Risk Factors Comparison 2025-03-03 to 2024-02-29 Form: 10-K

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Investing in our Company involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all other information in this Annual Report on Form 10- K, including our consolidated financial statements and related notes and the " Management' s Discussion and Analysis of Financial Condition and Results of Operations " section, before investing in our Company. Any of the risk factors we describe below could adversely affect our business, financial condition, results of operations, prospects or the trading price of our securities. The risks described below are not the only ones we face and additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business, financial condition, operating results, prospects and the trading price of our securities. Summary of Risk Factors Generally, the risks described below relate to the following: • our significant net losses since inception, expected net losses in the future and need for significant investments in products and services, as well as our ability to manage operating expenses in light of profitability goals; • **market acceptance** ~~our collaboration with Genentech~~ and **our** ability to ~~develop~~ **increase the adoption of our products** and **services** ~~commercialize cellular therapeutics~~, including **via coverage or reimbursement decisions related to our clinical diagnostic products; •** our ability to ~~achieve milestones and realize~~ **increase our capacity, manage** the **evolution** ~~intended benefits~~ of ~~the collaboration~~ **our products and services, stay current in our rapidly changing industry and otherwise manage our growth** ; • our laboratory operations, including errors or defects in our products or services and our reliance on a limited number of suppliers, and in some cases single suppliers, for our equipment and materials, some of which include reagents or other materials that may also require additional internal validation prior to use; • our **collaboration with Genentech and ability to develop and commercialize cellular therapeutics, including our ability to achieve milestones and realize the intended benefits of the collaboration; • our** limited experience with the development and commercialization of therapeutic products, including cellular therapies and antibodies ~~; • our ability to leverage our immune medicine platform to discover, develop and commercialize target antigens and therapeutic products may not be successful~~ ; • our expected and potential reliance on collaborators for development and clinical testing of therapeutic product candidates, which may fail at any time due to a number of possible unforeseen events; • ~~market acceptance of our products and services; • our ability to increase our capacity, manage~~ the ~~evolution~~ **extensive regulation** of our ~~products and services, stay current in our rapidly changing~~ industry **, including fraud** and ~~otherwise manage our growth~~ **abuse laws and data privacy regulations** ; • the loss of any member of our senior management team, or of the support of key opinion leaders; **and** ~~• the extensive regulation of our industry, including reimbursement coverage decisions;~~ • the validity of our patents, protection of our trade secrets and related intellectual property matters ~~; and • the effects of health epidemics in regions where we or third parties on which we rely have significant laboratory operations, manufacturing facilities, concentrations of clinical trial sites or other business operations~~ . Risks Relating to Our Business We have incurred significant losses since inception, we expect to incur losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability. We have incurred significant losses since our inception. For the year ended December 31, **2024,** 2023 ~~,~~ **and** 2022 ~~and 2021~~, we incurred a net loss of $ **159. 6 million, $** 225. 3 million ~~,~~ **and** $ 200. 4 million ~~and $ 207. 3 million~~, respectively. As of December 31, ~~2023~~ **2024** , we had an accumulated deficit of $ 1. ~~1~~ **3** billion. We have funded our operations to date principally from the sale of convertible preferred stock and common stock, including the sale of common stock in our initial public **offering and follow- on** offering, and, to a lesser extent, revenue as well as ~~entry into~~ **transactions pursuant to** the Purchase Agreement. We expect to continue to incur significant expenses and operating losses as we continue to invest in the development of products and services utilizing our immune medicine platform to support the validation of additional clinical **therapeutic and** diagnostic ~~and therapeutic~~ products and services. We will need to generate significant additional revenue to achieve and sustain profitability ~~stock price to decline.While as a general matter we intend to periodically report on the status of our development initiatives,including anticipated next steps,we may not provide forward- looking guidance on the timing of those next steps.In addition,we do not control the timing of disclosure of any such milestones related to any of our products that are managed by our collaborators.Any disclosure by us or our collaborators of data that is perceived as negative may have a material adverse impact on our stock price or overall valuation.Our stock price may decline as a result of unexpected clinical trial results in one or more of our products,including adverse safety events reported for any of our products~~ .If third- party payors,including private payors and government healthcare programs,do not provide coverage of,or adequate reimbursement for,our clinical diagnostic products,our commercial success will be negatively affected.Our diagnostic revenue depends in part on achieving broad coverage and reimbursement for our ~~elonoSEQ~~ **diagnostic** tests from payors,including both private and government payors.Certain large private payors have issued policies that decline to cover testing methods that they regard as experimental or investigational.Other payors may issue similar non- coverage policies.If payors do not provide coverage of,or do not provide adequate reimbursement for,a substantial portion of the price of our diagnostic tests,we may need to seek payment from the patient where this is not precluded by law or contract,which may adversely affect demand for our tests.Coverage determinations by a payor may depend on a number of factors,including,but not limited to,a payor' s determination that a certain diagnostic test is appropriate,medically necessary or cost- effective.If we are unable to provide payors with sufficient evidence of the clinical utility and validity of our diagnostic tests,they may not provide coverage,or may provide limited coverage,which will adversely affect our revenues and our ability to succeed.To the extent that more competitors enter our markets,the availability of coverage and the reimbursement rate for our tests and new diagnostic products may decrease as we encounter pricing pressure from our competitors.Each payor makes its own decision regarding coverage of our tests and the applicable payment rates,and payors

may not provide adequate coverage or reimbursement for our current or future products.Although we may contract with certain payors,working with payors through contract or otherwise to assure reimbursement is time- consuming and costly and outcomes are uncertain.In addition,the determinations by a payor whether to cover our clinical diagnostic product and the amount it will reimburse for them are often made on an indication- by- indication basis.In cases where there is no coverage policy or we do not have a contracted rate for reimbursement as a participating provider,the patient is typically responsible for a greater share of the cost of the test,which may result in further delay of our revenue,increase our collection costs or decrease the likelihood of collection.Through our Adaptive Assist patient support program,we provide clonoSEQ diagnostic tests for reduced rates or without charge to eligible low- income patients that may result in payors requiring us to provide evidence of eligibility of such patients to pay reduced out- of- pocket amounts.Our claims for reimbursement from payors may be denied upon submission,and we may need to take additional steps to receive payment,such as appealing the denials.Such appeals and other processes are time- consuming,expensive and may not result in payment.Payors may perform audits of historically paid claims and attempt to recoup funds years after the funds were initially distributed if the payors believe the funds were paid in error or determine that our clonoSEQ diagnostic tests or other clinical diagnostic products were medically unnecessary.In addition,similar to federal payors,state and federal laws permit commercial payors to seek civil and criminal penalties against a manufacturer if they feel they have been defrauded.If a **payor audits our claims and issues a negative audit finding,and we are not able to overturn the audit findings through appeal,the recoupment may result in a material adverse effect on our revenue.Additionally,in some cases commercial payors for whom we are not a participating provider may elect at any time to review claims previously paid and determine the amount they paid was too much.In these situations,the payor will typically notify us of their decision and then offset whatever amount they determine they overpaid against amounts they owe us on current claims.We do not have a mechanism to dispute these retroactive adjustments and we cannot predict when,or how often,a payor might engage in these reviews** . If we are not successful in leveraging our ~~immune medicine~~ platform to **expand clonoSEQ in new indications or sample types and** discover, develop and commercialize additional products and services, our ability to ~~expand~~ **grow** our business and achieve our strategic objectives would be impaired. Our strategy is to leverage our immune medicine platform to discover, develop and potentially commercialize additional **therapeutic and** diagnostic ~~and therapeutic~~ products and services for various disease states. In particular, for clonoSEQ we are attempting to generate sufficient clinical evidence to support the utility of MRD in additional lymphoid cancers beyond ALL, MM, CLL, ~~and~~ DLBCL **and MCL** while also demonstrating the clinical utility of blood as a sample type for all lymphoid cancers. If we are unable to generate compelling evidence supporting clonoSEQ use in other indications or sample types, we may not succeed in expanding our clonoSEQ product platform. In our immune medicine business, our focus on target antigen discovery and development of therapeutic products, including antibodies and cellular therapies, faces significant challenges in the identification, validation, development, clinical testing and marketing approval of new products. If we or our collaborators are unable to discover novel targets and develop transformative immune- based therapies, we may not succeed in commercializing new therapeutic products. Identifying new products and services requires substantial technical, financial and human resources, whether or not any products or services are ultimately developed or commercialized. We may pursue what we believe is a promising opportunity to leverage our platform only to discover that certain of our risk or resource allocation decisions were incorrect or insufficient, or that individual products, services or our science in general has technology or biology risks that were previously unknown or underappreciated. Our strategy of pursuing the value of our immune medicine platform over a long time horizon and across a broad array of human diseases may not be effective. In the event material decisions in any of these areas turn out to be incorrect or sub- optimal, we may experience a material adverse impact on our business and ability to fund our operations and we may never realize what we believe is the potential of our immune medicine platform. We expect to make significant investments in our continued research and development of new products and services, which may not be successful. We are seeking to leverage our immune medicine platform to develop a pipeline of future disease- specific research, **therapeutic and** diagnostic ~~and therapeutic~~ products. For example, we continually expand our immunomics database and ~~antigen- annotated~~ TCR- ~~Antigen~~ **antigen** ~~Map~~ **binding** with a view toward ~~continually~~ advancing target antigen discovery to leverage in developing therapies such as prophylactic or therapeutic antibodies. In addition, we are developing certain therapeutic product candidates under our collaboration agreement with Genentech by leveraging our platform to identify TCRs that can be engineered into personalized cellular therapeutic products. We are also attempting to leverage our immune medicine platform to discover and develop potential **therapeutic** ~~antibody~~ **antibodies** ~~therapies, which have been~~ **in autoimmune indications. This effort was** informed by our previous investment in ~~producing~~ **discovering** , ~~collecting~~ **making** and ~~analyzing data related to~~ **testing antibodies for the treatment of** COVID- 19. Our **antibody discovery and development** efforts in **autoimmunity** ~~this area~~ are early **,** and **we** continue to evolve and mature ~~as we augment~~ our **programs** ~~databases and pool of knowledge~~ . As we **generate** ~~continue to collect~~ and analyze ~~additional~~ data **on our antibody discovery work and programs** , we may find that our initial hypotheses regarding any disease state **are** ~~which is a target for antibody discovery is~~ not supported by a larger data set or further analysis. If ~~our beliefs~~ **we are unable to demonstrate compelling data** regarding the effectiveness of our antibody discovery and development capabilities ~~are incorrect~~ , ~~that could have a material adverse effect on the market for our~~ **we may incur substantial costs but not be able to commercialize any related** ~~products~~ **product** . Developing new products is a speculative and risky endeavor. Products or services that initially show promise may fail to achieve the desired results or may not achieve acceptable levels of analytical accuracy or clinical utility. We may need to alter our products in development and repeat clinical studies before we identify a potentially successful product or service. Therapeutic product development is expensive, may take years to complete and can have uncertain outcomes. Failure can occur at any stage of the development. If, after development, a product or service appears successful, we or our collaborators (if any) may, depending on the nature of the product or service, still need to obtain FDA and other regulatory clearances, authorizations or approvals before we can market it. The clearance, authorization or approval pathways at the FDA and other regulatory authorities are likely to involve significant time, as well as

