Current Agreements

Dealdoc

Collaborative R&D and licensing agreement for gene therapy products

Regeneron Pharmaceuticals
Avalanche Biotechnologies

May 05 2014

Collaborative R&D and licensing agreement for gene therapy products

Companies:	Regeneron Pharmaceuticals Avalanche Biotechnologies
Announcement date:	May 05 2014
Deal value, US$m:	648 : sum of upfront and milestone payments

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- Termsheet
- Press Release
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- Contract

Details

Announcement date:	May 05 2014
Start date:	May 01 2014
Industry sectors:	Bigpharma Biotech Pharmaceutical
Compound name:	AVA-101
Exclusivity:	Exclusive
Asset type:	Compound
Therapy areas:	Ophthalmics Gene therapy
Technology types:	Small molecules Viral vectors » Adeno-associated virus (AAV)
Deal components:	Co-development Collaborative R&D Licensing Option
Geographic focus:	Worldwide

Financials

Deal value, US$m:	648 : sum of upfront and milestone payments
Upfront, US$m:	8 : initial cash payment
Milestones, US$m:	640 : upon achievement of certain development and regulatory milestones, being $80 million per candidate for up to eight candidates
Royalty rates, %:	n/d : tiered, low- to mid-single digit royalties on annual net sales
Semi-quant royalties:	Low single digit Mid single digit

Termsheet

Regeneron Pharmaceuticals and Avalanche Biotechnologies announced the formation of a broad collaboration to discover, develop and commercialize novel gene therapy products for the treatment of ophthalmologic diseases.

The collaboration covers novel gene therapy vectors and proprietary molecules, discovered jointly by Avalanche and Regeneron, and developed using the Avalanche Ocular BioFactory, an adeno-associated virus (AAV)-based, proprietary, next-generation platform for the discovery and development of gene therapy vectors for ophthalmology.

Avalanche will receive an upfront cash payment, contingent payments of up to $640 million upon achievement of certain development and regulatory milestones, plus a royalty on worldwide net sales of collaboration products.

The collaboration covers up to eight distinct therapeutic targets, and Regeneron will have exclusive worldwide rights for each product it moves forward in clinical development.

In addition, Avalanche has the option to share in development costs and profits for products directed toward two collaboration therapeutic targets selected by Avalanche.

Regeneron has a time-limited right of first negotiation for certain rights to AVA-101, Avalanche's gene therapy product targeting vascular endothelial growth factor (VEGF) currently under development for the treatment of wet age-related macular degeneration (AMD), upon completion of the ongoing Phase 2a trial.

Press Release

Regeneron Pharmaceuticals, Inc. (REGN), Avalanche Biotechnologies Strike $640 Million Gene Therapy Tech Deal

Regeneron and Avalanche Biotechnologies Announce Collaboration to Develop Next-Generation Gene Therapy Products in Ophthalmology

TARRYTOWN, N.Y. and MENLO PARK, Calif., May 5, 2014 /PRNewswire/ -- Regeneron Pharmaceuticals, Inc. (NASDAQ: REGN) and Avalanche Biotechnologies, Inc., today announced the formation of a broad collaboration to discover, develop and commercialize novel gene therapy products for the treatment of ophthalmologic diseases. The collaboration covers novel gene therapy vectors and proprietary molecules, discovered jointly by Avalanche and Regeneron, and developed using the Avalanche Ocular BioFactory, an adeno-associated virus (AAV)-based, proprietary, next-generation platform for the discovery and development of gene therapy vectors for ophthalmology. Under the terms of the agreement, Avalanche will receive an upfront cash payment, contingent payments of up to $640 million upon achievement of certain development and regulatory milestones, plus a royalty on worldwide net sales of collaboration products. The collaboration covers up to eight distinct therapeutic targets, and Regeneron will have exclusive worldwide rights for each product it moves forward in clinical development. In addition, Avalanche has the option to share in development costs and profits for products directed toward two collaboration therapeutic targets selected by Avalanche.

As part of the agreement, Regeneron has a time-limited right of first negotiation for certain rights to AVA-101, Avalanche's gene therapy product targeting vascular endothelial growth factor (VEGF) currently under development for the treatment of wet age-related macular degeneration (AMD), upon completion of the ongoing Phase 2a trial.

"We look forward to the opportunity to collaborate with Avalanche, a leader in the field of next-generation gene therapy technologies," said George D. Yancopoulos, M.D., Ph.D., Chief Scientific Officer of Regeneron and President of Regeneron Laboratories. "This collaboration highlights the commitment by Regeneron to invest in potentially breakthrough therapies that could benefit patients with sight-threatening diseases."

"We are excited to work with Regeneron to discover and develop novel gene therapy medicines for serious eye diseases," said Thomas W. Chalberg, Ph.D., co-founder and Chief Executive Officer of Avalanche Biotechnologies. "The collaboration will bring together Avalanche's novel platform technology with Regeneron's proprietary molecules and research capabilities, with the goal of creating a new class of next-generation biologics in ophthalmology. Regeneron is a terrific partner for their scientific leadership, as well as their product development capabilities and commercialization track-record."

About Regeneron Pharmaceuticals Regeneron is a leading science-based biopharmaceutical company based in Tarrytown, New York that discovers, invents, develops, manufactures, and commercializes medicines for the treatment of serious medical conditions. Regeneron commercializes medicines for eye diseases, colorectal cancer, and a rare inflammatory condition, and has product candidates in development in other areas of high unmet medical need, including hypercholesterolemia, oncology, rheumatoid arthritis, asthma, and atopic dermatitis. For additional information about the company, please visit www.regeneron.com.

About Avalanche Biotechnologies, Inc. Founded in 2006, Avalanche Biotechnologies, Inc. is a privately held, clinical-stage biotechnology company that develops technologies and products for sustained delivery of therapeutic proteins. Avalanche's lead product, AVA-101, is currently under development in a Phase 2a trial for wet age-related macular degeneration. Avalanche's Ocular BioFactory platform technology is a proprietary adeno-associated virus (AAV)-based gene therapy discovery and development technology optimized for ophthalmology that utilizes a directed evolution approach to generate novel drug candidates. The company is headquartered in Menlo Park, California. For more information, please visit www.avalanchebiotech.com.

Filing Data

S1 abstract - 2014

In May 2014, we entered into the Collaboration Agreement with Regeneron to research, develop and commercialize certain gene therapy products based on our proprietary viral vectors that express transgenes encoding molecules that modulate up to a total of eight specified targets,

and encoding certain endogenous molecules known to bind to and modulate such targets. Such products, including AVA-311, are referred to collectively as “Products.” Pursuant to the Collaboration Agreement, we and Regeneron will conduct a research program to identify potential Products for a specified time period. Regeneron will bear all costs of performing research under the Collaboration Agreement. Regeneron has a right to substitute a certain number of such targets and may, subject to a payment to us, expand the collaboration beyond the four initially designated targets to include up to four additional targets not currently being researched or developed by Avalanche, and endogenous molecules known to bind to and modulate such additional targets, in the research program. Regeneron has an option, exercisable with respect to all Products containing transgenes expressing molecules that modulate one of the specified targets, to obtain an exclusive, worldwide license to research, develop, use, import, export, make, manufacture and commercialize such Products for the treatment, prevention or diagnosis of human disease or other medical disorders. Regeneron may exercise this option prior to the expiration of the term of the research program, within a certain time period after the acceptance for filing with the FDA of the IND for such Products. Regeneron must pay us an option fee each time it exercises an option.

Regeneron has the right to file an IND with the FDA for Products prior to exercising its option. If Regeneron exercises its option for specified Products, Regeneron will be primarily responsible for developing, obtaining and maintaining regulatory approval for, and commercializing such Products.

We have a right to co-fund costs of developing, manufacturing and commercializing Products containing transgenes encoding molecules capable of modulating a target with respect to which Regeneron has exercised its option, subject to certain exceptions. We may exercise this co-funding right up to two times. If we exercises such right, we may elect to bear up to 35% of all development costs incurred for such Products. For any co-funded Products, Regeneron’s payment obligations extend until the Product is no longer sold in the applicable territory. For those Products for which we exercise this option, either party may opt out of sharing development costs for all Products containing transgenes encoding molecules capable of modulating a protein target, in which case the other party may continue to develop and commercialize such Products, subject to the payment of a royalty to the other party ranging from low-single digit to low double digit royalties. While Regeneron will record all revenue from sales of the co-funded Products, Regeneron will share in the net profits and losses of sales of any Products for which we exercised our co-funding right, with each party receiving a share of profits and bearing its share of losses in accordance with the share of development costs borne by each party for such Product, provided that neither party exercises its opt-out right for such Products.

Additionally, we granted to Regeneron a time-limited right of first negotiation for a potential license to develop and commercialize AVA-101. Such right may be exercised within a specified time period following the first Phase 1 clinical trial for AVA-101. If Regeneron wishes to exercise such right, it must make a payment to us. If Regeneron exercises its right to negotiate and makes such payment, but the parties do not enter into an agreement under which Regeneron obtains such a license, we shall be free to enter into negotiations with third parties provided that for a certain period after expiration of the negotiation period, we may not grant a third party such a license on terms that are less favorable, when taken as a whole, to us than the last proposed offer we made to Regeneron without first offering Regeneron the right to acquire or license AVA-101 on terms and conditions that provide us substantially the same economic value.

Under the Collaboration Agreement, Regeneron made an initial payment of $8.0 million dollars for collaboration research costs, a one-time option fee and a one-time license grant fee.

In addition to the initial payment, Regeneron may make the following payments to us:

reimbursement for additional collaboration research costs;

up to $80.0 million in development and regulatory milestones for product candidates directed toward each of the eight therapeutic candidates, for a combined total of up to $640.0 in potential milestone payments for product candidates directed toward all eight therapeutic targets subject to the Collaboration Agreement; and

tiered, low- to mid-single digit royalties on annual net sales, subject to certain adjustments. For each Product, Regeneron’s payment obligations extend until the last to occur of the following: (i) the discontinuation of development of the Product or (ii) once a Product is approved by the FDA, the later of (x) the duration of patent coverage for the Product or (y) ten years after first commercial sale of the Product in a particular territory.

The Collaboration Agreement continues until the expiration of the option period for all Products, which occurs on May 1, 2017 if Regeneron has not exercised any options for a Product prior to such date. If Regeneron exercises an option for a Product prior to such date, the Collaboration Agreement continues in effect with respect to that Product on a country-by-country basis until the expiration of all payment obligations under the Collaboration Agreement. The Collaboration Agreement may also be terminated (i) by Regeneron at will, either in its entirety or on a target by target basis, upon 30 days’ prior written notice to us, (ii) by either party, upon written notice in connection with a material breach remaining uncured 60 days after initial written notice, (iii) by us, if Regeneron challenges the patent rights licensed by us under the Collaboration Agreement or (iv) by either party, for insolvency of the other party.

Contract

RESEARCH COLLABORATION AND LICENSE AGREEMENT

By and Between

AVALANCHE BIOTECHNOLOGIES, INC.

and

REGENERON PHARMACEUTICALS, INC.

Dated as of May 1, 2014

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RESEARCH COLLABORATION AND LICENSE AGREEMENT

THIS RESEARCH COLLABORATION AND LICENSE AGREEMENT (“Agreement”), dated as of May 1, 2014 (the “Effective Date”), is by and between Avalanche Biotechnologies, Inc., a Delaware corporation having a principal place of business at 1035 O’Brien Drive, Menlo Park, California 94025 (“Avalanche”), and Regeneron Pharmaceuticals, Inc., a New York corporation having a principal place of business at 777 Old Saw Mill River Road, Tarrytown, New York 10591 (“Regeneron”) (with each of Avalanche and Regeneron referred to herein individually as a “Party” and together as the “Parties”).

WHEREAS, Avalanche controls certain patents, know-how and other rights related to viral vector technology for gene therapy applications;

WHEREAS, Regeneron and its Affiliates possess knowledge and expertise in, and resources for, researching, developing, manufacturing and commercializing pharmaceutical products; and

WHEREAS, Regeneron and Avalanche desire to collaborate on the research of certain gene therapy products incorporating Avalanche’s proprietary viral vector technology, subject to the terms and conditions set forth herein (the “Collaboration”).

NOW, THEREFORE, in consideration of the following mutual covenants contained herein, and for other good and valuable consideration the adequacy and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE I.

DEFINITIONS

1.1 Definitions. Capitalized terms used in this Agreement, whether used in the singular or plural, except as expressly set forth herein, shall have the meanings set forth below:

“Actual Committed Co-Funding Percentage” means the percentage obtained by dividing (i) the amount of [***] in respect of [***] by (ii) the [***] of the [***] by the Parties for [***] to such [***], which shall be [***] at the end of each Quarter and set forth in the report delivered by Regeneron pursuant to Section 6.7(b).

“Additional Manufacturing Royalty” means the incremental royalties on Net Sales of Products, equal to the amounts set forth on Exhibit A.

“Adversely Affected” means, in respect of any Product, that the percentage resulting from dividing Net Sales of such Product in a given country in a consecutive [***] period by the Net Sales of such Product in such country for the same consecutive [***] period in the [***] immediately prior is equal to or less than [***].

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“Affiliate” means, with respect to any Person, another Person which controls, is controlled by or is under common control with such Person. A Person shall be deemed to control another Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise. Without limiting the generality of the foregoing, a Person shall be deemed to control another Person if any of the following conditions is met: (a) in the case of corporate entities, direct or indirect ownership of at least fifty percent (50%) of the stock or shares having the right to vote for the election of directors, and (b) in the case of non-corporate entities, direct or indirect ownership of at least fifty percent (50%) of the equity interest with the power to direct the management and policies of such non-corporate entities. The Parties acknowledge that in the case of certain entities organized under the laws of certain countries outside of the United States, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and that in such case such lower percentage shall be substituted in the preceding sentence, provided that such foreign investor has the power to direct the management and policies of such entity.

“Agreement” has the meaning set forth in the introductory paragraph, including all Schedules and Exhibits.

“Alternative Deal Terms” has the meaning set forth in Section 3.9(e).

“Approval” means, with respect to each Product any registration, license, approval, pricing approval or authorization from any Regulatory Authority required for the Development, Manufacture or Commercialization of such Product in the Field in a regulatory jurisdiction anywhere in the world, and shall include an approval, registration, license or authorization granted in connection with any Registration Filing.

“AVA-101” means the gene therapy product candidate that is being studied as of the Effective Date in the AVA-101 Phase 1 Trial.

“AVA-101 Election Notice” has the meaning set forth in Section 3.9(b).

“AVA-101 Exclusive License” has the meaning set forth in Section 3.9(b).

“AVA-101 Notice Period” has the meaning set forth in Section 3.9(b).

“AVA-101 Phase 1 Trial” means the clinical trial of AVA-101 that is ongoing in Australia as of the Effective Date and described as NCT01494805 at http://clinicaltrials.gov.

“Avalanche” has the meaning set forth in the introductory paragraph.

“Avalanche Development Cost Share” has the meaning set forth in Section 6.5(a)(iii).

“Avalanche Indemnitees” has the meaning set forth in Section 12.1(a).

“Avalanche Intellectual Property” means (i) Avalanche Patents, (ii) Avalanche Know-How, and (iii) Avalanche’s interest in Joint Inventions.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

“Avalanche Know-How” means Know-How Controlled by Avalanche or any of its Affiliates (other than pursuant to this Agreement) on the Effective Date or at any time during the Term that is necessary or useful for the Research, Development, Manufacture or Commercialization of a Product in the Field. Avalanche Know-How includes [***], Know-How within the [***] and [***] conceived or developed by [***].

“Avalanche Manufacturing Intellectual Property” means [***] and [***], which is [***] along with [***] and other [***] pursuant to [***].

“Avalanche Patents” means those Patents, including those set forth on Exhibit B hereto, that (a) at the Effective Date or at any time thereafter during the Term, are Controlled by Avalanche or any of its Affiliates (other than pursuant to this Agreement) and (b) claim inventions that are necessary or useful for the Research, Development, Manufacture or Commercialization of a Product in the Field. Avalanche shall update Exhibit B with a list of all then-existing Avalanche Patents [***] during the Term. Avalanche Patents shall include Patents claiming [***], Patents claiming [***], Patents claiming inventions within the [***] and Patents claiming [***].

“Avalanche Patent Infringement Action” has the meaning set forth in Section 9.4(e).

“Avalanche Sole Inventions” has the meaning set forth in Section 9.1(c).

“Avalanche Upstream Manufacturing Technology” means compositions of matter and methods of use that relate solely to (i) [***], and/or (ii) [***].

“Avalanche Vector Invention” means a Collaboration Invention that (i) is Avalanche Vector Technology and (ii) is not a Therapeutic Invention.

“Avalanche Vector Technology” means (i) compositions of matter comprising, and methods of and compositions for using, designing, discovering or creating (but specifically not manufacturing), [***], as compared to [***], and (ii) [***], in each case that are either disclosed, covered or claimed by intellectual property rights Controlled by Avalanche or any of its Affiliates as of the Effective Date or during the Term, or arise from activities conducted pursuant to this Agreement, provided that “Avalanche Vector Technology” specifically excludes [***].

“Business Day” means a day on which commercial banking institutions in New York, New York are open for business.

“CDA” has the meaning set forth in Section 11.1(a).

“Clinical Regulatory Documentation” means, with respect to all material submissions made by Regeneron to any Regulatory Authority in the United States or in any Ex-US Major Market, the sections that contain data and results related to clinical studies of Products.

“Clinical Supplies” means supplies of any Product, Manufactured in such form and dosage as is reasonably determined by Regeneron and suitable and intended for use in the conduct of pre-clinical and/or human clinical trials of such Product.

“Clinical Supply Agreement” has the meaning set forth in Section 8.1.

“Clinical Supply Cost” means, with respect to Regeneron’s Manufacture or acquisition of Clinical Supplies of Co-Funded Products, Regeneron’s and its Affiliates’ costs calculated in a manner consistent with the methodology set forth on Exhibit I.

“Co-Funded Product” means a Product Directed to a Collaboration Target for which Avalanche has exercised its Co-Funding Right.

“Co-Funded Product Share Payment” means a payment to, or by, Avalanche, in the amount equal to the product of (i) the [***] multiplied by (ii) [***], as the case may be, for Co-Funded Products Directed to the applicable Collaboration Target in a given Quarter.

“Co-Funding Agreement” has the meaning set forth in Section 6.5(a)(v).

“Co-Funding Notice” has the meaning set forth in Section 6.5(a)(i).

“Co-Funding Right” has the meaning set forth in Section 6.5(a).

“Code” has the meaning set forth in Section 3.7.

“COGS” means Commercial Supply Costs for Co-Funded Products sold in the Field in the Territory. COGS shall be calculated Quarterly.

“Collaboration” has the meaning set forth in the recitals.

“Collaboration Invention” means an invention that is conceived or made by Affiliates, employees, sublicensees, independent contractors, agents and consultants of the Parties, alone or working together, in the course of conducting the Research Program or the Research, Development, Manufacture, or Commercialization of Products under this Agreement.

“Collaboration Patent” means a Therapeutic Patent or Joint Patent.

“Collaboration Targets” means, subject to Sections 2.10 through 2.12, (i) the molecules identified as Collaboration Targets on Exhibit C as of the Effective Date and the nucleic acid sequences that encode such Collaboration Targets, (ii) the molecules identified as Pathway Targets on Exhibit C that correspond to each of the molecules described in (i) as of the Effective Date and the nucleic acid sequences that encode such Pathway Targets, (iii) any New Targets or Replacement Targets that are included after the Effective Date in Exhibit C as Collaboration Targets pursuant to Section 2.10 or 2.11 and any Pathway Targets that are included after the Effective Date in Exhibit C pursuant to Section 2.12), and (iv) [***] in (i) through (iii) that [***] such Collaboration Target. For the sake of clarity, except as otherwise expressly provided in this Agreement, any reference to a Collaboration Target in this Agreement that is set forth in Exhibit C in the column labeled “Collaboration Target” shall include any Pathway Target listed in the same row in the chart in Exhibit C as a Pathway Target therefor.

“Collaboration Therapeutic Molecule” means a molecule (i) [***], and (ii) which can be or is integrated within a [***] or a [***]; provided that for purposes of this Agreement, references to Collaboration Therapeutic Molecules are intended only to include the [***], such portion an [***].

“Combination Product” has the meaning set forth in the definition of Net Sales.

“Commercial Supplies” means any Product suitable and intended for commercial sale to Third Parties for end use.

“Commercial Supply Cost” means, with respect to Regeneron’s Manufacture or purchase from a Third Party manufacturer of Co-Funded Product and supply thereof, Regeneron’s and its Affiliates’ costs or expenses calculated in a manner consistent with the methodology set forth on Exhibit I.

“Commercialize” or “Commercialization” means any and all activities directly and specifically relating to marketing, promoting, detailing, distributing, importing, offering for sale, having sold and/or selling a Product in the Field in the Territory, including activities after the First Commercial Sale related to medical affairs, market research and educational activities, sampling and Non-Approval Trials in the Territory.

“Commercialization Costs” means, in respect of a Co-Funded Product, the costs incurred by Regeneron and its Affiliates in connection with the Commercialization of such Co-Funded Product for use in the Field, which types of costs may include certain types of costs or expenses incurred by Regeneron or its Affiliates, as set forth below, in each case calculated in accordance with GAAP:

(a) [***] in connection with Commercialization of such Co-Funded Products for use in the Field under this Agreement, to the extent not otherwise included pursuant to subsection (b);

(b) [***] in respect of such Co-Funded Product;

(c) [***] to the extent not otherwise included pursuant to subsection (b);

(d) any [***] incurred by Regeneron or its Affiliates [***] of such Co-Funded Products;

(e) [***], and [***] as a result of, [***] that the [***] of such [***];

(f) marketing and other reasonable expenses incurred by Regeneron or its Affiliates in relation [***] for Commercialization of Co-Funded Products;

(g) costs related to [***];

(h) [***] costs incurred by either Party [***] in respect of Co-Funded Product; and

(i) any other costs or expenses specifically identified to be included as Commercialization Costs in respect of such Co-Funded Product by mutual consent of the Parties.

“Commercialization FTE Cost” means, for all Commercialization activities performed by Regeneron or its Affiliates in respect of Co-Funded Products, the product obtained from (a) the actual number of FTEs utilized for such Commercialization activity multiplied by (b) the applicable Commercialization FTE Rate.

“Commercialization FTE Rate” means, in respect of any Product, the rate or rates as mutually agreed upon by the Parties at least [***] prior to the First Commercial Sale in respect of such Product, which rate shall be adjusted [***] thereafter by the [***], in the [***] (determined based on the [***]) since the Effective Date or the latest adjustment date hereunder, whichever is later, through [***]. The Commercialization FTE Rate shall be inclusive of [***] and [***] for the [***], including [***], such as, for example, [***].

“Commercially Reasonable Efforts” means, with respect to the efforts to be expended by a Party with respect to any objective, reasonable, diligent, good faith efforts to accomplish such objective as a similarly situated biopharmaceutical company would normally use to accomplish a similar objective under similar circumstances, it being understood and agreed that such efforts shall be substantially equivalent to those efforts and resources commonly used by a similarly situated biopharmaceutical company for a product owned by it, which product is at a similar stage in its development or product life and is of similar market potential (taking into consideration both anticipated total sales and overall profitability). Commercially Reasonable Efforts shall be determined on a market-by-market and Product-by-Product basis in view of conditions prevailing at the time, and evaluated taking into account all relevant factors, including the efficacy, safety, anticipated Regulatory Authority approved labeling, competitiveness of the Product or alternative products that are in the marketplace or under development and other technical, scientific, legal, medical marketing and competitiveness factors. It is anticipated that the level of effort constituting Commercially Reasonable Efforts may change over time.

“Committed Co-Funding Percentage” has the meaning set forth in Section 6.5(a)(ii).

