

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

FORM 10-K/A

(Amendment No. 1)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2021

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number 001-36289



GENOCEA BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

51-0596811

(I.R.S. Employer Identification No.)

100 Acorn Park Drive, Cambridge, MA 02140

(Address of principal executive offices, including zip code)

(617) 876-8191

(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol	Name of each exchange on which registered
Common Stock, \$0.001 par value	GNCA	Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the registrant's common stock held by non-affiliates on June 30, 2021, the last business day of the registrant's most recently completed second quarter, was: \$108,805,512.

The number of shares outstanding of the registrant's common stock as of April 25, 2022 was 58,783,503.

DOCUMENTS INCORPORATED BY REFERENCE

None.

Auditor Name	Auditor Location	Auditor Firm ID
Ernst & Young LLP	Boston, Massachusetts	42

EXPLANATORY NOTE

Genocea Biosciences, Inc. ("Genocea", the "Company", "we", "us" and "our") is filing this Amendment No. 1 on Form 10-K/A (this "Amendment") to its Annual Report on Form 10-K for the year ended December 31, 2021, originally filed on March 18, 2022 (the "Original Report"), for the sole purpose of including the information required by Part III of Form 10-K as we do not intend to file a definitive proxy statement for an annual meeting of stockholders within 120 days of the end of our fiscal year ended December 31, 2021. Accordingly, Items 10, 11, 12, 13, and 14 of Part III of our Original Report are replaced in their entirety with the information provided herein.

This Amendment does not amend, update or change any other items or disclosure in the Original Report or reflect events that occurred after the date of the Original Report. Therefore, this Amendment should be read in conjunction with our Original Report and our other filings made with the United States Securities and Exchange Commission ("SEC") after the filing of the Original Report.

This Amendment also includes as exhibits the certifications required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as well as an exhibit related to an employment arrangement. Accordingly, Item 15 of Part IV has also been amended to reflect the filing of these new exhibits.

TABLE OF CONTENTS

<u>PART III</u>		
<u>Item 10.</u>	<u>Directors, Executive Officers and Corporate Governance</u>	<u>3</u>
<u>Item 11.</u>	<u>Executive Compensation</u>	<u>7</u>
<u>Item 12.</u>	<u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>17</u>
<u>Item 13.</u>	<u>Certain Relationships and Related Transactions, and Director Independence</u>	<u>19</u>
<u>Item 14.</u>	<u>Principal Accountant Fees and Services</u>	<u>21</u>
 <u>PART IV</u>		
<u>Item 15.</u>	<u>Exhibits and Financial Statement Schedules</u>	<u>22</u>

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Directors and Executive Officers

The following sets forth certain information with respect to the executive officers of our Company as of the date of this Amendment:

William "Chip" Clark, age 53, has served as our President and Chief Executive Officer ("CEO") since February 2011 after serving as our Chief Business Officer from August 2010 to February 2011. Mr. Clark has also served on our board of directors since February 2011. Prior to joining Genocera, he served as Chief Business Officer at Vanda Pharmaceuticals, a biopharmaceutical company he co-founded in 2004. While at Vanda, he led the company's strategic and business development activities and played a central role in raising more than \$400 million through business development deals and equity financings. Prior to Vanda, Mr. Clark was a principal at Care Capital, a venture capital firm investing in biopharmaceutical companies, after serving in a variety of commercial and strategic roles at SmithKline Beecham (now GlaxoSmithKline). Mr. Clark has also served on the board of directors of iBio, Inc. since August 2021. Mr. Clark received an M.B.A. from The Wharton School of the University of Pennsylvania and a B.A. from Harvard University. Mr. Clark has also served as a Class III director since February 2011. We believe that Mr. Clark's operational and historical experience with our Company gained from serving as our President and Chief Executive Officer, and as a member of our Board of Directors, combined with his prior experience at Vanda and in the venture capital industry focusing on biopharmaceutical companies, qualifies him to serve as a member of our Board of Directors.

Girish Aakalu, Ph.D., age 47, has served as our Chief Business Officer since December 2018. In this role, he leads Genocera's business development efforts. His broad skill set spans business development, corporate and R&D strategy, product portfolio management, commercial planning, and alliance management. Prior to joining Genocera, Dr. Aakalu was employed by the Ipsen Group, from May 2015 until December 2018, where he was most recently Vice President: Global Head of External Innovation, and Pfizer, Inc., from October 2007 until May 2015, where he held the title of Executive Director: Head of Strategy, Innovation & Operations for Pfizer's External R&D Innovation team prior to his departure. His previous roles also include business development and oncology pipeline market planning positions at Genentech, Inc. and life science consulting experience at L.E.K Consulting. He received both a Ph.D. in cellular and molecular neurobiology and an M.S. in biology from the California Institute of Technology and a B.A. in biophysics with general and departmental honors from Johns Hopkins University. He has also completed executive education in corporate governance at the Kellogg School of Management at Northwestern University.

Thomas Davis, M.D., age 58, has served as our Chief Medical Officer since October 2018. Dr. Davis has over 20 years of academic and industry experience in immuno-oncology and cancer drug development. Most recently, he served as Chief Medical Officer of Gadeta B.V., a Dutch cell therapy company pursuing novel cancer targets from October 2017 to April 2018, where he steered a novel cell therapy technology into first-in human clinical studies. Prior to Gadeta B.V., he served as Chief Medical Officer of Celldex from 2006 to 2017, where he led all aspects of clinical and regulatory development including strategy, tactics, and execution. While at Celldex, Dr. Davis actively built and oversaw Clinical Science, Medical Affairs, Safety, Clinical Operations, Statistics, Regulatory Affairs, and Project Management, managed collaborations with large global pharmaceutical partners, and participated in investor relations activities. He also served as Chief Medical Officer at GenVec and as Senior Director of Clinical Science at Medarex. Prior to joining the industry, Dr. Davis supervised clinical efforts at the Cancer Therapy Evaluation Program (CTEP) of the National Cancer Institute (NCI), and worked on the development of rituximab and idiotype vaccines at Stanford University. Dr. Davis received an M.D. from Georgetown University and completed a fellowship in medical oncology at Stanford University. He also received an M.S. in physiology from Georgetown University and a B.A. in biophysics from Johns Hopkins.

Diantha Duvall, age 50, has served as our Chief Financial Officer since March 2019. Prior to joining Genocera, Ms. Duvall was Vice President, Controller and Chief Accounting Officer at Bioerativ, Inc. from February 2017 to January 2019. Prior to that, she worked at Biogen Inc., serving as Global Commercial Controller from February 2016 to January 2017, and U.S. Commercial Controller from February 2015 to January 2016. She also held a number of positions at Merck and Co. from May 2009 to January 2015. Her experiences at Merck spanned roles in venture investment, business development, joint ventures, and alliances, as well as operational controls and technical accounting. She also has extensive experience in SEC reporting, Sarbanes Oxley compliance, transaction support and risk management, having held multiple health industries positions within PricewaterhouseCoopers from 1996 to 2009. Ms. Duvall has also served on the board of directors of BioTheryX, Inc. since August 2021. Ms. Duvall has both an M.B.A and a M.S. in accounting from Northeastern University and a B.A. from Colby College.

Jessica Baker Flechtner, Ph.D., age 50, has served as our Chief Scientific Officer since February 2016 after serving as our Senior Vice President of Research from February 2014 to January 2016, and Vice President of Research from January 2010 to February 2014. From 2007 to February 2014, she held various roles of increasing seniority at Genocera. Prior to joining Genocera, Dr. Flechtner was an Immunology Consultant at BioVest International, Inc. from June 2006 to March 2007, where she guided the development of assays to evaluate the success of the company's autologous Follicular (Non-Hodgkin's) Lymphoma vaccine in patients. As a researcher at Mojave Therapeutics, Inc., or Mojave, and Antigenics Inc. (now Agenus), which acquired Mojave's intellectual property, from 2001 to 2005, Dr. Flechtner developed protein and peptide-based vaccines and immunotherapies for cancer, infectious disease, autoimmunity and allergy. She is an inventor on various pending or issued patents and has multiple peer-reviewed scientific publications. Dr. Flechtner performed her post-doctoral work in the laboratory of Dr. Harvey Cantor at the Dana Farber Cancer Institute and Harvard Medical School. She received both a Ph.D. in cellular immunology and a B.S. in animal science from Cornell University. She is a member of the American Association of Immunologists, American Association for Cancer Research, Society for the Immunotherapy of Cancer, the President's Council of Cornell Women, and Women in Bio.

Raymond D. Stapleton, Jr., Ph.D., age 51, has served as our Chief Technology Officer since March 2022 after serving as our Executive Vice President of Pharmaceutical Sciences and Manufacturing from January 2021 to February 2022. Prior to joining Genocera, Dr. Stapleton was President and Chief Operating Officer at American Type Culture Collection from November 2019 to January 2021, where he provided leadership for global operations. As Senior Vice President of Technical Operations at Iovance Biotherapeutics, Inc. from July 2019 to November 2019, Dr. Stapleton worked on commercial manufacturing readiness. From October 2015 through July 2019, Dr. Stapleton was employed at Synthetic Biologics, Inc. where his most recent position was Senior Vice President of Technical Operations. He also held a number of positions of increasing responsibility at Merck and Co. from 2003 to 2015, including leading a complex science, technology, and engineering organization at a manufacturing site responsible for supporting Merck's vaccine business. He has served as peer reviewer for a half dozen scientific journals and co-authored seventeen peer-reviewed manuscripts and multiple patents. Dr. Stapleton completed his post-doctoral work in the Oak Ridge National Laboratory. He received a Ph.D. in microbial ecology from The University of Tennessee - Knoxville and a B.S. in biology from Mary Washington College.

Jacquelyn Sumer, age 44, has served as our Chief Legal and Compliance Officer since February 2021. Ms. Sumer brings over 15 years of legal and strategic leadership experience. Prior to joining Genocera, Ms. Sumer served as Vice President and Assistant General Counsel at Bristol-Myers Squibb Company from November 2019 to February 2021, where she led the worldwide hematology and cell therapy legal team. Ms. Sumer served as Executive Director, Senior Corporate Counsel for Celgene Corporation's hematology and oncology franchise from May 2017 to July 2018 and led their CAR-T legal team from July 2018 to November 2019, supporting clinical development and launch preparedness for therapies in development. From August 2010 to May 2017, Ms. Sumer held positions of increasing responsibility at Novartis Pharmaceuticals Corporation where she advised on a wide array of matters relating to preclinical and clinical development, commercialization and market access, employment, litigation and government investigations, and compliance. Ms. Sumer began her legal career at Kaye Scholer, LLP and clerked for the Honorable Gladys Kessler of the United States District Court in Washington, D.C. She holds both a J.D. and an L.L.M. in international and comparative law from Duke University School of Law and a B.A. from Bucknell University.