additional research, development and clinical study expenditures. The FDA or other regulatory authorities may not clear, authorize or approve any future product we develop. Even if we develop a product that receives regulatory clearance, authorization or approval, we or our collaborators would need to commit substantial resources to commercialize, sell and market it before it could be profitable, and the product may never be commercially successful. Additionally, development of any product may be disrupted or made less viable by the development of competing products. Because new potential products may fail at any stage of development or commercialization and if we determine that any of our current or future products are unlikely to succeed, we may abandon them without any return on our investment. If we are unsuccessful in developing additional products, our potential for growth may be impaired . Our efforts to develop products leveraging....., financial condition and results of operations . We rely on a limited number of suppliers or, in many cases, single suppliers, for laboratory equipment and materials and may not be able to find replacements or immediately transition to alternative suppliers. We rely on a limited number of suppliers, or in many cases single suppliers, to provide certain sequencers, reagents, equipment and other materials that we use in our laboratory operations and product development. An interruption in our laboratory operations, kit distribution, technology transfer, or development activities could occur if we encounter delays, quality issues or other difficulties in securing these sequencers, equipment, reagents or other materials, and if we cannot then obtain an acceptable substitute. In such an event, we would likely be required to incur significant costs and devote significant efforts to find new suppliers, acquire and qualify new equipment, validate new reagents and revalidate aspects of our existing assays, which may cause delays in our processing of samples or development and commercialization of products. Any such interruption could significantly affect our business, financial condition, results of operations and reputation. Internal changes in processes or compositions of our reagents or other materials may also require validation efforts by us and supply of new materials from our suppliers which could impact timing of production and levels of inventory while such changes are being implemented. For example, we have purchased and rely on the Illumina NextSeq System **and plan to rely in the future on the NovaSeq X system** . Illumina supplies us with reagents that have been designed for use solely with this sequencer and Illumina is the sole provider of maintenance and repair services for the Illumina NextSeq System. We also license our laboratory information management software from Illumina and receive services from Illumina related to that software. In addition, Illumina is not obligated to meet all of our requirements for reagent supply. In the event Illumina ceases or slows its production of, or is otherwise unwilling or unable to continue to supply the sequencer reagents necessary for and currently used in our business at or near current pricing, we may be required to purchase different reagents from Illumina or to purchase from a different reagent vendor under terms and conditions which could be less favorable to us. Any disruption in Illumina' s operations or the suppliers of our reagents, materials or other equipment could impact our ability to do business. We believe there are only a few other equipment manufacturers that are currently capable of supplying the equipment necessary for our laboratory operations and product development, including sequencers and various associated reagents. The use of sequencers manufactured by a company other than Illumina would require us to alter our laboratory operations. Transitioning to and qualifying a new sequencer would be time- consuming and expensive, may result in interruptions in our laboratory operations, could affect the performance specifications of our laboratory operations or could require that we revalidate the reagents we use in immunosequencing, potentially including our clonoSEQ diagnostic testing services, and could require us to obtain additional clearance, authorization, approval, accreditation, or licensure for the changes. We may not be able to secure and implement alternative sequencers, associated reagents and other materials without experiencing interruptions in our workflow. In the case of an alternative supplier to Illumina, any replacement sequencers and various associated reagents may not be available or may not meet our quality control and performance requirements for our laboratory operations. If we should encounter delays or difficulties in securing, reconfiguring or revalidating the equipment and reagents we require for our products and services, our business, financial condition, results of operations and reputation could be adversely affected. **Errors or defects in our products or services could harm our reputation,decrease market acceptance of our products or services or expose us to product liability claims.We are creating new products,many of which are initially based on largely untested technologies.As all of our products and services progress,we or others may determine that we made product or service level scientific or technological mistakes or omissions.The testing processes utilize a number of complex and sophisticated biochemical,informatics,optical and mechanical processes,many of which are highly sensitive to external factors and variation between testing runs.Refinements to our processes may initially result in unanticipated issues that reduce the efficiency or increase variability.In particular,DNA sequencing,which is a key component of these processes,could be inefficient with higher than expected variability thereby increasing total sequencing costs and reducing the number of samples we can process in a given time period,which may negatively impact customer turnaround time.Therefore,inefficient or variable processes can cause variability in our operating results and damage our reputation.In addition,our development laboratory operations could result in any number of errors or defects.Our quality assurance system or product development processes may fail to prevent us from inadvertent problems with samples,sample quality,lab processes including sequencing,software,data upload or analysis,raw materials,reagent manufacturing,assay quality or design,or other components or processes.In addition,our assays may have quality or design errors,and we may have inadequate procedures or instrumentation to process samples,assemble our proprietary primer mixes and commercial materials,upload and analyze data,or otherwise conduct our development laboratory operations.If we provide products or services with undiscovered errors to our customers,our clinical diagnostics may falsely indicate a patient has a disease or fail to detect disease in a patient who requires treatment.We believe our customers are likely to be particularly sensitive to product and service defects,errors and delays,including if our products and services fail to indicate the presence of residual disease with high accuracy from clinical specimens or if we fail to list or inaccurately indicate the presence or absence of disease in our test report.In drug discovery,such errors may interfere with our collaborators' clinical studies or result in adverse safety or efficacy profiles for their products in development.This may harm our customers' businesses and may cause us to incur significant costs,divert the attention of**

key personnel,encourage regulatory enforcement action against us,create a significant customer relations problem for us and cause our reputation to suffer.We may also be subject to liability claims for damages related to errors or defects in our products.Any of these developments could harm our business and operating results .Our efforts to develop products leveraging our ~~antigen- annotated~~ TCR- ~~Antigen~~ **antigen** ~~Map~~ **binding data** may not be successful,and it may not yield the insights **that** we expect ~~at all~~ or on a timetable that allows development or commercialization of new **therapeutic or** diagnostic ~~and therapeutic~~ products.We are using our immunosequencing capabilities,proprietary computational ~~modeling~~ **analyses** and machine learning **models** to map **and computationally predict at scale binding of** TCR sequences to ~~the~~ **disease** antigens ~~they bind~~ **,which we believe has multiple high- value therapeutic applications and is relevant to our drug discovery work** .However,we may not be successful in developing a sufficiently comprehensive **data set or the performance of our ' digital'** TCR- ~~Antigen~~ **antigen prediction models may be insufficient** ~~Map for development of new therapies~~ for any number of reasons **,which may** ~~including~~ **include** difficulty **in** ~~accessing required sample sets to validate~~ **validating** signals and ~~complications~~ **challenges** in ~~advancing~~ **making progress toward** algorithmic- based methods that accurately define TCR ~~-~~ **antigen** signatures **of disease** ~~to be validated~~ .In addition, ~~even with the aid of machine learning,~~ we ~~expect~~ **may not succeed in accelerating** the **development of a ' digital'** TCR- ~~Antigen~~ **antigen** ~~Map to take~~ **binding prediction model that will allow** us ~~several years~~ to **pursue multiple high** ~~fully develop as planned.The TCR-~~ **value therapeutic applications and achieve our business goals in** ~~Antigen Map we are developing therefore may not yield clinically actionable insights on~~ a timetable that is commercially viable for our products or our collaborators' products,or at all. **As** ~~Our goal is to leverage the TCR- Antigen Map in connection with drug discovery and development.We have established proof of concept for identification of disease- specific signals from TCRs produced in patients with SARS- CoV- 2,acute Lyme disease,Crohn' s disease,celiac disease and MS.We have also identified early signals in ulcerative colitis and rheumatoid arthritis and~~ we **continue** ~~will seek~~ to **grow** ~~confirm those signals in ongoing validation work.In pursuit of discovering and developing new drugs,we will leverage~~ our immunomics database and **advance** ~~further develop~~ our ~~TCR- Antigen Map through~~ **prediction modeling activities,we may be unable to translate** ~~the~~ **these efforts into commercialization opportunities** ~~discovery of potential new drug targets (antigens)~~ . **Moreover** ~~Once we have a validated target~~ , ~~we will use our immune medicine platform and our growing TCR- Antigen Map to support development of TCR- based,antigen- based,and antibody- based therapeutic modalities.We have agreed to exclusively use Microsoft' s immunomics artificial intelligence services for TCR- antigen mapping in connection with all of our technology,products and services developed~~ as ~~a direct result of~~ our collaboration **activities under** ~~with Microsoft throughout the term of~~ the Microsoft Agreement **are winding down** , ~~which expires~~ **we may be less successful** in ~~2024~~ **pursuing these opportunities** .If **the performance of** our computational ~~modeling~~ and machine learning **modeling** efforts do not ~~accelerate the pace at which we can~~ **meet our expectations or our needs to accurately** validate ~~association of~~ TCR ~~sequences~~ to ~~the antigens~~ - **antigen** ~~they bind~~ **associations in a reasonable timeframe** , ~~the timetable for~~ our business model may not be commercially viable.Even if we ~~can~~ accelerate ~~this timeline~~ **our efforts** ,products derived from our ~~novel~~ **platform** technologies may have product ~~level errors~~ **specific limitations** .If we are unable to make meaningful progress in **leveraging** our **prediction models to** ~~TCR- Antigen Map and~~ successfully ~~use it to~~ develop and **in the future** commercialize new therapeutic products **,diagnostic products** or services,our business ~~and~~ results ~~of operations~~ will **be negatively** ~~suffer.We utilize artificial intelligence in data and document generation,which may impact~~ **impacted** ~~reliability of our data.We do not use artificial intelligence as an element of any product or service but do use it to assist in generation of datasets and documentation as well as to assist in training computational models.As with many innovations,the use of artificial intelligence presents risks and challenges,including flawed,insufficient or biased datasets.Challenges inherent to the use of artificial intelligence could adversely impact the reliability of our data and subject us to delays and competitive harm,regulatory action,or legal liability,as well as brand or reputational harm~~ .We are exposed to risks associated with our agreement with Genentech,and we may not realize the advantages we expect from it.In December 2018,we entered into the Genentech Agreement with the goal **to** ~~of accelerating the development~~ ---- **develop** and ~~commercialization~~ **commercialize** ~~of novel~~ cancer **antigen** ~~-~~ specific ~~antigen~~ and neoantigen directed ~~T~~ **TCR- based** cell therapies for the treatment of a broad range of tumor types.Under the terms of the Genentech Agreement,we received **an upfront payment of** $ 300.0 million in ~~an initial upfront payment in~~ February 2019 and **a $ 10.0 million milestone payment in May 2023,and we** may be eligible to receive up to approximately $ 1.8 billion in additional payments over time upon achievement of specified development,regulatory and commercial milestones.In addition, ~~Genentech will pay us~~ **we are eligible to receive** ~~royalties~~ **royalty payments** on sales of products **that Genentech** ~~commercialized~~ **commercializes** under the agreement.We may not be successful in achieving these milestones,and products **that Genentech** ~~developed~~ **develops** under the Genentech Agreement may not be commercialized in the timeframe we expect, **may not** achieve significant sales,or **may not** be commercialized at all.We are exposed to numerous risks associated with the Genentech Agreement,including ~~sharing a measure of control over the operations of our research and development portions of the collaboration with Genentech and~~ Genentech having sole control over the **clinical development and** commercialization of any products developed ~~via~~ **under** the ~~collaboration~~ **Genentech Agreement** .For instance,in 2021,Genentech suspended development of a ~~drug~~ **first product candidate** against **a** ~~our first~~ shared **cancer** antigen target ~~candidate~~ in response to **recently** published data **specific to that target** , ~~followed by its selection of an alternative~~ **following which Genentech selected to advance a second product** candidate.The Genentech Agreement also prevents us from ~~,among other things,~~ developing or commercializing TCR- based cellular therapies ~~outside the scope of the collaboration~~ in the field of oncology on our own or with any third party.Our collaboration involves risks that are different from the risks ~~involved in~~ **associated with** independently ~~conducting~~ **advancing therapeutic candidates and related** operations,including that Genentech may:• have or develop economic or business interests that are inconsistent with ours;• take actions contrary to our instructions,requests,policies or objectives;• take actions that reduce our return on investment for this collaboration;• fail to distinguish itself from biosimilar competition;or • take actions that harm our reputation or restrict our ability to run our business.Genentech' s degree of control

~~over~~ **of the** collaboration **,clinical** development and commercialization efforts may impact the **payment** amounts **that** we receive under the Genentech Agreement.For example,Genentech may suspend development of product candidates or decide not to pursue commercialization of product candidates at all,or it may agree to pay royalties to third parties or adopt a pricing model that reduces the amount of royalties we might otherwise expect.It is also possible that effective cell therapies will not be developed under the Genentech Agreement or,if developed,approved by the FDA or comparable regulatory authorities outside of the U.S.Genentech may also terminate the Genentech Agreement at its convenience,at any time and without cause.We may not be able to perform our ~~product~~ research,development and commercialization related obligations under the Genentech Agreement,including performing TCR screening activities for product candidates being developed and commercialized under ~~that~~ **the Genentech** ~~agreement~~ **Agreement** .For example,in the event **Genentech** ~~a product is commercialized~~ **commercializes a** under **this** ~~the Genentech Agreement~~ **agreement** ,as the volume of product sales grows,we will likely need to continue to increase our workflow capacity ~~for sample intake,customer service~~ and general process improvements,and expand our internal quality assurance program to support TCR screening on a larger scale within expected turnaround times. ~~We will likely need additional certified laboratory scientists and other scientific and technical personnel for the Personalized Product to identify and target therapeutically relevant,patient- specific neoantigens.We will likely also need to acquire additional laboratory space and equipment,which can take several months or more to procure,set up and validate.~~ These process enhancements and increases in scale,expansion of personnel,laboratory space and equipment **,among others,** may not be successfully implemented,and we may not have adequate laboratory facilities or resources to accommodate all the requirements that we currently anticipate needing to be successful.If we cannot satisfy our obligations,Genentech is entitled to trigger a technology transfer of our TCR screening process ~~(specific to the Personalized Product)~~ or terminate the Genentech Agreement.In addition,due to our significant obligations under the Genentech Agreement,we may face challenges in meeting the needs of existing customers,collaborators and suppliers and securing new customers,including any biopharmaceutical customers that are actual or potential competitors with Genentech.If we support **Genentech in late- stage clinical development or** the commercialization of one or more products under the Genentech Agreement,we may need to incorporate new equipment,implement new technology systems and laboratory processes and hire new personnel with different qualifications.Failure to manage this growth or transition could result in turnaround time delays,higher product costs,declining product quality,deteriorating customer service and slower responses to competitive challenges.A failure in any one of these areas could make it difficult for us to meet market expectations for our products and could damage our reputation and the prospects for our business,both under the Genentech Agreement and otherwise.As a result,our relationship with Genentech may not result in the realization of its anticipated benefits. ~~We have limited experience with the development and commercialization of cellular therapeutics,and future TCR- based cellular therapies may never be successfully developed and commercialized as part of our Genentech collaboration.We have limited experience with the development of cellular therapeutics,and no experience with the commercialization,marketing and distribution of cellular therapeutics.Our therapeutic product candidates are at an early stage of discovery and development under our Genentech collaboration,and we are continuing to develop our process being used under that collaboration to develop TCR- based cellular therapies for the treatment of cancer.Under our Genentech collaboration,Genentech has invested significant financial resources to develop future TCR- based cellular therapies,including conducting preclinical studies and other early research and development activities,and providing general and administrative support for these operations.Our future success is dependent on our and Genentech' s ability to successfully develop therapeutic product candidates and advance those product candidates into the clinic,and Genentech' s ability,where applicable,to obtain regulatory and marketing approval for,and then successfully commercialize,cellular therapeutics.We and Genentech have not yet developed and commercialized any cellular therapeutics,and~~ We have limited experience **supporting the development and commercialization of cellular therapeutics, and future TCR-based cellular therapies may never be successfully developed and commercialized under our Genentech collaboration. We have limited experience** in **supporting the development of cellular therapeutics, and no experience with the commercialization,** marketing and ~~selling certain~~ **distribution of cellular therapeutics. Our therapeutic** ~~products~~ **product candidates are at** ~~and~~ **an** ~~services,~~ **early stage of discovery** and ~~if~~ **development under our Genentech collaboration, and** we are ~~unable~~ **continuing** to ~~expand~~ **develop** our ~~direct sales~~ **process to develop TCR- based cellular therapies for the treatment of patients with cancer. Under our Genentech collaboration, Genentech has invested significant financial resources to develop future TCR- based cellular therapies, including conducting preclinical studies and other early research and development activities, and providing general and administrative support for these operations. Our future success is dependent on our and Genentech' s ability to successfully develop therapeutic product candidates and advance those product candidates into the clinic, and Genentech' s ability, where applicable, to obtain regulatory** and marketing ~~force~~ **approval** ~~or~~ **for** ~~partner with collaborators in certain product areas and markets to adequately address our customers' needs , our business may be adversely affected~~ **and then to successfully commercialize, cellular therapeutics** . We **and Genentech** have ~~no~~ **not** ~~experience marketing~~ **yet developed** and ~~selling~~ **commercialized any cellular** ~~therapeutic~~ **therapeutics** ~~products. Accordingly~~ , **and** we ~~or our drug discovery and development collaborators~~ may not be able to ~~market~~ **do so. We have limited experience with the development** and ~~sell our current or~~ **commercialization of antibody- based therapeutics, and** future **such** products **may never be successfully developed** and **commercialized by us** ~~services effectively enough to support our~~ **or** ~~planned growth~~ **our collaborators. We have limited experience with the development of antibodies, and no experience with the commercialization, marketing and distribution of antibody- based therapeutic products** . Our ~~sales and marketing efforts~~ **antibody- based therapeutic product candidates** are ~~targeted~~ at ~~a large and~~ **an** ~~diverse market~~ **early stage of discovery and development. We and any of our collaborators we work** with ~~highly specialized segments, including department heads, laboratory directors, principal investigators, core facility directors, clinicians, payors and research scientists and pathologists at leading academic institutions, biopharmaceutical companies, research institutions and contract research organizations. As a result, we believe it is necessary for our sales representatives~~ to **develop** ~~have relevant, specialized market~~