“Commission” means the U.S. Securities and Exchange Commission, or any other federal agency at the time administering the Securities Act.

“Competing Product” means, with respect to a given Product, a product being sold by a Third Party that contains (i) a [***], as compared to [***] as is contained in the [***] and (ii) a [***] (including for clarity a [***] (notwithstanding the last sentence of the [***], the foregoing reference to [***], other than the [***]); provided, however, a product will only deemed to be a Competing Product in a given country if such Competing Product is [***]. If, however, based on publicly available information the Parties cannot reasonably determine whether such Competing Product is [***] in a given country, then [***] in such country have been [***] in such country, in which case such product shall be deemed a Competing Product in such country (a [***]”). For clarity, once for any Product (i) the Competing Product is [***] or (ii) a [***] for a Competing Product is made in a country, the Competing Product shall continue to be deemed to be a Competing Product for the relevant Product in such country for the purposes of [***].

“Confidential Information” means all information furnished by or on behalf of either Party, or any of its Representatives or Affiliates, to the other Party or its Representatives or Affiliates, whether furnished before, on or after the Effective Date and furnished in any form, including written, verbal, visual, electronic or in any other media or manner. Confidential Information also includes the existence of this Agreement and its terms.

Notwithstanding the foregoing or anything to the contrary in this Agreement, Confidential Information shall not include information that: (i) is or becomes generally available to the public other than as a result of a breach of this Agreement by the Receiving Party or the Receiving Party’s Representatives; (ii) is or becomes available to the Receiving Party on a non-confidential basis from any source other than the Disclosing Party’s Representatives, which source Receiving Party or Receiving Party’s Representatives reasonably believes is entitled to disclose such information without the recipient thereof being bound by any obligation of confidentiality, or (iii) was known to the Receiving Party prior to its disclosure to the Receiving Party by the Disclosing Party or its Representatives other than under an obligation of confidentiality.

“Consolidating Entity” means an entity that is subject to financial consolidation with Regeneron.

“Contract Year” means the period beginning on the Effective Date and ending on December 31, 2014, and each succeeding consecutive twelve (12) month period thereafter during the Term. The last Contract Year of the Term shall begin on January 1 for the year during which termination or expiration of the Agreement shall occur, and the last day of such Contract Year shall be the effective date of such termination or expiration.

“Control,” “Controls” or “Controlled by” means, with respect to any Patents or Know-How, possession of the right, whether directly or indirectly, and whether by ownership, license or otherwise, to assign, or grant a license, sublicense, right of reference or other right to or under, under such Patent or Know-How without violating the terms of any agreement with any Third Party, without requiring the consent of any Third Party or, unless the Parties otherwise agree in writing, without having to make a payment to any Third Party that is not due pursuant to an Upstream Agreement.

“CPI” means (i) for the United States, the [***], published by the United States Department of Labor, Bureau of Statistics (or its successor equivalent index), (ii) for countries in the Ex-US Major Market (other than [***]), the [***] (or its successor equivalent index) and (iii) in [***], [***], as published by [***].

“Data Package” means the AVA-101 Phase 1 Trial study report and the other data and analyses listed on Exhibit G.

“Develop” or “Development” means activities that occur after IND filing directly and specifically relating to pre-clinical and clinical drug development of a Product in the Field, including test method development and stability testing, assay development, toxicology, pharmacology, formulation, drug delivery, device or delivery technology development, quality

assurance/quality control development, technology transfer, statistical analysis, process development and scale-up, pharmacokinetic studies, data collection and management, clinical studies (including research to design clinical studies), medical affairs for such pre-clinical and clinical activities, regulatory affairs, or clinical trial education and recruitment activities, project management, drug safety surveillance activities related to clinical studies, studies to assess the viability of developing Product for additional indications in the Field, the preparation, submission and maintenance of Registration Filings and Regulatory Approvals (including post-marketing clinical trials imposed by applicable Law or as required by a Regulatory Authority) reimbursement and/or listing on health care providers’ and payers’ formularies.

“Development Costs” means, in respect of a Co-Funded Product, the costs or expenses incurred by Regeneron and its Affiliates in connection with the Development of such Co-Funded Products for use in the Field in accordance with this Agreement, which may include certain types of costs or expenses incurred by Regeneron or its Affiliates, as set forth below, in each case calculated in accordance with GAAP:

(a) [***] in connection with Research and Development of such Co-Funded Product,

(b) fees and expenses associated with [***] for the Development and Commercialization of such Co-Funded Product for use in the Field under this Agreement;

(c) [***] in respect of such Co-Funded Product;

(d) [***] of such Co-Funded Product;

(e) any [***] incurred by Regeneron or its Affiliates [***] of such Co-Funded Product;

(f) [***];

(g) costs and expenses incurred in connection with the following: (i) [***] incurred in connection with Third Party contract manufacturers and vendors providing services for Manufacturing during and for Development purposes, including for establishing a primary or secondary source supplier, in each case in respect of such Co-Funded Product;

(h) [***], and [***] as a result of, [***] of such [***]; and

(i) [***] the Commercialization activities of such Co-Funded Product.

“Development FTE Cost” means, for all Development activities performed by Regeneron or its Affiliates in respect of Co-Funded Products, the product obtained from (a) the actual number of FTEs utilized for such Development activity multiplied by (b) the Development FTE Rate.

“Development FTE Rate” means [***] in the first Contract Year, such amount to be adjusted as of [***], and [***] thereafter by the [***] (determined based on the [***]) since the [***]. The Development FTE Rate shall be inclusive of [***] and [***] for the [***], such as, for example, [***].

“Directed to” means that a molecule or a product that contains a nucleic acid sequence that encodes (i) a [***] thereof, (ii) a [***] to such [***] thereof and [***] or (iii) a [***] that is [***] in the [***] to the [***] in such [***], for example, [***], or encoding a [***], for example [***], in each case thereby [***] of such [***].

“Disclosing Party” means the Party, or any of its Affiliates or Representatives, that discloses Confidential Information.

“Downstream Manufacturing Technology” means methods and compositions related to the production of Viral Vectors other than Avalanche Upstream Manufacturing Technology, including [***].

“Effective Date” has the meaning set forth in the introductory paragraph.

“Election Payment” has the meaning set forth in Section 3.9(b).

“Eligible Pathway Targets” means, in respect of a Replacement Target or New Target, as applicable, [***], such Replacement Target or New Target.

“Ex-US Major Market” means [***].

“Extension Notice” has the meaning set forth in Section 2.3.

“FDA” means the United States Food and Drug Administration and any successor agency thereto.

“Field” means treatment, prevention or diagnosis of human disease or other medical disorder.

“First Commercial Sale” means, with respect to a Product in a country in the Territory, the first commercial sale of the Product to a non-Sublicensee, unrelated Third Party in an arms-length transaction for end use in the Field in such country (or group of countries) following receipt of Regulatory Approval. Sales for test marketing or clinical trial purposes or compassionate or similar use shall not constitute a First Commercial Sale.

“Force Majeure” has the meaning set forth in Article XIII.

“FTE” means a full time equivalent employee (i.e., one fully-committed or multiple partially-committed employees aggregating to one full-time employee) employed by a Party and assigned to perform specified work, with such commitment of time and effort to constitute one employee performing such work on a full-time basis, which for purposes hereof shall be [***] hours per year.

“GAAP” means generally accepted accounting principles in the United States.

“Governmental Authority” means any court, tribunal, agency, authority, department, regulatory or legislative body or other office or instrumentality of any government or country or of any national, federal, state, provincial, regional, county, city or other political subdivision of any such government or any supranational organization of which any such country is a member.

“IAS/IFRS” means International Accounting Standards/International Financial Reporting Standards of the International Accounting Standards Board.

“[***]” means [***].

“IND” means, with respect to each Product, an Investigational New Drug Application filed with respect to such Product, as described in the FDA regulations, including all amendments and supplements to the application, and any equivalent filing with any Regulatory Authority outside the United States.

“IND-Enabling Preclinical Development” means any research or preclinical development activities conducted pursuant to the Research Program intended to support the filing by Regeneron of an IND for a Product, including [***] and the [***], but excluding activities [***].

“Indemnified Party” has the meaning set forth in Section 12.2.

“Indemnifying Party” has the meaning set forth in Section 12.2.

“Ineligible Co-Funding Products” has the meaning set forth in Section 6.5(c).

“Identified Infringement in the Field” has the meaning set forth in Section 9.4(f).

“Identified Regeneron Patent Infringement” has the meaning set forth in Section 9.4(h).

“Independent IP Counsel” means an independent, registered, patent attorney qualified to practice before the United States Patent and Trademark Office, who is selected by the mutual agreement of the Parties.

“JDC” has the meaning set forth in Section 2.7(a).

“JRC” has the meaning set forth in Section 2.5(a).

“Joint Inventions” has the meaning set forth in Section 9.1(d).

“Joint Patents” means Patents that cover Joint Inventions.

“Key Results Memo” has the meaning set forth in Section 3.9.

“Know-How” means any and all proprietary technical or scientific information, ideas, protocols, know-how, data, test results, processes, assays, knowledge, techniques, discoveries, inventions, specifications, designs, trade secrets, regulatory filings and other information (whether or not patentable or otherwise protected by trade secret Law).

“Law” or “Laws” means all laws, statutes, rules, regulations, orders, judgments, injunctions and/or ordinances of any Governmental Authority.

“[***] Agreement” means the License Agreement by and between Avalanche Biotechnologies, Inc. and [***] dated [***], as amended on [***].

“Losses” has the meaning set forth in Section 12.1(a).

“Manufacture” or “Manufacturing” means producing, manufacturing, processing, filling, finishing, packaging, labeling, quality assurance testing and release, shipping and/or storage of a Product or components thereof, or assembly of devices or other delivery technologies for use with such Product.

“Meaningful Level” means for a given [***] by a [***] in a [***] (computed by [***] of the [***] and the corresponding [***] (as such [***] to the Parties)) constituting more than [***] of the [***]. Notwithstanding the last sentence [***], for purposes of determining whether [***], the foregoing

reference to [***] that is a [***] but shall not include any [***] as is such [***] other than the [***].

“Milestone Payment” has the meaning set forth in Section 6.2(b).

“Modification” means, as to a specific Collaboration Target (including for clarity a Collaboration Target that is a Pathway Target) , that such Collaboration Target has been modified by [***], or by [***], provided that such [***] and does not provide [***].

“Modified Clause” has the meaning set forth in Section 15.6.

“Negotiation Period” has the meaning set forth in Section 3.9(c).

“Net Profit” means, with respect to Co-Funded Products Directed to a Collaboration Target for which Avalanche has exercised its Co-Funding Right, Net Sales made by Regeneron or its Affiliates [***] to Third Parties, plus [***], less (i) [***]. Net Profits shall be calculated Quarterly. For the avoidance of doubt, if the number obtained pursuant to the equation above is negative, the resulting number shall be deemed a “Net Loss.”

“Net Sales” means the gross amount invoiced for bona fide arms-length sales of any Product in the Field for use in the Territory by or on behalf of Regeneron or its Affiliates or Sublicensees to Third Parties, less the following deductions determined in accordance with Regeneron’s standard methods as generally and consistently applied by Regeneron:

(a) normal and customary trade, cash and/or quantity discounts allowed and taken with respect to Product sales;

(b) amounts refunded or credited for damages, expiry, defects, rejections, recalls, returns and allowances in respect of the Products;

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(c) distribution-related fees and other charges or fees directly related to handling and distribution of a Product;

(d) chargebacks and other amounts paid on sale or dispensing of such Product;

(e) Third Party cash rebates and chargebacks related to sales of the Product, to the extent allowed;

(f) retroactive price reductions of such Product that are actually allowed or granted;

(g) compulsory payments and rebates directly related to Product sales, accrued, paid or deducted pursuant to agreements with government entities or payors (including managed care agreements) or government regulations (including the branded prescription drug fee imposed by the Internal Revenue Service);

(h) freight, insurance and other transportation charges, to the extent included in the invoice price;

(i) tariffs, duties, excise, value-added, consumption or other taxes (other than taxes based on income), to the extent included in the invoice price;

(j) [***] in the [***] of such [***];

(k) [***]; and

(l) [***] to the [***].

Sales between the Parties, or between the Parties and their Affiliates or Sublicensees, for resale, shall be disregarded for purposes of calculating Net Sales. Any of the items set forth above that would otherwise be deducted from the invoice price in the calculation of Net Sales but which are separately charged to, and paid by, Third Parties shall not be deducted from the invoice price in the calculation of Net Sales. Solely for purposes of calculating Net Sales, if Regeneron or its Affiliate or Sublicensee sells such Products in the form of a combination product containing any Product and one or more active ingredients (whether combined in a single formulation or package, as applicable, or formulated or packaged separately but sold together for a single price in a manner consistent with the terms of this Agreement) (a “Combination Product”), Net Sales of such Combination Product shall be calculated by multiplying actual Net Sales of such Combination Product as determined in the first paragraph of this definition of “Net Sales” by the fraction A/(A+B), where A is the invoice price of such Product if sold separately, and B is the total invoice price of the other active ingredient(s) in the combination if sold separately. If, on a country-by-country basis, such other active ingredient(s) in the Combination Product is not sold separately in such country, but the Product component of the Combination Product is sold separately in such country, Net Sales for the Combination Product shall be calculated by multiplying actual Net Sales of the Combination Product by the fraction A/C, where A is the invoice price of the Product component if sold separately, and C is the invoice price of the Combination Product. If, on a country-by-country basis, the Product component is not sold separately in that country, Net Sales for the Combination Product shall be

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

calculated by multiplying actual Net Sales of the Combination Product by the fraction D/(D+E), where D is the fair market value of the portion of the Combination Product that contains the Product and E is the fair market value of the portion of the Combination Product containing the other active ingredient(s) included in such Combination Product, as such fair market values are determined by mutual agreement of the Parties through the JRC.

“New Target Nomination Fee” has the meaning set forth in Section 6.3(b).

“New Targets” has the meaning set forth in Section 2.11.

“Non-Approval Trials” means clinical trials conducted to support the Development or Commercialization of a Product in the Field for use in the Territory that are not conducted to gain Regulatory Approval for such Product.

“Non-Clinical Regulatory Documentation” means, with respect to all material submissions made by the Regeneron to any Regulatory Authority in the United States or in any Ex-US Major Market, all sections excluding Clinical Regulatory Documentation.

“Opt-Out Notice” has the meaning set forth in Section 6.5(b).

“Option Exercise Notice” has the meaning set forth in Section 2.4(b).

“Option Fee” has the meaning set forth in Section 6.3(a).

“Option Period” means, in respect of any Product, the [***] period starting on the acceptance for filing with the FDA of the IND for such Product, as evidenced by no objection by the FDA within [***] after the date of the IND submission; provided that in any event the Option Period for each Product will expire, if it has not previously done so, upon expiration of the Research Term.

“Option Right” has the meaning set forth in Section 2.4(b).

“Other Collaboration Inventions” has the meaning set forth in Section 9.1(c).

“Other Products” has the meaning set forth in Section 5.5.

“Out-of-Pocket Costs” means costs and expenses paid to Third Parties (or payable to Third Parties and accrued in accordance with GAAP or IAS/IFRS) by either Party and/or its Affiliates.

“Patents” means any patent (including any reissue, extension, substitution, confirmation, re-registrations, re-examination, revival, supplementary protection certificate or patents of addition) or patent application (including any provisional, non-provisional, continuation, continuation-in-part or divisional applications and any PCT international applications or national phase applications), in each case whether in the U.S. or any foreign country.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

“Pathway Target” means, as to a particular Collaboration Target listed in Exhibit C as a “Collaboration Target”, (i) the molecules identified as a Pathway Target for such Collaboration Target in Exhibit C (i.e., such Pathway Targets are in the same row on the chart in Exhibit C as such Collaboration Target), (ii) any other molecule that is determined to be a Pathway Target and included in Exhibit C pursuant to Section 2.12 for a Replacement Target or New Target that becomes a Collaboration Target pursuant to Sections 2.10 or 2.11, and (iii) [***] that have the [***].

“[***]” has the meaning set forth in Section 6.10(d).

“Payment Term” means (a) in respect of any Product that is not a Co-Funded Product, in any country in the Territory, the term beginning on the First Commercial Sale of such Product and ending on the later of (i) the last to expire Valid Claim of an Avalanche Patent or Collaboration Patent infringed by the sale or intended use of such Product in such country and (ii) the [***], and (b) in respect of any Co-Funded Product in any country in the Territory, the term beginning on the First Commercial Sale of such Product and ending on the date upon which Regeneron, its Affiliates and Sublicensees no longer sell such Co-Funded Product in such country.

“[***]” has the meaning set forth in Section 6.10(d).

“Person” means and includes an individual, partnership, joint venture, limited liability company, corporation, firm, trust, unincorporated organization, government or Governmental Authority, or any other entity or body.

“Phase 2 Trial” means a controlled dose ranging clinical trial to evaluate further the efficacy and safety of a Product in the Field in the targeted patient population and to help define the optimal dose and/or dosing regimen.

“Phase 3 Trial” means a clinical trial that is designed to gather further evidence of safety and efficacy of a Product in the Field (and to help evaluate its overall risks and benefits) and is intended to support Regulatory Approval for a Product in the Field in one or more countries in the Territory. A Phase 3 Trial typically follows at least one Phase 2 Trial.

“Platform Research Results” means all Research Results other than those arising from IND-Enabling Preclinical Development activities.

“Pre-Launch Marketing Expenses” means, on a country-by-country basis in the Territory, with respect to each Co-Funded Product, all expenses to brand, label and develop an advertising and marketing campaign to support the Co-Funded Product in the Field incurred prior to the First Commercial Sale of such Co-Funded Product.

“Post-IPO Ownership” has the meaning set forth in Section 7.1(b).

“Process Improvements” means any improvements or enhancements to any manufacturing process, which process was developed in the course of performing the Research Program for Products, [***] and are covered by Patents or Know-How [***].

“Product” means any product or product candidate (i) employing or including Avalanche Vector Technology and (ii) that includes a Therapeutic Expression Cassette.

“Product Trademark” means, with respect to each Product in the Field in the Territory, the trademark(s) selected and approved by Regeneron for use on such Product throughout the Territory and/or accompanying logos, slogans, trade names, trade dress and/or other indicia of origin, in each case as selected and approved by Regeneron.

“Qualified IPO” means a firm commitment underwritten initial public offering of common stock of Avalanche pursuant to an effective registration statement under the Securities Act that yields gross proceeds to Avalanche of at least $[***].

“Quarter” or “Quarterly” shall refer to a calendar quarter, except that the first Quarter shall commence on the Effective Date and extend to the end of the then-current calendar quarter and the last calendar quarter shall extend from the first day of such calendar quarter until the effective date of the termination or expiration of the Agreement.

“Quarterly Activities Report” has the meaning set forth in Section 6.6(a).

“Receiving Party” means the Party, or its Affiliates or Representatives, in receipt of Confidential Information.

“Regeneron” has the meaning set forth in the introductory paragraph.

“Regeneron Background Intellectual Property” means any Patents or Know-How Controlled by Regeneron as of the Effective Date and necessary or useful to the conduct of the Research Program.

“Regeneron Indemnitees” has the meaning set forth in 12.1(b).

“Regeneron Patent Infringement Action” has the meaning set forth in Section 9.4(g).

“Regeneron Sole Inventions” has the meaning set forth in Section 9.1(c).

“Regeneron Vector Invention” means a Collaboration Invention that (i) is [***], (ii) is conceived or developed solely by or on behalf of Regeneron, its Affiliates, employees, sublicensees, independent contractors, agents and consultants [***], and (iii) is not a [***].

“[***]” means the [***].

“Registration Filing” means any filing with a Regulatory Authority anywhere in the world with authority over the Development, Manufacture or Commercialization of any Product in the Field under this Agreement seeking Regulatory Approval of such Product in the Field.

“Regulatory Approval” means, in respect of any country in the Territory, an Approval by the applicable Regulatory Authority necessary for the Commercialization of a Product in the Field in such country.

“Regulatory Authority” means any federal, national, multinational, state, provincial or local regulatory agency, department, bureau or other governmental entity anywhere in the world with authority over the Development, Manufacture or Commercialization of any Product in the Field under this Agreement. The term “Regulatory Authority” includes the FDA and the EMA.

“Replacement Targets” has the meaning set forth in Section 2.10.

“Representatives” has the meaning set forth in Section 11.1(a).

“Research” means any and all research or discovery activities in respect of a Product.

“Research Plan” means the written Research Plan attached hereto as Exhibit D, which describes the Research to be conducted by or on behalf of Regeneron and Avalanche, and subsequent amendments thereto approved by the JRC.

“Research Program” means the program to execute the Research Plan under the direction of the JRC, all as further described, and subject to the terms and conditions set forth, herein.

“Research Program Budget” means a budget that has been approved by the JRC that describes the activities and associated costs for the conduct of the Research Program for a given calendar year.

“Research Program Costs” means the sum of (a) Research Program FTE Cost and (b) all Out-of-Pocket Costs not included in (a) and required for Research activities provided in the Research Plan and in accordance with the Research Plan budget agreed to by the Parties.

“Research Program FTE Cost” means, for all Research activities performed by Avalanche in accordance with the Research Program, the product obtained from (a) the actual number of FTEs utilized for such Research activity as provided in the Research Plan multiplied by (b) the Research Program FTE Rate.

“Research Program FTE Rate” means [***] in the first Contract Year, such amount to be adjusted as of [***] and [***] thereafter by the [***] (determined based on [***]) since the [***]. The Research Program FTE Rate shall be inclusive of [***] and [***], such as, for example, [***].

“Research Results” means any and all Know-How which arises or is conceived or developed during the Research Term in the course of activities conducted pursuant to the Research Program, by or on behalf of (a) [***] that is [***] of the [***] or (b) the [***] that are [***] of the [***], in each case including information and data [***].

“Research Term” means, subject to Section 2.3 the period starting on the Effective Date and ending on the third (3rd) anniversary of the Effective Date.

“Royalty” has the meaning set forth in Section 6.4(a).

“Royalty Offset” has the meaning set forth in Section 6.4(b).

“Securities Act” means the Securities Act of 1933, as amended.

“Sole Inventions” has the meaning set forth in Section 9.1(c).

“Sublicense Revenues” means all revenues or other consideration (including any up-front fees, royalty, net profit and/or milestone payments) received by Regeneron or its Affiliate from a Sublicensee as consideration for the grant of a sublicense under the licenses granted pursuant to Section 3.1 with respect to a Co-Funded Product; provided that any [***] received from a Sublicensee shall be included in Sublicense Revenues [***].

“Sublicensee” means a Third Party to whom Regeneron or its Affiliate shall have granted a license or sublicense under Avalanche’s rights granted to Regeneron and its Affiliates pursuant to Section 3.3.

“Tail Period” has the meaning set forth in Section 2.3.

“Tax Benefit” has the meaning set forth in Section 6.10(d).

“Term” has the meaning set forth in Section 14.1(a).

“Territory” means all the countries of the world.

“Therapeutic Expression Cassette” means (i) a [***], and (ii) which [***]; provided that for purposes of this Agreement, references to Therapeutic Expression Cassettes are intended only to include the [***] and [***].

“Therapeutic Invention” means a Collaboration Invention that [***] of (i) a [***], (ii) a [***], (iii) the [***] (iv) a [***]. For clarity, if a Collaboration Invention that relates on the one hand to [***] and on the other hand to [***], then such [***].

“Therapeutic Patents” means any Patents that claim Therapeutic Inventions.

“Third Party” means any Person other than Avalanche or Regeneron or any Affiliate of either Party.

“Third Party License Agreement” means a license obtained by Regeneron under the intellectual property Controlled by any Third Party in order to Research, Develop, Manufacture or Commercialize a Product.