The following sets forth certain information with respect to the directors and director nominees of our Company as of the date of this Amendment:

Director Name	Director Class	Committee		
		Audit	Compensation	Nominating and Governance
Kenneth Bate, Chairman of the Board	Class I	w	v	
Ali Behbahani, M.D.	Class I		w	
Katrine Bosley	Class II	w		v
Chip Clark	Class III			
Jennifer Herron	Class I		w	
Michael Higgins	Class II	v		
John Lunger	Class III			
George Siber, M.D.	Class III			w

w Member
v Committee chair

Kenneth Bate, age 71, is a Class I director who has served as a member of our Board of Directors since September 2014 and our chair since December 2018. Mr. Bate has served as an independent consultant in the biotechnology field since 2012. From 2009 to 2012, Mr. Bate served as President and Chief Executive Officer of Archemix, Inc. From 2006 to 2009, Mr. Bate served in various positions at NitroMed, Inc., most recently as President and Chief Executive Officer. From 2002 to 2005, Mr. Bate served as Chief Financial Officer of Millennium Pharmaceuticals Inc. Prior to joining Millennium Pharmaceuticals Inc., Mr. Bate co-founded JSB Partners, LLC, a banking and advisory services firm for biopharmaceutical and life sciences companies. From 1990 to 1996, he was with Biogen Inc., a biotechnology company, first as their Chief Financial Officer, and then as head of the commercial organization. Mr. Bate is currently a director of Astria Therapeutics, Inc., AVEO Pharmaceuticals Inc., Epizyme Inc., and Madrigal Pharmaceuticals Inc. He holds a B.A. from Williams College and an M.B.A. from The Wharton School of the University of Pennsylvania. We believe that Mr. Bate's experience as a chief executive officer of multiple biotechnology companies, as well as his experience as a director of other companies, qualifies him to serve as a member of our Board of Directors.

Ali Behbahani, M.D., age 46, is a Class I director who has served as a member of our Board of Directors since February 2018. Since 2007, Dr. Behbahani has served in various positions on the healthcare team at New Enterprise Associates, most recently as General Partner. The healthcare team specializes in investments in the biopharmaceutical and medical device sectors. He is also currently a member of the board of directors of 858 Therapeutics, Inc., Adaptimmune Therapeutics plc ("Adaptimmune"), Arcellx, Inc., Black Diamond Therapeutics, Inc., Cardionomic, Inc., CRISPR Therapeutics AG, CVRx, Inc., FirstLight Bio, Inc., Korro Bio, Inc., Minerva Surgical, Inc., Monte Rosa Therapeutics, Inc., Nkarta, Inc., Oyster Point Pharma, Inc., SpyGlass Ophthalmics, Inc., Stablix, Inc. and Tune Therapeutics, Inc. He has previously worked as a consultant in business development at The Medicines Company and held positions as a Venture Associate at Morgan Stanley Venture Partners from 2000 to 2002 and as a Healthcare Investment Banking Analyst at Lehman Brothers from 1998 to 2000. Dr. Behbahani conducted basic science research in the fields of viral fusion inhibition and structural proteomics at the National Institutes of Health and at Duke University. He holds an M.D. degree from the University of Pennsylvania School of Medicine and an M.B.A. from The Wharton School of the University of Pennsylvania. We believe Dr. Behbahani's experience in the biopharmaceutical industry, as well as his experience as a member on the boards of directors of multiple companies in the industry, qualifies him to serve as a member of our Board of Directors.

Katrine Bosley, age 54, is a Class II director who has served as a member of our Board of Directors since March 2013 and as our chair from August 2013 until December 2018. Ms. Bosley has served as a Venture Partner at Advent Life Sciences LLP since March 2022. Ms. Bosley served as the Chief Executive Officer of Editas Medicine Inc. ("Editas") from June 2014 through February 2019. Prior to Editas, Ms. Bosley was the Entrepreneur-in-Residence at The Broad Institute from September 2013 to May 2014. She served as Chief Executive Officer of Avila Therapeutics Inc. ("Avila"), from May 2009 to March 2012, when Avila was acquired by Celgene Corporation. Before Avila, she was Vice President, Strategic Operations at Adnexus Therapeutics Inc. ("Adnexus"), a subsidiary of Bristol Meyers Squibb Company ("BMS"), and was Vice President, Business Development at Adnexus before that. She joined Adnexus from Biogen Idec Inc. where she held roles in business development, commercial operations, and portfolio strategy in the United States and Europe. In addition to serving as a director of our Company, Ms. Bosley currently serves as Chairman of the Board of Arrakis Therapeutics, Inc., and as a director of Galapagos NV, Massachusetts Eye and Ear, and The Institute of Contemporary Art / Boston. She was also a member of the Biotechnology Innovation Organization Governing Board and Chair of the Emerging Companies Section of the Board. Ms. Bosley graduated from Cornell University with a B.A. in Biology. We believe that Ms. Bosley's experience as a chief executive officer of a biotechnology company and her breadth of experience in creating strategic and business development value qualifies her to serve as a member of our Board of Directors.

Jennifer Herron, age 52, is a Class I director who was appointed to serve as a member of our Board of Directors in September 2021. Ms. Herron has served as Senior Vice President and Chief Commercial Officer at ADC Therapeutics ("ADCT") since November 2019, leading global commercialization strategy and execution including the launch of ADCT's first commercial product. Before joining ADCT, Ms. Herron was Executive Vice President and Chief Commercial Officer at ImmunoGen from February 2019 to March 2019, President and Executive Vice President, Global Commercial, at MorphoSys US from July 2018 to November 2018, and Executive Vice President and Chief Commercial Officer at Ariad Pharmaceuticals from May 2016 to April 2017. Earlier in her career, she held commercial leadership roles in major multinational pharmaceutical companies such as Bristol-Myers Squibb, Novartis Oncology, and SmithKline Beecham (now GlaxoSmithKline). She holds a B.A. in Biology and Economics from Lehigh University and an M.B.A. from Georgetown University. We believe that Ms. Herron's commercial and industry experience qualifies her to serve as a member of our Board of Directors.

Michael Higgins, age 59, is a Class II director who has served as a member of our Board of Directors since February 2015. Mr. Higgins served as interim Chief Executive Officer of Voyager Therapeutics, Inc. ("Voyager") from May 2021 through March 2022. Mr. Higgins is a serial entrepreneur who has helped launch six companies since 2015. Mr. Higgins served as Entrepreneur-in-Residence at Polaris Partners from 2015 - 2020. From 2003 - 2014 he was Senior Vice President, Chief Operating Officer of Ironwood Pharmaceuticals Inc. At Ironwood, Mr. Higgins led the company's finance, operations, and strategy efforts, through its initial public offering and the launch of its first commercial product. Prior to 2003, Mr. Higgins spent seven years and held a variety of senior business positions at Genzyme Corporation, including Vice President of Corporate Finance and Vice President of Business Development. Prior to joining Genzyme Corporation, Mr. Higgins led Procept, Inc.'s financial team from founding through its initial public offering. He is currently the chairman of the board of both Pulmatrix, Inc. and Voyager. In addition, he is a board member at Nocion Therapeutics, Inc., Camp4 Therapeutics Corporation and Sea Pharmaceuticals LLC. Mr. Higgins earned his B.S. from Cornell University and holds an M.B.A. from the Amos Tuck School of Business at Dartmouth College. We believe that Mr. Higgins' financial and business expertise, including his diversified background as an executive officer in public pharmaceutical companies, qualifies him to serve as a member of our Board of Directors.

John Lunger, age 53, is a Class III director who was appointed to serve as a member of our Board of Directors in March 2022. From March 2017 to present, Mr. Lunger has served in various positions at Adaptimmune leading the teams responsible for producing and delivering products to patients, accelerating supply execution and optimizing the supply chain to be ready for commercialization, most recently as Chief Patient Supply Officer. Before joining Adaptimmune, Mr. Lunger served in supply chain leadership positions at Merrimack Pharmaceuticals from January 2015 to March 2017. Earlier in his career, Mr. Lunger held various senior manufacturing, operational and strategy roles at VWR International, Pfizer and Wyeth Pharmaceuticals. In his nearly 10 years with Wyeth Pharmaceuticals, Mr. Lunger held a number of leadership positions, including operations and supply chain strategy, supply management, procurement and strategic sourcing, business systems implementation, generic pharmaceutical business management, and site operations management in a pharmaceutical manufacturing plant in Ireland. Mr. Lunger holds a B.S. in Ocean Engineering from the U.S. Naval Academy and an M.B.A. in economics and operations management from the University of Chicago Booth School of Business. We believe that Mr. Lunger's manufacturing and supply chain strategy and execution experience qualifies him to serve as a member of our Board of Directors.

George Siber, M.D., age 77, is a Class III director who has served as a member of our Board of Directors since 2007. From 1996 to 2007, Dr. Siber served as Executive Vice President and Chief Scientific Officer of Wyeth Vaccines. While at Wyeth Vaccines, Dr. Siber oversaw the development and approval of multiple widely-used childhood vaccines, including: Prevnar®, a pneumococcal vaccine which has achieved multibillion dollar revenues; Acel-Imune, an acellular pertussis vaccine; Meningitec, a meningococcal meningitis vaccine; and FluMist®, a nasal influenza vaccine. Prior to Wyeth Vaccines, Dr. Siber was Director of the Massachusetts Public Health Biologic Laboratories and a Harvard Medical School Associate Professor of Medicine at Dana Farber Cancer Institute. During this time, Dr. Siber led the research and manufacturing of multiple vaccines and immune globulins including Respigam, a human immune globulin against respiratory syncytial virus. Dr. Siber has served on the boards of directors of several vaccine companies, including Crucell N.V., Selecta Biosciences, Inc., Vedantra Pharmaceuticals, Inc. and Affinivax, Inc., and as a consultant or scientific advisory board member to Advaccine Biopharmaceuticals Suzhou Co., Ltd., Cansino Biologics, Inc., CureVac N.V., COVAXX (a division of United Biomedical, Inc.), Everest Medicines Ltd., ILiAD Biotechnologies, LLC, Sichuan Clover Biopharmaceuticals, Inc., Valneva SE, Vaxart Inc., Vaxess Technologies, Inc., Vaxxinity, Inc., the Bill & Melinda Gates Foundation, PATH, the Wellcome Trust, the European Commission and the National Institutes of Health. Dr. Siber serves as a member of the Board of Trustees of the International Vaccine Institute. Dr. Siber holds an M.D. degree from McGill University, received post-doctoral training in Internal Medicine at Rush-Presbyterian Hospital and Beth Israel Hospital and Infectious Disease and vaccinology training at Children's Hospital and Beth Israel Hospital, Harvard Medical School. We believe that Dr. Siber's experience in life sciences, vaccine industries and his experience overseeing the development of multiple vaccines qualifies him to serve as a member of our Board of Directors.

