UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): June 14, 2022

Precision BioSciences, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**001-38841**	**20-4206017**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

302 East Pettigrew St., Suite A-100, Durham, North Carolina 27701
(Address of principal executive offices) (Zip Code)

(919) 314-5512
(Registrant's telephone number, including area code)

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value $0.000005 per share	DTIL	The Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 1.01. Entry into a Material Definitive Agreement.

Collaboration and License Agreement

On June 14, 2022, Precision BioSciences, Inc. (the "Company"), entered into a collaboration and license agreement (the "Collaboration and License Agreement") with Novartis Pharma AG ("Novartis"), which became effective on June 15, 2022 (the "Effective Date"), to collaborate to discover and develop *in vivo* gene editing products incorporating custom ARCUS nucleases of the Company for the purpose of seeking to research and develop potential treatments for certain diseases (as defined in the Collaboration and License Agreement, the "Licensed Products"). Any initial Licensed Products will be developed for the potential treatment of certain hemoglobinopathies, including sickle cell disease and beta thalassemia.

Pursuant to the terms of the Collaboration and License Agreement, the Company will develop an ARCUS nuclease and conduct *in vitro* characterization for the Licensed Products, with Novartis then assuming responsibility for all subsequent development, manufacturing and commercialization activities. Novartis will receive an exclusive license for, and be required to use commercially reasonable efforts to conduct all subsequent research, development, manufacture and commercialization activities with respect to, the Licensed Products. The Company will initially develop a single, custom ARCUS nuclease for a defined "safe harbor" target site for insertion of specified therapeutic payloads in the patient's genome (the "Initial Nuclease") for Novartis to further develop as a potential *in vivo* treatment option for certain hemoglobinopathies, including sickle cell disease and beta thalassemia. Pursuant to the terms of the Collaboration and License Agreement, Novartis may elect, subject to payment of a fee to the Company, to replace Licensed Products based on the Initial Nuclease with Licensed Products based on a second custom ARCUS nuclease designed by the Company for gene editing of a specified human gene target associated with hemoglobinopathies (the "Replacement Nuclease"). Additionally, Novartis has the option, upon payment of a fee to the Company for each exercise of the option, to include Licensed Products utilizing the Initial Nuclease for insertion of up to three additional specified therapeutic payloads at the "safe harbor" target site, each intended to treat a particular genetic disease. The exercise period for such option ends on the earlier of (a) the fourth anniversary of the Effective Date and (b) the replacement of the Initial Nuclease with the Replacement Nuclease as described above.

The Company will receive an upfront cash payment of $50.0 million under the Collaboration and License Agreement, and on the Effective Date Novartis made an equity investment of $25.0 million in the Company's common stock pursuant to a stock purchase agreement between the Company and Novartis as described below (the "Stock Purchase Agreement"). The upfront cash payment and the equity investment, together with the Company's existing cash and cash equivalents, expected operational receipts, and available credit, are projected to extend the Company's cash runway into Q2 2024. The Company will also be eligible to receive milestone payments of up to an aggregate of approximately $1.4 billion as well as certain research funding. If Licensed Products resulting from the collaboration are approved and sold, the Company will also be entitled to receive tiered royalties ranging from the mid-single digit to low-double digit percentages on net sales of Licensed Products, subject to customary potential reductions. Novartis's obligation to pay royalties to the Company expires on a country-by-country and Licensed Product-by-Licensed Product basis, upon the latest to occur of certain events related to expiration of patents, regulatory exclusivity or a period of ten years following the first commercial sale of the Licensed Product.

Unless earlier terminated, the Collaboration and License Agreement will remain in effect on a Licensed Product-by-Licensed Product and country-by-country basis until the expiration of a defined royalty term for each Licensed Product and country. Novartis has the right to terminate the Collaboration and License Agreement without cause by providing advance notice to the Company. Either party may terminate the Collaboration and License Agreement for material breach by the other party and a failure to cure such breach within the time period specified in the Collaboration and License Agreement. Precision may also terminate the Collaboration and License Agreement due to a challenge to its patents brought by Novartis.

Stock Purchase Agreement and Registration Rights Agreement

Concurrently with the execution of the Collaboration and License Agreement, on June 14, 2022, the Company and Novartis entered into the Stock Purchase Agreement pursuant to which, on the Effective Date, the Company issued and sold to Novartis 12,407,440 shares of the Company's common stock (the "Shares") in a private placement

transaction for an aggregate purchase price of $25.0 million, or approximately $2.01 per share. The price per share of the Company's common stock under the Stock Purchase Agreement represented a 20% premium over the volume-weighted-average-price of the Company's common stock over the 10 trading days preceding the execution date of the Stock Purchase Agreement.

Pursuant to the Stock Purchase Agreement, subject to certain exceptions, Novartis may not sell the Shares without the Company's approval for a period of two years following the Effective Date (the "Holding Period"). In addition, for a period of two years following the Effective Date, Novartis and its affiliates may not (a) effect or otherwise participate in, directly or indirectly, any acquisition of any securities or material assets of the Company, any tender offer or exchange offer, merger or other business combination or change of control involving the Company, any recapitalization, restructuring, liquidation, dissolution or other extraordinary transaction with respect to the Company, or any solicitation of proxies or consents to vote any securities of the Company or (b) act with any other person, or publicly disclose any intention, to do any of the foregoing. The Stock Purchase Agreement also contains customary representations, warranties, and covenants of each of the Company and Novartis.

On the Effective Date, the Company and Novartis also entered into a registration rights agreement (the "Registration Rights Agreement") pursuant to which the Company has agreed, within the time periods specified in the Registration Rights Agreement, to register the resale of the Shares on a registration statement to be filed with the Securities and Exchange Commission (the "SEC"). The Registration Rights Agreement contains customary indemnification provisions, and all registration rights terminate in their entirety effective on the first date on which there cease to be any Registrable Securities (as defined in the Registration Rights Agreement) outstanding.

The foregoing descriptions of the Collaboration and License Agreement, the Stock Purchase Agreement and the Registration Rights Agreement do not purport to be complete and are qualified in their entirety by reference to the Collaboration and License Agreement, the Stock Purchase Agreement and the Registration Rights Agreement, copies of which are attached hereto as Exhibits 10.1, and 10.2 and 10.3, respectively, and are incorporated into this Item 1.01 by reference.

Item 3.02. Unregistered Sales of Equity Securities.

The description of the Stock Purchase Agreement and the issuance and sale of the Shares thereunder set forth in Item 1.01 above is incorporated by reference into this Item 3.02. The Shares were offered and sold to Novartis in a private placement that is exempt from registration under Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act").

Item 7.01. Regulation FD Disclosure.

On June 21, 2022, the Company issued a press release announcing the Collaboration and License Agreement with Novartis. A copy of this press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

As described in the accompanying press release, the Company will be hosting a conference call and webcast on June 22, 2022 at 8:00 a.m., Eastern Time, to discuss the collaboration with Novartis. Access to the live webcast and the accompanying presentation materials will be available in the "Investors" portion of the Company's website at *https://investor.precisionbiosciences.com*.

The information contained in this Item 7.01 (including Exhibit 99.1) is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section, nor shall it deemed to be incorporated by reference in any filing of the Company under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such filing.

Forward-Looking Statements

Statements in this Current Report on Form 8-K regarding management's future expectations, beliefs, intentions, goals, strategies, plans or prospects are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including but not limited to statements regarding activities and obligations under the

Collaboration and License Agreement, statements regarding the expected benefits of and potential treatment options that may result, expectations about achievement of key milestones, the expected payments pursuant to and satisfaction of obligations under the Collaboration and License Agreement, Stock Purchase Agreement and Registration Rights Agreement, and the projected cash runway. Forward-looking statements may be identified by words such as "anticipates," "believe," "continue," "expect," "intend," "may," "plan to," "potential," "projects," "will," and other similar words or expressions, or the negative of these words or similar words or expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors, including, without limitation, the risks referred to under the section "Risk Factors" in the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, as such factors may be updated from time to time in the Company's other filings with the SEC, which filings are accessible on the SEC's website at www.sec.gov. All forward-looking statements speak only as of the date of this Current Report on Form 8-K, and except as required by applicable law, the Company has no obligation to update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
10.1*	Collaboration and License Agreement, dated June 14, 2022, by and between Precision BioSciences, Inc. and Novartis Pharma AG.
10.2*	Stock Purchase Agreement, dated June 14, 2022, by and between Precision BioSciences, Inc. and Novartis Pharma AG.
10.3	Registration Rights Agreement, dated June 15, 2022, by and between Precision BioSciences, Inc. and Novartis Pharma AG.
99.1	Press Release of Precision BioSciences, Inc., dated June 21, 2022.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

*Portions of this exhibit have been omitted pursuant to Rule 601(b)(10)(iv) of Regulation S-K.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PRECISION BIOSCIENCES, INC.

Date: June 21, 2022

By: /s/ John Alexander Kelly
John Alexander Kelly
Chief Financial Officer

Exhibit 10.1

Certain information marked as [***] has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential.

COLLABORATION AND LICENSE AGREEMENT

between

NOVARTIS PHARMA AG

and

PRECISION BIOSCIENCES, INC.

COLLABORATION AND LICENSE AGREEMENT

This **Collaboration and License Agreement** ("***Agreement***") is entered into as of June 14, 2022 (the "***Execution Date***"), by and between **Precision BioSciences, Inc.**, a corporation organized and existing under the laws of Delaware, having an address at 302 East Pettigrew St. – Dibrell Whse, Suite A-100, Durham, North Carolina 27701-3712, U.S.A. ("***Precision***"), and **Novartis Pharma AG**, a corporation organized and existing under the laws of Switzerland, with its principal business office located at Lichtstrasse 35, CH-4056 Basel, Switzerland ("***Novartis***"). Novartis and Precision are each hereafter referred to individually as a "***Party***" and together as the "***Parties***."

Whereas, Precision is a biotechnology company that has developed a proprietary gene editing platform, the ARCUS Technology (as defined below), and controls certain intellectual property rights with respect to using the ARCUS Technology to create fully synthetic nucleases derived from homing endonucleases;

Whereas, Novartis is a pharmaceutical company engaged in the research, development, manufacturing, marketing and distribution of pharmaceutical products, including therapeutic products, for use in humans and animals;

Whereas, Precision and Novartis desire to collaborate to discover and develop certain *in vivo* or *ex vivo* gene editing products incorporating an ARCUS Nuclease (as defined below) designed, created, selected, developed or optimized by Precision for Novartis using the ARCUS Technology, focused on insertion of Initial Payloads into the Initial Collaboration Target or knock down of the Replacement Collaboration Target (each as defined below);

Whereas, Novartis desires to obtain from Precision, and Precision desires to grant to Novartis, certain exclusive and non-exclusive license rights to develop, manufacture, and commercialize such products, subject to the terms and conditions of this Agreement; and

Whereas, in connection with the above and the Parties entering into this Agreement, Precision and Novartis are entering into that certain Stock Purchase Agreement (the "***Stock Purchase Agreement***"), pursuant to which Novartis is making an equity investment in Precision through an acquisition of common shares of Precision stock, and that certain corresponding Registration Rights Agreement ("***Registration Rights Agreement***").

Now, Therefore, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1

DEFINITIONS

Capitalized terms used in this Agreement and the Exhibits hereto shall have the following meanings (or as defined elsewhere in this Agreement):

1.1 "***Accounting Standards***" means, as of the Effective Date, with respect to Precision, US GAAP (United States Generally Accepted Accounting Principles) and, with respect to Novartis, IFRS (International Financial Reporting Standards), in each case, as generally and consistently applied throughout the Party's organization. Each Party shall promptly notify the other in the event that it changes the Accounting Standards pursuant to which its records are maintained, it being understood that each Party may only use internationally-recognized accounting principles (e.g. IFRS, US GAAP, etc.).

1.2 "***Acquirer***" has the meaning set forth in Section 1.26.

1.3 "***Active Component***" means a component that confers a therapeutic effect on a standalone basis, excluding, for clarity and without limitation, [***] and compounds that potentiate nucleases but which themselves do not confer a therapeutic effect on such basis.

1.4 "***Additional Payload***" means a Payload that is the subject of an [***] Program.

1.5 "***Affiliate***" means, with respect to any Person, any entity that, at the relevant time (whether as of the Effective Date or thereafter), directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with such Person, for so long as such control exists. As used in this Section 1.5, "control" means: (a) to possess, directly or indirectly, the power to direct or cause the direction of the management or policies of an entity, whether through ownership of voting securities or by contract relating to voting rights or corporate governance; or (b) direct or indirect ownership of fifty percent (50%) (or such lesser percentage that is the maximum allowed to be owned by a foreign entity in a particular jurisdiction) or more of the voting share capital or other equity interest in such entity.

1.6 "***After-Acquired IP***" has the meaning set forth in Section 11.1.5.

1.7 "***Agreement***" has the meaning set forth in the Preamble.

1.8 "***Alliance Manager***" has the meaning set forth in Section 2.1.

1.9 "***Antitrust Filings***" has the meaning set forth in Section 10.1.

1.10 "***Antitrust Laws***" has the meaning set forth in Section 10.1.

1.11 "***Applicable Laws***" means the applicable provisions of any and all federal, national, supranational, regional, state and local laws, treaties, statutes, rules, regulations, guidelines or requirements, administrative codes, guidance, ordinances, judgments, decrees, directives, injunctions, orders or permits of or from any court, arbitrator, Regulatory Authority, Governmental Authority, taxing authority, national securities exchange or exchange listing organization having jurisdiction over or related to the relevant subject item that may be in effect from time to time during the Term.

1.12 "***ARCUS Nuclease***" means any synthetic nuclease derived from a homing endonuclease and made using the ARCUS Technology.

1.13 "***ARCUS Technology***" means Precision's proprietary gene editing platform known as ARCUS®, relating to the design, creation, selection, development, optimization and delivery of synthetic enzymes derived from homing endonucleases, including any modifications or improvements to such platform.

1.14 "***Auditor***" has the meaning set forth in Section 9.8.

1.15 "***Background IP***" means Novartis Background IP or Precision Background IP, as applicable.

1.16 "***Bayh-Dole Act***" has the meaning set forth in Section 12.2.8.

1.17 [***] means any one (1) of the ARCUS Nucleases Directed Against the Replacement Collaboration Target and having DNA and amino acid sequences provided by Precision to Novartis.

1.18 "***Biosimilar Product***" means, with respect to a Licensed Product, and on a Licensed Product-by-Licensed Product and country-by-country basis, (a) any product that utilizes the same ARCUS Nuclease and the same Payload (except in the case of a Replacement Product) as such Licensed Product or (b) any product (including a "generic product," "biogeneric," "follow-on biologic," "follow-on biological product," "follow-on protein product," "similar biological medicinal product" or "biosimilar product") approved by way of an abbreviated regulatory mechanism by the relevant Regulatory Authority in a country in reference to such Licensed Product and in reliance upon the prior Regulatory Approval (or data therein) of such Licensed Product, in each case, (a) and (b), that is sold in the same country (or is commercially available in the same country via import from another country) as such Licensed Product by any Third Party that is not a Sublicensee of Novartis or its Affiliates and that did not purchase such product in a chain of distribution that included any of Novartis or any of its Affiliates or its Sublicensees.

1.19 "***Budget Cap***" has the meaning set forth in Section 4.7.1.

1.20 "***Business Day***" means any day, other than (a) any Saturday or Sunday; (b) a holiday observed by the United States federal government, the State of North Carolina or the Commonwealth of Massachusetts; or (c) a public holiday on which that banks are authorized or required to be closed in Basel, Switzerland.

1.21 "***Calendar Quarter***" means each respective period of three (3) consecutive months ending on March 31, June 30, September 30 and December 31 of any Calendar Year.

1.22 "***Calendar Year***" means each respective period of twelve (12) consecutive months commencing on January 1 and ending on December 31.

1.23 [***] means any one (1) of the ARCUS Nucleases Directed Against the Initial Collaboration Target and having DNA and amino acid sequences provided by Precision to Novartis.

1.24 "***Cellectis Agreement***" has the meaning set forth in Section 7.6.1.

1.25 "***Cellectis Patents***" has the meaning set forth in Section 7.6.1.

1.26 "***Change of Control***" means, with respect to either Party: (a) the acquisition by a Third Party, in one transaction or a series of related transactions, of direct or indirect beneficial ownership of more than fifty percent (50%) of the outstanding voting equity securities of such Party (excluding, for clarity, an acquisition by a Third Party where the equity holders of such acquired Party or its parent immediately prior to such transaction hold a majority of the outstanding voting equity securities of the surviving entity or the parent of the surviving entity immediately following such transaction); (b) a merger, reorganization or consolidation involving such Party as a result of which (i) a Third Party acquires direct or indirect beneficial ownership of more than fifty percent (50%) of the voting power of the surviving entity immediately after such merger, reorganization or consolidation and (ii) the voting securities of such Party outstanding immediately prior to such merger, reorganization or consolidation, or any securities into which such voting securities have been converted or exchanged, cease to represent more than fifty percent (50%) of the combined voting power of the surviving entity or the parent of the surviving entity immediately following such merger, reorganization or consolidation; or (c) a sale, exclusive license or other transfer of all or substantially all of the assets of such Party related to the transactions contemplated by this Agreement in one transaction or a series of related transactions to a Third Party. The acquiring or combining Third Party in any of (a), (b) or (c), and any of such Third Party's Affiliates (whether in existence as of or any time following the applicable transaction, but other than the acquired Party and its Affiliates as in existence prior to the applicable transaction or Affiliates it controls after the applicable transaction) are referred to collectively herein as the "***Acquirer***".

1.27 "***Change of Control Notice***" has the meaning set forth in Section 17.8.1.

1.28 "***Chimeric Antigen Receptor***" means a genetically engineered molecule, or a complex comprising a genetically-engineered molecule (including T cell receptors), that when present on the surface of human T cells, enables the T cells to recognize and bind to specific antigens that are present on the surface of cells.

1.29 "***Claim***" has the meaning set forth in Section 13.1.1.

1.30 "***Clinical Trial***" means a Phase I Clinical Trial, Phase II Clinical Trial or Phase III Clinical Trial, or any post-Regulatory Approval human clinical trial, as applicable.

1.31 "***Code***" has the meaning set forth in Section 15.9.

1.32 "***Collaboration***" has the meaning set forth in Section 4.1.

1.33 "***Collaboration IP***" means Novartis Collaboration IP or Precision Collaboration IP, as applicable.

1.34 "***Collaboration Payloads***" means, individually or collectively as applicable, the Initial Payloads, the Reserved Payloads, and the Additional Payloads. Collaboration Payloads exclude any Unavailable Payloads.

1.35 "***Combination Product***" has the meaning set forth in Section 1.115.

1.36 "***Commercial Milestone Event***" has the meaning set forth in Section 9.3.2.

1.37 "***Commercial Milestone Event Notice***" has the meaning set forth in Section 9.3.2.

1.38 "***Commercialization***" means any and all activities for the purposes of the offering for sale and sale of a Licensed Product, or other product or therapy including: (a) activities for the purposes of storing, marketing, promoting, detailing, distributing, importing, exporting, selling and offering to sell that Licensed Product, or other product or therapy; (b) conducting Clinical Trials after Marketing Authorization of a Licensed Product, or other product or therapy with respect to such Licensed Product, or other product or therapy; (c) interacting with Regulatory Authorities regarding the foregoing; and (d) seeking Regulatory Approvals (as applicable) for and registration of that Licensed Product, or other product or therapy (beyond seeking Marketing Authorization, which is addressed within "Development") in the Field in the Territory. When used as a verb, "to ***Commercialize***" means to engage in Commercialization.

1.39 "***Commercially Reasonable Efforts***" of a Party means that level of efforts and resources commonly applied by such Party to carry out a particular task or obligation consistent with the general practice followed by such Party to accomplish a similar objective under similar circumstances exercising reasonable business judgment, it being understood and agreed that with respect to the Manufacture, Development, and Commercialization of a Licensed Product, such efforts shall be substantially equivalent to those efforts and resources commonly used by such Party for products or therapies owned by it, or to which it has exclusive rights, which are of similar market potential at a similar stage in their development or product life, taking into account issues of safety and efficacy, product profile, the competitiveness of Third Party products in development and in the marketplace, supply chain management considerations, the proprietary position of the compound, product or therapy (including with respect to patent or regulatory exclusivity), the regulatory structure involved, the profitability of the applicable compound, product or therapy (including pricing and reimbursement status achieved), and other relevant technical, commercial, legal, scientific, regulatory or medical factors including, for the avoidance of doubt, Novartis's Global Access Commitments, as applicable.

1.40 "***Competing Program***" has the meaning set forth in Section 8.2.

1.41 "***Confidential Proprietary Information***" has the meaning set forth in Section 14.1.1.

1.42 "***Confidentiality Agreement***" means that certain Confidentiality Agreement entered into between the Parties as of July 15, 2019, as amended September 26, 2020, and March 9, 2021.

1.43 "***Control***" or "***Controlled***" means, with respect to any Know-How, Patents, or other intellectual property rights, that a Party has the legal authority or right (whether by ownership, license, or otherwise, but without taking into account any rights granted by one Party to the other Party pursuant to this Agreement) to grant to the other Party a license,

covenant not to sue, sublicense, access, or right to use (as applicable) under such Know-How, Patents, or other intellectual property rights, on the terms and conditions set forth herein, in each case without violating any obligations of the granting Party owed to a Third Party or breaching the terms of any agreement with a Third Party.

1.44 "***Cover***" means, with respect to a claim of a Patent and a relevant Licensed Product, that such claim would be infringed, absent a license, by the making, having made, use, importation, exportation, offering for sale, or sale of such Licensed Product (considering claims of patent applications to be issued as then pending).

1.45 "***Declaration***" means the notification by Novartis or any of its representatives on the JSC of the selection of a Development Candidate to the JSC.

1.46 "***Developing Countries***" means the countries and territories listed in Exhibit 1.46.

1.47 "***Development***" or "***Develop***" means any and all activities for the purposes of the (a) discovery, identification, screening, testing, assessment and optimization of Licensed Products, or other product or therapy, and (b) non-clinical and clinical drug development activities that are necessary or useful to obtain Marketing Authorization for a Licensed Product, or other product or therapy, including design and conduct of Clinical Trials and the preparation and filing of Regulatory Filings and all regulatory affairs related to the foregoing. When used as a verb, "***Developing***" means to engage in Development. For clarity, "***Development***" shall exclude any Commercialization activities.

1.48 "***Development Candidate***" means a Licensed Product, including the specific Licensed ARCUS Nuclease, Payload (if applicable) and delivery vector, selected by Novartis for further Development (i.e., conduct of a GLP Toxicology Study) with respect to the Initial Program, Replacement Program or any [***] Program.

1.49 "***Development Milestone Event***" has the meaning set forth in Section 9.3.1.

1.50 "***Development Milestone Event Notice***" has the meaning set forth in Section 9.3.1.

1.51 "***Directed Against***" means, with respect to a Licensed Product (or other *in vivo* or *ex vivo* gene editing product or therapy) and a human gene (or the locus of such human gene or any target site in such human gene locus, as applicable), that the compound (which, for clarity, may be an enzyme) contained in such Licensed Product or such other product or therapy is designed or developed to add to, subtract, or modify such human gene (through binding at such locus or target site, as applicable) in a patient's cells *in vivo* or *ex vivo* as its primary mechanism of action.

1.52 "***Directed To***" means, with respect to a Licensed Product (or other *in vivo* or *ex vivo* gene editing product or therapy) and a human gene, that the compound (which, for clarity, may be an enzyme) contained in such Licensed Product or such other product or therapy is (a) designed or developed to add to, subtract, or modify any human gene locus and insert in place of or at such human gene locus a copy of such human gene, or an exogenous polynucleotide encoding an inhibitor of translation of the transcript of such human gene, in a

patient's cells *in vivo* or *ex vivo* as its primary mechanism of action, or (b) Directed Against such human gene.

1.53 "***Disclosing Party***" has the meaning set forth in Section 14.1.2.

1.54 "***Dispute***" has the meaning set forth in Section 16.2.

1.55 "***Divestiture***" means (a) the sale or transfer of all rights to a Competing Program by [***] to a Third Party without the retention or reservation of any rights, license or interest by the selling entity or its Affiliates; or (b) with respect to an Acquirer of Precision, the sale or transfer of all rights to a Competing Program by such Acquirer to a Third Party without the retention or reservation of any rights, license or interest by the selling entity or its Affiliates. [***]

1.56 "***DOJ***" has the meaning set forth in Section 10.1.

1.57 "***Dollar***" means a U.S. dollar, and "***$***" is to be interpreted accordingly.

1.58 "***Duke Agreement***" means the License Agreement entered into by Precision and Duke University ("***Duke***") on April 17, 2006, as amended by the Amendment, dated May 31, 2007 and as further amended by the Letter Agreements, dated December 10, 2007, February 13, 2009, January 17, 2012, December 6, 2013, December 13, 2013 and February 4, 2014, and as further amended from time to time.

1.59 "***Duke IP***" means all Patents and Know-How licensed to Precision under the Duke Agreement that constitute Precision Background IP. The patent numbers and patent application numbers of the Patents that are included within the Duke IP as of the Execution Date are set forth in Schedule 1.59.

1.60 "***Effective Date***" means the Closing Date (as such term is defined in the Stock Purchase Agreement).

1.61 "***Enabling Technology***" means any intellectual property right owned or controlled by any Third Party that is necessary or reasonably useful for, or would be infringed by, the Research, Development, Manufacture or Commercialization of a Licensed Product.

1.62 "***Escrow Agent***" has the meaning set forth in Section 3.2.5.

1.63 "***Execution Date***" has the meaning set forth in the preamble to this Agreement.

1.64 "***Executive Officers***" means (a) with respect to Precision, [***] and (b) with respect to Novartis, [***]; or any other person that such person in the foregoing (a) or (b) designates from time to time.

1.65 "***Existing In-License Agreements***" means the Duke Agreement and the Cellectis Agreement.

1.66 "***Existing Patents***" has the meaning set forth in Section 12.2.3.

1.67 "***Extension***" has the meaning set forth in Section 11.5.1.

1.68 "***External Costs***" means expenses paid by Precision to Third Parties and (a) incurred in the performance of Research activities under this Agreement; and (b) [***].

1.69 "***FDA***" means the United States Food and Drug Administration or any successor agency thereto.

1.70 "***Field***" means the diagnosis, prevention and treatment of any and all diseases by *in vivo* or *ex vivo* gene editing Directed Against the Initial Collaboration Target or the Replacement Collaboration Target, as applicable.

1.71 "***Firewall Event***" has the meaning set forth in Section 17.8.4.

1.72 "***Firewall Period***" means [***].

1.73 "***Firewalls***" means [***].

1.74 "***First Commercial Sale***" means the first sale of a Licensed Product by Novartis or an Affiliate, or a Sublicensee, to a Third Party in a country following Marketing Authorization for sale of such Licensed Product in that country. Sales or transfers of reasonable quantities of a Licensed Product for research or Development, including proof of concept studies or other clinical trial purposes, or for compassionate or similar use, shall not be considered a First Commercial Sale.

1.75 "***FTC***" has the meaning set forth in Section 10.1.

1.76 "***FTE***" means the equivalent of a full-time Precision employee's work performing activities under a Research Plan, which is at least [***]. If any such individual works partially on work under a Research Plan for a Program and partially on other work in a Calendar Quarter, then the "FTE" to be attributed to such individual's work hereunder shall be calculated based upon the percentage of such individual's total work time in such Calendar Quarter that such individual spent working under a Research Plan for such Program based on [***], applied consistently throughout the Calendar Year. For clarity, no individual person can ever constitute more than a single FTE, and indirect personnel (including support functions such as managerial, financial, legal or business development) shall not constitute FTEs.

1.77 "***FTE Rate***" means [***].

1.78 "***Gates Foundation Agreement***" has the meaning set forth in Section 7.8.1.

1.79 "***Global Access Commitments***" has the meaning set forth in Section 6.3.

1.80 **"*GLP Toxicology Study*"** means [***].

1.81 "***Government Official***" has the meaning set forth in Section 12.5.4.

1.82 "***Governmental Authority***" means any national, international, federal, state, provincial or local government, or political subdivision thereof, or any multinational organization or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, and any court or tribunal (or any department, bureau or division thereof, or any governmental arbitrator or arbitral body).

1.83 "***HSR Act***" has the meaning set forth in Section 10.1.

1.84 "***IND***" means an investigational new drug application filed with the FDA or any similar application filed with a Regulatory Authority in a country outside the U.S. required to commence Clinical Trials of a pharmaceutical product.

1.85 "***Indemnitee***" has the meaning set forth in Section 13.1.3.

1.86 "***Indemnitor***" has the meaning set forth in Section 13.1.3.

1.87 "***Indirect Taxes***" has the meaning set forth in Section 9.10.2.

1.88 "***Infringement***" has the meaning set forth in Section 11.3.1.

1.89 "***Initial Collaboration Target***" means [***].

1.90 "***Initial Payload***" means [***] in each case (a) and (b) that is intended to treat a hemoglobinopathy, each as specified in greater detail in the Initial Research Plan.

1.91 "***Initial Program***" means Collaboration activities for the purposes of the Research and Development of Licensed Products for nuclease-mediated insertion of the Initial Payloads into the Initial Collaboration Target for the treatment of hemoglobinopathies, using a Licensed ARCUS Nuclease that is a [***].

1.92 "***Initial Research Plan***" has the meaning set forth in Section 4.4.1.

1.93 "***Initiation***" means (a) with respect to a Clinical Trial, the first dosing of the first human subject in such Clinical Trial or (b) with respect to a GLP Toxicology Study, the first dosing of the first animal in such GLP Toxicology Study.

1.94 "***Inventions***" means all Know-How and inventions, whether or not patentable, that are discovered, created, conceived or reduced to practice, in each case, by or on behalf of a Party or any of its Affiliates (whether solely or jointly by the Parties) in the course of performing activities under this Agreement, in either case, including all rights, title and interest in and to the intellectual property rights therein.

1.95 "***Joint IP***" has the meaning set forth in Section 11.1.2.

1.96 "***Joint Patents***" means any Patent constituting or claiming any Joint IP.

1.97 "***JSC***" has the meaning set forth in Section 2.2.

1.98 "***JSC Co-Chairpersons***" has the meaning set forth in Section 2.2.

1.99 "***Know-How***" means any proprietary scientific or technical information, inventions, discoveries, results and data of any type whatsoever, in any tangible or intangible form, including inventions, discoveries, databases, safety information, practices, methods, instructions, techniques, processes, drawings, documentation, specifications, formulations, formulae, knowledge, know-how, trade secrets, materials, skill, experience, test data and other information and technology applicable to formulations, compositions or products or to their manufacture, development, registration, use, marketing or sale or to methods of assaying or testing them, including pharmacological, pharmaceutical, medicinal chemistry, biological, chemical, biochemical, toxicological and clinical test data, physical and analytical, safety, quality control data, manufacturing, and stability data, studies and procedures, and manufacturing process and development information, results and data.

1.100 "***Knowledge***" means the actual or constructive knowledge of each of Precision's Chief Executive Officer, Chief Scientific Officer, Chief Financial Officer, General Counsel, Senior Vice President of Business Development and Alliance Management and Vice President of Intellectual Property, in each case, after due inquiry.

1.101 "***Licensed ARCUS Nuclease***" means [***].

1.102 "***Licensed Product***" means (a) with respect to the Initial Program, any *in vivo* or *ex vivo* gene editing product for nuclease-mediated insertion of an Initial Payload into a patient's cells using a Licensed ARCUS Nuclease that is a [***], (b) with respect to the Replacement Program, any *in vivo* or *ex vivo* gene editing product for knock down of the human [***] in a patient's cells using a Licensed ARCUS Nuclease that is a [***] (such product, a "***Replacement Product***"), or (c) with respect to an [***], any *in vivo* or *ex vivo* gene editing product for nuclease-mediated insertion of an Additional Payload into a patient's cells using a Licensed ARCUS Nuclease that is a [***]. For clarity, a Licensed Product may consist of a single vector or delivery vehicle delivering both a Payload and a Licensed ARCUS Nuclease together, or multiple vectors or delivery vehicles delivering a Payload and a Licensed ARCUS Nuclease separately, including as may be separated temporally, by means of administration, or otherwise. For further clarity, "Licensed Product" includes Combination Products.

1.103 "***Licensed Product Trademarks***" has the meaning set forth in Section 11.7.

1.104 "***Losses***" has the meaning set forth in Section 13.1.1.

1.105 [***]

1.106 "[***] ***Program***" means Collaboration activities for the purposes of the Research and Development of Licensed Products for nuclease-mediated insertion of an Additional Payload into the Initial Collaboration Target for the treatment of a given [***], using a Licensed ARCUS Nuclease that is a [***].

1.107 "***Major European Markets***" means [***].

1.108 "***Major Foreign Markets***" means [***].

1.109 "***Manufacture***" and "***Manufacturing***" means any and all activities related to the production, manufacture, formulation, finishing, packaging, labeling, shipping and holding of any Licensed Product, or other product or therapy, or any component, intermediary or precursor thereof (including, for clarity, [***], expression vectors, cell lines, culture media and feeds), and including process development, process qualification and validation, scale-up, pre-clinical, clinical and commercial manufacture, characterization, quality assurance and quality control (including testing).

1.110 "***Marketing Authorization***" means all Regulatory Approvals (including any Pricing and Reimbursement Approval or access approvals, if applicable) from the relevant Regulatory Authority required by such Regulatory Authority in order to initiate marketing and selling a Licensed Product in any country or jurisdiction.

1.111 "***Materials Transfer Record***" has the meaning set forth in Section 4.10.

1.112 "***Milestone Events***" has the meaning set forth in Section 9.3.

1.113 "***Milestone Payments***" has the meaning set forth in Section 9.3.

1.114 "***NDA***" means a New Drug Application (as more fully described in 21 C.F.R. Part 314 or its successor regulation), a Biologic License Application (as more fully described in U.S. 21 C.F.R. Part 601.20 or its successor regulation), or any analogous Regulatory Filing with any Regulatory Authority outside of the United States.

1.115 "***Net Sales***" means [***]. With respect to the calculation of Net Sales:

(w) [***]; and
(z) In the event that the Licensed Product is sold in a finished dosage form containing the Initial Payload or an Additional Payload (as applicable) in combination with one or more other Active Components (a "***Combination Product***"), the Net Sales will be calculated by [***].

1.116 "***Novartis***" has the meaning set forth in the Preamble.

1.117 "***Novartis Background IP***" means (a) any and all Patent rights and Know-How that Novartis or any of its Affiliates Controls as of the Effective Date or creates, conceives or reduces to practice outside of the activities under this Agreement after the Effective Date and (b) Novartis Improvement IP.

1.118 "***Novartis Collaboration IP***" means, individually or collectively, Novartis Sole IP and Novartis's share in Joint IP.

1.119 "***Novartis Improvement IP***" has the meaning set forth in Section 11.1.2.

1.120 "***Novartis Indemnitee***" has the meaning set forth in Section 13.1.1.

1.121 "***Novartis Materials***" has the meaning set forth in Section 4.10.

1.122 "***Novartis Patent***" means any Patent constituting or claiming any Novartis Background IP or Novartis Sole IP.

1.123 "***Novartis Sole IP***" has the meaning set forth in Section 11.1.2.

1.124 "***Option Exercise Fee***" has the meaning set forth in Section 3.2.4.

1.125 "***Option Period***" has the meaning set forth in Section 3.2.1.

1.126 "***Party***" and "***Parties***" has the meaning set forth in the Preamble.

1.127 "***Patent Working Group***" has the meaning set forth in Section 2.3.

1.128 "***Patents***" mean: (a) pending patent applications, issued patents, utility models and designs; (b) reissues, substitutions, confirmations, registrations, validations, re-examinations, additions, continuations, continued prosecution applications, continuations-in-part, or divisions of or to any of the foregoing; and (c) extensions, renewals or restorations of any of the foregoing by existing or future extension, renewal or restoration mechanisms, including supplementary protection certificates or the equivalent thereof.

1.129 "***Payload***" means (a) an Initial Payload or (b) [***].

1.130 [***]

1.131 "***Payment***" has the meaning set forth in Section 9.10.3.

1.132 [***]

1.133 "***Permitted Contractor***" has the meaning set forth in Section 4.9.

1.134 "***Person***" means any corporation, limited or general partnership, limited liability company, joint venture, trust, unincorporated association, governmental body, authority, bureau or agency, any other entity or body, or an individual.

1.135 "***Phase I Clinical Trial***" means a clinical trial in which a Licensed Product is administered to human subjects at multiple dose levels with the primary purpose of determining safety, metabolism, and pharmacokinetic and pharmacodynamic properties of the Licensed Product, and generally consistent with 21 C.F.R. § 312.21(a) (or the non-United States equivalent thereof). [***]

1.136 "***Phase II Clinical Trial***" means a clinical trial of a Licensed Product in human subjects, the principal purposes of which are to make a preliminary determination that the Licensed Product is safe for its intended use, to determine its optimal dose, and to obtain sufficient information about the Licensed Product's efficacy to permit the design of Phase III Clinical Trials, and generally consistent with 21 C.F.R. § 312.21(b) (or the non-United States equivalent thereof).

1.137 [***]

1.138 "***Phase IIa Clinical Trial***" means a Phase II Clinical Trial of a Licensed Product in human subjects, the principal purpose of which is to determine clinical efficacy, safety, pharmacokinetics and/or dose finding prior to Initiation of Phase IIb Clinical Trials.

1.139 "***Phase IIb Clinical Trial***" means a Phase II Clinical Trial of a Licensed Product in human subjects, the principal purpose of which is a further determination of efficacy and safety, in the target population, at the intended clinical dose (or doses or range of doses), to confirm the optimal manner of use of such compound or product (i.e., dose and dose regimen) prior to Initiation of Phase III Clinical Trials.

1.140 "***Phase III Clinical Trial***" means a clinical trial of a Licensed Product in human subjects, the principal purposes of which are to establish that the Licensed Product is safe and efficacious for its intended use and to define warnings, precautions and adverse reactions that are associated with the Licensed Product in the dosage range to be prescribed, and generally consistent with 21 C.F.R. § 312.21(c) (or the non-United States equivalent thereof).

1.141 [***]

1.142 "***Platform-Enabling IP***" has the meaning set forth in Section 11.1.5.

1.143 "***Precision***" has the meaning set forth in the Preamble.

1.144 "***Precision Background IP***" means (a) any and all Patent rights and Know-How that Precision or any of its Affiliates Controls as of the Effective Date or, subject to Section 11.1.5(b), creates, conceives or reduces to practice outside of the activities under this Agreement after the Effective Date and (b) Precision Improvement IP. [***]

1.145 "***Precision Background Platform IP***" means any and all Precision Background IP that is not Precision Background Product IP but is necessary or reasonably useful for the Development, making, having made, use, importation, exportation, offering for sale, sale, Commercialization or other exploitation of a Licensed Product, including the ARCUS Technology.

1.146 "***Precision Background Product IP***" means any and all Precision Background IP that Covers (or in the case of Know-How, is directed to) a Licensed Product as a composition of matter, a method of making a Licensed Product, or a method of using a Licensed Product.

1.147 "***Precision Collaboration IP***" means, individually or collectively, Precision Sole IP and Precision's share in Joint IP.

1.148 "***Precision Collaboration Platform IP***" means any and all Precision Collaboration IP that is not Precision Collaboration Product IP.

1.149 "***Precision Collaboration Product IP***" means Precision Collaboration IP that Covers (or in the case of Know-How, is directed to) a Licensed Product as a composition of matter, a method of making a Licensed Product, or a method of using a Licensed Product.

1.150 "***Precision FTE Costs***" has the meaning set forth in Section 4.7.1.

1.151 "***Precision Improvement IP***" has the meaning set forth in Section 11.1.2.

1.152 "***Precision Indemnitee***" has the meaning set forth in Section 13.1.2.

1.153 "***Precision Licensed Patent***" means any Patent included in the Precision Product IP or Precision Platform IP.

1.154 "***Precision Materials***" has the meaning set forth in Section 4.11.

1.155 "***Precision Patent***" means any Patent constituting or claiming any Precision Background IP or Precision Sole IP.

1.156 "***Precision Platform IP***" means, individually or collectively, the Precision Background Platform IP and the Precision Collaboration Platform IP.

1.157 "***Precision Product IP***" means, individually or collectively, the Precision Background Product IP and the Precision Collaboration Product IP.

1.158 "***Precision Sole IP***" has the meaning set forth in Section 11.1.2.

1.159 "***Precision Technology***" means, individually or collectively, the Precision Background IP and the Precision Collaboration IP.

1.160 "***Pricing and Reimbursement Approval***" means, with respect to a Licensed Product, the approval, agreement, determination or decision of any Regulatory Authority establishing the price or level of reimbursement for such Licensed Product, as required in a given country or jurisdiction prior to sale of such Licensed Product in such country or jurisdiction.

1.161 "***Product-Enabling IP***" has the meaning set forth in Section 11.1.5.

1.162 "***Program***" means the Initial Program, the Replacement Program or an [***] Program, as applicable.

1.163 "***Prosecute and Maintain***" or "***Prosecution and Maintenance***" with respect to a particular Patent, means all activities associated with the preparation, filing, prosecution and maintenance of such Patent, together with the conduct of interferences, derivation proceedings, *inter partes* review and post-grant review, the defense of oppositions and other similar proceedings with respect to that Patent, including any activities associated with claims, including as a counterclaim or declaratory judgment action, of unpatentability, invalidity or unenforceability of such Patent that are brought by a Third Party in connection with an Infringement under Section 11.3.

1.164 "***Receiving Party***" has the meaning set forth in Section 14.1.2.

1.165 "***Registration Rights Agreement***" has the meaning set forth in the Preamble.

1.166 "***Regulatory Approvals***" means, collectively, any and all approvals (including supplements, amendments, pre- and post-approvals, Pricing and Reimbursement Approvals), licenses, registrations, permits, notifications, and authorizations (including marketing and labeling authorizations) or waivers of any Regulatory Authority that are necessary for the testing, Research, Development, registration, Manufacture (including formulation), use, storage, import, export, transport, promotion, marketing, distribution, offer for sale, sale or other Commercialization of a pharmaceutical product (including any Licensed Product) in any country or jurisdiction, including Pricing and Reimbursement Approval, as applicable.

1.167 "***Regulatory Authority***" means any Governmental Authority that has responsibility in its applicable jurisdiction over the testing, Research, Development, registration, Manufacture (including formulation), use, storage, import, export, transport, promotion, marketing, distribution, offer for sale, sale or other Commercialization of pharmaceutical products (including any Licensed Product) in any country or jurisdiction. For countries or jurisdictions where governmental approval is required for pricing or reimbursement for a pharmaceutical product (including any Licensed Product) to be reimbursed by national health insurance (or its local equivalent), Regulatory Authority includes any Governmental Authority whose review or approval of pricing or reimbursement of such product is required.