~~experience. Competition for experienced sales~~ and **commercialize therapeutic antibody** ~~marketing personnel is intense, and new members of our sales organization may require intense training to apply their experience and expertise to our~~ products ~~and services. We~~ may not be able to ~~attract~~ **do so. We currently use,** and ~~retain personnel~~ **in the future expect to continue using, collaborators** ~~or for to continue using,collaborators for~~ several aspects of our operations as well as to commercially leverage our drug discovery platform,and if we cannot maintain current and enter new relationships with collaborators when necessary or desirable to do so,our business will suffer.We have limited resources to conduct our operations in both the MRD **business** and IM business areas,and have not yet fully established infrastructure for sales,marketing or distribution in connection with all of our current or **future** potential products.We have entered into collaboration agreements under which our collaborators have provided,and may in the future provide,funding and other resources for developing and potentially commercializing our products and services. ~~For~~ **We continue to pursue additional collaborators to secure patient** ~~example~~ **sample cohorts that could help further accelerate our TCR- antigen binding** , ~~we have entered into the Genentech Agreement,with the goal~~ **signal generation and validation for our immune- based diagnostics or drug discovery product or services pipeline.These collaborations may result in our incurring significant expenses in pursuit** of **potential products** ~~accelerating the development~~ and **services** ~~commercialization of T cell therapies for the treatment of a broad range of tumor types~~ ,and ~~the Microsoft Agreement,which has provided us with access to Microsoft' s research and machine learning technologies that~~ we **may not** be ~~able~~ **successful in identifying, developing or commercializing any potential products or services. We are pursuing potential drug discovery and development opportunities with pharmaceutical companies** to ~~build~~ **develop and commercialize therapeutic products that leverage** ~~or~~ **our** ~~adequately train~~ **immune medicine platform,including TCR- based and antibody- based therapeutic modalities,among others.We** may not succeed in ~~identifying~~ **discovering targets or advancing** therapeutic ~~assets~~ **product candidates** in these collaborations and our collaborators may not succeed in developing and commercializing such ~~assets~~ **products** ,which may cause us not to realize the expected monetary benefits of the collaborations.Many factors may impact the success of such collaborations,including our ability to perform our obligations,our collaborators' satisfaction with our products and services,our collaborators' performance of their obligations to us,our collaborators' internal priorities,resource allocation decisions and competitive opportunities,the ability to obtain regulatory approvals,disagreements with collaborators,the costs required of either party to the collaboration and related financing needs,and operating,legal and other risks in any relevant jurisdiction.In addition to ~~reducing~~ **negatively impacting** our revenue or delaying the development of our future products and services,the loss of one or more of these relationships may reduce our **growth potential** ~~exposure to research,data,clinical trials or computing technologies that facilitate the collection and incorporation of new information into our clinical immunomics database and TCR- Antigen Map~~ .All of the risks relating to product development,regulatory clearance,authorization or approval and commercialization described herein apply to us derivatively through the activities of our collaborators.We engage in conversations with companies **regarding potential collaborations on** an ~~efficient~~ **ongoing basis. These conversations may not result in a commercial agreement. Even if** ~~and~~ **an** ~~effective sales organization~~ **agreement is reached, the resulting relationship may not be successful, and any products and services developed as part of the collaboration may not produce successful outcomes. Speculation in the industry about our existing or potential collaborations can be a catalyst for adverse speculation about us or our products** , which ~~a catalyst for adverse speculation about us or our products,which~~ can adversely affect our reputation and our business.Significant additional research and development and,in certain instances,clinical trials or validation will be required before we or our collaborators can potentially seek regulatory clearance,authorization or approval for,or commercialize any of our products or services in development.We are developing a pipeline of immune- ~~driven~~ **based** diagnostics and ~~medicine~~ therapeutics,including **TCR- based** cellular therapies in oncology **and antibodies in autoimmunity.However** , ~~but~~ significant additional research and development activities,validations,and clinical trials **are** ~~could be~~ required before we and,as pertinent,our collaborators will have a chance to achieve additional commercially viable products.Our research and development efforts remain subject to all of the risks associated with ~~the~~ **drug** development ~~of new~~ **in general and specific to** products ~~based~~ **that we pursue** on ~~pharmaceutical therapies~~ **our own or in collaboration** .Development of the underlying technology may be affected by unanticipated technical or other problems,among other research and development issues,and the possible ~~insufficiency~~ **lack** of funds needed to complete development of these products.Safety,regulatory and efficacy issues,clinical hurdles or other challenges may result in delays and cause us to incur additional expenses that ~~would increase could~~ **would** ~~negatively impact sales~~ **increase our losses. If we** and ~~market acceptance of~~ **our collaborators cannot complete, or if we experience significant delays in developing,** our clinical diagnostics ~~and limit our~~ **or** ~~revenue growth~~ **therapeutics, including T- cell based cellular therapies** and ~~potential profitability. Under~~ **antibodies, particularly after incurring significant expenditures, our business may fail and investors may lose the entirety of** ~~the~~ **their investment. Prior** ~~Genentech Agreement, Genentech has the sole right and authority~~ to **obtaining regulatory clearances, authorizations or approvals for the** ~~commercialize~~ **commercial sale of any new therapeutic** products ~~developed under~~ **or services, we must demonstrate** that ~~agreement~~ **our products are both safe and effective for use in each target disease indication** . ~~It~~ **Clinical studies** will be **necessary** ~~Genentech' s responsibility~~ to ~~locate, qualify~~ **demonstrate that a product is safe** and ~~engage distribution partners, clinicians and local hospitals with industry experience and knowledge to effectively~~ **effective** ~~market~~ **. Research** and ~~sell~~ **development, clinical testing and validation are expensive, can take many years to complete and the outcomes are inherently uncertain. Failure can occur at any time. For therapeutics, the results of preclinical studies and early clinical trials of** products **and services in** ~~developed~~ **development** ~~under that agreement. Genentech~~ may not be ~~able to engage distribution partners,~~ **predictive of the results of later- stage** ~~clinicians~~ **clinical trials** ~~or hospitals on favorable terms~~ , ~~or at all~~ **and initial success in clinical trials may not be indicative of results obtained when clinical trials are completed** . **There is typically** ~~If Genentech' s sales and~~ **an** ~~marketing efforts with respect to~~ **extremely high rate of failure as therapeutic** products **in** ~~developed~~ **development proceed through clinical trials. Products in later stages of clinical trials** ~~under the Genentech Agreement are not successful,~~

~~we may not achieve significant market acceptance for~~ **or validation also may fail to show the desired safety and efficacy profile despite convincing data generated in non- clinical studies and initial clinical trials** ~~our~~ **or** ~~drug discovery~~ **validations. Any delays in the development of our products and** services **may harm** ~~and platform, which would materially and adversely impact~~ our business **, financial condition and prospects significantly** ~~operations. We face similar risks in our pharmaceutical services collaborations where milestone payments to us are dependent on successful commercialization of drugs by our collaborators~~ . If we or our collaborators experience any of a number of possible unforeseen events in connection with clinical trials, our or their ability to conduct further clinical trials of, obtain regulatory clearance, authorization or approval of or commercialize future products and services or improvements to current products, could be delayed or prevented. We or our collaborators may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our or their ability to conduct further clinical trials or obtain regulatory clearance, authorization or approval of or commercialize future products and services or improvements to current products and services, including: Evolving Regulatory Requirements and Policies • the area of " precision medicine " or " personalized medicine " and its regulation may be subject to ongoing changes in terms of regulatory requirements and governmental policies, in ways we cannot predict; Trial Design • regulatory authorities or ethical review boards, including IRBs, may not authorize commencement of a clinical trial or conduct a clinical trial at a prospective trial site; • there may be delays in reaching or failure to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites; • the FDA or other regulatory authorities may disagree with a clinical trial design or a sponsor' s interpretation of data and may change the requirements for product clearance, authorization or approval even after they have reviewed and commented on the clinical trial design; • differences in trial design between early stage clinical trials and later- stage clinical trials may make it difficult to extrapolate the results of earlier clinical trials to later clinical trials; • the FDA or other regulatory authorities may disagree about whether study endpoints are clinically meaningful; • the number of patients, or amount of data, required for clinical trials, or improvements to current products, may be larger than anticipated, patient enrollment in these clinical trials may be slower than anticipated or patients may drop out of clinical trials at a higher rate than anticipated; Testing • changes may be made to product candidates after commencing clinical trials, which may require that previously completed stages of clinical testing be repeated or delay later stages of testing, for example, we, or our collaborators, may pursue one or more different product development pathways for our T cell therapeutic products; • clinical trials may fail to satisfy the applicable regulatory requirements of the FDA or other regulatory authorities responsible for oversight of the conduct of clinical trials in other countries; • regulators may elect to impose a clinical hold, or governing IRBs, data safety monitoring board or ethics committees may elect to suspend or terminate our clinical research or trials for various reasons, including non- compliance with regulatory requirements or a finding that the participants are being exposed to unacceptable risks to their health or the privacy of their health information being disclosed; • the cost of clinical trials of future products, or improvements to current products, may be greater than we anticipate; • we may not have sufficient capacity in our laboratories to perform testing as requested or volumes requested or with the requested turnaround times necessary for clinical trials; • the supply or quality of materials or data necessary to conduct clinical trials of future products, or improvements to current products, may be insufficient or inadequate; Trial Outcomes • the outcome of our collaborators' preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results; • product candidates may be associated with negative or inconclusive results in clinical trials, and we or our collaborators may decide to deprioritize or abandon these product candidates, or regulatory authorities may require us to abandon them or impose onerous changes or requirements, which could lead to deprioritization or abandonment; • product candidates may have undesirable side effects which could lead to serious adverse events, or other unexpected characteristics. One or more of such effects or events could cause regulators to impose a clinical hold on the applicable trial, or cause us, our collaborators or their investigators, IRBs or ethics committees to suspend or terminate the trial of that product candidate; • clinical trials may suggest or demonstrate that our products are not as efficacious or safe as other similar diagnostics or therapies; and • preclinical and clinical data are often susceptible to varying interpretations and analyses, and our products may fail to obtain regulatory clearance, authorization or approval, even if they perform satisfactorily in preclinical studies and clinical trials. Delays of this nature could also allow competitors to bring products to market before we or our collaborators do, potentially impairing our ability to successfully commercialize products and harming our business and results of operations. Any delays in the development of our products or those jointly developed with our collaborators may significantly harm our business, financial condition and prospects. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory clearance, authorization or approval of products in development. We may need to expand our workforce, commercial infrastructure and laboratory operations over time to support demand for our products. We may encounter difficulties in managing this and in meeting fluctuations in this demand. ~~We~~ **As of December 31, 2024, we had 619 full- time employees, and we reduced our workforce last year as part of restructuring plans. See Note 15, Restructurings. If demand for our products and services increases in the future, we** may need to ~~further~~ expand our workforce, commercial infrastructure and laboratory operations to support demand for our products. If we are unable to support fluctuations in the demand for our products and services, including ensuring that we have adequate capacity to meet potential increased demand as well as other customer requirements (such as turnaround time and service level), our business could suffer. **Consequently** ~~As of December 31~~ , ~~2023, we had 709 full- time employees and~~ we may be required to increase the number of employees, including potential contingent employees as needed **,** to address demand fluctuations. As we and our collaborators commercialize additional products and services, we may need to incorporate new equipment, implement new technology systems and laboratory processes and hire new personnel with different qualifications. Failure to manage this growth or transition could result in turnaround time delays, higher service costs, declining service quality, deteriorating customer service and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products and services and could damage our reputation and the prospects for