Family Relationships

There are no familial relationships between any of our directors and executive officers.

Delinquent Section 16(a) Reports

Section 16(a) of the Exchange Act requires each of our directors, officers and beneficial owners of 10% or more of our common stock to file reports with the SEC regarding their ownership of our common stock and any changes in ownership. Based solely on our review of such reports filed by each of our directors, officers and beneficial owners of 10% or more of our common stock, we believe that all filing requirements applicable to these reporting persons were complied with in fiscal 2021 except Girish Aakalu, Jessica Baker Flechtner, Diantha Duvall, Thomas Andrew Davis and William Clark were each delinquent in filing a Form 4 to report a sale of Company common stock to cover income tax withholding in connection with the vesting and settlement of restricted stock units. Additionally in fiscal 2021, Jennifer Herron was delinquent in filing a Form 3 upon becoming a director of the Company and delinquent in filing a Form 4 to report the grant of stock options in connection with her initial appointment to the Board of Directors. Such filings have been made at the time of filing of this Amendment.

Code of Business Conduct and Ethics and Corporate Governance Guidelines

We have adopted a Code of Business Conduct and Ethics for our directors, officers and employees. A copy of the Code of Business Conduct and Ethics may be accessed free of charge by visiting our website at <https://ir.genocoea.com/> and going to the "Investor Relations—Governance" section or by requesting a copy in writing from our Corporate Secretary, at our Cambridge, Massachusetts office. We intend to post on our website amendments to, or waivers under, our Code of Business Conduct and Ethics that apply to certain of our executive officers within four business days following the date of such amendment or waiver.

A copy of the Corporate Governance Guidelines may also be accessed free of charge by visiting the website at <https://ir.genocoea.com/> and going to the "Investors Relations—Governance" section or by requesting a copy in writing from our Corporate Secretary, at our Cambridge, Massachusetts office.

Audit Committee

Our Audit Committee is composed of Mr. Bate, Ms. Bosley, and Mr. Higgins, with Mr. Higgins serving as chair of the committee. Our Board of Directors has determined, upon the recommendation of the Nominating and Corporate Governance Committee, that each member of the Audit Committee meets the independence requirements of Rule 10A-3 under the Exchange Act of 1934 (as amended, the "Exchange Act") and the applicable listing standards of Nasdaq. Our Board of Directors has determined that each of Mr. Bate and Mr. Higgins is an "audit committee financial expert" within the meaning of the SEC regulations and applicable listing standards of Nasdaq. The audit committee report will be included in the definitive proxy statement for our 2022 Annual Meeting to be filed later this year. Our Audit Committee operates pursuant to a written charter, and it reviews and assesses the adequacy of its charter annually.

Item 11. Executive Compensation

Compensation Discussion and Analysis

This section describes the compensation awarded or paid to, or earned by, our principal executive officer and our next two most highly compensated executive officers listed below in respect of their service to us for 2021. We refer to these individuals as our named executive officers. Our named executive officers are:

- William Clark, our President and Chief Executive Officer;
- Thomas Davis, M.D., our Chief Medical Officer; and
- Jessica Baker Flechtner, Ph.D., our Chief Scientific Officer.

Compensation Philosophy and Objectives

Our executive compensation program is designed to:

- attract, motivate and retain qualified and talented executives;
- be fair, reasonable and market-competitive;
- reward strong performance by linking performance and pay;
- be flexible to support our long-term growth strategy;
- align the incentives of our executive officers with our corporate strategies and business objectives and the long-term interests of our stockholders; and
- promote long-term equity ownership by our executives.

What We Do**What We Do Not Do**

✓ Link pay to performance; significant portion of executive pay is not guaranteed	✗ Provide for excise tax gross-ups in the event of a change in control
✓ Hold an annual advisory vote on the compensation paid to our named executive officers	✗ Reprice underwater stock options without shareholder approval
✓ Use our annual cash bonuses to recognize individual performance and leadership and achievement of corporate goals	✗ Permit hedging or short sales of company stock by executive officers or directors
✓ Review compensation realizable by our Executive Team as compared to the value of compensation awarded	
✓ Balance the mix of pay components, including cash, stock options and restricted stock units	
✓ Utilize an independent compensation consultant to provide analysis and recommendations on our executive compensation	
✓ Provide modest perquisites consisting primarily of long-term care insurance	

To achieve these objectives, each year, our Compensation Committee considers a variety of factors in assessing the competitiveness of our executive compensation program and the individual compensation of each of our executive officers, including our named executive officers. These factors include the executive officer's experience and individual performance, the Company's performance as a whole, and data from compensation surveys, as well as compensation paid at companies in our peer group, as described below, cost of living increases and general industry conditions. Our Compensation Committee does not assign any specific weighting to any one factor when making compensation decisions. In furtherance of our pay-for-performance philosophy, actual compensation paid to our executive officers is correlated to the achievement of corporate performance goals, our stock price and individual performance.

Market Benchmarks and Competitive Analysis

In making compensation decisions, our Compensation Committee reviews publicly available compensation data and survey data provided by its compensation consultant, Pay Governance, from a group of publicly traded, national and regional companies in the biopharmaceutical and biotechnology industries. Our Compensation Committee establishes our peer group based on the recommendation of its compensation consultant and the following criteria:

- companies whose scientific stage of development (measured by research and development expenses) and market capitalization are similar, though not necessarily identical, to ours;
- companies with similar executive positions to ours;
- companies against which we believe we compete for executive talent; and
- public companies based in the United States whose compensation and financial data are available in proxy statements or through widely available compensation surveys.

Our Compensation Committee, working with its compensation consultant, reviews the companies in our peer group annually, based on agreed criteria regarding which companies should be included in the peer group, and makes adjustments as necessary to ensure the peer group continues to properly reflect the market in which we compete for talented executives.

The peer group consisted of the following companies from November 2020 until November 2021. This peer group was used for purposes of 2021 compensation decisions.

Calithera Biosciences, Inc.	Jounce Therapeutics, Inc.
Catabasis Pharmaceuticals, Inc.	Kezar Life Sciences, Inc.
Celldex Therapeutics, Inc.	Leap Therapeutics, Inc.
Cidara Therapeutics, Inc.	Marker Therapeutics, Inc.
Cue Biopharma, Inc.	Mersana Therapeutics, Inc.
Gritstone Oncology, Inc.	OncoSec Medical Incorporated
Harpoon Therapeutics, Inc.	Pieris Pharmaceuticals, Inc.
Idera Pharmaceuticals, Inc.	Spring Bank Pharmaceuticals
Infinity Pharmaceuticals, Inc.	Surface Oncology, Inc.

Based on the criteria listed above, in November 2021, our Compensation Committee approved an updated peer group for purposes of 2022 compensation decisions consisting of the following companies:

Adicet Bio, Inc.	Infinity Pharmaceuticals, Inc.
Atreca, Inc.	Jounce Therapeutics, Inc.
Calithera Biosciences, Inc.	Kezar Life Sciences, Inc.
Cue Biopharma, Inc.	Leap Therapeutics, Inc.
F-Star Therapeutics, Inc.	Marker Therapeutics, Inc.
Gritstone Oncology, Inc.	OncoSec Medical Incorporated
Harpoon Therapeutics, Inc.	Pieris Pharmaceuticals, Inc.
HOOKIPA Pharma Inc.	Surface Oncology, Inc.
Idera Pharmaceuticals, Inc.	Synlogic, Inc.

Certain companies were added to or removed from our peer group in November 2021 based on the criteria listed above or due to acquisitions.

We believe that the data from our peer group provides us with appropriate compensation benchmarks for evaluating the compensation of our executive officers. Notwithstanding the similarities of the companies in our peer group to us, due to the nature of our business, we compete for executive talent with many public companies that are larger and more established than we are, or that possess greater resources than we do, and with smaller private companies that may be able to offer greater equity compensation potential, as well as with prestigious academic and non-profit institutions. Our Compensation Committee takes these factors into account in assessing executive compensation and also reviews survey data to form a broader market perspective on compensation in the market.

Our Compensation Committee evaluates our executive compensation program with the goal of setting total compensation at levels that align with a total rewards strategy appropriate for our size and stage of development and achieve the objectives of our executive compensation program, as described above. Our Compensation Committee generally targets base salaries, annual bonuses, and annual equity awards for our executive officers around the market median for our peer group, with actual payments varying based on corporate and individual performance. Our Compensation Committee may consider other factors, including market factors; the experience level of the applicable executive; his or her total responsibilities; the executive's contributions in helping to achieve corporate performance goals; and overall contributions and performance, in determining variations to this general practice in making recommendations to our Board of Directors.

Key Performance Factors in Determining Executive Compensation

Because the biopharmaceutical industry is characterized by a very long product development cycle, including a lengthy research and development ("R&D") period and a rigorous regulatory approval process, including the requirements for multiple phases of human testing and the need to meet a significant number of other government requirements, many of the traditional financial performance metrics, such as product sales, revenues and profits, used to evaluate successful performance are inappropriate for a biopharmaceutical company with a continued development focus, such as Genocera. Instead, the specific performance our Compensation Committee considers when evaluating the compensation of our named executive officers include:

- initiation and progress of clinical trials for our product candidates;
- key R&D achievements;
- expansion of our manufacturing and other operating capabilities;
- new business initiatives including financings; and
- our progress in building out key functions and managing our growth while maintaining a high-performing organization and culture.