1.168 "***Regulatory Documentation***" has the meaning set forth in Section 12.2.9.

1.169 "***Regulatory Filings***" means, collectively, any and all applications, filings, submissions, approvals (including supplements, amendments, pre- and post-approvals, pricing and reimbursement approvals), licenses, registrations, permits, notifications, and authorizations (including marketing and labeling authorizations), non-clinical and clinical study authorization applications or notifications (including all supporting files, writings, data, studies and reports) or waivers with respect to the testing, Research, Development, registration, Manufacture (including formulation), use, storage, import, export, transport, promotion, marketing, distribution, offer for sale, sale or other Commercialization of a Licensed Product made to or received from any Regulatory Authority or research ethics committee in a given country or jurisdiction, including INDs and NDAs.

1.170 "***Replacement Collaboration Target***" means [***].

1.171 "***Replacement Fee***" has the meaning set forth in Section 3.3.2.

1.172 "***Replacement Notice***" has the meaning set forth in Section 3.3.1.

1.173 "***Replacement Product***" has the meaning set forth in Section 1.102.

1.174 "***Replacement Program***" means Collaboration activities for the purposes of the Research and Development of Licensed Products to knock down the Replacement Collaboration Target in a patient's cells *in vivo* or *ex vivo* for the treatment of hemoglobinopathies, using a Licensed ARCUS Nuclease that is a [***].

1.175 "***Research***" has the meaning set forth in Section 4.1.

1.176 "***Research Budget***" has the meaning set forth in Section 4.4.1.

1.177 "***Research Costs***" means the sum of (a) Precision FTE Costs and (b) External Costs.

1.178 "***Research Plan***" has the meaning set forth in Section 4.4.

1.179 "***Research Term***" has the meaning set forth in Section 4.3.

1.180 "***Reservation Request***" has the meaning set forth in Section 3.2.2.

1.181 "***Reserved Payload***" has the meaning set forth in Section 3.2.1.

1.182 "***Reserved Payload List***" has the meaning set forth in Section 3.2.1.

1.183 "***Reserved Payload Selection Period***" has the meaning set forth in Section 3.2.1.

1.184 "***Residuals***" has the meaning set forth in Section 14.1.5.

1.185 "***Royalty***" has the meaning set forth in Section 9.4.2.

1.186 "***Royalty Term***" has the meaning set forth in Section 9.4.1.

1.187 "***Royalty Territory***" means [***].

1.188 "***Stock Purchase Agreement***" has the meaning set forth in the Preamble.

1.189 "***Sublicensee***" means a Third Party that is granted a license or sublicense to Develop, Manufacture, make, have made, use, import, export, offer for sale, sell, or Commercialize, or otherwise exploit Licensed Products in the Field in the Territory, beyond the mere right to purchase Licensed Products from Novartis and its Affiliates, and "Sublicensee" excludes Novartis's distributors and wholesalers.

1.190 "***Term***" has the meaning set forth in Section 15.1.

1.191 "***Terminated Programs***" has the meaning set forth in Section 15.6.

1.192 "***Territory***" means worldwide.

1.193 "***Third Party***" means any Person other than Novartis or Precision (or their respective Affiliates).

1.194 "***U.S.***" means the United States of America and its territories and possessions.

1.195 "***Unavailable Payload***" means a Payload that, at the time of Novartis's delivery of a Reservation Request pursuant to Section 3.2.1, if applicable, is [***]. Notwithstanding the foregoing, "Unavailable Payloads" shall also include (x) any Reserved Payload which is replaced on the Reserved Payload List by Novartis pursuant to Section 3.2.1, (y) any Reserved Payload which is not named by Novartis as an Additional Payload pursuant to Section 3.2.3 during the Option Period, and (z) all Payloads (including, for clarity, the Initial Payloads, all Reserved Payloads, and all Additional Payloads) after delivery of the Replacement Notice by Novartis pursuant to Section 3.3.1.

1.196 "***Unavailable Payload Information***" has the meaning set forth in Section 3.2.5.

1.197 "***Valid Claim***" means a claim that Covers (a) [***], or (b) [***], in each case (a) and (b) contained in (y) an issued and unexpired Patent that has not been revoked or held unenforceable, unpatentable or invalid by a decision of a court or other Governmental Authority of competent jurisdiction that is not appealable or has not been appealed within the time allowed for appeal; or (z) a pending patent application that has not been cancelled, withdrawn or abandoned or finally rejected by an administrative agency action from which no appeal can be taken and that has been pending for no longer than [***].

1.198 "***Variable Component***" means technology Controlled by Novartis or any of its Affiliates that Novartis elects to combine with a Licensed ARCUS Nuclease in a Licensed Product. [***]

1.199 "***Working Group***" has the meaning set forth in Section 2.3.

ARTICLE 2

GOVERNANCE AND JOINT STEERING COMMITTEE

2.1 **Alliance Managers**. Within [***] following the Effective Date, each Party shall appoint one (1) employee to act as the Alliance Manager for such Party (each, an "***Alliance Manager***"). Without limiting the responsibility and authority of the JSC (as expressly set forth herein), the Alliance Managers shall each be the primary point of contact for the Parties regarding the Collaboration and related activities contemplated by this Agreement and shall help facilitate all such activities hereunder. For avoidance of doubt, an Alliance Manager may not be appointed to serve as a JSC member simultaneously. Either Party, upon prior notice to the other Party, may change its Alliance Manager.

2.2 **Joint Steering Committee**. Within [***] after the Effective Date, the Parties shall establish a cross-functional, joint steering committee (the "***JSC***") composed of three (3) representatives from each Party that will oversee and manage the Collaboration between the Parties with respect to each Program. The JSC may, from time to time, establish subcommittees and Working Groups as it deems necessary to further the purposes of this Agreement. Each Party shall appoint its respective representatives to the JSC from time to time, and may change its

representatives, in its sole discretion, effective upon reasonable prior notice to the other Party designating such change. The representatives from each Party shall have appropriate technical credentials, experience and knowledge pertaining to and ongoing familiarity with the Research and Development of the applicable Programs. Each Party shall designate one (1) of its representatives on the JSC to serve as JSC co-chairpersons ("***JSC Co-Chairpersons***"), who will be jointly responsible for calling meetings of the JSC, circulating agendas and performing administrative tasks required to assure efficient operation of the JSC but shall not have any extra or additional votes or authority. The JSC Co-Chairpersons or their designees shall alternate responsibility for circulating agendas at least [***] prior to each meeting and distributing minutes of the meetings pursuant to Section 2.5.

2.3 **Working Groups**. The JSC may establish working groups consisting of members from both Precision and Novartis (each, a "***Working Group***") to oversee aspects of the activities of each Program. From time to time, the JSC may establish additional Working Groups as needed to oversee particular activities or projects. Each Working Group shall undertake the activities specified under this Agreement for such Working Group or otherwise delegated to it by the JSC. During the process of establishing each Working Group, such Working Group and the JSC shall agree regarding which matters such Working Group will resolve on its own and which matters such Working Group will advise the JSC regarding (and with respect to which such advice-specific matters the JSC will resolve). The Parties shall, at a minimum, establish a Working Group to coordinate Prosecution and Maintenance of Patents as described in Section 11.2 (the "***Patent Working Group***").

2.4 **Function and Powers of the JSC**. The JSC will:

(a) prepare, discuss, and approve initial Research Plans for each Program (including the applicable Research Budget set forth therein) and prepare, review, discuss, and approve any amendments or updates that may be necessary or desired to the Research Plans and applicable Research Budget;

(b) oversee the implementation of the Research Plans, including the activities, timing and deliverables thereunder, and coordination of such activities and timing across Programs;

(c) discuss the progress of the Research, Development, and the Programs generally, the Declaration of the Development Candidates and the selection, validation and development of the Licensed Products;

(d) address issues arising in the performance of the Research Plans;

(e) direct and oversee any operating Working Groups on all significant issues, and resolve disputed matters that may arise at the Working Groups;

(f) facilitate the exchange of Know-How or materials (pursuant to Section 4.10, Section 4.11 or Section 5.1, as applicable) as required hereunder; and

(g) perform any and all tasks and responsibilities that are expressly attributed to the JSC under this Agreement or as otherwise agreed by the Parties in writing.

2.5 **Meetings**. The JSC will meet at least once per Calendar Quarter for so long as the JSC remains in effect. The JSC may conduct such meetings by telephone, videoconference, or in person. Each Party may call special meetings of the JSC with at least [***] prior written notice, or a shorter time period in exigent circumstances, to resolve particular matters requested by such Party that are within the purview of the JSC. Meetings of the JSC are effective only if at least one (1) representative of each Party participates in such meeting. Each Alliance Manager shall be permitted to attend meetings of the JSC, and any Working Group, as a non-voting observer. Each Party may invite a reasonable number of other participants, in addition to its representatives, to attend JSC meetings in a non-voting capacity; provided that if either Party intends to have any Third Party (including any consultant) attend such a meeting, such Party shall provide prior written notice to the other Party. Such Party shall ensure that such Third Party is bound by confidentiality and non-use obligations consistent with the terms of this Agreement. Each Party is responsible for its own expenses incurred in connection with participating in and attending all such meetings. The JSC Co-Chairpersons or their designees shall keep minutes of each JSC meeting that record in writing all decisions made, action items assigned or completed and other appropriate matters. The JSC Co-Chairpersons or their designees shall send meeting minutes to all members of the JSC promptly after a meeting for review. Each JSC member shall have [***] from receipt in which to comment on and to approve the minutes (such approval not to be unreasonably withheld, conditioned or delayed). If a JSC member, within such time period, does not notify the JSC Co-Chairpersons or their designees that s/he does not approve of the minutes, the minutes shall be deemed to have been approved by such member. The Parties acknowledge and agree that, notwithstanding the requirements of this Section 2.5 for the JSC to meet once per Calendar Quarter, the Parties shall communicate and meet (as appropriate) on a more informal basis as needed to discuss the progress of the Programs.

2.6 **Decisions**. The JSC will endeavor to make decisions by consensus, with the representatives of each Party having, collectively, one (1) vote on behalf of that Party. If the JSC cannot reach consensus or a dispute arises that cannot be resolved within the JSC, either Party may refer such dispute to the Executive Officers for resolution. If consensus cannot be reached with respect to a decision within [***] after attempted resolution by the Executive Officers, then (a) Precision has the final decision-making authority with respect to (i) [***] and (ii) all matters within the purview of the Patent Working Group with respect to the Precision Patents, and (b) Novartis has the final decision-making authority with respect to [***]. Further, Precision shall have the right to make day-to-day decisions on the implementation of the Research Plan by or on behalf of Precision, provided such implementation is consistent with the Research Plan and Novartis does not reasonably object to such implementation. For the avoidance of doubt, the Patent Working Group and JSC do not have decision-making authority with respect to Prosecution and Maintenance of Patents, which is instead allocated between the Parties in accordance with Section 11.2.

2.7 **Authority**. The Alliance Managers, JSC, JSC Co-Chairpersons, and each Working Group have only the powers assigned expressly to them in this Article 2 and elsewhere in this Agreement (or in the case of Working Groups, as expressly assigned to them by the JSC). Each Party retains the rights, powers, and discretion granted to it under this Agreement and neither Party may delegate or vest such rights, powers, or discretion in the Alliance Manager, the JSC, the JSC Co-Chairpersons, or any Working Group, unless expressly provided for in this Agreement or the Parties expressly so agree in writing. The JSC shall not have the power to

amend, waive or modify any term of this Agreement, and no decision of the JSC shall be in contravention of any terms and conditions of this Agreement. It is understood and agreed that issues to be formally decided by the JSC are limited to those specific issues that are expressly provided in this Agreement to be decided by the JSC.

2.8 **Discontinuation of JSC**. The JSC will automatically disband on a Program-by Program basis on the earlier of (a) [***] or (b) the date on which the Program becomes a Terminated Program. Once disbanded, all approval rights of the JSC, or final decision-making authority granted to a Party pursuant to this Agreement, shall become approval rights of the corresponding Party (i.e., mutual agreement by the Parties or final decision-making authority by a Party). Notwithstanding the foregoing, neither the end of the Research Term nor the disbandment of the JSC pursuant to this Section 2.8 shall affect the existence of the Patent Working Group, which shall continue to meet during the Term, and the terms of Article 2 shall continue to apply to the Patent Working Group; provided that, notwithstanding the terms of Section 2.6, following disbandment of the JSC, any disputes of the Patent Working Group shall be directly referred to the Executive Officers for resolution, and if consensus cannot be reached with respect to a decision within [***] after attempted resolution by the Executive Officers, then Precision shall have final decision-making authority with respect to such dispute if it pertains to Precision Patents, and Novartis shall have final decision-making authority with respect to [***]. For the avoidance of doubt, the Patent Working Group and JSC do not have decision-making authority with respect to Prosecution and Maintenance of Patents, which is instead allocated between the Parties in accordance with Section 11.2.

ARTICLE 3

ADDITIONAL PAYLOADS OR REPLACEMENT COLLABORATION TARGET

3.1 **Initial Collaboration Target**. As of the Effective Date, the Collaboration activities will be for the purposes of the Research and Development of only the Initial Collaboration Target and Initial Payloads, but Novartis may add Additional Payloads or replace the Initial Collaboration Target with the Replacement Collaboration Target, subject to and in accordance with this Article 3.

3.2 **Additional Payload Option**.

3.2.1 **Reserved Payloads; Reserved Payload List**. During the period beginning on the Effective Date and ending on the earlier of (a) the fourth (4th) anniversary of the Effective Date and (b) the replacement of the Initial Collaboration Target with the Replacement Collaboration Target pursuant to Section 3.3 (the "***Option Period***"), subject to the terms and conditions of this Agreement, the Parties will maintain a list of Payloads (for clarity, other than any Initial Payload and any Unavailable Payloads) for potential inclusion as Additional Payloads under this Agreement in accordance with this Section 3.2 (such list, the "***Reserved Payload List***," and each such Payload on the Reserved Payload List, a "***Reserved Payload***"). The Reserved Payload List as of the Effective Date consists of the [***] Payloads set forth in Exhibit 3.2.1. Within [***] after the Effective Date (the "***Reserved Payload Selection Period***"), Novartis shall provide

written notice to Precision, as well as notification through the JSC, selecting [***] of such listed Payloads to remain on the Reserved Payload List after the end of the Reserved Payload Selection Period (which selection shall be final and irrevocable and be deemed to automatically update Exhibit 3.2.1 to include only such selected Payloads (if any) without further action by the Parties), and any Payload not so selected shall cease to constitute a Reserved Payload after such date. During the Option Period, a Reserved Payload shall not be considered an Unavailable Payload. If a Reserved Payload is not named by Novartis as an Additional Payload during the Option Period pursuant to Section 3.2.3, then from and after the expiration of the Option Period, such Reserved Payload will be deemed an Unavailable Payload and not a Reserved Payload.

3.2.2 **Payload Reservation**. During the Option Period, after the end of the Reserved Payload Selection Period, [***] with respect to each of the Reserved Payloads on the Reserved Payload List (i.e., any Payloads selected by Novartis during the Reserved Payload Selection Period in accordance with Section 3.2.1), Novartis may replace any such Reserved Payload in its sole discretion at any time during the Option Period by providing written notice to Precision, as well as notification through the JSC, specifying the identity of the Payload that Novartis desires to include in the Reserved Payload List, as well as the particular Reserved Payload that Novartis desires to replace with such Payload under this Agreement (a "***Reservation Request***"), provided that if such Payload is an Unavailable Payload at the time Precision receives such Reservation Request, then Precision shall within [***] of receipt of the Reservation Request provide written notice to Novartis that such Payload is an Unavailable Payload, and such Reservation Request shall have no further effect. If the Payload specified in such Reservation Request is not an Unavailable Payload, then upon receipt of the applicable Reservation Request by Precision, such Payload shall be deemed a Reserved Payload (which replacement shall be final and irrevocable and be deemed to automatically update Exhibit 3.2.1 to reflect such replacement without further action by the Parties) and the particular Reserved Payload that such Payload replaces shall be deemed an Unavailable Payload. For clarity, after the Reserved Payload Selection Period, (i) Novartis will not be able to reserve more than a maximum of [***] Payloads during the Option Period (inclusive of the up to [***] Reserved Payloads on the Reserved Payload List after the end of the Reserved Payload Selection Period), and (ii) the Reserved Payload List will not exceed [***] Payloads at any given time. Once a Reserved Payload has been nominated as an Additional Payload in accordance with Section 3.2.3, Novartis will not be able to replace such Payload on the Reserved Payload List with an additional Payload (i.e., the maximum size of the Reserved Payload List will be reduced by one (1) Payload).

3.2.3 **Option Exercise**. Solely with respect to the Initial Collaboration Target, Novartis will have the right, in its sole discretion, to add up to three (3) [***] Programs in accordance with this Section 3.2.3. During the Option Period, after the end of the Reserved Payload Selection Period, Novartis may name a Reserved Payload as an Additional Payload. Novartis may exercise such right in its sole discretion at any time during the Option Period by providing written notice to Precision, as well as notification through the JSC, specifying the identity of the Reserved Payload that Novartis desires to include as an Additional Payload under this Agreement. Any Additional Payload added pursuant to this Section 3.2.3 will be the subject of its corresponding [***] Program for

purposes of this Agreement. The maximum number of Additional Payloads that may be optioned by Novartis as the subject of [***] Programs under this Agreement is three (3).

3.2.4 **Option Exercise Fee**. As consideration for exercising an option to add a particular Reserved Payload as an Additional Payload in accordance with Section 3.2.3, Novartis shall pay to Precision a one-time fee of [***] (the "***Option Exercise Fee***"). Upon receipt of notice from Novartis exercising such option pursuant to Section 3.2.3, Precision will provide an invoice for the Option Exercise Fee, and Novartis will pay Precision the Option Exercise Fee in accordance with Section 9.7. Novartis shall pay the Option Exercise Fee for each Additional Payload that Novartis adds under this Agreement.

3.2.5 **Unavailable Payloads**. Promptly following the Effective Date, the Parties shall agree upon an independent Third Party to serve as an escrow agent for purposes of this Section 3.2.5 (the "***Escrow Agent***"). Following agreement on the Escrow Agent, if any Payload (for clarity, other than an Initial Payload or any Reserved Payload) becomes or has become an Unavailable Payload during the Option Period, Precision shall submit a complete and accurate list of Unavailable Payloads along with a copy of the applicable agreement, term sheet, or letter of intent related to each of such Unavailable Payloads, which copies may be submitted in redacted form (the "***Unavailable Payload Information***"), to the Escrow Agent, and shall provide the Escrow Agent with updated Unavailable Payload Information promptly upon any Payload becoming an Unavailable Payload or losing its status as an Unavailable Payload. Unavailable Payload Information shall be held by the Escrow Agent in confidence. If Novartis delivers a Reservation Request pursuant to Section 3.2.1 that specifies an Unavailable Payload, then by written notice to Precision and to the Escrow Agent, Novartis may require the Escrow Agent to confirm to Novartis that such Payload is an Unavailable Payload. In response to a particular Reservation Request, the Escrow Agent shall not provide to Novartis the identity of any other Payload that appears on the list of Unavailable Payloads or any details regarding any agreement (draft or otherwise), term sheet or letter of intent related to any Unavailable Payload, other than such confirmation.

3.3 **Replacement Collaboration Target**.

3.3.1 **Target Replacement**. During the Research Term, provided that Novartis has not previously delivered a Declaration of Development Candidate with respect to the Initial Program or any [***] Program, Novartis shall have the right, subject to the terms and conditions of this Agreement, to replace the Initial Collaboration Target with the Replacement Collaboration Target as the subject of the Collaboration. Novartis may exercise such right in its sole discretion by providing written notice to Precision, as well as notification through the JSC, specifying its intent to make such replacement (such notice, the "***Replacement Notice***"). Upon delivery of the Replacement Notice in accordance with this Section 3.3.1, (a) the Collaboration will cease with respect to the Initial Program and any [***] Program then in effect and the Collaboration will be solely for the purposes of the Replacement Program, (b) the Initial Program and any [***] Program then in effect will each cease to be a Program and will be deemed a Terminated Program and all rights in such Terminated Program(s) shall revert to Precision in accordance with Section 15.6, (c) all [***] shall cease to be Licensed ARCUS Nucleases

and all products including [***] shall cease to be Licensed Products, and (d) the Initial Collaboration Target and all Payloads (including, for clarity, the Initial Payloads, all Reserved Payloads, and all Additional Payloads) shall cease to be subject to the rights and obligations of the Parties under this Agreement.

3.3.2 **Replacement Fee**. As consideration for replacing the Initial Collaboration Target with the Replacement Collaboration Target in accordance with Section 3.3.1, Novartis shall pay to Precision a one-time fee of [***] (the "***Replacement Fee***"). Upon receipt of the Replacement Notice from Novartis, Precision will provide an invoice for the Replacement Fee, and Novartis will pay Precision the Replacement Fee in accordance with Section 9.7.

3.4 **Reservation of Rights**. Precision will be free at all times to grant rights to any Person for or with respect to any target, gene or Payload (including any Unavailable Payload), excluding only (a) the Initial Collaboration Target, (b) the Initial Payloads, (c) the Reserved Payloads, (d) any Additional Payloads, and (e) the Replacement Collaboration Target, and in each case (a)-(e) only to the extent that they continue to be subject to the rights and obligations of the Parties under this Agreement.

ARTICLE 4

COLLABORATION AND RESEARCH

4.1 **Overview and Responsibilities**. Precision and Novartis will collaborate in a Research and Development program with respect to Licensed Products in accordance with this Agreement (the "***Collaboration***"). During the Research Term, Precision will lead and be primarily responsible for the design, creation, selection and *in vitro* development and optimization of an ARCUS Nuclease for the Initial Collaboration Target or, if applicable, the Replacement Collaboration Target ("***Research***") to support further Development by Novartis of Licensed Products for the applicable Program(s). All such Research shall be conducted in accordance with the applicable Research Plans, with funding managed as set forth in Section 4.7 below. For the avoidance of doubt, Novartis will be responsible at its sole cost and expense for all other Development of the Licensed Product(s). For clarity, the Parties intend (a) for such Research to yield ARCUS Nucleases Directed Against the Initial Collaboration Target for potential selection by Novartis pursuant to the applicable Research Plan or, if applicable, ARCUS Nucleases Directed Against the Replacement Collaboration Target for potential selection by Novartis pursuant to the applicable Research Plan and (b) with respect to the Initial Program or Replacement Program, Novartis will select a Development Candidate based on such ARCUS Nucleases and notify the JSC in writing of its selection.

4.2 **Diligence Efforts**. Each Party shall use Commercially Reasonable Efforts to execute and to perform, or cause to be performed, in a good scientific manner and in compliance with Applicable Law, the Research and Development activities assigned to it in each Research Plan.

4.3 **Research Term; Declaration of Development Candidates**.

4.3.1 **Research Term**. The initial term of the Collaboration will be [***] from the Effective Date, provided such term will be extended by a single period of [***] in total upon expiry thereof (collectively, the "***Research Term***") if (a) the Replacement Collaboration Target is substituted for the Initial Collaboration Target pursuant to Section 3.3 or (b) Novartis exercises its option with respect to one or more [***] Programs pursuant to Section 3.2.3.

4.3.2 **Selection of Licensed ARCUS Nuclease; Declaration of Development Candidates**. No later than [***], Novartis shall provide written notice to Precision identifying the [***] or the [***], as applicable, that Novartis selects to be the Licensed ARCUS Nuclease under this Agreement following the expiration of such [***] period. Novartis shall provide written notice to Precision, as well as notification through the JSC, of Novartis's Declaration of a Development Candidate (in its sole discretion), if any, arising from the Initial Program or Replacement Program, as applicable, and each [***] Program. Novartis shall not conduct any GLP Toxicology Study with respect to any Licensed Product arising from a given Program until Novartis has delivered a Declaration of a Development Candidate for a Licensed Product arising from such Program.

4.3.3 **Target Replacement**. Upon Novartis's delivery of a Declaration of a Development Candidate with respect to the Initial Program or any [***] Program, Novartis's right to replace the Initial Collaboration Target with the Replacement Collaboration Target in accordance with Section 3.3.1 shall cease, and the Replacement Collaboration Target and all ARCUS Nucleases Directed Against the Replacement Collaboration Target shall cease to be subject to the rights and obligations of the Parties, except to the extent expressly set forth with respect to the human [***] in Section 8.1, as applicable.

4.4 **Research Plans**.

4.4.1 **Content**. The Parties shall conduct the Initial Program and the Replacement Program, if applicable, pursuant to a comprehensive written research plan (each, a "***Research Plan***") that sets forth, for each Program: (a) the objective of the applicable Research Plan and the Research and Development activities to be conducted by each of the Parties, and the allocation of activities between the Parties; (b) the expected resources to be allocated to and the anticipated number of FTEs to be dedicated to performing such Research and Development, including the applicable detailed budget for the Precision FTE Costs and External Costs for Precision's research activities thereunder (the "***Research Budget***"); and (c) the anticipated timeline and milestones of such activities. The Research Plan, and its related Research Budget, for the Initial Collaboration Target is attached hereto as Exhibit 4.4.1 (the "***Initial Research Plan***"). The Research Plan, and its related Research Budget, for the Replacement Program, if applicable, shall be drafted by Precision within [***] following substitution of the Replacement Collaboration Target for the Initial Collaboration Target pursuant to Section 3.3, and shall substantially follow, in form and substance, the form of the Initial Research Plan, except to the extent the Parties agree to any deviations from such form with respect to the Replacement Program. The JSC shall decide whether to approve such Research Plan within [***] of submission of such Research Plan to the JSC. Notwithstanding anything to the contrary in

this Agreement, each Party's obligations under the Research Plan(s) shall not be construed as an obligation to achieve any outcome or guarantee that any Research or Development efforts will be successful.

4.4.2 **Approval and Amendments**. During the Research Term, the JSC shall regularly review the Research Plans, the progress of activities being conducted under the Research Plans, and the Research Budget, in no event less frequently than once each Calendar Year. Either Party may propose amendments to the Research Plan for a particular Program from time to time as appropriate, to take into account completion, commencement, or cessation of activities contemplated in the then-current Research Plan for such Program or any newly available information related to such Program. Such amendments shall be effective upon JSC approval and subject to decision making in accordance with Section 2.6.

4.5 **[***] Programs**. Upon option exercise for an [***] Program, Novartis shall conduct, and will be responsible at its sole cost and expense for, all Development of the Licensed Product(s) arising from such [***] Program. Within [***] of option exercise for an [***] Program, Novartis shall provide to Precision, through the JSC, a written summary of Development activities that Novartis plans to undertake in such [***] Program. Such plan shall be for informational purposes only and shall not be binding on either Party. For clarity, Precision shall not have any obligation to conduct any Research or Development activities with respect to any [***] Program unless mutually agreed in writing by the Parties. Novartis's Declaration of Development Candidate for an [***] Program shall be in accordance with, and conduct of GLP Toxicology Studies for any Licensed Product that is the subject of such [***] Program shall be subject to, Section 4.3.2.

4.6 **Records; Reports**.

4.6.1 **Records**. Precision shall maintain, or cause to be maintained[***] complete and accurate records of its Research data and results for each Program in sufficient detail and in a good scientific manner appropriate for scientific, patent, and regulatory purposes, which records will reasonably reflect all work performed by or on behalf of Precision under the applicable Research Plan for each Program. Novartis may request a copy of any such records of Precision, except that Precision may redact any portion of such records that Precision reasonably determines to constitute Confidential Proprietary Information that is not licensed to Novartis hereunder, or to which Novartis does not otherwise have a right hereunder.

4.6.2 **Reports and Data Package**. Precision shall regularly report to Novartis through the JSC (or its designated Working Group) its results in conducting Research under the applicable Research Plan for each Program. For each Program, Precision shall provide the JSC with: (a) the deliverables set forth in the Research Plan for such Program in accordance with such Research Plan, including a written report summarizing the data and information generated under each Program, within [***] after the completion of Precision's Research for such Program; and (b) on a [***] basis during the applicable Research Term, all data and results generated by or on behalf of Precision in performance of the Research for such Program under this Agreement. In no event will

Precision be required to provide Novartis or the JSC any data, results, or information outside the scope of the Research Plan.

4.7 **Program Funding.**

4.7.1 **Precision Research Costs**. Novartis shall be responsible for one hundred percent (100%) of its own costs incurred in performing the activities assigned to it under the applicable Research Plan and, subject to this Section 4.7, one hundred percent (100%) of the Precision FTE costs (collectively, the "***Precision FTE Costs***") and External Costs actually incurred by Precision in performing the activities assigned to it under the applicable Research Plan. The sum of Precision FTE Costs and External Costs that Novartis will be obligated to reimburse under this Agreement with respect to the Initial Program shall not exceed [***] (the "***Budget Cap***"), unless agreed otherwise by Novartis in writing.

4.7.2 **Precision Research Costs Estimates**. No later than [***] following the beginning of each Calendar Quarter, Precision shall provide to Novartis a good faith, non-binding estimate (in a form to be agreed by the JSC) of the Research Costs it anticipates incurring during such Calendar Quarter under each Research Plan.

4.7.3 **Research Costs Invoicing and Payment.** Within [***] after the end of each Calendar Quarter during the performance of the Research, Precision shall submit to Novartis an invoice (accompanied by reasonable supporting documents) setting forth the Research Costs actually incurred by Precision in such Calendar Quarter to perform activities assigned to it under a Research Plan in accordance with the Research Budget set forth therein. Such accompanying documentation will include (a) the specific budgeted item set forth in the Research Plan (e.g., FTEs conducting Research activities), (b) the applicable Research activities that were conducted; and (c) if applicable, documentation supporting any [***] External Costs. Novartis shall pay the undisputed amount of all such invoices within [***] after the date of its receipt of such invoice. If Novartis disputes in good faith any portion of an invoice for Research Costs, Novartis shall promptly notify Precision and the Parties shall use good faith efforts to resolve such dispute expediently. Upon resolution of such dispute, any Research Costs subject to such dispute shall be paid by Novartis at the next Calendar Quarter invoice submission by Precision. The Research Costs to be reimbursed to Precision by Novartis must be incurred in accordance with the respective Research Plan and shall not exceed the Research Budget set forth therein (y) for the Research Term or (z) by [***] in any Calendar Quarter as compared to the estimate provided pursuant to Section 4.7.2 for such Calendar Quarter; provided that Precision shall have the right to re-allocate the funding under the Research Budget between Precision FTE Costs and External Costs; and provided further that any costs sought by Precision to be reallocated from Precision FTE Costs to External Costs will require JSC approval. External Costs incurred by Precision, whether initially budgeted or due to such reallocation, will be reimbursed by Novartis as a pass-through of the direct costs charged to Precision by the applicable Permitted Contractor without any mark-up. [***] Precision shall promptly notify Novartis in the event that it anticipates incurring Research Costs which would exceed the foregoing thresholds. Any amount exceeding the aforementioned [***] variance threshold in a Calendar Quarter will

automatically roll over to the following Calendar Quarter and will be included in the next quarterly estimate for Research Costs provided pursuant to Section 4.7.2. Any Research Costs incurred by Precision with respect to the Initial Program in excess of the Budget Cap shall be borne by Precision unless the Research Budget is increased by an amendment of the Research Plan approved by the JSC in accordance with Section 4.4.2.

4.8 **Certain Standards Applicable to Work**. All Research and Development conducted by either Party for non-regulated work under this Agreement will be conducted in accordance with the Research Plans and all Applicable Laws, including those regarding data privacy and data security. If it has not done so prior to the Effective Date, a duly authorized representative of Novartis may make an on-site visit to Precision for the purpose of conducting a quality assessment or quality audit for non-regulated work. Additionally, Novartis may conduct compliance audits of Precision or Precision's Affiliates and Third Party subcontractors engaged in work related to this Agreement, during normal business hours, no more than [***], provided Novartis has requested such audit with written notice of at least [***] and such audit does not unreasonably interfere with Precision's or its Affiliates' or Third Party subcontractors' operations. Novartis's representative performing such audit shall keep confidential any information obtained during such inspection. All such audits shall be done at Novartis's cost and expense and in accordance with Article 14.

4.9 **Subcontracting**. Each Party may engage its Affiliates or Third Party subcontractors (including contract research organizations and contract manufacturing organizations) to perform such portions of its research obligations under the Program that it customarily engages for its other similar research activities; provided that any subcontractor for which Novartis will pay External Costs shall be subject to Novartis's reasonable approval (such subcontractor a "***Permitted Contractor***"). The activities of any such Third Party subcontractors will be considered activities of such subcontracting Party under this Agreement. The subcontracting Party shall ensure compliance by such Third Party subcontractors with the terms of this Agreement, including any applicable Research Plans. The subcontracting Party shall ensure, prior to engaging any Third Party subcontractor, that such Third Party subcontractor is subject to written agreements containing terms and conditions that: (a) protect the rights of the Parties under this Agreement, including by imposing obligations of confidentiality on each such Third Party subcontractor that are no less than the obligations of confidentiality on each Party under this Agreement and obligations consistent with the intellectual property provisions of Article 11; (b) do not under any circumstance impose any payment obligations or liability on the non-subcontracting Party; and (c) are otherwise consistent with the terms of this Agreement.

4.10 **Novartis Materials**. In the event that it is necessary to execute the Research Plan, Novartis may need to transfer certain materials to Precision that are not otherwise delivered under a supply or other separate agreement between the Parties or their Affiliates ("***Novartis Materials***"). These Novartis Materials will be used by Precision only for Research and Development work pursuant to this Agreement. In each such case, the Parties will mutually agree on the terms of such material transfer, which in any case shall be subject to the terms of Article 11 of this Agreement. Any such materials provided to Precision shall be accompanied by a materials transfer record substantially in the form of Exhibit 4.10 (each a "***Materials Transfer Record***"). In the event of such transfer, unless otherwise mutually agreed, Novartis shall be responsible for obtaining all necessary approvals or filings as required under Applicable Laws for the exportation of any such materials to Precision and Precision shall be responsible for obtaining all necessary approvals or filings as required under Applicable Laws

for their importation and use by Precision**.** For the avoidance of doubt, all Novartis Materials will at all times remain the property of Novartis and will be held confidential in respect to Third Parties and will not be transferred to a Third Party (other than a Sublicensee or a Permitted Contractor engaged in accordance with Section 4.9) without prior written permission of Novartis. Upon the termination of this Agreement, Precision will, at Novartis's sole discretion and Precision's cost, either (a) dispose of any residual Novartis Materials not consumed by Precision in the performance of this Agreement in accordance with Applicable Laws, or (b) upon request, return such Novartis Materials to Novartis.

4.11 **Precision Materials**. In order to execute the Research Plan, Precision may need to transfer certain materials to Novartis that are not otherwise delivered under a supply or other separate agreement between the Parties or their Affiliates ("***Precision Materials***"). These Precision Materials will be used by Novartis only for Development work pursuant to this Agreement. Unless otherwise mutually agreed, Precision shall be responsible for obtaining all necessary approvals or filings as required under Applicable Laws for the exportation of Precision Materials to Novartis and Novartis shall be responsible for obtaining all necessary approvals or filings as required under Applicable Laws for their importation and use by Novartis. All Precision Materials will at all times remain the property of Precision and will be held confidential in respect to Third Parties and will not be transferred to a Third Party (other than a Sublicensee or a subcontractor engaged in accordance with Section 4.9) without prior written permission of Precision. Upon the termination of this Agreement, Novartis will, at Precision's sole discretion and Novartis's cost, either (a) dispose of any residual Precision Materials not consumed by Novartis in the performance of this Agreement in accordance with Applicable Laws, or (b) upon request, return such Precision Materials to Precision. Any such materials provided to Novartis by Precision shall be accompanied by a Materials Transfer Record.

ARTICLE 5

DEVELOPMENT AND REGULATORY MATTERS

5.1 **Development Responsibilities**. Novartis shall lead, and have sole responsibility and control for, the Development of all Licensed Products, including the determination of whether to file an IND with respect to any Licensed Product and for preparation and submission of the IND filing for each Licensed Product. Subject to the terms of this Agreement and the applicable Research Plan, all decisions concerning the Development of Licensed Products, including the clinical and regulatory strategy of Licensed Products covered under this Agreement, shall be within the sole discretion of Novartis. Novartis shall be solely responsible (as between the Parties) for all costs and expenses of Development. Following the Effective Date, and until the date which is [***], Precision shall, on a quarterly basis, share with Novartis [***].

5.2 **Diligence Efforts**. Following the Research Term, Novartis shall use Commercially Reasonable Efforts to further Develop and seek Regulatory Approval for at least [***] Licensed Product per Program (i.e., [***] for the Initial Program or the Replacement Program, and [***] for each [***] Program exercised by Novartis in accordance with Section

3.2.3) in [***], subject to Section 6.3. The activities of Novartis's Affiliates and Sublicensees shall be considered the activities of Novartis for purposes of this Section 5.2.

5.3 **Reports**. Novartis shall keep Precision reasonably informed as to the progress and results of its and its Affiliates' and Sublicensees' Development activities under this Agreement through the JSC while the JSC remains in effect. Thereafter, within [***], Novartis will provide to Precision a confidential [***] written report summarizing the material Development activities it has undertaken during the preceding [***] period and the results thereof, and the material Development activities it expects to take in the following [***] period, including any Milestones Events expected to be achieved. Novartis's obligations under this Section 5.3 shall cease with respect to a Licensed Product [***].

5.4 **Regulatory Responsibilities**.

5.4.1 **Novartis Responsibility and Control**. Subject to Section 5.4.2, except as provided under a Research Plan, as between the Parties, Novartis shall have sole responsibility for and control of the preparation, submission, and maintenance of all Regulatory Filings and obtaining and maintaining all Regulatory Approvals with respect to Licensed Products, and shall have sole control over all interactions with the applicable Regulatory Authority, including all correspondence to or with the applicable Regulatory Authority. Precision shall reasonably cooperate with Novartis, at Novartis's reasonable request and expense, with respect to any regulatory matters related to Licensed Products. Novartis will own all right, title and interest in and to any and all Regulatory Filings and Regulatory Approvals for Licensed Products and, as between the Parties, all such Regulatory Filings and Regulatory Approvals will be held in the name of Novartis. Precision shall execute all documents and take all actions as are necessary or reasonably requested by Novartis to vest such title in Novartis. [***]

5.4.2 **ARCUS Regulatory Matters**. Concurrent with the annual report provided by Novartis pursuant to Section 5.3, Novartis shall provide a summary of feedback received from Regulatory Authorities concerning the Development, Manufacture or Commercialization of Licensed Products during the preceding Calendar Year. In addition, Novartis shall (a) keep Precision apprised of communications, requests or feedback from any Regulatory Authority with respect to any ARCUS Technology, that in Novartis's reasonable view would affect Precision's development, manufacturing or commercialization of *in vivo* or *ex vivo* gene editing products utilizing the ARCUS Technology, or that otherwise requires urgent input from Precision, and (b) provide to Precision for review copies of any communications with, or received from, the Regulatory Authorities, or portions thereof, to the extent relating to ARCUS Nucleases or ARCUS Technology. Within [***] after the end of each Calendar Year, Precision will provide to Novartis with a confidential written report summarizing, to the extent such information is Controlled by Precision, feedback received from Regulatory Authorities during the preceding Calendar Year insofar as it concerns the development, manufacture, or commercialization *in vivo* or *ex vivo* gene editing products utilizing the ARCUS Technology. [***]

5.5 **Adverse Event Reporting**. Novartis shall establish, hold, and maintain the global safety database for Licensed Products with respect to information on adverse events concerning the Licensed Products, as and to the extent required by Applicable Law.

ARTICLE 6

COMMERCIALIZATION AND MANUFACTURING

6.1 **Commercialization**. Novartis shall have the sole right and responsibility for, and shall bear all costs associated with, the Commercialization of Licensed Products, including Manufacturing, distribution, marketing, and sales activities. Subject to the terms of this Agreement, all decisions concerning Commercialization of Licensed Products, including the marketing and sales of Licensed Products, and the design, price, and promotion of Licensed Products, shall be within Novartis's sole discretion.

6.2 **Diligence Efforts**. Following the receipt of Marketing Authorization for the relevant Licensed Product, Novartis shall use Commercially Reasonable Efforts to Commercialize at least [***] Licensed Product per Program (i.e., [***] for the Initial Program or the Replacement Program, and [***] for each [***] Program exercised by Novartis in accordance with Section 3.2.3) in [***], subject to Section 6.3. The activities of Novartis's Affiliates and Sublicensees shall be considered the activities of Novartis for purposes of this Section 6.2.

6.3 **Global Access Commitments**. The Parties acknowledge and agree that (i) the Parties intend that funding for the Initial Program (and, if applicable, the Replacement Program) will be supported in part by a grant under the Gates Foundation Agreement, [***] (such commitments the "***Global Access Commitments***"). Novartis's diligence obligations under Sections 4.2, 5.2 and 6.2 of this Agreement will at all times be subject to Novartis's Global Access Commitments, as applicable, and nothing in this Agreement shall be deemed to require Novartis to undertake any action that is inconsistent with the Global Access Commitments.

6.4 **Manufacturing.** Novartis shall be solely responsible for Manufacturing (or having Manufactured through a contract manufacturing organization) the Licensed Products, including all Chemistry, Manufacturing and Controls development for the Licensed Products, for Development use and for Commercialization.

ARTICLE 7

LICENSE RIGHTS

7.1 **License Grants to Novartis**.

7.1.1 **Exclusive License to Precision Product IP**. Subject to the terms and conditions of this Agreement, Precision (on behalf of itself and its Affiliates) hereby grants to Novartis an exclusive (even as to Precision and its Affiliates), royalty-bearing (as set forth in Section 9.4) license, with the right to grant sublicenses (through multiple tiers, as provided in Section 7.3), under the Precision Product IP to Develop, Manufacture, make, have made, use, import, export, offer for sale, sell, Commercialize, or otherwise

exploit Licensed Products in the Field in the Territory. For clarity, Novartis shall have the right, at any time, to combine the Licensed ARCUS Nuclease(s) with Variable Components or other technologies owned or licensed by Novartis, and to Develop and Commercialize Licensed Products based on such combinations, but the foregoing license does not include any rights with respect to Variable Components or other technologies, products or therapies with which a Licensed ARCUS Nuclease or a Licensed Product may be combined. Novartis acknowledges and agrees that the foregoing license does not include any right to, and Novartis shall not, and shall not permit any of its Affiliates or its or their Sublicensees to, modify any Licensed ARCUS Nucleases without Precision's prior written consent.