“Third Party License Payments” means, collectively, any royalties, license fees and other consideration paid by Regeneron or its Affiliates under Third Party License Agreements to avoid claims that the Development, Manufacture (of Clinical Supplies or Commercial Supplies) and/or the Commercialization of Co-Funded Products in the Field for use in the Territory infringes the intellectual property rights of a Third Party.

“Transferred CMC Technology” means the technology, processes, methodologies and systems covered or claimed by Patents or Know-How Controlled by Avalanche and (i) either (A) arising in the course of [***] or (B) [***], and (ii) in each of (A) and (B), are [***].

“[***] Agreement [***]” means the [***] between Avalanche and [***] for [***], dated [***].

“[***] Agreement [***]” means the [***] by and between Avalanche and [***], dated [***].

“[***] Agreements” means the license agreements between [***] and Avalanche listed in Exhibit E.

“United States,” “US” or “U.S.” means the United States of America (including its territories and possessions and its military bases wherever located in the Territory) and Puerto Rico.

“Upstream Agreements” means the agreements between Avalanche and Third Parties that are set forth on Exhibit E, as such agreements, subject to Section 10.5(j), may be amended during the Term.

“Valid Claim” means for any country, a claim of an issued, unexpired and not withdrawn Patent, which claim has not been revoked, abandoned, disclaimed (other than by terminal disclaimer), denied, or admitted, determined or held to be unpatentable, invalid or unenforceable by a decision of a court or other governmental agency of competent jurisdiction, including through reissue, re-examination, post-grant review, inter partes review, interference, opposition, derivation proceeding, supplemental examination, or otherwise.

“Verified Internal Research Program” means a research or development program (i) that Avalanche is [***] with respect to [***], or [***], including as demonstrated by [***] that include [***] or a [***] and capable of [***], or by [***], (ii) for which Avalanche has [***] with respect to [***], or (iii) that is the subject to [***] with respect to [***], in each case that Avalanche [***] subsections (i) through (iii).

“Viral Vector” means a viral capsid containing a nucleic acid sequence containing and capable of expressing a transgene of interest.

“Vector Manufacturing Cassette” means a nucleic acid sequence [***] that are [***].

“[***] Agreement” means the [***] by and between Avalanche Biotechnologies, Inc. and [***] dated [***].

1.2 Certain Rules of Construction.

(a) As used in this Agreement, unless the context otherwise requires: Section, Schedule, Article and Exhibit references are intended to refer to this Agreement; words describing the singular number shall include the plural and vice versa; words denoting natural

persons shall include corporations, partnerships and other entities, and vice versa; the words “hereof”, “herein” and “hereunder”, and words of similar import, shall refer to this Agreement as a whole, and not to any particular provision of this Agreement; the term “include” and derivations thereof are not intended to apply any limitation to the item(s) specified.

(b) This Agreement is between financially sophisticated and knowledgeable parties and is entered into by the Parties in reliance upon the economic and legal bargains contained herein, the language used in this Agreement has been negotiated by the Parties and shall be interpreted and construed in a fair and impartial manner without regard to such factors as the Party that prepared, or caused the preparation of, this

Agreement or the relative bargaining power of the Parties.

ARTICLE II.

SCOPE AND MANAGEMENT OF THE COLLABORATION

2.1 Scope of Collaboration. The Parties shall use Commercially Reasonable Efforts to conduct the activities set forth in the Research Program during the Research Term. Upon identification by the JRC of a Product suitable for IND-Enabling Preclinical Development, Regeneron shall have the sole right and responsibility to conduct the IND-Enabling Preclinical Development of such Product. Regeneron shall have the sole right and responsibility to Develop, Manufacture and Commercialize all Products against which Regeneron has, during the Option Period, (i) exercised the Option Right and (ii) paid the Option Fee; provided, however, that if Avalanche exercises its Co-Funding Right with respect to any Collaboration Target, Avalanche shall participate in the Development of Co-Funded Products Directed to such Collaboration Target through its participation on the JDC, and subject to the terms set forth in this Agreement. For the avoidance of doubt, Regeneron shall at all times remain solely responsible for Commercializing all Co-Funded Products.

2.2 Responsibilities of the Parties.

(a) Avalanche shall use Commercially Reasonable Efforts to conduct the Avalanche activities under the Research Program, including designing, optimizing, characterizing, producing at research-scale Products, designing and screening new libraries for the discovery of new Viral Vectors and performing initial activities directed to the manufacture of Products, all of which shall be done in accordance with (i) the terms of this Agreement, including the Research Plan, and (ii) the oversight, direction and review of the JRC. [***] Avalanche, by itself or through its contractors, may also conduct in vitro and in vivo evaluations of Viral Vectors and Products.

(b) Regeneron shall use Commercially Reasonable Efforts to conduct the Regeneron activities under the Research Plan, including evaluating Viral Vectors and Products in in vitro and in vivo models, and conducting IND-Enabling Preclinical Development of such Products.

(c) Regeneron shall be responsible for filing the IND in respect of the Products and shall provide Avalanche with draft copies of such IND reasonably in advance of filing so that Avalanche may provide comments thereon for consideration by Regeneron as set forth in Section 5.2(b).

(d) After the filing of an IND with the applicable Regulatory Authority in respect of any Product, if Regeneron has exercised its Option Right for the Collaboration Target to which such Product is Directed, Regeneron shall have the sole right and responsibility to Research, Develop, and Commercialize such Product, subject to the terms of this Agreement. Avalanche shall use Commercially Reasonable Efforts to assist Regeneron, [***], in Regeneron's Research, Development and Commercialization of Products, including [***].

(e) Subject to Section 8.1, following exercise of its Option Right for Products Directed to a given Collaboration Target, Regeneron shall have the sole right and responsibility to Manufacture clinical supplies of such Products, at its sole cost and expense; provided that at Regeneron's discretion, Avalanche shall reasonably support Regeneron in connection with the Manufacture of Clinical Supplies of such Products, subject to Section 8.1, by either (i) producing Clinical Supplies for Regeneron in sufficient quantities to support the Development of such Product pursuant to a separate Clinical Supply Agreement, to be negotiated by the Parties in good faith following written request by Regeneron, or (ii) transferring to Regeneron, or a contract manufacturer selected by Regeneron, in its sole discretion, the Transferred CMC Technology necessary to permit Regeneron, or such contract manufacturer selected by Regeneron, to produce the Clinical Supplies in sufficient quantities to support the Development of such Product.

(f) Unless otherwise agreed by the Parties, if Regeneron has exercised its Option Right for the Collaboration Target that such Products are Directed to, Regeneron shall have the sole right and responsibility to Manufacture Commercial Supplies of any Products, and Avalanche shall have no obligation to Manufacture Commercial Supplies of Products.

2.3 Extension of Research Term. Regeneron may extend the Research Term for up to an additional three (3) years by notifying Avalanche in writing of such extension on or before the date that is [***] days prior to the third (3rd) anniversary of the Effective Date. In addition, provided Regeneron is, at the date of delivery of the Extension Notice, using Commercially Reasonable Efforts to conduct IND-Enabling Preclinical Development of a Product Directed to such Collaboration Target, the Research Term in respect of such Product may be extended by Regeneron upon written notice (the "Extension Notice") delivered to Avalanche at least [***] days prior to the date upon which the Research Term would otherwise expire, for an additional period (the "Tail Period") equal to the shorter of (a) two (2) years or (b) such time that Regeneron is no longer using Commercially Reasonable Efforts to Develop such Product.

2.4 Option Right.

(a) Avalanche shall, and hereby does, grant Regeneron the Option Right set forth in this Section 2.4. As partial consideration for the grant of the Option Right, Regeneron shall pay to Avalanche [***].

(b) During the Option Period in respect of any Product, Regeneron shall have the right to obtain the exclusive license provided in Section 3.1(c) to Research, Develop, use, import, export, make, Manufacture and Commercialize Products Directed to the relevant Collaboration Target, and have any of the foregoing done on Regeneron's behalf by a Third Party (the "Option Right") by (i) notifying Avalanche, in writing, of its exercise of its Option Right (an "Option Exercise Notice") and (ii) paying and delivering to Avalanche the Option Fee in respect of such Products and such Collaboration Target. Upon delivery of the Option Exercise Notice and the payment and delivery of the Option Fee to Avalanche, Regeneron shall immediately, and without further action of the Parties, be granted the exclusive license provided in Section 3.1(c) for such Products. If Regeneron does not deliver both an Option Exercise Notice and the applicable Option Fee prior to the expiration of the Option Period, the Option Right in respect of Products Directed to such Collaboration Target shall terminate and be of no further force.

(c) With regard to each Collaboration Target, during the Research Term and, if Regeneron exercises its Option Right with respect to a Product Directed to such Collaboration Target, from the date of delivery of the Option Exercise Notice and the payment and delivery of the Option Fee by Regeneron in respect of any Product, Avalanche shall not develop, manufacture or commercialize, or assist (through a license or sublicense grant or by otherwise knowingly conducting another action) any Third Party in the research, development, manufacture or commercialization of any Product Directed to such Collaboration Target (including, for clarity, all Pathway Targets designated as such for such Collaboration Target as set forth in Exhibit C) other than pursuant to Sections 2.2(e) and 6.5 of this Agreement or as otherwise approved by Regeneron, except as otherwise expressly provided in this Agreement.

2.5 Joint Research Committee.

(a) The Parties hereby establish a joint research committee (the "JRC"), consisting of an equal number of members appointed by each Party, which number of members shall not exceed [***] from each Party, to oversee the Research Program, subject to the terms set forth herein. Each member of the JRC shall have the appropriate expertise to oversee the Parties' performance of their respective obligations under this Agreement. The initial JRC members shall be designated by each Party within seven (7) days after the Effective Date. Each Party shall have the right, at any time and from time to time, to designate a replacement, on a permanent or temporary basis, for any or all of its previously designated members of the JRC.

(b) The JRC shall meet at least once per Quarter during the Research Term (or more frequently as the Parties may agree or as required to resolve disputes or disagreements) on such dates and times, as the Parties may agree; provided, however, that the first meeting of the JRC to occur within thirty (30) days after the Effective Date. The Parties shall agree in advance on a written agenda for each meeting of the JRC. The regularly scheduled JRC meetings shall take

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

place in person or telephonically as determined by the Parties, but shall include at least one in person meeting per calendar year at the headquarters of each Party. The members of the JRC may also convene or be polled or consulted from time to time by means of telephone conference, video conference, electronic mail or correspondence and the like, as the Parties deem necessary. Minutes of any meeting of the JRC shall be promptly issued to the Parties following each meeting, and the Parties shall use Commercially Reasonable Efforts to agree as to the specific text of such minutes within [***] days of issuance.

(c) All decisions of the JRC shall be made in good faith by unanimous vote or unanimous written consent of both Parties, with each Party having, collectively among its respective designees, one (1) vote in all decisions; provided, however, that if the members of the JRC are unable to achieve unanimity, then [***] shall have the right to make the final determination with respect to decisions before the JRC related to the Research Program; provided, further that in no event shall the JRC, without the prior written consent of [***], (i) require that [***] or other [***] under the Research Plan (even if such [***]), (ii) materially [***] or (iii) decide any other matters in any manner that could result in [***].

(d) Each Party shall be responsible for the costs of its representatives on the JRC, including all travel and related costs and expenses for its members and approved invitees to attend meetings of, and otherwise participate on, the JRC.

2.6 Purposes and Powers of the JRC. The principal purposes of the JRC shall be to (i) approve the overall strategy for the Research Program, and (ii) provide guidance and direction as provided herein. Subject to the express rights of the Parties as set forth herein, the functions of the JRC shall include:

(a) acting as liaison between the Parties to ensure that each is informed of the ongoing progress of the Research Program, including providing Avalanche, through the JRC, with Research Program information reasonably necessary to assist Avalanche with its determination as to whether to exercise its Co-Funding Right;

(b) overseeing the Research Program, including establishing the Research Program Budget;

(c) reviewing and discussing any data generated by the Parties during the course of the Research Program;

(d) overseeing all Research Program activities for a given Product prior to the expiration of the Option Term or Regeneron's exercise of its Option Right (if earlier);

(e) updating the Initial Research Plan to include manufacturing activities as provided in Exhibit D, and updating the Research Program Budget to include applicable budgets therefor; and

(f) performing such other responsibilities as may be assigned to the JRC pursuant to this Agreement or as may be mutually agreed upon by the Parties from time to time.

2.7 Joint Development Committee.

(a) Within [***] after Avalanche exercises its Co-Funding Right, the Parties shall appoint a joint development committee (the "JDC"), consisting of an equal number of members appointed by each Party, which number of members shall not exceed [***] from each Party, to oversee the Development of Co-Funded Products, subject to the terms set forth herein. Each member of the JDC shall have the appropriate expertise to oversee the Parties' performance of their respective obligations under this Agreement. Each Party shall have the right, at any time and from time to time, to designate a replacement, on a permanent or temporary basis, for any or all of its previously designated members of the JDC. After the JDC has been formed, it shall remain in existence in respect of any Co-Funding Product until Avalanche delivers the Opt-Out Notice in respect of such Product.

(b) Within [***] of exercising its option with respect to a particular Collaboration Target, Regeneron shall provide Avalanche with a development plan in the form then existing and, if then available, a commercialization plan in the form then existing, for Products Directed to such Collaboration Target, to enable Avalanche to decide whether it desires to exercise its Co-Funding Right within the relevant [***] period described in 6.5(a)(i). If Avalanche indicates within [***] after receiving such development plan that Avalanche is interested in exercising its Co-Funding Right for the relevant Collaboration Target, then the Parties shall commence discussions of the ramifications of unexpected technical, safety or medical issues materially impacting the Development, Manufacturing and Commercialization of the relevant Products should they become Co-Funded Products, including the potential suspension of each Party's payment obligations during any time period in which such activities are put on hold.

(c) The JDC shall meet at least once per Quarter on such dates and times, as the Parties may agree. The Parties shall agree in advance on a written agenda for each meeting of the JDC. The regularly scheduled JDC meetings shall take place in person or telephonically as determined by the Parties, but shall include at least one in person meeting per calendar year at the headquarters of each Party. The members of the JDC may also convene or be polled or consulted from time to time by means of telephone conference, video conference, electronic mail or correspondence and the like, as the Parties deem necessary. Minutes of any meeting of the JDC shall be promptly issued to the Parties following each meeting, and the Parties shall use Commercially Reasonable Efforts to agree as to the specific text of such minutes within [***] of receipt.

(d) All decisions of the JDC shall be made in good faith by unanimous vote or unanimous written consent of both Parties, with each Party having, collectively among its respective designees, one (1) vote in all decisions; provided, however, that if the members of the JDC are unable to achieve unanimity, then [***] shall have the right to make the final determination with respect to decisions before the JDC related to the Development of Co-Funded Products.

(e) Each Party shall be responsible for the costs of its representatives on the JDC, including all travel and related costs and expenses for its members and approved invitees to attend meetings of, and otherwise participate on, the JDC.

2.8 Purposes and Powers of the JDC. The principal purposes of the JDC shall be to oversee and provide guidance and direction on the overall strategy for the Development of Co-Funded Products. Subject to the express rights of the Parties as set forth herein, the functions of the JDC shall include:

(a) review clinical and regulatory matters pertaining to the Co-Funded Products;

(b) acting as liaison between the Parties to ensure that they are informed of the ongoing progress of the Development of Co-Funded Products and, in furtherance of the foregoing, Regeneron shall provide members of the JDC with copies of Non-Clinical Regulatory Documentation, Clinical Regulatory Documentation, INDs and Registration Filings related to Co-Funded Products;

(c) reviewing the creation and implementation of annual and long-range plans for Development, Manufacturing and Commercialization of Co-Funded Products; and

(d) performing such other responsibilities as may be mutually agreed upon by the Parties from time to time.

2.9 Committee Limitations; Participation. Notwithstanding anything to the contrary herein, neither the JRC, nor the JDC, nor any member of either of the foregoing, in such capacity shall be empowered to change or waive the terms or conditions of this Agreement. Avalanche's membership in the JRC and JDC shall be at its sole discretion, as a matter of right and not obligation, for the sole purpose of participation in governance, decision-making, and information exchange with respect to activities within the jurisdiction of such committee as provided in this Article II. Avalanche shall have the right to withdraw from membership in the JRC and/or the JDC upon [***] prior written notice to Regeneron, which notice shall be effective as to the relevant committee upon the expiration of such [***] period. Following the issuance of such notice for a given committee, (a) Avalanche's membership in such committee shall be terminated, and (b) the Parties shall have the right to continue to receive the information they would otherwise be entitled to receive under this Agreement through such committee. If, at any time, following issuance of such a notice, Avalanche wishes to resume participation in any committee, Avalanche shall notify Regeneron in writing and, thereafter, Avalanche's representatives to such committee shall be entitled to attend any subsequent meeting of such committee and to participate in the activities of, and decision-making by, such committee as provided in this Article II as if such notice had not been issued by Avalanche pursuant to this Section 2.9.

2.10 Replacement Targets. During the Research Term, Regeneron shall have the right (exercisable on one or more occasions) to replace an aggregate of up to [***] of the targets listed on Exhibit C as "Collaboration Targets" (the "Replacement Targets") by providing Avalanche with a written notice (i) nominating the Replacement Target and not more than [***] Eligible Pathway Targets it proposes to designate as additional Pathway Targets for each Replacement Target, and (ii) setting forth which of the targets listed on Exhibit C as "Collaboration Target(s)" that Regeneron is proposing to replace. The Parties shall meet within [***] Business Days following delivery by Regeneron of such written notice to discuss and

consider the nominated Replacement Target(s). A Replacement Target nominated by Regeneron shall be added to Exhibit C as a "Collaboration Target" and included in the Research Program as a Collaboration Target unless there is a Verified Internal Research Program with respect to such Replacement Target or any Eligible Pathway Targets therefor determined pursuant to Section 2.12, in which case such nominated Replacement Target shall not become a Collaboration Target. In such case, at its discretion, Regeneron may nominate other Replacement Targets until an available Replacement Target is identified. Such available Replacement Target shall be added to Exhibit C as a "Collaboration Target" and shall be included in the Research Program as a Collaboration Target for all purposes of this Agreement. A Collaboration Target that has been replaced pursuant to this Section 2.10 shall thereafter be deleted from Exhibit C, along with all Pathway Targets designated as such for such Collaboration Target in Exhibit C, and each such deleted Collaboration Target (including, for clarity such deleted Pathway Targets) shall be deemed to be a Collaboration Target that Regeneron has terminated for convenience pursuant to Section 14.3, and the rights and obligations of the Parties with respect to such Collaboration Target shall be subject to the provisions of Section 14.6(d). Notwithstanding the foregoing, Regeneron's right to name Replacement Targets shall not apply during the Tail Period.

2.11 New Targets. During the Research Term, Regeneron shall have the right to nominate (on one or more occasions) up to an aggregate of four (4) additional targets (the "New Targets") to be included as Collaboration Targets by providing Avalanche with written notice of (i) any such nomination and (ii) not more than [***] Eligible Pathway Targets that it proposes to designate as additional Pathway Targets for each New Target. The Parties shall meet within [***] Business Days following delivery by Regeneron of such written notice to discuss and consider such New Target(s) and Eligible Pathway Targets. A New Target nominated by Regeneron shall be added to Exhibit C as a "Collaboration Target" and included in the Research Program as a Collaboration Target for all purposes of this Agreement if (i) there is no Verified Internal Research Program with respect to such New Target or any Eligible Pathway Targets therefor determined pursuant to Section 2.12, and (ii) Regeneron pays the associated New Target Nomination Fee. In the event a Verified Internal Research Program does exist or Regeneron does not pay the New Target Nomination Fee such nominated Replacement Target shall not become a Collaboration Target. In the event such a Verified Internal Research Program does exist, at its discretion, Regeneron may nominate other New Targets until an available New Target is identified for which neither it nor the Eligible Pathway Targets nominated by Regeneron are subject to a Verified Internal Research Program, until the maximum of four (4) New Targets has been reached. Notwithstanding the foregoing, Regeneron's right to name New Targets shall not apply during the Tail Period. For the sake of clarity, Regeneron shall not have an obligation to pay the New Target Nomination Fee for a nominated Replacement Target that does not become a Collaboration Target.

2.12 Nomination of Pathway Targets for New Targets and Replacement Targets; Determination of Eligible Pathway Targets.

(a) Within [***] after Regeneron nominates a Replacement Target or New Target and provides to Avalanche the applicable list of [***] Eligible Pathway Targets, Avalanche may propose a list of additional Eligible Pathway Targets for such Replacement Target or New Target for purposes of determining whether a Verified Internal Research Program will preclude such proposed Replacement Target or New Target, as applicable, from being designated as a Collaboration Target as set forth in Section 2.10 or 2.11, as applicable.

(b) The Parties shall, for a period of [***] after the later of Avalanche's receipt of such proposed list of Eligible Pathway Targets or the date upon which Avalanche provides a proposed list of Eligible Pathway Targets, pursuant to Sections 2.10, 2.11 or 2.12(a), as applicable, use Commercially Reasonable Efforts to agree on whether the proposed listed targets are Eligible Pathway Targets. If the Parties are unable to agree on whether any of the proposed listed targets are Eligible Pathway Targets for the relevant Replacement Target or New Target, then the issue shall be [***] are Eligible Pathway Targets for such Replacement Target or New Target.

(c) Any such Pathway Targets proposed by Regeneron pursuant to Section 2.12(a) that the Parties so agree, [***] are Eligible Pathway Targets shall be included as "Pathway Targets" in Exhibit C, subject to a maximum of [***] Pathway Targets being designated for each Replacement Target or New Target, except that if there is a Verified Internal Research Program with respect to any Eligible Pathway Targets for a Replacement Target or a New Target, then the proposed Replacement Target or New Target may not be designated as a Collaboration Target and no Eligible Pathway Target therefor may be designated as a Pathway Target under this Agreement; provided, however, that Regeneron retains the right to propose again in the future any Pathway Targets that have been determined not to be Eligible Pathway Targets under this Section 2.12 in the course of exercising Regeneron's rights under Sections 2.10 and 2.11, in which case the Parties shall again apply the terms and conditions of this Section 2.12 to determine whether a Verified Internal Research Program then exists with respect to the proposed Pathway Targets and if so, the Verified Internal Research Program will again preclude such proposed Replacement Target or New Target, as applicable, from being designated as a Collaboration Target as set forth in Section 2.10 or 2.11.

2.13 Compliance with Law. Both Avalanche and Regeneron, and their respective Affiliates, shall perform their respective obligations under this Agreement in compliance with applicable Law.

ARTICLE III.

LICENSE GRANTS

3.1 Avalanche License Grants. Subject to the terms and conditions of this Agreement, Avalanche hereby grants to Regeneron and its Affiliates the following licenses under the Avalanche Intellectual Property:

(a) an exclusive (including as to Avalanche, subject to Section 3.2), non-royalty-bearing, transferrable (subject to Section 15.8) and sublicensable (subject to Sections 3.3) right and license to conduct IND-Enabling Preclinical Development for Products in the Field for use in the Territory and to have any of the foregoing done on Regeneron's behalf by a Third Party during the Research Term, subject to the terms of the Upstream Agreements;

(b) a non-exclusive, non-royalty-bearing, transferrable (subject to Section 15.8) and sublicensable (subject to Section 3.3) right and license to conduct Research as set forth in the Research Plan, subject to the terms of the Upstream Agreements;

(c) upon Regeneron's exercise of the Option Right in respect of a Collaboration Target pursuant to Section 2.4, an exclusive (including as to Avalanche, subject to Section 3.2(a)), royalty-bearing (pursuant to Section 6.4 and, if applicable, Section 6.5), transferrable (subject to Section 15.8) and sublicensable (subject to Sections 3.3) right and license to Research, Develop, use, import, export, make, Manufacture and Commercialize any Product Directed to such Collaboration Target in the Field for use in the Territory and to have any of the foregoing done on Regeneron's behalf by a Third Party, subject to the terms of the Upstream Agreements; and

(d) a non-exclusive, non-royalty-bearing, transferable (subject to Section 15.8), and sublicensable (subject to Section 3.3) right and license under Patents or Know-how that cover or claim Regeneron Vector Inventions to research, develop, use, import, export, make and manufacture and commercialize products and to have any of the foregoing done on Regeneron's behalf by a Third Party;

provided that in subsection (b), the license to conduct Research shall include the right to suggest or identify compositions and methods useful to [***], and to suggest or identify the [***] in the Avalanche Vector Technology but shall otherwise exclude the right to [***], other than those viral capsids that are Avalanche Vector Technology and that are created or designed by Avalanche pursuant to the Research Program and, provided that in the case of subsection (c), the license to conduct Research shall not include the right to [***], other than those viral capsids that are Avalanche Vector Technology and that are created or designed by Avalanche pursuant to the Research Program.