Annual corporate performance goals are proposed by our senior leadership team at the beginning of each year and approved by our Board of Directors. During the first quarter of each year, our Compensation Committee, with the input of the senior leadership team, evaluates our corporate performance for the prior year against the corporate performance goals set for that year, and, taking into account other corporate achievements and developments, recommends a corporate performance rating to be approved by our Board of Directors. For 2021, our Compensation Committee approved a corporate performance rating of 90% for our executives based on our corporate performance, as further described below under “Elements of Executive Compensation - Annual Cash Bonuses”. Our Compensation Committee, with the input of our Chief Executive Officer, also evaluates the individual performance of our executive officers (other than our Chief Executive Officer) against their individual goals for the year. For 2021, the Compensation Committee approved individual performance ratings ranging from 90% to 125% for our executive officers. Our Compensation Committee and our Board of Directors also evaluate the performance of our Chief Executive Officer each year, although 100% of his annual bonus is based on the achievement of our corporate performance goals.

During or before the first quarter of each year, our Compensation Committee typically evaluates compensation levels for such year for our executive officers, including the amount of each executive officer’s base salary, target annual bonus and annual equity awards, taking into consideration the compensation paid by members of our peer group, our prior year’s overall corporate performance against the established corporate performance goals, as well as each individual executive officer’s contributions to achievement of such corporate performance goals, individual performance and the other factors described above, in making compensation recommendations to our Board of Directors. Our Board of Directors considers these recommendations in determining the compensation for our executive officers for the applicable year.

Elements of Executive Compensation

The compensation of our named executive officers consists of base salary, annual cash bonuses and equity awards, as well as employee benefits that are made available to our salaried employees generally. Our named executives are also entitled to compensation and benefits upon termination of employment in certain circumstances, including following a change of control transaction, as described under "Employment Letter Agreements" below.

Base Salaries. Base salaries for our named executive officers are reviewed annually by our Compensation Committee and are set by our Board of Directors. When making its base salary recommendations to our Board of Directors, our Compensation Committee takes the factors described above into account, but does not assign any specific weighting to any one factor. Our Board of Directors determines each named executive officer’s base salary after reviewing the Compensation Committee’s recommendation with respect to such salaries. In 2021, on the recommendation of our Compensation Committee, our Board of Directors approved an increase of 3.5% to the base salary of Mr. Clark (to \$573,763 per year) and Dr. Davis (to \$471,210 per year) and an increase of 10.0% to the base salary of Dr. Flechtner (to \$410,240 per year).

Annual Cash Bonuses. Our annual cash bonus program promotes and rewards the achievement of key strategic business goals and individual performance goals. For 2021, the target annual bonus as a percentage of annual base salary was 50% for Mr. Clark and 40% for each of Dr. Davis and Dr. Flechtner. In the case of Mr. Clark, 100% of his annual bonus was based on the achievement of pre-established corporate performance goals and, in the case of Dr. Davis and Dr. Flechtner, their respective annual bonuses were based on the achievement of pre-established corporate performance goals and pre-established individual performance goals.

At the beginning of 2021, our Compensation Committee established the corporate performance goals for 2021 and the weighting for each goal. These corporate performance goals included key strategic and financial goals related to the development and commencement of certain research and clinical programs, other strategic objectives related to our clinical pipeline, business development collaborations and financings, and cash management. Also at the beginning of 2021, Mr. Clark, working with Dr. Davis and Dr. Flechtner, established individual performance goals for each of Dr. Davis and Dr. Flechtner and their weightings. These goals included, to the extent applicable to the executive, objectives related to oversight of clinical activities for compliance with laws, developing and conducting clinical programs and studies, research and development, managing studies according to schedule and within budgets, business and corporate development and demonstrating leadership with respect to direct reports.

In February 2022, our Compensation Committee met to review and consider the level of corporate and individual performance goals that were achieved for purposes of making its recommendation to our Board of Directors regarding the amount of the annual cash bonus earned by our named executive officers for 2021. The Compensation Committee reviewed and evaluated our corporate performance against the pre-established corporate performance goals for 2021, taking into consideration Mr. Clark's evaluation of our performance. With respect to the individual performance goals applicable to Dr. Davis and Dr. Flechtner, our Compensation Committee also considered Mr. Clark's determination that Dr. Davis had achieved 95% and Dr. Flechtner had achieved 110% of such individual performance goals. After reviewing the achievement of our 2021 corporate performance goals, and after considering Mr. Clark's determination regarding the level of achievement of the individual performance goals for Dr. Davis and Dr. Flechtner, our Compensation Committee recommended, and our Board of Directors approved, a 90% level of achievement of corporate performance goals, a 95% level of achievement by Dr. Davis of his individual performance goals and a 110% level of achievement by Dr. Flechtner of her individual performance goals. As a result, our Board of Directors approved an annual cash bonus of \$258,193 for Mr. Clark, \$161,154 for Dr. Davis, and \$162,455 for Dr. Flechtner for 2021.

Equity Awards. Our named executive officers have each been granted stock options, including options intended to qualify as incentive stock options. Stock option awards serve to align the interests of our named executive officers with our stockholders because no value is created unless the value of our common stock appreciates after grant. Stock option awards also encourage retention through the use of time-based vesting conditions. In addition, in 2021, we granted each of our named executive officers restricted stock units ("RSUs"), which also encourage retention, build stock ownership and further serve to align the interests of our named executive officers with our shareholders. We have from time to time in the past also granted stock options that are subject to performance-based vesting conditions, thereby incentivizing the achievement of key strategic goals.

In 2021, Mr. Clark, Dr. Davis and Dr. Flechtner were granted options to purchase 450,000, 93,750 and 131,250 shares, respectively, of our common stock under our 2014 Equity Plan. These stock options vest in equal monthly installments over the 48 months following the date of grant, generally subject to the executive's continued employment. In addition, Mr. Clark, Dr. Davis and Dr. Flechtner were granted service-based RSUs under our 2014 Equity Plan that represent the right to receive, at settlement, 150,000, 31,250 and 43,750 shares, respectively, of our common stock. These service-based RSUs vest in equal annual installments over the 4 years following the date of grant, generally subject to the executive's continued employment. Mr. Clark, Dr. Davis and Dr. Flechtner were also each granted market-based RSUs under our 2014 Equity Plan that represent the right to receive, at settlement, 600,000, 100,000 and 100,000 shares, respectively, of our common stock. The number of shares subject to market-based RSUs represents the number of shares issuable upon vesting, assuming the Company achieves its corporate stock price metrics at the target achievement level. The number of shares issuable, if any, when the award vests will depend on the degree of achievement of corporate stock price metrics at the vest date and ranges between 75% and 150% of the target number of shares. To the extent earned, the market-based RSUs vest on December 31, 2023 (or earlier upon a change in control), generally subject to the executive's continued employment. Pursuant to each named executive officer's employment letter agreement, stock options and RSUs held by the executive will vest automatically upon a termination of employment in certain circumstances following a change of control. See "Employment Letter Agreements" below for additional details about each individual's agreement.

Summary Compensation Table

The following table sets forth information about compensation earned, awarded or paid to our named executive officers for 2021 and 2020.

Name and principal position	Year	Salary (\$)	Stock Awards (\$) ⁽¹⁾	Option Awards (\$) ⁽²⁾	Nonequity incentive plan compensation (\$) ⁽³⁾	All other compensation (\$) ⁽⁴⁾	Total (\$)
William Clark, President and Chief Executive Officer	2021	570,529	1,795,500	1,117,935	258,193	8,700	3,750,857
	2020	551,235	158,675	481,254	263,321	6,836	1,461,321
Thomas Davis, M.D., Chief Medical Officer	2021	468,554	318,063	232,903	161,154	18,700	1,199,374
	2020	452,708	38,431	115,790	173,005	6,007	785,941
Jessica Baker Flechtner, Ph.D., Chief Scientific Officer ⁽⁵⁾	2021	404,024	355,688	326,064	162,455	18,700	1,266,931

- (1) Amounts shown in this column reflect the aggregate grant date fair value of RSUs granted in the applicable year, computed in accordance with FASB ASC Topic 718, excluding the effect of estimated forfeitures. The fair value of service-based RSUs is the closing market price of Genoccea's common stock on the grant date. The Company measures fair value of market-based RSUs on the grant date using a Monte Carlo simulation model. Assumptions used in the calculation of the market-based RSUs are included in Note 11 to our consolidated financial statements included in our Annual Report.
- (2) Amounts shown in this column reflect the aggregate grant date fair value of stock options granted in the applicable year, computed in accordance with FASB ASC Topic 718, excluding the effect of estimated forfeitures. Assumptions used in the calculation of these amounts are included in Note 11 to our consolidated financial statements included in our Annual Report.
- (3) Amounts shown in this column for Dr. Davis and Dr. Flechtner reflect the annual cash bonuses that were earned in the applicable year based on the achievement of corporate and individual performance goals, and, in the case of Mr. Clark, the amounts shown reflect the annual cash bonuses that were earned in the applicable year based solely on the achievement of corporate performance goals.
- (4) Amounts shown in this column reflect employer matching contributions under our 401(k) plan for all of our named executive officers, and in the cases of Dr. Davis and Dr. Flechtner, the amounts shown also reflect employer-paid premiums for long-term care insurance.
- (5) For Dr. Flechtner, information is only provided for 2021 because she was not a named executive officer for 2020.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information regarding outstanding option and stock awards held by our named executive officers as of December 31, 2021.