7.1.2 **Non-Exclusive License to Precision Platform IP**. Subject to the terms and conditions of this Agreement, Precision (on behalf of itself and its Affiliates) hereby grants to Novartis a non-exclusive, royalty-bearing (as set forth in Section 9.4) license, with the right to grant sublicenses (through multiple tiers, as provided in Section 7.3), under the Precision Platform IP to Develop, Manufacture, make, have made, use, import, export, offer for sale, sell, Commercialize, or otherwise exploit Licensed Products in the Field in the Territory. For clarity, the foregoing license set forth in this Section 7.1.2 is intended to provide Novartis a "freedom to operate" license with respect to the Precision Platform IP solely for the Development, making, having made, using, importing, exporting, offering for sale, selling, Commercialization, and other exploitation of Licensed Products, and not for Novartis's independent use of the Precision Platform IP, and does not include any rights with respect to Variable Components or other technologies, products or therapies with which a Licensed ARCUS Nuclease or a Licensed Product may be combined. Novartis acknowledges and agrees that the foregoing licenses do not include any rights to, and Novartis will not have any right to (a) access or receive any ARCUS Technology, (b) design, create, select, or optimize any ARCUS Nucleases using the ARCUS Technology, or (c) otherwise use the ARCUS Technology as a gene editing or engineering tool.

7.2 **License Grant to Precision**. Subject to the terms and conditions of this Agreement, Novartis hereby grants to Precision a fully paid, royalty-free, non-sub-licensable (except to Third Party subcontractors acting on its behalf, as permitted by Section 4.9), non-exclusive license under the Novartis Background IP and Novartis Collaboration IP, in the Territory solely as and to the extent necessary for Precision or its Affiliates (or Third Party subcontractors) to conduct Research pursuant to the Research Plans during the Research Term. Precision acknowledges and agrees that the foregoing license does not include any right to, and Precision shall not, and shall not permit any of its Affiliates or its or their Sublicensees to, modify any Novartis Materials without Novartis's prior written consent.

7.3 **Third Party Sublicenses**. Novartis and Precision may grant one or more sublicenses under the rights and licenses granted to it under Section 7.1 (in the case of Novartis) or Section 7.2 (in the case of Precision), in full or in part, to Third Parties (with the right to sublicense through multiple tiers); provided, that: (a) any such permitted sublicense is consistent with and subject to the terms and conditions of this Agreement, including the confidentiality provisions of Article 14 and the intellectual property provisions of Article 11; and (b) the Party granting such sublicense shall remain responsible for performance of such Party's obligations

under this Agreement and shall be responsible for all actions of each such sublicensee as if such sublicensee were the Party hereunder. Notwithstanding the foregoing, during the Research Term, Novartis shall not grant any sublicenses to a Third Party, other than a consultant or contractor engaged for the applicable sublicensed activities in accordance with Section 4.9 by or on behalf of Novartis or its Affiliates, without Precision's prior written consent. Each Party shall ensure that each sublicense under the licenses granted to it under Section 7.1 (in the case of Novartis) or Section 7.2 (in the case of Precision) grants the other Party rights with respect to Inventions discovered, created, conceived or reduced to practice by the Sublicensee under such sublicense as if such Inventions were discovered, created, conceived or reduced to practice by the sublicensing Party in the course of performing activities under this Agreement (with the exception of improvements to the Sublicensee's background technology that are unrelated to the intellectual property that is the subject of this Agreement). Novartis shall require each Sublicensee to notify Novartis of the achievement of any Milestone Event by such Sublicensee. In addition, to the extent required by the Cellectis Agreement, each sublicense granted by Novartis under any Patents within Precision Product IP must grant the same scope of rights for all Patents within Precision Product IP and each sublicense granted by Novartis under any Patents within Precision Platform IP must grant the same scope of rights for all Patents within Precision Platform IP. Novartis shall provide Precision with prompt written notice of any grant of sublicense to a Sublicensee of the rights and licenses granted to Novartis under Section 7.1 (but excluding any sublicenses solely for the distribution, marketing or promotion of Licensed Products) and the identity of the applicable Sublicensee. Upon request, Novartis shall provide Precision with a fully-executed copy of any sublicense (or amendment thereto) that includes [***], provided that Novartis may redact confidential or commercially sensitive information from any such sublicense or amendment, provided that sufficient information remains un-redacted to allow Precision to assess whether Novartis is in compliance with its obligations under this Agreement.

7.4 **Retention of Rights; No Implied Rights**. Subject to the terms and conditions of this Agreement, Novartis agrees that Precision may: (a) practice the Precision Product IP to exercise its rights and perform its obligations under this Agreement; (b) conduct research related to the ARCUS Technology; and (c) practice and license the Precision Product IP outside the scope of the license granted to Novartis under Section 7.1.1. Except as expressly set forth in this Agreement, neither Party shall be granted, by implication, estoppel or otherwise, any license or right to or under any other intellectual property interest, including any trademarks, Know-How, or Patents, of the other Party. Novartis shall not practice, and shall not permit or cause any of its Affiliates to practice, any Precision Technology for any purpose other than as expressly authorized in this Agreement.

7.5 **Safe Harbor Research**. Notwithstanding anything to the contrary in this Agreement, by entering into this Agreement, neither Party is forfeiting any rights that such Party may have to perform research activities in compliance with 35 U.S.C. § 271(e)(1) or any experimental or research use exemption that may apply under Applicable Law or in any country.

7.6 **Existing In-License Agreements**.

7.6.1 **Cellectis Patents.** Novartis acknowledges and agrees that rights under certain Precision Patents are licensed to Precision by Cellectis S.A. (the "***Cellectis***

Patents") under that certain Patent Cross-License Agreement between Cellectis S.A. and Precision dated January 23, 2014 (the "***Cellectis Agreement***"), and, notwithstanding any exclusive license granted to Novartis under this Agreement, (a) Cellectis S.A. retains rights under the Cellectis Patents and is not restricted from granting rights to Third Parties under the Cellectis Patents, (b) any licenses and rights granted by Precision to Novartis under the Cellectis Patents are granted only within the permissible scope of sublicenses granted under the Cellectis Agreement, and (c) pursuant to the Cellectis Agreement, Cellectis S.A. retains non-exclusive rights under certain Precision Patents identified in the Cellectis Agreement, which may be further sublicensed by Cellectis S.A. without Precision control or consent. Novartis acknowledges and agrees that any exercise of any right by Cellectis S.A., or by any Third Party through Cellectis S.A., under the Cellectis Agreement shall not constitute a breach of this Agreement by Precision.

7.6.2 **Duke IP.** Novartis acknowledges and agrees that any licenses and rights granted by Precision to Novartis under the Duke IP are granted subject to the terms and conditions of the Duke Agreement, including Duke's right to practice under the Duke IP for its own internal, non-commercial, educational, research and clinical purposes, and subject to the rights of the United States Government and applicable limitations under 37 C.F.R. § 401, Public Law 96-517 and Public Law 98-620 resulting from the United States Government's funding of research leading to creation of the Duke IP. Without limiting the foregoing, Novartis agrees to comply with any obligations resulting from such government rights with respect to its practice of the Duke IP (if any) under this Agreement.

7.7 **Preservation of Existing In-License Agreements.** To the extent relating to the Licensed Products, Precision shall, and shall procure that its Affiliates shall, (a) maintain the Existing In-License Agreements in full force and effect in accordance with their terms and conditions and keep Novartis reasonably informed in this regard and (b) promptly provide notice to Novartis in the event any disputes arise under the Existing In-License Agreements or in the event Precision receives any notices from Duke or Cellectis S.A. under such parties' respective Existing In-License Agreement which concern the Duke IP or Cellectis Patents or rights with respect thereto. Without limiting the foregoing and Section 9.6, Precision shall not (y) commit any acts or permit the occurrence of any omissions that could reasonably be expected to cause breach or termination of the Existing In-License Agreements or (z) amend or otherwise modify or permit to be amended or modified, the Existing In-License Agreements, in any way that would prejudice Novartis's rights under this Agreement or its ability to continue to Develop, Manufacture, make, have made, use, import, export, offer for sale, sell, Commercialize, or otherwise exploit Licensed Products. In the event any Existing In-License Agreement is terminated, the Parties agree that Novartis may offset from the amounts due to Precision under this Agreement any amounts Novartis is required to pay to the applicable counterparty for the licenses covered by such terminated Existing In-License Agreement, and any contrary term in this Agreement (including Section 9.4.6) shall be of no effect (and, in the event Novartis cannot offset such amounts against payments due to Precision for any reason, Precision shall reimburse Novartis within [***] following Novartis providing Precision with a written request for reimbursement of such amounts).

7.8 **Bill & Melinda Gates Foundation**.

7.8.1 Precision acknowledges and agrees that funding for the Initial Program (and, if applicable, the Replacement Program) is intended to be supported in part by a grant provided pursuant to that certain Grant Agreement (Investment ID [***]) entered into between Novartis Institutes for BioMedical Research, Inc. and the Bill & Melinda Gates Foundation dated November 20, 2020 (the "***Gates Foundation Agreement***"), and that Novartis's Development and Commercialization activities with respect to the Initial Program and Replacement Program will, as a result of utilization of funding from such grant in the Initial Program and Replacement Program, be subject to Novartis's obligations under the Gates Foundation Agreement, as applicable. For clarity, however, no such funding will be included in any payment to Precision hereunder. Precision acknowledges and agrees that (a) [***], (b) [***], and (c) [***] shall in each case (a)-(c) not constitute a breach of this Agreement by Novartis. [***]

7.8.2 Novartis shall promptly provide notice to Precision in the event any dispute arises under the Gates Foundation Agreement, or in the event Novartis receives from the Bill & Melinda Gates Foundation any request for information specifically concerning or request for access to any Precision Technology.

7.8.3 The Parties acknowledge and agree that [***].

7.9 **Consideration**. The Parties acknowledge that each of the licenses and rights granted by Precision in this Agreement and each of the provisions of this Agreement for efforts or assistance by Precision and access to Precision Technology, individually and collectively, constitute good, valuable and sufficient consideration for each and all of the fees and payments called for hereunder and for each and all of the other obligations of Novartis, its Affiliates and its and their Sublicensees; and the Parties further acknowledge that the individual and collective rights under and access to Precision Technology renders the way in which those fees and payments hereunder are determined, their amount (and potential reduction) and their duration, appropriate and desirable as a matter of convenience.

ARTICLE 8

EXCLUSIVITY

8.1 **Precision Exclusivity Obligations**. During the Term, except for Precision's conduct of activities under this Agreement, Precision [***].

8.2 **Transactions Involving Competing Programs**.

8.2.1 **Acquisition of Existing Competing Program**. Notwithstanding the exclusivity obligations set forth in Section 8.1, if, after the Effective Date, any Third Party becomes [***] as a result of a merger, acquisition, consolidation, asset sale, or other similar transaction (whether in a single transaction or series of related transactions), and, as of the closing date of such transaction, such Third Party is engaged in any activities [***] (such activities, a "***Competing Program***"), then continuation of the relevant Competing Program shall not be a breach of this Agreement provided that Precision

provides Novartis with written notice of such transaction promptly, but no later than [***], and Precision [***].

8.2.2 **Existing Competing Program of a Precision Acquirer**. For the avoidance of doubt, Section 8.1 shall not be construed under any circumstances to apply to an Acquirer of Precision. If after the Effective Date any Third Party becomes an Acquirer of Precision as a result of a Change of Control of Precision, and, as of the closing date of such transaction, such Acquirer is engaged in a Competing Program, then the provisions of Section 17.8 shall apply.

ARTICLE 9

FEES, ROYALTIES, & PAYMENTS

9.1 **Upfront Payment**. As partial consideration for the rights granted by Precision to Novartis pursuant to the terms of this Agreement, Novartis shall pay to Precision a one-time payment equal to Fifty Million Dollars ($50,000,000). Promptly following the Execution Date, Precision will provide an invoice for such payment, and Novartis will pay Precision such payment in accordance with Section 9.7 within [***] following receipt of the invoice.

9.2 **Equity Investment**. As partial consideration for the rights granted by Precision to Novartis pursuant to the terms of this Agreement, as of the Execution Date, the Parties have entered into the Stock Purchase Agreement, whereby Novartis will purchase Twenty-Five Million Dollars ($25,000,000) of stock in Precision.

9.3 **Milestone Payments**.

9.3.1 Novartis will provide Precision with written notice (a "***Development Milestone Event Notice***") of any Licensed Product that includes a particular Payload or any Replacement Product achieving a development milestone event set forth in Table 9.3 below (each, a "***Development Milestone Event***"). Such notice will be provided within [***] after such Development Milestone Event is achieved by Novartis or any of its Affiliates. In the case such Development Milestone Event is achieved by a Sublicensee, Novartis's notice shall be provided within [***] after Novartis receives notice from the corresponding Sublicensee.

9.3.2 Novartis will provide Precision with written notice (a "***Commercial Milestone Event Notice***") of any Licensed Product achieving a commercial milestone event set forth in Table 9.3 (each, a "***Commercial Milestone Event***") concurrent with Novartis's royalty report issued pursuant to Section 9.4.8.

9.3.3 Upon the achievement of a Milestone Event, Novartis shall pay to Precision the corresponding milestone payment indicated in Table 9.3 (each "***Milestone Payment***"), as follows. The amount of the Milestone Payment that is payable for a particular Milestone Event shall depend on whether the Licensed Product includes an Initial Payload or is a Replacement Product, or includes an Additional Payload, as specified in Table 9.3. The Development Milestone Events and Commercial Milestone

Events may be referred to individually or collectively as "***Milestone Events***." For purposes of determining whether the Net Sales thresholds set forth in Table 9.3 have been achieved for a Licensed Product for purposes of this Section 9.3, subject to Section 9.5, all Net Sales shall be calculated on a Licensed Product-by-Licensed Product basis for all Net Sales made by Novartis or any of its Affiliates or its or their Sublicensees of such Licensed Product. Each Milestone Payment shall be payable (y) only once for the set of all Licensed Products that include an Initial Payload or are Replacement Products; and (z) once for each set of Licensed Products that include an Additional Payload (i.e., once per [***] Program option exercised by Novartis in accordance with Section 3.2.3), in each case (y) and (z), upon first achievement of the applicable Milestone Event by a Licensed Product within each such set of Licensed Products. Upon receipt of a Milestone Event Notice, Precision will provide an invoice for the applicable Milestone Payment, and Novartis will pay Precision the Milestone Payments in accordance with Section 9.7.

9.3.4 The Development Milestone Events are intended to be sequential. Achievement of a Development Milestone Event relating to Initiation of a Phase I Clinical Trial, Occurrence of Phase II Clinical Trial Trigger or Occurrence of Phase III Clinical Trial Trigger shall result in deemed achievement of all earlier Development Milestone Events, and achievement of a Development Milestone Event relating to First Commercial Sale shall result in deemed achievement of all earlier Development Milestones Events other than those relating to First Commercial Sale. Similarly, achievement of each Commercial Milestone Event measured by annual Net Sales shall result in achievement of all Commercial Milestone Events measured by a lower amount of annual Net Sales.

Table 9.3 – Milestone Payments

Development Milestone Events – For either a Licensed Product that includes an Initial Payload or a Replacement Product	**Milestone Payment**
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
Total Development Milestone (Licensed Products that include an Initial Payload or Replacement Products) Payments:	**[***]**
Development Milestone Events – For a Licensed Product that includes an Additional Payload	**Milestone Payment**
[***]	[***]

[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
Total Development Milestone (Licensed Product that includes an Additional Payload) Payments:	**[***]**
Commercial Milestone Events – For either a Licensed Product that includes an Initial Payload or a Replacement Product	**Milestone Payment**
[***]	[***]
[***]	[***]
[***]	[***]
Total Commercial Milestone (Licensed Product including an Initial Payload or Replacement Product) Payments:	**[***]**
Commercial Milestone Events – For a Licensed Product that includes an Additional Payload	**Milestone Payment**
[***]	[***]
[***]	[***]
[***]	[***]
Total Commercial Milestone (Licensed Product that includes an Additional Payload) Payments:	**[***]**

9.4 **Royalties on Products**.

9.4.1 **Royalty Term**. Novartis shall pay Precision royalties as set forth in this Section 9.4 on a Licensed Product-by-Licensed Product and country-by-country basis in the Territory during the period of time beginning on the date of the First Commercial Sale of such Licensed Product in such country and continuing until the latest to occur of: (a) the expiration of the last-to-expire Valid Claim in such country Covering such Licensed Product; (b) the expiration of all data, regulatory, or market exclusivity, or supplemental protection certificates (other than Patent rights) covering the Licensed Product in such country; and (c) ten (10) years after the First Commercial Sale of such Licensed Product in such country (the "***Royalty Term***"); provided, however, that royalties shall only be payable with respect to any Licensed Product that includes an Initial Payload, or any Replacement Product, for sales made in the Royalty Territory. Upon the

expiration of the Royalty Term for a Licensed Product in a particular country, the license granted by Precision to Novartis under (y) Section 7.1.1 with respect to such Licensed Product and such country shall survive and become perpetual, fully-paid, and royalty-free, and shall remain exclusive (even as to Precision and its Affiliates) and (z) Section 7.1.2 with respect to such Licensed Product and such country shall survive and become perpetual, fully-paid, and royalty-free, and shall remain non-exclusive.

9.4.2 **Royalty Rates**. On a Licensed Product-by-Licensed Product and country-by-country basis, during the Royalty Term in respect of such country, Novartis shall pay to Precision a tiered royalty equal to the percentages of annual global Net Sales of such Licensed Product, as set forth below (the "***Royalty***"), calculated by multiplying the applicable royalty rate percentage by the corresponding portion of aggregate global Net Sales for such Licensed Product in such Calendar Year. The amount of the Royalty that is payable shall depend on whether the Licensed Product is from the Initial Program or Replacement Program or is from an [***] Program, as set forth below. For purposes of determining whether the Net Sales thresholds below in this Section 9.4.2 have been achieved for a Licensed Product for purposes of this Section 9.4.2, subject to Section 9.5, all Net Sales shall be calculated on a Licensed Product-by-Licensed Product basis for all Net Sales made by Novartis or any of its Affiliates or its or their Sublicensees of such Licensed Product during the Royalty Term applicable to such Licensed Product. For clarity, the incremental royalty rates set forth below will only apply to that portion of the Net Sales of royalty-bearing Licensed Products that fall within the indicated range of sales.

Annual Global Net Sales of the Applicable Licensed Product from the Initial Program or Replacement Program	**Royalty Rate**
The portion of annual global Net Sales of such Licensed Product less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***] but less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***] but less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***]	[***]
Annual Global Net Sales of the Applicable Licensed Product from an [***] Program	**Royalty Rate**
The portion of annual global Net Sales of such Licensed Product less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***] but less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***]	[***]

9.4.3 **Valid Claim**. If, at the time a Licensed Product is sold in a country during the Royalty Term for a Licensed Product, there is no Valid Claim of a Precision Licensed Patent that Covers such Licensed Product in such country, the Royalty rates provided in Section 9.4.2 above for the sale of such Licensed Product in such country will be reduced in such country by [***].

9.4.4 **Biosimilar Products**. On a country-by-country and Licensed Product-by-Licensed Product basis, if the annual Net Sales of a Licensed Product in a country are less than [***] of the peak annual Net Sales for such Licensed Product in such country, and in such country the first commercial sale of a Biosimilar Product with respect to such sale of such Licensed Product has occurred, the Royalty rates provided in Section 9.4.2 above for the Licensed Product in such country will be reduced in such country [***].

9.4.5 **Third Party Payments**. Novartis may deduct from any Royalty payments to Precision under this Section 9.4 for the sale of a given Licensed Product an amount equal to [***] of (a) any [***] made by Novartis to a Third Party in consideration for a right or license under such Third Party's interest in any Patents that [***], or (b) (i) any [***] made by Novartis to a Third Party that [***] and (ii) a reasonable allocation of any [***] made by Novartis to a Third Party that [***], in each case (i) and (ii), in

consideration for a right or license under such Third Party's interest in any Patents that [***].

9.4.6 **Royalty Floor**. For the avoidance of doubt, under no circumstances will the application of the reductions in Section 9.4.3 or 9.4.4 (as applicable) and Section 9.4.5 together ever result in a reduction of the Royalties payable by Novartis to Precision to less than [***] of the Royalties otherwise payable under Section 9.4.2. [***]

9.4.7 **Compulsory Licenses and Other Step-In Rights**. In the event that, on a country-by-country basis, Novartis, its Affiliates or any Sublicensees are required to grant any licenses or other rights to a Third Party, including any Governmental Authority, to Develop, Manufacture, or Commercialize a Licensed Product, whether as a result of the actions of any Governmental Authority or the exercise of any rights by an upstream licensor of a Party, or in the event any Governmental Authority exercises its right to substantially reduce the price at which such Licensed Product is sold in such country, then [***].

9.4.8 **Payment; Reports**. Royalty payments due by Novartis to Precision under this Section 9.4 will be calculated and reported for each Calendar Quarter, as follows. During each applicable Royalty Term and any period in which a Milestone Payment corresponding to a Commercial Milestone Event may become payable, within [***] after the end of each Calendar Quarter Novartis shall provide Precision with a report setting forth, with respect to such Calendar Quarter, on a Licensed Product-by-Licensed Product and country-by-country basis: (a) Net Sales of the Licensed Product by Novartis and its Affiliates and Sublicensees in the Territory; (b) a calculation of the Royalties due on such Net Sales; and (c) whether any Commercial Milestone Events have been achieved. Upon receipt of this report, Precision will provide an invoice for the applicable royalty payments and Milestone Payments corresponding to Commercial Milestone Events, and Novartis will pay Precision the foregoing royalties and Milestone Payments corresponding to Commercial Milestone Events in accordance with Section 9.7.

9.5 **Licensed Product Aggregation**. For purposes of the calculations in Sections 9.3 and 9.4, (a) all Net Sales of a Licensed Product that includes a particular Payload and combination of Variable Components, including any and all forms, presentations, dosages, and formulations of such Licensed Product, shall be aggregated globally as the same Licensed Product; and (b) all Net Sales of a Replacement Product that includes a particular combination of Variable Components, including any and all forms, presentations, dosages, and formulations of such Replacement Product, shall be aggregated globally as the same Licensed Product. For clarity, a "combination of Variable Components" as used in this Section 9.5 may include zero (0) or one (1) or more Variable Components.

9.6 **Payments under Existing In-License Agreements**. The Parties acknowledge and agree that Precision shall be solely responsible for, and shall promptly discharge, any and all payments payable pursuant to the Existing In-License Agreements.

9.7 **Invoicing and Payment Procedure; Currency Conversion.** Precision shall provide Novartis an invoice for all amounts due to it under this Agreement. Unless otherwise noted, all fees owed to Precision will be payable within [***] after Novartis's receipt of an invoice from Precision. Invoices to Novartis shall be substantially in the form set forth in the Exhibit 9.7(a). Unless otherwise agreed by the Parties, all payments due under this Agreement shall be paid in Dollars by wire transfer or electronic funds transfer of immediately available funds to an account designated by the payee; provided however, that Novartis shall only be required to disburse funds to the payee's jurisdiction of incorporation or to a jurisdiction in which the payee has a significant business presence. The initial wire transfer instructions for Precision are as set forth on Exhibit 9.7(b). When conversion of payments from any currency other than Dollars is required, Novartis's then-current standard exchange rate methodology will be employed for the translation of foreign currency sales into Dollars; provided, that this methodology is consistent with Novartis's normal practices used to prepare its audited financial statements for external reporting purposes.

9.8 **Records and Audits**. Each Party shall keep complete, true and accurate books and records in accordance with its Accounting Standards in relation to this Agreement, including, with respect to Novartis, in relation to Net Sales of Licensed Products as necessary to ascertain properly and to verify the Royalty and Milestone Payments due hereunder. Each Party will keep such books and records for at least [***] following the Calendar Year to which they pertain. Precision may, upon written request, cause an internationally-recognized independent accounting firm (the "***Auditor***"), which is reasonably acceptable to Novartis, to inspect the relevant records of Novartis and its Affiliates to verify the Net Sales, Royalties and Milestone Payments payable by Novartis and the related reports, statements and books of accounts, as applicable. Before beginning its audit, the Auditor shall execute an undertaking acceptable to Novartis by which the Auditor agrees to keep confidential all information reviewed during the audit. The Auditor shall have the right to disclose to Precision only its conclusions regarding any payments owed under this Agreement. Novartis and its Affiliates shall make their records available for inspection by the Auditor during regular business hours at such place or places where such records are customarily kept, upon receipt of reasonable advance notice from Precision. The records shall be reviewed solely to verify the accuracy of Novartis's royalties and compliance with this Agreement. Such inspection right shall not be exercised more than [***]. In addition, Precision shall only be entitled to audit the books and records of Novartis and its Affiliates from the [***] prior to the Calendar Year in which the audit request is made. Precision agrees to hold in strict confidence all information received and all information learned in the course of any audit or inspection, except to the extent necessary to enforce its rights under this Agreement or to the extent required to comply with any law, regulation or judicial order. The Auditor shall provide its audit report and basis for any determination to Novartis at the time such report is provided to Precision before it is considered final. Novartis shall have the right to request a further determination by such Auditor as to matters which Novartis disputes within [***] following receipt of such report. Novartis will provide Precision and the Auditor with a reasonably detailed statement of the grounds upon which it disputes any findings in the audit report and the Auditor shall undertake to complete such further determination within [***] after the dispute notice is provided, which determination shall be limited to the disputed matters. Any matter that remains unresolved shall be resolved in accordance with the dispute resolution procedures contained in Section 16.2**.** In the event that the final result of the inspection reveals an undisputed underpayment or overpayment by Novartis, the underpaid or overpaid amount

shall be settled promptly. Precision shall pay for such inspections, as well as its expenses associated with enforcing its rights with respect to any payments hereunder. In addition, if an underpayment of more than [***] of the total payments due for the applicable audit period is discovered, the fees and expenses charged by the Auditor shall be paid by Novartis. Any overpayment by Novartis revealed by an audit shall be credited against future payments owed by Novartis to Precision (and if no further payments are due, shall be refunded by Precision at the request of Novartis within [***] of the receipt of the request).

9.9 **Late Payments**. If any payment properly due under this Agreement and not subject to a good faith dispute is not paid when due in accordance with the applicable provisions of this Agreement, the payment shall accrue interest from the date due at [***]. The payment of such interest shall not limit the Party entitled to receive payment from exercising any other rights it may have as a consequence of the lateness of any payment.

9.10 **Taxes**.

9.10.1 **Cooperation and Coordination**. The Parties acknowledge and agree that it is their mutual objective and intent to minimize, to the extent feasible and in compliance with Applicable Laws, taxes payable with respect to their collaborative efforts under this Agreement and that they shall use reasonable efforts to cooperate and coordinate with each other to achieve such objective, including by completing and filing documents required or permitted under the provisions of any Applicable Laws in connection with a claim of exemption from, or entitlement to a reduced rate of, withholding taxes or in connection with any claim to a refund of or credit for any payment of such taxes. Notwithstanding the foregoing, for clarity, it is Precision's sole responsibility to prepare and file required documents necessary to claim an exemption from withholding tax or to claim a reduced rate of withholding tax, at Precision's sole expense.

9.10.2 **Indirect Taxes.** All amounts mentioned in this Agreement are exclusive of any value added, goods and services, sales, use, excise, consumption, and other similar indirect taxes ("***Indirect Taxes***"). Precision shall issue all invoices in full compliance with the Indirect Tax laws and regulations applicable at Precision's place of business. If any Indirect Taxes are due based on local law, Precision will be allowed to add the amount of Indirect Taxes to the amounts mentioned in this Agreement and invoice the net amount plus the applicable Indirect Taxes. Both Parties agree that Precision is generally allowed to issue zero-rated invoices in case of cross-border supply of services as agreed in this Agreement. The Parties shall issue invoices for all amounts payable under this Agreement consistent with all Indirect Tax requirements and irrespective of whether the sums may be netted for settlement purposes.

9.10.3 **Payment of Tax**. The upfront, milestones, royalties and other amounts payable by Novartis to Precision to this Agreement (each, a "***Payment***") shall be paid free and clear of any and all taxes, except for any withholding taxes required by Applicable Law. Except as provided in this Section 9.10. Precision shall be solely responsible for paying any and all taxes (other than withholding taxes required by Applicable Law to be deducted from Payments and remitted by Novartis) levied on

account of, or measured in whole or in part by reference to, any Payments it receives. Novartis shall deduct or withhold from the Payments any taxes that it is required by Applicable Law to deduct or withhold. Notwithstanding the foregoing, if Precision is entitled under any applicable tax treaty to a reduction in the rate of, or the elimination of, any applicable withholding tax, it may deliver to Novartis or the appropriate Governmental Authority (with the assistance of Novartis to the extent that this is reasonably required and is expressly requested in writing) the prescribed forms necessary to reduce the applicable rate of withholding or to relieve Novartis of its obligation to withhold such tax and Novartis shall apply the reduced rate of withholding or dispense with withholding as the case may be; provided that Novartis has received Precision's delivery of all applicable forms in a form satisfactory to Novartis (and, if necessary, evidence, in a form satisfactory to Novartis, of Precision's receipt of appropriate governmental authorization) at least [***] prior to the time Payments are due. If in accordance with the foregoing, Novartis withholds any amounts of tax, it shall pay to Precision the balance when due, make timely payment to the proper tax authority of the withheld amount and send to Precision proof of such payment within [***] following such payments.

9.10.4 **Withholding Tax Actions**. If Novartis changes its tax residence, performs a tax repatriation or takes any similar action that would increase any required withholding taxes with respect to any Payment that would not be required absent such action, Novartis shall provide Precision with prior written notice to allow Precision a reasonable opportunity to timely furnish forms, certificates or other items that would reduce or eliminate such withholding tax. If no withholding tax deduction has been made on the payments to Precision or its Affiliates under this Agreement, but tax authorities subsequently take the position that a withholding tax deduction should have been made, including extra-territorial taxation, Precision shall provide, at its own expense, all reasonable support to Novartis to obtain relief or reduction of withholding under the applicable laws and tax treaties, including but not limited to the submission or issuance of requisite forms and information, and the Parties will bear such liability (reimburse one another as necessary) in a manner consistent with that which would have resulted had the tax been originally withheld. Any refunds of withholding taxes that are granted to Precision by the competent tax authority and which would cause Precision to receive payments in excess of that which Novartis would owe under this Agreement, including related interest, shall be paid to Novartis by Precision.

ANTITRUST FILINGS

10.1 **Antitrust Filings**. All option exercise notices delivered by Novartis pursuant to Section 3.2.3 shall specify whether the exercise of the applicable option right, in Novartis's good faith assessment, requires filings under the Hart-Scott-Rodino Antitrust Improvement Act of 1976 (as amended from time to time, the "***HSR Act***") or any other federal, state or foreign Applicable Law, regulation or decree designed to prohibit, restrict or regulate actions intended to or having the effect of reducing competition or monopolizing or restraining trade (collectively, "***Antitrust Laws***"). If Novartis concludes that filings are required, both Parties shall file (or, if

applicable, shall cause their respective Affiliate(s) to file) the appropriate notices with respect to the transactions contemplated hereby as promptly as reasonably practicable with the United States Federal Trade Commission ("***FTC***") and Department of Justice ("***DOJ***") under the HSR Act or other applicable Government Authorities in respect to other Antitrust Laws (such filings the "***Antitrust Filings***"). Each of the Parties shall promptly supply (or, if applicable, shall cause their respective Affiliate(s) to supply) the other with any information that may reasonably be required in order to effectuate the Antitrust Filings. Each Party agrees (and shall cause each of their respective Affiliates) to use their respective commercially reasonable efforts: (a) to cooperate to obtain any authorizations, clearances, orders or approvals required for transactions contemplated hereby under the Antitrust Laws; (b) to promptly respond to any request by any Governmental Authority for information under any Antitrust Law with respect to the transactions contemplated hereby; (c) to promptly inform the other Party upon receipt of any material communication from the FTC, the DOJ or any other Governmental Authority regarding the transactions contemplated hereby; and (d) subject to applicable legal limitations and the instructions of any Governmental Authority, keep the other Party apprised of the status of matters relating to the transactions contemplated hereby, including promptly furnishing the other Party with copies of material notices or other material communications received by such Party or any of their respective Affiliates, as the case may be, from any Third Party or any Governmental Authority with respect to the transactions contemplated hereby. The Parties shall each permit legal counsel for the other Party a reasonable opportunity to review in advance, and consider in good faith the views of the other Party in connection with, any proposed material written communication to any Governmental Authority with respect to the transactions contemplated hereby. Each of the Parties agrees, subject to applicable legal limitations and the instructions of any Governmental Authority, not to participate in any substantive meeting or discussion, either in person or by telephone, with any Governmental Authority in connection with this Agreement unless it consults with the other Party in advance and gives the other Party the opportunity to attend and participate, provided, however, that neither Party shall be required to consent to the divestiture or other disposition of any of its assets or the assets of its Affiliates or to consent to any other structural or conduct remedy and neither Party nor its Affiliates shall have any obligation to contest, administratively or in court, any ruling, order or other action of the FTC or DOJ or any Third Party with respect to the transactions contemplated by this Agreement. Each Party shall be responsible for paying its own costs and expenses (including legal and consultants' fees) incurred in connection with obtaining clearance of the transactions contemplated hereby from the FTC and the DOJ, except that Novartis will pay the filing fees incurred by both Parties in connection with the filings required pursuant to the Antitrust Laws. Each Party agrees to request, and to cooperate with the other Party in requesting, early termination of any applicable waiting period under the Antitrust Laws. Notwithstanding anything to the contrary in this Agreement, each option exercised by Novartis under Section 3.2.3 is conditioned upon the receipt of all consents, approvals and authorizations required under the Antitrust Laws, and the option exercise shall not be effective, the particular Reserved Payload shall not be an Additional Payload, and the corresponding Option Exercise Fee shall not be payable until the applicable waiting periods under the Antitrust Laws terminate or expire, and the expiry of the Option Period during such waiting periods shall be of no effect with respect to the particular Reserved Payload that is the subject of such Antitrust Filing; provided, however, that if the option exercise has not become effective within [***] of the date of the applicable Antitrust Filing, then (y) Novartis shall be deemed not to have provided notice of option exercise under Section 3.2.3, the

corresponding Option Exercise Fee shall not be payable and the particular Reserved Payload shall not become an Additional Payload and (z) the particular Reserved Payload shall be deemed an Unavailable Payload.

ARTICLE 11

INTELLECTUAL PROPERTY

11.1 **Ownership of Intellectual Property**.

11.1.1 **Background IP**. As between the Parties, and subject to the licenses granted under this Agreement (a) Novartis shall solely own (or retain ownership of) all rights, title and interests in and to the Novartis Background IP, and (b) Precision shall solely own (or retain ownership of) all rights, title and interests in and to the Precision Background IP. If any Third Party becomes an Acquirer of Precision after the Effective Date pursuant to a Change of Control, any Patent rights and Know-How Controlled by the Acquirer before the relevant Change of Control transaction or thereafter during the Term will not be considered part of the Precision Background IP; provided, however, that any Patent rights or Know-How that would otherwise constitute Precision Background IP and are discovered or created by or on behalf of the Acquirer after the relevant Change of Control transaction by using any Precision Technology relating to the Program will be considered part of the Precision Background IP.

11.1.2 **Inventions**. Ownership of Inventions created, conceived or reduced to practice in the course of the activities under this Agreement shall be as follows:

(a) Novartis shall solely own (or retain ownership of) all such Inventions, regardless of the inventorship thereof, that solely relate to [***] ("***Novartis Improvement IP***"); Precision agrees to assign and hereby assigns to Novartis all of its and its Affiliates' right, title and interests in and to the Novartis Improvement IP and agrees to execute such documents and perform such other acts as Novartis may reasonably request to obtain, perfect and enforce the Novartis Improvement IP and the assignment thereof;

(b) Precision shall solely own (or retain ownership of) all such Inventions, regardless of the inventorship thereof, that relate to [***] ("***Precision Improvement IP***"); Novartis agrees to assign and hereby assigns to Precision all of its and its Affiliates' right, title and interests in and to the Precision Improvement IP and agrees to execute such documents and perform such other acts as Precision may reasonably request to obtain, perfect and enforce the Precision Improvement IP and the assignment thereof; and

(c) Except to the extent constituting Precision Improvement IP or Novartis Improvement IP, all other such Inventions will be owned according to inventorship thereof. Inventorship as between the Parties will be determined in accordance with U.S. patent laws; all such determinations shall be documented to ensure that the Patent claims in any divisional or continuation patent applications reflect appropriate inventorship. For clarity, each Party shall solely own such other Inventions made solely by or on behalf of its, and its Affiliates', employees and contractors ("***Precision Sole IP***" and "***Novartis Sole IP***," as

applicable) and the Parties shall jointly own such other Inventions made jointly by or on behalf of Precision and Novartis or their respective Affiliates ("***Joint IP***"), as applicable.

11.1.3 **Rights of Joint Owners**. Subject to the licenses and obligations of exclusivity granted hereunder, Sections 11.2 and 11.3 and the payment obligations under Article 9, each Party shall have full rights to exploit and license Joint IP (and any Patent rights therein), without any obligation or requirement of an accounting to the other Party.

11.1.4 **Independent Development**. Subject to the licenses and obligations of exclusivity granted hereunder, nothing in this Agreement shall be construed as limiting either Novartis's or Precision's right to research, develop, improve and in-license technology related to the Novartis Background IP (in the case of Novartis) or Precision Background IP (in the case of Precision) outside the scope of this Agreement in its ordinary course of business.

11.1.5 **Enabling Technology; After-Acquired IP**.

(a) Enabling Technology for the Licensed Products will be secured: (i) [***] to the extent necessary for Precision (as determined by Precision) to use the ARCUS Technology or to design, create, select or optimize ARCUS Nucleases [***] ("***Platform-Enabling IP***"); or (ii) [***] to the extent it relates to other elements of the Licensed Products [***] ("***Product-Enabling IP***"); provided, however that Novartis will be solely responsible for obtaining any licenses required as a result of [***].

(b) If Precision or any of its Affiliates [***] creates, conceives or reduces to practice, and Controls, any Patent rights or Know-How outside the course of the activities under this Agreement after the Effective Date that is necessary or reasonably useful for the Development, making, having made, use, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of a Licensed Product as a result of the Licensed ARCUS Nuclease included therein, including any such Patent that Covers a Licensed ARCUS Nuclease ("***After-Acquired IP***"), [***].

11.1.6 **Contribution of Licensed Precision Technology**. Precision shall inform Novartis in writing, prior to contributing to any Research to be conducted under any Research Plan any portion of the Precision Technology that is in-licensed from a Third Party, the contribution of which would prevent or conflict with the ownership and use rights with respect to Patents and Know-How contemplated by this Agreement. Novartis acknowledges that it has received a copy of the Cellectis Agreement and the Duke Agreement prior to the Execution Date.

11.1.7 **Assignment Obligation**. Each Party shall cause all of its Affiliates, employees, agents, independent contractors, consultants, and others who perform activities for such Party under this Agreement to be under an obligation to assign to such Party their rights in and to any Inventions and all intellectual property rights therein, except where Applicable Law requires otherwise in the case of governmental, not-for-profit and public institutions that have standard policies against such an assignment (in each of such cases a Party shall obtain a suitable license, preferably exclusive, or right to

obtain such a license). Each Party shall use reasonable efforts to promptly disclose to the other Party in writing all Inventions, including any invention disclosures, or other similar documents, submitted to it by its employees, agents or independent contractors describing such Inventions, and all information relating to such Inventions to the extent necessary or useful for the preparation, filing and maintenance of any Patent with respect to such Invention.

11.2 **Patent Prosecution and Maintenance**.

11.2.1 **Patent Working Group Representatives**. Each Party shall designate to the other Party in writing a patent Prosecution and Maintenance representative to liaise with the other Party's patent Prosecution and Maintenance representative via the Patent Working Group with respect to the Prosecution and Maintenance of Patents under this Section 11.2. Each Party may update its patent Prosecution and Maintenance representative at any time upon written notice to the other Party.

11.2.2 **Rights to Prosecute and Maintain Patents**. As between the Parties:

(a) Novartis has the sole right, but not the obligation, to Prosecute and Maintain any Novartis Patent, at Novartis's sole cost and expense;

(b) Precision has the sole right, but not the obligation, to Prosecute and Maintain any Precision Patent, at Precision's sole cost and expense;

(c) subject to and in accordance with Section 11.2.3, Novartis has the first right, but not the obligation, to Prosecute and Maintain any Joint Patent, at Novartis's sole cost and expense, and Precision shall have the secondary right, at Precision's sole cost and expense, to Prosecute and Maintain any Joint Patent; and

(d) Novartis acknowledges and agrees that Precision has no rights or responsibility for preparing, filing, Prosecuting or Maintaining the Cellectis Patents.

11.2.3 **Prosecution and Maintenance Procedures for Joint Patents**. Novartis shall keep Precision reasonably informed of the status of the Joint Patents and shall promptly provide Precision with all material correspondence received from any patent authority in connection therewith. In addition, Novartis shall promptly provide Precision, through the Patent Working Group, the opportunity to review the text of any application constituting or claiming Joint IP before filing of the relevant application; Novartis will reasonably consider any input or feedback from Precision with respect to the foregoing, provided, that Novartis shall have the final authority with respect to any such decisions. Novartis shall notify Precision of its intention to suspend or cease any Prosecution and Maintenance of any Joint Patent. Novartis shall provide such notice at least [***] prior to any filing or payment due date, or any other due date that requires action, in connection with such Joint Patent. In such event, Novartis shall permit Precision, at Precision's discretion and at its sole expense, to continue Prosecution and Maintenance of such Joint Patent.

11.2.4 **Cooperation of the Parties**. Each Party shall cooperate fully with the other Party in the Prosecution and Maintenance of Patents under this Section 11.2 at [***] cost (except as expressly set forth otherwise in this Article 11), including by: (a) executing all papers and instruments, or requiring its employees or contractors, to execute such papers and instruments, to enable the other Party to apply for and to Prosecute and Maintain such Patents in any country as permitted by this Section 11.2; and (b) promptly informing the other Party of any matters coming to such Party's attention that may affect the Prosecution and Maintenance of any such Patents. Each Party will use reasonable efforts via good faith consultation through the Patent Working Group to avoid creating potential issues in Prosecution and Maintenance of Patents under this Section 11.2.

11.3 **Infringement or Misappropriation by Third Parties**.

11.3.1 **Notice**. Each Party shall notify the other within [***] of becoming aware of any alleged or threatened infringement by a Third Party of any of the Precision Patents, Novartis Patents or Joint Patents that Cover a Licensed Product, in each case in the Field in the Territory, and any related declaratory judgment, opposition or similar action alleging the invalidity, unenforceability or non-infringement of any of the Precision Patents, Novartis Patents, or Joint Patents (collectively "***Infringement***").

11.3.2 **Joint IP and Precision Product IP**.