3.2 Regeneron License Grants. Regeneron hereby grants to Avalanche:

(a) a non-exclusive, transferable (subject to Section 15.8), non-sublicensable right and license under (i) Regeneron Sole Inventions, Therapeutic Inventions and Regeneron Background Intellectual Property, (ii) Regeneron's interest in Joint Inventions and (iii) any Research Results

conceived or developed by Regeneron related to any of the foregoing clauses (i) –(ii), as well as Avalanche Intellectual Property licensed to Regeneron pursuant to Section 3.1, in each case only to the extent necessary to perform the activities to be performed by Avalanche as provided in the Research Plan and to perform any Manufacturing activities that may be allocated to Avalanche pursuant to Sections 2.2(e), 3.8 and 8.1 and Development activities for Co-Funded Products that Avalanche agrees, in its sole discretion, to perform. This right and license in respect of any Product shall terminate immediately, without notice, upon the termination of this Agreement in respect of the Collaboration Target that such Product is Directed to; and

(b) a non-exclusive, non-royalty-bearing, sublicensable (subject to Sections 3.3) right and license under Regeneron Sole Inventions and Joint Inventions and Patents thereon that were conceived during the Research Term or the [***] period following the end of the Research Term, all to the extent necessary to Research, Develop, use, import, export, make and Manufacture and Commercialize any gene therapy product that is not a Product.

3.3 Sublicensing and Subcontracting.

(a) Regeneron may grant sublicenses to the Avalanche Intellectual Property solely for use in connection with Products in the Field. Avalanche may enter into subcontracts with its Affiliates and Third Parties to perform its obligations for Avalanche under this Agreement, and may grant sublicenses under the license granted to it pursuant to Section 3.2(b) to Affiliates and to Third Parties [***]; provided, however, that any such sublicense or subcontract shall be subject and subordinate to the terms and conditions of this Agreement and shall contain terms and conditions consistent with those in this Agreement. Notwithstanding any sublicense granted, or subcontract entered into, by a Party, such Party shall remain responsible for the performance of all obligations and observance of all terms herein under the licenses granted to it and shall cause its Affiliates, sublicensees or subcontractors, as applicable, to enable such Party to comply with all applicable terms and conditions of this Agreement. Each sublicense agreement and each material subcontract agreement entered into by a Party shall refer to this Agreement and shall be consistent with the terms and conditions of this Agreement. If a Party becomes aware of a material breach of any sublicense by a sublicensee or of a subcontract by a contractor engaged by such Party, in each case to the extent relevant to this Agreement, such Party shall promptly notify the other Party of the particulars of same and enforce the terms of such sublicense or subcontract. Any agreement between a Party and the sublicensee or subcontractor shall provide that such sublicensee or subcontractor may only use the Confidential Information of the other Party to further the objectives of this Agreement and, for sublicenses granted by Regeneron, Avalanche shall be an express third-party beneficiary of such agreement, including provisions related to use and disclosure of Confidential Information and ownership of inventions made in the course of conducting activities under this Agreement or such sublicense.

(b) Unless otherwise provided in this Agreement, Regeneron shall notify Avalanche within [***] after execution of a sublicense entered into hereunder (other than a sublicense with an Affiliate) and provide a copy of the fully executed sublicense agreement to Avalanche within the same time, which shall be treated as Confidential Information of Regeneron under Article XI. If Avalanche is required by any Upstream Agreement to provide Avalanche's upstream licensor a copy of such sublicense agreement, Regeneron shall provide to Avalanche a copy of such sublicense agreement that may be redacted to the extent permitted under such Upstream Agreement, as set forth in Section 3.4, and Avalanche shall use and/or disclose such copy solely to fulfill its obligation to such upstream licensor.

3.4 Upstream Agreements.

(a) All licenses granted by Avalanche under this Article III, to the extent they constitute sublicenses under intellectual property rights owned by a Third Party and licensed or sublicensed to Avalanche under an Upstream Agreement and licensed to Regeneron under this Article III are subject to the relevant terms and conditions of the Upstream Agreements. Any exclusive licenses that are granted under this Article III that constitute sublicenses under the Upstream Agreements are exclusive only to the extent of the nature of the license granted to Avalanche under the Upstream Agreements. Regeneron acknowledges that it has, subject to the veracity of Section 10.5(g), received copies of the Upstream Agreements prior to the Effective Date.

(b) Any sublicense granted to any Third Party under any of the [***] Agreements must include the following: (i) a statement setting forth the date upon which Avalanche's exclusive rights, privileges and licenses to the Patent Rights expire under the [***] Agreements, (ii) provisions passing through to sublicensees all of the rights of [***] under the [***] Agreements and requiring the performance of all applicable obligations due under the [***] Agreements, (iii) an indemnity from such sublicensee in favor of [***] upon the same terms as set forth in such [***] Agreement.

(c) Any sublicense granted to any Third Party under any of the [***] Agreements may provide such sublicensee the right to further sublicense only to the extent sublicensee deems such sublicenses commercially reasonable, useful or necessary for the development and/or commercialization of the Licensed Product(s) or Licensed Method(s) (solely for purposes of this Section 3.4(c), both as defined under Sections 2.2 and 2.3 of [***] Agreement [***] and [***] Agreement [***]) in accordance with the [***] Agreements, provided that (i) such further sublicenses

are subject to a written agreement, consistent with the applications terms and conditions of the [***] Agreements and (ii) each sublicensee shall, within [***] after issuing any further sublicense, furnish to Avalanche all material terms of any such sublicenses pertaining to [***] interests, including the sublicensee name and address and the indemnification of [***] as provided in the [***] Agreements.

(d) Regeneron shall, within [***] following the grant of any sublicense under a [***] Agreement, provide to Avalanche for delivery to [***] all material terms of such sublicense pertaining to [***] interests, including the sublicensee name and address, and confirmation of the foregoing indemnification. Additionally, Regeneron shall provide to Avalanche so that Avalanche can provide [***] with a copy of each sublicense agreement, which may be redacted to protect sensitive information, but must contain sufficient information to assure [***] that the sublicense is consistent with the [***] Agreement, and under no circumstances shall any financial terms necessary to calculate payments due to [***] be redacted. Regeneron consents to Avalanche's provision of this Agreement to [***] pursuant to Section 4.3 of the [***] Agreements.

(e) Pursuant to Sections 3.7 of the [***] Agreements, the Inventions (solely for purposes of this Section 3.4(e) and Section 3.4(g), as defined in the [***] Agreements), were funded in part by the U.S. government. Products covered by patent applications or patents claiming the Inventions and sold in the United States shall, to the extent required by applicable Law (including PL 96-517, as amended by PL 98-620), be substantially manufactured in the United States.

(f) Pursuant to Section 4.7 of each of the [***] Agreements, for any Patent Rights licensed to Avalanche pursuant to the [***] Agreements, upon termination of one or more of the [***] Agreements for any reason, so long as Regeneron is in compliance with this Agreement as of the date of such termination of the [***] Agreement(s), the license to the applicable Patent

Rights under Section 3.1 shall survive termination of the [***] Agreement(s) and Regeneron shall become a direct licensee of [***], provided that (i) each such direct license shall be subject to the same non-financial terms and conditions as those in the [***] Agreement except that [***] shall not be bound to perform any duties or obligations set forth in this Agreement that extend beyond the duties and obligations of [***] under the terminated [***] Agreement(s); (ii) Regeneron shall be required to make any annual maintenance payments due pursuant to Sections 5.2 of the [***] Agreements or any minimum annual royalties due pursuant to Sections 6.7 of the terminated [***] Agreements; and (iii) Regeneron shall be required to make any other monetary payment(s) that, had the terminated [***] Agreement(s) not been terminated, Avalanche would have been required to make under the [***] Agreements as a result of its license to or the activities of Regeneron.

(g) [***] expressly reserve the right to use the Inventions, Biological Material and related technology (solely for purposes of this Section 3.4(g), as defined in the [***] Agreements or with respect to [***], as defined in [***] Agreement [***]) for their educational and research purposes; to disseminate the Biological Material and other tangible materials associated with, or required to practice the Inventions and/or the [***] Patent Rights to researchers at non-profit institutions for their educational and research purposes and to permit other nonprofit institutions to use such Biological Material to practice the [***] and [***] Patent Rights for education and research purposes.

(h) Under Section 8.2 of the [***] Agreement, [***] owns all Collaboration IP (solely for purposes of this Section 3.4(h), as defined in the [***] Agreement), and such intellectual property rights are subject to the license granted to Avalanche for Avalanche Products (as that term is defined in the [***] Agreement), and Avalanche represents to Regeneron that such rights are included in the licenses granted to Regeneron pursuant to this Agreement if such rights otherwise fall within the definition of Avalanche Intellectual Property.

(i) Pursuant to the [***] Agreement, [***] may manufacture Third Party Products (solely for purposes of this Section 3.4(i), as such term is defined in Section 1.45 of the [***] Agreement), for commercialization by Third Parties.

(j) Under the [***] Agreement, the license grant to Avalanche is non-exclusive, and therefore, Third Parties may practice [***] technology licensed to Avalanche pursuant to the [***] Agreement in a manner that may conflict with Regeneron's exclusive rights pursuant to Section 3.1.

3.5 No Implied License. Except as expressly provided in this Article III or elsewhere in this Agreement, neither Party shall be deemed by this Agreement to have been granted any license or other rights to the other Party's Patents or Know-How, either expressly or by implication, estoppel or otherwise.

3.6 Retained Rights.

(a) Each Party expressly retains any rights not expressly granted to the other Party under this Article III (or otherwise under this Agreement). Nothing in Section 3.1 is intended to limit Avalanche's ability to perform its obligations under this Agreement. For purposes of clarity and without limitation, Avalanche may Develop and Commercialize product candidates or products employing the Avalanche Vector Technology that encode targets, or are Directed to any targets, other than Collaboration Targets and to grant rights to Third Parties to do so.

(b) The following additional rights are retained by Avalanche pursuant to the [***] Agreements and the [***] Agreement:

(i) The Inventions (solely for purposes of this Section 3.6(b), as defined in the [***] Agreement [***]) were sponsored part by the U.S. government, and as a consequence, pursuant to Section 1.4 of [***] Agreement [***], [***] retain title to such Inventions subject to the rights of the U.S. government under 35 U.S.C. §§ 200-212 and implementing regulations, including that [***] have granted back to the U.S. government, a non-exclusive, non-transferable, irrevocable, paid-up license to practice or have practiced such Inventions for or on behalf of the U.S. government throughout the world. These U.S. government grants are [***] ([***] Agreement [***]).

(ii) Pursuant to Section 2.1 of the [***] Agreement, Avalanche grants [***] a royalty-bearing, non-exclusive, sublicensable license under the Avalanche IP, which includes Avalanche Improvements, (i) to manufacture Avalanche Products pursuant to the Manufacturing Agreement and (ii) to develop, make, have made, use and Commercialize Third Party Products in the Field and in the Territory (solely for purposes of this Section 3.6(b), as such capitalized terms are defined in the [***] Agreement).

3.7 Rights in Bankruptcy. All licenses and rights to licenses granted under or pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "Code"), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. Each Party, as a recipient of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code. Upon commencement of a bankruptcy proceeding by or against the other Party under the Code, such party shall be entitled to a complete duplicate of, or complete access to (as such Party deems appropriate), any such intellectual property and all embodiments of such intellectual property. Such intellectual property and all embodiments thereof shall be promptly delivered to such Party (a) upon any such commencement of a bankruptcy proceeding upon written request therefor by such Party, unless Avalanche elects to continue to perform all of its obligations under this Agreement or (b) if not delivered under (a) above, upon the rejection of this Agreement by or on behalf of the other Party upon written request therefor by such Party. The foregoing provisions are without prejudice to any rights such Party may have arising under the Code or other applicable Law.

3.8 Information Transfer. Promptly after the Effective Date and during the Term, Avalanche shall disclose to Regeneron all Avalanche Intellectual Property as reasonably accessible and not previously disclosed to Regeneron, to the extent such Avalanche Intellectual Property is reasonably necessary to enable Regeneron or its Affiliates to perform Regeneron's obligations and exercise its rights granted under this Agreement; provided that Avalanche shall not be obligated to provide to Regeneron any Avalanche Intellectual Property that is necessary to

(i) create or design Products comprised of any viral capsids, either alone or in combination with Collaboration Therapeutic Molecules (other than those viral capsids that are Avalanche Vector Technology and that are created or designed by Avalanche pursuant to the Research Program), or (ii) the Manufacture of Products (other than that Avalanche Intellectual Property that is Transferred CMC Technology). Regeneron shall reimburse Avalanche for reasonable costs it incurs in transferring the Transferred CMC Technology. Promptly after the Effective Date and from time to time during the Term, Regeneron shall disclose to Avalanche (a) Research Results and (b) Know-how Controlled by Regeneron as reasonably accessible and not previously disclosed to Avalanche, to the extent such Know-How is necessary to enable Avalanche or its Affiliates to perform its obligations and exercise its rights under Sections 3.2 and 6.5.

3.9 Right of First Offer.

(a) Notwithstanding anything to the contrary in this Agreement, after the Effective Date, neither Avalanche nor its Affiliates shall enter into any agreement granting to any Third Party the right to Research, Develop, offer for sale, market, promote, sell, import and otherwise Commercialize AVA-101, except after complying with this Section 3.9; provided, however, that Avalanche and its Affiliates shall have the right to enter into agreements with contract research organizations, academic collaborators and other similar service providers working on Avalanche's or its Affiliates' behalf in connection with the Research, Development Manufacture or Commercialization by Avalanche or its Affiliates of AVA-101.

(b) Avalanche shall (i) notify Regeneron upon the completion of the [***] in the AVA-101 Phase 1 Trial, which shall constitute the [***] of such AVA-101 Phase 1 Trial, and (ii) deliver to Regeneron the Data Package as soon as practicable following the date on which the memorandum setting forth the key results of the AVA-101 Phase 1 Trial (the "Key Results Memo") is delivered to senior management of Avalanche (the "Completion Date"). Within [***] after Regeneron's receipt of the complete Data Package (the "AVA-101 Notice Period"), if Regeneron wishes to negotiate terms of a potential license to develop and commercialize AVA-101, Regeneron shall (i) provide written notice (the "AVA-101 Election Notice") to Avalanche of its desire to enter into good faith negotiations to obtain an exclusive license to research (but not to create or design products comprised of viral capsids, other than the viral capsid that is then included in AVA-101), develop, offer for sale, market, promote, sell, import, manufacture and commercialize AVA-101 (the "AVA-101 Exclusive License"), and (ii) pay to Avalanche [***] dollars ($[***]) (the "Election Payment"), which shall be [***] pursuant to any AVA-101 Exclusive License. If Regeneron notifies Avalanche in writing that it does not wish to enter into negotiations in respect of AVA-101, or Regeneron fails to notify Avalanche in writing that Regeneron wishes to enter into such negotiations and pay the Election Payment within the AVA-101 Notice Period, Regeneron shall have no further rights with respect to AVA-101, and Avalanche shall be free of its obligations to Regeneron under this Agreement with respect to AVA-101. During the AVA-101 Notice Period, Regeneron may request that Avalanche provide additional information and data related to AVA-101 and/or the Data Package and Avalanche shall promptly respond to such requests, including, upon reasonable request of Regeneron, making Avalanche's management team available to

meet with Regeneron representatives and responding to any inquiries from Regeneron; provided, however, that in no event shall the AVA-101 Notice Period be extended by the provision of any such additional materials, data or meetings of the Parties following Avalanche's delivery to Regeneron of the Data Package.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(c) If Regeneron delivers the AVA-101 Election Notice and makes the Election Payment during the AVA-101 Notice Period, the Parties shall negotiate exclusively and in good faith for a period of [***] days after Avalanche's receipt thereof (the "Negotiation Period") in an effort to agree on the principal terms of the AVA-101 Exclusive License and to execute a non-binding term sheet containing a summary of such terms. During the Negotiation Period, Avalanche shall deliver to Regeneron a good faith offer in respect of the AVA-101 Exclusive License. Prior to the expiration of the AVA-101 Notice Period and, if applicable, the Negotiation Period, Avalanche [***], (i) [***] from the [***] (except [***]), or (ii) [***], with regard to [***]. If (A) Regeneron delivers the AVA-101 Election Notice, (B) Regeneron makes the Election Payment during the AVA-101 Notice Period and (C) the Negotiation Period expires without the Parties having entered into an AVA-101 Exclusive License, then Avalanche shall be free of its obligations to Regeneron under this Agreement with respect to AVA-101[***].

(d) If (i) Regeneron delivers the AVA-101 Election Notice, (ii) Regeneron makes the Election Payment during the AVA-101 Notice Period and (iii) the Negotiation Period expires without the Parties having entered into an AVA-101 Exclusive License, then, at any time from the expiration of the Negotiation Period until the date that is [***] after expiration of the Negotiation Period, subject to Section 3.9(e), Avalanche may not enter into an agreement with a Third Party in which such Third Party is granted rights to AVA-101 with terms that are, in Avalanche's reasonable, good faith judgment, less favorable, when taken as a whole, to Avalanche than the last proposed offer from Avalanche to Regeneron to license AVA-101 during the Negotiation Period unless (A) it first offers to Regeneron the right to acquire or license AVA-101 on terms and conditions that provide Avalanche substantially the same economic value and (B) Regeneron does not accept such offer within [***].

(e) If (i) Regeneron delivers the AVA-101 Election Notice, (ii) Regeneron makes the Election Payment during the AVA-101 Notice Period and (iii) the Negotiation Period expires without the Parties having entered into an AVA-101 Exclusive License, then at any time from the expiration of the Negotiation Period until the date that is [***] after expiration of the Negotiation Period, if Avalanche reasonably determines in good faith and based on demonstrable evidence that an event has occurred [***] that has [***], then, notwithstanding Section 3.9(d), Avalanche shall have the right, but not the obligation, to offer to Regeneron the right to enter into the AVA-101 Exclusive License on terms and conditions that are [***] during the [***] by delivering to Regeneron such offer in writing along with reasonably detailed information and relevant documentation evidencing such [***] to allow Regeneron to confirm such determination. If Regeneron provides written notice, within [***], to Avalanche that Regeneron either accepts the [***] or makes a counteroffer containing terms and conditions that provide substantially the same economic value as such [***], the Parties shall negotiate exclusively and in good faith for a period of [***] after Avalanche receives such written notice from Regeneron in an effort to agree on the terms and conditions of, and execute, the AVA-101 Exclusive License. If Regeneron does not provide such written notice within such [***], or if the Parties do not execute the AVA-101 Exclusive License within such [***], Avalanche shall be free to license or sell AVA-101 to a Third Party on terms and conditions no less favorable to Avalanche than the [***].

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(f) For the avoidance of doubt, unless the Parties enter into an AVA-101 Exclusive License as provided in this Section 3.9, Avalanche shall be responsible for all operational activities, costs and expenses in respect of the Development of AVA-101, including the AVA-101 Phase 1 Trial.

3.10 No Implied Licenses. The Parties agree that no permitted use by a Party of the other Party's intellectual property rights pursuant to this Agreement shall vest in such Party any right, title or interest in or to any other of such other Party's intellectual property rights, unless expressly provided hereunder.

ARTICLE IV.

DEVELOPMENT AND COMMERCIALIZATION ACTIVITIES

4.1 Development of Products in the Field for Use in the Territory. After the exercise of the Option Right in respect of any Collaboration Target by Regeneron, and subject to the other terms and conditions of this Agreement, Regeneron shall use Commercially Reasonable Efforts to Develop a Product Directed to such Collaboration Target in the Field for use in the Territory.

4.2 Development Responsibilities of Regeneron.

(a) Regeneron shall have the sole right and decision-making authority in respect of the Development of the Products, subject to Section 4.2(c). Except as set forth in this Agreement, including Section 6.5, Regeneron shall bear all costs and expenses to Develop the Products in the Field for use in the Territory.

(b) As set forth in Section 6.6(c), Regeneron shall provide to Avalanche reports updating the status of the Development activities in respect of Products that are not Co-Funded Products.

(c) If Avalanche has exercised its Co-Funding Right for a given Collaboration Target pursuant to Section 6.5, Avalanche shall participate in the Development of Co-Funded Products Directed to such Collaboration Target through the JDC.

(d) For Co-funded Products for which Avalanche has not delivered an Opt-Out Notice pursuant to Section 6.5(b), Regeneron shall provide to Avalanche any immunology and biodistribution data collected by Regeneron in the course of Developing such Co-funded Products that could reasonably be generally applicable to Avalanche Vector Technology for use by or on behalf of Avalanche, its Affiliates or sublicensees in connection with products other than Products.

4.3 Commercialization of Products in the Field in the Territory. If Regeneron exercises the Option Right and pays the Option Fee in respect of any Collaboration Target, Regeneron shall use Commercially Reasonable Efforts to Commercialize a Product Directed to such Collaboration Target in the Field for use in the Territory.

4.4 Commercialization Responsibilities of Regeneron. Regeneron shall have the sole right and decision-making authority in respect of the Commercialization of any Product. For the avoidance of doubt, Regeneron shall have sole authority for determining and establishing the price and terms of sale (including any rebates or discounts) of Products in the Field for each country in the Territory.

ARTICLE V.

REGULATORY AFFAIRS

5.1 Ownership of Approvals, INDs and Registration Filings.

(a) Regeneron shall be responsible for, and shall have the decision-making authority in respect of, preparing, prosecuting and maintaining in its name Registration Filings, INDs and any Regulatory Approvals for Products in the Field under this Agreement. Regeneron shall own, in their entirety, (i) all clinical data and reports related to any Product, including those arising from clinical trials conducted for any Product, and (ii) all Regulatory Approvals and applications therefor, including Registration Filing, INDs, any BLA and sBLA approvals and applications; provided, however, that during any period when Avalanche is responsible for Clinical Supplies of Products under this Agreement, any drug master file for the Product Manufactured by or for Avalanche or its designee shall be owned solely by Avalanche or its Third Party designee.

(b) Each Party hereby agrees to provide a letter of authorization to the other Party in respect of all drug master files Controlled by that Party or its Affiliates with regard to material relating to Avalanche Vector Technology, for use solely in connection with the Development, Manufacture or Commercialization of Products (where Avalanche is the granting Party) or products that are not Products (where Regeneron is the granting Party) pursuant to this Agreement.

5.2 FDA Communications; Meetings.

(a) Regeneron shall be solely responsible for responding to any communications related to any Product from any Regulatory Authority. To the extent Avalanche receives written or material oral communication from the FDA or any other Regulatory Authority relating to any Regulatory Approval with respect to any Product, Avalanche shall notify Regeneron and provide to Regeneron a copy of any material written communication as soon as reasonably practicable.

(b) Regeneron shall provide Avalanche with drafts of all INDs for Products reasonably in advance of filing so that Avalanche may provide comments thereon for consideration by Regeneron. Regeneron will confer with Avalanche with respect to any such comments[***].