Name	Option Awards				Stock Awards			
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option Exercise Price (\$) ⁽³⁾	Option Expiration Date ⁽⁴⁾	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested (\$) ⁽⁸⁾	Equity incentive plan awards: number of unearned shares, units or other rights that have not vested (#)	Equity incentive plan awards: market or payout value of unearned shares, units or other rights that have not vested (\$) ⁽⁸⁾
William Clark	10,209	—	27.60	7/25/2023	—	—	—	—
	16,701	—	27.60	7/25/2023	—	—	—	—
	17,250	—	72.64	2/26/2025	—	—	—	—
	36,000	—	24.72	2/2/2026	—	—	—	—
	36,000	—	37.36	2/28/2027	—	—	—	—
	103,496	4,504 ⁽¹⁾	7.84	2/8/2028	—	—	—	—
	64,527	27,348 ⁽¹⁾	4.32	2/7/2029	—	—	—	—
	61,620	109,380 ⁽¹⁾	1.66	4/2/2030	—	—	—	—
	22,223	64,467 ⁽¹⁾	2.72	6/1/2030	—	—	—	—
	84,375	365,625 ⁽¹⁾	3.01	3/15/2031	—	—	—	—
	—	—	—	—	38,088 ⁽⁵⁾	44,182	—	—
	—	—	—	—	20,508 ⁽⁶⁾	23,789	—	—
	—	—	—	—	150,000 ⁽⁷⁾	174,000	—	—
—	—	—	—	—	—	450,000 ⁽⁹⁾	522,000	
Thomas Davis, M.D.	49,479	13,021 ⁽²⁾	6.32	10/1/2028	—	—	—	—
	26,554	10,946 ⁽¹⁾	4.32	2/7/2029	—	—	—	—
	19,293	27,020 ⁽¹⁾	1.66	4/2/2030	—	—	—	—
	9,861	15,077 ⁽¹⁾	2.72	6/1/2030	—	—	—	—
	17,578	76,172 ⁽¹⁾	3.01	3/15/2031	—	—	—	—
	—	—	—	—	9,225 ⁽⁵⁾	10,701	—	—
	—	—	—	—	4,968 ⁽⁶⁾	5,763	—	—
	—	—	—	—	31,250 ⁽⁷⁾	36,250	—	—
	—	—	—	—	—	—	75,000 ⁽⁹⁾	87,000
Jessica Baker Flechtner, Ph.D.	6,298	—	27.60	7/25/2023	—	—	—	—
	1,426	—	96.00	2/4/2024	—	—	—	—
	1,800	—	96.80	2/20/2024	—	—	—	—
	3,750	—	72.64	2/26/2025	—	—	—	—
	12,500	—	24.72	2/2/2026	—	—	—	—
	12,500	—	37.36	2/28/2027	—	—	—	—
	35,933	1,568 ⁽¹⁾	7.84	2/8/2028	—	—	—	—
	14,448	4,302 ⁽¹⁾	5.84	11/6/2028	—	—	—	—
	30,981	12,769 ⁽¹⁾	4.32	2/7/2029	—	—	—	—
	24,368	34,132 ⁽¹⁾	1.66	4/2/2030	—	—	—	—
	12,464	19,036 ⁽¹⁾	2.72	6/1/2030	—	—	—	—
	24,609	106,641 ⁽¹⁾	3.01	3/15/2031	—	—	—	—
	—	—	—	—	11,652 ⁽⁵⁾	13,516	—	—
—	—	—	—	6,274 ⁽⁶⁾	7,278	—	—	
—	—	—	—	43,750 ⁽⁷⁾	50,750	—	—	
—	—	—	—	—	—	75,000 ⁽⁹⁾	87,000	

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- (1) Reflects time-based options to purchase shares of our common stock that vest in 48 equal monthly installments following the date of grant, generally subject to the executive's continued employment.
 - (2) Reflects time-based options to purchase shares of our common stock that vest as to 25% of the shares subject to the stock option on the vesting commencement date (approximately 12 months from the grant date) and thereafter vest in equal monthly installments over the following 36 months, generally subject to the executive's continued employment.
 - (3) The exercise price of each option is not less than the fair market value of a share of our common stock on the date of grant, as determined by our Board of Directors. For stock options granted following our initial public offering ("IPO"), the exercise price is the closing price of a share of our common stock as reported on Nasdaq on the date of grant of the stock option.
 - (4) All options have a 10-year term measured from the date of grant.
 - (5) Reflects time-based RSUs granted on April 2, 2020 that vest in 4 equal annual installments following the date of grant, generally subject to the executive's continued employment.
 - (6) Reflects time-based RSUs granted on June 1, 2020 that vest in 4 equal annual installments following the date of grant, generally subject to the executive's continued employment.
 - (7) Reflects time-based RSUs granted on March 15, 2021 that vest in 4 equal annual installments following the date of grant, generally subject to the executive's continued employment.
 - (8) The value of unvested RSUs was calculated by multiplying the closing price of our common stock on December 31, 2021 (\$1.16) by the number of unvested RSUs, assuming the Company achieves its corporate stock price metrics at the threshold achievement level for market-based RSUs.
 - (9) Reflects market-based RSUs granted on March 15, 2021 that vest on December 31, 2023 (or earlier upon a change in control), generally subject to the executive's continued employment. The number of unvested shares represents the number of shares issuable upon vesting, assuming the Company achieves its corporate stock price metrics at the threshold achievement level. The number of shares issuable, if any, when the award vests will depend on the degree of achievement of corporate stock price metrics at the vest date and ranges between 75% and 150% of the target achievement level.

Retirement Benefits

We do not maintain any qualified or non-qualified defined benefit plans or supplemental executive retirement plans. We offer a tax-qualified defined contribution retirement plan, which we refer to as our 401(k) plan, to eligible employees, including our named executive officers. Our 401(k) plan permits eligible employees to defer their annual eligible compensation subject to the limitations imposed by the Internal Revenue Code of 1986 (as amended, the "Code"). We may, but are not required to, make discretionary profit-sharing contributions on behalf of eligible employees under this plan. In 2015, we commenced making an employer match of 50% for the first 6% of employee contributions and have continued to do so. Employer matching contributions vest over a four-year period starting with the employee's date of hire.

Employment Letter Agreements

We have entered into an employment letter agreement with each of Mr. Clark, which was amended and restated on January 16, 2014 and became effective prior to our IPO, Dr. Davis, which became effective on October 1, 2018, his date of hire, and Dr. Flechtner, which was amended and restated on January 16, 2014 and became effective prior to our IPO and was further amended on September 12, 2016. Each named executive officer's employment letter agreement provides for an initial base salary and target annual bonus as well as severance payments and benefits upon a termination of employment in certain circumstances, as described below. The terms "change of control," "cause," "good reason" and "disability" referred to below are defined in their employment letter agreements.

Termination of Employment without Cause or for Good Reason Following a Change of Control. If, within 12 months after a change of control, Mr. Clark, Dr. Davis or Dr. Flechtner's employment is terminated by us without cause or the executive terminates their employment for good reason, all stock options, RSUs and other equity awards then held by the executive will fully vest. In addition, the executive will be entitled to receive base salary and payment of COBRA premiums for 15 months for Dr. Davis and Dr. Flechtner, or for 18 months for Mr. Clark following such termination of employment.

Termination of Employment without Cause or for Good Reason. If Mr. Clark, Dr. Davis or Dr. Flechtner's employment is terminated by us without cause or the executive terminates their employment for good reason other than within 12 months following a change of control as described above, the executive will be entitled to receive base salary and payment of COBRA premiums for 9 months for Dr. Davis and Dr. Flechtner, or 12 months for Mr. Clark following such termination of employment.

Termination of Employment Due to Death or Disability. If Mr. Clark, Dr. Davis or Dr. Flechtner's employment is terminated by us due to disability or death, the executive (or, if applicable, their estate) will receive a portion of their target annual cash bonus for the year in which such termination of employment occurs, prorated based on the number of days that each individual was employed during such year prior to the date of such termination.

Severance Subject to Release of Claims. Our obligation to provide Mr. Clark, Dr. Davis or Dr. Flechtner with any severance payments or other benefits under their employment letter agreement is conditioned on each executive signing and not revoking an effective release of claims in our favor.

Other Termination of Employment. If Mr. Clark, Dr. Davis or Dr. Flechtner's employment is terminated for any reason other than by us without cause, by any of the executives for good reason, or due to the executive's death or disability, the executive will only be entitled to receive earned but unpaid base salary through the date of such termination of employment.

280G Better-of Provision. In the event of a change in ownership or control of our Company under Section 280G of the Code, and the regulations thereunder, if any portion of the payments made pursuant to Mr. Clark, Dr. Davis or Dr. Flechtner's employment letter agreement (or otherwise) constitute an "excess parachute payment" within the meaning of Section 280G of the Code, each executive, as applicable, will be entitled to receive an amount of such payments reduced so that no portion of the payments would constitute an excess parachute payment, or the amount otherwise payable to the executive under the employment letter agreement (or otherwise) reduced by all applicable taxes, including the excise tax imposed under Section 4999 of the Code, whichever amount results in the greater amount payable to each individual on an after-tax basis.

As a condition to their employment with us, each of our named executive officers was required to sign and must comply with the terms of a Confidential Information and Invention Assignment Agreement, and an At-Will Employment and Non-Competition Agreement pursuant to which they have agreed not to compete with us for a period of 12 months following the termination of their employment and not to solicit our employees or independent contractors for a period of 36 months following the termination of their employment. Each executive has also agreed to covenants relating to the use and disclosure of confidential information and the assignment of inventions.

Hedging Policy. In accordance with the Company's Insider Trading Policy, the Company prohibits directors, officers, and employees of the Company from engaging in hedging transactions in the Company's securities, including equity swaps and collars, prepaid forward contracts, and similar devices.

Non-Employee Director Compensation Policy

Our Board of Directors adopted a non-employee director compensation policy that is designed to enable us to attract and retain, on a long-term basis, highly-qualified non-employee directors. Under the policy, as it may be amended from time to time, all non-employee directors will be paid cash compensation as set forth in the table below. Cash fees are prorated for partial years of service. In addition, we reimburse our non-employee directors for reasonable travel expenses in connection with their service.

Cash compensation for our non-employee directors consists of the following components:

	Annual Cash Fees
Board of Directors:	
All non-employee members ⁽¹⁾	\$ 35,000
Additional retainer for chair ⁽¹⁾	\$ 40,000
Audit Committee:	
Members	\$ 7,500
Additional retainer for chair	\$ 7,500
Compensation Committee:	
Members	\$ 5,000
Additional retainer for chair	\$ 5,000
Nominating and Corporate Governance Committee:	
Members ⁽¹⁾	\$ 3,500
Additional retainer for chair ⁽¹⁾	\$ 3,500

(1) Effective April 1, 2022, the non-employee director compensation policy was amended to increase the annual retainer for all non-employee members of the Board of Directors from \$35,000 to \$40,000, to decrease the additional annual retainer for the non-employee chair of the Board of Directors from \$40,000 to \$35,000, to increase the annual retainer for members of the Nominating and Corporate Governance Committee from \$3,500 to \$4,000, and to increase the additional annual retainer for the chair of the Nominating and Corporate Governance Committee from \$3,500 to \$4,000. Our Compensation Committee recommended, and our Board of Directors approved, these changes after reviewing market data for non-employee director compensation of comparable companies.