(a) As between the Parties, Novartis has the first right, but not the obligation, to bring and control any legal action, at [***] cost and expense, in connection with (i) any Infringement of any Joint IP, or (ii) any Infringement of any [***]. Novartis shall keep Precision reasonably informed of the status of such enforcement efforts for such Joint IP or such [***], and shall consider in good faith Precision's comments thereon. Novartis shall provide Precision with drafts of all material papers and statements to be filed with the court in sufficient time to allow Precision to review, consider and substantively comment thereon, and shall in good faith consider all reasonable comments thereto by Precision before filing such papers or statements. Precision may, at [***] expense, join as a party to such claim, suit, or proceeding and be represented in any such action by counsel of its own choice.

(b) If Novartis does not bring a legal action pursuant to Section 11.3.2(a) within [***] after the notice provided pursuant to Section 11.3.1 (or within such shorter period prior to the next deadline for any action that must be taken in order to bring such legal action), Precision may bring and control any legal action in connection with such Infringement, at [***] cost and expense as it reasonably determines appropriate so long as Novartis does not reasonably object to such action. Precision shall keep Novartis reasonably informed of the status of such enforcement efforts for such Joint IP, and shall consider in good faith Novartis's comments thereon. Precision shall provide Novartis with drafts of all material papers and statements to be filed with the court in sufficient time to allow Novartis to review, consider and substantively comment thereon, and shall in good faith consider all reasonable comments thereto by Novartis before filing

such papers or statements. Novartis may, at [***] expense, join as a party to such claim, suit, or proceeding and be represented in any such action by counsel of its own choice.

11.3.3 **Precision Background IP and Precision Sole IP**. Except as set forth in Section 11.3.2(a), as between the Parties, Precision has the sole right to initiate any proceedings or take other appropriate actions against an Infringement of any Precision Background IP or Precision Sole IP or to defend against any challenge of any Precision Background IP or Precision Sole IP. Novartis acknowledges and agrees that (a) Precision has no rights or responsibility for enforcing the Cellectis Patents, and therefore all references to Precision Background IP in this Section 11.3 shall be deemed to exclude the Cellectis Patents for all purposes, (b) prior to initiating enforcement actions against a Third Party with respect to certain Precision Patents which are subject to the non-exclusive license granted by Precision to Cellectis S.A. pursuant to the Cellectis Agreement, Precision is required by the Cellectis Agreement to confirm that Cellectis S.A. has not granted a license to such Third Party under such Precision Patents, and Novartis will cooperate with Precision in taking such actions as required by the Cellectis Agreement, and (c) Duke retains discretion as to whether to become a party plaintiff and has certain rights with respect to enforcement of Patents contained within the Duke IP in the event Precision does not enforce such Patents.

11.3.4 **Novartis Background IP and Novartis Improvement IP**. Novartis has the sole right to initiate any proceedings or take other appropriate actions against an Infringement of any Novartis Background IP or Novartis Sole IP or to defend against any challenge of a Novartis Background IP or Novartis Sole IP.

11.3.5 **Allocation of Recoveries**. Any recoveries resulting from enforcement action relating to a claim of Infringement under Section 11.3.2 shall be [***].

11.3.6 **Cooperation**. At the request and expense of the Party bringing an action under this Section 11.3, the other Party shall provide reasonable assistance in connection therewith, including by executing reasonably appropriate documents, cooperating in discovery and joining as a party to the action if required by Applicable Law to pursue such action. In connection with any such enforcement action, the Party bringing the action shall not enter into any settlement admitting the invalidity or non-infringement of, or otherwise impairing the other Party's rights in the applicable Patents without the prior written consent of the other Party.

11.4 **Defense and Settlement of Third Party Claims**. Each Party shall promptly notify the other in writing of: (a) any allegation by a Third Party that the activity of either of the Parties pursuant to this Agreement infringes or may infringe the intellectual property rights of such Third Party; or (b) any declaratory judgment action that is brought naming either Party as a defendant and alleging invalidity of any of the Novartis Patents, Precision Patents or Joint Patents that Cover a Licensed Product. Precision has the sole right to control any defense of any such claim described in (a) involving alleged infringement of Third Party rights by Precision's activities at [***] expense and by counsel of its own choice, and Novartis may, at [***] expense, be represented in any such action by counsel of its own choice. Novartis has the sole right to control any defense of any such claim described in (a) involving alleged infringement of Third

Party rights by Novartis's activities at [***] expense and by counsel of its own choice, and Precision may, at [***] expense, be represented in any such action by counsel of its own choice. Neither Party may settle any patent infringement litigation under this Section 11.4 in a manner that admits the invalidity or unenforceability of the other Party's Patents or a Joint Patent or imposes on the other Party restrictions or obligations or other liabilities, without the written consent of such other Party, which consent shall not be unreasonably withheld, conditioned, or delayed. Nothing in this Section 11.4 will limit any indemnification rights or obligations of a Party under Article 13.

11.5 **Patent Extension**.

11.5.1 The Parties shall cooperate through the Patent Working Group in determining which Patent claiming or covering a Licensed Product should be extended, and thereafter the Parties shall cooperate, including by providing reasonable assistance, executing documents, and providing relevant information, in obtaining patent term restorations, supplemental protection certificates or their equivalents, and other forms of patent term extensions (collectively, "***Extensions***") for a given Licensed Product with respect to any applicable Precision Patent, Novartis Patent, or Joint Patent in any country or region where applicable. Novartis shall have final decision-making authority with respect to decisions regarding Extensions, including the decision not to file Extensions, with respect to [***]. Precision shall have final decision-making authority with respect to decisions regarding Extensions, including the decision not to file Extensions, with respect to [***].

11.5.2 [***]

11.6 **CREATE Act**. It is the Parties' intention that this Agreement is a "joint research agreement" as that phrase is defined in 35 U.S.C. § 100(h). The Parties agree to cooperate and to take reasonable actions to maximize the protections available for the Licensed ARCUS Nucleases and Licensed Products under 35 U.S.C. § 102(c) as amended by the Cooperative Research and Technology Enhancement (CREATE) Act, including the provisions of 35 U.S.C. § 102(b)(2)(c).

11.7 **Trademarks**. Novartis shall have the right to select, and will be free, in its sole discretion, to use and to register in any trademark office in the Territory, any trademark for use with a Licensed Product (the "***Licensed Product Trademarks***"); provided that Novartis shall not use, file applications for, or register any trademarks owned by Precision (or its Affiliates), whether stand-alone or in combination with a design element, for the benefit of branding (including co-branding) without the prior written consent of Precision. As between the Parties, Novartis shall own all right, title and interest in and to any such Licensed Product Trademarks adopted by Novartis for use with Licensed Product, and is responsible for the registration, filing, maintenance and enforcement thereof.

ARTICLE 12

REPRESENTATIONS, WARRANTIES AND COVENANTS

12.1 **Mutual Representations and Warranties**. Each of Novartis and Precision represent and warrant, as of the Execution Date, that:

12.1.1 it is duly organized and validly existing under in the Applicable Laws of the jurisdiction of its incorporation or formation, as applicable, has full corporate, limited liability company or other power and authority, as applicable, to enter into this Agreement and to carry out the provisions hereof, and has sufficient facilities, experienced personnel or other capabilities (including via Affiliates or Third Parties) to enable it to perform its obligations under this Agreement;

12.1.2 it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the individual executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate, limited liability company or other action, as applicable; and

12.1.3 this Agreement is legally binding upon it and enforceable in accordance with its terms (except as the enforceability thereof may be limited by bankruptcy, bank moratorium or similar laws affecting creditors' rights generally and laws restricting the availability of equitable remedies and may be subject to general principles of equity whether or not such enforceability is considered in a proceeding at law or in equity) and the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate action and do not and will not: (a) conflict with, or constitute a default or result in a breach under, any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, or violate any Applicable Law; or (b) require any consent or approval of its stockholders or similar.

12.2 **Precision Representations and Warranties**. Precision represents and warrants to Novartis that, as of the Execution Date:

12.2.1 **No Grants that Conflict with this Agreement**. Precision and its Affiliates have not granted any rights (or other encumbrances) to any Third Party under Precision Technology that conflict with the rights granted to Novartis hereunder.

12.2.2 **Control over Know-How and Patents**. Precision has Control over all Know-How and Patent rights owned by it or its Affiliates that are necessary or reasonably useful for the Research, Development, making, having made, use, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of the Initial Collaboration Target, the Replacement Collaboration Target or Licensed Products in the Field, as known to be contemplated by this Agreement. [***]

12.2.3 **Existing Patents**.

(a) All Patent rights contained in the Precision Background Platform IP existing as of the Execution Date, other than the Cellectis Patents, that are issued or subject to a pending application for issuance are listed on Exhibit 12.2.3 (the "***Existing Patents***").

(b) All Existing Patents are: (i) to the extent issued (unless otherwise indicated on Exhibit 12.2.3), subsisting and, to Precision's Knowledge, not invalid or unenforceable, in whole or in part, or to Precision's Knowledge, confer a valid right to claim priority thereto; (ii) solely and exclusively owned or exclusively licensed to Precision, free of any encumbrance, lien or claim of ownership by any Third Party; (iii) in respect of Existing Patents owned by Precision, to the extent subject to a pending application for issuance, being prosecuted in good faith in the respective patent offices in which such applications have been filed in accordance with Applicable Law and, to Precision's Knowledge, all material references, documents and information have been presented to the relevant patent office in respect of such Existing Patents to the extent required by such patent office; and (iv) in respect of Existing Patents owned by Precision, filed and maintained in accordance with applicable Patent office rules, and all applicable fees applicable thereto have been paid on or before any final due date for payment.

(c) The Existing Patents and the Cellectis Patents represent all Precision Patents that relate to the Precision Background Platform IP or the exploitation thereof.

(d) Each of the Existing In-License Agreements is valid, enforceable and binding on the parties thereto.

12.2.4 **No Third Party Agreements**. Other than the Existing In-License Agreements, there are no license or other agreements with Third Parties regarding the exploitation of any Precision Technology or other materials contemplated to be provided by Precision to Novartis hereunder, to which Precision or its Affiliate is a party.

12.2.5 **[*****]

12.2.6 **Other Material Claims and Actions**. There are no claims, actions, or proceedings pending or, to Precision's Knowledge, threatened by any Third Party; and to Precision's Knowledge, there are no formal inquiries initiated or written notices received that may lead to the institution of any such legal proceedings, in each case (or in aggregate) against Precision or its properties, assets or business, which if adversely decided, would, individually or in the aggregate, have a material adverse effect on, or prevent Precision's ability to conduct the Research or to grant the licenses or rights granted to Novartis under this Agreement.

12.2.7 **Assignment by Employees, Agents and Consultants**. Precision has obtained from each of its current employees, consultants and contractors, in each case who perform research or development activities pursuant to this Agreement, written agreements containing obligations of confidentiality and non-use and an assignment to Precision of all inventions (and all of such Person's rights thereto) for which Precision or Novartis is intended to have ownership or license rights under this Agreement such that no

such employee, contractor or consultant shall retain any rights to such inventions that would prevent or conflict with Novartis's rights of ownership or use of such inventions contemplated by this Agreement.

12.2.8 **No Government Funding**. Except with respect to the Duke IP, the inventions claimed or covered by the Precision Patents: (a) were not conceived, discovered, developed or otherwise made in connection with any research activities funded, in whole or in part, by the federal government of the United States of America or any agency thereof; (b) are not a "subject invention" as that term is described in 35 U.S.C. Section 201(e) and (c) are not otherwise subject to the provisions of the Patent and Trademark Law Amendments Act of 1980, as amended, codified at 35 U.S.C. §§ 200-212, as amended, as well as any regulations promulgated pursuant thereto, including in 37 C.F.R. Part 401 (the "***Bayh-Dole Act***"). With regard to any inventions within the Duke IP that are subject to the Bayh-Dole Act, Precision and its Affiliates have complied with the applicable provisions of the Bayh-Dole Act, in a manner that protects and preserves Precision's right, title and interest in such inventions to the maximum extent permitted by law.

12.2.9 **Regulatory Documentation**. Precision and its Affiliates have generated, prepared, maintained and retained all Regulatory Documentation that is required to be maintained or retained pursuant to and in accordance with, to the extent applicable, good laboratory and clinical practice and Applicable Law and all such information is true, complete and correct in all material respects and what it purports to be. "***Regulatory Documentation***" means all: (a) applications (including all INDs and applications for Regulatory Approval), registrations, licenses, authorizations and approvals (including Regulatory Approvals); (b) correspondence and reports submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority) and all supporting documents with respect thereto, including all adverse event files and complaint files; (c) supplements or changes to any of the foregoing following Regulatory Approval; and (d) clinical and other data, including Clinical Trial data, contained or relied upon in any of the foregoing; in each case ((a)–(d)) relating to a Licensed Product in the Field.

12.3 **Mutual Covenants**.

12.3.1 **Employees, Consultants and Contractors**. Each Party covenants that it has obtained or will obtain written agreements from each of its employees, consultants and contractors who perform research or development activities pursuant to this Agreement, which agreements will obligate such persons to obligations of confidentiality and non-use and to assign inventions in a manner consistent with the provisions of this Agreement.

12.3.2 **Debarment**. Each Party represents, warrants and covenants to the other Party that neither it nor its officers, employees, agents, consultants or any other person used by such Party in the performance of the respective research and development activities under this Agreement is: (a) debarred or disqualified under the U.S. Federal Food, Drug and Cosmetic Act; (b) listed by any Governmental Authority as ineligible to

participate in any government healthcare programs or government procurement or non-procurement programs (as that term is defined in 42 U.S.C. § 1320a-7b(f)), or excluded, debarred, suspended or otherwise made ineligible to participate in any such program; or (c) convicted of a criminal offense related to the provision of healthcare items or services, or is subject to any such pending action. Each Party will not during the Term knowingly, employ or use, directly or indirectly, including through Affiliates the services of any such person. In the event that either Party becomes aware of the debarment or disqualification or threatened debarment or disqualification of any person providing services to such Party, directly or indirectly, including through Affiliates or, in the case of Novartis, Sublicensees, which directly or indirectly relate to activities contemplated by this Agreement, such Party shall promptly notify the other Party in writing and such Party shall cease employing, contracting with, or retaining any such person to perform any such services.

12.3.3 **Protection of Information**. Each Party agrees that during the Term of this Agreement, and without limiting its obligations hereunder, each Party shall implement technical and organizational measures to protect all information under the Agreement that are appropriate and that provide no less protection than both (a) good industry practice (i.e., in accordance with ISO 27001 or similar industry standards) and (b) such Party's measures to protect its own information of a similar nature or importance.

12.3.4 **Invention Assignment Obligation**. Each Party will obtain from each of its future employees, consultants and contractors, in each case who perform Research or Development activities pursuant to this Agreement, written agreements containing obligations of confidentiality and non-use and an assignment to such Party of all Inventions (and all of such Person's rights thereto) for which Precision or Novartis is intended to have ownership or license rights under this Agreement such that no such employee, contractor or consultant shall retain any rights to such Inventions that would prevent or conflict with Precision's or Novartis's, as applicable, rights of ownership or use of such Inventions contemplated by this Agreement.

12.4 **Precision Covenants**. Precision agrees that during the Term of this Agreement, neither Precision nor its Affiliates will grant any rights (or other encumbrances) to any Third Party to Precision Technology that conflict with the rights granted to Novartis hereunder. For the avoidance of doubt, nothing in this Section 12.4 shall limit Precision's rights pursuant to Section 3.4.

12.5 **Compliance**.

12.5.1 **Compliance with this Agreement**. Each of the Parties shall, and shall cause their respective Affiliates to, comply in all material respects with the terms of this Agreement.

12.5.2 **Compliance with Applicable Laws**. Each Party covenants to the other that in the performance of its obligations under this Agreement, such Party shall comply with, and shall cause its Affiliates and its and its Affiliates' employees and contractors to comply, with all Applicable Laws. No Party shall, or shall be required to,

undertake any activity under or in connection with this Agreement which violates, or which it believes, in good faith, may violate, any Applicable Laws.

12.5.3 **Compliance with Anti-Corruption Laws**. In connection with this Agreement, the Parties shall comply with all applicable local, national, and international laws, regulations, and industry codes dealing with government procurement, conflicts of interest, corruption or bribery, including, if applicable, the U.S. Foreign Corrupt Practices Act of 1977, as amended, and any laws enacted to implement the Organisation of Economic Cooperation and Development Convention on Combating Bribery of Foreign Officials in International Business Transactions.

12.5.4 **Prohibited Conduct**. Without limiting the other obligations of the Parties set forth in this Section 12.5, each Party covenants to the other that, as of the Effective Date and in the performance of its obligations under this Agreement through the expiration and termination of this Agreement, such Party and, to its knowledge, its Affiliates and its and its Affiliates' employees and contractors, in connection with the performance of their respective obligations under this Agreement, have not made, offered, given, promised to give, or authorized, and will not make, offer, give, promise to give, or authorize, any bribe, kickback, payment or transfer of anything of value, directly or indirectly through Third Parties, to any Government Official for the purpose of: (a) improperly influencing any act or decision of the Person or Government Official; (b) inducing the Person or Government Official to do or omit to do an act in violation of a lawful or otherwise required duty; (c) securing any improper advantage; or (d) inducing the Person or Government Official to improperly influence the act or decision of any organization, including any government or government instrumentality, to assist any Party in obtaining or retaining business. For the purpose of this Section "***Government Official***" means: (x) any officer, employee (including physicians, hospital administrators, or other healthcare professionals), agent, representative, department, agency, de facto official, representative, corporate entity, instrumentality or subdivision of any government, military or international organization, including any ministry or department of health or any state-owned or affiliated company or hospital; (y) any candidate for political office, any political party or any official of a political party, in each case for the purpose of obtaining or retaining business for or with, or directing business to, any Person, including either Party; or (z) any Person acting in an official capacity on behalf of any of the foregoing.

12.6 **Disclaimer**. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS ARTICLE 12, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR VALIDITY OF PATENT CLAIMS OR THE AVAILABILITY OF ANY LICENSES WITH RESPECT TO INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS A REPRESENTATION MADE OR WARRANTY GIVEN BY EITHER PARTY THAT EITHER PARTY WILL BE SUCCESSFUL IN OBTAINING ANY PATENTS OR THAT ANY PATENTS WILL ISSUE BASED ON A PENDING APPLICATION. WITHOUT LIMITING THE RESPECTIVE RIGHTS AND OBLIGATIONS OF THE

PARTIES EXPRESSLY SET FORTH HEREIN, EACH PARTY SPECIFICALLY DISCLAIMS ANY GUARANTEE THAT ANY PROGRAM OR LICENSED PRODUCTS WILL BE SUCCESSFUL, IN WHOLE OR IN PART.

ARTICLE 13

INDEMNIFICATION

13.1 **Indemnity**.

13.1.1 **By Precision**. Subject to Section 13.1.3, Precision shall defend, indemnify and hold harmless Novartis and its Affiliates, and their respective directors, officers, employees, and agents (each, a "***Novartis Indemnitee***") from and against any and all costs, fees, expenses, losses, liabilities, and damages, including reasonable legal expenses and attorneys' fees (collectively, "***Losses***") to which any Novartis Indemnitee may become subject as a result of any claim, demand, action or other proceeding by any Third Party (a "***Claim***") to the extent such Losses arise out of: (a) the gross negligence or willful misconduct of Precision or its Affiliates or their respective Sublicensees or Permitted Contractors in connection with its activities under this Agreement; or (b) the breach of this Agreement or the representations, warranties, and covenants made hereunder by Precision; except, in each case, to the extent such Losses result from matters subject to clause (a), (b), or (c) of Section 13.1.2.

13.1.2 **By Novartis**. Subject to Section 13.1.3, Novartis shall defend, indemnify and hold harmless Precision, its Affiliates, Duke, and its and their respective directors, officers, employees and agents (each, a "***Precision Indemnitee***") from and against any and all Losses to which any Precision Indemnitee may become subject as a result of any Claim to the extent such Losses arise out of: (a) the gross negligence or willful misconduct of Novartis, its Affiliates, or their respective Sublicensees or subcontractors in connection with its activities under this Agreement; (b) the breach of this Agreement or the representations, warranties and covenants made hereunder by Novartis; or (c) [***]; except, in each case, to the extent such Losses result from matters subject to clause (a) or (b) of Section 13.1.1.

13.1.3 **Procedure**. A Party that intends to claim indemnification under this Article 13 (the "***Indemnitee***") shall promptly notify the Indemnitor (the "***Indemnitor***") in writing of any Claim in respect of which the Indemnitee intends to claim such indemnification. The failure to deliver written notice to the Indemnitor within a reasonable time after the commencement of any action with respect to a Claim shall only relieve the Indemnitor of its indemnification obligations under this Article 13 if and to the extent the Indemnitor is actually and materially prejudiced thereby. The Indemnitor has sole control of the defense or settlement thereof. The Indemnitee shall cooperate fully with the Indemnitor and its legal representatives in the investigation of any action with respect to a Claim covered by this indemnification. The Indemnitee may participate at its expense in the Indemnitor's defense of and settlement negotiations for any Claim with counsel of the Indemnitee's own selection. The Indemnitor shall not settle any Claim without the prior written consent of the Indemnitee, not to be unreasonably withheld, conditioned or

delayed. So long as the Indemnitor is actively defending the Claim in good faith, the Indemnitee shall not settle or compromise any such Claim without the prior written consent of the Indemnitor. If the Indemnitor does not assume and conduct the defense of the Claim as provided above: (a) the Indemnitee may defend against, consent to the entry of any judgment, or enter into any settlement with respect to such Claim in any manner the Indemnitee may deem reasonably appropriate (and the Indemnitee need not consult with, or obtain any consent from, the Indemnitor in connection therewith); and (b) the Indemnitor shall remain responsible to indemnify the Indemnitee as provided in this Article 13.

13.2 **Insurance**. During the Term, each Party shall maintain such types and amounts of liability insurance (including self-insurance) as is normal and customary in the industry generally for similarly situated parties and adequate to cover its obligations under this Agreement, and Precision will upon request provide Novartis with a certificate of insurance in that regard, along with any amendments and revisions thereto.

ARTICLE 14

CONFIDENTIALITY

14.1 **Confidential Proprietary Information**.

14.1.1 **Confidential Proprietary Information**. In connection with this Agreement, each Party may disclose technical, business or other confidential information in connection with this Agreement, whether prior to, on, or after the Effective Date, including (a) any unpublished Patents, and (b) any information regarding the scientific, regulatory or business affairs or other activities of either Party (such confidential information, "***Confidential Proprietary Information***"). Without limiting the foregoing, the terms of this Agreement, the Stock Purchase Agreement, the Registration Rights Agreement and all Joint IP are the Confidential Proprietary Information of both Parties and shall be treated confidentially by each of the Parties, subject to the exceptions set forth in this Article 14. [***] Information exchanged by the Parties pursuant to the Confidentiality Agreement shall be treated as Confidential Proprietary Information under this Agreement and governed by the terms of this Agreement.

14.1.2 **Restrictions**. A Party (the "***Receiving Party***") that receives Confidential Proprietary Information from the other Party (the "***Disclosing Party***") shall keep all the Disclosing Party's Confidential Proprietary Information in confidence with the same degree of care with which the Receiving Party holds its own confidential information (but in no event less than a commercially reasonable degree of care). A Receiving Party shall not use the Disclosing Party's Confidential Proprietary Information except in connection with the performance of its obligations and exercise of its rights under this Agreement.

14.1.3 **Exceptions**. The obligations of confidentiality and restriction on use of Confidential Proprietary Information under Section 14.1.2 do not apply to any information that the Receiving Party can prove by competent written evidence: (a) is now,

or hereafter becomes, through no act or failure to act on the part of the Receiving Party, generally known or available to the public; (b) is known by the Receiving Party at the time of receiving such information without an obligation of confidentiality or limitations on use with respect thereto, other than by previous disclosure of the Disclosing Party, or its Affiliates, employees, agents, consultants, or contractors; (c) is hereafter furnished to the Receiving Party without an obligation of confidentiality or limitations on use with respect thereto by a Third Party lawfully permitted to make such disclosure as a matter of right; or (d) is independently discovered or developed by the Receiving Party without the use of or reference to Confidential Proprietary Information belonging to the Disclosing Party. Specific information shall not be deemed to be within any of the foregoing exclusions merely because it is embraced by more general information falling within those exclusions. Further, any combination of Confidential Proprietary Information shall not be deemed to be generally known, available to the public or known by the Receiving Party merely because individual elements of such Confidential Proprietary Information are subject to such exclusions unless the combination and its principles are subject to such exclusions.

14.1.4 **Permitted Disclosures**. The Receiving Party may disclose Confidential Proprietary Information belonging to the Disclosing Party as expressly permitted by this Agreement or if and to the extent such disclosure is reasonably necessary in the following instances:

(a) made by or on behalf of the Receiving Party to a Patent authority as may be reasonably necessary or useful for purposes of Prosecution and Maintenance of Patents as permitted by this Agreement; provided, that (i) neither Party shall file a patent application that discloses Background IP or Collaboration IP that is solely owned by the other Party pursuant to this Agreement and (ii) the Disclosing Party provides prior written consent for the disclosure (such consent not to be unreasonably withheld, conditioned or delayed);

(b) made by or on behalf of the Receiving Party to Regulatory Authorities as required in connection with any Regulatory Filings for a product that such Party has a license or right to develop in a given country or jurisdiction;

(c) made by or on behalf of the Receiving Party as may be reasonably necessary for prosecuting or defending litigation as permitted by this Agreement, the Stock Purchase Agreement or the Registration Rights Agreement;

(d) made by or on behalf of the Receiving Party for the purpose of complying with a valid order of a court of competent jurisdiction or other Governmental Authority of competent jurisdiction or, if in the opinion of the Receiving Party's legal counsel, such disclosure is otherwise required by Applicable Law;

(e) made by or on behalf of the Receiving Party in the event that disclosure of certain material developments or material information generated under this Agreement is required by, or advisable to comply with the requirements of, a Governmental Authority (including in filings with the Securities and Exchange Commission or other agency) or stock exchange; provided that, to the extent permitted, the Party seeking such disclosure first

provides the other Party a copy of the proposed disclosure; and provided, further, that the receiving Party shall afford to the other Party an opportunity to review and comment, which period shall be no less than [***] (provided that if the applicable disclosure is required to be made within fewer than [***], then the receiving Party shall afford to the other Party a reasonable opportunity to review and comment consistent with such disclosure requirement), and the Receiving Party shall accept any reasonable comments so provided;

(f) made by or on behalf of Precision to Duke solely as and to the extent necessary to fulfill Precision's reporting and payment obligations under the Duke Agreement, including disclosure of any financial terms of this Agreement or the Stock Purchase Agreement relevant to such obligations (e.g., royalty rates and thresholds), so long as (i) such information is disclosed subject to the confidentiality provisions of the Duke Agreement and (ii) Precision shall afford Novartis the opportunity to review and comment on such disclosure, which period shall be no less than [***] and Precision shall accept any reasonable comments so provided, to the extent permitted under the Duke Agreement;

(g) made by or on behalf of Novartis to the Bill & Melinda Gates Foundation solely as and to the extent necessary to fulfill Novartis's reporting obligations under the Gates Foundation Agreement, including disclosure of any financial terms of this Agreement or the Stock Purchase Agreement relevant to such obligations (e.g., royalty rates and thresholds), so long as (i) such information is disclosed subject to the confidentiality provisions of the Gates Foundation Agreement and (ii) Novartis shall afford Precision the opportunity to review and comment on such disclosure, which period shall be no less than [***] and Novartis shall accept any reasonable comments so provided, to the extent permitted under the Gates Foundation Agreement;

(h) made by or on behalf of the Receiving Party in response to a valid request by a U.S., state, foreign, provincial, or local tax authority, in which case either Party may disclose, a copy of this Agreement, the Stock Purchase Agreement or the Registration Rights Agreement (including any Exhibits, Appendices, ancillary agreements, and amendments hereto or thereto);

(i) made by the Receiving Party to its and its Affiliates' employees, consultants, contractors and agents, and to Sublicensees (in the case of Novartis) or licensees (in the case of Precision with respect to Terminated Programs), in each case on a need-to-know basis (as reasonably determined by the Receiving Party) in connection with the Research, Development, making, having made, use, importing, exporting, offering for sale, selling, Commercialization, or other exploitation of Licensed Products or Terminated Programs (if applicable) in the Field in the Territory, in each case under written obligations of confidentiality and non-use at least as stringent as those herein; and

(j) made by the Receiving Party to potential and actual investors, acquirers, licensees and other financial partners solely for the purpose of evaluating or carrying out an actual or potential investment, or acquisition, in each case under written obligations of confidentiality and non-use at least as stringent as those herein; provided, however, that with respect to disclosure to actual or bona fide potential investors, such disclosure is under a written

obligation of confidentiality that is consistent with market terms, including a shorter period of time during which such information must be held confidential.

In addition to the foregoing, Precision may [***].

14.1.5 **Public Domain Information and Residual Knowledge**. Nothing in this Agreement shall prevent a Party from using any information that is in the public domain. A Party shall also not be restricted under, and shall not be in breach of, this Agreement from using, within or outside this Agreement and for any purpose, any general knowledge, skill, and expertise acquired by its employees (or its Affiliates' employees) in their performance of this Agreement ("***Residuals***") solely to the extent such Residuals shall have been retained in the unaided memory (without intentional memorization) of such employees in intangible form and without use by the Party or such employees of tangible copies of any Confidential Proprietary Information of the other Party; provided that this provision will not be deemed in any event to provide any right to infringe the Patent rights of the other Party or of Third Parties that have licensed or provided materials to the other Party; provided, further, that a Party's use of such Residuals is on an "as is, where is" basis, with all faults and all representations and warranties disclaimed and at such Party's sole risk.

14.1.6 **Disclosure of Agreement**. Notwithstanding anything to the contrary herein, either Party or its Affiliates may disclose the relevant terms of this Agreement, the Stock Purchase Agreement and the Registration Rights Agreement: (a) to the extent required or advisable to comply with the rules and regulations promulgated by the Securities and Exchange Commission, any other Governmental Authority or any applicable stock exchange, provided that in connection with any filing of any such agreement with any Governmental Authority or stock exchange, the disclosing Party shall (i) file a redacted form of the agreement with such Governmental Authority or stock exchange, if permitted by such Governmental Authority or stock exchange, (ii) provide the redacted form of the agreement, if any, to the other Party for review and comment at least [***] prior to filing (provided that if the applicable filing is required to be made within fewer than [***], then the filing Party shall afford to the other Party a reasonable opportunity to review and comment consistent with such filing requirement), and (iii) consider any comments by the other Party to the redacted form of the agreement in good faith, it being acknowledged and agreed that each Party shall retain ultimate discretion to disclose the terms of the agreement to any Governmental Authority or stock exchange (as the case may be) as such Party determines is required or advisable; and (b) upon request from a Governmental Authority (such as a tax authority), provided the disclosing Party uses reasonable efforts to ensure the Governmental Authority maintains such terms as confidential.

14.1.7 **Survival**. Each Party's obligations under this Section 14.1 (other than Section 14.1.5) shall apply during the Term and continue for [***]. Section 14.1.5 shall apply during the Term and shall survive any expiration or termination of this Agreement.

14.2 **Publicity**. On the earlier of [***], the Parties shall issue a press release mutually agreed upon by the Parties. Thereafter, either Party may make subsequent public disclosure of the contents of such press release and, except as permitted under Section 14.1.4 and this Section 14.2, neither Party shall issue any subsequent press release or public statement disclosing information relating to this Agreement or the transactions contemplated hereby or the terms hereof without the prior written consent of the other Party, not to be unreasonably withheld, conditioned, or delayed; provided however, that (y) neither Party will be prevented from complying with any duty of disclosure it may have pursuant to Applicable Laws or pursuant to the rules of any recognized stock exchange or quotation system subject to the restrictions set forth in Sections 14.1.4 and 14.1.6 and (z) Precision will not be prevented from disclosing publicly the achievement of any Milestone Event and the receipt (and the amount) of any corresponding Milestone Payment, provided that (i) Novartis shall have at least [***] to review and provide edits and comments to any public disclosure proposed by Precision under this Section 14.2(z) and (ii) Precision shall reasonably incorporate any edits and address any comments provided by Novartis in such proposed public disclosure. If either Party desires to issue a press release or other public statement disclosing information relating to this Agreement or the transactions contemplated hereby or the terms hereof, the issuing Party will provide the other Party with a copy of the proposed press release or public statement. The issuing Party shall specify with each such proposed press release or public statement, taking into account the urgency of the matter being disclosed, a reasonable period of time within which the Receiving Party may provide any comments on such proposed press release or public statement. If the reviewing Party provides any comments, the Parties shall consult with one another on such proposed press release or public statement and work in good faith to prepare a mutually acceptable press release or public statement. Each Party may publicly disclose any information relating to this Agreement that has already been publicly disclosed in accordance with this Section 14.2, provided such information continues as of such time to be accurate.

14.3 **Publication**. Novartis shall be entitled to issue scientific publications, disclose scientific data and make presentations with respect to a Program, the Initial Collaboration Target or Replacement Collaboration Target (as applicable), any Initial Payloads and Additional Payloads (as applicable), the Licensed Products, and their testing in accordance with Novartis's and its collaborators' internal guidelines without approval by Precision, and Novartis shall be in control of any scientific publications or scientific presentations regarding the Licensed Products or their testing, subject to this Section 14.3. For any such publications, disclosures and presentations regarding Licensed Products for which a First Commercial Sale has not yet occurred, Novartis shall: (a) provide Precision with a draft of such publication, disclosure or presentation at least [***] prior to submission to the publisher (as applicable); (b) remove any Confidential Proprietary Information of Precision related to ARCUS Technology or ARCUS Nucleases generally, as requested by Precision; (c) delay the disclosure or submission for publication of such publication or presentation of such presentation, as applicable, for an additional [***] to allow the applicable Party under Section 11.2 the opportunity to seek patent protection with respect to the content of such publication, disclosure or presentation; and (d) give Precision a pre-publication right to review and comment upon such publication, disclosure or presentation, which comments shall be considered in good faith by Novartis. Precision shall not issue any scientific publications regarding the Initial Collaboration Target or Replacement Collaboration Target (as applicable), any Initial Payloads and Additional Payloads (as applicable), the Licensed Products or their testing without Novartis's prior written consent.

Notwithstanding the foregoing, during the Research Term Precision may issue scientific publications, disclose scientific data and make presentations relating specifically to the ARCUS Technology (including the cleavage activity, specificity, mechanics of cleavage or other performance characteristics of ARCUS Nucleases) that do not identify the Initial Collaboration Target or Replacement Collaboration Target (as applicable), any Initial Payloads and Additional Payloads (as applicable) or a Licensed Product; provided, that for any publication, disclosure or presentation that discloses information relating to the Initial Collaboration Target or Replacement Collaboration Target (as applicable), any Initial Payloads and Additional Payloads (as applicable) or the Licensed Products, Precision shall: (w) provide Novartis with a draft of such publication, disclosure or presentation at least [***] prior to submission to the publisher (as applicable); (x) remove any Confidential Proprietary Information of Novartis or any Confidential Proprietary Information of either Party which identifies the Licensed ARCUS Nucleases, as requested by Novartis; (y) delay the disclosure or submission for publication of such publication or presentation of such presentation, as applicable, for an additional [***] to allow the applicable Party under Section 11.2 the opportunity to seek patent protection with respect to the content of such publication, disclosure or presentation; and (z) consider in good faith any comments from Novartis with respect to the information contained therein relating to the Initial Collaboration Target or Replacement Collaboration Target (as applicable), any Initial Payloads and Additional Payloads (as applicable) or the Licensed Products.

ARTICLE 15

TERM & TERMINATION

15.1 **Term**. This Agreement commences on the Effective Date and, unless terminated earlier as provided in this Article 15, shall continue on a Licensed Product-by-Licensed Product basis until the expiration of the last Royalty Term in the Territory for such Licensed Product (the "***Term***").

15.2 **Termination for Material Breach**.

15.2.1 **Termination**. Either Party may terminate this Agreement upon written notice to the other Party if such other Party materially breaches its obligations under this Agreement and, after receiving written notice from the non-breaching Party identifying such material breach in reasonable detail, fails to cure such material breach within [***] from the date of such notice [***].

15.2.2 **Dispute**. If the alleged breaching Party disputes in good faith the existence or materiality of a breach specified in a notice provided by the other Party in accordance with Section 15.2.1, and such alleged breaching Party provides the other Party notice of such dispute within the applicable cure period, then the non-breaching Party may not terminate this Agreement under Section 15.2.1 unless and until it has been finally determined pursuant to Article 16 that the alleged breaching Party has materially breached this Agreement and such Party fails to cure such breach within [***] following such decision. During the pendency of such dispute, all of the terms and conditions of this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder. If the Parties do not agree as to whether or not a

material breach has occurred, the non-breaching Party may elect to have the dispute resolved pursuant to expedited arbitration; accordingly, upon election of the non-breaching Party, such dispute will be resolved by arbitration as set forth in Article 16, except that the Parties agree that the proceedings shall be conducted pursuant to the Expedited Procedure Rules set forth by the American Arbitration Association for such expedited proceedings, irrespective of the amount in dispute.

15.3 **Termination by Novartis**.

15.3.1 **Partial Termination**. Novartis may, at any time in its sole discretion and without cause, terminate this Agreement on a Program-by-Program basis upon [***] prior written notice to Precision.

15.3.2 **Entire Agreement**. Novartis may, in its sole discretion, terminate this Agreement in its entirety at any time and without cause upon [***] prior written notice to Precision.

15.3.3 **Novartis Special Remedy**. In the event that Novartis would have the right to terminate this Agreement under Section 15.2.1 for Precision's material breach of (a) [***] or (b) [***], then Novartis may, in its sole discretion, elect to either (y) exercise such termination right, or (z) in lieu of exercising such termination right (and without limiting Novartis's rights otherwise set under this Agreement), maintain the licenses and other rights granted by Precision to Novartis under this Agreement in relation to the affected Program(s) in accordance with their respective terms, provided that: [***]. For clarity, Novartis shall only be considered to have the right to terminate this Agreement under Section 15.2.1 after the applicable notice period has expired without a cure or, if applicable (pursuant to Section 15.2.2), unless and until it has been finally determined pursuant to Article 16 that Precision has materially breached this Agreement and Precision fails to cure such breach within [***] following such decision. In no event shall Novartis be entitled to elect the remedy under this Section 15.3.3 [***].

15.4 **Effect of Patent Challenges**. Except to the extent the following is unenforceable under the Applicable Law of a jurisdiction:

15.4.1 if Novartis, its Affiliates or Sublicensees, directly or indirectly: (a) initiate, request or participate in an interference or opposition proceeding with respect to any Precision Patent; or (b) make, file, maintain or participate in any claim, demand, lawsuit, cause of action or any other administrative, judicial or similar proceeding to challenge the validity, enforceability or patentability of any Precision Patent (in each case, (a) or (b), other than in response to a threat of an infringement claim by Precision or its Affiliates), then Precision may upon written notice to Novartis immediately terminate this Agreement in its entirety; provided, however, that if Novartis or its applicable Affiliate or the applicable Sublicensee withdraws (or causes to be withdrawn) the applicable action described in above in this Section 15.4.1 within [***] after being requested to do so by Precision in writing, then Precision will have no right to terminate this Agreement pursuant to this Section 15.4.1 on the basis of such challenge or action.

15.4.2 For clarity, (a) Precision may not terminate this Agreement pursuant to Section 15.4.1 on the basis of any particular challenge or action if Novartis or any of its Affiliates or Sublicensees is required by legal process to be joined as a party in such challenge or action by a Third Party, and (b) "participates in" as used in this Section 15.4 shall not include a Party's truthful responses to mandated requests by a relevant Governmental Authority (such as subpoenas or depositions).

15.5 **Termination for Cessation of Development**. On a Program-by-Program basis, if with respect to all Licensed Products arising from such Program in all countries in the Territory, Novartis and its Affiliates and Sublicensees have suspended or do not have an active and ongoing Development program (which program may include activities directed to Developing delivery technology for Licensed Products or out-licensing) for a period of [***] during the Term, and no First Commercial Sale of any Licensed Product arising from such Program has occurred, then provided such cessation was not due to action taken by Regulatory Authorities to restrict or prohibit such activities, Third Party litigation related to a Licensed Product arising from such Program, or any cause specified in Section 17.10, then such cessation shall automatically be treated as Novartis's submission of written notice of termination of this Agreement pursuant to Section 15.3.1 with respect to such Program. In the event that such cessation of Development for Licensed Products within the applicable Program was a result of such actions or litigation or infringement, the [***] period or portion thereof so affected shall be extended on a day-for-day basis during the period of time such action, litigation or cause continues to exist.

15.6 **Effects of Termination**. Upon any termination of this Agreement, the following will apply, provided that if this Agreement is terminated only with respect to specified Programs ("***Terminated Programs***") and not in its entirety, then the following will apply to such Terminated Programs only, and if this Agreement is terminated in its entirety, then all Programs will be deemed Terminated Programs.

15.6.1 **Termination of Licenses**. All licenses for Terminated Programs granted under Section 7.1, and all sublicenses granted thereunder (other than the sublicense to the Bill & Melinda Gates Foundation authorized in Section 7.8.1), terminate automatically as of the termination effective date and all such rights shall revert to Precision; provided that, if Novartis (or its Affiliates or Sublicensees) has inventory of usable Licensed Product(s) arising from a Terminated Program as of the effective date of termination, then Novartis (and its Affiliates and Sublicensees) may continue to sell off such inventory of Licensed Products in the Field in the Territory (and fulfill customer orders therefor) until the earlier to occur of [***] after the effective date of termination and the date on which Novartis (or its Affiliates or Sublicensees) no longer has such inventory of Licensed Product(s) and shall pay Precision any applicable royalties due based on such sales. If the applicable Terminated Program is the Initial Program, then the Initial Collaboration Target and all associated Licensed Products and Licensed ARCUS Nucleases shall cease to be subject to the rights and obligations of the Parties under this Agreement, except with respect to any [***] that have not become Terminated Programs pursuant to this Agreement and their associated Licensed Products, and the Initial Payloads shall cease to be subject to the rights and obligations of the Parties under this Agreement. If the applicable Terminated Program is an [***], then the applicable

Additional Payload and all associated Licensed Products shall cease to be subject to the rights and obligations of the Parties under this Agreement. If the applicable Terminated Program is the Replacement Program, then this Agreement shall be deemed to be terminated in accordance with Section 15.3.2.