(c) If Avalanche has exercised its Co-Funding Right for a given Collaboration Target pursuant to Section 6.5, Regeneron shall provide to Avalanche a reasonable time period to review and comment in advance on all material written communications with Regulatory

Authorities and Registration Filings relating to such Co-Funded Products Directed to such Collaboration Target. Regeneron shall reasonably consider any such comments made by Avalanche on such filings and communications[***]. Regeneron shall also consider in good faith allowing Avalanche to nominate up to [***] representatives to participate as observers in all meetings with Regulatory Authorities relating to such Co-Funded Products. Regeneron shall provide to Avalanche a copy of all Registration Filings made for each Co-Funded Product promptly after filing such Registration Filings with the Regulatory Authorities.

5.3 Regulatory Inspection or Audit. If a Regulatory Authority desires to conduct an inspection or audit of Avalanche or any of its facilities with respect to a Product, Avalanche shall cooperate with Regeneron and the Regulatory Authority during such inspection or audit, including by allowing a representative of Regeneron to be present during the applicable portions of such inspection or audit to the extent it relates to a Product. Following receipt of the inspection or audit observations of the Regulatory Authority, Avalanche shall promptly provide a copy of such inspection or audit observations to Regeneron. Without limiting the foregoing, Avalanche (and its Third Party subcontractors) shall notify Regeneron within [***] of receipt of a notification from a Regulatory Authority of the intention of such Regulatory Authority to audit or inspect facilities used or proposed to be used for the Manufacture of Products; provided, however, that such notification shall be given no later than [***] prior to any such Regulatory Authority audit or inspection.

5.4 Recalls and Other Corrective Actions. Decisions with respect to any recall, market withdrawal or other corrective action related to any Product shall be made by Regeneron. Regeneron shall provide to Avalanche prompt written notice if Regeneron determines to conduct any recall, market withdrawal or other corrective action. The Parties shall cooperate in good faith with respect to any actions taken or public statements made in connection with any such recall or market withdrawal.

5.5 Right of Reference for Regulatory Authority Request. Regeneron hereby grants to Avalanche a right of reference and access to Non-Clinical Regulatory Documentation that is (i) related to Viral Vectors within the Avalanche Vector Technology used in connection with Products and (ii) necessary or useful to address a specific request from a Regulatory Authority related to the development, manufacture, or commercialization by Avalanche, its Affiliates or sublicensees of products that are not Products, and any products to which Avalanche obtains rights pursuant to Sections 14.6(a) and 14.6(d) (such products, collectively, “Other Products”).

ARTICLE VI.

PAYMENTS; PERIODIC REPORTS

6.1 Research Funding. Regeneron shall make a payment of $6,000,000 within [***] of the Effective Date as a pre-payment of certain Research Program Costs expected to be incurred by Avalanche in its conduct of the Research Program. At such time as the Research Program Costs incurred by Avalanche from the Effective Date exceed $[***], Regeneron shall begin reimbursing Avalanche for Research Program Costs actually incurred by Avalanche on a Quarterly basis upon receipt of the Quarterly Activities Report until the end of the Research

Term. Regeneron shall reimburse such Research Program Cost within [***] of receipt of an invoice for the Quarter. For clarity, in the Quarter in which Avalanche’s aggregate Research Program Costs first exceed $[***], Regeneron’s payment in such Quarter will be only for those Research Program Coss that exceed such amount.

6.2 Upfront Payment and Milestone Payments.

(a) Within [***] of the Effective Date , Regeneron shall make a one-time payment to Avalanche in the amount of $[***] as partial consideration for the [***], and $[***] as partial consideration for the licenses granted in Sections 3.1(a) and 3.1(b), for a total payment of $2,000,000.

(b) Subject to the terms and conditions of this Agreement, Regeneron shall make the following fully-earned, non-refundable and non-creditable milestone payments upon the achievement of specified milestones in respect of Products Directed to each Collaboration Target (each a “Milestone Payment”):

(i) [***]

For the avoidance of doubt, Regeneron shall only be obligated to make each Milestone Payment [***], regardless of whether [***].

6.3 Additional Fees.

(a) In connection with the exercise by Regeneron of each Option Right in respect of a Collaboration Target, Regeneron shall make a one-time payment to Avalanche in the amount of $[***] (the “Option Fee”).

(b) Regeneron shall pay to Avalanche a fee of $[***] for each New Target that is included as a Collaboration Target in accordance with Section 2.11 (the “New Target Nomination Fee”).

6.4 Royalty Payments.

(a) In addition to the payments set forth in Sections 6.2 and 6.3, during the applicable Payment Term, Regeneron shall, subject to this Sections 6.4, pay to Avalanche the following royalty amounts with respect to Products that are not Co-Funded Products (each, a “Royalty”). Royalty shall exclude any Additional Manufacturing Royalty, which is separately payable to Avalanche as set forth below.

(i) [***] percent ([***]%) of Net Sales of each Product in each country in the Territory [***] and [***];

(ii) [***] percent ([***]%) of Net Sales of each Product in each country in the Territory if (A) [***], and (B) Avalanche is [***], and (C) at any time after the First Commercial Sale of such Product, a [***];

(iii) [***] percent ([***]%) of Net Sales of each Product in each country in the Territory if (A) [***], and (B) Avalanche is [***] and (C) at any time after the First Commercial Sale of such Product, a [***].

(iv) [***] percent ([***]%) of Net Sales of each Product in each country in the Territory if (A) [***], and (B) Avalanche is [***];

(v) [***] percent ([***]%) of Net Sales of each Product in each country in the Territory if (A) [***], and (B) Avalanche is [***].

(b) If, in respect of any Product, Regeneron or its Affiliates or Sublicensees, acting reasonably, and on a country-by-country basis, determines that it is necessary to obtain, and does obtain, a license under Patents controlled by any Third Party and claiming [***] such Product in such country, then (except to the extent that Avalanche shall have paid its portion of Third Party License Payments) the Royalty payable to Avalanche under this Section 6.4 shall be reduced by an amount equal to [***] percent ([***]%) of any royalties, license fees or other consideration paid or payable by Regeneron or its Affiliates or Sublicensees to such Third Party (a "Royalty Offset"); provided, however, that the Royalty Offset shall not (i) reduce the Royalty payable to Avalanche by more than [***] percent ([***]%) of the Royalty otherwise owed (but for such deduction) as set forth in Sections 6.4(a) or (ii) reduce the payment of royalties to Avalanche in amounts that are, on a country by country basis, less than [***] percent ([***]%) more than the total royalties owed by Avalanche to licensors under the Upstream Agreements (without regard to any Additional Manufacturing Royalty that is otherwise payable to Avalanche) with respect to Net Sales of Products in such country.

(c) In addition to the Royalty set forth in Section 6.4(a), during the applicable Payment Term, Regeneron shall pay Avalanche the Additional Manufacturing Royalty on Net Sales of Products that are not Co-Funded Products made using or that incorporate the [***] Technology (as defined in the [***] Agreement) (including any [***] Know-How and/or a [***] Improvement (as defined in the [***] Agreement) in all countries in the Territory. The Additional Manufacturing Royalty shall not be subject to any reductions that may be otherwise set forth in this Section 6.4.

6.5 Avalanche Co-Funding Right.

(a) Avalanche has a right, exercisable in its sole discretion, to commit to fund a portion of the Development Costs (the "Co-Funding Right") for all Products directed to up to two (2) Collaboration Targets (for clarity, including for each of such two (2) Collaboration Targets, all corresponding Pathway Targets as set forth in Exhibit C) selected by Avalanche as follows:

(i) at any time until the expiration of the [***] period after Regeneron has exercised its Option with respect to a given Collaboration Target pursuant to Section 2.4(b), regardless of whether the Research Term has expired, Avalanche may deliver to Regeneron written notice (a "Co-Funding Notice") of its election to exercise the Co-Funding Right with respect to Products Directed to a given Collaboration Target;

(ii) the Co-Funding Notice shall specify the Collaboration Target and the percentage of Development Costs for which Avalanche will be responsible (the "Committed Co-Funding Percentage"), which percentage shall not exceed thirty-five percent (35%) or be less than ten percent (10%);

(iii) Avalanche shall be responsible for the amount of Development Costs for a given Co-Funded Product equal to the product obtained by multiplying (A) the Development Costs in respect of the Co-Funded Product and (B) the Committed Co-Funding Percentage for such Co-Funded Product ("Avalanche Development Cost Share") and shall pay Regeneron the Avalanche Development Cost Share in accordance with Section 6.6(b); and

(iv) if Avalanche timely delivers a Co-Funding Notice to Regeneron in respect of any Collaboration Target, then Avalanche shall thereafter be entitled to receive from, or obligated to pay to, Regeneron, as the case may be, its Co-Funded Product Share Payment for each such Co-Funded Product Directed to the Collaboration Target(s) for which Avalanche has exercised its Co-Funding Right, rather than the Royalty due to Avalanche pursuant to Section 6.4(a), subject to Section 6.5(b).

(v) If Avalanche provides a timely Co-Funding Notice for a Collaboration Target, the Parties will, within [***] after Regeneron's receipt of such notice, meet to discuss certain mechanisms of such co-funding arrangement, including: (i) the mechanisms for Regeneron to provide to Avalanche, on an ongoing basis, information to enable Avalanche to make financial plans to meet its obligations with respect thereto; and (ii) invoicing provisions to be used by each Party in connection with payments to be made to effect the Co-Funded Share Payment. If the Parties agree, they will enter into an agreement governing such arrangements (a "Co-Funding Agreement"). For the avoidance of doubt, any failure of the Parties to enter into such a Co-Funding Agreement shall not affect their rights hereunder.

(b) Notwithstanding the foregoing, either Party may opt out of its obligation to fund its share of the Development Costs for all Co-Funded Products with respect to a given Collaboration Target by delivering to the other Party written notice of such election at any time (the "Opt-Out Notice"). Any such Opt-Out Notice shall be effective no sooner than the date that is [***] after receipt of the Opt-Out Notice. The Party receiving the Opt-Out Notice shall be permitted to continue Development and Commercialization of Co-Funded Products Directed to such Collaboration Target, and the Party delivering the Opt-Out Notice shall receive a royalty, both as set forth in Exhibit H. In the event Regeneron delivers an Opt-Out Notice for a given Collaboration Target it shall be considered a termination of this Agreement with respect to such Collaboration Target pursuant to Section 14.3. For the avoidance of doubt, the delivery by Avalanche of an Opt-Out Notice shall not affect the rights granted to Regeneron under this Agreement.

(c) Notwithstanding the foregoing, a Product will not be eligible to be a Co-Funded Product if Regeneron (i) exercises its Option Right pursuant to Section 2.4(b) for a Product [***] and (ii) [***]. For each Product that [***], the milestones payable under Sections 6.2(b) shall be [***].

6.6 Activities Reports.

(a) Within [***] after the end of each Quarter, (i) each Party shall provide to the other Party a written report (in electronic form) summarizing the material activities undertaken by such Party in connection with the Research Program during such Quarter and (ii) Avalanche shall provide to Regeneron the Research Program Costs it incurred during such Quarter in connection with the Research Program Budget (the "Quarterly Activities Report").

(b) If Avalanche delivers a Co-Funding Notice to Regeneron in respect of any Product, Regeneron shall, within [***] after the end of each Quarter thereafter, provide to Avalanche a written report (in electronic form) summarizing the material activities undertaken by Regeneron in connection with the Development of such Co-Funded Product during such Quarter and the Development Costs it incurred during such Quarter in connection therewith. Regeneron shall provide Avalanche an invoice for the Avalanche Development Cost Share and Avalanche shall pay to Regeneron amounts that Avalanche owes pursuant to Section 6.5 by wire transfer of immediately available funds within [***] of receipt of invoice from Regeneron in respect thereof.

(c) Within [***] of the end of each Calendar Year during which Regeneron is Developing a Product(s), Regeneron shall provide to Avalanche a written report (in electronic form) summarizing the material activities undertaken by Regeneron in connection with the Development of Products during such Calendar Year.

6.7 Royalty and Net Profit Reports.

(a) Within [***] after the end of each Quarter following the First Commercial Sale of any Product until the Quarter after which Regeneron or its Affiliates or Sublicensees is no longer selling such Product, Regeneron shall provide to Avalanche a written report (in electronic form) that includes, for that Quarter, (i) the gross invoiced sales of such Product sold during such quarter to the extent Regeneron possesses such information, (ii) Net Sales of such Product and (iii) the calculation of the amounts owed by Regeneron pursuant to Section 6.4 in respect of the sale of such Product.

(b) In the event Avalanche has exercised its Co-Funding Right for a given Collaboration Target, the report set forth in 6.7(a) shall also include, for each Co-Funded Product Directed to such Collaboration Target, (i) COGS, (ii) Commercialization Costs, (iii) the calculation of Net Profits or Net Losses, as applicable, and (iv) the Actual Committed Co-Funding Percentage, and (v) a calculation of the amount of the Co-Funded Product Share Payment to be paid to or by Avalanche.

6.8 Term of Payments. Royalties and other amounts payable by Regeneron to Avalanche pursuant to Section 6.4, and Co-Funded Product Share Payments payable to or from Avalanche, as applicable, shall only be payable in respect of Net Sales made during the applicable Payment Term. Following expiry of each Payment Term for Products that are not Co-

Funded Products, the licenses granted to Regeneron with respect to such Product, if any, shall become fully paid-up, sublicensable, royalty-free, transferable, perpetual and irrevocable licenses continuing indefinitely and the obligation of Regeneron to pay Royalties with respect to the relevant Product shall terminate.

6.9 Payment Procedures.

(a) Remittance of payments under this Article VI shall be made by means of wire transfer of immediately available funds to a bank account designated in advance in writing by the Party receiving such payments. All amounts payable to Avalanche or to Regeneron under this

Agreement shall be paid in United States Dollars. In those cases in which the amounts due in United States Dollars is calculated based on one or more currencies other than United States Dollars, such amounts shall be converted into United States Dollars using the average spot exchange rate for the relevant currency for the Quarter during which such amounts are recorded, as such exchange rate is published by Thomson Reuters Eikon.

(b) Any Milestone Payment or additional fee owed pursuant to Sections 6.2 or 6.3 shall be paid by Regeneron to Avalanche within [***] of the event triggering the payment of such Milestone Payment or additional fee.

(c) Any Royalty (including Additional Manufacturing Royalty) shall accrue in accordance with Section 6.4 during the applicable Payment Term. Subject to Section 6.4, Royalty obligations that accrue during a Quarter shall be paid within [***] after the end of such Quarter.

(d) Any Co-Funded Product Share Payment for a Co-Funded Product shall be set forth in the report delivered by Regeneron pursuant to Section 6.7(b) and a payment shall be made by either Regeneron or Avalanche, as applicable, to the other Party to effect the intended Co-Funded Product Share Payment within [***] after the receipt of such report.

(e) The Parties shall each keep complete and accurate records of the Royalties, Net Sales, Development Costs, Research Program Costs, Net Profits and all other costs pertaining to the sale or other disposition of the Products and, as applicable, activities conducted pursuant to the Research Program, in sufficient detail to permit the other Party to confirm the accuracy of all payments due hereunder for a period of [***] years after such costs were incurred or amounts paid. Each Party shall have the right to cause an independent, national certified public accounting firm to audit such records to confirm the Royalties, Net Sales, Development Costs, Research Program Costs, Net Profits payments; provided, however, that such auditor shall not disclose either Party's Confidential Information to the other Party, except to the extent such disclosure is necessary to verify the amount of Royalties and other payments due under this Agreement. Such audits may be exercised once per calendar year, within [***] years after the applicable Payment Term to which such records relate (or applicable period when Research Program Costs are due and payable), and any data and information relating to any portion of the applicable Payment Term (or applicable period when Research Program Costs are due and payable) shall be audited only once, upon reasonable advance notice to the Party being audited and subject to audit during normal business hours. Any amounts shown to be owing by such

audits by one Party to the other shall be paid promptly. The Party requesting the audit shall bear the full cost of such audit, unless such audit discloses a deficiency in the amounts paid by the audited Party of more than [***] percent ([***]%) of the amount of payments actually owed for the period audited, in which case, the audited Party shall bear the full cost of such audit. The terms of this Section 6.9(e) shall survive any termination or expiration of this Agreement for a period of [***] years.

6.10 Taxes.

(a) Any withholding or other taxes that either Party or its Affiliates are required by Law to withhold or pay on behalf of the other Party, with respect to any payments to such other Party hereunder, shall be deducted from such payments and paid to the appropriate tax authority contemporaneously with the remittance to the other Party. The Party that is required to make such withholding will: (i) deduct those taxes from such payment, (ii) timely remit the taxes to the proper tax authority, and (iii) send evidence of the obligation together with proof of tax payment to the other Party on a timely basis following that tax payment; provided, however, that before making any such deduction or withholding, the withholding Party shall give the other Party notice of the intention to make such deduction or withholding (such notice, which shall include the authority, basis and method of calculation for the proposed deduction or withholding, shall be given at least a reasonable period of time before such deduction or withholding is required, in order for such other Party to obtain reduction of or relief from such deduction or withholding). Each Party agrees to cooperate with the other Party in claiming refunds or exemptions from such deductions or withholdings under any relevant agreement or treaty which is in effect (including furnishing any necessary documents issued by the relevant tax authorities) to ensure that any amounts required to be withheld pursuant to this Section 6.10(a) are reduced in amount to the fullest extent permitted by applicable Law. To the extent that amounts are so deducted and withheld, such deducted and withheld amounts shall be treated as having been paid to the person in respect of whom such deduction and withholding was made for all purposes of this Agreement.

(b) Notwithstanding the foregoing, if either Party [***], then any such amount [***] shall [***]; provided, however, that the [***] Party will have no obligation to [***].

(c) Each Party and any other recipient of payments under this Agreement shall provide to the other Party, at the time or times reasonably requested by such other Party or as required by applicable Law, such properly completed and duly executed documentation (for example, IRS Forms W-8 or W-9) as will permit payments made under this Agreement to be made without, or at a reduced rate of, withholding for taxes, to the extent permitted by applicable Law.

(d) If a Party [***] determines in its sole discretion exercised in good faith that it has [***], it shall [***]Notwithstanding anything to the contrary in this Section 6.10(d), in no event will the [***]. This Section 6.10(d) shall not be construed to require any [***] or any other Person.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

ARTICLE VII.

EQUITY FINANCINGS

7.1 Initial Public Offering.

(a) If, on or before the [***] anniversary of the Effective Date, Avalanche proposes to register its common stock under the Securities Act for sale to the public in a Qualified IPO, it shall give written notice to such effect to Regeneron at least [***] prior to the initial filing or confidential submission of the registration statement relating to such Qualified IPO. In such a case, Regeneron shall, contemporaneously with or immediately prior to the pricing of the Qualified IPO, purchase from Avalanche an aggregate amount of up to $10,000,000 of common stock of Avalanche (the "Private Placement Shares") at the price per share equal to the price of such common stock being sold to the public in the Qualified IPO in a private placement of restricted securities, and Regeneron hereby covenants and agrees that such sale and purchase of Private Placement Shares may be disclosed in the preliminary prospectus and final prospectus for the Qualified IPO (including disclosure on the front cover of each such prospectus) as determined by Avalanche, the underwriters for the Qualified IPO and their respective counsel. If (i) the Securities and Exchange Commission indicates to Avalanche in writing that the provisions of this Section 7.1(a) may violate the Securities Act or (ii) the rights granted hereunder would, on the basis of Securities and Exchange Commission staff comments, prevent the registration statement relating to the Qualified IPO from being declared effective (the indications and comments referred to in clauses (i) and (ii), collectively, "Adverse SEC Comments"), Avalanche hereby agrees to use its reasonable best efforts to address and resolve the Adverse SEC Comments and, if it is unable to do so, Regeneron and Avalanche hereby agree to negotiate in good faith to formulate a mutually satisfactory alternative to Regeneron's rights set forth in this Section 7.1(a).

(b) If the purchase of common stock of Avalanche by Regeneron pursuant to this Section 7.1 would result in Regeneron's record or beneficial ownership, on an as-converted basis (the "Post-IPO Ownership"), of more than [***] percent ([***]%) of the outstanding voting power of Avalanche, the amount of Regeneron's investment pursuant to this Section 7.1 shall be reduced to ensure that the Post-IPO Ownership remains below such percentage threshold; provided, however, that Regeneron may further decrease the amount of such investment such that the Post-IPO Ownership does not exceed [***] percent ([***]%) of the outstanding voting power of Avalanche if Regeneron reasonably determines based on consultation with its outside accounting experts that such lower percentage of Post-IPO Ownership is advisable for Regeneron to avoid having Avalanche become a Consolidating Entity.

(c) Regeneron acknowledges that the sale of any Private Placement Shares to Regeneron will only be made (i) in compliance with all applicable federal and state securities laws and all applicable rules and regulations promulgated by the Financial Industry Regulatory Authority (FINRA) and such other self-regulatory organizations as may be applicable in connection with the Qualified IPO or have authority over the participants therein and (ii) subject to compliance with Section 105(c) of the Jumpstart Our Business Startups Act.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(d) If at any time during which Regeneron holds any capital stock of Avalanche it is determined by Regeneron in good faith that Avalanche would be considered a Consolidating Entity, Regeneron shall have the right, on [***] notice to Avalanche, to require Avalanche to [***] as of the date on which such notice is given.

(e) Without limiting the generality of Section 15.8, references to "Avalanche" in this Section 7.1 and in the definition of "Qualified IPO" (set forth in Section 1.1) shall include any successor entity to Avalanche, whether by merger, consolidation, conversion or otherwise.

ARTICLE VIII.

MANUFACTURE AND SUPPLY

8.1 Clinical and Commercial Supplies. Unless Regeneron elects to require Avalanche to Manufacture and supply Clinical Supplies of Products pursuant to Section 2.2(e), Regeneron shall be responsible (including through a contract manufacturer selected by Regeneron) for Manufacturing all Clinical and Commercial Supplies. Upon request of Regeneron, Avalanche shall use Commercially Reasonable Efforts to, and have its contract manufacturer, transfer the Transferred CMC Technology (if not previously transferred pursuant to Section 3.8) to Regeneron, its Affiliates or its designated contract manufacturer, provided that Regeneron makes such request in a timely fashion, and provided further that such transfer shall be completed within [***] after such request. Following the last day of such [***] period until the [***] thereof, upon request of Regeneron, Avalanche shall use Commercially Reasonable Efforts to, and have its contract manufacturer, respond to any requests by Regeneron for additional information or support, provide such request is reasonable in nature and scope. Regeneron shall reimburse Avalanche for reasonable costs it incurs in transferring the Transferred CMC Technology and responding to any request for additional information or support. Regeneron may also elect to have Avalanche or Avalanche's Affiliates Manufacture some portion or all of the Clinical Supplies by providing Avalanche with written notice of such election upon reasonable advance notice as agreed by the Parties pursuant to Section 2.2(e). If Regeneron so elects, the Parties shall negotiate in good faith the agreement(s) governing the terms and conditions of such arrangement

(“Clinical Supply Agreement”), but notwithstanding anything in this Agreement to the contrary, neither Avalanche nor its Affiliates shall be obligated to perform such Manufacturing activities unless and until the Parties enter into such a Clinical Supply Agreement.

ARTICLE IX.

INTELLECTUAL PROPERTY

9.1 Ownership of Newly Created Intellectual Property. Avalanche Vector Inventions, Regeneron Vector Inventions, Other Collaboration Inventions and Therapeutic Inventions shall be owned as follows:

(a) Avalanche shall solely own all (i) [***] that are either (A) conceived [***], and (ii) [***]. Regeneron shall promptly assign and/or cause all individuals having an obligation to assign such intellectual property to Regeneron or its Affiliate (or for which ownership vests in Regeneron or its Affiliate by operation of law) to assign to Avalanche all of its or their right, title and interest in and to any [***].

(b) Regeneron shall solely own all [***]. Avalanche shall promptly assign and/or cause all individuals having an obligation to assign such intellectual property to Avalanche or its Affiliate (or for which ownership vests in Avalanche or its Affiliate by operation of law) to assign to Regeneron all of its or their right, title and interest in and to any such [***].