Under our non-employee director compensation policy, each non-employee director who is initially appointed or elected to our Board of Directors is eligible to be granted an option to purchase 30,000 shares of our common stock under the Genoecea Biosciences Inc. Amended and Restated 2014 Equity Incentive Plan ("2014 Equity Plan") at the time of their initial appointment or election to our Board of Directors. These options vest monthly in equal installments over a three-year period, generally subject to the non-employee director's continued service. In addition, each continuing non-employee director is eligible to be granted an option to purchase 15,000 shares of our common stock under our 2014 Equity Plan on an annual basis, which vest in full on the first anniversary of the grant date, generally subject to the non-employee director's continued service through such date. These annual option grants are typically made on the date of the Company's annual meeting of stockholders for the relevant year or as soon thereafter as is reasonably practicable.

Director Compensation

All of our non-employee directors were compensated for service on our Board of Directors under our non-employee director compensation policy described above. Mr. Clark receives no additional compensation for his service as a director, and, consequently, is not included in this table. The compensation received by Mr. Clark as our President and Chief Executive Officer for 2021 is set forth in the "Summary Compensation Table".

The following table sets forth information concerning the compensation awarded or paid to, or earned, by our non-employee directors during 2021.

Name	Fees earned or paid in cash (\$) ⁽¹⁾	Option awards (\$) ⁽²⁾⁽³⁾	Total (\$)
Kenneth Bate	92,500	28,484	120,984
Ali Behbahani, M.D.	40,000	28,484	68,484
Katrine Bosley	47,398	28,484	75,882
Ronald Cooper ⁽⁴⁾	13,016	—	13,016
Jennifer Herron	12,486	49,011	61,497
Michael Higgins	50,000	28,484	78,484
Gisela Schwab, M.D. ⁽⁵⁾	27,065	28,484	55,549
George Siber, M.D.	38,500	28,484	66,984

(1) Amounts reported in this column represent annual cash director fees for services rendered, as described above. All director fees were paid quarterly in arrears.

(2) As of December 31, 2021, our directors held options to purchase the aggregate number of shares of our common stock as follows: Mr. Bate held options to purchase 46,892 shares of our common stock, Dr. Behbahani held options to purchase 45,000 shares of our common stock, Ms. Bosley held options to purchase 50,252 shares of our common stock, Ms. Herron held options to purchase 30,000 shares of our common stock, Mr. Higgins held options to purchase 46,261 shares of our common stock, and Dr. Siber held options to purchase 54,293 shares of our common stock.

(3) Amounts reported in this column represent the aggregate grant date fair value of options to purchase shares of our common stock granted during 2021, computed in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 718, excluding the effect of estimated forfeitures. Assumptions used in the calculation of these amounts are included in Note 11 to our consolidated financial statements included in our Annual Report. Ms. Herron was granted options to purchase 30,000 shares of our common stock in 2021 in connection with her initial appointment to the Board of Directors, which vest monthly in equal installments over a three-year period, generally subject to her continued service. All of other our non-employee directors were granted options to purchase 15,000 shares of our common stock in 2021, which options will vest in full on the one-year anniversary of their respective date of grant, generally subject to their continued service.

(4) Mr. Cooper resigned from the Board of Directors effective April 14, 2021.

(5) Ms. Schwab passed away on September 3, 2021.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth information relating to the beneficial ownership of our common stock as of March 31, 2022, by: each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding shares of common stock; each of our directors; each of our named executive officers; and all directors and executive officers as a group.

The percentage of shares beneficially owned is computed on the basis of 58,733,759 shares of our common stock outstanding as of March 31, 2022. The number of shares beneficially owned by each entity, person, director or executive officer is determined in accordance with the rules of SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Shares of our common stock that a person has the right to acquire within 60 days of March 31, 2022 are deemed outstanding for purposes of computing the percentage ownership of the person holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group. Unless otherwise indicated below, the address for each beneficial owner listed is c/o Genocea Biosciences, Inc., Cambridge Discovery Park, 100 Acorn Park Drive, Cambridge, MA 02140.

Name	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
5% or greater stockholders:		
New Enterprise Associates 16, L.P. ⁽¹⁾ 1954 Greenspring Drive, Suite 600 Timonium, MD 21093	15,401,579	24.16 %
BVF Partners L.P. ⁽²⁾ 44 Montgomery Street, 40th Floor San Francisco, CA 94104	6,073,396	9.99 %
GSK Equity Investments, Ltd. ⁽³⁾ 980 Great West Road Brentford, Middlesex, TW8 9GS England	6,005,251	9.99 %
Avoro Capital Advisors LLC ⁽⁴⁾ 110 Greene Street, Suite 800 New York, NY 10012	5,954,441	9.99 %
Citadel Multi-Strategy Equities Master Fund Ltd. ⁽⁵⁾ 131 South Dearborn Street, 32nd Floor Chicago, IL 60603	3,535,358	5.85 %
Commodore Capital LP ⁽⁶⁾ 767 Fifth Avenue, Floor 12 New York, NY 10153	3,079,756	5.24 %
Directors and Named Executive Officers:		
William Clark ⁽⁷⁾	684,104	1.15 %
Thomas Davis, Ph.D. ⁽⁸⁾	165,702	*
Jessica Baker Flechtner, Ph.D. ⁽⁹⁾	235,410	*
Kenneth Bate ⁽¹⁰⁾	31,892	*
Ali Behbahani, M.D. ⁽¹¹⁾	30,000	*
Katrine Bosley ⁽¹²⁾	39,139	*
Jennifer Herron ⁽¹³⁾	6,672	*
Michael Higgins ⁽¹⁴⁾	31,261	*
John Lunger ⁽¹⁵⁾	1,668	*
George Siber, M.D. ⁽¹⁶⁾	59,711	*
All executive officers and directors as a group (14 persons) ⁽¹⁷⁾	1,710,378	2.84 %

* Represents beneficial ownership of less than one percent of our outstanding common stock.

- (1) Based on a Schedule 13D/A filed with the SEC on April 14, 2021, consisting of 10,376,936 shares of common stock and warrants to purchase 5,024,643 shares of common stock. NEA Partners 16, L.P. ("NEA Partners 16") is the sole general partner of New Enterprise Associates 16, L.P. ("NEA 16"). NEA 16 GP, LLC ("NEA 16 GP") is the sole general partner of NEA Partners 16. The individual managers of NEA 16 GP are Peter J. Barris, Forest Baskett, Ali Behbahani, Carmen Chang, Anthony A. Florence, Jr., Mohamad H. Makhzoumi, Joshua Makower, David M. Mott, Scott D. Sandell, Peter W. Sonsini and Paul Walker (collectively, the "Managers"). The Managers share voting and dispositive power with regard to these shares and warrants.
- (2) Based on a Schedule 13G/A filed with the SEC on February 14, 2022, consisting of 2,071,705 shares of common stock held of record by Biotechnology Value Fund, L.P., 1,564,664 shares of common stock held of record by Biotechnology Value Fund II, L.P., 276,546 shares of common stock held of record by Biotechnology Value Trading Fund OS LP, and 99,488 shares of common stock held of record by BVF Partners L.P. Managed Accounts, collectively the ("BVF entities"). Also includes 2,060,993 shares of common stock issuable upon exercise of warrants held by the BVF entities. Excludes 2,651,631 shares of common stock issuable upon the exercise of warrants, which are not exercisable within 60 days of March 31, 2022 by virtue of the beneficial ownership limitation described below. The number of shares of common stock into which the warrants are convertible is limited to that number of shares of common stock which would result in the BVF entities, together with their affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of common stock. This beneficial ownership limitation may be increased or decreased to an amount not to exceed 19.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon exercise of warrants.
- (3) Based on a Schedule 13G/A filed with the SEC on February 10, 2022, consisting of 4,626,389 shares of common stock and 1,378,862 shares of common stock issuable upon the exercise of warrants. GSK Equity Investments, Ltd. is an indirect wholly-owned subsidiary of GlaxoSmithKline plc ("GSK"). Excludes 192,525 shares of common stock issuable upon the exercise of warrants, which are not exercisable within 60 days of March 31, 2022 by virtue of the beneficial ownership limitation described below. The number of shares of common stock into which the warrants are convertible is limited to that number of shares of common stock which would result in GSK, together with its affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of common stock.
- (4) Based on a Schedule 13G filed with the SEC on February 12, 2021, consisting of 5,084,184 shares of common stock and 870,257 shares of common stock issuable upon the exercise of warrants. Avoro Capital Advisors LLC is an indirect wholly-owned subsidiary of Avoro Life Sciences LLC. Behzad Aghazadeh is the portfolio manager and controlling person of Avoro and, as such, holds voting and dispositive power with regard to these shares and warrants. Excludes 27,659,003 shares of common stock issuable upon the exercise of warrants, which are not exercisable within 60 days of March 31, 2022 by virtue of the beneficial ownership limitation described below. The number of shares of common stock into which the warrants are convertible is limited to that number of shares of common stock which would result in Dr. Aghazadeh, together with his affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of common stock.
- (5) Based on a Schedule 13G/A filed with the SEC on February 14, 2022, consisting of 1,854,686 shares of common stock and 1,680,672 shares of common stock issuable upon the exercise of warrants. Citadel Advisors LLC is the portfolio manager for Citadel Multi-Strategy Equities Master Fund Ltd. Citadel Advisors Holdings LP ("CAH") is the sole member of Citadel Advisors LLC. Citadel GP LLC ("CGP") is the general partner of CAH. CALC IV LP ("CALC4") is the non-member manager of Citadel Securities LLC. Citadel Securities GP LLC ("CGSP") is the general partner of CALC4. Kenneth Griffin is the President and Chief Executive Officer of CGP, and owns a controlling interest in CGP and CSGP and, as such, holds voting and dispositive power with regard to these shares and warrants.
- (6) Based on a Schedule 13G/A filed with the SEC on February 14, 2022, consisting of 3,079,756 shares of common stock. Commodore Capital LP ("Commodore Capital") is the investment manager to Commodore Capital Master LP ("Commodore Master"). Michael Kramarz and Robert Egen Atkinson are the managing partners of Commodore Capital and, as such, hold voting and dispositive power with regard to these shares.
- (7) Consisting of 108,472 shares of common stock and 12,696 shares of common stock that will be acquired upon the vest of RSUs and 562,936 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (8) Consisting of 8,352 shares of common stock and 3,075 shares of common stock that will be acquired upon the vest of RSUs and 154,275 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (9) Consisting of 13,853 shares of common stock and 3,884 shares of common stock that will be acquired upon the vest of RSUs and 217,673 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (10) Consisting of 31,892 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.