our business. Due to the technical proficiency required from much of our workforce, we may not be able to effectively recruit, train, and retain additional qualified personnel. This may result in weaknesses in our infrastructure, operational mistakes, slower development of our products and services, missed or delayed milestone achievement, significant cost overruns, loss of business opportunities, loss of employees and contingent workers, inability to execute on hiring plans and reduced productivity among remaining employees and contingent workers. Our **current and future products and services may never achieve significant commercial market acceptance. Our success depends on the market' s confidence that we can provide immune- driven research, therapeutic and diagnostic products and services that improve clinical outcomes, lower healthcare costs and enable better biopharmaceutical development. Failure of our products and services, or those jointly developed with our collaborators, to perform as expected could significantly impair our** operating results **and our reputation. We believe patients, clinicians, academic institutions and biopharmaceutical companies are likely to be particularly sensitive to defects, errors, inaccuracies, delays and toxicities in or associated with our products and services. Furthermore, inadequate performance of these products or services** may ~~fluctuate~~ **result in lower confidence in our immune medicine platform in general. We and our collaborators may not succeed in achieving** ~~significantly~~ -- **significant** ~~, which makes~~ **commercial market acceptance for our current** ~~our~~ - **or** future **products** ~~operating results difficult to predict~~ and **services** ~~could cause our operating results to fall below expectations or any guidance we may provide. Our financial condition and operating results have varied in the past and will continue to fluctuate from quarter- to- quarter and year- to- year in the future~~ due to a ~~variety~~ **number** of factors, ~~many of which are beyond our control. Factors relating to our business that may contribute to these fluctuations include~~ **including** ~~the following, as well as other factors described elsewhere in this Annual Report on Form 10- K~~ : • ~~the timing~~ **our ability, and that** of ~~upfront payments from~~ our collaborators ~~; •~~ **, to secure and maintain FDA and other regulatory clearance, authorization** ~~our~~ - **or approval for** ~~ability and that of~~ our ~~collaborators to develop and successfully commercialize our products, including therapeutic~~ products; • **the agreement by third- party payors to reimburse our diagnostics, the scope and extent of which will affect patients' willingness** ~~our~~ - **or** ability to ~~achieve collaboration~~ **pay for our diagnostics, even in markets that we expect to be primarily self** - **pay** ~~based milestones on currently contemplated timelines~~ , **and will likely heavily influence physicians' decisions to recommend** ~~or~~ **our tests** ~~at all~~ ; • **the rate** ~~availability and extent~~ of ~~reimbursement~~ **adoption of our immune medicine platform and related products and services** by ~~governmental~~ **academic institutions, clinicians, key opinion leaders, advocacy groups** and ~~private payors~~ **biopharmaceutical companies; and • the impact of our investments in product innovation and commercial growth. Additionally, our customers and collaborators may decide to decrease** ~~for~~ - **or discontinue their use of** our products ~~; • the ability of our clinical sales teams to continue converting physicians from using incumbent products in the market to clonoSEQ and new diagnostic products~~ and services **due** ~~we may develop; • our ability~~ to **changes in** ~~continue driving repeat usage of the~~ **their** ~~clonoSEQ diagnostic test by physicians and get reimbursed for that repeat usage by commercial and government payors for monitoring of MRD; • the outcomes of~~ research ~~initiatives~~ **and development plans** , **failures in their** clinical trials ~~or~~ **, financial constraints,** ~~other~~ -- **the regulatory environment, negative publicity about** ~~product development or approval processes conducted by us or our collaborators; • the level of demand for~~ our products ~~; • our relationships,~~ and **services** ~~any associated exclusivity terms~~ , ~~with collaborators; • our ability to manage our growth and operating~~ -- **competing** ~~expenses; • our contractual or other obligations to provide resources to fund our~~ products ~~and services and to provide resources to our~~ - **or** ~~collaborations; • delays~~ **the reimbursement landscape, all of which are circumstances outside of** ~~or~~ **our control** failures in advancement of future products in.....) carryforwards to offset future taxable income . **We** ~~The cumulative effects of factors discussed above could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period- to- period basis~~ may not be **successful in addressing these** ~~meaningful. Investors should not rely on our~~ - **or** ~~past~~ **other factors that might affect the market acceptance of our products, services and technologies. Failure to achieve widespread market acceptance of our immune medicine platform and related products and services would materially harm our business, financial condition and** results ~~as an indication~~ of ~~our future performance. In any particular period, our operating~~ **operations** results could be below the expectations of..... events reported for any of our products . We have estimated the sizes of the markets for our current and future products and services, and these markets may be smaller than we estimate. Our estimates of the annual **total** addressable markets for our current products and services and those under development are based on a number of internal and third- party estimates, including, without limitation, the number of patients who have developed one or more of a broad range of cancers, the number of individuals who are at a higher risk for developing one or more of a broad range of cancers, and the number of individuals who have developed or are at a higher risk of developing certain autoimmune disorders, as well as the proportion of patients in each market whose needs can be addressed by our or our collaborators' products, and the assumed prices at which we can sell our current and future products and services for markets that have not been established. While we believe our assumptions and the data underlying our estimates are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, thereby reducing the predictive accuracy of these underlying factors. As a result, our estimates of the annual **total** addressable market for our current or future products may prove to be incorrect **. In presenting our total addressable market, we are not making any claim that we can realistically serve that market** . If the actual number of patients who would benefit from our products, the price at which we can sell future products and services or the annual **total** addressable market for our products or services is smaller than we have estimated, it may impair our sales growth and have an adverse impact on our business **. We have limited experience in marketing and selling certain products and services, and if we are unable to expand our direct sales and marketing force or partner with collaborators in certain product areas and markets to adequately address our customers' needs, our business may be adversely affected. Our sales and marketing efforts are targeted at a large and diverse market with highly specialized segments, including department heads, laboratory directors, principal investigators, core facility directors, clinicians, payors and research scientists and pathologists at**

leading academic institutions, biopharmaceutical companies, research institutions and contract research organizations. As a result, we believe it is necessary for our sales representatives to have relevant, specialized market experience. Competition for experienced sales and marketing personnel is intense, and new members of our sales organization may require intense training to apply their experience and expertise to our products and services. We may not be able to attract and retain personnel or be able to build or adequately train an efficient and effective sales organization, which could negatively impact sales and market acceptance of our clinical diagnostics and limit our revenue growth and potential profitability. We have no experience marketing and selling therapeutic products. Accordingly, we or our drug discovery and development collaborators may not be able to market and sell our current or future products and services effectively enough to support our planned growth. For example, under the Genentech Agreement, Genentech has the sole right and authority to commercialize products developed under that agreement. It will be Genentech' s responsibility to locate, qualify and engage distribution partners, clinicians and local hospitals with industry experience and knowledge to effectively market and sell products developed under that agreement. Genentech may not be able to engage distribution partners, clinicians or hospitals on favorable terms, or at all. If Genentech' s sales and marketing efforts with respect to products developed under the Genentech Agreement are not successful, we may not achieve significant market acceptance for our drug discovery services and platform, which would materially and adversely impact our business operations. We face similar risks in our pharmaceutical services collaborations where milestone payments to us are dependent on successful commercialization of drugs by our collaborators . If we do not compete effectively with our competitors, we may not be able to successfully commercialize our products. The biotechnology and pharmaceutical industries in the field of drug discovery are intense and highly competitive. These fields are characterized by rapidly advancing technologies and a strong emphasis on intellectual property. Given the breadth and promise of immune medicine, we face substantial competition from many different sources, including diagnostic, pharmaceutical and biotechnology companies, academic research institutions and governmental agencies and public and private research institutions across various components of our platform and current and potential product offerings. Due to the significant interest and growth in immune medicine more broadly, we expect the intensity of the competition to increase. For instance, in clinical diagnostics, our clonoSEQ MRD test faces competition from both conventional and next- generation flow cytometry performed either in- house by our target customers or by reference labs, as well as from labs and institutions advancing research- use- only MRD technologies for clinical applications and commercial- stage oncology diagnostics companies extending the application of their solid tumor (ctDNA) MRD products into the hematology MRD space. In drug discovery, clinical trials of immune medicines are being undertaken by a number of industry and academic players. Our competitors may have or obtain the knowledge necessary to generate and characterize similar data to our known data for the purpose of identifying and developing products or services that could compete with any of our products or services. Further, immune medicine is being pursued by several biotechnology companies as well as by large- cap biopharmaceutical companies. Many of our current or potential competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, regulatory approval and compliance, and sales and distribution than we do. We could be adversely affected if we do not develop our **drug discovery and** clinical diagnostic ~~and drug discovery~~ products, obtain required regulatory and other clearances, authorizations or approvals, obtain or enforce patents covering our discoveries and launch our products before our competitors. Moreover, our competitors may succeed in developing clinical diagnostics and therapies that circumvent our intellectual property rights. Our competitors may succeed in developing and commercializing therapies or diagnostic products that are more accurate, more convenient to use or more cost- effective than our products or could prove to be safer, more effective, more convenient to administer or more cost- effective than any therapeutic products we may develop with our collaborators or that would render our products less competitive or obsolete. We expect competition to intensify in the fields in which we are involved as technical advances in these fields occur and become more widely known. For additional information regarding our competition, see the " Business — Competition " section of this Annual Report on Form 10- K. **We may not be able** ~~The life sciences industry is subject~~ to ~~rapid change~~ **retain regulatory approval of clonoSEQ in the EU and may never obtain approval in any other foreign country for any of our products or services and** , **even if we do, we or our collaborators may never be able to commercialize them in any other jurisdiction, which would limit our ability to realize their full market potential. In order to market any of our current or future products and services in any particular foreign jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a jurisdiction- by- jurisdiction basis regarding quality, safety, performance and efficacy. In addition, clinical trials or clinical investigations conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory clearance, authorization or approval in one country does not guarantee regulatory clearance, authorization or approval in any other country. Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory clearance, authorization or approval could result in difficulties and costs for us and our collaborators and require additional preclinical studies, clinical trials or clinical investigations** which could ~~make~~ **be costly and time- consuming. Regulatory requirements and ethical approval obligations can vary widely from country to country and could delay** ~~our~~ **or** ~~immune medicine platform and related~~ **prevent the introduction of our** products ~~that~~ **and services in those countries. The foreign regulatory clearance, authorization or approval process involves all of the risks and uncertainties associated with FDA clearance, authorization or approval. We have licensed our technology to certain international sites including but not limited to France, Germany, Italy, the United Kingdom, Spain, and Australia for research use only of our clonoSEQ assay and in some cases, for clinical use of clonoSEQ. In August 2024, clonoSEQ received IVDR certification in the EU, but our collaborators are only beginning to use clonoSEQ as an IVDR- compliant test in local EU clinical trials. We do not know how long** we ~~develop obsolete. Our industry is characterized by rapid~~ **will be able to retain IVDR certification if regulatory**