15.6.2 **Destruction of Confidential Proprietary Information**. Each Receiving Party shall destroy (at the Disclosing Party's written request) all Confidential Proprietary Information of the Disclosing Party in its possession as of the effective date of expiration or termination, with the exception of one copy of such Confidential Proprietary Information, which may be retained by the legal department of the Receiving Party to confirm compliance with the nonuse and nondisclosure provisions of this Agreement, provided that each Receiving Party may retain and continue to use such Confidential Proprietary Information of the Disclosing Party only to the extent necessary to exercise any surviving rights, licenses or obligations under this Agreement, including any obligation of Novartis to transfer Licensed Products to support the Humanitarian License under the Gates Foundation Agreement. Notwithstanding the foregoing, a Receiving Party shall not be required to destroy (a) any Confidential Proprietary Information of the Disclosing Party contained in its laboratory notebooks, (b) any computer files created during automatic system back up that are subsequently stored securely by it and not readily accessible to its employees, consultants, or others who received the Disclosing Party's Confidential Proprietary Information under this Agreement, or (c) any Joint IP.

15.6.3 **Other Rights and Obligations**. All other rights granted under this Agreement and all obligations of the Parties will automatically terminate except as expressly set forth in this Section 15.6 or Section 15.7.

15.7 **Survival**. Expiration or termination of this Agreement shall not relieve the Parties of any obligation or right accruing prior to such expiration or termination. Except as set forth below or elsewhere in this Agreement, the obligations and rights of the Parties under the following provisions of this Agreement shall survive expiration or termination of this Agreement: Articles 1 (to the extent such definitions are used in surviving provisions) and 16, and Sections 3.3.1 (last sentence only, and only if Novartis has delivered the Replacement Notice prior to the effective date of such termination or expiration), 4.7 (with respect to Research Costs incurred by Precision prior to the effective date of such termination or expiration), 4.10, 4.11, 7.4 (second-to-last sentence only), 7.8, 9.3 (with respect to Milestone Events achieved prior to the effective date of such termination or expiration), 9.4 (with respect to sales of Licensed Products made before the effective date of such termination or expiration or pursuant to Section 15.6.1), 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 11.1.1, 11.1.2, 11.1.3, 11.2.2, 11.2.3, 11.2.4 (to the extent such cooperation is implicated by other surviving provisions of Article 11), 11.3.2 (with respect to any and all Infringements of Joint IP), 11.3.5 (with respect to actions brought before the effective date of such termination or expiration, or brought with respect to Joint IP after the effective date of such termination or expiration), 11.3.6 (with respect to actions brought with respect to Joint IP), 11.4 (with respect to Joint IP), 11.5.2, 11.6, 11.7 (last sentence only), 12.6, 13.1 (with respect to claims for which the cause of action arose prior to the effective date of termination or expiration), 14.1 (to the extent and as described in Section 14.1.7), 15.6, 15.7, 15.8, 17.1, 17.2, 17.4, 17.5, 17.6, 17.9, 17.11, 17.15, 17.16 and 17.17.

15.8 **Exercise of Rights to Terminate; Damages; Relief**. The valid use by either Party of a termination right provided for under this Agreement shall not give rise to the payment of damages or any other form of compensation or relief to the other Party with respect thereto; provided, however, that termination of this Agreement shall not preclude either Party from claiming any other damages, compensation or relief that it may be entitled to upon termination.

15.9 **Bankruptcy Code**. If this Agreement is rejected by a Party as a debtor under Section 365 of the United States Bankruptcy Code or similar provision in the bankruptcy laws of another jurisdiction (the "***Code***"), then, notwithstanding anything else in this Agreement to the contrary, all licenses and rights to licenses granted under or pursuant to this Agreement by the Party in bankruptcy to the other Party are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the Code (or similar provision in the bankruptcy laws of the jurisdiction), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code (or similar provision in the bankruptcy laws of another applicable jurisdiction). The Parties agree that a Party that is a licensee of rights under this Agreement shall retain and may fully exercise all of its rights and elections under the Code, and that upon commencement of a bankruptcy proceeding by or against a Party under the Code, the other Party shall be entitled to a complete duplicate of, or complete access to (as such other Party deems appropriate), any such intellectual property to which such other Party is otherwise entitled to have access under this Agreement and all embodiments of such intellectual property, if not already in such other Party's possession, shall be promptly delivered to such other Party: (a) upon any such commencement of a bankruptcy proceeding upon written request therefor by such other Party, unless the bankrupt Party elects to continue to perform all of its obligations under this Agreement; or (b) if not delivered under the foregoing subclause (a), upon the rejection of this Agreement by or on behalf of the bankrupt Party upon written request therefor by the other Party. The foregoing provisions of this Section 15.9 are without prejudice to any rights a Party may have arising under the Code.

ARTICLE 16

GOVERNING LAW; DISPUTE RESOLUTION

16.1 **Governing Law**. This Agreement is governed by and will be construed in accordance with the laws of the State of New York, without reference to its conflict of laws principles. The United Nations Convention of International Contracts on the Sale of Goods (the Vienna Convention) does not apply to this Agreement.

16.2 **Disputes**. The Parties recognize that controversies or claims arising out of, relating to, or in connection with this Agreement may arise from time to time. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes in an expedient manner by mutual cooperation and without resort to litigation. To accomplish this objective, the Parties shall follow the procedures set forth in this Article 16 to resolve any dispute, claim or controversy of any nature arising out of or relating to this Agreement, including any action or claim based on tort, contract or statute, or concerning the interpretation, effect, termination, validity, performance or breach of this Agreement (each, a "***Dispute***"). Notwithstanding the foregoing, "Dispute" shall not include matters within the purview of the JSC, which shall be resolved pursuant to Section 2.6, including through the exercise by Precision or Novartis of its final decision-making authority in accordance therewith; provided that Disputes regarding

whether a decision is subject to Precision's JSC representatives having final decision-making authority or to Novartis's JSC representatives having final decision-making authority pursuant to Section 2.6 shall be resolved pursuant to the procedures set forth in this Article 16. If a Dispute arises between the Parties, either Party may refer the Dispute to Executive Officers of each Party for resolution within [***] of a written request by either Party to the other Party. Each Party, within [***] after a Party has received such written request from the other Party to so refer such Dispute, shall notify the other Party in writing of the Executive Officer to whom such Dispute is referred. If, after an additional [***] after the notice of Dispute, such Executive Officers have not succeeded in negotiating a resolution of the Dispute, and a Party wishes to pursue the matter, the Parties may seek to resolve the Dispute through binding arbitration as further described in Section 16.3.

16.3 **Arbitration**. Any Dispute not resolved through the informal Dispute-resolution procedures described above shall be settled by binding arbitration as follows (subject to Section 15.2.2, with respect to expedited arbitration of Disputes regarding the existence or materiality of a breach). Either Party, following the end of the [***] period referenced in Section 16.2, may refer such issue to arbitration by submitting a written notice of such request to the other Party. Promptly following receipt of such notice, the Parties shall meet and discuss in good faith and agree on an arbitrator to resolve the issue, which arbitrator shall be neutral and independent of both Parties and all of their respective Affiliates, shall have significant experience and expertise in licensing and partnering agreements in the pharmaceutical and biotechnology industries. If the Parties cannot agree on such arbitrator within [***] of request by a Party for arbitration, then such arbitrator shall be appointed by the American Arbitration Association, which arbitrator must meet the foregoing criteria. The place of arbitration shall be New York, New York. The proceedings shall be conducted pursuant to the rules set forth by the American Arbitration Association for such proceedings. All proceedings and communications shall be in English. The Parties agree that discovery appropriate to the issues in the dispute shall be permitted in the arbitration, including reasonable document requests, pre-hearing exchanges of information, expert witness disclosures, limited depositions of important witnesses and other appropriate discovery, provided that such discovery shall be limited to the narrower of (a) the scope of discovery agreed to by the Parties, or if none can be agreed, established by the arbitrator, and (b) such discovery as would be permitted by the Federal Rules of Civil Procedure and is approved by the arbitrator, keeping in mind the goal of an expedited and efficient proceeding. The arbitration shall be governed by the procedural and substantive law set forth in Section 16.1 and the United States Arbitration Act, 9 U.S.C. §§1-16 to the exclusion of any inconsistent state laws. Either Party may apply to the arbitrator for interim injunctive relief or may seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that Party pending resolution of the matter pursuant to this Article 16. The Parties shall have the right to be represented by counsel. Any judgment or award rendered by the arbitrator shall be final and binding on the Parties, and shall be governed by the terms and conditions hereof, including the limitation of liability set forth in Section 17.2. The Parties agree that such a judgment or award may be enforced in any court of competent jurisdiction. The statute of limitations of the State of New York applicable to the commencement of a lawsuit shall apply to the commencement of arbitration under this Article 16. Each Party shall bear its own costs and expenses and attorneys' fees in the arbitration, except that the arbitrator may order the non-prevailing Party to bear all or an appropriate part (reflective of the relative success on the issues) of the costs and expenses and reasonable attorneys' fees incurred by the prevailing Party

based on the relative merits of each Party's positions on the issues in the dispute. The Party that does not prevail in the arbitration proceeding shall pay the arbitrator's fees and expenses and any administrative fees of arbitration. All proceedings and decisions of the arbitrator(s) shall be deemed Confidential Proprietary Information of each of the Parties, and shall be subject to Article 14.

16.4 **Patent and Trademark Disputes**. Notwithstanding Section 16.3, any Dispute relating to the scope, validity, enforceability or infringement of any Patents or trademarks shall be submitted to a court or other Governmental Authority of competent jurisdiction in the country in which such Patent or trademark rights were granted or arose.

ARTICLE 17

MISCELLANEOUS

17.1 **Entire Agreement; Amendment**. This Agreement, including the Exhibits and Schedules hereto, together with the Stock Purchase Agreement and the Registration Rights Agreement, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto with respect to the subject matter hereof and supersedes, as of the Effective Date, all prior and contemporaneous agreements and understandings between the Parties with respect to the subject matter hereof, including the Confidentiality Agreement. The foregoing may not be interpreted as a waiver of any remedies available to either Party as a result of any breach, prior to the Effective Date, by the other Party of its obligations under the Confidentiality Agreement. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party.

17.2 **Limitation of Liability**. NEITHER PARTY MAY RECOVER FROM THE OTHER PARTY ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES IN CONNECTION WITH THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THIS SECTION 17.2 SHALL NOT BE CONSTRUED TO LIMIT EITHER PARTY'S INDEMNIFICATION OBLIGATIONS UNDER ARTICLE 13, EITHER PARTY'S LIABILITY FOR BREACH OF ITS CONFIDENTIALITY OBLIGATIONS UNDER ARTICLE 14 OR LIABILITY OF A PARTY FOR ITS INFRINGEMENT OR MISAPPROPRIATION OF ANY INTELLECTUAL PROPERTY RIGHTS OR FOR A PARTY'S GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR FRAUD.

17.3 **Independent Contractors**. The relationship between Novartis and Precision created by this Agreement is solely that of independent contractors. This Agreement does not create any agency, distributorship, employee-employer, partnership, joint venture or similar business relationship between the Parties. Neither Party is a legal representative of the other Party, and neither Party can assume or create any obligation, representation, warranty, or guarantee, express or implied, on behalf of the other Party.

17.4 **Notice**. Any notice required or permitted to be given by this Agreement must be in writing, in English. Any and all notices or other communications or deliveries required or

permitted to be provided hereunder must be in writing and will be deemed given and effective if: (a) delivered by hand or by overnight courier with tracking capabilities; (b) mailed postage prepaid by first class, registered, or certified mail; or (c) delivered by facsimile or electronic mail, with a confirmation copy to be sent via either of the methods set forth in clauses (a) and (b) of this Section 17.4, in each case, addressed as set forth below unless changed by notice so given:

If to Precision:

Precision BioSciences, Inc.
302 East Pettigrew Street, Suite A-100
Durham, NC 27701
Attn: [***] Senior Vice President, Business Development and Alliance Management
Fax: (480) 393-5553
E-mail: [***]

with a copy (which shall not constitute notice) to:

Smith, Anderson, Blount, Dorsett,
Mitchell & Jernigan, LLP
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: John Therien
Fax: (919) 821-6800
E-mail: jtherien@smithlaw.com

Novartis shall also provide a copy of any notice (via e-mail if available) to Precision's Alliance Manager.

If to Novartis:

NovartisPharma AG
Lichtstrasse 35
CH-4056 Basel
Switzerland
Attn: Head of NIBR General Legal, Europe
And an email copy to: [***]

with a copy (which shall not constitute notice) to:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139 USA
Attn: General Counsel

Precision shall also provide a copy of any notice (via e-mail if available) to Novartis's Alliance Manager.

17.5 **Severability**. If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable, or illegal by a court of competent jurisdiction, (a) such adjudication shall not, to the extent feasible, affect or impair, in whole or in part, the validity, enforceability, or legality of any remaining portions of this Agreement, (b) this Agreement shall be construed and enforced as if such invalid, unenforceable or illegal provision had never comprised a part hereof, (c) all remaining portions will remain in full force and effect and shall not be affected by the invalid, unenforceable or illegal provision or by its severance herefrom, and (d) in lieu of such invalid, unenforceable or illegal provision, the Parties shall use reasonable efforts to seek and agree on an alternative valid and enforceable provision that preserves the original purpose and intent of this Agreement.

17.6 **Non-Use of Names**. Precision shall not use the name, trademark, logo, or physical likeness of Novartis or its respective officers, directors or employees, or any adaptation of any of them, in any advertising, promotional or sales literature, without Novartis's prior written consent; provided that Precision shall have the right to use the name and logo of Novartis solely for the purpose of referring to Novartis as a partner of Precision, subject to Precision's compliance with Novartis's written branding and usage guidelines. Precision shall require its Affiliates to comply with the foregoing. Novartis shall not use the name, trademark, logo, or physical likeness of Precision or its officers, directors or employees, or any adaptation of any of them, in any advertising, promotional or sales literature, without Precision's prior written consent; provided that Novartis shall have the right to use the name and logo of Precision solely for the purpose of referring to Precision as a partner of Novartis, subject to Novartis's compliance with Precision's written branding and usage guidelines. Novartis shall require its Affiliates and Sublicensees to comply with the foregoing.

17.7 **Assignment**. Neither Party may assign or transfer this Agreement or any rights or obligations hereunder without the prior written consent of the other, except that a Party may make such an assignment or transfer, without the other Party's consent to: (a) its Affiliate, provided that such Party shall remain primarily liable for any acts or omissions of such Affiliate; or (b) to an Acquirer in connection with a Change of Control, subject to Section 17.8. Any permitted assignee shall, in writing to the non-assigning party, expressly assume performance of such assigning Party's rights and obligations. Any permitted assignment or transfer is binding on the successors of the assigning or transferring Party. Any assignment or transfer or attempted assignment or transfer by either Party in violation of the terms of this Section 17.7 is null, void and of no legal effect.

17.8 **Precision Change of Control**.

17.8.1 **Notification of Change of Control**. Precision shall provide Novartis with written notice of any Change of Control of Precision promptly, but no later than [***], following the first public announcement of such Change of Control, which notice shall describe in reasonable detail the nature of the transaction and the identity of the Acquirer (a "***Change of Control Notice***"). If Precision undergoes a Change of Control, then Section 17.8.2 shall apply. For avoidance of doubt, a Change of Control of Precision shall not in any way limit or alter Novartis's termination rights in accordance with Section 15.3, and the provisions of Section 17.8.2 below shall only apply if Novartis has not exercised any such termination right.

17.8.2 **Effects of Change of Control**. Subject to Section 17.8.3 below, following a Change of Control of Precision, [***].

17.8.3 **Acquirer Engaged in Competing Program**. If Precision undergoes a Change of Control and, as of the closing date of such Change of Control transaction, the applicable Acquirer is engaged in a Competing Program, then Novartis may, by written notice delivered to Precision within [***] following Novartis's receipt of a Change of Control Notice from Precision, [***].

17.8.4 **Firewalled Programs**. Promptly following the first to occur of any of the following events in relation to an Acquirer of Precision: (a) the effective date of a Change of Control of Precision [***], (b) Novartis's delivery to Precision of a Reservation Request pursuant to Section 3.2.1 specifying the identity of a Payload that Novartis desires to include as a Reserved Payload under this Agreement that results in the Acquirer's program with respect to the applicable Payload becoming a Competing Program, or (c) the initiation of [***] (each of (a), (b) and (c), with respect to such Competing Program, the "***Firewall Event***"), Precision shall implement and enforce Firewalls between the applicable Program and Competing Program for the duration of the applicable Firewall Period.

17.8.5 **Firewall Audits**. Novartis shall have the right, through a designated Third Party auditor reasonably acceptable to Precision, to audit Precision's (and, as applicable, its Affiliates') implementation and enforcement of Firewalls under this Section 17.8 for purposes of confirming compliance with the Firewalls, identifying any vulnerabilities or breaches and requiring Precision (or its Affiliates) to promptly remediate any non-compliance identified by such audit. In connection with such audit, duly authorized representatives of Novartis's designated auditor may make an on-site visit to Precision (or its Affiliate) for the purpose of conducting such audit. Precision may require such auditor to execute a reasonable confidentiality agreement prior to commencing the audit, provided that the results of such audit (excluding all Third Party confidential information and any of Precision's or its Affiliates' confidential information that Novartis does not otherwise have the right to access under this Agreement) may be shared with Novartis. Novartis may conduct such audits from time to time as reasonably necessary to confirm Precision's compliance with such Firewall requirements [***]. Any audits described under this Section 17.8.5 shall be conducted during Precision's regular business hours, for a duration only as reasonably necessary to confirm Precision's compliance with the applicable Firewall requirements, and shall not unreasonably interfere with or impede Precision's business operations. Novartis shall provide Precision with written notice of such audit at least [***] prior to such requested audit (or such shorter period as may be designated by Novartis if Novartis reasonably believes at any time that Precision is not in compliance with such Firewall requirements). All such audits shall be conducted at Novartis's cost and expense. If the auditor identifies any breach of the Firewall, Novartis or the auditor will notify Precision, and Precision will promptly (and will use reasonable efforts to ensure its Affiliates promptly) take all action necessary to remedy such breach, and will provide Novartis with reasonable assurance that such action has been taken, at Precision's sole expense.

17.9 **Waivers**. The failure of a Party to insist upon strict performance of any provision of this Agreement or to exercise any right arising out of this Agreement shall neither impair that provision or right nor constitute a waiver of that provision or right, in whole or in part, in that instance or in any other instance. Any waiver by a Party of a particular provision or right shall be in writing, shall be as to a particular matter and, if applicable, for a particular period of time and shall be signed by such Party.

17.10 **Force Majeure**. Neither Party shall be responsible to the other for any failure or delay in performing any of its obligations under this Agreement or for other nonperformance hereunder (excluding, in each case, the obligation to make payments when due) if such delay or nonperformance is caused by strike, fire, flood, earthquake, accident, war, act of terrorism, epidemics, pandemics, the spread of infectious diseases, quarantines, act of God or of the government of any country or of any local government, or by any other cause unavoidable or beyond the control of any Party hereto. In such event, such affected Party shall use Commercially Reasonable Efforts to resume performance of its obligations and will keep the other Party informed of actions related thereto.

17.11 **Interpretation**. The captions and headings to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless specified to the contrary, references to Articles, Sections, Appendices or Exhibits mean the particular Articles, Sections, Appendices or Exhibits to this Agreement and references to this Agreement include all Exhibits hereto. In the event of any conflict between the main body of this Agreement and any Exhibit hereto, the main body of this Agreement shall prevail. Unless context otherwise clearly requires, whenever used in this Agreement: (a) the words “include” or “including” shall be construed as incorporating, also, “but not limited to” or “without limitation”; (b) the word “day” or “year” means a calendar day or year unless otherwise specified; (c) the word “notice” means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (d) the words “hereof,” “herein,” “hereby” and derivative or similar words refer to this Agreement as a whole and not merely to the particular provision in which such words appear; (e) the words “shall” and “will” have interchangeable meanings for purposes of this Agreement; (f) provisions that require that a Party, the Parties or a committee hereunder “agree,” “consent” or “approve” or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise; (g) words of any gender include the other gender; (h) words using the singular or plural number also include the plural or singular number, respectively; (i) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement law, rule or regulation thereof; (j) the phrase “non-refundable” shall not prohibit, limit or restrict either Party’s right to obtain damages in connection with a breach of this Agreement; (k) neither Party shall be deemed to be acting on behalf of the other Party; and (l) the word “or” is used in the inclusive sense (“and/or”).

17.12 **Counterparts; Electronic Signatures**. This Agreement may be executed in any number of counterparts, each of which is deemed an original, but all of which together constitute one instrument. This Agreement may be executed and delivered electronically and upon such delivery such electronic signature will be deemed to have the same effect as if the original signature had been delivered to the other Party.

17.13 **Expenses**. Each Party shall pay its own costs, charges and expenses incurred in connection with the negotiation, preparation and execution of this Agreement.

17.14 **Further Assurances**. Novartis and Precision hereby covenant and agree without the necessity of any further consideration, to execute, acknowledge and deliver any and all documents and take any action as may be reasonably necessary to carry out the intent and purposes of this Agreement.

17.15 **No Third Party Beneficiary Rights**. This Agreement is not intended to and shall not be construed to give any Third Party any interest or rights (including any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby, except as otherwise expressly provided for in this Agreement.

17.16 **Construction**. The Parties hereto acknowledge and agree that: (a) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (b) the rule of construction to the effect that any ambiguities are resolved against the drafting Party shall not be employed in the interpretation of this Agreement; and (c) the terms and provisions of this Agreement shall be construed fairly as to all Parties hereto and not in a favor of or against any Party, regardless of which Party was generally responsible for the preparation of this Agreement.

17.17 **Cumulative Remedies**. No remedy referred to in this Agreement is intended to be exclusive unless explicitly stated to be so, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

17.18 **Extension to Affiliates**. Except as expressly set forth otherwise in this Agreement, each Party shall have the right to extend the rights and immunities granted in this Agreement to one or more of its Affiliates. All applicable terms and provisions of this Agreement, except this right to extend, shall apply to any such Affiliate to which this Agreement has been extended to the same extent as such terms and provisions apply to the Party extending such rights and immunities. For clarity, Novartis extending the rights and immunities granted hereunder shall remain primarily liable for any acts or omissions of its Affiliates.

17.19 **Effective Date**. This Agreement will automatically become effective in its entirety on the Effective Date. Until the Effective Date, other than Sections 14.1.4, 14.1.6 and 14.2 (each of which will apply notwithstanding anything to the contrary in the Confidentiality Agreement), this Section 17.19 and Article 16 (including any defined terms set forth in the foregoing provisions or in Article 1 to the extent necessary to give effect to the rights and obligations set forth therein), this Agreement shall not be binding on the Parties. The Parties agree that the Confidentiality Agreement will remain in full force and effect until the earlier of (a) the Effective Date or (b) September 15, 2022.

17.20 **[*****]

[Signature Page Follows]

In Witness Whereof, the Parties have caused this Agreement to be executed as of the Execution Date by their duly authorized representatives.

Precision BioSciences, Inc.

By: /s/ Michael Amoroso
Name: Michael Amoroso
Title: Chief Executive Officer

Novartis Pharma AG

By: /s/ Petra Grohmann-Moesching
Name: Petra Grohmann-Moesching
Title: Head of Finance, NIBR Europe

By: /s/ Simone Pfirter
Name: Simone Pfirter
Title: Head NIBR General Legal Europe

Exhibit 1.46

Developing Countries List

[Omitted]

Exhibit 3.2.1

Reserved Payload List

[Omitted]

Exhibit 4.4.1

Initial Research Plan and Budget

[Omitted]

Exhibit 4.10

Form of Materials Transfer Record

[Omitted]

Exhibit 9.7(a)

Form Invoice

[Omitted]

Exhibit 9.7(b)

Precision Wire Instructions

[Omitted]

Exhibit 12.2.3

Existing Patents

[Omitted]

Schedule 1.59

Duke IP

[Omitted]

Exhibit 10.2

Certain information marked as [***] has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential.

STOCK PURCHASE AGREEMENT

This **Stock Purchase Agreement** (this "***Agreement***") is entered into as of June 14, 2022 (the "***Execution Date***"), by and between **Precision BioSciences, Inc.**, a corporation organized and existing under the laws of Delaware, with its principal business office located at 302 E Pettigrew St - Dibrell Whse Suite A-100, Durham, North Carolina 27701-3712 ("***Precision***"), and **Novartis Pharma AG**, a corporation organized and existing under the laws of Switzerland, with its principal business office located at Lichtstrasse 35, CH-4056 Basel, Switzerland ("***Novartis***"). Precision and Novartis are each hereafter referred to individually as a "***Party***" and together as the "***Parties***." The capitalized terms used herein and not otherwise defined have the meanings given to them in Appendix 1 or the Collaboration and License Agreement (as defined below).

Whereas, in connection with the transactions contemplated by this Agreement, the Parties are entering into that certain Collaboration and License Agreement (the "***Collaboration and License Agreement***") and a Registration Rights Agreement in the form attached hereto as Exhibit A (the "***Registration Rights Agreement***"); and

Whereas, pursuant to the terms and subject to the conditions set forth in this Agreement, Precision desires to issue and sell to Novartis, and Novartis desires to purchase from Precision, certain shares of Precision's common stock, $0.000005 par value per share (the "***Common Stock***").

Now, Therefore, in consideration of the representations, warranties, covenants, agreements and obligations contained herein, and for other good and valuable consideration, the adequacy and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1

SALE AND PURCHASE OF COMMON STOCK

1.1 Purchase of Common Stock.

Subject to the terms and conditions of this Agreement, at the Closing, Precision will issue and sell to Novartis, and Novartis will purchase from Precision, 12,407,440 shares of Common Stock (the "***Shares***") at a price per share of $2.01492 (which the Parties agree represents a price per share equal to 120% of the daily volume-weighted average per share price of the Common Stock on Nasdaq over the ten (10) trading day period ending on and including June 13, 2022) for an aggregate purchase price of $25,000,000 (the "***Purchase Price***"); provided, however, that in the event of any stock dividend, stock split, combination of shares or recapitalization with respect to the Common Stock after the date of this Agreement and on or prior to the Closing, the number of Shares shall be adjusted proportionately.

1.2 Payment.

At the Closing, Novartis will pay the Purchase Price by wire transfer or electronic funds transfer of immediately available funds to an account designated by Precision in accordance with the instructions attached as Appendix 2 hereto, and Precision will deliver the Shares in book-entry form to Novartis upon receipt of the Purchase Price.

1.3 **Closing.**

(a) The closing of the purchase and sale of the Shares hereunder (the "***Closing***") shall be held on the fifth (5th) Business Day after the satisfaction or waiver of the conditions to Closing set forth in Article 6 (other than those conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or waiver of such conditions at the Closing), at 10:00 a.m. Eastern Time, remotely via the exchange of documents and signatures, or at such other time, date and location as the Parties may agree orally or in writing. The date the Closing occurs is hereinafter referred to as the "***Closing Date***."

(b) Precision shall instruct its transfer agent at the Closing to record the Shares in book-entry in the name of Novartis, and Precision shall cause its transfer agent to deliver on the Closing Date written confirmation of the book-entry delivery of the Shares to Novartis. Precision will also deliver to Novartis at the Closing (i) a certificate in form and substance reasonably satisfactory to Novartis and duly executed on behalf of Precision by an authorized officer of Precision, certifying that the conditions to the Closing set forth in Section 6.3 have been fulfilled and (ii) a certificate of the secretary of Precision dated as of the Closing Date certifying (A) that attached thereto is a true and complete copy of the Organizational Documents (as defined below) of Precision as in effect on the Closing Date; and (B) that attached thereto is a true and complete copy of all resolutions adopted by the Board authorizing the execution, delivery and performance of this Agreement, the Collaboration and License Agreement, and the Registration Rights Agreement and the transactions contemplated hereunder and thereunder and that all such resolutions are in full force and effect and are all the resolutions adopted in connection with the transactions contemplated hereby and thereby as of the Closing Date; and

(c) Novartis will deliver to Precision at the Closing a certificate in form and substance reasonably satisfactory to Precision and duly executed on behalf of Novartis by an authorized officer or representative of Novartis, certifying that the conditions to Closing set forth in Section 6.2 have been fulfilled.

ARTICLE 2

REPRESENTATIONS AND WARRANTIES OF PRECISION

Except as otherwise specifically contemplated by this Agreement or as specifically disclosed in writing by Precision to Novartis prior to the Closing with respect to matters arising following the execution of this Agreement, Precision hereby represents and warrants as of the Execution Date and the Closing Date to Novartis that:

2.1 **Private Placement.**

Subject to the accuracy of the representations made by Novartis in Article 3, the offer, issuance and sale of the Shares to Novartis as contemplated hereby will be exempt from

the registration requirements of the Securities Act and the registration and qualification requirements of all applicable securities laws of the states of the United States.

2.2 **Organization and Qualification.**

Precision is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware, with full corporate power and authority to conduct its business as currently conducted. Precision is duly qualified as a foreign corporation to do business and is in good standing in every jurisdiction in which the nature of the business conducted by it or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision. True and correct copies of Precision's amended and restated certificate of incorporation, amended and restated bylaws and similar organizational documents (collectively, the "***Organizational Documents***"), as in effect on the Execution Date and the Closing Date, are each filed or incorporated by reference as exhibits to the SEC Documents (as defined below).

2.3 **Subsidiaries.**

Precision has disclosed all of its subsidiaries required to be disclosed in an exhibit to its applicable SEC Documents (each, a "***Subsidiary***" and, collectively, the "***Subsidiaries***"). Each Subsidiary that owns any assets material to Precision has been duly incorporated or organized, as the case may be, and is validly existing as a corporation, partnership or limited liability company, as applicable, in good standing under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as presently conducted. Each Subsidiary is duly qualified as a foreign corporation, partnership or limited liability company, as applicable, to do business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or be in good standing would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision. All of the issued and outstanding capital stock or other equity or ownership interests of each Subsidiary have been duly authorized and validly issued, are fully paid and nonassessable and are owned by Precision, directly or through Subsidiaries, free and clear of any encumbrances or preemptive and similar rights to subscribe for or purchase securities, and were issued in material compliance with applicable United States federal and state securities laws.

2.4 **Authorization; Enforcement.**

Precision has all requisite corporate power and authority to enter into and to perform its obligations under this Agreement, to consummate the transactions contemplated hereby and to issue the Shares in accordance with the terms hereof. The execution, delivery and performance of this Agreement by Precision and the consummation by it of the transactions contemplated hereby (including the issuance of the Shares at the Closing in accordance with the terms hereof) have been duly authorized by the Board and no further consent or authorization of Precision, the Board or Precision's stockholders is required. This Agreement has been duly executed by Precision and (assuming due authorization, execution and delivery by Novartis) constitutes a legal, valid and binding obligation of Precision, enforceable against Precision in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' and contracting parties' rights generally and except as enforceability may be subject to general principles of equity (regardless of whether enforcement is sought in a proceeding at law or in equity) and except as rights to indemnity and contribution may be limited by state or federal securities laws or public policy underlying such laws (collectively, the "***Enforceability Exception***").

2.5 **Issuance of Shares.**

The Shares have been duly authorized and, upon issuance in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable and will not be subject to liens, encumbrances or restrictions on transfer, including preemptive rights, rights of first refusal, purchase options, call options, subscription rights or other similar rights of stockholders of Precision, other than as arising pursuant to this Agreement, as a result of any action by Novartis or under

federal or state securities laws. No stop order or suspension of trading of the Common Stock has been imposed by Nasdaq or the SEC and remains in effect. Assuming the accuracy of the representations of Novartis in Article 3, the Shares will be issued in compliance with all applicable United States federal and state securities laws.

2.6 **SEC Documents, Financial Statements.**

(a) Precision currently is not an "ineligible issuer," as defined in Rule 405 under the Securities Act. Precision agrees to notify Novartis promptly upon Precision becoming an "ineligible issuer." Precision has (i) timely filed or furnished, as applicable, all reports, schedules, forms, statements and other documents required to be filed or furnished by it with the SEC since January 1, 2021, pursuant to the reporting requirements of the Exchange Act (all of the foregoing filed since March 14, 2022 and all exhibits included therein and financial statements and schedules thereto and documents (other than exhibits) incorporated by reference therein, collectively, the "***SEC Documents***") and (ii) delivered or made available (by filing or furnishing on the SEC's electronic data gathering and retrieval system (EDGAR)) to Novartis complete copies of the SEC Documents, including its Annual Report on Form 10-K for the year ended December 31, 2021 (the "***Form 10-K***") and Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022 (the "***Form 10-Q***"). As of its respective date, or if amended, as of the date of the last such amendment, each SEC Document complied as to form in all material respects with the requirements of the Exchange Act and the Securities Act applicable to such SEC Documents, and, as of its respective date, or if amended, as of the date of the last such amendment, such SEC Document did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

(b) As of the respective dates and for the respective periods indicated, the consolidated financial statements (including the notes thereto) of Precision included in the Form 10-K comply as to form in all material respects with all applicable accounting requirements and with the published rules and regulations of the SEC with respect thereto, have been prepared in accordance with GAAP applied on a consistent basis during the periods involved (except as may be indicated in the notes thereto) and fairly present in all material respects, in accordance with GAAP, the consolidated financial position of Precision as of the dates thereof and the consolidated results of its operations and cash flows for the periods then ended. Except (i) as set forth in the SEC Documents (excluding any Forward-Looking Disclosures) or (ii) for liabilities incurred in the ordinary course of business subsequent to the date of the most recent balance sheet contained in the Form 10-Q, Precision has not incurred any liabilities, whether absolute or accrued, contingent or otherwise, other than those that would not, individually or in the aggregate, be material to Precision and its Subsidiaries taken as a whole.

(c) The Common Stock is listed on Nasdaq and registered pursuant to Section 12(b) of the Exchange Act, and Precision has taken no action designed to or reasonably likely to have the effect of terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq. Precision has not received any notification that, and has no Knowledge that, the SEC or Nasdaq is contemplating terminating such registration or listing. Precision is in compliance in all material respects with the requirements of Nasdaq for continued listing of the Common Stock thereon.

2.7 **Internal Controls; Disclosure Controls and Procedures.**

Precision has established and maintains internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that is designed to comply with the requirements of the Exchange Act. Precision's internal control over financial reporting is effective and since January 1, 2021, to the Knowledge of Precision, there have been (i) no significant deficiencies or material weaknesses in Precision's internal control over financial reporting (whether or not remediated), (ii) no fraud, whether or not material, that involves management or other employees who have a role in the internal control over financial reporting of Precision or its Subsidiaries and (iii) no change in Precision's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, Precision's internal control over financial reporting. Precision has implemented the "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) that are designed to comply with the requirements of the Exchange Act, that (a) are required in order for the principal executive officer and principal financial officer of Precision to engage in the review and evaluation process mandated by the Exchange Act, (b) have been evaluated by management of Precision for effectiveness as of December 31, 2021 and (c) are, based on such evaluation, effective at the reasonable assurance level to perform the functions for which they were established. To the Knowledge of Precision, Precision is in compliance with such disclosure controls and procedures in all material respects. Each of the principal executive officer and the principal financial officer of Precision has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 with respect to all reports, schedules, forms, statements and other documents required to be filed by Precision with the SEC.

2.8 **Capitalization and Voting Rights.**

(a) The authorized capital of Precision as of the Execution Date consists of (i) 200,000,000 shares of Common Stock of which, as of June 13, 2022, (x) 62,412,201 shares were issued and outstanding, (y) 16,183,443 shares were issuable upon the exercise of stock options outstanding or issuable upon vesting of restricted stock unit awards outstanding, and (z) 3,100,964 shares were reserved for issuance in connection with future grants of awards pursuant to Precision's stock incentive plans, and (ii) 10,000,000 shares of Preferred Stock, of which no shares are issued and outstanding as of the Execution Date. All of the issued and outstanding shares of Common Stock (A) have been duly authorized and validly issued, (B) are fully paid and non-assessable and (C) were issued in material compliance with applicable United States federal and state securities laws and not in violation of any preemptive rights or similar rights to subscribe for or purchase securities.

(b) All of the authorized shares of Common Stock are entitled to one vote per share.

(c) Except as described or referred to in the SEC Documents, there are no (i) outstanding equity securities, options, warrants, rights (including conversion or preemptive rights, rights of first refusal, rights of first purchase, purchase options, call options or subscription rights) or other agreements pursuant to which Precision is or may become obligated to issue or sell, any shares of its capital stock or any other securities of Precision other than equity securities that may have been granted pursuant to its stock incentive plans, which plans are described in the SEC Documents, (ii) restrictions on the transfer of capital stock of Precision other than pursuant to federal or state securities laws or as set forth in this Agreement or (iii) obligation (contingent or otherwise) to repurchase, redeem or otherwise acquire any of its equity securities or any interests therein or to pay any dividend or make any distribution in respect thereof.

(d) Precision is not a party to or subject to any agreement or understanding relating to the voting of shares of capital stock of Precision or the giving of written consents by a stockholder or director of Precision.

(e) Precision does not have outstanding any stockholder rights plans or "poison pill" or any similar arrangement in effect giving any Person the right to purchase any equity interest in Precision upon the occurrence of certain events.

2.9 **No Conflicts; Government Consents and Permits.**

(a) The execution, delivery and performance of this Agreement by Precision and the consummation by Precision of the transactions contemplated hereby (including the issuance of the Shares) will not (i) conflict with or result in a violation of any provision of Precision's Organizational Documents, (ii) result in any encumbrance upon any of the Shares, other than restrictions on resale pursuant to securities laws or as set forth in this Agreement or the Registration Rights Agreement, (iii) materially violate or conflict with, or result in a material breach, default, modification, acceleration of payment or termination under any provision of, or constitute a material default under, any Material Contract, or (iv) result in a material violation of any law, rule, regulation, Order, judgment or decree (including United States federal and state securities laws and regulations and regulations of any self-regulatory organizations) applicable to Precision, in each case, which have been made or will be made in a timely manner.

(b) Precision is not required to obtain any consent, authorization or Order of, or make any filing or registration with, any Governmental Authority in order for it to execute, deliver and perform its obligations under this Agreement in accordance with the terms hereof, or to issue and sell the Shares in accordance with the terms hereof, other than such as have been made or obtained, and except (i) for any post-Closing filings required to be made under federal or state "blue sky" or securities laws and (ii) for any required filings or notifications regarding the issuance or listing of additional shares with Nasdaq.

2.10 **Litigation.**

Other than as set forth in the SEC Documents, there is no material Action pending (of which Precision has received notice or otherwise has Knowledge) or, to Precision's Knowledge, threatened, against Precision or which Precision intends to initiate.

2.11 **Licenses and Other Rights; Compliance with Laws**

. (a) each of Precision and its Subsidiaries possesses such valid and current licenses, certificates, authorizations, clearances, approvals, permits or amendments thereto required by state, federal, provincial or foreign regulatory agencies or bodies to conduct its business as currently conducted and as described in the SEC Documents (excluding any Forward-Looking Disclosures) ("***Permits***"), including any Investigational New Drug Application or Tissue Establishment Registration as required by the United States Food and Drug administration ("***FDA***") or authorizations issued by Regulatory Authorities (as defined below); (b) each of Precision and its Subsidiaries is not in violation of, or in default under, any of the Permits; (c) neither Precision nor any of its Subsidiaries has received any notice of proceedings relating to the revocation, termination, impairment or modification of, or non-compliance with, any such Permits; (d) neither Precision nor any of its Subsidiaries has taken any action that would interfere with its ability to renew all such Permits when required; (e) neither Precision nor any of its Subsidiaries has failed to file with the FDA or any other Regulatory Authority any required application, submission, report, document, notice, supplement or amendment, and all such filings were in compliance with applicable laws when filed and have been supplemented as necessary to remain in compliance with applicable laws; and (f) no deficiencies have been asserted by the FDA or any other Regulatory Authority with respect to any filings described in clause (e); except, in the case of each of clauses (a)-(f), as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on Precision. Precision is and has been in compliance with all laws applicable to its business, properties and assets, and to the products and services sold by it, except where the failure to be in compliance has not had and would not reasonably be expected to have a Material Adverse Effect on Precision.

2.12 **Intellectual Property.**

(a) To Precision's Knowledge, and except as disclosed in the SEC Documents, Precision and its Subsidiaries own, possess, license or have other rights to use all foreign and domestic patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, Internet domain names, know-how and other intellectual property (collectively, the "***Precision IP***"), necessary for the conduct of their respective businesses as now conducted except to the extent that the failure to own, possess, license or otherwise hold adequate rights to use such Precision IP would not reasonably be expected to have a Material Adverse Effect on Precision.

(b) Except as disclosed in the SEC Documents, (i) there are no rights of Third Parties to any such Precision IP owned by Precision or its Subsidiaries; (ii) to Precision's Knowledge, there is no infringement by Third Parties of any such Precision IP; (iii) there is no pending or, to Precision's Knowledge, threatened Action by others challenging Precision's and its Subsidiaries' rights in or to any such Precision IP; (iv) there is no pending or, to Precision's Knowledge, threatened Action by any Third Party challenging the validity or scope of any such Precision IP, other than routine patent application prosecution proceedings in the United States Patent Office, and foreign counterpart offices, with respect to pending patent applications owned or licensed by Precision or its Subsidiaries; (v) there is no pending or, to Precision's Knowledge, threatened Action by any Third Party that Precision or its Subsidiaries infringe or

otherwise violate, or has infringed or otherwise violated, any patent, trademark, copyright, trade secret or other proprietary rights of any Third Party; and (vi) to Precision's Knowledge, Precision and its Subsidiaries have complied in all material respects with the terms of each agreement pursuant to which Precision IP has been licensed to Precision or such Subsidiary, and all such agreements are in full force and effect; except, in the case of any of the items described in clauses (i)- (vi) above, those that would not reasonably be expected to have a Material Adverse Effect on Precision.

(c) To Precision's Knowledge, (i) the conduct of the business of Precision and its Subsidiaries as presently conducted has not infringed, misappropriated or otherwise violated, and is not infringing, misappropriating or otherwise violating any Intellectual Property of any Third Party, and (ii) no Third Party has infringed, misappropriated or otherwise violated, or is infringing, misappropriating or otherwise violating, any of the Precision Patents or Precision IP, and no such claims have been made against any Third Party by Precision; except, in the case of each of clauses (i) and (ii), for infringements, misappropriations and other violations that would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision.

2.13 **Taxes and Tax Returns.**

(a) Each of Precision and each of its Subsidiaries has timely filed (taking into account all applicable extensions) all Tax Returns required to be filed by it; all such Tax Returns were correct and complete; and each of Precision and each of its Subsidiaries has paid (or has had paid on its behalf) to the appropriate Governmental Authority all Taxes that are required to be paid by it; except, in each case, (i) with respect to matters contested (or that could be contested) in good faith or for which materially adequate reserves have been established in accordance with GAAP or (ii) as would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision. There are no disputes pending or, to the Knowledge of Precision, claims asserted in writing in respect of Taxes of Precision or any of its Subsidiaries for which reserves that are adequate under GAAP have not been established.