- (11) Consisting of 30,000 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (12) Consisting of 3,887 shares of common stock and 35,252 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (13) Consisting of 6,672 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (14) Consisting of 31,261 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (15) Consisting of 1,668 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (16) Consisting of 20,678 shares of common stock and 39,033 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.
- (17) Consisting of 202,390 shares of common stock and 25,805 shares of common stock that will be acquired upon the vest of RSUs and 1,482,183 shares of common stock that can be acquired upon the exercise of options within 60 days of March 31, 2022.

Equity Compensation Plan Information

The following table provides aggregate information with respect to all of our equity compensation plans in effect as of December 31, 2021. We are required under applicable SEC rules to disclose in this table the number of shares remaining available for issuance under our equity plans as of December 31, 2021. Accordingly, the figures in the table below do not reflect the equity grants made to our employees under our plans since December 31, 2021.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights ⁽²⁾	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in first column) ⁽³⁾
Equity compensation plans approved by security holders ⁽¹⁾	3,743,382	\$ 5.18	865,901

(1) Includes information regarding our Amended and Restated 2014 Equity Incentive Plan and our 2014 Employee Stock Purchase Plan, as amended.

(2) The weighted-average exercise price includes all outstanding stock options but does not include RSUs, which do not have an exercise price.

(3) Does not include 2,329,007 shares added to the Amended and Restated 2014 Equity Incentive Plan under the evergreen provision on January 1, 2022.

Item 13. Certain Relationships and Related Party Transactions, and Director Independence

The following is a description of transactions since January 2020, to which we have been a party, in which the amount involved exceeded or will exceed \$120,000, and in which any related person had a direct or indirect material interest.

Indemnification Agreements

We entered into indemnification agreements with each of our directors and executive officers. These agreements will require us to indemnify these individuals and, in certain cases, affiliates of such individuals, to the fullest extent permissible under Delaware law against liabilities that may arise by reason of their service to us or at our direction, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

Registration Rights Agreement

We are a party to a registration rights agreement with certain holders of common stock, including some of our executive officers and 5% stockholders and their affiliates. The registration rights agreement provides these holders the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing.

Transactions with Our Executive Officers, Directors and 5% Stockholders

In July 2020, we issued and sold to New Enterprise Associates ("NEA"), a holder of more than 5% of our capital stock, in a private placement 3,151,260 shares of our common stock and warrants to purchase 3,151,260 shares of our common stock for aggregate consideration of approximately \$7.5 million.

Additionally, in connection with an equity financing in January 2018, we agreed to elect one representative from NEA to serve as a member of our Board of Directors. In February 2018, the Board of Directors elected Ali Behbahani, a partner in the healthcare group at NEA, as a director of the Company. We do not have any obligation to continue to nominate NEA's representative on our Board of Directors.

Related Person Transactions Policy

Pursuant to our written related person transaction approval policy, if we want to enter into a transaction with a related person or an affiliate of a related person, our Chief Financial Officer will review the proposed transaction to determine, based on applicable Nasdaq and SEC rules, if such transaction requires pre-approval by the Audit Committee and/or Board of Directors. If pre-approval is required, such matters will be reviewed at the next regular or special Audit Committee and/or Board of Directors meeting. We may not enter into a related person transaction unless our Chief Financial Officer has either specifically confirmed in writing that no further reviews are necessary or that all requisite corporate reviews have been obtained.

Transactions with related persons

If a related person proposes to enter into such a transaction, arrangement or relationship, which we refer to as a "related person transaction," the related person must report the proposed related person transaction to our Chief Financial Officer. The policy calls for the proposed related person transaction to be reviewed and, if deemed appropriate, approved by our Audit Committee. Whenever practicable, the reporting, review and approval will occur prior to entry into the transaction. If advance review and approval is not practicable, the Audit Committee will review, and, in its discretion, may ratify the related person transaction. The policy also permits the chair of the Audit Committee to review and, if deemed appropriate, approve proposed related person transactions, in which the amount involved does not exceed \$500,000, that arise between Audit Committee meetings, subject to ratification by the Audit Committee at its next meeting. Any related person transactions that are ongoing in nature will be reviewed annually.

A related person transaction reviewed under the policy will be considered approved or ratified if it is authorized by the Audit Committee after full disclosure of the related person's interest in the transaction.

In addition to the transactions that are excluded by the instructions to the SEC's related person transaction disclosure rule, our Board of Directors has determined that the following transactions are pre-approved by the Audit Committee even if the aggregate amount of such transaction exceeds \$120,000:

- employment of executive officers where the related compensation is required to be reported in a proxy statement (general applicable to "named executive officers") or the executive officer is not an immediate family member of another executive officer or director, the related compensation would be reported as compensation in a proxy statement and the Compensation Committee approved (or recommended that the Board of Directors approve) such compensation;
- any compensation paid to a director if the compensation is required to be reported in a proxy statement;
- any transaction with another company at which a related person's only relationship is an employee (other than an executive officer), director of beneficial owner of less than 10% of that company's shares, if the aggregate amount involved does not exceed the greater of \$1 million or 2% of that company's total annual revenues;
- any transaction where our Company is indebted to another company at which a related person's only relationship is an employee (other than an executive officer), director of beneficial owner of less than 10% of that company's shares, if the total amount of our Company's indebtedness to the other company at the end of that company's last completed fiscal year does not exceed 1% of that company's total consolidated assets;
- any transaction where the related person's interest arises solely from the ownership of our Company's common stock and all holders of our Company's common stock received the same benefit on a pro rata basis;
- any transaction involving a related person where the rates or charges involved are determined by competitive bids;
- any transaction with a related person involving the rendering of services as common or contract carrier, or public utility, at rates or charges fixed in conformity with law or governmental authority; or
- any transaction with a related person involving services as a bank depository of funds, transfer agent, registrar, trustee under a trust indenture, or similar services.

Director Independence

As required by the listing standards of The Nasdaq Capital Market ("Nasdaq"), the Board of Directors has affirmatively determined, upon the recommendation of the Nominating and Corporate Governance Committee, that each of our directors (other than William Clark, our President and Chief Executive Officer) is independent. To make this determination, our Board of Directors reviews all relevant transactions or relationships between each director and Genocsa, its senior management and its independent registered public accounting firm. During this review, the Board of Directors considers whether there are any transactions or relationships between directors or any member of their immediate family (or any entity of which a director or an immediate family member is an executive officer, general partner or significant equity holder) and members of our senior management or their affiliates. The Board of Directors consults with Genocsa's outside corporate counsel to ensure that the Board of Directors' determinations are consistent with all relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent Nasdaq listing standards, as in effect from time to time.

The Board has also determined that each current member of the audit committee, the compensation committee, and the nominating and corporate governance committee meets the independence standards applicable to those committees prescribed by Nasdaq, the SEC, and the Internal Revenue Service.

Item 14. Principal Accountant Fees and Services

We regularly review the services and fees of our independent registered public accounting firm. These services and fees are also reviewed by the Audit Committee on an annual basis. The aggregate fees billed for the fiscal years ended December 31, 2021 and 2020 for each of the following categories of services are as follows:

Fee Category	2021	2020
Audit Fees	\$ 588,000	\$ 598,905
Audit-Related Fees	—	—
Tax Fees	82,400	—
All Other Fees	3,510	—
Total Fees	<u>\$ 673,910</u>	<u>\$ 598,905</u>

Audit Fees. Consists of fees billed for professional services rendered for the audit of our annual financial statements, the review of interim financial statements and services provided in connection with our registration statements on Form S-1, Form S-8 and Form S-3.

Audit-Related Fees. Consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and are not reported under Audit Fees.

Tax Fees. Consists of fees billed for tax compliance, tax advice and tax planning and includes fees for tax return preparation.

All Other Fees. Consists of all other fees billed other than those described above under Audit Fees, Audit-Related Fees and Tax Fees.

All of the services under the captions "Audit Fees" were pre-approved by our Audit Committee.

Pre-Approval Policies and Procedures

Our Audit Committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our registered public accounting firm. This policy generally provides that we will not engage our registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by our Audit Committee or the engagement is entered into pursuant to one of the pre-approval procedures described below.

From time to time, our Audit Committee may pre-approve specified types of services that are expected to be provided to us by our registered public accounting firm during the next 12 months. Any such pre-approval is detailed as to the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

PART IV

Item 15. Exhibits and Financial Statement Schedules

Exhibits

The exhibits required by Item 601 of Regulation S-K are listed in the Exhibit Index immediately preceding the signature page of this Annual Report on Form 10-K/A. The exhibits listed in the Exhibit Index are incorporated by reference herein.

EXHIBIT INDEX

Exhibit Number	Exhibit Description
3.1	Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on June 24, 2021)
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on February 12, 2014)
4.1	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1, File No. 333-193043, filed on December 23, 2013)
4.2	Fourth Amended and Restated Registration Rights Agreement (incorporated by reference to Exhibit 4.5 to the Company's Registration Statement on Form S-1, File No. 333-193043, filed on December 23, 2013)
4.3	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, File No. 001-36289 filed on January 19, 2018)
4.4	Form of Class A Warrant to Purchase Shares of Common Stock of Genocoea Biosciences, Inc. (incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 16, 2018)
4.5	Warrant Agreement between the Company and Hercules Capital, Inc., dated April 24, 2018 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on April 30, 2018)
4.6	Form of Pre-Funded Warrant to Purchase Shares of Common Stock of Genocoea Biosciences, Inc. (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on February 12, 2019)
4.7	Form of Class B Warrant to Purchase Shares of Common Stock of Genocoea Biosciences, Inc. (incorporated by reference to Exhibit 4.8 to the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 28, 2019)
4.8	Form of Pre-Funded Warrant to Purchase Shares of Common Stock of Genocoea Biosciences, Inc. (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on July 22, 2020)
4.9	Form of Class C Warrant to Purchase Shares of Common Stock of Genocoea Biosciences, Inc. (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on July 22, 2020)
4.10	Warrant Agreement between the Company and Silicon Valley Bank, dated February 18, 2021 (incorporated by reference to Exhibit 4.10 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 22, 2021)
4.11	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.11 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on March 18, 2022)
10.1	Form of Director Indemnification Agreement (incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-1, File No. 333-193043, filed on December 23, 2013)
10.2++	Amended and Restated License Agreement between Genocoea Biosciences, Inc. and President and Fellows of Harvard College, dated November 19, 2012 (incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 13, 2020)
10.3	License and Supply Agreement, between the Company and Oncovir, Inc., dated January 26, 2018 (incorporated by reference to Exhibit 10.32 to the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 16, 2018)
10.4	Lease, dated as of July 3, 2012 between TBCI, LLC and Genocoea Biosciences, Inc. (incorporated by reference to Exhibit 10.8 to the Company's Registration Statement on Form S-1, File No. 333-193043, dated December 23, 2013)