requirements ~~changes -~~ **change** ~~, including technological and scientific breakthroughs, frequent new product and service introductions and enhancements and evolving industry standards, all of which could make our -~~ **or necessitate additional validations** ~~current and future products obsolete. For -~~ **or** ~~example~~ **approvals. Additionally** , ~~there~~ **aside from this achievement, we** have **limited experience** ~~been numerous advances~~ in **obtaining regulatory clearance** ~~technologies relating to life sciences research and the diagnosis and treatment of cancer~~ , **authorization** ~~and autoimmune disorders. There have also been advances in technologies used to computationally analyze very large amounts of biologic information. Our future success will depend on our -~~ **or approval in international** ~~ability to keep pace with evolving needs of our customers on a timely and cost- effective basis and to pursue new market~~ **markets** ~~opportunities that develop as a result of scientific and technological advances~~ . If we ~~do not update our -~~ **or** ~~platform~~ **our collaborators fail to comply with regulatory requirements in international markets or to obtain** and **maintain required regulatory clearances, authorizations or approvals in international markets, or if those approvals are delayed, our target market will be reduced and our ability to realize the full market potential of our** products ~~to reflect new scientific knowledge about DNA sequencing, immunology, computational biology, software development, new disease diagnostics and therapies or the diseases we seek to treat, our products and technology could become obsolete so products~~ and services **will be unrealized** ~~based on our immune medicine platform could decline or fail to grow as expected~~ . The loss of any member of our senior management team or our inability to attract and retain highly skilled scientists, clinicians and salespeople could adversely affect our business. Our success depends on the skills, experience and performance of key members of our senior management team, including our co- founders and executive officers. The individual and collective efforts of these employees will be important as we continue to develop products and services based on our immune medicine platform. The loss or incapacity of existing members of our executive management team could adversely affect our operations if we experience difficulties in hiring qualified successors. Our executive officers have signed employment agreements with us, but their service is at- will and may end at any point in time. Our research and development initiatives and laboratory operations depend on our ability to attract and retain highly skilled scientists, technicians and software engineers. We may not be able to attract or retain qualified scientists, technicians or software engineers in the future due to the competition for qualified personnel among life sciences and technology businesses, particularly near our facilities located in Seattle, Washington and ~~our laboratory facilities located~~ in South San Francisco, California. We also face competition from universities and public and private research institutions in recruiting and retaining highly qualified scientific personnel. We may have difficulties locating, recruiting or retaining qualified salespeople. Recruiting, training and retention difficulties can limit our ability to support our research and development and commercialization efforts. All of our employees are at- will, which means that either we or the employee may terminate their employment at any time. In addition, we rely on consultants, contractors and advisors, including scientific and clinical advisors, to assist us in formulating our research and development, regulatory and commercialization strategies. Our consultants and advisors may provide services to other organizations and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. The loss of the services of one or more of our current consultants or advisors might impede the achievement of our research, development, regulatory and commercialization objectives. If we lose the support of key thought leaders, it may be difficult to establish products and services enabled by our immune medicine platform as industry standards, which may limit our revenue growth and ability to achieve profitability. We have established relationships with leading oncology, hematology, immunology, autoimmunity or inflammatory disease, transplantation and solid tumor thought leaders at premier academic and research institutions. If these key thought leaders determine that our immune medicine platform or our current or future products or services are not clinically effective, determine that alternative technologies are more effective or elect to use internally developed services, we could encounter significant difficulty validating our products or services, driving adoption or establishing our immune medicine platform as an industry standard, which would limit our revenue growth and our ability to achieve profitability. In addition, negative publications or reviews by clinicians, industry groups or other important stakeholders may negatively impact our revenue growth and ability to achieve profitability. ~~We~~ **The life sciences industry is subject to rapid change, which could make our immune medicine platform and related products that we develop obsolete. Our industry is characterized by rapid changes, including technological and scientific breakthroughs, frequent new product and service introductions and enhancements and evolving industry standards, all of which could make our current and future products obsolete. For example, there have been numerous advances in technologies relating to life sciences research, MRD technologies and assays and the diagnosis and treatment of cancer and autoimmune disorders. There have also been advances in technologies used to computationally analyze very large amounts of biologic information. Our future success will** depend on our ~~information technology systems and any failure~~ **ability to keep pace with evolving needs** of ~~these systems could harm~~ our **customers** ~~business. We depend~~ on ~~information technology~~ **a timely** and **cost** ~~telecommunications systems, including third -~~ **effective basis** ~~party cloud computing infrastructure, operating systems~~ and ~~artificial intelligence~~ **to pursue new market opportunities that develop as a result of scientific and technological advances. If we do not update our** ~~platforms -~~ **platform** ~~, for significant elements of our operations, including our laboratory information management system, clinical immunomics database, TCR- Antigen Map, laboratory workflow tools, customer~~ and ~~collaborator reporting and related functions. We also depend on our proprietary workflow~~ **products to reflect new scientific knowledge about DNA sequencing, immunology, computational biology,** software ~~to support~~ **development,** new ~~product launches~~ **disease diagnostics** and **therapies** ~~regulatory compliance. We use complex software processes and pipelines to manage samples and evaluate sequencing result data. These are subject to initial design~~ or ~~ongoing modifications which may result in unanticipated issues that could cause variability in patient results, leading to service disruptions or errors, resulting in liability. We have installed, and expect to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including systems handling human resources, financial controls and reporting, contract management, regulatory compliance and other -~~ **the diseases** ~~infrastructure operations. In addition to these business systems,~~ we **seek** ~~have~~

~~installed, and intend~~ to **treat** ~~extend, the capabilities of both our~~ **or assist in** ~~preventative and detective security controls by augmenting the monitoring and alerting functions, the network design and the automatic countermeasure operations of our technical systems. These information technology and telecommunications systems support a variety of functions, including laboratory operations, test validation, sample tracking, quality control, customer service support, billing and reimbursement, research and development activities, scientific and medical curation and general administrative activities. In addition, our third-party billing and collections provider depends upon technology and telecommunications systems provided by outside vendors. In addition to the risks directly relevant to our vendors, systems, and information technology, there are risks associated with the outside vendors and third parties with whom they~~ **the treatment** ~~subcontract. For example, our third- party billing and collections provider depends upon technology and telecommunications systems provided by outside vendors. Subcontractors can be a vector~~ of ~~vulnerability~~, ~~as any weaknesses in their organization's technical and organizational controls could affect vendor operations as well as data management, in turn impacting our own operations and ability to safeguard critical data. Information technology and telecommunications systems are vulnerable to attack in a variety of forms and from a variety of sources, including telecommunications or network failures, malicious human acts (~~such as **lymphoid malignancies** ~~ransomware) and natural disasters. Moreover~~, ~~despite network security and back- up measures, some of our servers are potentially vulnerable to physical or~~ **our products** ~~electronic break- ins, computer viruses~~ and **technology** ~~similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that~~ could ~~affect our information technology~~ **become obsolete so products** and **services based on** ~~telecommunications systems, failures or~~ **our immune medicine platform** ~~significant downtime of these systems or those used by our collaborators or subcontractors~~ could **decline** ~~prevent us from conducting our~~ **or fail** ~~business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have an adverse effect on our business and our reputation, and we may be unable~~ to **grow as expected** ~~regain or repair our reputation in the future~~. If our laboratory facilities **are damaged,** become ~~damaged or~~ inoperable or we are required to vacate our existing facilities, our ability to **support our customers,** conduct our laboratory processes ~~and analysis~~ and pursue our research and development efforts may be jeopardized. We operate laboratory facilities located in Seattle, Washington and South San Francisco, California. Our facilities and equipment could be harmed or rendered inoperable by natural or man- made disasters, including war, fire, earthquake, power loss, communications failure or terrorism, which may render it difficult or impossible for us to operate our immune medicine platform for some period of time. The inability to perform our laboratory processes that could develop if our facilities are inoperable, for even a short period of time, or to replace or repair inventory such as reagents or customer samples may result in the loss of customers or harm to our reputation, and we may be unable to regain those customers or repair our reputation in the future. Furthermore, our facilities and the equipment we use to perform our research and development work could be unavailable or costly and time- consuming to repair or replace. It would be difficult, time- consuming and expensive to rebuild our facilities, to locate and qualify new facilities or license or transfer our proprietary technologies to a third party, particularly in light of licensure and accreditation requirements. Even in the unlikely event we are able to find a third party with such qualifications to enable us to conduct our laboratory processes, we may be unable to negotiate commercially reasonable terms. We carry insurance for damage to our property and the disruption of our business, but this insurance may not cover all of the risks associated with damage or disruption to our business, may not provide coverage in amounts sufficient to cover our potential losses and may not continue to be available to us on acceptable terms, if at all . We may need to raise additional..... market conditions could adversely impact our business . We use biological and hazardous materials that require considerable expertise and expense for handling, storage and disposal and may result in claims against us. We work with materials, including chemicals, biological agents and compounds and samples that could be hazardous to human health and safety or the environment. Our operations also produce hazardous and biological waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental laws and regulations may restrict our operations. If we do not comply with applicable regulations, we may be subject to fines and penalties. In addition, we cannot eliminate the risk of accidental injury or contamination from these materials or wastes, which increase with the volume of material and sample transfers and could cause an interruption of our commercialization efforts, research and development programs, and business operations, as well as environmental damage resulting in costly cleanup and liabilities under applicable laws and regulations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. While our property insurance policy provides limited coverage in the event of contamination from hazardous and biological products and the resulting cleanup costs, we do not currently have any additional insurance coverage for legal liability for claims arising from the handling, storage or disposal of hazardous materials. Accordingly, in the event of contamination or injury, we could be liable for damages or penalized with fines in an amount exceeding our resources and our operations could be suspended or otherwise adversely affected. ~~.~~We may need to raise additional capital to fund our existing operations,develop additional products and services,commercialize new products and services or expand our operations.Based on our current business plan,we believe our current cash,cash equivalents and marketable securities will be sufficient to meet our anticipated cash requirements over at least the next 12 months.If our available cash and investment balances and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements,including because of lower demand for our products and services as a result of risks described herein,we may seek to sell common or preferred equity or convertible debt securities,enter into a credit facility or another form of third- party funding or seek other debt financing.We may consider raising additional capital in the future to expand our business,to pursue strategic investments,to take advantage of financing opportunities or for other reasons,including to:• increase our sales and marketing efforts to drive market adoption of our life sciences research,clinical diagnostics and therapeutics;• fund development efforts for our current and future products and

services;• expand our products and services into other disease indications and clinical applications;• acquire,license or invest in technologies;• acquire or invest in complementary businesses or assets;and • finance capital expenditures,such as our corporate headquarters expansion,and general and administrative expenses.Our present and future funding requirements will depend on many factors,including:• our ability to achieve revenue growth;• our rate of continued progress in establishing payor coverage and reimbursement arrangements with domestic and international commercial third- party payors and government payors for our clonoSEQ diagnostic test;• the cost of expanding our laboratory operations and offerings,including our sales and marketing efforts;• our rate of progress in supporting the development of cellular therapies developed under the Genentech Agreement;• our rate of progress in,and research and development expenses associated with,products and services in research and early development;• the effect of competing technological,product and market developments;• costs related to international expansion;and • the potential cost of and delays in product development as a result of any regulatory oversight applicable to our products and services.The various ways we could raise additional capital carry potential risks.If we raise funds by issuing equity securities,dilution to our shareholders could result.Any preferred equity securities issued also could provide for rights,preferences or privileges senior to those of holders of our common stock.If we raise funds by issuing debt securities,those debt securities would have rights,preferences and privileges senior to those of holders of our common stock.The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations.If we raise funds through collaborations and licensing arrangements,we might be required to relinquish significant rights to our platform technologies or products and services or grant licenses on terms that are not favorable to us **.We may acquire other businesses or form joint ventures or make investments in other companies or technologies that could negatively affect our operating results,dilute our shareholders' ownership,increase our debt or cause us to incur significant expense.We may pursue acquisitions of businesses and assets.We also may pursue joint ventures or investments that leverage our immune medicine platform and industry experience to expand our offerings or distribution.We have no experience forming joint ventures and limited experience investing in or acquiring other companies.We may not be able to find suitable joint ventures,investment or acquisition candidates,and we may not be able to complete such transactions on favorable terms,if at all.If we make any acquisitions,we may not be able to integrate the acquired company successfully into our existing business,and we could assume unknown or contingent liabilities,including regulatory violations such as the FCPA or similar laws.Any future acquisitions also could result in the incurrence of debt,contingent liabilities or future write- offs of intangible assets or goodwill,any of which could have a material adverse effect on our financial condition,results of operations and cash flows.Integration of an acquired company also may disrupt ongoing operations and require management resources that we would otherwise focus on developing our existing business.We may experience losses related to investments in other companies,which could have a material negative effect on our results of operations and financial condition.We may not realize the anticipated benefits of any acquisition,technology license,collaboration or joint venture.To finance any acquisitions or joint ventures,we may choose to issue shares of our common stock as consideration,which would dilute the ownership of our shareholders.Additional funds may not be available on terms that are favorable to us,or at all.If the price of our common stock is low or volatile,we may not be able to acquire other companies or fund a joint venture project using our stock as consideration** .Our ability to use our NOL carryforwards and certain other tax attributes may be limited.We have incurred net losses since our inception and we may never achieve or sustain profitability.Generally,losses incurred will carry forward until such losses expire (for losses generated prior to January 1,2018) or are used to offset future taxable income,if any.Utilization of our NOL carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by Section 382 of the Internal Revenue Code of 1986 (" Section 382 ") and similar state provisions.The annual limitation may result in the expiration of NOL carryforwards and credits before utilization.If there should be an ownership change,our ability to utilize our NOL carryforwards and credits could be limited.We have completed a Section 382 analysis for changes in ownership through ~~June 30~~ **December 31** ,2023 and continue to monitor for changes that could trigger a limitation.Based on this analysis,we do not expect to have any permanent limitations on the utilization of our federal NOLs.Under the Tax Cuts and Jobs Act of 2017 (the " TCJA "),federal NOLs incurred in 2018 and future years may be carried forward indefinitely,but the deductibility of such federal NOLs is subject to an annual limitation.NOLs generated prior to 2018 are eligible to be carried forward up to 20 years.Based on the available objective evidence,management determined that it was more likely than not that the net deferred tax assets would not be realizable as of December 31, ~~2023~~ **2024** .Accordingly,management applied a full valuation allowance against net deferred tax assets as of December 31, ~~2023~~ **2024** .We may experience ownership changes in the future as a result of shifts in our stock ownership,which may be outside of our control.As a result,if we earn net taxable income,our ability to use our pre- ownership change NOL carryforwards to offset such taxable income will be subject to limitations.Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes.As a result,even if we attain profitability,we may be unable to use a material portion of our NOL carryforwards and other tax attributes,which could adversely affect our future cash flows. ~~We~~ **Unfavorable U.S.or global economic conditions could adversely affect our business,financial condition or results of operations.Our results of operations** could be adversely affected by **general conditions in** ~~violations of the FCPA and other~~ **the** ~~worldwide anti- bribery laws~~ **global economy and financial markets** . ~~As we expand geographically~~ **Changes in these economic conditions can arise suddenly** , ~~commercialize~~ **such as in the case of recent inflation fluctuations.A severe or prolonged economic downturn,as result of a global pandemic or otherwise,could result in a variety of risks to our business,including weakened demand for** our products and services ~~,~~ and ~~attempt to obtain required clearances,authorizations or~~ **our ability** ~~approvals required~~ to **raise** ~~offer products and services for sale,we or our collaborators may be deemed to do business outside the U.S.,including because international customers may be able to order our products and services.As a result,we or our collaborators would be subject to the FCPA,which prohibits companies and their intermediaries from making payments in violation of law to non- U.S.government officials for the purpose of obtaining or retaining business or securing any~~