(b) Precision has not been a United States real property holding company within the meaning of Section 897(c)(2) of the Internal Revenue Code of 1986, as amended (the "***Code***") during the period specified in Section 897(c)(1)(A)(ii) of the Code.

2.14 **Absence of Certain Changes**

. Since December 31, 2021, except as set forth in the SEC Documents (excluding any Forward-Looking Disclosures), as contemplated by this Agreement or the Collaboration and License Agreement or as separately disclosed in writing by Precision to Novartis, there has not been:

(a) any change, development, occurrence or event that has had or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision;

(b) except as contemplated by this Agreement or the Collaboration and License Agreement, any (i) declaration, setting aside or payment of any dividends, or authorization or making of any distribution upon or with respect to any class or series of Precision's capital stock, (ii) sale, exchange or other disposition of any material assets or rights outside the ordinary course of business of Precision or its Subsidiaries, or (iii) repurchase, redemption or other acquisition of any outstanding shares of Precision's capital stock;

(c) any admission by Precision in writing of its inability to pay its debts generally as they become due, filing or consent to the filing against it of a petition in bankruptcy or a petition to take advantage of any insolvency act, made an assignment for the benefit of creditors, consent to the appointment of a receiver for itself or for the whole or any substantial part of its property, or any petition in bankruptcy filed against it, been adjudicated a bankrupt or filed a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other laws of the United States or any other jurisdiction;

(d) any material Tax election made or changed, any audit settled or any amended Tax Returns filed of Precision;

(e) any material damage, destruction or loss (whether or not covered by insurance) involving any material asset or right of Precision and its Subsidiaries;

(f) any sale, assignment or transfer, or any agreement to sell, assign or transfer, any material asset, liability, property, obligation or right of Precision or any Subsidiary to any Person, in each case, other than in the ordinary course of business;

(g) any material obligation or liability incurred, or any material loans or advances made, by Precision or any Subsidiary of Precision to any of its or their other Affiliates, other than in the ordinary course of business;

(h) any purchase or acquisition, or agreement, plan or arrangement to purchase or acquire, any material property, rights or assets other than in the ordinary course of business by Precision or any of its Subsidiaries;

(i) any material waiver of any material rights or claims of Precision or any Subsidiary;

(j) any material lien upon, or adversely affecting, any material property or other material assets of Precision or any Subsidiary; or

(k) any Contract entered into by Precision or any Subsidiary to do any of the foregoing.

2.15 **Material Contracts.**

Each Material Contract that is required to be included as an exhibit in the SEC Documents filed by Precision prior to the Closing Date has been so included. Each Material Contract that is not required to be included as an exhibit in the SEC Documents prior to the Closing Date has been disclosed in writing to Novartis prior to the Closing. Each Material Contract is the legal, valid and binding obligation of Precision, enforceable against Precision in accordance with its terms, and, to the Knowledge of Precision, is the legal, valid and binding obligation of the other party thereto, enforceable against each other party thereto in accordance with its terms, except in each case except to the extent that (a) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles and (b) the indemnification provisions of certain agreements may be limited by federal or state securities laws or public policy considerations in respect thereof. Neither Precision nor, to Precision's Knowledge, any other Person is in material breach, violation or default under any such Material Contract. Precision has not been notified in writing that any Third Party to any Material Contract has indicated that such Third Party intends to cancel, terminate or not renew any Material Contract.

2.16 **Brokers' or Finders' Fees.**

No broker, finder, investment banker, or other Person is entitled to any brokerage, finder's or other similar fee or commission from Precision in connection with the transactions contemplated by this Agreement, the Collaboration and License Agreement, or the Registration Rights Agreement. No Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon Novartis for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of Precision.

2.17 **Not an Investment Company.**

Precision is not, and solely after receipt of the Purchase Price, will not be, required to register as an "investment company" as defined in the Investment Company Act of 1940, as amended.

2.18 **No Integration.**

Precision has not, directly or through any agent, sold, offered for sale, solicited offers to buy or otherwise negotiated in respect of any security (as defined in the Securities Act) which is or will be integrated with the Shares sold pursuant to this Agreement in a manner that would require the registration of the Shares under the Securities Act or cause this offering of Shares to be integrated with any prior offering of securities of Precision such that the shareholder approval provisions of Nasdaq would require Precision to obtain stockholder approval of the issuance of the Shares, nor will Precision take any action that would cause the offering or issuance of the Shares to be integrated with future offerings such that the Shares would be required to be registered under the Securities Act or that Precision would be required to obtain stockholder approval of the issuance of the Shares pursuant to the shareholder approval provisions of Nasdaq.

2.19 **Foreign Corrupt Practices Act.**

Neither Precision nor any of its Subsidiaries nor, to Precision's Knowledge, any director, officer, agent, employee or other Person acting on behalf of Precision or any of its Subsidiaries has, in the course of its actions for, or on behalf of Precision or any of its Subsidiaries, (a) directly or indirectly, used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (b) made any direct or indirect unlawful payment to any domestic government official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "***FCPA***")) or employee or to any foreign or domestic political parties or campaigns from corporate funds; (c) violated or is in violation of any provision of the FCPA or any applicable non-U.S. anti-bribery statute or regulation; (d) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any domestic government official, such foreign official or employee; or (e) failed to properly disclose, in accordance with applicable laws, any contribution made by Precision or any Subsidiary (or, to the Knowledge of Precision, made by any Person acting on its behalf) which is in violation of law. Precision

and its Subsidiaries have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure continued compliance therewith.

2.20 **Money Laundering Laws.**

The operations of Precision and its Subsidiaries are, and have been conducted at all times, in compliance in all material respects with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, and the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any Governmental Authority (collectively, the "***Money Laundering Laws***"), and no Action by or before any Governmental Authority involving Precision or any Subsidiary with respect to the Money Laundering Laws is pending or, to the Knowledge of Precision, threatened.

2.21 **OFAC.**

Neither Precision nor any of its Subsidiaries nor, to Precision's Knowledge, any director, officer, agent, employee or Person acting on behalf of Precision or any of its Subsidiaries is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("***OFAC***"); and Precision will not directly or indirectly use the proceeds from the sale of the Shares, or lend, contribute or otherwise make available such proceeds to any Subsidiary or any joint venture partner or other Person, for the purpose of financing the activities of or business with any Person, or in any country or territory, that currently is subject to any U.S. sanctions administered by OFAC or in any other manner that will result in a violation by Precision or any of its Subsidiaries of U.S. sanctions administered by OFAC.

2.22 **Preclinical and Clinical Data and Regulatory Compliance.**

Except as set forth in the SEC Documents (excluding any Forward-Looking Disclosures), the preclinical tests and clinical trials (collectively, "***Studies***") that are described in, or the result of which are referred to in, the SEC Documents were and, if still pending, are being conducted in accordance with the protocols, procedures, controls, and accepted professional scientific standards designed and approved for such Studies, except in each case as has not had or would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision. Except as set forth in the SEC Documents, neither Precision nor any Subsidiary has received any written notice of, or correspondence from, any Regulatory Authority or institutional review board or ethics committee requiring the termination, suspension or material modification of any Studies that are described or referred to in the SEC Documents or which call into question the quality, accuracy, or integrity of any preclinical or clinical data intended for submission to Regulatory Authorities and Precision and each Subsidiary have operated and currently are in compliance with applicable laws, rules, regulations and policies of the federal, state, local or foreign agencies or bodies engaged in the regulation of pharmaceuticals and biological products such as those being developed by Precision (collectively, "***Regulatory Authorities***"), including current Good Laboratory Practices, current Good Clinical Practices, current Good Tissue Practices, and current Good Manufacturing Practices (in each case, as enforced by the FDA), except, in each case, as has not or would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on Precision.

2.23 **Insurance.**

Except as has not had, and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision, (a) all insurance policies ("***Policies***") with respect to the business and assets of Precision and its Subsidiaries are in full force and effect, (b) neither Precision nor any of its Subsidiaries is in breach or default, and neither Precision nor any of its Subsidiaries has taken any action or failed to take any action that, with notice or the lapse of time, would constitute such a breach or default, or permit termination or modification of any of the Policies, and (c) Precision and its Subsidiaries have not received any written notice of cancellation or threatened cancellation of any of the Policies or of any claim pending regarding Precision or any of its Subsidiaries under any of such Policies as to which coverage has been questioned, denied or disputed by the underwriters of such Policies. Precision and its Subsidiaries maintain insurance with reputable insurers in such amounts

and against such risks as is customary for the industries in which it and its Subsidiaries operate and as the management of Precision has in good faith determined to be prudent and appropriate.

2.24 **Cybersecurity.**

To Precision's Knowledge, there has been no material security breach or other material compromise of or relating to any of Precision's information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology (collectively, "***IT Systems and Data***") and (a) Precision has not been notified of, and has no Knowledge of any event or condition that would reasonably be expected to result in, any material security breach or other material compromise to its IT Systems and Data; (b) Precision is presently in compliance with all applicable laws or statutes and all Orders, rules and regulations of any court or arbitrator or Governmental Authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (b), individually or in the aggregate, have a Material Adverse Effect on Precision; and (c) Precision has implemented and maintains reasonable backup, disaster recovery and support arrangements for its IT Systems and Data consistent with industry standards and practice.

2.25 **Privacy Laws.**

(a) Precision and its Subsidiaries are, and at all prior times were, in compliance with all applicable data privacy and security laws and regulations, including the Health Insurance Portability and Accountability Act (***"HIPAA"***), as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.) (collectively, ***"Privacy Laws"***); (b) Precision and its Subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling and analysis of Personal Data (the ***"Privacy Policies"***); (c) Precision provides accurate notice, when applicable and required by law, of its Privacy Policies to its customers, employees, third party vendors and representatives; and (d) the Privacy Policies provide accurate and legally sufficient notice of Precision's then-current privacy practices relating to its subject matter; except, in the case of each of clauses (a)-(d), as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on Precision. The execution, delivery and performance of this Agreement and the Registration Rights Agreement will not result in a breach of any Privacy Laws or Privacy Policies. Neither Precision nor any of its Subsidiaries (A) has received written notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no Knowledge of any event or condition that would reasonably be expected to result in any such notice; (B) is currently conducting or paying for, in whole or in part, any investigation, remediation or other corrective action pursuant to any Privacy Law; or (C) is a party to any Order, decree, or agreement that imposed any obligation or liability under any Privacy Law; except, in the case of each of clauses (A)-(C), as would not reasonably be expected to have a Material Adverse Effect on Precision.

2.26 **Related-Party Transactions.**

There are no business relationships or related-party transactions involving Precision, its Subsidiaries or any other Person required by the Securities Act to be described in the SEC Documents that have not been described as required.

2.27 **CFIUS Representations.**

Precision does not engage in (a) the design, fabrication, development, testing, production or manufacture of one (1) or more "critical technologies" within the meaning of the Defense Production Act of 1950, as amended, including all implementing regulations thereof (the "*DPA*"); (b) the ownership, operation, maintenance, supply, manufacture, or servicing of "covered investment critical infrastructure" within the meaning of the DPA (where such activities are covered by column 2 of Appendix A to 31 C.F.R. Part 800); or (c) the maintenance or collection, directly or indirectly, of "sensitive personal data" of U.S. citizens within the meaning of the DPA. Precision has no current intention of engaging in such activities in the future.

2.28 **No Disqualification Events.**

2.29 No Disqualification Event is applicable to the Precision or, to its Knowledge, any Company Covered Person, except for a Disqualification Event as to which Rule 506(d)(2) or (d)(3) promulgated under the Securities Act is applicable.

REPRESENTATIONS AND WARRANTIES OF NOVARTIS

Except as otherwise specifically contemplated by this Agreement, Novartis hereby represents and warrants as of the Execution Date and the Closing Date to Precision that:

3.1 **Authorization; Enforcement.**

Novartis has all requisite corporate power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. Novartis has taken all necessary corporate action to authorize the execution, delivery and performance of this Agreement. This Agreement has been duly executed by Novartis and (assuming due authorization, execution and delivery by Precision) constitutes a legal, valid and binding obligation of Novartis, enforceable against Novartis in accordance with its terms, except as enforceability may be limited by the Enforceability Exception.

3.2 **No Conflicts; Government Consents.**

(a) The execution, delivery and performance of this Agreement by Novartis and the consummation by Novartis of the transactions contemplated hereby (including the purchase of the Shares) will not (i) conflict with or result in a violation of any provision of Novartis's organizational documents, (ii) violate or conflict with, or result in a breach of any provision of, or constitute a default under, any material agreement, indenture or instrument to which Novartis is a party, or (iii) result in a violation of any law, rule, regulation, Order, judgment or decree (including United States federal and state securities laws and regulations and regulations of any self-regulatory organizations) applicable to Novartis; except, in the case of each of clauses (ii) and (iii), as would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Novartis's ability to perform its obligations hereunder or consummate the transactions contemplated hereby.

(b) Novartis is not required to obtain any consent, authorization or Order of, or make any filing or registration with, any Governmental Authority in order for it to execute, deliver or perform any of its obligations under this Agreement in accordance with the terms hereof, or to purchase the Shares in accordance with the terms hereof. Novartis's subscription and payment for and continued beneficial ownership of the Shares will not violate any applicable securities laws of its jurisdiction.

3.3 **Investment Purpose.**

Novartis is purchasing the Shares for its own account and not with a present view toward the public distribution thereof and has no arrangement or understanding with any other Persons regarding the distribution of the Shares. Novartis will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) any of the Shares except in accordance with the Securities Act and to the extent permitted by Sections 5.2 and 5.3. Novartis has no present intent to effect a Change of Control of Precision (replacing

references to "a Third Party" or "any Third Party" with "the other Party or its Affiliates" in the definition of "Change of Control"). None of Novartis or any of its Affiliates has direct or indirect "beneficial ownership" (as defined in Rule 13d-3 under the Exchange Act) of any shares of Common Stock or any securities that are or may become convertible into or exercisable or exchangeable for shares of Common Stock.

3.4 **Reliance on Exemptions.**

Novartis did not learn of the investment in the Shares as a result of any general solicitation or advertising. Novartis understands that Precision intends for the Shares to be offered and sold to it in reliance upon specific exemptions from the registration requirements of United States federal and state securities laws and the shareholder approval requirements of Nasdaq and that Precision is relying upon the truth and accuracy of, and Novartis's compliance with, the representations, warranties, agreements, acknowledgments and understandings of Novartis set forth herein (including in this Section 3.4) in order to determine the availability of such exemptions and the eligibility of Novartis to acquire the Shares.

3.5 **Accredited Investor; Access to Information.**

Novartis is an "accredited investor" as defined in Regulation D promulgated under the Securities Act; is knowledgeable, sophisticated and experienced in making, and is qualified to make, decisions with respect to investments in shares presenting an investment decision like that involved in the purchase of the Shares; and is not subject to the disqualification provisions of Rule 506(d), except, if applicable, a Disqualification Event as to which Rule 506(d)(2) or (d)(3) promulgated under the Securities Act is applicable. Novartis has been afforded an opportunity to receive, review and understand all information related to Precision requested by it and to ask questions of and receive answers from Precision regarding Precision, its business and the terms and conditions of the offering of the Shares, and has conducted and completed its own independent due diligence. Novartis acknowledges that Precision has made the SEC Documents available (by filing on the SEC's electronic data gathering and retrieval system (EDGAR)) to Novartis. Based on the information Novartis has deemed appropriate, and without reliance upon any Third Party, Novartis has independently made its own analysis and decision to enter into this Agreement. Novartis is relying exclusively on its own investment analysis and due diligence (including professional advice it deems appropriate) with respect to the execution, delivery and performance of this Agreement, the Shares and the business, condition (financial and otherwise), management, operations, properties and prospects of Precision, and in entering into this Agreement Novartis has not relied upon, nor shall it be entitled to rely upon, any representation, warranty, collateral contract or other assurances made by or on behalf of Precision except for those that are expressly set forth in this Agreement. However, no investigation conducted by or on behalf of Novartis or its representatives or counsel will modify, amend or affect Novartis's right to rely on (i) the accuracy and completeness, in all material respects, as of their respective dates, of the SEC Documents and (ii) Precision's representations and warranties contained in this Agreement.

3.6 **Governmental Review.**

Novartis understands that no United States federal or state agency or any other Governmental Authority has passed upon or made any recommendation or endorsement of the Shares or an investment therein.

3.7 **Brokers and Finders.**

. No Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon Precision for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of Novartis.

STANDSTILL AGREEMENT

4.1 **Standstill Provisions.**

Until the two-year anniversary of the Closing Date (the "***Standstill Period***"), Novartis and its Affiliates that Novartis controls will not, directly or indirectly, except as expressly approved or invited by Precision in writing or as contemplated by the Collaboration and License Agreement:

(a) effect or seek, offer or propose (whether publicly or otherwise) to effect, directly or indirectly, or cause or participate in, directly or indirectly, (i) any acquisition of any securities of Precision or any of its Subsidiaries or any securities convertible into or exercisable or exchangeable for any securities of Precision or any of its Subsidiaries (or beneficial ownership thereof) (other than pursuant to this Agreement); (ii) any acquisition of any material assets of Precision or any of its Subsidiaries, (iii) any tender offer or exchange offer, merger or other business combination or Change of Control involving Precision or any of its Subsidiaries (replacing references to "a Third Party" or "any "Third Party" with "the other Party or its Affiliates" in the definition of "Change of Control"), (iv) any recapitalization, restructuring, liquidation, dissolution or other extraordinary transaction with respect to Precision or any of its Subsidiaries, or (v) any "solicitation" of "proxies" (as such terms are used in the proxy rules of the SEC) or consents to vote any securities of Precision;

(b) form, join or in any way participate in a "group" (as defined under the Exchange Act) with respect to any securities of Precision or any of its Subsidiaries;

(c) otherwise act, alone or in concert with others, to seek to control or influence the board of directors or the management or policies of Precision or any of its Subsidiaries;

(d) take any action that would reasonably be expected to require Precision to make a public announcement regarding any of the matters set forth in this Section 4.1;

(e) enter into any discussions or arrangements with any Third Party with respect to any of the foregoing; or

(f) publicly disclose any intention, plan or arrangement regarding any of the matters set forth in this Section 4.1.

4.2 **Amendment or Waiver of Standstill; Ownership of Securities.**

Novartis agrees during the Standstill Period not to request Precision (or its representatives), directly or indirectly, to amend or waive any provision of this Article 4, other than by means of a confidential communication to Precision's Chairman of the Board or Chief Executive Officer. Novartis represents and warrants that, as of the Execution Date, neither Novartis nor any of its subsidiaries owns, of record or beneficially, any securities of Precision or any securities convertible into or exercisable or exchangeable for securities of Precision,

and neither Novartis nor any of its subsidiaries has engaged or intends to engage in any transactions involving, directly or indirectly, any securities of Precision (other than the purchase of the Shares), except in each case, the ownership or purchase by Novartis, an employee benefit plan or trust of Novartis, or any Novartis Affiliates of any diversified index, mutual or pension fund or similar entity managed by an independent advisor and not under the control, directly or indirectly, of Novartis or any of its Affiliates, which fund or similar entity in-turn holds, directly or indirectly, securities of Precision.

4.3 **Automatic Termination of Standstill.**

Notwithstanding the provisions set forth in Sections 4.1 and 4.2 (the "***Standstill Provisions***"), (a) if at any time (i) a Third Party enters into a definitive agreement with Precision contemplating a Change of Control of Precision, including a merger, consolidation or other business combination transaction or tender offer related thereto, or the purchase of all or substantially all of the assets of Precision and its Subsidiaries, and the Board approves and, if applicable, recommends that the stockholders approve the transactions contemplated by such agreement, then the Standstill Provisions automatically shall be terminated and of no further force or effect or (ii) a Third Party commences a bona fide tender or exchange offer that, if consummated, would result in a Change of Control of Precision, then the Standstill Provisions automatically shall be terminated and of no force or effect; and (b) Novartis will not be precluded from making any confidential offers or proposals to the Board in a manner reasonably believed not to require Precision to make a public announcement of such offer or proposal; provided, however, that Novartis shall not publicly disclose any such offers or proposals.

4.4 **Exclusions from Standstill.**

None of (a) the ownership or purchase by Novartis, an employee benefit plan or trust of Novartis, or any Novartis Affiliates of any diversified index, mutual or pension fund or similar entity managed by an independent advisor and not under the control, directly or indirectly, of Novartis or any of its Affiliates, which fund or similar entity in-turn holds, directly or indirectly, securities of Precision, (b) the acquisition of the equity securities of an entity that is not an Affiliate of Novartis that owns Common Stock prior to such acquisition so long as such acquisition is not consummated for the purpose of, and would not have the effect of, circumventing this Article 4, (c) the acquisition of securities of Precision by an entity that is not an Affiliate of Novartis acquired by Novartis or its Affiliate after the date hereof pursuant to the terms of an agreement requiring (but only to the extent requiring) such entity to acquire such securities, which agreement was in effect on the date Novartis or its Affiliate entered into an agreement to acquire such entity so long as such acquisition is not consummated for the purpose of, and would not have the effect of, circumventing this Article 4, (d) the acquisition of assets or securities of Precision or any of its Affiliates, as debtor, that are acquired in a transaction subject to the approval of the United States Bankruptcy Court pursuant to proceedings under the United States Bankruptcy Code, or (e) transfers or resales of the Shares by Novartis to any other Person in compliance with this Agreement, will be deemed to be a breach of Novartis's standstill obligations under this Article 4.

4.5 **Acknowledgement.**

Except in the event of a breach by Novartis of its obligations under this Article 4, Precision agrees that it will not assert that this Agreement or the Registration Rights Agreement restricts any of the actions contemplated by Section 4.1 after the expiration or termination of the Standstill Period.

ARTICLE 5

ADDITIONAL COVENANTS AND AGREEMENTS

5.1 **Market Listing.**

From the Execution Date through the Closing, Precision shall use reasonable best efforts to (a) maintain the listing and trading of the Common Stock on Nasdaq and (b) effect the listing of the Shares on Nasdaq.

5.2 **Transfer or Resale.**

Novartis understands that:

(a) the Shares have not been and, except as may be required under the Registration Rights Agreement, will not be registered under the Securities Act or any applicable state securities laws and, consequently, Novartis may have to bear the risk of owning the Shares for an indefinite period of time because the Shares may not be transferred unless (i) the resale of the Shares is registered pursuant to an effective registration statement under the Securities Act in accordance with the Registration Rights Agreement; (ii) Novartis has delivered to Precision an opinion of counsel (in form, substance and scope customary for opinions of counsel in comparable transactions) to the effect that the Shares to be sold or transferred may be sold or transferred pursuant to an exemption from such registration; or (iii) the Shares are sold or transferred pursuant to Rule 144 under the Securities Act ("***Rule 144***") (provided, that Novartis provides Precision with reasonable assurances (including in the form of seller and broker representation letters) that the Shares may be sold pursuant to such rule);

(b) Precision has no obligation to register the Shares under the Securities Act or any applicable state securities laws, except as may be required under the Registration Rights Agreement; and

(c) any sale of the Shares made in reliance on Rule 144 may be made only in accordance with the terms of Rule 144 and, if Rule 144 is not applicable, any resale of the Shares under circumstances in which the seller (or the Person through whom the sale is made) may be deemed to be an underwriter (as that term is defined in the Securities Act) may require compliance with some other exemption under the Securities Act.

5.3 **Lock-Up.**

Novartis agrees that it will hold and will not, directly or indirectly, without Precision's prior approval, sell, transfer or otherwise dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (the "***Lock-Up Securities***"), or otherwise make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale of the Lock-Up Securities (any such transaction, a "***Transfer***"), until the two-year anniversary of the Closing Date (the "***Holding Period***"); provided, that the foregoing shall not prohibit (a) Novartis from transferring any Lock-Up Securities to (i) a Permitted Transferee or (ii) Precision; or (b) the disposition of Lock-Up Securities pursuant to (i) any merger, consolidation or similar transaction to which Precision is a constituent corporation or (ii) a bona fide tender offer or exchange offer made to all of the holders of Common Stock by a Person other than Novartis (or any of its Affiliates or any Person acting on behalf of or as part of a group or in concert with Novartis or any of its Affiliates). Notwithstanding the foregoing, the restrictions on the Lock-Up Securities

automatically shall terminate and be of no further force or effect (1) in the event Precision enters into any definitive agreement with a Third Party during the Holding Period contemplating a (y) Change of Control pursuant to a merger, consolidation or similar transaction to which Precision is a constituent corporation or (z) tender offer or exchange offer to be made to all of the holders of Common Stock by a Third Party (other than a Third Party acting on behalf of or as part of a group or in concert with Novartis), (2) if at any time during the Holding Period the Shares represent greater than 19.9% ownership of Precision's then-outstanding voting securities solely as a result of an action taken by Precision (provided that the restrictions shall only terminate and be of no further force and effect to the extent necessary to permit Novartis to reduce its ownership of shares to 19.9%), or (3) upon the termination of the Collaboration and License Agreement in accordance with its terms, whichever first occurs.

5.4 **Legends.**

Novartis understands the Shares will bear restrictive legends in substantially the following form (and a stop-transfer order may be placed against transfer of the Shares):

> THESE SHARES HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS AND MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER THE SECURITIES ACT OR APPLICABLE STATE SECURITIES LAWS OR AN OPINION OF COUNSEL (WHICH COUNSEL SHALL BE REASONABLY SATISFACTORY TO PRECISION BIOSCIENCES, INC.) THAT SUCH REGISTRATION IS NOT REQUIRED OR UNLESS SOLD PURSUANT TO RULE 144 OF THE SECURITIES ACT.
>
> THE SALE, PLEDGE, HYPOTHECATION OR TRANSFER OF THESE SHARES IS SUBJECT TO THE TERMS AND CONDITIONS OF A STOCK PURCHASE AGREEMENT DATED JUNE 14, 2022 BETWEEN PRECISION BIOSCIENCES, INC. AND NOVARTIS PHARMA AG, AS SUCH AGREEMENT MAY BE AMENDED FROM TIME TO TIME.

If such Shares may be transferred pursuant to Sections 5.2 and 5.3, Novartis may request that Precision remove, and if so requested, Precision shall agree to authorize and instruct (including by causing any required legal opinion to be provided) the removal of any legend from the Shares, if permitted by applicable securities laws, within three Business Days of any such request (provided that Novartis timely delivers to Precision such customary representation letters and other documents reasonably requested by Precision in connection with the removal of the share legend); it being understood and agreed that each Party will be responsible for any fees it incurs in connection with such request and removal.

5.5 **Information Rights.**

(a) Until Novartis no longer holds Shares representing beneficial ownership of at least five percent (5%) of the outstanding Common Stock, Novartis shall be entitled to consult with Precision's Chief Executive Officer, who shall make himself or herself available quarterly on a reasonable basis and who shall respond to the reasonable information and other requests made by Novartis on a quarterly basis with respect to Precision's business and financial matters.

(b) Without limiting any other obligations of confidentiality that Novartis has to Precision under the Collaboration and License Agreement or otherwise, Novartis agrees that it will keep confidential and will not disclose, divulge or use for any purpose (other than to monitor its investment in Precision pursuant to this Agreement) any confidential information obtained from Precision pursuant to the terms of this Agreement, including Section 5.5(a), unless such confidential information is (i) known or becomes generally known to the public in general (other than as a result of a breach of this Section 5.5(b)), (ii) rightfully known to Novartis without obligation of confidentiality prior to receipt of the same from Precision, (iii) furnished to Novartis without an obligation of confidentiality or limitations on use with respect thereto by a Third Party lawfully permitted to make such disclosure; or (iv) independently developed by Novartis without use of or reference to any confidential information obtained from Precision.

5.6 **Integration.**

Precision shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in the Securities Act) that would be integrated with the offer or sale of the Shares to be issued to Novartis hereunder such that the Shares would be required to be registered under the Securities Act or that Precision would be required to obtain stockholder approval of the issuance of Shares to Novartis hereunder pursuant to the rules and regulations of any of the following markets or exchanges on which the shares of Common Stock are listed or quoted for trading on the date in question: the Pink OTC Markets, the OTC Bulletin Board, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the NYSE American or the New York Stock Exchange.

5.7 **Right to Conduct Activities.**

Precision hereby agrees and acknowledges that Novartis and its Affiliates have numerous business lines (the "***Existing Novartis Business***") and an active investment and acquisition program. Precision hereby agrees that none of Novartis or any of its Affiliates (together, the "***Novartis Group***") shall be liable to Precision or any of its Affiliates for any claim arising out of, or based upon, (a) the investment by the Novartis Group in any entity competitive with Precision, (b) actions taken by any partner, officer or other representative of the Novartis Group to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on Precision, or (c) with respect to the Novartis Group, the Novartis Group engaging in the Existing Novartis Business; provided, however, that the foregoing shall not limit any of Novartis's or any of its Affiliates' obligations under this Agreement, the Registration Rights Agreement or the Collaboration and License Agreement or otherwise relieve Novartis or any Affiliate of Novartis from liability associated with the breach by Novartis of any representation, warranty, covenant, agreement or obligation set forth in this Agreement, the Registration Rights Agreement or the Collaboration and License Agreement, including (for the avoidance of doubt) Novartis's obligations of confidentiality and non-use under this Agreement and the Collaboration and License Agreement.

CONDITIONS TO CLOSING

6.1 Mutual Conditions to Closing.

The obligations of Precision and Novartis to consummate the Closing are subject to the satisfaction or waiver of the following conditions at or prior to the Closing:

(a) Absence of Litigation. No proceeding challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit, alter, prevent or materially delay the Closing, shall have been instituted or be pending before any Governmental Authority.

(b) No Governmental Prohibition. The sale of the Shares by Precision and the purchase of the Shares by Novartis shall not be prohibited by any applicable law or Governmental Authority.

(c) Collaboration and License Agreement. The Parties shall have duly executed and delivered the Collaboration and License Agreement and it shall be in full force and effect.

(d) Registration Rights Agreement. The Parties shall have duly executed and delivered the Registration Rights Agreement and it shall be in full force and effect.

6.2 Conditions to Obligations of Precision to Close.

Precision's obligation to complete the purchase and sale of the Shares and deliver the Shares to Novartis is subject to the satisfaction or waiver of the following conditions at or prior to the Closing:

(a) Receipt of Funds. Precision shall have received immediately available funds in the full amount of the Purchase Price for the Shares.

(b) Representations and Warranties. The representations and warranties made by Novartis in Article 3 shall be true and correct in all respects as of the Execution Date and the Closing Date, except to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties shall be true and correct as of such other date, except in each case where the failure of such representations and warranties to be so true and correct (without giving effect to any limitation as to "materiality" set forth therein) would not reasonably be expected to have a material adverse effect on Novartis's ability to perform its obligations hereunder or consummate the transactions contemplated hereby.

(c) Covenants. All covenants and agreements contained in this Agreement to be performed or complied with by Novartis on or prior to the Closing Date shall have been performed or complied with in all material respects.

(d) Closing Deliverables. All Closing deliverables required to be delivered by Novartis to Precision under Section 1.3(c) shall have been so delivered.

6.3 **Conditions to Novartis's Obligations to Close.**

Novartis's obligation to complete the purchase and sale of the Shares is subject to the satisfaction or waiver of the following conditions at or prior to the Closing:

(a) Representations and Warranties. The representations and warranties made by Precision in Article 2 shall be true and correct in all respects (provided, however, that in the case of any representation and warranty of Precision contained in Article 2 which is not qualified by materiality or Material Adverse Effect, such representation and warranty shall be true and correct in all material respects) as of the Execution Date and the Closing Date, except (i) to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties shall be true and correct as of such other date and (ii) in each case where, individually or in the aggregate, the failure of such representations and warranties to be so true and correct on the Closing Date (without giving effect to any limitation as to "materiality" or "Material Adverse Effect" set forth therein) would not reasonably be expected to have a Material Adverse Effect on Precision.

(b) Covenants. All covenants and agreements contained in this Agreement to be performed or complied with by Precision on or prior to the Closing Date shall have been performed or complied with in all material respects.

(c) Closing Deliverables. All Closing deliverables as required to be delivered by Precision (or its transfer agent) to Novartis under Section 1.3(b) shall have been so delivered.

(d) Nasdaq Matters.

(i) Prior to the Closing, Precision shall have taken all actions which are reasonably necessary, including providing appropriate notice to Nasdaq of the transactions contemplated by this Agreement, for the Shares to be listed on Nasdaq and shall have complied in all material respects with all listing, reporting, filing and other obligations under the rules of Nasdaq and of the SEC with respect to the matters contemplated by this Agreement.

(ii) The Common Stock shall not have been suspended, as of the Closing Date, by the SEC or Nasdaq from trading on Nasdaq nor shall any such suspension by the SEC or Nasdaq have been threatened, as of the Closing Date, in writing by the SEC or Nasdaq.

(e) No Material Adverse Effect. Since the Execution Date, there shall not have been any change, development, occurrence or event that has had or would reasonably be expected to have a Material Adverse Effect on Precision.

TERMINATION

7.1 **Ability to Terminate.**

This Agreement may be terminated prior to the Closing by:

(a) mutual written consent of Precision and Novartis;

(b) either Precision or Novartis, upon written notice to the other, if any of the conditions to the Closing set forth in Section 6.1 shall have become incapable of fulfillment by July 14, 2022 (the "***Termination Date***") and such conditions shall not have been waived by each Party within two Business Days after receipt of notice of an intention to terminate pursuant to this Section 7.1(b); provided, however, that the right to terminate this Agreement under this Section 7.1(b) shall not be available to any Party whose failure to fulfill any obligation under this Agreement, the Collaboration and License Agreement, or the Registration Rights Agreement has been the cause of, or resulted in, the failure to consummate the transactions contemplated hereby prior to the Termination Date;

(c) Precision, upon written notice to Novartis, so long as Precision is not then in breach of its representations, warranties, covenants or agreements under this Agreement such that any of the conditions set forth in Section 6.3(a) or (b), as applicable, could not be satisfied by the Termination Date, (i) upon a breach of any covenant or agreement on the part of Novartis set forth in this Agreement or (ii) if any representation or warranty of Novartis shall have been or become untrue, in each case such that any of the conditions set forth in Section 6.2(b) or (c), as applicable, could not be satisfied by the Termination Date; and

(d) Novartis, upon written notice to Precision, so long as Novartis is not then in breach of its representations, warranties, covenants or agreements under this Agreement such that any of the conditions set forth in Section 6.2(b) or (c), as applicable, could not be satisfied by the Termination Date, (i) upon a breach of any covenant or agreement on the part of Precision set forth in this Agreement, (ii) if any representation or warranty of Precision shall have been or become untrue, in each case such that any of the conditions set forth in Section 6.3(a) or (b), as applicable, could not be satisfied by the Termination Date, or (iii) if there has been any change, development, occurrence or event since the Execution Date that has had or would reasonably be expected to have a Material Adverse Effect on Precision.

7.2 **Effect of Termination.**

In the event of the termination of this Agreement pursuant to Section 7.1, (a) this Agreement (except for this Section 7.2 and Article 8, and any definitions set forth in this Agreement and used in this Section 7.2 or Article 8) shall forthwith become void and have no effect, without any liability on the part of either Party, and (b) all filings, applications and other submissions made pursuant to this Agreement, to the extent practicable, shall be withdrawn from the agency or other Person to which they were made or appropriately amended to reflect the termination of the transactions contemplated hereby; provided, however, that nothing contained in this Section 7.2 shall relieve either Party from liability for fraud or any intentional or willful breach of this Agreement, the Collaboration and License Agreement, or the Registration Rights Agreement.

MISCELLANEOUS

8.1 **Entire Agreement; Amendment.**

This Agreement, together with the Collaboration and License Agreement and the Registration Rights Agreement, sets forth the complete, final and exclusive

agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties with respect to the subject matter hereof and supersedes, as of the Execution Date, all prior and contemporaneous agreements and understandings between the Parties with respect to the subject matter hereof. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer or representative of each Party.

8.2 **Survival.**

The representations and warranties contained in this Agreement shall survive the execution and delivery of this Agreement and the Closing of the transactions contemplated by this Agreement until the date that is [***] following the date of this Agreement (at which time they shall terminate) and shall in no way be affected by any investigation or knowledge of the subject matter thereof made by or on behalf of Novartis or Precision. The covenants and agreements contained in this Agreement shall survive the execution and delivery of this Agreement and the Closing of the transactions contemplated by this Agreement.

8.3 **Notice.**

Any notice required or permitted to be given by this Agreement must be in writing, in English. Any and all notices or other communications or deliveries required or permitted to be provided hereunder must be in writing and will be deemed given and effective if (a) delivered by hand or by overnight courier with tracking capabilities; (b) mailed postage prepaid by first class, registered or certified mail; or (c) delivered by facsimile or electronic mail, with a confirmation copy to be sent via either of the methods set forth in clauses (a) and (b) of this Section 8.3, in each case, addressed as set forth below unless changed by notice so given:

If to Precision:
Precision BioSciences, Inc.
302 E Pettigrew St. – Dibrell Whse, Suite A-100
Durham, NC 27701-3712
Attn: [***], Senior Vice President, Business Development
Fax: (480) 393-5553
E-mail: [***]

with a copy (which shall not constitute notice) to:

Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, LLP
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: John Therien
Fax: (919) 821-6800
E-mail: jtherien@smithlaw.com

If to Novartis:
Novartis Pharma AG
Lichtstrasse 35
CH-4056 Basel
Switzerland
Attn: Head of NIBR General Legal, Europe
And an email copy to: [***]

with a copy (which shall not constitute notice) to:

Novartis Institutes for BioMedical Research, Inc.

250 Massachusetts Avenue
Cambridge, MA 02139 USA
Attn: General Counsel

with a copy (which shall not constitute notice) to:

Arnold & Porter Kaye Scholer LLP
Three Embarcadero Center, 10th Floor
San Francisco, CA 94111
Attention: Stephanie Coutu
Fax: (415) 471-3400
E-mail: stephanie.coutu@arnoldporter.com

8.4 **Severability.**

If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable or illegal by a court of competent jurisdiction, (a) such adjudication shall not, to the extent feasible, affect or impair, in whole or in part, the validity, enforceability or legality of any remaining portions of this Agreement, (b) this Agreement shall be construed and enforced as if such invalid, unenforceable or illegal provision had never comprised a part hereof, (c) all remaining portions will remain in full force and effect and shall not be affected by the invalid, unenforceable or illegal provision or by its severance herefrom, and (d) in lieu of such invalid, unenforceable or illegal provision, the Parties shall use reasonable efforts to seek and agree on an alternative valid and enforceable provision that preserves the original purpose and intent of this Agreement.

8.5 **Successors and Assigns.**

This Agreement is binding upon and inures to the benefit of the Parties and their respective successors and permitted assigns. Except for an assignment by Novartis of this Agreement or any rights hereunder to a Permitted Transferee (which assignment will not relieve Novartis of any obligation hereunder), neither Party may assign this Agreement or any rights or obligations hereunder without the prior written consent of the other Party.

8.6 **Waivers.**

The failure of a Party to insist upon strict performance of any provision of this Agreement or to exercise any right arising out of this Agreement shall neither impair that provision or right nor constitute a waiver of that provision or right, in whole or in part, in that instance or in any other instance. Any waiver by a Party of a particular provision or right shall be in writing, shall be as to a particular matter and, if applicable, for a particular period of time and shall be signed by such Party.

8.7 **Interpretation.**

The captions and headings to this Agreement are for convenience only and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless specified to the contrary, references to Articles, Sections or Appendices mean the particular Articles, Sections or Appendices to this Agreement. Unless the context otherwise clearly requires, whenever used in this Agreement: (a) the words “include” or “including” shall be construed as incorporating, also, “but not limited to” or “without limitation”; (b) the word “day” or “year” means a calendar day or year unless otherwise specified; (c) the word “notice” means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (d) the words “hereof,” “herein,” “hereby” and derivative or similar words refer to this Agreement as a whole and not merely to the particular provision in which such words appear; (e) the words “shall” and “will” have interchangeable meanings for purposes of this Agreement; (f) provisions that require that a Party or the Parties “agree,” “consent” or “approve” or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise; (g) words of any gender include the other gender; (h) words using the singular or

plural number also include the plural or singular number, respectively; (i) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement law, rule or regulation thereof; and (j) neither Party shall be deemed to be acting on behalf of the other Party.

8.8 **Counterparts; Electronic Signatures.**

This Agreement may be executed in any number of counterparts, each of which is deemed an original, but all of which together constitute one instrument. This Agreement may be executed and delivered electronically and upon such delivery such electronic signature will be deemed to have the same effect as if an original signature had been delivered to the other Party.

8.9 **Expenses.**

Each Party shall pay its own costs, charges and expenses incurred in connection with the negotiation, preparation, execution and performance of this Agreement.

8.10 **Further Assurances.**

The Parties hereby covenant and agree, without the necessity of any further consideration, to execute, acknowledge and deliver any and all documents and take any action as may be reasonably necessary to carry out the intent and purposes of this Agreement. In furtherance and not in limitation of the foregoing, Novartis agrees to promptly furnish information that is reasonably requested by Precision in connection with Precision's reporting and other obligations under the Exchange Act and the Securities Act.

8.11 **No Third Party Beneficiary Rights.**

This Agreement is not intended to and shall not be construed to give any Third Party any interest or rights (including any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby.

8.12 **Construction.**

The Parties acknowledge and agree that (a) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (b) the rule of construction to the effect that any ambiguities are resolved against the drafting Party shall not be employed in the interpretation of this Agreement; and (c) the terms and provisions of this Agreement shall be construed fairly as to each Party and not in a favor of or against either Party, regardless of which Party was generally responsible for the preparation of this Agreement.

8.13 **Governing Law; Jurisdiction.**

This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws principles thereof that would require the application of the laws of any other jurisdiction. Any action brought under or arising out of this Agreement shall be brought in the Court of Chancery of the State of Delaware. Each Party hereby irrevocably submits to the exclusive jurisdiction of such court in respect of any claim relating to the validity, interpretation and enforcement of this Agreement and hereby waives, and agrees not to assert, as a defense in any Action in which any such claim is made that it is not subject to the jurisdiction of such court or that such Action may not be brought or is not maintainable in such court, or that the venue thereof may not be appropriate or that this agreement may not be enforced in or by such court. Each Party hereby consents to and grants the Court of Chancery of the State of Delaware jurisdiction over such Party and over the subject matter of any such claim and agree that mailing of process or other papers in connection with any such Action in the manner provided in Section 8.3 or in such other manner as may be permitted by law, shall be valid and sufficient.

8.14 **Equitable Relief.**

Each Party acknowledges and agrees that if it fails to perform any of its covenants or agreements or discharge any of its obligations under this Agreement, irreparable damage could occur and any remedy at law may prove to be inadequate relief for the other Party. Accordingly, notwithstanding anything herein to the contrary, each Party shall be entitled (without any requirement to post bond) to seek injunctive relief and specific performance (including any relief or recovery under this

Agreement) in any court of competent jurisdiction anywhere in the world (including the court designated in Section 8.13).