Exhibit Number	Exhibit Description
10.5	<u>First Amendment to Lease, dated May 16, 2016, between 100 Discovery Park DE, LLC, a Delaware limited liability company (as successor in interest to TBCI, LLC, as Trustee of 100 Discovery Park Realty Trust) and Genocea Biosciences, Inc. (incorporated by reference to Exhibit 10.30 to the Company's Form 10-Q, File No. 001-36289, filed on August 5, 2016)</u>
10.6	<u>Second Amendment to the Lease, dated May 1, 2019, between 100 Discovery Park DE, LLC, a Delaware limited liability company (as successor in interest to TBCI, LLC, as Trustee of 100 Discovery Park Realty Trust) and Genocea Biosciences, Inc. (incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 13, 2020)</u>
10.7	<u>Sublease between the Company and Zymergen Inc., dated November 30, 2020 (incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 22, 2021)</u>
10.8†	<u>Genocea Biosciences, Inc. Amended and Restated 2007 Equity Incentive Plan, as amended on June 24, 2013 (incorporated by reference to Exhibit 10.10 to the Company's Registration Statement on Form S-1, File No. 333-193043, filed on December 23, 2013)</u>
10.9†	<u>Form of Incentive Stock Option Granted under the Genocea Biosciences, Inc. Amended and Restated 2007 Equity Incentive Plan (incorporated by reference to Exhibit 10.21 to the Company's Registration Statement on Form S-1, File No. 333-193043, filed on December 23, 2013)</u>
10.10†	<u>Form of Nonstatutory Stock Option Granted under the Genocea Biosciences, Inc. Amended and Restated 2007 Equity Incentive Plan (incorporated by reference to Exhibit 10.20 to the Company's Registration Statement on Form S-1, File No. 333-193043, filed on December 23, 2013)</u>
10.11†	<u>Genocea Biosciences, Inc. Amended and Restated 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on June 2, 2020)</u>
10.12†	<u>Form of Incentive Stock Option under the Genocea Biosciences, Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.22 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 13, 2014)</u>
10.13†	<u>Form of Nonstatutory Stock Option under the Genocea Biosciences, Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.23 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 13, 2014)</u>
10.14†	<u>Form of Restricted Stock Unit Award Agreement under the Genocea Biosciences, Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q, File No. 001-36289, filed on April 30, 2020)</u>
10.15†	<u>Genocea Biosciences, Inc. 2014 Employee Stock Purchase Plan, as amended (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on June 25, 2018)</u>
10.16†	<u>Genocea Biosciences, Inc. Cash Incentive Plan (incorporated by reference to Exhibit 10.16 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 13, 2014)</u>
10.17†	<u>Nonstatutory Stock Option granted under the Genocea Biosciences, Inc. Amended and Restated 2007 Equity Incentive Plan to Katrine Bosley, dated May 13, 2013 (incorporated by reference to Exhibit 10.27 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 13, 2014)</u>
10.18†	<u>Nonstatutory Stock Option granted under the Genocea Biosciences, Inc. Amended and Restated 2007 Equity Incentive Plan to Katrine Bosley, dated November 5, 2013 (incorporated by reference to Exhibit 10.28 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 13, 2014)</u>
10.19†	<u>Amended and Restated Employment Letter Agreement between William Clark and Genocea Biosciences, Inc., dated January 16, 2014 (incorporated by reference to Exhibit 10.12 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 23, 2014)</u>

Exhibit Number	Exhibit Description
10.20†	Employment Letter Agreement between Girish Aakalu and Genocea Biosciences, Inc., dated December 6, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, File No. 001-36289, filed on April 30, 2020)
10.21†	Employment Letter Agreement between Thomas Davis and Genocea Biosciences, Inc., dated October 1, 2018 (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, File No. 001-36289, filed on April 30, 2020)
10.22+	Amended and Restated Loan and Security Agreement between the Company, the several banks and other financial institutions or entities from time to time parties thereto and Hercules Capital, Inc., dated April 24, 2018 (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q, File No. 001-36289, filed on August 3, 2018)
10.23	First Amendment to Amended and Restated Loan and Security Agreement between the Company, the several banks and other financial institutions or entities from time to time parties thereto and Hercules Capital, Inc., dated November 14, 2019 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on November 19, 2019)
10.24	Equity Rights Letter Agreement between the Company and Hercules Technology Growth Capital, Inc., dated November 20, 2014 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on November 21, 2014)
10.25	Amendment to Equity Rights Letter Agreement between the Company, Hercules Capital, Inc. (f/k/a Hercules Technology Growth Capital, Inc.), dated April 24, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 001-36289, filed on April 30, 2018)
10.26++	Loan and Security Agreement between the Company and Silicon Valley Bank, dated February 18, 2021 (incorporated by reference to Exhibit 10.26 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on February 22, 2021)
10.27†	Form of Performance-Based Restricted Stock Unit Award Agreement under the Genocea Biosciences, Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, File No. 001-36289, filed on April 29, 2021)
10.28++	Collaboration and Option Agreement between the Company and Janssen Biotech, Inc., dated December 28, 2021 (incorporated by reference to Exhibit 10.28 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on March 18, 2022)
10.29†	Amended and Restated Employment Letter Agreement between Jessica Flechtner and Genocea Biosciences, Inc., dated January 16, 2014 (incorporated by reference to Exhibit 10.14 to the Company's Registration Statement on Form S-1, File No. 333-193043, as amended on January 23, 2014)
10.30†*	Amendment to the Amended and Restated Employment Letter Agreement between Jessica Flechtner and Genocea Biosciences, Inc., dated September 12, 2016
21.1	List of Subsidiaries of the Company (incorporated by reference to Exhibit 21.1 to the Company's Form 10-K, File No. 001-36289, filed on February 17, 2016)
23.1	Consent of Ernst & Young LLP (incorporated by reference to Exhibit 23.1 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on March 18, 2022)
31.1*	Rule 13a-14(a) / 15d-14(a) Certification of Principal Executive Officer
31.2*	Rule 13a-14(a) / 15d-14(a) Certification of Principal Financial Officer
32	Section 1350 Certifications of Principal Executive Officer and Principal Financial Officer (incorporated by reference to Exhibit 32 of the Company's Annual Report on Form 10-K, File No. 001-36289, filed on March 18, 2022)
101. INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document
101. SCH*	Inline XBRL Taxonomy Extension Schema Document
101. CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document

Exhibit Number	Exhibit Description
101. DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101. LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101. PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.

** Furnished herewith.

† Indicates a management contract or compensatory plan.

+ Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and this exhibit has been submitted separately to the Securities and Exchange Commission.

++ Portions of this exhibit (indicated by asterisks) have been omitted because the Registrant has determined they are not material and would likely cause competitive harm to the Registrant if publicly disclosed.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on April 29, 2022.

GENOCEA BIOSCIENCES, INC.

By: /s/ William Clark

William Clark

President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ William Clark</u> William Clark	President and Chief Executive Officer and Director (Principal Executive Officer)	April 29, 2022
<u>/s/ Diantha Duvall</u> Diantha Duvall	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	April 29, 2022
<u>/s/ Kenneth Bate</u> Kenneth Bate	Director	April 29, 2022
<u>/s/ Ali Behbahani</u> Ali Behbahani	Director	April 29, 2022
<u>/s/ Katrine Bosley</u> Katrine Bosley	Director	April 29, 2022
<u>/s/ Jennifer Herron</u> Jennifer Herron	Director	April 29, 2022
<u>/s/ Michael Higgins</u> Michael Higgins	Director	April 29, 2022
<u>/s/ John Lunger</u> John Lunger	Director	April 29, 2022
<u>/s/ George Siber</u> George Siber, M.D.	Director	April 29, 2022

September 12, 2016

Dear Jess:

This letter (the "Amendment") amends the letter agreement between you and Genocea Biosciences, Inc. (the "Company"), dated January 16, 2014 (the "Employment Agreement"), effective as of the date hereof. All capitalized terms used in this Amendment shall have the meanings ascribed to them in the Employment Agreement unless otherwise expressly provided herein.

In recognition of your recent promotion to Chief Scientific Officer and in consideration of your continued employment with the Company, the additional severance benefits, mutual promises and terms and conditions set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, you and the Company agree to amend the Employment Agreement as follows:

1. Section 1 of the Employment Agreement is hereby amended by deleting "Vice President of Research" and replacing it with "Chief Scientific Officer".
2. Sections 5(a)(i) and 5(a)(ii) of the Employment Agreement are hereby amended by deleting each reference to "six-month period" therein and replacing each such reference with "nine-month period".
3. Sections 5(b)(i) and 5(b)(ii) of the Employment Agreement are hereby amended by deleting each reference to "twelve-month period" therein and replacing each such reference with "fifteen-month period".

Except as expressly amended herein, the Employment Agreement will continue in full force and effect in accordance with its terms. This Amendment embodies the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior communications, agreements and understandings, whether written or oral, with respect to the same. This Amendment may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same instrument. This Amendment is a Massachusetts contract and shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts, without regard to the conflict-of-laws principles thereof.

Please acknowledge your agreement with the terms and conditions of this Amendment by signing and returning the enclosed copy of this Amendment to the undersigned, whereupon this Amendment will become a binding agreement between us.

Sincerely,
/s/ William Clark
Name: William Clark
Title: President and Chief Executive Officer

Agreed to and accepted,

Signature: /s/ Jessica B. Flechtner
Printed Name: Jessica B. Flechtner
Date: September 12, 2016

Enclosures
Duplicate Original Letter

PRINCIPAL EXECUTIVE OFFICER CERTIFICATION

I, William D. Clark, certify that:

1. I have reviewed this Amendment No.1 to the Annual Report on Form 10-K of Genoecea Biosciences, Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

/s/ WILLIAM D. CLARK

William D. Clark

President and Chief Executive Officer and Director

(Principal Executive Officer)

Date: April 29, 2022

PRINCIPAL FINANCIAL OFFICER CERTIFICATION

I, Diantha Duvall, certify that:

1. I have reviewed this Amendment No. 1 to the Annual Report on Form 10-K of Genocera Biosciences, Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

/s/ DIANTHA DUVALL

Diantha Duvall

Chief Financial Officer

Date: April 29, 2022