other improper advantage.In addition **additional capital when needed** ,our collaborators or any third- party distributors could be deemed to be our agents and we could be held responsible for their actions,including violations of the FCPA.Other U.S.companies in the life sciences industry have faced criminal penalties under the FCPA for allowing their agents to deviate from appropriate practices in doing business with non- U.S.government officials.We may also become subject to similar anti-bribery laws in the jurisdictions in which we may operate,including the United Kingdom' s Bribery Act of 2010,which also prohibits commercial bribery and makes it a crime for companies to fail to prevent bribery.These laws are complex and far-reaching in nature,and we may be required in the future to alter one or more of our practices to be in compliance with these laws.Accordingly,our expansion internationally will demand a high degree of vigilance,and any violations of these laws,or allegations of such violations,could disrupt our operations,involve significant management distraction,involve significant costs and expenses,including legal fees,and could result in a material adverse effect on our business,prospects,financial condition or results of operations.We could also suffer severe penalties,including criminal and civil penalties,disgorgement and other remedial measures.We may acquire other businesses or form joint ventures or make investments in other companies or technologies that could negatively affect our operating results,dilute our shareholders' ownership,increase our debt or cause us to incur significant expense.We may pursue acquisitions of businesses and assets.We also may pursue joint ventures or investments that leverage our immune medicine platform and industry experience to expand our offerings or distribution.We have no experience forming joint ventures and limited experience investing in or acquiring other companies.We may not be able to find suitable joint ventures,investment or acquisition candidates,and we may not be able to complete such transactions on favorable terms,if at all. **A weak** If we make any acquisitions,we may not be able to integrate the acquired company successfully into our - **or** existing **declining economy could also strain our collaborators,possibly resulting in supply disruption,or cause delays in their payments to us.Any of the foregoing could harm our** business ,and we **cannot anticipate all of the ways in which the current economic climate and financial market conditions** could assume unknown **adversely impact** or **our business.** contingent liabilities,including regulatory violations If we were to be sued for product liability or professional liability, we could face substantial liabilities that exceed our resources. The marketing, sale and use of our products and services could lead to the filing of product or professional liability claims were someone to allege that our products or services failed to perform as designed or intended. We could also be potentially exposed to claims relating to therapeutic failures of products commercialized under our collaborations, such as a cellular therapy marketed by Genentech that is manufactured based on TCR- related sequences and data we provide. We may also be subject to liability for errors in, a misunderstanding of or inappropriate reliance upon, the information we provide in the ordinary course of our business activities. A product liability or professional liability claim could result in substantial damages and be costly and time- consuming for us to defend. Regardless of merit or eventual outcome, product liability and professional liability claims may result in: • decreased demand for any products, services or clinical solutions that we have developed or may develop; • loss of revenue; • substantial monetary awards to patients or their families; • significant time and costs to defend related litigation; • withdrawal of clinical trial participants; • the inability to commercialize any products, services or clinical solutions that we have developed or may develop; and • injury to our reputation and significant negative media attention. We maintain product and professional liability insurance, but this insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could cause current collaborators to terminate existing agreements or potential collaborators to seek other companies, any of which could impact our results of operations. We **depend on** may never obtain approval in the EU or **our** in **information technology systems and** any **failure of these systems could harm our business. We depend on information technology and telecommunications systems, including third- party cloud computing infrastructure, operating systems and artificial intelligence platforms, for significant elements of our operations, including our laboratory information management system, clinical immunomics database, TCR- antigen binding, laboratory workflow tools, customer and collaborator reporting and related functions. We also depend on our proprietary workflow software to support new product launches and regulatory compliance. We use complex software processes and pipelines to manage samples and evaluate sequencing result data. These are subject to initial design or ongoing modifications which may result in unanticipated issues that could cause variability in patient results, leading to service disruptions or errors, resulting in liability. We have installed, and expect to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including systems handling human resources, financial controls and reporting, contract management, regulatory compliance and** other **infrastructure operations** foreign country for any of our products or services and, even if we do, we or our collaborators may never be able to commercialize them in any other jurisdiction, which would limit our ability to realize their full market potential. In order to eventually market any of our current or future products and services in any particular foreign jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a jurisdiction- by- jurisdiction basis regarding quality, safety, performance and efficacy . In addition **to these business systems** , clinical trials **we have installed, and intend to extend, the capabilities of both** or **our preventative and detective security controls** clinical investigations conducted in one country may not be accepted by **augmenting** regulatory authorities in other -- **the monitoring** countries, and regulatory clearance **alerting functions** , authorization **the network design and the automatic countermeasure operations of** or **our technical systems** approval in one country does not guarantee regulatory clearance, authorization or approval in any other country . **These information technology** Approval processes vary among countries and can involve additional product testing and **telecommunications systems support a variety of functions, including laboratory operations, test** validation **, sample tracking, quality control, customer service support, billing** and additional **reimbursement, research and development activities, scientific and medical curation and general** administrative **activities** review periods . **In** Seeking foreign regulatory clearance, authorization or approval could result in difficulties and

~~costs for us and our collaborators and require additional~~ -- **addition** ~~preclinical studies~~ , ~~clinical trials or~~ **our third** ~~clinical investigations which could be costly and time~~ - **party billing** ~~consuming. Regulatory requirements~~ and **collections provider depends upon technology** ~~ethical approval obligations can vary widely from country to country~~ and **telecommunications systems provided by outside vendors** ~~could delay or prevent the introduction of our products and services in those countries~~ . **In addition to** ~~The foreign regulatory clearance, authorization or approval process involves all of~~ the risks **directly relevant to our vendors, systems,** and ~~uncertainties~~ **information technology, there are risks** associated with ~~FDA clearance, authorization~~ **the outside vendors and third parties with whom they subcontract.** ~~or~~ **For** ~~approval~~ **example, our third- party billing and collections provider depends upon technology and telecommunications systems provided by outside vendors** . ~~We~~ **Subcontractors can be a vector of vulnerability, as any weaknesses in their organization' s technical and organizational controls could affect vendor operations as well as data management, in turn impacting our own operations and ability to safeguard critical data. Information technology and telecommunications systems are vulnerable to attack in a variety of forms and from a variety of sources, including telecommunications or network failures, malicious human acts (such as ransomware) and natural disasters. Moreover, despite network security and back- up measures, some of our servers are potentially vulnerable to physical or electronic break- ins, computer viruses and similar disruptive problems. Despite the precautionary measures we** have ~~completed a~~ **taken to prevent unanticipated problems that could affect our information** technology ~~transfer process~~ **and telecommunications systems, failures** ~~for~~ - **or** ~~research~~ **significant downtime of these systems or those** ~~use~~ **used** ~~to international sites including France, Germany, Italy, the United Kingdom, Spain, and Australia, but~~ **by our collaborators or subcontractors could prevent us from conducting our business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could** have **an adverse effect on** ~~no experience in obtaining regulatory clearance, authorization or~~ **our** ~~approval in international markets. If~~ **business and our reputation, and** we **may** ~~or our collaborators fail to comply with regulatory requirements in international markets or to obtain and maintain required regulatory clearances, authorizations or approvals in international markets, or if those approvals are delayed, our target market will~~ be ~~reduced and~~ **unable to regain** ~~our~~ - **or repair** ~~ability to realize the full market potential of~~ our **reputation in the future** ~~products and services will be unrealized~~ . We or our collaborators may be adversely affected by natural or man- made disasters or other business interruptions, such as cybersecurity attacks, and our business continuity and disaster recovery plans, or those of our collaborators, may not adequately protect us from the effects of a serious disaster. Natural and man- made disasters and other events beyond our control could severely disrupt our operations, or those of our collaborators, and have a material adverse impact on our business, results of operations, financial condition and prospects. If a natural disaster, power outage, cybersecurity attack or other event occurred that prevented us from using all or a significant portion of our headquarters, damaged critical infrastructure, such as our laboratory facilities or those of our collaborators, limited our or our collaborators' ability to access or use our respective digital information systems or that otherwise disrupted our respective operations, it may be difficult or, in certain cases, impossible for us or our collaborators to continue our respective businesses for a substantial period of time. The disaster recovery and business continuity plans we and our collaborators currently have in place are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. Our cybersecurity liability insurance may not cover any or all damages, depending on the severity and extent, we or our collaborators could sustain based on any breach of our respective computer security protocols or other cybersecurity attack, including potential liability arising out of third parties' negatively impacted data privacy rights. We may incur substantial expenses as a result of the limited nature of our respective disaster recovery and business continuity plans, which could have a material adverse impact on our business. ~~Our~~ **The use of artificial intelligence and machine learning presents new risks and challenges to our** business ~~could be adversely affected by~~ **. The use of artificial intelligence (" AI ") and machine learning is increasingly being embedded in standard business processes, including in the life sciences and healthcare industries. While we do not use AI or machine learning as an element of any product or service, we do use** ~~the~~ **them** ~~effects~~ **to assist in a range** of ~~health epidemics~~ **other contexts** , such as **to enhance** ~~the recent COVID - 19 pandemic, in regions where we or~~ **our** ~~third parties on which we rely have significant laboratory~~ operations, **technology** ~~manufacturing facilities~~ , ~~concentrations of clinical trial sites~~ **and internal workflows. We also anticipate AI to be adopted more broadly throughout** ~~or~~ **our** ~~other business~~ **organization to manage** ~~operations~~ **operational efficiencies, particularly** ~~. Such epidemics could materially affect our operations~~ as ~~well as the business or operations of our manufacturers, contract research organizations or other~~ -- **the technology evolves and improves** ~~third parties with whom we do or will need to conduct business~~ . **However,** ~~Our business could be adversely affected by global pandemics or health epidemics in regions where we have concentrations of clinical trial sites or other~~ -- **the** ~~business operations, and such pandemics or epidemics could cause~~ -- **use** ~~significant disruption in the operations~~ of **AI** ~~third- party manufacturers, suppliers, general contractors~~ and **machine learning presents risks** ~~sub-contractors related to capital projects~~ and **challenges** ~~CROs upon whom we do or will need to rely. Quarantines, stay at home orders and similar government orders, or the perception~~ that ~~such orders, shutdowns or other restrictions on business operations could occur, whether related to COVID- 19 or other infectious diseases,~~ could impact **our business. For example, the improper use of data (including** ~~personnel~~ **personal information, PHI or confidential information) to train AI algorithms could result in violations of our privacy and confidentiality obligations, jeopardize our intellectual property rights, or put us** at ~~third- party manufacturing~~ **risk of violating applicable laws and regulations. Furthermore, AI models may be poorly trained or compromised. This could create output from AI tools that might be flawed without appropriate human oversight, resulting in biased data, misinformation or disinformation or the introduction of cybersecurity threats such as malware. AI practices and machine learning tools used by** ~~or~~ **our** ~~supplier facilities in~~ **commercial partners could present similar risks, and any of** ~~the~~ **these outcomes could have a** ~~U. S. and other countries, or the availability or cost of materials~~ - **material adverse effect on our business** , ~~which would disrupt~~ **results of operations,** ~~our~~ - **or** ~~supply chain~~ **financial condition** . Risks Relating to Government Regulation We conduct our business in a heavily regulated industry, and changes in