8.15 **Cumulative Remedies.**

No remedy referred to in this Agreement is intended to be exclusive unless explicitly stated to be so, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

[Remainder of page intentionally left blank.]

In Witness Whereof, the Parties have caused this Agreement to be executed as of the Execution Date by their duly authorized representatives.

Precision BioSciences, Inc.

By: /s/ Michael Amoroso
Name: Michael Amoroso
Title: Chief Executive Officer

Novartis Pharma AG

By: /s/ Petra Grohmann-Moesching
Name: Petra Grohmann-Moesching
Title: Head of Finance, NIBR Europe

By: /s/ Simone Pfirter
Name: Simone Pfirter
Title: Head NIBR General Legal Europe

[Signature page to Stock Purchase Agreement]

APPENDIX 1

DEFINED TERMS

"***Action***" shall mean any action, cause or action, suit, prosecution, notice of violation, inquiry, investigation, litigation, arbitration, hearing, Order, claim, complaint or other proceeding (whether civil, criminal, administrative, investigative or informal) by or before any Governmental Authority or arbitrator.

"***Affiliate***" means, with respect to any Person, any entity that, at the relevant time (whether as of the Execution Date or thereafter), directly or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with such Person, for so long as such control exists. For purposes of this definition, "control" means (i) to possess, directly or indirectly, the power to direct or cause the direction of the management or policies of an entity, whether through ownership of voting securities or by contract relating to voting rights or corporate governance, or (ii) direct or indirect ownership of 50% (or such lesser percentage that is the maximum allowed to be owned by a foreign entity in a particular jurisdiction) or more of the voting share capital or other equity interest in such entity.

"***Board***" means the board of directors of Precision.

"***Business Day***" means any day, other than any Saturday, Sunday or any day that banks are authorized or required to be closed in Durham, North Carolina, Cambridge, Massachusetts or Basel, Switzerland.

"***Change of Control***" means, with respect to either Party, any of the following events occurring after the Closing Date: (i) the acquisition by a Third Party, in one transaction or a series of related transactions, of direct or indirect beneficial ownership of more than fifty percent (50%) of the outstanding voting equity securities of such Party (excluding, for clarity, an acquisition by a Third Party where the equity holders of such acquired Party or its parent immediately prior to such transaction hold a majority of the outstanding voting equity securities of the surviving entity or the parent of the surviving entity immediately following such transaction); (ii) any Third Party obtains the power, directly or indirectly, to elect a majority of the members of such Party's board of directors, or similar governing body; (iii) a merger or consolidation involving such Party as a result of which (x)(A) a Third Party acquires direct or indirect beneficial ownership of more than fifty percent (50%) of the voting power of the surviving entity immediately after such merger or consolidation and (B) the voting securities of such Party outstanding immediately prior to such merger or consolidation, or any securities into which such voting securities have been converted or exchanged, cease to represent more than 50% of the combined voting power of the surviving entity or the parent of the surviving entity immediately following such merger or consolidation or (y) the members of the board of directors of such Party immediately prior to such transaction constitute less than a majority of the members of the board of directors of such Party or such surviving Person immediately following such transaction; or (iv) a sale, exclusive license or other transfer of all or substantially all of the assets of such Party in one transaction or a series of related transactions to a Third Party.

"***Company Covered Person***" means, with respect to Precision as an "issuer" for purposes of Rule 506 promulgated under the Securities Act, any Person listed in the first paragraph of Rule 506(d)(1).

"*Contract*" means, with respect to any Person, any legally binding written or oral contracts, agreements, indentures, bonds, loans, leases, subleases, licenses, sublicenses, instruments, notes and arrangements to which such Person is a party or by which any of its properties or assets are subject.

"***Disqualification Event***" means a "bad actor" disqualifying event described in Rule 506(d)(1)(i)-(viii) promulgated under the Securities Act.

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC thereunder.

"***Forward-Looking Disclosures***" means any forward-looking disclosures set forth in any "risk factors" section or "forward-looking statements" section of the SEC Documents.

"***GAAP***" means accepted accounting principles generally accepted in the United States of America.

"***Governmental Authority***" means any national, international, federal, state, provincial or local government, or political subdivision thereof, or any multinational organization or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, and any court or tribunal (or any department, bureau or division thereof, or any governmental arbitrator or arbitral body).

"***Knowledge***" has the meaning set forth in the Collaboration and License Agreement.

"***Material Adverse Effect***" shall mean any change, event or occurrence that, individually or in the aggregate with any other changes, events or circumstances, has had or would reasonably be expected to have (i) a material adverse effect on the business, financial condition, assets or results of operations of Precision, taken as a whole, or (ii) a material adverse effect on Precision's ability to perform its obligations hereunder or consummate the transactions contemplated hereby. In the case of (i), none of the following (individually or in the aggregate) shall be deemed to be a Material Adverse Effect, and none of the following (individually or in the aggregate) will be taken into account for purposes of (i) above: (A) changes in conditions in the United States or global economy or capital or financial markets generally, including changes in interest or exchange rates; (B) changes in general legal, regulatory, political, economic or business conditions, or changes in GAAP or interpretations thereof, that, in each case, generally affect the biotechnology or biopharmaceutical industries; (C) the announcement or pendency of the transactions contemplated by this Agreement and the Collaboration and License Agreement, or the announcement of the identity of either Party; (D) any change in the trading prices or trading volume of the securities of Precision, in and of themselves (with the underlying reason for such change may be taken into account for purposes of (i) above, unless excluded by another clause of this definition); (E) acts of war, sabotage or terrorism, or any escalation or worsening of any such acts of war, sabotage or terrorism, (F) earthquakes, hurricanes, floods or other natural disasters, (G) pandemics or other health crises, (H) any action taken by either Party contemplated by this Agreement or the Collaboration and License Agreement or with the other Party's written consent; provided, that, with respect to clauses (A), (B), (E), (F) and (G), that such change, event or circumstance does not have or would not reasonably be expected to have a materially disproportionate and adverse effect on Precision relative to other companies in the biotechnology or biopharmaceutical industries.

"***Material Contract***" means all Contracts entered into by Precision on or prior to the Closing Date that are required to be filed as exhibits by Precision in the SEC Documents pursuant to Items 601(b)(2), 601(b)(4), 601(b)(9) and 601(b)(10) of Regulation S-K promulgated by the SEC (excluding, for the avoidance of doubt, this Agreement, the Collaboration and License Agreement, and the Registration Rights Agreement).

"***Nasdaq***" means The Nasdaq Stock Market LLC.

"***Order***" shall mean any assessment, award, decision, injunction, judgment, order, ruling, verdict or writ entered, issued, made, or rendered by any court, administrative agency, or other Governmental Authority or by any arbitrator.

"***Permitted Transferee***" means an Affiliate of Novartis; provided, however, that no such Person shall be deemed a Permitted Transferee for any purpose under this Agreement unless: (a) the Permitted Transferee, prior to or simultaneously with any disposition of Shares to such Affiliate, shall have agreed in writing to be subject to and bound by the terms of this Agreement as though it were "Novartis" hereunder, and (b) Novartis acknowledges that it continues to be bound by the terms of this Agreement.

"***Person***" means any (i) corporation, limited or general partnership, limited liability company, joint venture, trust, unincorporated association, governmental body, authority, bureau or agency, any other entity or body, or an individual and (ii) "person" and "group" with the meanings given such terms under Section 13(d) and 14(d) of the Exchange Act, with the term "group" including any group acting for the purpose of acquiring, holding or disposing of securities within the meaning of Rule 13d-5(b)(1) under the Exchange Act.

"***Personal Data***" means (i) a natural person's name, street address, telephone number, email address, photograph, social security number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; and (iv) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or sexual orientation.

"***Preferred Stock***" means shares of Precision's preferred stock, par value $0.0001 per share.

"***SEC***" means the United States Securities and Exchange Commission or any successor entity.

"***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations of the SEC thereunder.

"***Tax***" or "***Taxes***" shall mean all federal, state, local, and foreign income, excise, gross receipts, gross income, ad valorem, profits, gains, property, capital, sales, transfer, use, payroll, employment, severance, withholding, duties, intangibles, franchise, backup withholding, value- added, and other taxes imposed by a Governmental Authority, together with all interest, penalties and additions to tax imposed with respect thereto.

"*Tax Return*" shall mean a report, return or other document (including any amendments thereto) required to be supplied to a Governmental Authority with respect to Taxes.

"***Third Party***" means any Person other than Novartis or Precision (or their respective Affiliates).

[Remainder of page intentionally left blank.]

APPENDIX 2

PAYMENT INSTRUCTIONS

[***]

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EXHIBIT A

REGISTRATION RIGHTS AGREEMENT

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this "***Agreement***") is made and entered into as of [●], 2022, between Precision BioSciences, Inc., a Delaware corporation (the "***Company***"), and Novartis Pharma AG, a corporation organized and existing under the laws of Switzerland, with its principal business office located at Lichtstrasse 35, CH-4056 Basel, Switzerland (the "***Purchaser***"). Capitalized terms used and not otherwise defined herein shall have the meanings given to such terms in the Purchase Agreement (as defined below).

WHEREAS, the Purchaser is purchasing shares of the Company's common stock ("***Common Stock***"), par value $0.000005 per share (the "***Shares***"), pursuant to that certain Stock Purchase Agreement, dated as of June 14, 2022, between the Company and the Purchaser (the "***Purchase Agreement***");

WHEREAS, the obligations in the Purchase Agreement are conditioned upon the execution and delivery of this Agreement; and

WHEREAS, the Company and the Purchaser desire to provide for certain arrangements with respect to the registration under the Securities Act of 1933, as amended (the "***Securities Act***") of the Shares sold to the Purchaser pursuant to the Purchase Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and the Purchaser hereby agree as follows:

1. **Definitions**

. As used in this Agreement, the following terms shall have the respective meanings set forth in this Section 1:

"***Advice***" shall have the meaning set forth in Section 9(c).

"***Affiliate***" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"***Agreement***" shall have the meaning set forth in the Preamble.

"***Commission***" means the United States Securities and Exchange Commission, or any successor entity or entities, including, if applicable, the staff of the Commission.

"***Control***" (including the terms "controlling", "controlled by" or "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"***Effectiveness Period***" shall have the meaning set forth in Section 2(b).

"***Excess Securities Registration Statement***" shall have the meaning set forth in Section 2(a).

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

"***Holder***" or "***Holders***" means the Purchaser or its Permitted Transferees (for so long as they remain Affiliates of the Purchaser) that have been assigned registration rights under this Agreement in

compliance with Section 9(h), in each case, to the extent such Persons hold Registrable Securities from time to time.

"***Indemnified Party***" shall have the meaning set forth in Section 6(c).

"***Indemnifying Party***" shall have the meaning set forth in Section 6(c).

"***Initial Registration Statement***" shall mean the initial Registration Statement required to be filed to cover the resale by the Holders of the Registrable Securities pursuant to Section 2(a).

"***Lock-Up Period***" means the period commencing on the Closing Date and ending on the earlier of (i) the two (2) year anniversary of the Closing Date or (2) date on which the Collaboration and License Agreement has been terminated in accordance with its terms.

"***Losses***" shall have the meaning set forth in Section 6(a).

"***Permitted Suspension***" shall have the meaning set forth in Section 2(b).

"***Person***" means an individual or corporation, limited or general partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"***Proceeding***" means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

"***Prospectus***" means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A or Rule 430B promulgated by the Commission pursuant to the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

"***Purchase Agreement***" shall have the meaning set forth in the Preamble.

"***Purchaser***" shall have the meaning set forth in the Preamble.

"***Reduction Securities***" shall have the meaning set forth in Section 2(c).

"***Registrable Securities***" means, to the extent held by a Holder, (i) the Shares issued pursuant to the Purchase Agreement and (ii) any other shares of Common Stock issued as (or issuable upon conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, in exchange for or in replacement of the Shares; provided, however, that such securities shall not constitute (or shall cease to constitute) Registrable Securities (and the Company shall not be required to maintain the effectiveness of any, or file another, Registration Statement hereunder with respect thereto) (a) in the event that a Registration Statement with respect to the sale of such securities is declared effective by the Commission under the Securities Act and such securities have been disposed of by the Holder in accordance with such Registration Statement, (b) in the event that such securities have been previously sold or transferred in

accordance with Rule 144, or (c) after such time as both (i) the Registrable Securities constitute 8% or less of the then-outstanding shares of Common Stock and (ii) such securities become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144 as set forth in a written legal opinion letter to such effect, addressed, delivered and reasonably acceptable to the Company's transfer agent and the Purchaser.

"***Registration Expenses***" shall have the meaning set forth in Section 5.

"***Registration Statement***" means any registration statement of the Company under the Securities Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement (including any Excess Securities Registration Statement), along with any amendments and supplements to such Registration Statement, including post-effective amendments, all exhibits and all material incorporated by reference in such Registration Statement.

"***Required Holders***" shall mean the written consent or affirmative vote of Holders that hold at least sixty percent (60%) of the Registrable Securities, given in writing or by vote at a meeting, consenting or voting (as the case may be) together as a single class.

"***Rule 144***" means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"***Rule 415***" means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"***Rule 424***" means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"***Securities Act***" shall have the meaning set forth in the Preamble.

"***Shares***" shall have the meaning set forth in the Preamble.

"***Trading Day***" means any day on which the Shares are traded on The Nasdaq Global Select Market, or, if The Nasdaq Global Select Market is not the principal trading market for the Shares, then on the principal securities exchange or securities market on which the Shares are then traded.

"***Underwritten Offering***" means an offering registered under the Securities Act in which securities of the Company are sold to one or more underwriters for reoffering to the public.

2. **Registration**.

(a) If, and only to the extent, Registrable Securities are reasonably expected to remain outstanding at the expiration of the Lock-Up Period, then, no later than 45 calendar days prior to the expiration of the Lock-Up Period (or, if the Lock-Up Period expires as a result of a termination of the Collaboration and License Agreement, within 60 calendar days following the termination of the Collaboration and License Agreement), the Company shall prepare and file with the Commission a Registration Statement covering the resale of all of the Registrable Securities that are not then registered on an existing and effective Registration Statement for an offering to be made on a continuous basis pursuant to Rule 415; provided, however, that if during the Lock-Up Period the Registrable Securities

represent greater than 19.9% ownership of the Company's then-outstanding voting securities solely as a result of an action taken by the Company, the Company shall, within 60 calendar days following the date of such action, prepare and file with the Commission a Registration Statement covering the resale of at least the number of Registrable Securities that are not then registered and are not eligible to be resold under Rule 144 during the 90-day period following the date of such action (it being acknowledged and agreed that the Company may, in its discretion, file a Registration Statement covering a greater number or all of the Registrable Securities) (such Registration Statement, the "***Excess Securities Registration Statement***"). After the expiration of the Lock-Up Period, if any Registrable Securities remain that are not then registered on an existing and effective Registration Statement after the Company's filing of an Excess Securities Registration Statement, the Company shall still be obligated to file a Registration Statement pursuant to this Section 2 covering the resale of such remaining unregistered Registrable Securities. The Registration Statement(s) filed hereunder shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form, including on Form S-1, in accordance herewith) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the "Plan of Distribution" in substantially the form attached hereto as Annex A (which may be modified to respond to comments, if any, provided by the Commission, or as the Company and the Required Holders may mutually agree).

(b) The Company shall use its reasonable best efforts to cause a Registration Statement filed under this Agreement to be declared effective under the Securities Act as soon as practicable and shall, subject to Section 9(c), use its commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until the date on which all securities under such Registration Statement have ceased to be Registrable Securities (the "***Effectiveness Period***"). Notwithstanding the foregoing, the Company shall be entitled to suspend the effectiveness of the Registration Statement at any time prior to the expiration of the Effectiveness Period for up to an aggregate of 30 consecutive Trading Days or an aggregate of 90 Trading Days (which need not be consecutive) in any given 360-day period, if (i) there is material non-public information regarding the Company which the Company's Board of Directors reasonably determines in good faith not to be in the Company's best interest to disclose and which the Company is not otherwise required to disclose, (ii) there is a significant business opportunity (including, but not limited to, a collaboration or exclusive license agreement, the acquisition or disposition of assets (other than in the ordinary course of business) or any merger, consolidation, tender offer or similar transaction) available to the Company which the Company's Board of Directors reasonably determines not to be in the Company's best interest to disclose and which the Company would be required to disclose under a Registration Statement, or (iii) the Company would be unable to comply with requirements under the Securities Act or the Exchange Act (each of clauses (i)-(iii), a "***Permitted Suspension***") (and, in each case, the Chief Executive Officer or Chief Financial Officer of the Company certifies such Permitted Suspension in writing to the Purchaser). In the event of any such Permitted Suspension, the Effectiveness Period of the applicable Registration Statement will be extended by the number of Trading Days in the Effectiveness Period during which the Registration Statement was suspended; provided, that in no event shall the Effectiveness Period be extended past the date on which all securities under such Registration Statement cease to be Registrable Securities. Notwithstanding the foregoing, without the prior written consent of the Purchaser, the Company shall not disclose to the Purchaser any material nonpublic information giving rise to such Permitted Suspension, and except as required by law, the Holders and their respective Affiliates shall not make any public disclosure regarding, and shall treat as confidential, any Permitted Suspension and any notice with respect thereto.

(c) Notwithstanding anything contained herein to the contrary, in the event that the Commission limits the amount of Registrable Securities that may be included and sold by Holders in any Registration Statement, including the Initial Registration Statement, pursuant to Rule 415 or any other basis, the Company may reduce the number of Registrable Securities included in such Registration Statement on

behalf of the Holders in whole or in part (in case of an exclusion as to a portion of such Registrable Securities, such portion shall be allocated pro rata among such Holders first in proportion to the respective numbers of Registrable Securities represented by shares requested to be registered by each such Holder over the total amount of Registrable Securities represented by shares) (such Registrable Securities, the "***Reduction Securities***"). In such event, the Company shall give the Holders prompt written notice of the number of such Reduction Securities excluded and the Company will not be liable for any damages under this Agreement in connection with the exclusion of such Reduction Securities. The Company shall use its commercially reasonable efforts at the first opportunity that is permitted by the Commission to register for resale the Reduction Securities. Such new Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Reduction Securities on Form S-3, in which case such registration shall be on another appropriate form, including on Form S-1, for such purpose) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the "Plan of Distribution" in substantially the form attached hereto as Annex A (which may be modified to respond to comments, if any, provided by the Commission, or as the Company and the Required Holders may mutually agree). The Company shall use its commercially reasonable efforts to cause each such Registration Statement to be declared effective under the Securities Act as soon as possible and shall use its commercially reasonable efforts to keep such Registration Statement continuously effective under the Securities Act during the entire Effectiveness Period, subject to Section 9(c). Notwithstanding the foregoing, the Company shall be entitled to suspend the effectiveness of such Registration Statement at any time prior to the expiration of the Effectiveness Period in connection with a Permitted Suspension for an aggregate of no more than 30 consecutive Trading Days or an aggregate of 90 Trading Days (which need not be consecutive) in any given 360-day period.

(d) In the event of an Underwritten Offering pursuant to a Registration Statement hereunder and the managing underwriter of the Underwritten Offering advises the Company and the Holders in writing that in its reasonable and good faith opinion the number of shares of Common Stock proposed to be included in the Underwritten Offering, including all Registrable Securities and all other shares of Common Stock proposed to be included in such Underwritten Offering, exceeds the number of shares of Common Stock which can be sold in such Underwritten Offering and/or the number of shares of Common Stock proposed to be included in such Underwritten Offering would adversely affect the price per share of the Common Stock proposed to be sold in such Underwritten Offering, the Company shall include in such Underwritten Offering (i) first, the Registrable Securities that the Holders propose to sell, and (ii) second, the shares of Common Stock proposed to be included therein by any other Persons (including shares of Common Stock to be sold for the account of the Company and/or other Persons) allocated among such Persons in such manner as they may agree. If the managing underwriter determines that less than all of the Registrable Securities proposed to be sold can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated pro rata among the respective Holders thereof on the basis of the number of Registrable Securities owned by each such Holder.

3. **Registration Procedures**

. In connection with the Company's registration obligations hereunder, the Company shall:

(a) Not less than five Trading Days prior to the filing of a Registration Statement or any related Prospectus or any amendment or supplement thereto, furnish to the Holders copies of all such documents proposed to be filed (other than those incorporated by reference). Notwithstanding the foregoing, the Company shall not be required to furnish to the Holders any prospectus supplement being prepared and filed solely to name new or additional selling securityholders unless such Holders are named in such prospectus supplement. In addition, in the event that any Registration Statement is on Form S-1 (or other form which does not permit incorporation by reference), the Company shall not be required to furnish to the Holders any prospectus supplement containing information included in a report or proxy statement filed under the Exchange Act that would be incorporated by reference in such Registration Statement if

such Registration Statement were on Form S-3 (or other form which permits incorporation by reference). The Company shall duly consider any comments made by Holders and received by the Company not later than two Trading Days prior to the filing of the Registration Statement, but shall not be required to accept any such comments to which it reasonably objects. Notwithstanding the above, the Company shall not be required to provide, and shall not provide, any Holder or its representatives with material, non-public information unless such Holder agrees in writing to receive such information, in which case each such Holder receiving such information shall treat such information as confidential and shall not make any public disclosure regarding such information.

(b) (i) Prepare and file with the Commission such amendments, including post-effective amendments, to each Registration Statement and the Prospectus used in connection therewith as may be necessary to keep such Registration Statement continuously effective as to the applicable Registrable Securities for its Effectiveness Period and prepare and file with the Commission, if necessary, such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement, and as so supplemented or amended to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably possible to any comments received from the Commission with respect to each Registration Statement or any amendment thereto; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the Registration Statements and the disposition of all Registrable Securities covered by each Registration Statement.

(c) Notify the Holders as promptly as reasonably possible (and, in the case of (i)(A) below, not less than three Trading Days prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one Trading Day following the day (i)(A) when a Prospectus or any prospectus supplement (but only to the extent notice is required under Section 3(a)) or post-effective amendment to a Registration Statement is proposed to be filed; (B) when the Commission notifies the Company whether there will be a "review" of such Registration Statement and whenever the Commission comments in writing on such Registration Statement (in which case the Company shall, solely to the extent such comments relate to the Holders as selling stockholders or the Plan of Distribution, provide true and complete copies thereof and all written responses thereto to each of the Holders that pertain to the Holders as a selling stockholder; for purposes of clarity, the Company shall have no obligation to provide any information that it reasonably believes would constitute material and non-public information); and (C) with respect to each Registration Statement or any post-effective amendment, when the same has been declared effective; (ii) of any request by the Commission or any other Federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information that pertains to the Holders as selling stockholders or the Plan of Distribution; (iii) of the issuance by the Commission of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; and (v) of the occurrence of any event or passage of time that makes the financial statements included or incorporated by reference in a Registration Statement ineligible for inclusion or incorporation by reference therein or any statement made in such Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to such Registration Statement, Prospectus or other documents so that, in the case of such Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that any and all of such information communicated pursuant to this Section 3 shall remain confidential to each Holder until such information otherwise becomes public, unless disclosure by a Holder is required by law.

(d) Use its reasonable efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(e) Furnish to each Holder, without charge, at least one conformed copy of each Registration Statement and each amendment thereto and all exhibits to the extent reasonably requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission; provided, however, that the Company shall have no obligation to provide any document pursuant to this clause that is available on the EDGAR system.

(f) Promptly deliver to each Holder, without charge, as many copies of each Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request. Subject to Section 9(c), the Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto.

(g) Prior to any public offering of Registrable Securities, use its commercially reasonable efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of those jurisdictions within the United States as any Holder reasonably requests in writing to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things necessary or advisable to enable the disposition in such jurisdictions of the Registrable Securities covered by the Registration Statements; provided, however, that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified or subject the Company to any material tax in any such jurisdiction where it is not then so subject.

(h) Cooperate with the Holders to facilitate the timely preparation and delivery of certificates or book-entry statements representing Registrable Securities to be delivered to a transferee pursuant to the Registration Statements, which certificates or book-entry statements shall be free, to the extent permitted by the Purchase Agreement, of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any such Holders may request.

(i) Upon the occurrence of any event contemplated by Section 3.3(c)(v), as promptly as reasonably practicable in the circumstances (but without limiting the Company's rights in connection with a Permitted Suspension), prepare a supplement or amendment, including a post-effective amendment, to the affected Registration Statements or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, no Registration Statement nor any Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, or any form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading.

(j) If the Company receives written request from the Required Holders in connection with any Underwritten Offering, (i) enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of the Underwritten Offering pursuant to which such Registrable Securities are being offered and (ii) use commercially reasonable efforts to obtain (A) comfort letters and bring-down comfort letters from the Company's independent registered public accountants covering such matters of the type customarily covered by comfort letters and bring-down

comfort letters as the underwriters may reasonably request and (B) an opinion or opinions addressed to the underwriter or underwriters in customary form and scope from counsel for the Company; in each case, subject to Sections 2(b), 2(c) and 9(c). Notwithstanding anything to the contrary herein, the Company shall have no obligations to the Holders or otherwise in connection with any Underwritten Offering if (1) the Holders (or any of them) have requested or completed an Underwritten Offering pursuant to a Registration Statement hereunder within the preceding 12 months or (2) the Holders (or any of them) have previously requested or completed three Underwritten Offerings pursuant to Registration Statement(s) hereunder during the term of this Agreement. If withdrawn by the Holders (or any of them), a request for an Underwritten Offering shall constitute a request for an Underwritten Offering hereunder by the withdrawing Holder(s) for purposes of this Section 3 unless (x) the Holders reimburse the Company for all Registration Expenses with respect to such withdrawn Underwritten Offering or (y) such withdrawal is the result of (a) an action by the Company requiring such withdrawal, (b) a Permitted Suspension or (c) the occurrence of any event of the kind described in Section 3(c)(iii)-(v).

4. **Holder's Obligations**

. Each Holder agrees, by acquisition of the Registrable Securities and upon written request by the Company, that it shall promptly furnish to the Company (i) the number of shares of Common Stock beneficially owned by such Holder and any Affiliate thereof, (ii) each natural person thereof who has voting or dispositive control over the shares, (iii) any other information as may be requested by the Commission or any state securities commission, and (iv) such other information regarding such Holder and its proposed sale of securities by such Holder as the Company or its counsel shall reasonably request and as is customarily required in connection with a Registration Statement. Failure by a Holder to provide such information shall relieve the Company of its duties to a Holder under this Agreement until such time as the Holder provides such information.

5. **Registration Expenses**

. All fees and expenses incident to the Company's performance of or compliance with its obligations under this Agreement (excluding any underwriting discounts and selling commissions) shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement (such expenses, "***Registration Expenses***"). The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with the Principal Market on which the Shares are then listed for trading, and (B) in compliance with applicable state securities or Blue Sky laws), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is reasonably requested by the holders of a majority of the Registrable Securities included in the Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) reasonable fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, and (vi) reasonable fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar commissions of any Holder or any legal fees or other costs of the Holders. To the extent that underwriting discounts and selling commissions are incurred in connection with the sale of Registrable Securities in an Underwritten Offering hereunder, such underwriting discounts and selling commissions shall be borne by the Holders of Registrable Securities sold pursuant to such Underwritten Offering, pro rata on the basis of the number of Registrable Securities sold on their behalf in such Underwritten Offering.

6. **Indemnification**.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, agents, partners, members, stockholders and employees of each Holder, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, agents, partners, members, stockholders and employees of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable costs of preparation and reasonable attorneys' fees) and expenses (collectively, "***Losses***"), as incurred, arising out of or relating to (i) any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading or (ii) any violation by the Company of any rule or regulation promulgated by the Securities Act or any other similar federal or state securities laws or any rule or regulation promulgated thereunder applicable to the Company and relating to any action or inaction required of the Company in connection with any such registration, qualification or compliance, except to the extent, but only to the extent, that (1) such untrue statements, alleged untrue statements, omissions or alleged omissions are based upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein (it being understood that the Holder has approved the information substantially in the form of Annex A hereto for this purpose), or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing (in accordance with Section 9(g)) that the Prospectus is outdated or defective and prior to the receipt by such Holder of an Advice (as defined below) or an amended or supplemented Prospectus, but only if and to the extent that following the receipt of the Advice or the amended or supplemented Prospectus the misstatement or omission giving rise to such Loss would have been corrected. The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding of which the Company is aware in connection with the transactions contemplated by this Agreement.

(b) Indemnification by Holders. Each Holder shall, notwithstanding any termination of this Agreement, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents, partners, members, stockholders or employees of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, arising out of or based upon (x) for so long as the prospectus delivery requirements of the Securities Act apply to sales by such Holder, such Holder's failure to comply with any applicable prospectus delivery requirements of the Securities Act or (y) any untrue statement of a material fact contained in any Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto, or arising out of or based upon any omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, or any form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading to the extent, but only to the extent, that (1) such untrue statements or omissions are based upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in

writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing (in accordance with Section 9(g)) that the Prospectus is outdated or defective and prior to the receipt by such Holder of an Advice or an amended or supplemented Prospectus, but only if and to the extent that following the receipt of the Advice or the amended or supplemented Prospectus the misstatement or omission giving rise to such Loss would have been corrected. In no event shall the liability of any selling Holder hereunder be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "***Indemnified Party***"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "***Indemnifying Party***") in writing, and the Indemnifying Party shall assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have proximately and materially adversely prejudiced the Indemnifying Party. An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless (1) the Indemnifying Party has agreed in writing to pay such fees and expenses; (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Indemnifying Party); provided, however, that the Indemnifying Party shall not be liable for the fees and expenses of more than one separate firm of attorneys at any time for all Indemnified Parties pursuant to this Section 6(c). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld or delayed. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement (x) includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding and (y) does not include an admission of fault, culpability or failure to act, by or on behalf of any Indemnified Party, or require forms of relief other than the payment of monetary damages by the Indemnifying Party. Each Indemnified Party shall furnish such information regarding itself or the claim in question as an Indemnifying Party may reasonably request in writing and as shall be reasonably required in connection with defense of such claim and litigation resulting therefrom.

All fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within 10 Trading Days of written notice thereof to the Indemnifying Party (regardless of whether it is ultimately determined that an Indemnified Party is not entitled to indemnification hereunder; provided, that the Indemnifying Party

may require such Indemnified Party to undertake to reimburse all such fees and expenses to the extent it is finally judicially determined that such Indemnified Party is not entitled to indemnification hereunder).

(d) Contribution. If a claim for indemnification under Section 6(a) or 6(b) is unavailable to an Indemnified Party (by reason of public policy or otherwise), then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in Section 6(c), any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 6(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 6(d), no Holder shall be required to contribute, in the aggregate, any amount in excess of the amount by which the proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section 6 are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties.

7. **Compliance with Rule 144**

. With a view to making available to the Holders the benefits of Rule 144 and any other rule or regulation of the Commission that may at any time permit the Holders to sell securities of the Company to the public without registration, the Company agrees, for so long as the Holders hold all or any portion of the Registrable Securities, to use its commercially reasonable efforts to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144, at all times on and after the date hereof;

(b) file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (or obtain extensions in respect thereof and file within the applicable grace period); and

(c) furnish to each Holder, so long as the Holder owns all or any portion of the Registrable Securities, forthwith upon request (1) a written statement by the Company that it has complied with the reporting requirements of Rule 144, the Securities Act and the Exchange Act and (2) such other information as may be reasonably requested to avail such Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration.

8. **Market Stand-Off**

. For so long as the Collaboration and License Agreement is in effect, the Purchaser agrees that upon a written request of the Company or the underwriters managing any Underwritten Offering of the Company's securities, in which case, the Company shall provide notice on behalf of the underwriters pursuant to Section 9(g), it will (i) not offer, sell, contract to sell, loan, grant any option to purchase, make any short sale or otherwise dispose of, hedge or transfer any of the economic interest in (or offer, agree or commit to do any of the foregoing) any shares of Common Stock, or any options or warrants to purchase any shares of Common Stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, whether now owned or hereinafter acquired by such holder, owned directly (including holding as a custodian) or with respect to which such holder has beneficial ownership within the rules and regulations of the Commission (other than those included by such holder in the offering in question, if any) without the prior written consent of the Company or such underwriters, as the case may be, for up to fourteen (14) days prior to, and during the ninety (90) day period following, the date of the prospectus supplement for such Underwritten Offering, and (ii) enter into and be bound by such form of agreement with respect to the foregoing as the Company or such managing underwriter may reasonably request; provided that each executive officer and director of the Company also agrees to substantially similar restrictions.

9. **Miscellaneous**.

(a) Remedies. In the event of a breach by the Company or by a Holder of any of its obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agree that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(b) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Registrable Securities pursuant to the Registration Statement.

(c) Discontinued Disposition. Each Holder agrees by its acquisition of such Registrable Securities that, upon receipt of a written notice from the Company of the occurrence of an any event of the kind described in Section 3(c), such Holder will forthwith discontinue disposition of such Registrable Securities under the Registration Statement until such Holder's receipt of the copies of the supplemented Prospectus and/or amended Registration Statement or until it is advised in writing (the "***Advice***") by the Company that the use of the applicable Prospectus may be resumed, and, in either case, has received copies of any additional or supplemental filings that are incorporated or deemed to be incorporated by reference in such Prospectus or Registration Statement. The Company may provide appropriate stop orders to enforce the provisions of this paragraph.

(d) Further Assurances. Each of the parties hereto will, without additional consideration, execute and deliver such further instruments and take such other action as may be reasonably requested by any other party hereto in order to carry out the purposes and intent of this Agreement. Each Holder shall furnish in writing to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it, as shall be reasonably requested by the Company to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request.

(e) Amendments and Waivers. No provision of this Agreement may be waived or amended except in a written instrument signed by the Company and the Required Holders. The Company shall provide prior notice to all Holders of any proposed waiver or amendment. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right.

(f) Termination of Registration Rights. For the avoidance of doubt, it is expressly agreed and understood that in the event that there are no Registrable Securities outstanding, all registration rights granted to the Holders hereunder shall terminate in their entirety effective on the first date on which there shall cease to be any Registrable Securities outstanding, and the Company shall have no further obligation to file, cause to be declared effective or keep effective any Registration Statement hereunder.

(g) Notices. All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed facsimile or electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given (i) when so sent in the case of facsimile or electronic mail transmission, with a confirmation copy to be sent via first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, or (ii) when so received in the case of mail or courier, and addressed as follows:

If to Precision:

Precision BioSciences, Inc.
302 E Pettigrew St. – Dibrell Whse, Suite A-100
Durham, NC 27701-3712
Attn: [***], Senior Vice President, Business Development
Fax: (480) 393-5553
E-mail: [***]

with a copy (which shall not constitute notice) to:

Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, LLP
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: John Therien
Fax: (919) 821-6800
E-mail: jtherien@smithlaw.com

If to Novartis:

Novartis Pharma AG
Lichtstrasse 35
CH-4056 Basel
Switzerland
Attn: Head of NIBR General Legal, Europe
And an email copy to: [***]

with a copy (which shall not constitute notice) to:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139 USA
Attn: General Counsel

with a further copy (which shall not constitute notice) to:

Arnold & Porter Kaye Scholer LLP
Three Embarcadero Center, 10th Floor
San Francisco, CA 94111
Attention: Stephanie Coutu
Fax: (415) 471-3400
E-mail: stephanie.coutu@arnoldporter.com

if to any other Person who is then the registered Holder, to the address of such Holder as it appears in the stock transfer books of the Company, or such other address as may be designated in writing hereafter, in the same manner, by such Person.

(h) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. Each Holder may assign its respective rights hereunder in the manner and to the Persons as permitted under the Purchase Agreement; provided that, such transferee or assignee agrees in writing to be bound by the terms of the Purchase Agreement and this Agreement.

(i) Execution and Counterparts. This Agreement may be executed in any number of counterparts, each of which is deemed an original, but all of which together constitute one instrument. This Agreement may be executed and delivered electronically and upon such delivery such electronic signature will be deemed to have the same effect as if the original signature had been delivered to the party.

(j) Governing Law; Waiver of Jury Trial. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws principles thereof that would require the application of the laws of any other jurisdiction. Any action brought under or arising out of this Agreement shall be brought in the Court of Chancery of the State of Delaware. Each Party hereby irrevocably submits to the exclusive jurisdiction of such court in respect of any claim relating to the validity, interpretation and enforcement of this Agreement and hereby waives, and agrees not to assert, as a defense in any Action in which any such claim is made that it is not subject to the jurisdiction of such court or that such Action may not be brought or is not maintainable in such court, or that the venue thereof may not be appropriate or that this Agreement may not be enforced in or by such court. Each Party hereby consents to and grants the Court of Chancery of the State of Delaware jurisdiction over such Party and over the subject matter of any such claim and agree that mailing of process or other papers in connection with any such Action in the manner provided in Section 9(g) or in such other manner as may be permitted by law, shall be valid and sufficient. EACH PARTY HERETO WAIVES ITS RIGHT TO TRIAL OF ANY ISSUE BY JURY. Each party hereto (i) certifies that no representative or attorney of any other party has represented, expressly or otherwise, that such party would not, in the event of any action, seek to enforce the foregoing waiver and (ii) acknowledges that it and the other party have been induced to enter into this Agreement, by, among other things, the mutual waiver and certifications in this Section 9(j).

(k) Cumulative Remedies. No remedy referred to in this Agreement is intended to be exclusive unless explicitly stated to be so, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

(l) Severability. If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable or illegal by a court of competent jurisdiction, (i) such adjudication shall not, to the extent feasible, affect or impair, in whole or in part, the validity, enforceability or legality of any remaining portions of this Agreement, (ii) this Agreement shall be construed and enforced as if such invalid,

unenforceable or illegal provision had never comprised a part hereof, (iii) all remaining portions will remain in full force and effect and shall not be affected by the invalid, unenforceable or illegal provision or by its severance herefrom, and (iv) in lieu of such invalid, unenforceable or illegal provision, the parties shall use reasonable efforts to seek and agree on an alternative valid and enforceable provision that preserves the original purpose and intent of this Agreement.

(m) Use of Terms. The parties agree and acknowledge that when, in this Agreement, the Company is required to use its reasonable best efforts to perform any covenant under this Agreement, such requirement shall not obligate the Company, in the reasonable judgment of the disinterested members of its Board of Directors, to perform any act that will have a Material Adverse Effect on the Company.

(n) Headings; Construction. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof. Unless specified to the contrary, references to Sections mean the particular Sections of this Agreement.

(o) Entire Agreement. This Agreement, the Purchase Agreement and the Collaboration and License Agreement (as such term is defined in the Purchase Agreement) contain the entire agreement among the parties with respect to the subject matter hereof and thereof and supersede all prior and contemporaneous arrangements or understandings, whether written or oral, with respect hereto and thereto.

(p) No Presumption Against Drafter. Each of the parties hereto has jointly participated in the negotiation and drafting of this Agreement. In the event there arises any ambiguity or question or intent or interpretation with respect to this Agreement, this Agreement shall be construed as if drafted jointly by all of the parties hereto and no presumptions or burdens of proof shall arise favoring any party by virtue of the authorship of any of the provisions of this Agreement.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

PRECISION BIOSCIENCES, INC.

By:
Name: Michael Amoroso
Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

NOVARTIS PHARMA AG

By:
Name: Petra Grohmann-Moesching
Title: Head of Finance, NIBR Europe

By:
Name: Simone Pfirter
Title: Head NIBR General Legal Europe

ANNEX A

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued to the selling stockholders to permit the resale of these shares of common stock by the holders of these shares of common stock from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of their shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders and any of their pledgees, donees, transferees, assignees or other successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of the shares of common stock beneficially owned by the selling stockholder or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. The shares of common stock may be sold on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market or in transactions otherwise than on these exchanges or systems or in the over-the-counter market and in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. The selling stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through brokers, dealers or underwriters that may act solely as agents;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through the writing or settlement of options or other hedging transactions entered into after the effective date of the registration statement of which this prospectus is a part, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of disposition; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, or Section 4(a)(1) of the Securities Act, if available, rather than under this prospectus, provided that the selling stockholder meets the criteria and conforms to the requirements of those provisions.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by the selling stockholders and, if the selling stockholders default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of

common stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledge intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of the shares of common stock or interests in shares of common stock, the selling stockholders may enter into hedging transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of common stock short after the effective date of the registration statement of which this prospectus is a part and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of Section 2(a)(11) of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The maximum commission or discount to be received by any member of the Financial Industry Regulatory Authority (FINRA) or independent broker-dealer will not be greater than 8% of the initial gross proceeds from the sale of any security being sold. If a selling stockholder is deemed to be an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act, it will be subject to the applicable prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

We have advised the selling stockholders that they are required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended, during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

We are required to pay all fees and expenses incident to the registration of the shares *provided, however*, that the selling stockholders will pay all underwriting discounts and selling commissions, if any. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including some liabilities under the Securities Act, in accordance with the Registration Rights Agreement, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus, in accordance with the Registration Rights Agreement, or we may be entitled to contribution.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the date that (i) the securities registered hereunder collectively constitute 8% or less of the outstanding shares of common stock of the Company and may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 or any other rule of similar effect, as set forth in a written opinion letter to such effect, or (ii) all of the securities registered hereunder have been sold pursuant to this prospectus or Rule 144.

To the extent required, this prospectus may be amended and/or supplemented from time to time to describe a specific plan of distribution.

Exhibit 10.3

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this "***Agreement***") is made and entered into as of June 15, 2022, between Precision BioSciences, Inc., a Delaware corporation (the "***Company***"), and Novartis Pharma AG, a corporation organized and existing under the laws of Switzerland, with its principal business office located at Lichtstrasse 35, CH-4056 Basel, Switzerland (the "***Purchaser***"). Capitalized terms used and not otherwise defined herein shall have the meanings given to such terms in the Purchase Agreement (as defined below).

WHEREAS, the Purchaser is purchasing shares of the Company's common stock ("***Common Stock***"), par value $0.000005 per share (the "***Shares***"), pursuant to that certain Stock Purchase Agreement, dated as of June 14, 2022, between the Company and the Purchaser (the "***Purchase Agreement***");

WHEREAS, the obligations in the Purchase Agreement are conditioned upon the execution and delivery of this Agreement; and

WHEREAS, the Company and the Purchaser desire to provide for certain arrangements with respect to the registration under the Securities Act of 1933, as amended (the "***Securities Act***") of the Shares sold to the Purchaser pursuant to the Purchase Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and the Purchaser hereby agree as follows:

1. **Definitions**

. As used in this Agreement, the following terms shall have the respective meanings set forth in this Section 1:

"***Advice***" shall have the meaning set forth in Section 9(c).

"***Affiliate***" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"***Agreement***" shall have the meaning set forth in the Preamble.

"***Commission***" means the United States Securities and Exchange Commission, or any successor entity or entities, including, if applicable, the staff of the Commission.