(c) With regards to Collaboration Inventions that are neither [***] (“Other Collaboration Inventions”), each Party shall solely own all such Collaboration Inventions and intellectual property rights therein (including Know-How, Patents and copyrights but not trademarks (as provided in Section 9.7)) that are conceived or made solely by employees, sublicensees, independent contractors, agents and consultants of such Party or its Affiliates, or other individuals having an obligation to assign such Collaboration Inventions solely to such Party or its Affiliates (or for which ownership vests in such Party or its Affiliates by operation of law) (collectively, “Sole Inventions”). Sole Inventions conceived or made solely by employees, sublicensees, independent contractors, agents and consultants of Avalanche or other individuals having an obligation to assign such inventions to Avalanche or its Affiliates (or for which ownership vests in Avalanche or its Affiliates by operation of law) are referred to herein as “Avalanche Sole Inventions.” Sole Inventions made solely by employees, sublicensees, independent contractors, agents and consultants of Regeneron or other individuals having an obligation to assign such inventions to Regeneron or its Affiliates (or for which ownership vests in Regeneron or its Affiliates by operation of law) are referred to herein as “Regeneron Sole Inventions.”

(d) With regards to Other Collaboration Inventions that are not Sole Inventions, the Parties shall jointly own all such inventions and intellectual property rights therein (including Know-How, Patents and copyrights but not trademarks as provided in Section 9.7), with each Party having an undivided interest therein (“Joint Inventions”).

(e) Notwithstanding the foregoing, the determination of whether an invention shall be solely owned by a Party or a jointly owned by a Party shall be resolved in accordance with United States patent laws.

(f) To the extent that any right, title or interest in or to any Collaboration Invention vests in a Party or its Affiliate, by operation of Law or otherwise, in a manner contrary to the agreed upon ownership as set forth in this Agreement, such Party (or its Affiliate) shall, and hereby does, irrevocably assign to the other Party such of its right, title and interest in and to such Invention and intellectual property rights therein to the other Party to the extent required to effect the foregoing ownership principles without the need for any further action by any Party.

(g) Each Party shall have an undivided interest in Joint Inventions, which may be sublicensed to Third Parties, and any ownership rights therein may be transferred, in whole or in part, by each Party (unless otherwise prohibited by this Agreement and subject to any licenses thereunder granted under this Agreement); provided, however, that (i) each Party agrees not to transfer any of its ownership interest in any of the Joint Inventions without securing the

transferee’s written agreement to be bound by the terms of this Section 9.1(g) and (ii) nothing in this Article IX shall relieve a Party or its Affiliates of their obligations under Article XI with respect to Confidential Information of any Party provided by the other Party or such other Party’s Affiliates. Neither Party hereto shall have the duty to account to the other Party for any revenues or profits obtained from any transfer of its interest in, or its use, sublicense or other exploitation of, the Joint Inventions outside the scope of this Agreement. The provisions governing Joint Inventions set forth in this Section 9.1(g) shall survive the expiration or termination of this Agreement. To the extent necessary to effect the intent of this Section 9.1(g), each Party grants to the other Party a nonexclusive, royalty-free, worldwide, sublicensable license under such Party’s interest in Joint Inventions, and all intellectual property rights therein, to make, use, sell, offer for sale and import the relevant Joint Invention, for all purposes.

9.2 Prosecution and Maintenance of Patents.

(a) Subject to Section 9.2(b), Avalanche, by counsel it selects to whom Regeneron has no reasonable objection, shall use Commercially Reasonable Efforts to prepare, file, prosecute and maintain Patents included in the Avalanche Patents in the countries mutually agreed upon by the Parties. Avalanche shall confer with and keep Regeneron reasonably informed regarding the status of such activities. Avalanche shall have the sole right to make any final decisions regarding the filing, prosecution and maintenance of the Avalanche Patents, subject to Section 9.2(b); provided that Avalanche shall consult with Regeneron a reasonable time prior to taking or failing to take action that would materially affect the scope, validity or enforceability of any such Patents in the Field (including substantially narrowing or canceling any claim without reserving the right to file a continuing or divisional Patent, abandoning any such Patent, withdrawing any such Patent, disclaiming any term of such Patent, or not filing or perfecting the filing of any such Patent in any country). Avalanche shall be solely responsible for all fees and costs incurred for the preparation, filing, prosecution and maintenance of the Avalanche Patents. For the avoidance of doubt, Avalanche shall not be responsible for legal expenses incurred pursuant to Regeneron's consultation rights pursuant to this Section 9.2. Notwithstanding the above, under Section 8.3 of the [***] Agreement, [***] has the right to conduct and control prosecution related to any Collaboration IP (as that term is defined in the [***] Agreement) created under the [***] Agreement as set forth therein. To the extent Avalanche may do so under the [***] Agreement, Avalanche shall cause [***] to consider and incorporate Regeneron's comments related to such prosecution.

(b) In the event that Avalanche desires to abandon, withdraw or otherwise discontinue the maintenance or prosecution of any Patent included in the Avalanche Patents, in the Territory, Avalanche shall provide reasonable prior written notice to Regeneron of such intention (which notice shall, in any event, be given no later than [***] prior to the next deadline for any action that may be taken with respect to such Patent with the applicable patent office). Regeneron shall have the right, but not the obligation, to assume responsibility for the prosecution and maintenance thereof in Avalanche's name at Regeneron's expense.

(c) Subject to Section 9.2(d), Regeneron, by counsel it selects to whom Avalanche has no reasonable objection, in consultation with Avalanche, shall be responsible for the preparation, filing, prosecution and maintenance of the Joint Patents, [***] and any Patents

claiming Regeneron Sole Inventions in the countries selected by Regeneron in consultation with Avalanche. Regeneron shall provide Avalanche with access to all substantive documentation, filings and communications to or from the respective patent offices in the Territory with respect to the Joint Patents, [***] and any Patents claiming Regeneron Sole Inventions at reasonable times and on reasonable notice. Regeneron shall confer with and keep Avalanche reasonably informed regarding the status of such activities. Avalanche and Regeneron shall agree in advance on a general patent prosecution strategy for Joint Patents addressing, among other things, the scope of claims to be pursued and the countries in which such Joint Patents will be filed and prosecuted[***]. Regeneron shall implement such strategy and shall have the sole right to make any day-to-day final decisions regarding the filing, prosecution and maintenance of the [***] and any Patents claiming Regeneron Sole Inventions, subject to Section 9.2(d); provided that Regeneron shall (i) not amend or cancel any claim that would materially affect the scope of any Joint Patents (including substantially narrowing or canceling any claim without reserving the right to file a continuing or divisional Patent, abandoning any such Patent, withdrawing any such Patent, disclaiming any term of such Patent, or not filing or perfecting the filing of any such Patent in any country) without the prior written consent of Avalanche (provided that, if Avalanche fails to respond to a request from Regeneron to consent to amend or cancel any such claim within fourteen (14) days of receipt of such request, Avalanche shall be deemed to have consented thereto), and (ii) consult with Avalanche a reasonable time prior to taking or failing to take action that would materially affect the scope, validity or enforceability of Patents claiming Regeneron Sole Inventions or [***] in the Field (including substantially narrowing or canceling any claim without reserving the right to file a continuing or divisional Patent, abandoning any such Patent, withdrawing any such Patent, disclaiming any term of such Patent, or not filing or perfecting the filing of any such Patent in any country). Regeneron shall be solely responsible for all fees and costs incurred for the preparation, filing, prosecution and maintenance of the [***] and any Patents claiming Regeneron Sole Inventions. For the avoidance of doubt, Regeneron shall not be responsible for legal expenses incurred pursuant to Avalanche's consultation rights pursuant to this Section 9.2.

(d) In the event that Regeneron desires to abandon, withdraw or otherwise discontinue the maintenance or prosecution of (i) the [***] or Patents claiming Regeneron Sole Inventions (in each case subject to the remainder of this Section 9.2(d)), or (ii) the Joint Patents, in the Territory, Regeneron shall provide reasonable prior written notice to Avalanche of such intention (which notice shall, in any event, be given no later than thirty (30) days prior to the next deadline for any action that may be taken with respect to such Patents with the applicable patent office) and Avalanche shall have the right, but not the obligation, to assume responsibility for the prosecution and maintenance thereof in Regeneron's name at Avalanche's expense and with counsel of Avalanche's choice. [***]

(e) If Avalanche desires to file either (A) a patent application on a Collaboration Invention that includes the sequence of a Collaboration Therapeutic Molecule or (B) a patent application on any invention that is not a Collaboration Invention where such patent application would include the sequence of a Collaboration Therapeutic Molecule that constitutes the Confidential Information of Regeneron under this Agreement, then Avalanche shall provide Regeneron, at least [***] prior to the anticipated filing date, a copy of such patent application and, upon the request of Regeneron, shall remove the sequence of a Collaboration Therapeutic Molecule from such application prior to filing.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(f) In the event Avalanche desires to file a patent application on a Collaboration Invention that includes reference to [***], Avalanche shall provide Regeneron, at least [***] prior to the anticipated filing date, a copy of such patent application and, upon the request of Regeneron, shall remove such reference to [***] from such application or delay the filing of such application for a reasonable amount of time to allow Regeneron to file a patent application covering [***], or other Collaboration Inventions in which Regeneron has an ownership interest under this Agreement. In the event Regeneron desires to file a patent application on any composition or method that is [***] or another Collaboration Invention in which Avalanche has an ownership interest under this Agreement, Regeneron shall provide Avalanche shall provide the other Party, at least [***] prior to the anticipated filing date, a copy of such patent application and, upon the request of Avalanche, shall remove such reference to any composition or method that is [***] from such application or delay the filing of such application for a reasonable amount of time to allow Avalanche to file a patent application covering [***] or other Collaboration Inventions in which Avalanche has an ownership interest under this Agreement.

(g) Each Party agrees to cooperate with the other with respect to the preparation, filing, prosecution and maintenance of Patents pursuant to this Section 9.2, including the execution of all such documents and instruments and the performance of such acts (and causing its relevant employees to execute such documents and instruments and to perform such acts) as may be reasonably necessary in order to permit the other Party to continue any preparation, filing, prosecution or maintenance of Patents, including those Patents either Party has elected not to pursue as provided for in Sections 9.2(b) and (d).

(h) All Out-of-Pocket Costs incurred in the preparation, filing, prosecution and maintenance of any Joint Patents in the Territory shall be shared equally by the Parties.

9.3 Administrative Patent Proceedings.

(a) Each Party shall notify the other within [***] of receipt by such Party of information concerning the request for, or filing or declaration of, any reissue, re-examination, post-grant review, inter partes review, interference, opposition, derivation proceeding or supplemental examination or other administrative proceeding relating to Avalanche Patents, Joint Patents, [***] or Patents claiming Sole Inventions in the Territory. The Parties shall thereafter consult and cooperate fully to determine a course of action with respect to any such proceeding. Decisions on whether to initiate or how to respond to such a proceeding, as applicable, and the course of action in such proceeding shall be made (i) with respect to Avalanche Patents by Avalanche in consultation with Regeneron and (ii) with respect to Joint Patents, [***], by Regeneron in consultation with Avalanche. Avalanche shall reimburse Regeneron for half of any fees and costs for such proceedings with respect to Joint Patents. Avalanche shall be solely responsible for all fees and costs for such proceedings with respect to the Avalanche Patents. Regeneron shall be solely responsible for all fees and costs for such proceedings with respect to the [***]. Neither party shall be responsible for legal expenses incurred pursuant to the other party's consultation rights pursuant to this Section 9.3.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) When any proceeding under Section 9.3(a) involves Patents involved in a third party infringement action under Section 9.4, any decisions on whether to initiate or how to respond to such a proceeding, as applicable, and the course of action in such proceeding shall be made by the Party controlling such third party infringement action in consultation with the other Party.

(c) All Out-of-Pocket Costs incurred in connection with any proceeding under Section 9.3(a) relating to [***] covering Co-Funded Products in the Territory shall be shared by the Parties as part of Development Costs.

9.4 Third Party Infringement.

(a) Each Party shall promptly notify the other Party if it becomes aware of any claim that any Party's activities contemplated under this Agreement, including the sale of Products, infringes, misappropriates, or otherwise violates the intellectual property rights of any Third Party in the Field. In any such instance, the Parties shall cooperate and shall mutually agree upon an appropriate course of action.

(b) Each Party shall promptly report in writing to the other Party during the Term any known or suspected infringement by a Third Party of any of the Avalanche Patents, [***], Joint Patents and Patents that claim Sole Inventions in the Field, in each case of which such Party becomes aware and shall provide the other Party with all evidence supporting or relating to such infringement in its possession. In the event either Party initiates a proceeding pursuant to this Section 9.4, the other Party shall cooperate fully and provide all assistance reasonably requested by the initiating Party, including sharing all material notices and filings in a timely manner, using Commercially Reasonable Efforts to mutually agree upon an appropriate course of action, assisting in the preparation of material court filings, cooperating in discovery and participating in any discussions concerning the settlement of such proceeding, all at the initiating Party's expense.

(c) Each of the Parties (or its Affiliate), as joint owner of the Joint Inventions and Joint Patents, agrees not to grant any licenses, covenants not to sue or otherwise transfer any rights, title or interest in such Joint Inventions and Joint Patents to any Third Parties against which any enforcement actions pursuant to this Section 9.4 have been initiated, without the prior written consent of the other joint owner(s), such consent

not to be unreasonably withheld, until such action is finally resolved, terminated or settled.

(d) Avalanche as sole owner of the Avalanche Sole Inventions and [***], agrees not to grant any licenses, covenants not to sue or otherwise transfer any rights, title or interest in such Avalanche Sole Inventions and [***] to any Third Parties against which any enforcement actions pursuant to this Section 9.4 have been commenced by Regeneron, without the prior written consent of Regeneron, such consent not to be unreasonably withheld, until such action is finally resolved, terminated or settled.

(e) Except as set forth in Section 9.4(d) and Section 9.4(f), Avalanche shall have the sole and exclusive right to initiate, control, defend and/or settle, or to take such other actions as Avalanche, in its sole discretion, deems to be proper, justified and necessary in any proceeding involving the infringement or suspected infringement of any of the Avalanche Patents ("Avalanche Patent Infringement Action"), except that the foregoing shall not limit the rights of the [***] with respect to Patent Rights licensed to Avalanche pursuant to the [***] Agreements.

(f) If Avalanche declines to initiate an Avalanche Patent Infringement Action with respect to a particular actual or threatened infringement of any issued patent within the Avalanche Patents by reason of the manufacture, use or sale of a competitive product (an "Identified Infringement in the Field") within [***] following its receipt of a written request from Regeneron that it initiate an Avalanche Patent Infringement Action with respect to such Identified Infringement in the Field, or if Avalanche otherwise fails to confirm that it shall commence an Avalanche Patent Infringement Action with respect to such Identified Infringement in the Field within such [***] period, then Regeneron may thereafter commence an Avalanche Patent Infringement Action with respect to such Identified Infringement in the Field. Regeneron shall thereafter have the sole and exclusive right to initiate, control, defend and/or settle, or to take such other actions as Regeneron, in its sole discretion, deems to be proper, justified and necessary in such Avalanche Patent Infringement Action.

(g) Subject to Section 9.4(h), Regeneron shall have the sole and exclusive right to initiate, control, defend and/or settle, or to take such other actions as Regeneron, in its sole discretion, deems to be proper, justified and necessary in any proceeding involving the infringement or suspected infringement of any of the [***] Joint Patents or Patents claiming Regeneron Sole Inventions ("Regeneron Patent Infringement Action").

(h) If Regeneron declines to initiate a Regeneron Patent Infringement Action with respect to a particular actual or threatened infringement of any issued patent within the [***] Joint Patents or Patents claiming Regeneron Sole Inventions (an "Identified Regeneron Patent Infringement") within [***] following its receipt of a written request from Avalanche that it initiate an Infringement Action with respect to such Identified Regeneron Patent Infringement, or if Regeneron otherwise fails to confirm that it shall commence a Regeneron Patent Infringement Action with respect to such Identified Regeneron Patent Infringement within such [***] period, then Avalanche may thereafter commence a Regeneron Patent Infringement Action with respect to such Identified Regeneron Patent Infringement. Avalanche shall thereafter have the sole and exclusive right to initiate, control, defend and/or settle, or to take such other actions as Avalanche, in its sole discretion, deems to be proper, justified and necessary in such Regeneron Patent Infringement Action.

(i) The Party initiating either a Regeneron Patent Infringement Action or Avalanche Patent Infringement Action in accordance with this Section 9.4 shall be solely responsible for all fees and costs associated with the respective Infringement Action. If any monetary judgment or settlement is recovered in connection with (A) any Regeneron Patent Infringement Action or Avalanche Patent Infringement Action initiated by either Party in accordance with this Section 9.4 and (B) the development, manufacture, importation or sale of a product by the infringing Third Party that is directed to the same target as a Co-Funded Product, then, after both Parties recoup actual fees, costs and reasonable expenses associated with such Infringement Action, regardless of which Party initiated the Action, the initiating Party shall retain [***]

percent ([***]%) of such recovery and the other Party shall receive [***] percent ([***]%) of such recovery. If any monetary judgment or settlement is recovered in connection with any Regeneron Patent Infringement Action or Avalanche Patent Infringement Action initiated by either Party in accordance with this Section 9.4 other than as specified above in clauses (A) and (B), then, after both Parties recoup actual fees, costs and reasonable expenses associated with such Infringement Action, regardless of which Party initiated the Action, the initiating Party shall retain [***] percent ([***]%) of such recovery and Avalanche shall receive [***] percent ([***]%) of such recovery.

(j) Notwithstanding the foregoing, the following shall first be given effect if such recovery relates to an infringement of the Patent Rights licensed to Avalanche pursuant to the [***] Agreements: Pursuant to Sections 18.3 of the [***] Agreements, if [***] bring suit without Avalanche, all recoveries from such suit will belong to [***], while any legal action brought jointly by [***] and Avalanche and participated in by both, will be at the joint expense of the parties to the [***] Agreement and all recoveries will be allocated in the following order: (i) to each party to the [***] Agreement, reimbursement of the costs and expenses in connection with the suit until all such costs and expenses are consumed for each party and (ii) any remaining amount shall be shared [***], but in no event with [***].

(k) In the event a Party initiates an action in accordance with this Section 9.4, the other Party shall provide reasonable cooperation and assistance to the initiating Party in connection with such action, including being joined as a party in an infringement action and joining any other Third Parties that can be compelled to join by the other Party, all at the initiating Party's expense.

(l) The foregoing provisions of this Section 9.4 are subject to the following provisions of the Upstream Agreements:

(i) [***], pursuant to Sections 18.2 of the [***] Agreements, have the right to voluntarily join a suit involving the Patent Rights licensed to Avalanche under the [***] Agreements, at the expense of [***], but may not thereafter commence suit against the infringer for the acts of infringement that are the subject of Avalanche's already-existing suit or any judgment rendered in that suit. Avalanche cannot join [***] in a suit initiated by Avalanche or Regeneron without [***] prior written consent, and, if such consent is given, the enforcing Party must reimburse [***] expenses thereof.

(ii) Pursuant to Sections 18.2 of the [***] Agreements, if within [***] following the effective date of the notice of infringement, the infringing activity has not been abated and Avalanche and/or Regeneron has not brought suit against the infringer, [***] may institute suit for patent infringement against the infringer. If [***] institute such suit, Avalanche may not join such suit without [***] consent and may not thereafter commence a suit against the infringer for the acts of infringement that are the subject of [***] suit or any judgment rendered in that suit.

(iii) Under Section 8.4 of the [***] Agreement, [***] and Avalanche must provide each other with prompt written notice of and any available information relating to any actual or threatened Product Infringement (as that term is defined in the [***] Agreement) of which either becomes aware. Avalanche and [***], respectively, shall have the first right, but not the obligation, to bring or control, at its own expense, any enforcement action related to such Product Infringement (as that term is defined in the [***] Agreement), if it relates to the Avalanche IP or [***] IP, respectively (each as defined in the [***] Agreement), or as such infringement relates to the Collaboration IP (as that term is defined in the [***] Agreement). Avalanche has the obligation to keep [***] informed as to all significant decisions relating to any such enforcement actions.

9.5 Notice of Alleged Breach. Avalanche shall notify Regeneron within [***] after Avalanche first learns of any breach, or alleged breach, of an Upstream Agreement or receives a notice of termination of any Upstream Agreement.

9.6 Selection of Product Trademarks. For each Product, Regeneron shall select Product Trademarks for use in the Field throughout the Territory and such Product in the Field shall be promoted and sold in the Territory under the applicable Product Trademark(s), trade dress and packaging.

9.7 Ownership of Product Trademarks. [***] shall own and retain all right, title and interest in and to Product Trademark(s), together with all associated domain names and all goodwill related thereto in all countries in the Territory.

9.8 Prosecution and Maintenance of Product Trademark(s). [***] shall use Commercially Reasonable Efforts to prosecute and maintain the Product Trademark(s) in the United States and all Ex-US Major Markets. Notwithstanding the foregoing, in the event [***] elects not to prosecute or maintain any Product Trademark(s) in any country in the Territory, [***] shall have the right to request an assignment of the Trademark and any associated goodwill, which shall not be unreasonably withheld by [***].

ARTICLE X.

REPRESENTATIONS, WARRANTIES AND COVENANTS

10.1 Due Organization, Valid Existence and Due Authorization. Each Party hereto represents and warrants to the other Party, as of the Effective Date, as follows: (a) it is duly organized and validly existing under the Laws of its jurisdiction of incorporation; (b) it has full corporate power and authority and has taken all corporate action necessary to enter into and perform this Agreement; (c) the execution and performance by it of its obligations hereunder shall not constitute a breach of, or conflict with, its organizational documents nor any other agreement by which it is bound or any requirement of applicable Laws or regulations in any material respect; (d) this Agreement is its legal, valid and binding obligation, enforceable in accordance with the terms and conditions hereof (subject to applicable Laws of bankruptcy and moratorium); (e) such Party is not prohibited by the terms of any agreement to which it is a party from granting the licenses granted to the other Party under Article III hereof; and (f) except for Avalanche's engagement of [***], no broker, finder or investment banker is entitled to any brokerage, finder's or other fee in connection with this Agreement or the transactions contemplated hereby based on arrangements made by it or on its behalf. Avalanche additionally represents and warrants to Regeneron that it has and shall continue to have the resources and financial wherewithal to fully meet its obligations under this Agreement.

10.2 Knowledge of Pending or Threatened Litigation. Each Party represents and warrants to the other Party that, as of the Effective Date, there is no claim, announced investigation, suit, action or proceeding pending or, to such Party's knowledge, threatened, against such Party before or by any Governmental Authority or arbitrator that, individually or in the aggregate, could reasonably be expected to (a) materially impair the ability of such Party to perform any of its obligations under this Agreement or (b) prevent or materially delay or materially alter the consummation of any or all of the transactions contemplated hereby. During the Term, each Party shall promptly notify the other Party in writing upon learning of any of the foregoing.

10.3 No Debarment. Each Party represents and warrants to the other Party that neither such Party nor any of its Affiliates (a) has been debarred by a Regulatory Authority, (b) is subject to debarment by a Regulatory Authority or (c) shall use, in any capacity, in connection with the activities to be performed under this Agreement, any Person who or that has been debarred, or is the subject of debarment proceedings by any Regulatory Authority. If either Party learns that a Person performing on its behalf under this Agreement has been debarred by any Regulatory Authority, or has become the subject of debarment proceedings by any Regulatory Authority, such Party shall so promptly notify the other Party and shall prohibit such Person from performing on its behalf under this Agreement.

10.4 No Consents. Neither the execution and delivery of this Agreement nor the performance hereof by each Party requires such Party to obtain any permits, authorizations or consents from any Regulatory Authority or from any other person.