regulations or violations of regulations may, directly or indirectly, reduce our revenue, adversely affect our results of operations and financial condition and harm our business. The life sciences industry is highly regulated, and the regulatory environment in which we and our collaborators operate may change significantly and adversely to us in the future. Areas of the regulatory environment that may affect our ability to conduct business include, without limitation, federal and state laws relating to: • laboratory testing, including CLIA and state laboratory licensing laws; • the development, testing, use, distribution, promotion and advertising of research services, kits, clinical diagnostics and pharmaceutical therapies, including certain LDTs, and related services, which are regulated by the FDA under the FDCA and the FTC; • test ordering, documentation of tests ordered, billing practices and claims payment under CMS and the HHS OIG enforcing those laws and regulations; • cellular therapies, medical device and in vitro diagnostic clearance, marketing authorization or approval; • laboratory anti- mark- up laws; • the handling and disposal of medical and hazardous waste; • fraud and abuse laws such as the False Claims Act, the AKS, EKRA, and the Stark Law; • Occupational Safety and Health Administration rules and regulations; • HIPAA and other federal and state ~~medical~~ data privacy and security laws; • **federal and state genetic information laws, such as** the Genetic Information Nondiscrimination Act (" GINA ") and similar state laws; and • coverage and restrictions on coverage and reimbursement for clinical diagnostics and pharmaceutical therapies and Medicare, Medicaid, other governmental payors and private insurers reimbursement levels. In particular, the laws, regulations and policies governing the marketing of RUO products, LDTs and clinical diagnostic tests and services are extremely complex and are subject to interpretation by the courts and governmental agencies. Our failure to comply could lead to civil or criminal penalties, exclusion from participation in state and federal health care programs, or prohibitions or restrictions on our laboratories' ability to provide or receive payment for our services. We believe that we are in material compliance with all statutory and regulatory requirements, but there is a risk that one or more government agencies could take a contrary position, or that a private party could file suit under the qui tam provisions of the federal False Claims Act or a similar state law. Such occurrences, regardless of their outcome, could damage our reputation and adversely affect important business relationships with third parties, including managed care organizations, and other private third- party payors. The insurance coverage and reimbursement status of newly approved products, in a new category of diagnostics and therapeutics, is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for current or future products could limit our ability, and that of our collaborators, to fully commercialize our products and decrease our ability to generate revenue. The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford the clinical diagnostic tests and therapeutics that we and our collaborators plan to develop and sell. In addition, because our clinical diagnostics and some of our potential therapeutic products will represent new approaches to the research, diagnosis, detection and treatment of diseases, we cannot accurately estimate how our products and services, and those jointly created with our collaborators, would be priced, whether reimbursement could be obtained or any potential revenue generated. Sales of our products will depend substantially, both domestically and internationally, on the extent to which the costs of our products and services are paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third- party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize some of our products or services. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment in any of our products or services. If we adopt a self- pay strategy with respect to any products or services, we may experience similar difficulties in the establishment or maintenance of sufficiently high pricing. Changes in the reimbursement landscape may occur, which are outside of our control, and may impact the commercial viability of our products and services. There is significant uncertainty related to the insurance coverage and reimbursement of newly cleared, authorized or approved products and services. In the U. S., many significant decisions about reimbursement for new diagnostics and medicines are typically made by CMS, an agency within the HHS, and its contractors. CMS and its contractors decide whether and to what extent a new diagnostic or medicine will be covered and reimbursed under Medicare. Private payors tend to follow CMS policies to a substantial degree. It is difficult to predict what CMS and its contractors will decide with respect to reimbursement for novel products and services such as ours. Additionally, reimbursement agencies in Europe may be more conservative than CMS. These inherent limitations could affect our ability to realize revenues from our clinical products, including new indications addressed for clonoSEQ. Outside the U. S., the reimbursement process and timelines vary significantly. Certain countries, including a number of member states of the EU, set prices and make reimbursement decisions for diagnostics and pharmaceutical products, or medicinal products, as they are commonly referred to in the EU, with limited participation from the marketing authorization or Conformité Européene (" CE ") mark holders, or may take decisions that are unfavorable to the authorization or CE mark holder where they have participated in the process. We cannot be sure that such prices and reimbursement decisions will be acceptable to us or our collaborators. If the regulatory authorities in these foreign jurisdictions set prices or make reimbursement criteria that are not commercially attractive for us or our collaborators, our revenues and the potential profitability of our products and services in those countries would be negatively affected. An increasing number of countries, including the U. S. and the EU, are pursuing initiatives to attempt to control the healthcare budget by focusing cost-cutting efforts on medicinal products, and to a lesser extent, medical devices, provided under their state- run healthcare systems. Additionally, some countries require approval of the sale price of a product before it can be marketed or mandatory discounts or profit caps may be applied. Further, after the sale price is approved, it remains subject to review during the product lifecycle. In many countries, the pricing review period begins after marketing or product licensing approval is granted or the CE mark is obtained. As a result, we or our collaborators might obtain marketing approval for a product or service in a particular country, but then may experience delays in the reimbursement approval or be subject to price regulations that would delay the commercial launch of our product or service, possibly for lengthy time periods, which could negatively impact the revenues we are able to generate from the sale of that product or service in that particular country. Moreover, increasing efforts by

governmental and third- party payors, in the U. S. and abroad, to cap or reduce healthcare costs may cause such organizations to limit both coverage and level of reimbursement for newly cleared, authorized or approved devices and medicines and, as a result, they may not cover or provide adequate payment for our clinical diagnostics or the cellular therapies to be sold by us or our collaborators. For example, the U. S. government introduced the Lower Drug Costs Now Act of 2019 to reduce the cost of drugs. This blueprint contains certain measures that HHS is already working to implement. In addition, the No Surprises Act (" NSA ") took effect in January 2022. One of the goals of the NSA is to protect patients from " surprise " medical bills resulting from gaps in coverage for services provided by out- of- network providers, such as laboratories, related to patient visits at in-network facilities. The NSA limits the amount out- of- network laboratories may charge a patient for laboratory services ordered during an in- network facility visit and establishes an independent dispute resolution process for determining the amount of reimbursement for the laboratory service in the event that the laboratory and insurer cannot agree on a rate. To the extent the NSA limits the price charged for our diagnostic products or cellular therapeutics, the commercial viability of those products may be adversely affected. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological program pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, which are, in some cases, designed to encourage importation from other countries and bulk purchasing. We expect to experience pricing pressures on our clinical diagnostics and cellular therapies sold by us and our collaborators due to the trend toward value- based pricing and coverage, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and surgical procedures and other treatments, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. Our business could be harmed by the loss, suspension or other restriction on a license, certification or accreditation, or by the imposition of a fine or penalties, under CLIA, its implementing regulations or other state, federal and foreign laws and regulations affecting licensure or certification, or by future changes in these laws or regulations. Federal law requires virtually all clinical laboratories to comply with CLIA, which generally involves becoming certified by the federal and state government for the testing that will be performed and complying with various operational, personnel, facilities administration, quality and proficiency testing requirements intended to ensure that testing services are accurate and reliable. CLIA certification is also a prerequisite to be eligible to bill state and federal healthcare programs, as well as many private third- party payors, for laboratory research and clinical diagnostic testing services. As a condition of our CLIA certification, our Seattle, Washington laboratory is subject to survey and inspection every other year, additional random inspections and surprise inspections based on complaints received by state or federal regulators. The biennial survey and inspection is conducted by CMS, a CMS agent or, if the laboratory holds a CLIA certificate of accreditation, a CMS- approved accreditation organization, such as CAP. Sanctions for failure to comply with CLIA requirements, including proficiency testing violations, may include suspension, revocation or limitation of a laboratory' s CLIA certificate, which is necessary to conduct business, as well as the imposition of significant civil, administrative or criminal sanctions against the lab, its owners and other individuals. In addition, we are subject to regulation under certain state laws and regulations governing laboratory licensure. Some states, including Washington, have enacted laboratory licensure and compliance laws that are more stringent than CLIA. Changes in state licensure laws that affect our ability to offer and provide research and diagnostic products and services across state or foreign country lines could materially and adversely affect our business. In addition, state and foreign requirements for laboratory certification may be costly or difficult to meet and could affect our ability to receive specimens from certain states or foreign countries. Any sanction imposed under CLIA, its implementing regulations or state or foreign laws or regulations governing licensure, or our failure to renew a CLIA certificate, a state or foreign license or accreditation, could have a material adverse effect on our business. Changes in law relating to health insurance coverage and payment may adversely affect our business. In the U. S., there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the ACA was passed, which substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the U. S. clinical diagnostic and biopharmaceutical industries. The ACA, among other things, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program, extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs and medical devices, including laboratory kits, and promoted a new Medicare Part D coverage gap discount program. Some of the provisions of the ACA have been subject to judicial and Congressional challenges. It is also unclear how regulatory provisions and sub- regulatory guidance, both of which fluctuate continually, may affect interpretation and implementation of the ACA and its practical effects on our business. In addition, changes in the number of patients that can look to third- party payment to help afford our products and services may affect the demand for these products and services. We cannot predict what healthcare reform initiatives may be adopted in the future. Further federal, state and foreign legislative and regulatory developments are likely, and we expect ongoing initiatives to increase downward pressure on drug and device pricing. Such reforms could have an adverse effect on anticipated revenues from our products and services, including those that we jointly develop with our collaborators, and may affect our overall financial condition and ability to develop or obtain regulatory clearance, authorization or approval for our products and services. Inadequate funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business. The ability of the FDA to review and clear, authorize or approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel, and statutory, regulatory and policy changes. In addition, government funding of agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow

the time necessary for new drugs and devices to be reviewed and cleared, authorized or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U. S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. We must maintain compliance with marketing authorization requirements of the FDA and equivalent foreign and state regulatory authorities for our products and services whose sale is subject to their authority and failure to maintain compliance with FDA requirements may prevent or delay the marketing of our products and services. Even after we have obtained marketing authorization (as we did for clonoSEQ) we must comply with the scope of that clearance, authorization or approval. Failure to comply with those limitations or the additional, extensive and ongoing post- marketing obligations imposed by the FDA or other regulatory requirements of other regulatory agencies, such as the Clinical Laboratory Evaluation Program for New York State, could result in unanticipated compliance expenditures, a range of administrative enforcement actions, injunctions and criminal prosecution. FDA post-market obligations include, among other things, compliance with the FDA QSR, establishing registration and device listings, labeling requirements, reporting of certain adverse events and malfunctions, and reporting of certain recalls. In addition, circumstances may arise that cause us to recall equipment used in connection with our products and services. Such recalls could have an adverse effect on our ability to provide those products and services, which in turn would adversely affect our financial condition. Our collaborators will also be required to maintain FDA clearance and possibly also other authorizations or approvals for the products and services that we jointly develop. Any failure by us or our collaborators to maintain such clearance, authorization or approval could impair or cause a delay in our ability to profit from these collaborations. Products and services offered RUO may be subject to regulatory scrutiny. Certain of our products are currently provided on a RUO basis, not for use in the diagnosis or treatment of disease. Pursuant to FDA guidance on RUO products, a company may not make clinical or diagnostic claims about an RUO product or provide clinical directions or clinical support services to customers of RUO products. If the FDA were to disagree with our RUO classification or modify its approach to regulating RUO products, we could experience reduced revenue or increased compliance and other costs, which could adversely affect our business, prospects, results of operations and financial condition. In the event that the FDA requires marketing authorization of our RUO products in the future, the FDA may not ultimately grant any clearance, authorization or approval requested by us in a timely manner, or at all. ~~Future changes in~~ FDA **'s Final LDT Rule and targeted** enforcement discretion **policies** for LDTs could subject our operations to much more significant regulatory requirements. In addition to offering the cleared version of clonoSEQ as a test for MRD in certain blood cancers, we also currently offer LDT versions of this test for other indications. ~~The~~ **For years, the** FDA has **exercised** ~~a policy of~~ enforcement discretion with respect to LDTs ~~whereby~~ **that are marketed in** the ~~FDA does~~ **United States and has** not actively ~~enforce~~ **enforced** its medical device regulatory requirements for such tests ~~. However~~ , ~~in October~~ **provided that the LDTs met certain conditions. On May 6,** ~~2014~~ **2024** , ~~the~~ FDA issued **the final rule** ~~two draft guidance documents stating~~ that **amended** the **definition of in vitro diagnostics (IVDs) in its regulations to state that IVDs are medical devices under the federal Food, Drug, and Cosmetic Act including when the manufacturer of the IVD is a laboratory. Under this nuanced approach,** FDA ~~intended~~ **proposed** to ~~modify~~ **phase out** its **general** ~~policy of~~ enforcement discretion **for LDTs over a four- year period, subject to targeted enforcement discretion policies. In the absence of a successful legal challenge, LDTs that do not fall within the final rule' s targeted enforcement discretion policies are expected to comply** with **certain** ~~respect to LDTs in a risk- based manner consistent with the existing classification of~~ medical ~~devices~~ **device** ~~. Although the FDA halted finalization of the guidance in November 2016 to allow for further public discussion on an appropriate oversight approach to LDTs and to give Congressional authorizing committees the opportunity to develop a legislative solution, it is unclear if Congress or the FDA will modify the current approach to the regulation of LDTs in a way that would subject our current or future services marketed as LDTs to the enforcement of FDA~~ regulatory requirements **such as medical** ~~. The FDA Commissioner and the Director of the Center for Devices~~ **device reporting** and **complaint handling requirements beginning on May 6** ~~Radiological Health (" CDRH ") have expressed significant concerns regarding disparities between some LDTs and in vitro diagnostics that have been reviewed~~ , ~~cleared~~ **2025** , ~~authorized~~ **and other requirements such as registration and listing and premarket authorization, among others, will become phased in over the next three years. As a result,** ~~or~~ **our** ~~approved by the FDA. If the FDA were to determine that~~ NGS MRD tests ~~offered as LDTs are not within the policy for LDTs for any reason, including new rules, policies or guidance, or due to changes in statute, our tests~~ may become subject to extensive FDA requirements **,** or our business may otherwise be adversely affected. If the FDA were to disagree with our LDT status or modify its approach to regulating LDTs, we could experience reduced revenue or increased costs, which could adversely affect our business, prospects, results of operations and financial condition. If required, the regulatory marketing authorization process required to bring our current or future LDTs into compliance may involve, among other things, successfully completing additional clinical validations and submitting to and obtaining clearance from the FDA for a premarket clearance (510 (k)) submission or authorization for a de novo or approval of a PMA. Furthermore, **Congress is working on legislation that, if enacted, would clarify the FDA' s authority with respect to LDTs. In this regard, the VALID Act was first introduced in March 2020, and most** recently ~~introduced~~ **reintroduced in March 2023. The bill proposes a risk- based approach that would subject many LDTs to FDA** ~~legislation~~ **regulation by creating a new in vitro clinical test** , ~~if passed~~ **or IVCT** , **category of regulated products. As proposed, the bill would grandfather many existing LDTs from certain proposed requirements but would require such tests to comply with certain other regulatory requirements** such as ~~the VALID Act~~ **registration and listing** , **adverse event reporting. This legislation** could create new or different regulatory and compliance burdens on us and could have a negative effect on our ability to develop new products, which could have a material effect on our business. In the event that the FDA requires marketing authorization of our LDTs in the future, the FDA may not ultimately grant any clearance ~~, authorization~~ or approval requested by us in a timely manner, or at