"***Control***" (including the terms "controlling", "controlled by" or "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"***Effectiveness Period***" shall have the meaning set forth in Section 2(b).

"***Excess Securities Registration Statement***" shall have the meaning set forth in Section 2(a).

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

"***Holder***" or "***Holders***" means the Purchaser or its Permitted Transferees (for so long as they remain Affiliates of the Purchaser) that have been assigned registration rights under this Agreement in compliance with Section 9(h), in each case, to the extent such Persons hold Registrable Securities from time to time.

"***Indemnified Party***" shall have the meaning set forth in Section 6(c).

"***Indemnifying Party***" shall have the meaning set forth in Section 6(c).

"***Initial Registration Statement***" shall mean the initial Registration Statement required to be filed to cover the resale by the Holders of the Registrable Securities pursuant to Section 2(a).

"***Lock-Up Period***" means the period commencing on the Closing Date and ending on the earlier of (i) the two (2) year anniversary of the Closing Date or (2) date on which the Collaboration and License Agreement has been terminated in accordance with its terms.

"***Losses***" shall have the meaning set forth in Section 6(a).

"***Permitted Suspension***" shall have the meaning set forth in Section 2(b).

"***Person***" means an individual or corporation, limited or general partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"***Proceeding***" means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

"***Prospectus***" means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A or Rule 430B promulgated by the Commission pursuant to the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

"***Purchase Agreement***" shall have the meaning set forth in the Preamble.

"***Purchaser***" shall have the meaning set forth in the Preamble.

"***Reduction Securities***" shall have the meaning set forth in Section 2(c).

"***Registrable Securities***" means, to the extent held by a Holder, (i) the Shares issued pursuant to the Purchase Agreement and (ii) any other shares of Common Stock issued as (or issuable upon conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, in exchange for or in replacement of the Shares; provided, however, that such securities shall not constitute (or shall cease to constitute) Registrable Securities (and the Company shall not be required to maintain the effectiveness of any, or file another, Registration Statement hereunder with respect thereto) (a) in the event that a Registration Statement with respect to the sale of such securities is declared effective by the Commission under the Securities Act and

such securities have been disposed of by the Holder in accordance with such Registration Statement, (b) in the event that such securities have been previously sold or transferred in accordance with Rule 144, or (c) after such time as both (i) the Registrable Securities constitute 8% or less of the then-outstanding shares of Common Stock and (ii) such securities become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144 as set forth in a written legal opinion letter to such effect, addressed, delivered and reasonably acceptable to the Company's transfer agent and the Purchaser.

"***Registration Expenses***" shall have the meaning set forth in Section 5.

"***Registration Statement***" means any registration statement of the Company under the Securities Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement (including any Excess Securities Registration Statement), along with any amendments and supplements to such Registration Statement, including post-effective amendments, all exhibits and all material incorporated by reference in such Registration Statement.

"***Required Holders***" shall mean the written consent or affirmative vote of Holders that hold at least sixty percent (60%) of the Registrable Securities, given in writing or by vote at a meeting, consenting or voting (as the case may be) together as a single class.

"***Rule 144***" means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"***Rule 415***" means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"***Rule 424***" means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"***Securities Act***" shall have the meaning set forth in the Preamble.

"***Shares***" shall have the meaning set forth in the Preamble.

"***Trading Day***" means any day on which the Shares are traded on The Nasdaq Global Select Market, or, if The Nasdaq Global Select Market is not the principal trading market for the Shares, then on the principal securities exchange or securities market on which the Shares are then traded.

"***Underwritten Offering***" means an offering registered under the Securities Act in which securities of the Company are sold to one or more underwriters for reoffering to the public.

2. **Registration**.

(a) If, and only to the extent, Registrable Securities are reasonably expected to remain outstanding at the expiration of the Lock-Up Period, then, no later than 45 calendar days prior to the expiration of the Lock-Up Period (or, if the Lock-Up Period expires as a result of a termination of the Collaboration and License Agreement, within 60 calendar days following the termination of the Collaboration and License Agreement), the Company shall prepare and file with the Commission a Registration Statement covering the resale of all of the Registrable Securities that are not then registered

on an existing and effective Registration Statement for an offering to be made on a continuous basis pursuant to Rule 415; provided, however, that if during the Lock-Up Period the Registrable Securities represent greater than 19.9% ownership of the Company's then-outstanding voting securities solely as a result of an action taken by the Company, the Company shall, within 60 calendar days following the date of such action, prepare and file with the Commission a Registration Statement covering the resale of at least the number of Registrable Securities that are not then registered and are not eligible to be resold under Rule 144 during the 90-day period following the date of such action (it being acknowledged and agreed that the Company may, in its discretion, file a Registration Statement covering a greater number or all of the Registrable Securities) (such Registration Statement, the "***Excess Securities Registration Statement***"). After the expiration of the Lock-Up Period, if any Registrable Securities remain that are not then registered on an existing and effective Registration Statement after the Company's filing of an Excess Securities Registration Statement, the Company shall still be obligated to file a Registration Statement pursuant to this Section 2 covering the resale of such remaining unregistered Registrable Securities. The Registration Statement(s) filed hereunder shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form, including on Form S-1, in accordance herewith) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the "Plan of Distribution" in substantially the form attached hereto as Annex A (which may be modified to respond to comments, if any, provided by the Commission, or as the Company and the Required Holders may mutually agree).

(b) The Company shall use its reasonable best efforts to cause a Registration Statement filed under this Agreement to be declared effective under the Securities Act as soon as practicable and shall, subject to Section 9(c), use its commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until the date on which all securities under such Registration Statement have ceased to be Registrable Securities (the "***Effectiveness Period***"). Notwithstanding the foregoing, the Company shall be entitled to suspend the effectiveness of the Registration Statement at any time prior to the expiration of the Effectiveness Period for up to an aggregate of 30 consecutive Trading Days or an aggregate of 90 Trading Days (which need not be consecutive) in any given 360-day period, if (i) there is material non-public information regarding the Company which the Company's Board of Directors reasonably determines in good faith not to be in the Company's best interest to disclose and which the Company is not otherwise required to disclose, (ii) there is a significant business opportunity (including, but not limited to, a collaboration or exclusive license agreement, the acquisition or disposition of assets (other than in the ordinary course of business) or any merger, consolidation, tender offer or similar transaction) available to the Company which the Company's Board of Directors reasonably determines not to be in the Company's best interest to disclose and which the Company would be required to disclose under a Registration Statement, or (iii) the Company would be unable to comply with requirements under the Securities Act or the Exchange Act (each of clauses (i)-(iii), a "***Permitted Suspension***") (and, in each case, the Chief Executive Officer or Chief Financial Officer of the Company certifies such Permitted Suspension in writing to the Purchaser). In the event of any such Permitted Suspension, the Effectiveness Period of the applicable Registration Statement will be extended by the number of Trading Days in the Effectiveness Period during which the Registration Statement was suspended; provided, that in no event shall the Effectiveness Period be extended past the date on which all securities under such Registration Statement cease to be Registrable Securities. Notwithstanding the foregoing, without the prior written consent of the Purchaser, the Company shall not disclose to the Purchaser any material nonpublic information giving rise to such Permitted Suspension, and except as required by law, the Holders and their respective Affiliates shall not make any public disclosure regarding, and shall treat as confidential, any Permitted Suspension and any notice with respect thereto.

(c) Notwithstanding anything contained herein to the contrary, in the event that the Commission limits the amount of Registrable Securities that may be included and sold by Holders in any

Registration Statement, including the Initial Registration Statement, pursuant to Rule 415 or any other basis, the Company may reduce the number of Registrable Securities included in such Registration Statement on behalf of the Holders in whole or in part (in case of an exclusion as to a portion of such Registrable Securities, such portion shall be allocated pro rata among such Holders first in proportion to the respective numbers of Registrable Securities represented by shares requested to be registered by each such Holder over the total amount of Registrable Securities represented by shares) (such Registrable Securities, the "***Reduction Securities***"). In such event, the Company shall give the Holders prompt written notice of the number of such Reduction Securities excluded and the Company will not be liable for any damages under this Agreement in connection with the exclusion of such Reduction Securities. The Company shall use its commercially reasonable efforts at the first opportunity that is permitted by the Commission to register for resale the Reduction Securities. Such new Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Reduction Securities on Form S-3, in which case such registration shall be on another appropriate form, including on Form S-1, for such purpose) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the "Plan of Distribution" in substantially the form attached hereto as Annex A (which may be modified to respond to comments, if any, provided by the Commission, or as the Company and the Required Holders may mutually agree). The Company shall use its commercially reasonable efforts to cause each such Registration Statement to be declared effective under the Securities Act as soon as possible and shall use its commercially reasonable efforts to keep such Registration Statement continuously effective under the Securities Act during the entire Effectiveness Period, subject to Section 9(c). Notwithstanding the foregoing, the Company shall be entitled to suspend the effectiveness of such Registration Statement at any time prior to the expiration of the Effectiveness Period in connection with a Permitted Suspension for an aggregate of no more than 30 consecutive Trading Days or an aggregate of 90 Trading Days (which need not be consecutive) in any given 360-day period.

(d) In the event of an Underwritten Offering pursuant to a Registration Statement hereunder and the managing underwriter of the Underwritten Offering advises the Company and the Holders in writing that in its reasonable and good faith opinion the number of shares of Common Stock proposed to be included in the Underwritten Offering, including all Registrable Securities and all other shares of Common Stock proposed to be included in such Underwritten Offering, exceeds the number of shares of Common Stock which can be sold in such Underwritten Offering and/or the number of shares of Common Stock proposed to be included in such Underwritten Offering would adversely affect the price per share of the Common Stock proposed to be sold in such Underwritten Offering, the Company shall include in such Underwritten Offering (i) first, the Registrable Securities that the Holders propose to sell, and (ii) second, the shares of Common Stock proposed to be included therein by any other Persons (including shares of Common Stock to be sold for the account of the Company and/or other Persons) allocated among such Persons in such manner as they may agree. If the managing underwriter determines that less than all of the Registrable Securities proposed to be sold can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated pro rata among the respective Holders thereof on the basis of the number of Registrable Securities owned by each such Holder.

3. **Registration Procedures**

. In connection with the Company's registration obligations hereunder, the Company shall:

(a) Not less than five Trading Days prior to the filing of a Registration Statement or any related Prospectus or any amendment or supplement thereto, furnish to the Holders copies of all such documents proposed to be filed (other than those incorporated by reference). Notwithstanding the foregoing, the Company shall not be required to furnish to the Holders any prospectus supplement being prepared and filed solely to name new or additional selling securityholders unless such Holders are named in such prospectus supplement. In addition, in the event that any Registration Statement is on Form S-1 (or other form which does not permit incorporation by reference), the Company shall not be required to furnish

to the Holders any prospectus supplement containing information included in a report or proxy statement filed under the Exchange Act that would be incorporated by reference in such Registration Statement if such Registration Statement were on Form S-3 (or other form which permits incorporation by reference). The Company shall duly consider any comments made by Holders and received by the Company not later than two Trading Days prior to the filing of the Registration Statement, but shall not be required to accept any such comments to which it reasonably objects. Notwithstanding the above, the Company shall not be required to provide, and shall not provide, any Holder or its representatives with material, non-public information unless such Holder agrees in writing to receive such information, in which case each such Holder receiving such information shall treat such information as confidential and shall not make any public disclosure regarding such information.

(b) (i) Prepare and file with the Commission such amendments, including post-effective amendments, to each Registration Statement and the Prospectus used in connection therewith as may be necessary to keep such Registration Statement continuously effective as to the applicable Registrable Securities for its Effectiveness Period and prepare and file with the Commission, if necessary, such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement, and as so supplemented or amended to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably possible to any comments received from the Commission with respect to each Registration Statement or any amendment thereto; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the Registration Statements and the disposition of all Registrable Securities covered by each Registration Statement.

(c) Notify the Holders as promptly as reasonably possible (and, in the case of (i)(A) below, not less than three Trading Days prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one Trading Day following the day (i)(A) when a Prospectus or any prospectus supplement (but only to the extent notice is required under Section 3(a)) or post-effective amendment to a Registration Statement is proposed to be filed; (B) when the Commission notifies the Company whether there will be a "review" of such Registration Statement and whenever the Commission comments in writing on such Registration Statement (in which case the Company shall, solely to the extent such comments relate to the Holders as selling stockholders or the Plan of Distribution, provide true and complete copies thereof and all written responses thereto to each of the Holders that pertain to the Holders as a selling stockholder; for purposes of clarity, the Company shall have no obligation to provide any information that it reasonably believes would constitute material and non-public information); and (C) with respect to each Registration Statement or any post-effective amendment, when the same has been declared effective; (ii) of any request by the Commission or any other Federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information that pertains to the Holders as selling stockholders or the Plan of Distribution; (iii) of the issuance by the Commission of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; and (v) of the occurrence of any event or passage of time that makes the financial statements included or incorporated by reference in a Registration Statement ineligible for inclusion or incorporation by reference therein or any statement made in such Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to such Registration Statement, Prospectus or other documents so that, in the case of such Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that any and all of such information communicated pursuant to

this Section 3 shall remain confidential to each Holder until such information otherwise becomes public, unless disclosure by a Holder is required by law.

(d) Use its reasonable efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(e) Furnish to each Holder, without charge, at least one conformed copy of each Registration Statement and each amendment thereto and all exhibits to the extent reasonably requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission; provided, however, that the Company shall have no obligation to provide any document pursuant to this clause that is available on the EDGAR system.

(f) Promptly deliver to each Holder, without charge, as many copies of each Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request. Subject to Section 9(c), the Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto.

(g) Prior to any public offering of Registrable Securities, use its commercially reasonable efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of those jurisdictions within the United States as any Holder reasonably requests in writing to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things necessary or advisable to enable the disposition in such jurisdictions of the Registrable Securities covered by the Registration Statements; provided, however, that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified or subject the Company to any material tax in any such jurisdiction where it is not then so subject.

(h) Cooperate with the Holders to facilitate the timely preparation and delivery of certificates or book-entry statements representing Registrable Securities to be delivered to a transferee pursuant to the Registration Statements, which certificates or book-entry statements shall be free, to the extent permitted by the Purchase Agreement, of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any such Holders may request.

(i) Upon the occurrence of any event contemplated by Section 3.3(c)(v), as promptly as reasonably practicable in the circumstances (but without limiting the Company's rights in connection with a Permitted Suspension), prepare a supplement or amendment, including a post-effective amendment, to the affected Registration Statements or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, no Registration Statement nor any Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, or any form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading.

(j) If the Company receives written request from the Required Holders in connection with any Underwritten Offering, (i) enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of the Underwritten Offering pursuant to

which such Registrable Securities are being offered and (ii) use commercially reasonable efforts to obtain (A) comfort letters and bring-down comfort letters from the Company's independent registered public accountants covering such matters of the type customarily covered by comfort letters and bring-down comfort letters as the underwriters may reasonably request and (B) an opinion or opinions addressed to the underwriter or underwriters in customary form and scope from counsel for the Company; in each case, subject to Sections 2(b), 2(c) and 9(c). Notwithstanding anything to the contrary herein, the Company shall have no obligations to the Holders or otherwise in connection with any Underwritten Offering if (1) the Holders (or any of them) have requested or completed an Underwritten Offering pursuant to a Registration Statement hereunder within the preceding 12 months or (2) the Holders (or any of them) have previously requested or completed three Underwritten Offerings pursuant to Registration Statement(s) hereunder during the term of this Agreement. If withdrawn by the Holders (or any of them), a request for an Underwritten Offering shall constitute a request for an Underwritten Offering hereunder by the withdrawing Holder(s) for purposes of this Section 3 unless (x) the Holders reimburse the Company for all Registration Expenses with respect to such withdrawn Underwritten Offering or (y) such withdrawal is the result of (a) an action by the Company requiring such withdrawal, (b) a Permitted Suspension or (c) the occurrence of any event of the kind described in Section 3(c)(iii)-(v).

4. **Holder's Obligations**

. Each Holder agrees, by acquisition of the Registrable Securities and upon written request by the Company, that it shall promptly furnish to the Company (i) the number of shares of Common Stock beneficially owned by such Holder and any Affiliate thereof, (ii) each natural person thereof who has voting or dispositive control over the shares, (iii) any other information as may be requested by the Commission or any state securities commission, and (iv) such other information regarding such Holder and its proposed sale of securities by such Holder as the Company or its counsel shall reasonably request and as is customarily required in connection with a Registration Statement. Failure by a Holder to provide such information shall relieve the Company of its duties to a Holder under this Agreement until such time as the Holder provides such information.

5. **Registration Expenses**

. All fees and expenses incident to the Company's performance of or compliance with its obligations under this Agreement (excluding any underwriting discounts and selling commissions) shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement (such expenses, "***Registration Expenses***"). The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with the Principal Market on which the Shares are then listed for trading, and (B) in compliance with applicable state securities or Blue Sky laws), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is reasonably requested by the holders of a majority of the Registrable Securities included in the Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) reasonable fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, and (vi) reasonable fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar commissions of any Holder or any legal fees or other costs of the Holders. To the extent that underwriting discounts and selling commissions are incurred in connection with the sale of Registrable Securities in an Underwritten Offering hereunder, such underwriting discounts and selling commissions shall be borne by the Holders of Registrable Securities sold pursuant to such Underwritten Offering, pro rata on the basis of the number of Registrable Securities sold on their behalf in such Underwritten Offering.

6. **Indemnification**.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, agents, partners, members, stockholders and employees of each Holder, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, agents, partners, members, stockholders and employees of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable costs of preparation and reasonable attorneys' fees) and expenses (collectively, "***Losses***"), as incurred, arising out of or relating to (i) any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading or (ii) any violation by the Company of any rule or regulation promulgated by the Securities Act or any other similar federal or state securities laws or any rule or regulation promulgated thereunder applicable to the Company and relating to any action or inaction required of the Company in connection with any such registration, qualification or compliance, except to the extent, but only to the extent, that (1) such untrue statements, alleged untrue statements, omissions or alleged omissions are based upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein (it being understood that the Holder has approved the information substantially in the form of Annex A hereto for this purpose), or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing (in accordance with Section 9(g)) that the Prospectus is outdated or defective and prior to the receipt by such Holder of an Advice (as defined below) or an amended or supplemented Prospectus, but only if and to the extent that following the receipt of the Advice or the amended or supplemented Prospectus the misstatement or omission giving rise to such Loss would have been corrected. The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding of which the Company is aware in connection with the transactions contemplated by this Agreement.

(b) Indemnification by Holders. Each Holder shall, notwithstanding any termination of this Agreement, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents, partners, members, stockholders or employees of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, arising out of or based upon (x) for so long as the prospectus delivery requirements of the Securities Act apply to sales by such Holder, such Holder's failure to comply with any applicable prospectus delivery requirements of the Securities Act or (y) any untrue statement of a material fact contained in any Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto, or arising out of or based upon any omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, or any form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading to the extent, but only to the extent, that (1) such untrue statements or omissions are based upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in

writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing (in accordance with Section 9(g)) that the Prospectus is outdated or defective and prior to the receipt by such Holder of an Advice or an amended or supplemented Prospectus, but only if and to the extent that following the receipt of the Advice or the amended or supplemented Prospectus the misstatement or omission giving rise to such Loss would have been corrected. In no event shall the liability of any selling Holder hereunder be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "***Indemnified Party***"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "***Indemnifying Party***") in writing, and the Indemnifying Party shall assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have proximately and materially adversely prejudiced the Indemnifying Party. An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless (1) the Indemnifying Party has agreed in writing to pay such fees and expenses; (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Indemnifying Party); provided, however, that the Indemnifying Party shall not be liable for the fees and expenses of more than one separate firm of attorneys at any time for all Indemnified Parties pursuant to this Section 6(c). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld or delayed. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement (x) includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding and (y) does not include an admission of fault, culpability or failure to act, by or on behalf of any Indemnified Party, or require forms of relief other than the payment of monetary damages by the Indemnifying Party. Each Indemnified Party shall furnish such information regarding itself or the claim in question as an Indemnifying Party may reasonably request in writing and as shall be reasonably required in connection with defense of such claim and litigation resulting therefrom.

All fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within 10 Trading Days of written notice thereof to the Indemnifying Party (regardless of whether it is ultimately determined that an Indemnified Party is not entitled to indemnification hereunder; provided, that the Indemnifying Party

may require such Indemnified Party to undertake to reimburse all such fees and expenses to the extent it is finally judicially determined that such Indemnified Party is not entitled to indemnification hereunder).

(d) Contribution. If a claim for indemnification under Section 6(a) or 6(b) is unavailable to an Indemnified Party (by reason of public policy or otherwise), then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in Section 6(c), any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 6(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 6(d), no Holder shall be required to contribute, in the aggregate, any amount in excess of the amount by which the proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section 6 are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties.

7. **Compliance with Rule 144**

. With a view to making available to the Holders the benefits of Rule 144 and any other rule or regulation of the Commission that may at any time permit the Holders to sell securities of the Company to the public without registration, the Company agrees, for so long as the Holders hold all or any portion of the Registrable Securities, to use its commercially reasonable efforts to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144, at all times on and after the date hereof;

(b) file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (or obtain extensions in respect thereof and file within the applicable grace period); and

(c) furnish to each Holder, so long as the Holder owns all or any portion of the Registrable Securities, forthwith upon request (1) a written statement by the Company that it has complied with the reporting requirements of Rule 144, the Securities Act and the Exchange Act and (2) such other information as may be reasonably requested to avail such Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration.

8. **Market Stand-Off**

. For so long as the Collaboration and License Agreement is in effect, the Purchaser agrees that upon a written request of the Company or the underwriters managing any Underwritten Offering of the Company's securities, in which case, the Company shall provide notice on behalf of the underwriters pursuant to Section 9(g), it will (i) not offer, sell, contract to sell, loan, grant any option to purchase, make any short sale or otherwise dispose of, hedge or transfer any of the economic interest in (or offer, agree or commit to do any of the foregoing) any shares of Common Stock, or any options or warrants to purchase any shares of Common Stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, whether now owned or hereinafter acquired by such holder, owned directly (including holding as a custodian) or with respect to which such holder has beneficial ownership within the rules and regulations of the Commission (other than those included by such holder in the offering in question, if any) without the prior written consent of the Company or such underwriters, as the case may be, for up to fourteen (14) days prior to, and during the ninety (90) day period following, the date of the prospectus supplement for such Underwritten Offering, and (ii) enter into and be bound by such form of agreement with respect to the foregoing as the Company or such managing underwriter may reasonably request; provided that each executive officer and director of the Company also agrees to substantially similar restrictions.

9. **Miscellaneous**.

(a) Remedies. In the event of a breach by the Company or by a Holder of any of its obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agree that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(b) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Registrable Securities pursuant to the Registration Statement.

(c) Discontinued Disposition. Each Holder agrees by its acquisition of such Registrable Securities that, upon receipt of a written notice from the Company of the occurrence of an any event of the kind described in Section 3(c), such Holder will forthwith discontinue disposition of such Registrable Securities under the Registration Statement until such Holder's receipt of the copies of the supplemented Prospectus and/or amended Registration Statement or until it is advised in writing (the "***Advice***") by the Company that the use of the applicable Prospectus may be resumed, and, in either case, has received copies of any additional or supplemental filings that are incorporated or deemed to be incorporated by reference in such Prospectus or Registration Statement. The Company may provide appropriate stop orders to enforce the provisions of this paragraph.

(d) Further Assurances. Each of the parties hereto will, without additional consideration, execute and deliver such further instruments and take such other action as may be reasonably requested by any other party hereto in order to carry out the purposes and intent of this Agreement. Each Holder shall furnish in writing to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it, as shall be reasonably requested by the Company to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request.

(e) Amendments and Waivers. No provision of this Agreement may be waived or amended except in a written instrument signed by the Company and the Required Holders. The Company shall provide prior notice to all Holders of any proposed waiver or amendment. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right.

(f) Termination of Registration Rights. For the avoidance of doubt, it is expressly agreed and understood that in the event that there are no Registrable Securities outstanding, all registration rights granted to the Holders hereunder shall terminate in their entirety effective on the first date on which there shall cease to be any Registrable Securities outstanding, and the Company shall have no further obligation to file, cause to be declared effective or keep effective any Registration Statement hereunder.

(g) Notices. All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed facsimile or electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given (i) when so sent in the case of facsimile or electronic mail transmission, with a confirmation copy to be sent via first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, or (ii) when so received in the case of mail or courier, and addressed as follows:

If to Precision:

Precision BioSciences, Inc.
302 E Pettigrew St. – Dibrell Whse, Suite A-100
Durham, NC 27701-3712
Attn: [***], Senior Vice President, Business Development
Fax: (480) 393-5553
E-mail: [***]

with a copy (which shall not constitute notice) to:

Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, LLP
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: John Therien
Fax: (919) 821-6800
E-mail: jtherien@smithlaw.com

If to Novartis:

Novartis Pharma AG
Lichtstrasse 35
CH-4056 Basel
Switzerland
Attn: Head of NIBR General Legal, Europe
And an email copy to: [***]

with a copy (which shall not constitute notice) to:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139 USA
Attn: General Counsel

with a further copy (which shall not constitute notice) to:

Arnold & Porter Kaye Scholer LLP
Three Embarcadero Center, 10th Floor
San Francisco, CA 94111
Attention: Stephanie Coutu
Fax: (415) 471-3400
E-mail: stephanie.coutu@arnoldporter.com

if to any other Person who is then the registered Holder, to the address of such Holder as it appears in the stock transfer books of the Company, or such other address as may be designated in writing hereafter, in the same manner, by such Person.

(h) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. Each Holder may assign its respective rights hereunder in the manner and to the Persons as permitted under the Purchase Agreement; provided that, such transferee or assignee agrees in writing to be bound by the terms of the Purchase Agreement and this Agreement.

(i) Execution and Counterparts. This Agreement may be executed in any number of counterparts, each of which is deemed an original, but all of which together constitute one instrument. This Agreement may be executed and delivered electronically and upon such delivery such electronic signature will be deemed to have the same effect as if the original signature had been delivered to the party.

(j) Governing Law; Waiver of Jury Trial. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws principles thereof that would require the application of the laws of any other jurisdiction. Any action brought under or arising out of this Agreement shall be brought in the Court of Chancery of the State of Delaware. Each Party hereby irrevocably submits to the exclusive jurisdiction of such court in respect of any claim relating to the validity, interpretation and enforcement of this Agreement and hereby waives, and agrees not to assert, as a defense in any Action in which any such claim is made that it is not subject to the jurisdiction of such court or that such Action may not be brought or is not maintainable in such court, or that the venue thereof may not be appropriate or that this Agreement may not be enforced in or by such court. Each Party hereby consents to and grants the Court of Chancery of the State of Delaware jurisdiction over such Party and over the subject matter of any such claim and agree that mailing of process or other papers in connection with any such Action in the manner provided in Section 9(g) or in such other manner as may be permitted by law, shall be valid and sufficient. EACH PARTY HERETO WAIVES ITS RIGHT TO TRIAL OF ANY ISSUE BY JURY. Each party hereto (i) certifies that no representative or attorney of any other party has represented, expressly or otherwise, that such party would not, in the event of any action, seek to enforce the foregoing waiver and (ii) acknowledges that it and the other party have been induced to enter into this Agreement, by, among other things, the mutual waiver and certifications in this Section 9(j).

(k) Cumulative Remedies. No remedy referred to in this Agreement is intended to be exclusive unless explicitly stated to be so, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

(l) Severability. If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable or illegal by a court of competent jurisdiction, (i) such adjudication shall not, to the extent feasible, affect or impair, in whole or in part, the validity, enforceability or legality of any remaining portions of this Agreement, (ii) this Agreement shall be construed and enforced as if such invalid,

unenforceable or illegal provision had never comprised a part hereof, (iii) all remaining portions will remain in full force and effect and shall not be affected by the invalid, unenforceable or illegal provision or by its severance herefrom, and (iv) in lieu of such invalid, unenforceable or illegal provision, the parties shall use reasonable efforts to seek and agree on an alternative valid and enforceable provision that preserves the original purpose and intent of this Agreement.

(m) Use of Terms. The parties agree and acknowledge that when, in this Agreement, the Company is required to use its reasonable best efforts to perform any covenant under this Agreement, such requirement shall not obligate the Company, in the reasonable judgment of the disinterested members of its Board of Directors, to perform any act that will have a Material Adverse Effect on the Company.

(n) Headings; Construction. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof. Unless specified to the contrary, references to Sections mean the particular Sections of this Agreement.

(o) Entire Agreement. This Agreement, the Purchase Agreement and the Collaboration and License Agreement (as such term is defined in the Purchase Agreement) contain the entire agreement among the parties with respect to the subject matter hereof and thereof and supersede all prior and contemporaneous arrangements or understandings, whether written or oral, with respect hereto and thereto.

(p) No Presumption Against Drafter. Each of the parties hereto has jointly participated in the negotiation and drafting of this Agreement. In the event there arises any ambiguity or question or intent or interpretation with respect to this Agreement, this Agreement shall be construed as if drafted jointly by all of the parties hereto and no presumptions or burdens of proof shall arise favoring any party by virtue of the authorship of any of the provisions of this Agreement.

[*Signature pages follow*]

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

PRECISION BIOSCIENCES, INC.

By: /s/ Michael Amoroso
Name: Michael Amoroso
Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

NOVARTIS PHARMA AG

By: /s/ Petra Grohmann-Moesching
Name: Petra Grohmann-Moesching
Title: Head of Finance, NIBR Europe

By: /s/ Simone Pfirter
Name: Simone Pfirter
Title: Head NIBR General Legal Europe

ANNEX A

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued to the selling stockholders to permit the resale of these shares of common stock by the holders of these shares of common stock from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of their shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders and any of their pledgees, donees, transferees, assignees or other successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of the shares of common stock beneficially owned by the selling stockholder or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. The shares of common stock may be sold on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market or in transactions otherwise than on these exchanges or systems or in the over-the-counter market and in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. The selling stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through brokers, dealers or underwriters that may act solely as agents;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through the writing or settlement of options or other hedging transactions entered into after the effective date of the registration statement of which this prospectus is a part, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of disposition; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, or Section 4(a)(1) of the Securities Act, if available, rather than under this prospectus, provided that the selling stockholder meets the criteria and conforms to the requirements of those provisions.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by the selling stockholders and, if the selling stockholders default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of

common stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledge intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of the shares of common stock or interests in shares of common stock, the selling stockholders may enter into hedging transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of common stock short after the effective date of the registration statement of which this prospectus is a part and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of Section 2(a)(11) of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The maximum commission or discount to be received by any member of the Financial Industry Regulatory Authority (FINRA) or independent broker-dealer will not be greater than 8% of the initial gross proceeds from the sale of any security being sold. If a selling stockholder is deemed to be an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act, it will be subject to the applicable prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

We have advised the selling stockholders that they are required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended, during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

We are required to pay all fees and expenses incident to the registration of the shares *provided, however*, that the selling stockholders will pay all underwriting discounts and selling commissions, if any. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including some liabilities under the Securities Act, in accordance with the Registration Rights Agreement, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus, in accordance with the Registration Rights Agreement, or we may be entitled to contribution.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the date that (i) the securities registered hereunder collectively constitute 8% or less of the outstanding shares of common stock of the Company and may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 or any other rule of similar effect, as set forth in a written opinion letter to such effect, or (ii) all of the securities registered hereunder have been sold pursuant to this prospectus or Rule 144.

To the extent required, this prospectus may be amended and/or supplemented from time to time to describe a specific plan of distribution.

Exhibit 99.1

Precision BioSciences Announces *In Vivo* Gene Editing Collaboration with Novartis to Develop Potentially Curative Treatment for Disorders Including Sickle Cell Disease

- *Precision to Receive $75 Million Upfront for a Single Target; Precision Eligible to Receive up to an Additional $1.4 Billion in Milestones and Tiered Royalties on Sales of Licensed Products*

- *Precision to Develop a Single ARCUS® Nuclease Designed for Safe and Efficient In Vivo Gene Insertion*

- *Collaboration Combines Precision's Proprietary ARCUS Genome Editing Platform and Gene Insertion Capabilities with Novartis' Drug Discovery and Gene Therapy Expertise*

- *Extends Precision's Cash Runway into Q2 2024*

- *Precision to Host Conference Call Tomorrow, June 22, 2022, at 8:00 AM ET*

DURHAM, N.C.—June 21, 2022 -- Precision BioSciences, Inc. (Nasdaq: DTIL), a clinical stage gene editing company developing ARCUS-based *ex vivo* allogeneic CAR T and *in vivo* gene editing therapies, today announced it has entered into an exclusive worldwide *in vivo* gene editing research and development collaboration and license agreement with Novartis Pharma AG (the "Agreement"). As part of the Agreement, Precision will develop a custom ARCUS nuclease that will be designed to insert, *in vivo,* a therapeutic transgene at a "safe harbor" location in the genome as a potential one-time transformative treatment option for diseases including certain hemoglobinopathies such as sickle cell disease and beta thalassemia.

Under the terms of the Agreement, Precision will develop an ARCUS nuclease and conduct *in vitro* characterization, with Novartis then assuming responsibility for all subsequent research, development, manufacturing and commercialization activities. Novartis will receive an exclusive license to the custom ARCUS nuclease developed by Precision for Novartis to further develop as a potential *in vivo* treatment option for sickle cell disease and beta thalassemia. Precision will receive an upfront payment of $75 million and is eligible to receive up to an aggregate amount of approximately $1.4 billion in additional payments for future milestones. Precision is also eligible to receive certain research funding and, should Novartis successfully commercialize a therapy from the collaboration, tiered royalties ranging from the mid-single digits to low-double digits on product sales.

"We are excited to collaborate with Novartis to bring together the precision and versatility of ARCUS genome editing with Novartis' gene therapy expertise and commitment to developing one-time, potentially transformative treatment for hard-to-treat inherited blood disorders," said Michael Amoroso, Chief Executive Officer at Precision BioSciences. "This collaboration will build on the unique gene insertion capabilities of ARCUS and illustrates its utility as a premium genome editing platform for potential *in vivo* drug development. With this Agreement, Precision, either alone or with world-class partners, will have active *in vivo* gene editing programs for targeted gene insertion and gene deletions in hematopoietic stem cells, liver, muscle and the central nervous system showcasing the distinctive versatility of ARCUS."

"We identify here a collaborative opportunity to imagine a unique therapeutic option for patients with hemoglobinopathies, such as sickle cell disease and beta thalassemia – a potential one-time treatment administered directly to the patient that would overcome many of the hurdles present today with other therapeutic technologies," said Jay Bradner, President of the Novartis Institutes for Biomedical Research (NIBR), the Novartis innovation engine. "We look forward to working with Precision and leveraging the

ARCUS technology platform, which could bring a differentiated approach to the treatment of patients with hemoglobinopathies."

“The *in vivo* gene editing approach that we are pursuing for sickle cell disease could have a number of significant advantages over other *ex vivo* gene therapies currently in development,” said Derek Jantz, Ph.D., Chief Scientific Officer and Co-Founder of Precision BioSciences. “Perhaps most importantly, it could open the door to treating patients in geographies where stem cell transplant is not a realistic option. We believe that the unique characteristics of the ARCUS platform, particularly its ability to target gene insertion with high efficiency, make it the ideal choice for this project, and we look forward to working with our partners at Novartis to bring this novel therapy to patients.”

Upon completion of the transaction, Precision expects that existing cash and cash equivalents, expected operational receipts, and available credit will be sufficient to fund its operating expenses and capital expenditure requirements into Q2 2024.

Precision BioSciences Conference Call and Webcast Information
Precision's management team will host a conference call and webcast tomorrow, June 22, 2022, at 8:00 AM ET to discuss the collaboration. The dial-in conference call numbers for domestic and international callers are (866)-996-7202 and (270)-215-9609, respectively. The conference ID number for the call is 6252688. Participants may access the live webcast on Precision's website https://investor.precisionbiosciences.com/events-and-presentations in the Investors page under Events and Presentations. An archived replay of the webcast will be available on Precision's website.

About ARCUS and “Safe harbor” ARCUS Nucleases
ARCUS is a proprietary genome editing technology discovered and developed by scientists at Precision BioSciences. It uses sequence-specific DNA-cutting enzymes, or nucleases, that are designed to either insert (knock-in), remove (knock-out), or repair DNA of living cells and organisms. ARCUS is based on a naturally occurring genome editing enzyme, I-CreI, that evolved in the algae *Chlamydomonas reinhardtii* to make highly specific cuts in cellular DNA. Precision's platform and products are protected by a comprehensive portfolio including nearly 100 patents to date.

Precision can use an ARCUS nuclease to add a healthy copy of a gene (or “payload”) to a person’s genome. The healthy copy of the gene can be inserted at its usual site within the genome, replacing the mutated, disease-causing copy. Alternatively, an ARCUS nuclease can be used to insert a healthy copy of the gene at another site within the genome called a “safe harbor” that enables production of the healthy gene product without otherwise affecting the patient’s DNA of gene expression patterns.

About Sickle Cell Disease and Beta Thalassemia
Sickle cell disease (SCD) is a complex genetic disorder that affects the structure and function of hemoglobin, reduces the ability of red blood cells to transport oxygen efficiently and, early on, progresses to a chronic vascular disease.[1-4] The disease can lead to acute episodes of pain known as sickle cell pain crises, or vaso-occlusive crises, as well as life-threatening complications.[5-7] The condition affects 20 million people worldwide.[8] Approximately 80% of individuals with SCD globally live in sub-Saharan Africa and it is estimated that approximately 1,000 children in Africa are born with SCD every day and more than half will die before they reach five.[9,10] SCD is also a multisystem disorder and the most common genetic disease in the United States, affecting 1 in 500 African Americans. About 1 in 12 African Americans carry the autosomal recessive mutation, and approximately 300,000 infants are born with sickle cell anemia annually.[11] Even with today’s best available care, SCD continues to drive

premature deaths and disability as this lifelong illness often takes an extreme emotional, physical, and financial toll on patients and their families.[12,13]

Beta thalassemia is also an inherited blood disorder characterized by reduced levels of functional hemoglobin.[14] The condition has three main forms – minor, intermedia and major, which indicate the severity of the disease.[14] While the symptoms and severity of beta thalassemia varies greatly from one person to another, a beta thalassemia major diagnosis is usually made during the first two years of life and individuals require regular blood transfusions and lifelong medical care to survive.[14] Though the disorder is relatively rare in the United States, it is one of the most common autosomal recessive disorders in the world.[14] The incidence of symptomatic cases is estimated to be approximately 1 in 100,000 individuals in the general population.[14, 15] The frequency of beta-thalassemia mutations varies by regions of the world with the highest prevalence in the Mediterranean, the Middle-East, and Southeast and Central Asia. Approximately 68,000 children are born with beta-thalassemia.[16]

About Precision BioSciences, Inc.
Precision BioSciences, Inc. is a clinical stage biotechnology company dedicated to improving life (DTIL) with its novel and proprietary ARCUS genome editing platform. ARCUS is a highly precise and versatile genome editing platform that was designed with therapeutic safety, delivery, and control in mind. Using ARCUS, the Company's pipeline consists of multiple *ex vivo* "off-the-shelf" CAR T immunotherapy clinical candidates and several *in vivo* gene editing candidates designed to cure genetic and infectious diseases where no adequate treatments exist. For more information about Precision BioSciences, please visit www.precisionbiosciences.com.

Forward-Looking Statements
This press release contains forward-looking statements, as may any related presentations, within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this herein and in any related presentation that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements regarding the goal of providing a one time, potentially curative treatment for certain hemoglobinopathies, the success of the collaboration with Novartis, including the receipt of any milestone, royalty, or other payments pursuant to and the satisfaction of obligations under the Agreement, clinical and regulatory development and expected efficacy and benefit of our platform and product candidates, expectations about our operational initiatives and business strategy, expectations about achievement of key milestones, and expected cash runway. In some cases, you can identify forward-looking statements by terms such as "aim," "anticipate," "approach," "believe," "contemplate," "could," "estimate," "expect," "goal," "intend," "look," "may," "mission," "plan," "potential," "predict," "project," "should," "target," "will," "would," or the negative thereof and similar words and expressions. Forward-looking statements are based on management's current expectations, beliefs and assumptions and on information currently available to us. Such statements are subject to a number of known and unknown risks, uncertainties and assumptions, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various important factors, including, but not limited to: our ability to become profitable; our ability to procure sufficient funding and requirements under our current debt instruments and effects of restrictions thereunder; risks associated with raising additional capital; our operating expenses and our ability to predict what those expenses will be; our limited operating history; the success of our programs and product candidates in which we expend our resources; our limited ability or inability to assess the safety and efficacy of our product candidates; our dependence on our ARCUS technology; the initiation, cost, timing, progress, achievement of milestones and results of research and development activities, preclinical studies and clinical trials; public perception about

genome editing technology and its applications; competition in the genome editing, biopharmaceutical, and biotechnology fields; our or our collaborators' ability to identify, develop and commercialize product candidates; pending and potential liability lawsuits and penalties against us or our collaborators related to our technology and our product candidates; the U.S. and foreign regulatory landscape applicable to our and our collaborators' development of product candidates; our or our collaborators' ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations and/or warnings in the label of an approved product candidate; our or our collaborators' ability to advance product candidates into, and successfully design, implement and complete, clinical or field trials; potential manufacturing problems associated with the development or commercialization of any of our product candidates; our ability to obtain an adequate supply of T cells from qualified donors; our ability to achieve our anticipated operating efficiencies at our manufacturing facility; delays or difficulties in our and our collaborators' ability to enroll patients; changes in interim "top-line" and initial data that we announce or publish; if our product candidates do not work as intended or cause undesirable side effects; risks associated with applicable healthcare, data protection, privacy and security regulations and our compliance therewith; the rate and degree of market acceptance of any of our product candidates; the success of our existing collaboration agreements, and our ability to enter into new collaboration arrangements; our current and future relationships with and reliance on third parties including suppliers and manufacturers; our ability to obtain and maintain intellectual property protection for our technology and any of our product candidates; potential litigation relating to infringement or misappropriation of intellectual property rights; our ability to effectively manage the growth of our operations; our ability to attract, retain, and motivate key executives and personnel; market and economic conditions; effects of system failures and security breaches; effects of natural and manmade disasters, public health emergencies and other natural catastrophic events; effects of COVID-19 pandemic and variants thereof, or any pandemic, epidemic or outbreak of an infectious disease; insurance expenses and exposure to uninsured liabilities; effects of tax rules; risks related to ownership of our common stock and other important factors discussed under the caption "Risk Factors" in our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022, as any such factors may be updated from time to time in our other filings with the SEC, which are accessible on the SEC's website at www.sec.gov and the Investors page of our website under SEC Filings at investor.precisionbiosciences.com.

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