10.5 Additional Avalanche Representations, Warranties and Covenants. Avalanche additionally represents, warrants and covenants to Regeneron that:

(a) Except as set forth in Schedule 10.5, Avalanche is the sole owner of the Avalanche Patents existing at the Effective Date, and to Avalanche's knowledge, its title is free and clear of all liens, security interests and other encumbrances (excluding, for clarity, license grants) and, except with respect to the Upstream Agreements, no Third Party has any right, title or interest in the Field to use in the Territory with respect to the Avalanche Patents existing at the Effective Date;

(b) Avalanche owns or possesses sufficient legal rights to all patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information and other proprietary rights and processes necessary for its business as conducted as of the Effective Date and as proposed to be conducted as of the Effective Date, without any known infringement of the rights of others, and Avalanche has no knowledge that any Third Party is infringing or misappropriating any of the Avalanche Intellectual Property as of the Effective Date;

(c) There are no judgments or settlements against or owed by Avalanche or any of its Affiliates or to Avalanche's knowledge its Third Party licensors with respect to the Avalanche Intellectual Property, and there is no action, claim, demand, suit, proceeding, arbitration, citation, summons, subpoena or investigation of any nature, civil, criminal, regulatory or otherwise, in law or in equity, pending or, to the knowledge of Avalanche, threatened against Avalanche or any of its Affiliates or to Avalanche's knowledge, its Third Party licensors, in each case in connection with the Avalanche Intellectual Property or relating to the transactions contemplated by this Agreement;

(d) There are no claims, announced investigations, actions or other proceedings pending before or, to Avalanche's knowledge, threatened by any Regulatory Authority or other government agency with respect to any facility owned or leased by Avalanche or any of its Affiliates and neither Avalanche nor its Affiliates has received written notice threatening any such claim, investigation, action or other proceeding;

(e) Neither Avalanche, its Affiliates, nor, to Avalanche's knowledge, its Third Party licensors, have misappropriated the trade secrets of any Third Party in connection with the development of the Avalanche Vector Technology for use in the Field in the Territory;

(f) Neither Avalanche nor any of its Affiliates, nor any of its or their respective officers, employees, directors, or agents, has (i) made an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority in the Territory with respect to the development of products employing the Avalanche Vector Technology in existence as of the Effective Date and in development by Avalanche, its Affiliates, or agents, (ii) failed to disclose a material fact required to be disclosed to the FDA or any other Regulatory Authority in the Territory with respect to the development of such products, or (iii) committed an act, made a statement, or failed to make a statement with respect to the development of such products, in each of (i) through (iii) that could reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto;

(g) Any Avalanche Intellectual Property that is Controlled by Avalanche pursuant to an agreement with a Third Party agreement setting forth rights to which a Third Party has any interest in any Avalanche Intellectual Property, is listed on Exhibit E. Except as set forth in the Upstream Agreements, no Third Party is entitled to any fee in connection with this Agreement or the intellectual property licenses contemplated herein;

(h) Avalanche is not, and to Avalanche's knowledge, the other parties thereto are not, in material breach, violation or default under any of the agreements listed on Exhibit E and there does not exist, to the knowledge of Avalanche, any event that, with the giving of notice or the lapse of time or both, would constitute such a breach, violation or default. Each of the agreements listed on Exhibit E (i) constitutes a valid and binding obligation of Avalanche, and (ii) to Avalanche's knowledge, is binding and enforceable against the other parties thereto. Neither Avalanche nor

any of its Affiliates has received or given any written notice, of an intention to terminate, not renew or challenge the validity or enforceability of any of the agreements listed on Exhibit E;

(i) Avalanche has provided to Regeneron, or allowed Regeneron access to review, a true and complete copy of each Upstream Agreement. Each Upstream Agreement is, to Avalanche's knowledge, in full force and effect as of the Effective Date. Avalanche shall devote Commercially Reasonable Efforts to maintain each Upstream Agreement in full force and effect and to perform its obligations thereunder in all material respects, and to keep Regeneron informed of any material development pertaining thereto that would reasonably be expected to have a material adverse effect on Regeneron's rights under this Agreement;

(j) Avalanche shall not, without the prior written approval of Regeneron, (i) amend any provision of an Upstream Agreement that would adversely impact Regeneron's rights under this Agreement, (ii) make any [***] or (iii) make any [***] that would result in the [***] (including, e.g., the [***]);

(k) Avalanche shall promptly provide to Regeneron true and correct copies of all reports generated in respect of the Upstream Agreements or received from a counterparty to any Upstream Agreements, in each case that are relevant to activities conducted under or rights and licenses granted under this Agreement, provided that Avalanche shall be permitted to redact from such reports any information that Avalanche is restricted from disclosing due to confidentiality obligations to Third Parties;

(l) The execution, delivery and performance of this Agreement shall not breach, violate or conflict with any instrument or agreement concerning Avalanche Intellectual Property; and shall not cause the forfeiture or termination or give rise to a right of forfeiture or termination of any of Avalanche Intellectual Property (or of any rights in, to or under any Avalanche Intellectual Property);

(m) Avalanche has not received any notice from any Third Party asserting or alleging that the manufacture, use, sale, offer for sale, supply or importation by Avalanche (or its Affiliates) of products employing the [***] infringes any claim of an issued Patent of any Third Party, or if and when issued, any claim within any published Patent existing as of the Effective Date of any Third Party, in the Territory in the Field;

(n) Avalanche shall make available to Regeneron, as soon as practicable, but in any event within [***] after the end of each Quarter, unaudited statements of income and cash flows for such Quarter, a statement of stockholders' equity, and an unaudited balance sheet as of the end of such Quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to year end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(o) In the event Regeneron determines in good faith that Avalanche would be considered a Consolidating Entity or that Regeneron will use the equity method accounting to account for its investment in Avalanche, Avalanche shall make available to Regeneron, as soon as practicable, but in any event within [***] after the end of each fiscal year of Avalanche, (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by a nationally recognized independent public accounting firm

selected by Avalanche; provided that if audited financial statements are not then available, Avalanche will deliver unaudited statements at the required time and will use commercially reasonable efforts to provide such audited financial statements as soon as possible following delivery of the unaudited financial statements (but in no event more than one hundred eight (180) days after delivery of such unaudited statements); and

(p) Any representations, warranties or covenants made to Avalanche's knowledge are made to the actual knowledge of [***] without conducting any special searches.

10.6 Disclaimer of Warranties. EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, CONCERNING THE SUCCESS OR POTENTIAL SUCCESS OF THE DEVELOPMENT, COMMERCIALIZATION, MARKETING OR SALE OF ANY PRODUCT IN THE FIELD. EXCEPT AS EXPRESSLY SET FORTH HEREIN, EACH PARTY EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

10.7 Mutual Covenants. Each Party hereby covenants to the other Party as of the Effective Date as follows: (a) it shall not, during the Term, grant any right or license to any Third Party in the Territory that would conflict with the rights granted to the other Party under this Agreement in any material respect, and shall not take any action that would materially conflict with or adversely affect its obligations to the other Party under this Agreement; (b) neither Party shall use the inventions claimed in the Patents or Know-How Controlled by the other Party outside the scope of the licenses and rights granted to it under this Agreement (other than pursuant to a separate agreement between the Parties permitting such

use); and (c) in the course of the Research, Development, Manufacture or Commercialization of a Product in the Field under this Agreement, it shall not knowingly use and shall not have knowingly used an employee or consultant who is or has been debarred by a Regulatory Authority or, to the best of such Party's knowledge, is or has been the subject of debarment proceedings by a Regulatory Authority.

ARTICLE XI.

CONFIDENTIALITY

11.1 Confidential Information.

(a) Each Party agrees to retain in strict confidence and not to disclose, divulge or otherwise communicate to any other Person any Confidential Information of the other Party, whether or not received prior to the Effective Date pursuant to the Mutual Confidentiality Agreement between the Parties dated [***], as amended as of [***] and [***] (the "CDA"), and further agrees not to use any such Confidential Information for any purpose, except pursuant to the terms of, and as required to carry out such Party's obligations and exercise such Party's rights, under this Agreement, or (with respect to Avalanche) to comply with its reporting obligations under any Upstream Agreements except that each Party may disclose Confidential

Information of the other Party to the officers, directors, employees, agents, accountants, attorneys, consultants, subcontractors or other representatives of the Receiving Party or its Affiliates (the "Representatives"), or to any Third Party to which the Receiving Party has a contractual obligation related to any Product, and who, in each case (a) need to know such Confidential Information for purposes of the implementation and performance by the Receiving Party of its obligations under this Agreement, (b) are permitted to use such Confidential Information only for such limited purposes, and (c) are bound by confidentiality obligations no less protective than those set forth in this Agreement. Each Party hereby agrees to use at least the same standard of care in complying with its confidentiality obligations hereunder as it uses to protect its own confidential information of comparable sensitivity and to prevent and restrain the unauthorized disclosure of such Confidential Information by any of its Representatives, but no less than a reasonable standard of care. The Receiving Party shall be liable for any breach by any of its Representatives of the restrictions set forth in this Agreement. Without limiting the generality of any of the foregoing, the Parties shall not make any disclosure of Confidential Information of the other Party that would be reasonably likely to impair the Parties' ability to obtain US or foreign patents on any patentable invention or discovery described or otherwise embodied in such Confidential Information without first complying with Section 11.2(d). The Confidential Information of each Party may include information from Third Parties disclosed by one Party to the other Party. This Article XI shall supersede the CDA in its entirety and all information exchanged thereunder shall be deemed disclosed by the relevant Party pursuant to this Agreement.

(b) Each Party may disclose Confidential Information to the extent that such disclosure of Confidential Information is made in response to a valid order of a court of competent jurisdiction or other Governmental Authority of a country or any political subdivision thereof of competent jurisdiction or, subject to Section 11.2 is otherwise required by Law or legal process (whether in connection with its ongoing disclosure obligations, in connection with a corporate activity or otherwise), including by the rules or regulations of the Commission or of any stock exchange or listing association, in each case in the opinion of counsel to the Receiving Party; provided, however, that, to the extent practicable, the Receiving Party shall first have given written notice to the Disclosing Party reasonably in advance under the circumstances to give the Disclosing Party a reasonable opportunity to quash such order or to obtain a protective order requiring that the Confidential Information or documents that are the subject of the disclosure order be held in confidence by such court or Governmental Authority or, if disclosed, be used only for the purposes for which the disclosure order was issued, and assists the Disclosing Party in its reasonable and lawful efforts to avoid or minimize the degree of such disclosure; and provided, further that, regardless of whether a disclosure order is quashed or a protective order is obtained, the Confidential Information disclosed in response to such court or Governmental Authority order shall be limited to only that information that is legally required to be disclosed in such response to such court or governmental order.

(c) Except as otherwise set forth in this Agreement, nothing herein shall be construed as giving either Party any right, title, interest in or ownership of the Confidential Information or intellectual property rights of the other Party. For the purposes of this Agreement, specific information disclosed as part of Confidential Information shall not be deemed to be in the public domain or in the prior possession of the Receiving Party merely because it is embraced by more

general information in the public domain or by more general information in the prior possession of the Receiving Party. For the avoidance of doubt, Confidential Information arising from activities conducted outside of the Research Program related to the Development, Manufacture and Commercialization of Products shall be deemed Regeneron Confidential Information, but shall be licensed to Avalanche to the extent provided in Sections 3.2 and subject to Avalanche's rights pursuant to Section 4.2(d). The obligations regarding confidentiality as set forth in this Article XI shall survive for a period of [***] following expiration or termination of this Agreement for any reason.

(d) Notwithstanding anything to the contrary contained in this Article XI, (i) except as provided in Section 9.2, each Party may disclose Confidential Information of the other Party to the extent reasonably necessary in connection with the filing of a Patent with the U.S. Patent and Trademark Office or any other patent office in the Territory, (ii) Regeneron may disclose Confidential Information of Avalanche to a Regulatory Authority as required in connection with any filing (including a Registration Filing), application or request for Regulatory Approval with respect to any Product, in each case only to the extent such information is required by such contractual obligation (provided, however, that in each case (i.e., the foregoing clauses (i)-(ii)), reasonable measures shall be taken to assure the confidential treatment of such information), and (iii) Avalanche may disclose Confidential Information to the extent reasonably necessary to comply with reporting obligations in its Upstream Agreements; provided, however, that reasonable measures shall be taken to assure the confidential treatment of such information. Notwithstanding the foregoing, neither Party shall disclose the Confidential Information of the other Party without providing such other Party with a reasonable opportunity to file a patent application related to such Confidential Information.

11.2 Research Results. Research Results shall be deemed Confidential Information of both Regeneron and Avalanche subject to the following:

(a) Regeneron may use Research Results [***]. Regeneron may disclose Research Results to Third Parties in connection with the research, development, manufacturing and/or commercialization of Products, provided that any such disclosure is subject to confidentiality restrictions at least as restrictive as those contained herein.

(b) Avalanche may use Research Results for (i) conducting its activities related to this Agreement and (ii) [***]. Avalanche may disclose Platform Research Results to Third Parties provided that (x) such disclosure is subject to confidentiality restrictions at least as restrictive as those contained herein, (y) the identity of any Collaboration Target, Collaboration Therapeutic Molecule, or Product has been removed, and (z) any mention of Regeneron in relation to such Research Results has been removed.

(c) Avalanche shall use Commercially Reasonable Efforts to include in any future collaboration agreements with Third Parties that the results of research from such collaboration that relate to Avalanche Vector Technology may be provided to third parties (including Regeneron), provided that (x) such disclosure is subject to customary confidentiality restrictions, (y) the identity of products may be removed, and (z) the name of such third party in relation to such results may be removed.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(d) If Regeneron desires to disclose any Research Results in journals, publications or presentations, Regeneron shall provide Avalanche an advance copy of any proposed publication or summary of a proposed oral presentation relating to the Research Results prior to submission for publication or disclosure. Avalanche shall have a reasonable opportunity to (i) recommend any changes it reasonably believes are necessary to prevent any specific, material adverse effect to it or a Product as a result of the publication or disclosure (such recommendation of changes to include a description of the specific material adverse effect) or to prevent disclosure of its Confidential Information [***] and (ii) file a patent application related to such Research Results. Regeneron shall remove any such Avalanche Confidential information and consider any other such recommended changes in good faith, and shall not publish any such Research Results if Avalanche requests a delay of up to [***] to enable it to file Patent applications on Collaboration Inventions until expiration of such [***] period.

(e) If Avalanche desires to disclose any Platform Research Results in journals, publications or presentations, Avalanche shall provide Regeneron an advance copy of any proposed publication or summary or a proposed oral presentation relating to the Platform Research Results prior to submission for publication or disclosure. Regeneron shall have a reasonable opportunity to (i) recommend any changes it reasonably believes are necessary to prevent any specific, material adverse effect to it or a Product as a result of the publication or disclosure (such recommendation of changes to include a description of the specific material adverse effect) or to prevent disclosure of its Confidential Information other than Platform Research Results and (ii) file a patent application related to such Platform Research Results. Avalanche shall [***].

(f) The disclosing Party shall recognize the other Party, and any affiliated authors, in all such publications or presentations if appropriate based on customary standards of scientific authorship.

(g) Notwithstanding the foregoing, the following shall apply with respect to publications relating to the subject matter of the Upstream Agreements: Pursuant to Sections 3.3 of [***] Agreement [***] and [***] Agreement [***], the [***] shall have the right to publish any and all technical data resulting from any research performed by the [***] relating to the Inventions and the Biological Material (both as defined in [***] Agreement [***] and [***] Agreement [***]).

11.3 Disclosure of the Agreement. Either Party may disclose the terms of this Agreement if such Party reasonably determines, based on advice from its counsel, that it is required to make such disclosure by applicable Law or legal process (whether in connection with its ongoing disclosure obligations, in connection with a corporate activity or otherwise), including by the rules or regulations of the Commission or of any stock exchange or listing association. In such event, the Disclosing Party shall provide prior notice of such intended disclosure to the other Party sufficiently in advance to enable the other Party to seek confidential treatment or other protection for such information, unless the Disclosing Party was and is prevented by applicable Law or such legal process from providing such notice, and in any event the Disclosing Party shall disclose only such terms of this Agreement as it reasonably determines, based on advice from its counsel, are required by applicable Law or legal process to be disclosed (whether in connection with its ongoing disclosure obligations, in connection with a corporate activity or otherwise).

11.4 Injunctive Relief. Each Party acknowledges that damages resulting from breach of this Article XI would not be an adequate remedy and that in the event of any such disclosure, or any indication of an intent to disclose information in breach of this Article XI, the other Party shall be entitled to injunctive relief or other equitable relief, in addition to any and all remedies available at law or in equity, including the recovery of damages and reasonable attorneys' fees, and in any such action for equitable relief in a court of competent jurisdiction, the Parties shall not assert as a defense that there is an adequate remedy at law.

11.5 Press Release. The Parties hereby agree to publicize the execution of this Agreement by issuing jointly the press release attached hereto as Exhibit F. After such initial press release, (i) neither Party shall issue a press release or public announcement relating to a Co-Funded Product without the prior written approval of the other Party, which approval shall not be unreasonably withheld or delayed, and (ii) Avalanche shall not issue a press release or public announcement relating to any Product that is not a Co-Funded Product without the prior written consent of Regeneron; provided, however, that either Party may issue a press release or public announcement as required by applicable Law, including by the rules or regulations of the Commission or similar regulatory agency in a country other than the United States or of any stock exchange or listing entity, provided, further, that such Party shall provide the other Party any such press release in draft form and consider in good faith any comments in respect thereof from such other Party. Except as otherwise provided herein, each Party agrees not to use the name, trademark, service mark, or design registered to the other Party or its Affiliates in any publicity, promotional, or advertising material, without prior written approval of the other Party. The rights of approval and notice granted to a Party in accordance with this Section 11.5 shall only apply for the first time that specific information is to be disclosed, and shall not apply to the subsequent disclosure of substantially similar information that has previously been disclosed.

ARTICLE XII.

INDEMNITY

12.1 Indemnity and Insurance.

(a) Regeneron agrees to indemnify, defend and hold harmless Avalanche and its Affiliates, and their respective agents, directors, officers and employees and their respective successors and permitted assigns (the "Avalanche Indemnitees") from and against any and all losses, costs, damages, fees or expenses ("Losses") incurred by an Avalanche Indemnitee to the extent arising out of any claim, suit, demand, investigation or proceeding brought by a Third Party based on (i) any breach of any representation, warranty, covenant or obligation by or of Regeneron under this Agreement, (ii) Regeneron's gross negligence or willful misconduct or (iii) except to the extent of any fee or expense sharing provision in Article IX or as otherwise provided for in the definitions of Commercialization Costs or Development Costs, the Development, Manufacture or Commercialization of Products by or on behalf of Regeneron, its Affiliates, Sublicensees, distributors, agents, manufacturers or other independent contractors (other than Avalanche and its Affiliates, sublicensees, distributors, agents, manufacturers or

independent contractors pursuant to Section 3.3). The foregoing indemnification shall not apply to the extent that any Losses arise out of (A) a breach of any of Avalanche's representations, warranties, covenants and/or obligations under this Agreement or the Clinical Supply Agreement, (B) Avalanche's gross negligence or willful misconduct or (C) activities conducted by or on behalf of Avalanche, its Affiliates, Sublicensees, distributors, agents, manufacturers or other independent contractors with respect to Products that are developed, manufactured or commercialized pursuant to Sections 14.6(a)(v) and 14.6(d)(iv).

(b) Avalanche agrees to indemnify, defend and hold harmless Regeneron, its Affiliates, and their respective agents, directors, officers and employees and their respective successors and permitted assigns (the "Regeneron Indemnitees") from and against any and all Losses incurred by a Regeneron Indemnitee to the extent arising out of or in connection with any claim, suit, demand, investigation or proceeding brought by a Third Party based on (i) any breach of any representation, warranty, covenant or obligation by or of Avalanche under this Agreement, (ii) Avalanche's gross negligence or willful misconduct, (iii) any breach of any representation, warranty, covenant or obligation by or of Avalanche under any Upstream Agreement, or (iv) activities conducted by or on behalf of Avalanche, its Affiliates, Sublicensees, distributors, agents, manufacturers or other independent contractors with respect to Products that are developed, manufactured or commercialized pursuant to Sections 14.6(a)(v) and 14.6(d)(iv). The foregoing indemnification shall not apply to the extent that any Losses arise out of (A) a breach of any of Regeneron's representations, warranties, covenants and/or obligations under this Agreement, or (B) Regeneron's gross negligence or willful misconduct.

(c) During the Term and for a period of [***] after the expiration of this Agreement or the earlier termination thereof, each Party shall obtain and/or maintain (either directly or as a named insured on a Third Party insurance policy or policies), at its sole cost and expense, product liability insurance (including any self-insured arrangements) and general liability insurance (including contractual liability insurance) in amounts that are reasonable and customary for activities of the nature conducted by such party with respect to comparable products in the pharmaceutical

industry for companies of comparable size and activities.

12.2 Indemnity Procedure. The Party entitled to indemnification under this Article XII (an “Indemnified Party”) shall notify the Party potentially responsible for such indemnification (the “Indemnifying Party”) within five (5) Business Days of becoming aware of any claim or claims asserted or threatened against the Indemnified Party which could give rise to a right of indemnification under this Agreement; provided, however, that the failure to give such notice shall not relieve the Indemnifying Party of its indemnity obligation hereunder except to the extent that such failure materially prejudices its rights hereunder.

(a) If the Indemnifying Party has acknowledged in writing to the Indemnified Party the Indemnifying Party’s responsibility for defending such claim, the Indemnifying Party shall have the right to defend, at its sole cost and expense, such claim by all appropriate proceedings, which proceedings shall be prosecuted diligently by the Indemnifying Party to a final conclusion or settled at the discretion of the Indemnifying Party; provided, however, that the Indemnifying Party may not enter into any compromise or settlement unless (i) such compromise or settlement includes as an unconditional term thereof, the giving by each claimant or plaintiff to the

Indemnified Party of a release from all liability in respect of such claim; and (ii) such compromise or settlement does not (A) include any admission of legal wrongdoing by the Indemnified Party, (B) require any payment by the Indemnified Party that is not indemnified hereunder or (C) result in the imposition of any equitable relief against the Indemnified Party. If the Indemnifying Party does not elect to assume control of the defense of a claim or if a good faith and diligent defense is not being or ceases to be materially conducted by the Indemnifying Party, the Indemnified Party shall have the right, at the expense of the Indemnifying Party, upon [***] prior written notice to the Indemnifying Party of its intent to do so, to undertake the defense of such claim for the account of the Indemnifying Party (with counsel reasonably selected by the Indemnified Party and approved by the Indemnifying Party, such approval not unreasonably withheld or delayed); provided that the Indemnified Party shall keep the Indemnifying Party apprised of all material developments with respect to such claim and promptly provide the Indemnifying Party with copies of all correspondence and documents exchanged by the Indemnified Party and the opposing party(ies) to such litigation.

(b) The Indemnified Party may participate in, but not control, any defense or settlement of any claim controlled by the Indemnifying Party pursuant to this Section 12.2 and shall bear its own costs and expenses with respect to such participation; provided, however, that the Indemnifying Party shall bear such costs and expenses if the Indemnifying Party’s counsel may not properly represent both the Indemnifying and the Indemnified Party.

(c) The amount of any Losses for which indemnification is provided under this Article XII shall be reduced by any insurance proceeds received, and any other amount recovered if any, by the Indemnified Party in respect of any such Losses; provided that for clarity the Indemnified Party shall have no obligation to seek such insurance proceeds or recoveries.

(d) If an Indemnified Party receives an indemnification payment pursuant to this Article XII and subsequently receives insurance proceeds from its insurer with respect to the Losses in respect of which such indemnification payment(s) was made, the Indemnified Party shall promptly pay to the Indemnifying Party an amount equal to the difference (if any) between (i) the sum of such insurance proceeds or other amounts received, and the indemnification payment(s) received from the Indemnifying Party pursuant to this Article XII for any Losses and (ii) the amount necessary to fully and completely indemnify and hold harmless the Indemnified Party from and against such Losses. In no event, however, shall such refund ever exceed the Indemnifying Party’s indemnification payment(s) to the Indemnified Party for such Losses under this Article XII. For clarity, the Indemnified Party shall have no obligation to seek such insurance proceeds or other amounts or recoveries, and the foregoing shall apply only if such proceeds or recoveries are in fact received by the Indemnified Party.

ARTICLE XIII.

FORCE MAJEURE

Neither Party shall be held liable or responsible to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party including embargoes, acts of terrorism, acts of war

(whether war be declared or not), insurrections, strikes, riots, earthquakes, civil commotions or acts of God (“Force Majeure”). Such excuse from liability and responsibility shall be effective only to the extent and duration of the event(s) causing the failure or delay in performance and provided that the affected Party has not caused such event(s) to occur. The affected Party shall notify the other Party of such Force Majeure circumstances as soon as reasonably practical and shall make Commercially Reasonable Efforts to mitigate the effects of such Force Majeure circumstances.

ARTICLE XIV.

TERM AND TERMINATION

14.1 Term/Expiration of Term.

(a) For each Collaboration Target and Products Directed to such Collaboration Target, the term of this Agreement (the "Term") shall commence on the Effective Date and shall continue and remain in effect, unless earlier terminated as provided under Sections 14.2, 14.3, 14.4 or 14.5:

(i) Until the first to occur of (A) the expiration of the Option Period, if Regeneron has not exercised its Option right during such time period and (B) the expiration of the Research Term, if the Option Period has not commenced prior to such expiration date; and

(ii) if Regeneron exercises its Option Right and pays to Avalanche the applicable Option Fee during the Option Period, until expiration of all payment obligations of Regeneron under this Agreement, subject to Section 14.7.

(b) For the avoidance of doubt, the licenses granted hereunder shall not be terminated solely by the expiration of any Payment Term.

(c) Upon expiration of the Term according to Section 14.1(a), except as set forth in this Agreement, all licenses and rights with respect to Products shall automatically terminate and revert to the granting Party.

14.2 Termination for Material Breach. If either Party commits a material breach or material default in the performance or observance of any of its obligations under this Agreement, and such breach or default continues without cure for a period of sixty (60) days after delivery by the other Party of written notice reasonably detailing such breach or default, then the non-breaching or non-defaulting Party shall have the right to terminate this Agreement, with immediate effect, by giving written notice to the breaching or defaulting Party. The Parties shall retain all rights and remedies (at law or in equity) in respect of any breach hereof.

14.3 Termination for Convenience. Regeneron may in its sole discretion, and upon thirty (30) days' written notice to Avalanche terminate (i) the rights and obligations of the Parties set forth in this Agreement on a Collaboration Target-by-Collaboration Target basis or (ii) this Agreement in its totality.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

14.4 Termination for Insolvency. This Agreement shall automatically terminate upon the initiation of any proceeding in bankruptcy, reorganization, dissolution, liquidation or arrangement for the appointment of a receiver or trustee to take possession of the assets of either Party or similar proceeding under the law for release of creditors by or against a Party or if a Party shall make a general assignment for the benefit of its creditors. All licenses and rights to licenses granted under or pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the Code, licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. Each Party, as the licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code. The Parties agree that all intellectual property rights licensed hereunder, including, without limitation, any patents or patent applications in any country of a party covered by the license grants under this Agreement, are part of the "intellectual property" as defined under Section 101(52) of the Code subject to the protections afforded the non-terminating Party under Section 365(n) of the Code, and any similar law or regulation in any other country. The Parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against a Party or its Affiliates under the Code or analogous provisions of applicable Law outside the United States, the other Party will be entitled to a complete duplicate of (or complete access to, as appropriate) such intellectual property and all embodiments of such intellectual property, which, if not already in such other Party's possession, will be promptly delivered to it upon such other Party's request therefor. Any agreements supplemental hereto will be deemed to be "agreements supplementary to" this Agreement pursuant to Section 365(n) of the Code.

14.5 Termination for Challenge of Avalanche Patents. Prior to its expiration, Avalanche may terminate this Agreement in its entirety by [***] written notice to Regeneron if Regeneron, its Affiliates or a Third Party on behalf of Regeneron (and with the actual knowledge of Regeneron) challenges the validity, scope or enforceability of any Avalanche Patent, provided that Regeneron or its Affiliates do not withdraw such challenge within such [***] period. Regeneron shall include provisions in all agreements under which a Sublicensee obtains a sublicense under any Avalanche Patent providing that if the Sublicensee challenges the validity or enforceability of any such Avalanche Patent under which the Sublicensee is sublicensed, Regeneron may terminate such sublicense, and Regeneron shall enforce such provision if such Sublicensee takes any such action. Pursuant to Section 3.4 of the [***] Agreements, a [***] Agreement, and Regeneron's sublicense thereunder, terminates immediately if Avalanche files a claim that in any way asserts that any of [***] Patent Rights (as defined in the applicable [***] Agreement), is invalid or unenforceable where the filing is by Avalanche, by a Third Party on behalf of Avalanche (and with the actual knowledge of Avalanche), or a Third Party at the written urging of Avalanche.

14.6 Effect of Termination.

(a) Upon the termination of this Agreement by Avalanche in accordance with Section 14.2, 14.4 or 14.5:

(i) all rights and licenses granted to Regeneron pursuant to this Agreement shall automatically and immediately terminate;

(ii) the licenses set forth in Section 3.2(a) shall immediately terminate; and

(iii) any sublicense granted by Regeneron under the license granted to Regeneron pursuant to Section 3.1(b), if granted prior to such termination in compliance with this Agreement, in respect of such Collaboration Target, shall remain in full force and effect pursuant to the terms thereof, notwithstanding such termination, provided that such Sublicensee is then in good standing and has not contributed to the breach or other circumstance that led to the termination, but all monies and other obligations due under such sublicense to Regeneron shall become immediately due to Avalanche instead of Regeneron, and Regeneron shall have no further obligations under such sublicense agreement; provided, however that Avalanche shall have no obligation to perform any activities under such sublicense that extend beyond Avalanche's obligations under this Agreement;

(iv) Section 5.5 shall survive with respect to Other Products; and

(v) if Avalanche shall have exercised its Co-Funding Right, then Avalanche shall automatically and without any further action required have the rights in respect of each Collaboration Target for which it exercised its Co-Funding Right, on the financial and other terms, set forth on Exhibit H.

(b) Upon the termination of this Agreement by Regeneron in accordance with Section 14.2 (other than for a breach of Section [***], Articles [***], [***] or [***] that substantially impairs Regeneron's rights under this Agreement taken as a whole) or 14.4:

(i) the rights and licenses under the Avalanche Intellectual Property granted to Regeneron pursuant to Section 3.1 in respect of Products Directed to such Collaboration Target (and any sublicenses granted by Regeneron in respect thereof) shall continue in full force and effect subject to the payment obligations of Regeneron set forth in Article VI, [***]; and

(ii) the license set forth in Section 3.2(a) shall immediately terminate in respect of all Collaboration Targets.

(c) Upon the termination of this Agreement by Regeneron in accordance with Section 14.2 for breach by Avalanche of Section [***], Articles [***], [***] or [***] that substantially impairs Regeneron's rights under this Agreement taken as a whole):

(i) the rights and licenses under the Avalanche Intellectual Property granted to Regeneron pursuant to Section 3.1 in respect of Products Directed to such Collaboration Target (and any sublicenses granted by Regeneron in respect thereof) shall continue in full force and effect subject to the payment obligations of Regeneron set forth in Article VI, [***]; and

(ii) all licenses set forth in Section 3.2(a) shall immediately terminate in respect of all Collaboration Targets.

(d) If Regeneron terminates this Agreement in respect of any Collaboration Target for convenience pursuant to Section 14.3, then

(i) the rights and licenses under the Avalanche Intellectual Property granted to Regeneron pursuant to Section 3.1 in respect of such Collaboration Target shall automatically and immediately terminate;

(ii) the license set forth in Section 3.2(a) shall immediately terminate in respect of such Collaboration Target;

(iii) Section 5.5 shall survive as to Other Products; and

(iv) if Avalanche shall have exercised its Co-Funding Right in respect of the Collaboration Target against which the Agreement has been terminated, then Avalanche shall automatically and without any further action required have the rights in respect of such Collaboration Target, on the financial and other terms, set forth on Exhibit H, and such termination will be considered a Regeneron Opt-Out Notice with respect to such Collaboration Target under Section 6.5(b).

14.7 Survival of Rights and Obligations.

(a) The obligations and rights of the Parties under the penultimate sentence of Section 2.10, Sections 3.1(d), 3.2(b), 3.3 (to the extent relevant to Section 3.1(d)), 3.4 (to the extent relevant to any sublicenses granted to Regeneron under such Upstream Agreements that survive expiration or termination), 3.5, 3.6, 3.7, 3.8 (only to the extent necessary for a Party to exercise its rights surviving the expiration or termination of this Agreement), 3.10, 5.1(b) (only to the extent necessary for a Party to exercise its rights surviving the expiration or termination of this Agreement), 5.3 (only to the extent necessary for a Party to exercise its rights surviving the expiration or termination of this Agreement), 5.4 (only to the extent

necessary for a Party to exercise its rights surviving the expiration or termination of this Agreement), 5.5 (to the extent provided in Section 14.6), 6.7 through 6.10 (to the extent relevant to payment obligations that survive expiration or termination of this Agreement), 9.1, 9.7 (only if Regeneron retains its licenses for Products after such expiration or termination), 10.6, 11.1, 11.2(a), (b), (d), (e) and (g), 11.3, 11.4, 14.6 (including the provisions set forth on Exhibit H, as applicable) and 14.7, and Articles I, XII (to the extent applicable to Losses arising during the Term or thereafter to the extent applicable to a Party's retained rights following expiration or termination of this Agreement), XIII, and XV shall survive expiration of the Term or termination of this Agreement (including when the Term expires in respect of any Collaboration Target and Products Directed to such Collaboration Target or this Agreement is terminated in respect of any Collaboration Target). For sake of clarity, following the expiration of the Term pursuant to Section 14.1(a)(ii) for any Collaboration Target or Product Directed to such Collaboration Target, the licenses granted to Regeneron with respect to such Product, if any, shall become fully paid-up, sublicensable, royalty-free, transferable, perpetual and irrevocable licenses continuing indefinitely.

(b) The termination or expiration of this Agreement for any reason shall be without prejudice to any rights which shall have accrued to the benefit of either Party prior to such termination or expiration, including any damages arising from any breach hereunder. Such termination or expiration shall not relieve either Party from obligations which are expressly indicated to survive termination or expiration of this Agreement.

ARTICLE XV.

MISCELLANEOUS

15.1 Governing Law; Submission to Jurisdiction; Waiver of Jury Trial. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York without reference to any rules of conflicts of laws. The Parties hereby consent to the exclusive jurisdiction of the Federal and State courts of New York and hereby waive any objection to venue or forum laid therein. The Parties hereby agree that service of process by certified mail, return receipt requested, shall constitute personal service for all purposes hereof. The Parties expressly reject the application of the United Nations Convention on Contracts for the International Sale of Goods and all implementing legislation thereunder. EACH PARTY HEREBY WAIVES ITS RIGHT TO A TRIAL BY JURY OF ANY CLAIM OR CAUSE OF ACTION BASED UPON, ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, IN ANY ACTION, PROCEEDING OR OTHER LITIGATION OF ANY TYPE BROUGHT BY ANY PARTY AGAINST THE OTHER, WHETHER WITH RESPECT TO CONTRACT CLAIMS, TORT CLAIMS OR OTHERWISE. THIS WAIVER SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS TO THIS AGREEMENT.

15.2 Waiver. Waiver by a Party of a breach hereunder by the other Party shall not be construed as a waiver of any subsequent breach of the same or any other provision. No delay or omission by a Party in exercising or availing itself of any right, power or privilege hereunder shall preclude the later exercise of any such right, power or privilege by such Party. No waiver shall be effective unless made in writing with specific reference to the relevant provision(s) of this Agreement and signed by a duly authorized representative of the Party granting the waiver.

15.3 Entire Agreement. This Agreement contains the complete understanding of the Parties with respect to the subject matter hereof and thereof and supersedes all prior understandings and writings relating to the subject matter hereof and thereof.

15.4 Amendments. No provision in this Agreement shall be supplemented, deleted or amended except in a writing executed by an authorized representative of each of Avalanche and Regeneron.

15.5 Headings. Headings in this Agreement are for convenience of reference only and shall not be considered in construing this Agreement.

15.6 Severability. If, under applicable Laws, any provision hereof is invalid or unenforceable, or otherwise directly or indirectly affects the validity of any other material provision(s) of this Agreement in any jurisdiction ("Modified Clause"), then, it is mutually agreed that this Agreement shall endure and that the Modified Clause shall be enforced in such jurisdiction to the maximum extent permitted under applicable Laws in such jurisdiction; provided that the Parties shall consult and use all reasonable efforts to agree upon, and hereby consent to, any valid and enforceable modification of this Agreement as may be necessary to avoid any unjust enrichment of either Party and to match the intent of this Agreement as closely as possible, including the economic benefits and rights contemplated herein.

15.7 Registration and Filing of the Agreement. To the extent that a Party concludes in good faith that it is or may be required to file or register this Agreement or a notification thereof with any Governmental Authority in accordance with applicable Laws, such Party may do so subject to the provisions of Section 11.3. The other Party shall promptly cooperate in such filing or notification and shall promptly execute all documents reasonably required in connection therewith. The Parties shall promptly inform each other as to the activities or inquiries of any such Governmental Authority relating to this Agreement, and shall promptly cooperate to respond to any request for further information therefrom.

15.8 Assignment. This Agreement shall be binding upon and inure to the benefit of the Parties and their successors and permitted assigns; provided, however, that neither Party shall assign any of its rights and obligations hereunder without the prior written consent of the other Party, except (i) to a purchaser of all or substantially all of the assets or business of such Party to which this Agreement relates, or to the successor resulting from any merger, acquisition, consolidation or similar transaction with such Party and (ii) to an Affiliate; provided, however, that (A) such assignment to an Affiliate shall not relieve such Party of its obligations herein and (B) that in each case assigning Party shall provide the other Party with written notice of such assignment. In the event of any assignment described in subsection (i), no intellectual property rights of the acquiring corporation shall be included in the technology licensed to the other Party hereunder, unless such intellectual property rights arise as a result of the performance of this Agreement by such corporation after such transaction becomes effective. Any assignment or attempted assignment by either Party in violation of the terms of this Section 15.8 shall be null and void.

15.9 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and permitted assigns, and shall also inure to the benefit of the Regeneron Indemnitees and Avalanche Indemnitees.

15.10 Affiliates. Each Party may perform its obligations hereunder through one or more of its Affiliates. Each Party absolutely, unconditionally and irrevocably guarantees to the other Party prompt performance when due and at all times thereafter of the responsibilities, liabilities, covenants, warranties, agreements and undertakings of its Affiliates pursuant to this Agreement. Without limiting the foregoing, neither Party shall cause or permit any of its Affiliates to commit any act (including any act or omission) which such Party is prohibited hereunder from committing directly. If an Affiliate of a Party shall engage in the Development, Manufacture or Commercialization of a Product or shall otherwise license its Know-How under this Agreement, then such Party shall enter into a separate agreement with such Affiliate pursuant to which the obligations of such Party hereunder shall be binding on such Affiliate and which shall provide that the other Party is a third-party beneficiary of such agreement entitled to enforce such agreement and this Agreement against such Affiliate.

15.11 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but which together shall constitute one and the same instrument.

15.12 Third-Party Beneficiaries. None of the provisions of this Agreement shall be for the benefit of or enforceable by any Third Party, including any creditor of any Party hereto. No Third Party shall obtain any right under any provision of this Agreement or shall by reason of any such provision make any claim in respect of any debt, liability or obligation (or otherwise) against any Party hereto. Notwithstanding the foregoing, Article XII is intended to benefit, in addition to the Parties, the other Regeneron Indemnitees and Avalanche Indemnitees as if they were parties hereto, but this Agreement is enforceable only by the Parties.

15.13 Notices. Any notices given under this Agreement shall be in writing, addressed to the Parties at the following addresses, and delivered by person, by facsimile (with electronic confirmation of successful transmittal), or by FedEx or other reputable international courier service. Any such notice shall be deemed to have been given as of the day of personal delivery, one (1) business day after the date sent by facsimile or on the day of attempted or successful delivery to the other Party confirmed by the courier service.

(a) If to Avalanche:

Avalanche Biotechnologies, Inc.

1035 O’Brien Drive

Menlo Park, CA 94025

Attention: CEO

Copy: General Counsel

With copy to:

Latham & Watkins

140 Scott Drive

Menlo Park, CA, 94025

Attn: Judith Hasko

Email: judith.hasko@lw.com

Fax: 650-463-2600

(b) If to Regeneron:

Regeneron Pharmaceuticals, Inc.

777 Old Saw Mill River Road

Tarrytown, New York 10591

U.S.A.

Attention: President

Copy: General Counsel

With copy to:

Orrick, Herrington & Sutcliffe LLP

51 West 52nd Street

New York, NY 10019

Attention: R. King Milling, Esq.

Fax: 212-506-5151

15.14 Relationship of the Parties. Each Party shall bear its own costs incurred in the performance of its obligations hereunder without charge or expense to the other Party except as provided for in this Agreement. Neither Avalanche nor Regeneron shall have any responsibility for the hiring, termination or compensation of the other Party's employees or for any employee compensation or benefits of the other Party's employees. No employee or representative of a Party shall have any authority to bind or obligate the other Party to this Agreement for any sum or in any manner whatsoever, or to create or impose any contractual or other liability on the other Party without said Party's approval. For all purposes and notwithstanding any other provision of this Agreement to the contrary, Regeneron's legal relationship under this Agreement to Avalanche, and Avalanche's legal relationship under this Agreement to Regeneron, shall be that of an independent contractor. Nothing in this Agreement shall be construed to establish a relationship of partners or joint ventures between the Parties or any of their respective Affiliates.

15.15 Limitation of Losses. IN NO EVENT SHALL REGENERON OR AVALANCHE BE LIABLE FOR SPECIAL, PUNITIVE, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS) SUFFERED BY THE OTHER PARTY, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE) AND REGARDLESS OF ANY PRIOR NOTICE OF SUCH DAMAGES. HOWEVER, NOTHING IN THIS SECTION 15.15 IS INTENDED TO LIMIT OR RESTRICT (I) THE INDEMNIFICATION RIGHTS AND OBLIGATIONS OF EITHER PARTY HEREUNDER WITH RESPECT TO THIRD-PARTY CLAIMS, (II) THE RIGHTS OF EITHER PARTY IN THE EVENT OF A BREACH OF THE OTHER PARTY'S CONFIDENTIALITY OBLIGATIONS SET FORTH IN ARTICLE XI OR (III) THE RIGHTS OF REGENERON IN THE EVENT OF A BREACH OF AVALANCHE'S OBLIGATIONS SET FORTH IN SECTION 2.4(C).

15.16 No Strict Construction. This Agreement has been prepared jointly and shall not be construed against either Party.

[***]

IN WITNESS WHEREOF, Avalanche and Regeneron have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

AVALANCHE BIOTECHNOLOGIES, INC.

By:

/s/ Thomas Chalberg

Name:

Thomas Chalberg, PhD.

Title:

Chief Executive Officer

REGENERON PHARMACEUTICALS, INC.

By:

/s/ Leonard S. Schleifer

Name:

Leonard S. Schleifer, M.D., Ph.D.

Title:

President & CEO

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT A

ADDITIONAL MANUFACTURING ROYALTY

Portion of Annual Worldwide Net Sales

Royalty Rate

[***]

[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B

AVALANCHE PATENTS

Family

Publication

Number Application

Number Title Assignee

[***]

[***] [***] [***] [***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT C

COLLABORATION TARGETS

For purposes of this Agreement, Collaboration Targets described in subsection (i) of the definition of Collaboration Targets shall mean the following proteins listed under the column entitled “Collaboration Targets” below, and Collaboration Targets described in subsection (ii) of the definition of Collaboration Targets shall mean those proteins listed under “Pathway Targets” for a given Collaboration Target that are in the same row as is the relevant Collaboration Target.

Collaboration Targets Pathway Targets

[***]

[***] [***]

New Targets and Replacement Targets, and their corresponding Pathway Targets, shall be added to the left hand column in the table above per Section 2.10 and 2.11, as applicable, and Pathway Targets for such New Targets and Replacement Targets shall be added to the right hand column of the table above, in the same row as is such New Target or Replacement Target, as applicable, per Section 2.12.

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT D

RESEARCH PLAN

[***]

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[***] Four pages have been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT E

UPSTREAM AGREEMENTS

No.

Agreement Name

Date Party 1

Party 2

1 License Agreement [***] [***] Avalanche Biotechnologies, Inc.

2 License Agreement [***] [***] Avalanche Biotechnologies, Inc.

3 Exclusive License and Bailment Agreement for [***] [***] [***] Avalanche Biotechnologies, Inc.

4 Exclusive License and Bailment Agreement [***] [***] [***] Avalanche Biotechnologies, Inc.

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT F

PRESS RELEASE

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT G

DATA PACKAGE

[***]

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT H

TERMINATION RIGHTS

For Co-Funded Products, one Party may cease participation in co-funding development ("Co-Funding Halt") following delivery of an Opt-Out Notice (pursuant to Section 6.5(b)) or termination of the Agreement under Article 14. In such cases, one Party shall have the right (but not the obligation) to continue Development and Commercialization of such Co-Funded Product (the "Continuing Party"), and the other Party shall cease all participation in Development and Commercialization activities (the "Inactive Party"), as follows:

(a) If Avalanche delivers an Opt-Out Notice for a Co-Funded Product pursuant to Section 6.5(b), Avalanche shall become the Inactive Party, and Regeneron shall become the Continuing Party;

(b) If Regeneron terminates the Agreement with regard to a Co-Funded Product pursuant to Section 14.3, or Avalanche has exercised its termination rights under Sections 14.2, 14.4, or 14.5, Avalanche shall become the Continuing Party, and Regeneron shall become the Inactive Party.

If the Continuing Party successfully Develops and Commercializes such Co-Funded Product, it shall pay royalties on Net Sales of such Co-Funded Product to the Inactive Party (the "Reversion Royalty") according to the following formula:

[***]

Such royalties will be payable on Net Sales of Co-Funded Products on a country by country basis [***]. Furthermore, such royalties shall be [***].

Where Regeneron is the Continuing Party, the Additional Manufacturing Royalty shall also be payable to Avalanche as provided in Section 6.4.

If Avalanche is the Continuing Party, it shall automatically and without any further action required have the following rights. In such case, to more fully implement such rights, the Parties will enter into an agreement containing the following terms and conditions and such other customary terms and conditions typically contained in a commercial license and development transaction for similar products and technologies. Such agreement will use definitions provided in this Agreement mutatis mutandis.

[***]

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT I

Manufacturing Cost Methodology

[***]

[***] Two pages have been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 10.5

EXCEPTIONS TO ADDITIONAL AVALANCHE REPRESENTATIONS, WARRANTIES AND COVENANTS

1. Certain of the Avalanche Patents licensed under the [***] Agreements are subject to certain retained rights of the United States government.

2. The Avalanche Patents non-exclusively licensed to Avalanche pursuant to the [***] Agreement allow others to practice [***] technology.

3. [***] has ongoing rights and licenses with respect to the practice of the rights licensed to Avalanche pursuant to the [***] Agreement, and is also the owner of Collaboration IP (as that term is defined under the Avalanche-[***] Collaboration), arising under the [***] Agreement.

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.