all. In addition, if the FDA inspects our laboratory in relation to the marketing of our FDA- cleared clonoSEQ test, any enforcement action the FDA takes might not be limited to the FDA- cleared clonoSEQ test and could encompass our LDT testing service. For each product we are developing that requires FDA premarket review or equivalent regulatory approval, the FDA or other regulatory authority may not grant clearance, authorization or premarket approval and failure to obtain necessary approvals for our future products and services would adversely affect our ability to grow our business. Before we begin to manufacture, label and market additional clinical diagnostic products for commercial diagnostic use in the U. S., we may be required to obtain either clearance, marketing authorization or approval from the FDA and state regulatory authorities with jurisdiction over such products, unless an exemption applies or, in the case of the FDA, it exercises its enforcement discretion and refrains from enforcing its requirements. For example, the FDA currently ~~has a policy of refraining~~ **refrains** from enforcing its medical device requirements with respect to LDTs, which the FDA considers to be a type of in vitro diagnostic test that is designed, manufactured and used within a single properly licensed laboratory. The process of obtaining PMA from the FDA is much more rigorous, costly, lengthy and uncertain than the 510 (k) clearance process. In the PMA approval process, the FDA must determine that a proposed device is safe and effective for its intended use based, in part, on extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing and labeling data. Conversely, in the 510 (k) clearance process, the FDA must determine that a proposed device is " substantially equivalent " to a legally marketed " predicate " device in order for the product to be cleared for marketing. To be " substantially equivalent, " the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics or if it has different technological characteristics as the predicate device, the proposed device must be as safe and effective as, and not raise different questions of safety or effectiveness than, the predicate device. Clinical data is sometimes required to support substantial equivalence. For lower- risk devices that would otherwise automatically be placed into Class III, which require a PMA because no predicate device is available and the devices do not fall within an existing 510 (k)- exempt classification, an applicant may submit a de novo request to down classify the device into Class II or Class I, which would not require a PMA. In the de novo process, the FDA must determine that general and special controls are sufficient to provide reasonable assurance of the safety and effectiveness of a device, which is low to moderate risk and has no predicate. In other words, the applicant must justify the " down- classification " to Class I or II for a new product type that would otherwise automatically be placed into Class III, but is lower risk. Clinical data may be required. For laboratory tests for which FDA clearance, authorization or approval is required, the FDA may also require data to support analytical and clinical validity. The 510 (k), de novo and PMA processes can be expensive and lengthy and require the payment of significant fees, unless an exemption applies. The FDA' s 510 (k) clearance pathway usually takes from three to nine months from submission, but it can take longer for a novel type of product. The FDA' s de novo classification pathway usually takes from six to 12 months, but for many applicants can take up to 18 months or more. The process of obtaining a PMA generally takes from one to three years, or even longer, from the time the PMA is submitted to the FDA until an approval is obtained. Any delay or failure to obtain necessary regulatory clearances, authorizations or approvals would have a material adverse effect on our business, financial condition and prospects. The FDA can delay, limit or deny clearance, authorization or approval of a device for many reasons, including: • the inability to demonstrate to the satisfaction of the FDA that the products are safe or effective for their intended uses; • the disagreement of the FDA with the design, conduct or implementation of the clinical trials or the analysis or interpretation of data from preclinical studies, analytical studies or clinical trials; • serious and unexpected adverse device effects experienced by participants in clinical trials; • the data from preclinical studies, analytical studies and clinical trials may be insufficient to support clearance, authorization or approval, where required; • the inability to demonstrate that the clinical and other benefits of the device outweigh the risks; • an advisory committee, if convened by the FDA, may recommend against approval of a PMA or other application or may recommend that the FDA require, as a condition of approval, additional preclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions, or even if an advisory committee makes a favorable recommendation, the FDA may still not approve the product; • the FDA may identify deficiencies in our marketing application; • the FDA may identify deficiencies in our or our collaborators' manufacturing processes, facilities or analytical methods; • the potential for policies or regulations of the FDA or applicable foreign regulatory bodies to change significantly in a manner rendering clinical data or regulatory filings insufficient for clearance, authorization or approval; and • the FDA or foreign regulatory authorities may audit clinical trial data and conclude that the data is not sufficiently reliable to support a PMA. There are numerous FDA personnel assigned to review different aspects of marketing submissions, which can present uncertainties based on their ability to exercise judgment and discretion during the review process. During the course of review, the FDA may request or require additional data and information, and the development and provision of these data and information may be time- consuming and expensive. The process of obtaining regulatory clearances, authorizations or approvals to market a medical device can be costly and time- consuming, and we may not be able to obtain these clearances, authorizations or approvals on a timely basis, or at all for our products in development. If we are unable to obtain clearance, authorization or approval for any products for which we plan to seek clearance, authorization or approval, our business may be harmed. Modifications to our products with FDA clearance may require new FDA clearances, authorizations or approvals, or may require us to cease marketing or recall the modified clinical diagnostic products or future clinical products until clearances are obtained. Any modification to a 510 (k)- cleared device that significantly affects its safety or effectiveness, or that constitutes a major change in its intended use, could require a new 510 (k) clearance, a new de novo authorization or approval of a PMA. The FDA requires every manufacturer to make this determination in the first instance, but the FDA may review any manufacturer' s decision. The FDA may not agree with our decisions regarding whether new clearances, authorizations or approvals are necessary. For any product approved pursuant to a PMA, we would be required to seek supplemental approval for many types of modifications to the approved product. The FDA requires manufacturers in the first instance to determine whether a PMA supplement or other regulatory filing is needed or whether the change may be reported via the PMA Annual Report, but may disagree with a company' s

assessment. If the FDA disagrees with our determination, which it may not review until we submit an annual report or the FDA conducts an inspection or other inquiry, and requires us to seek new clearances, authorizations or approvals for modifications to our previously cleared, authorized or approved clinical diagnostic products for which we have concluded new clearances, authorizations or approvals are unnecessary, we may be required to cease marketing or distribution of these clinical diagnostic products or to recall the modified products until we obtain clearance, authorization or approval. We may also be subject to enforcement action, including, among other things, significant regulatory fines or penalties. Our employees, ~~principal investigators,~~ consultants and collaborators may engage in misconduct or other improper activities, including non- compliance with regulatory standards and requirements and insider trading. We are exposed to the risk of fraud or other misconduct by our employees, consultants and those of our collaborators. Misconduct by these parties could include intentional failures to comply with the regulations of the FDA and non- U. S. regulators, comply with healthcare fraud and abuse laws and regulations in the U. S. and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent improper marketing, fraud, misconduct, kickbacks, bribery, self- dealing and other abusive practices. These laws and regulations may restrict or prohibit a range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct could also involve the improper use of information obtained in the course of clinical studies, which could result in regulatory sanctions and cause serious harm to our reputation. We currently have a code of conduct applicable to all of our employees and suppliers, but it is not always possible to identify and deter misconduct. In addition, our code of conduct and the other precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses, or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such investigations or actions are instituted against us and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of significant fines or other sanctions, which could have a significant impact on our business. We currently have a compliance program in accordance with the elements of an effective program outlined by the HHS OIG, which could help mitigate damages, but cannot prevent all misconduct. Whether or not we are successful in defending against such actions or investigations, we could incur substantial costs, including legal fees, suffer adverse publicity and reputational harm, and have the attention of management diverted in defending ourselves against any of these claims or investigations . If third- party payors,..... a payor might engage in these reviews . Future Medicare payment rates are uncertain. In January 2020, CMS revised the National Coverage Determination (" NCD ") for molecular diagnostic laboratory testing services utilizing a NGS methodology, which includes our clinical diagnostic products, for Medicare beneficiaries with advanced cancer. CMS revised the NCD to extend specific coverage for germline (inherited) testing. CMS stated that it is continuing to make other technical, clarifying and conforming changes in the NCD manual and they are also clarifying the existing policy related to diagnostic tests for Somatic (Acquired) Cancer. If CMS were to make material revisions to policy, this could potentially impact the scope of clonoSEQ coverage. Under Medicare Part B, payment for most diagnostic laboratory tests is made under the Clinical Laboratory Fee Schedule (" CLFS "), which assigns payment amounts to tests based on billing codes. Under the Protecting Access to Medicare Act of 2014 (" PAMA "), certain laboratories that receive the majority of their Medicare revenue from payments made under the CLFS or Medicare' s Physician Fee Schedule are required to report to CMS every three years, or annually for " advanced diagnostic laboratory tests, " commercial payor payment rates and volumes for tests they perform and that are assigned specific billing codes. PAMA has special provisions relating to " advanced diagnostic laboratory tests, " as defined by the statute, and these provisions affect the rate- setting at the time of launch and the periodicity of rate reporting and revision. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. If, in the future, clonoSEQ or any of our tests are assigned a specific code we would be required to report commercial payor payment data on those tests. Payments for tests billed under miscellaneous codes are determined by the MACs, which also have discretion to change those payment rates. CMS uses the data reported by laboratories to calculate a payment rate for each CLFS test, other than those coded with miscellaneous codes and certain others, based on the volume- weighted median of the private payor rates. These rates apply for three years, except that payment rates for advanced diagnostic laboratory tests apply for one year. If we offer tests with specific codes, this apparatus will apply. Under these circumstances, Medicare' s payment rates would be determined by the rates we and other laboratories, if any, with tests that share the specific codes we use, obtain from commercial payors. In that case, if we are unable to obtain and maintain adequate reimbursement rates from commercial payors, this may adversely affect our Medicare rates. In some circumstances, our tests may be furnished to hospital inpatients and paid by Medicare under different rules. For example, when a specimen is obtained from a patient who is at the time classified by Medicare as a hospital inpatient, Medicare would not make a separate payment for the test and we would have to look to the hospital for payment. We do not know how often this will occur or whether hospitals will resist paying us for our tests. In this situation, Medicare coverage would be determined by the MAC for the jurisdiction where the hospital is located, which may not cover our tests. Our products, and those jointly developed with our collaborators, may in the future be subject to product or service recalls. A recall of products or services, either voluntarily or at the direction of the FDA or another governmental authority, or the discovery of serious safety issues with our or our collaborators' products or services, could have a significant adverse impact on us. The FDA has the authority to require the recall of commercialized products or services that are subject to FDA regulation. Manufacturers may, under their own initiative, recall a product or service if any deficiency is found. The FDA requires that certain corrections and removals, including recalls intended to reduce a health risk, be reported to the FDA within ten working days of initiating such correction or removal. For reportable corrections and removals, companies are required to make additional periodic submissions to the FDA after initiating the recall, and often engage with the FDA on their recall strategy prior to initiating the recall. A government- mandated or voluntary recall by us, one of our distributors or our collaborators could occur as a result of an unacceptable health risk, component failures, failures in laboratory processes, malfunctions,

manufacturing errors, design or labeling defects, or other deficiencies and issues. Recalls of any of our commercialized products or services or those jointly developed with our collaborators would divert managerial and financial resources and adversely affect our reputation, results of operations and financial condition. We may also be subject to liability claims, be required to bear other costs or take other actions that may negatively impact our future sales and our ability to generate profits. Companies are also required to maintain certain records of corrections and removals, even if these do not require reporting to the FDA. We or our collaborators may initiate voluntary recalls involving our commercialized products or services in the future that we determine do not require FDA notification. If the FDA disagrees with our determinations, they may require us to report those actions as recalls. A future recall announcement by us or our collaborators could harm our reputation with customers and negatively affect our results of operations and financial condition. In addition, the FDA or other agency could take enforcement action for failing to report the recalls when they were conducted. If we or our collaborators initiate a recall, including a correction or removal, for one of our commercialized products or services, issue a safety alert, or undertake a field action or recall to reduce a health risk, this could lead to increased scrutiny by the FDA, other governmental and regulatory enforcement bodies, and our or our collaborators' customers regarding the quality and safety of our products and services, and to negative publicity, including FDA alerts, press releases, or administrative or judicial actions. Furthermore, the submission of these reports could be used against us by competitors and cause customers to delay purchase decisions or cancel orders, which would harm our reputation. Any additional commercialized products or any future products that obtain regulatory clearance, authorization, approval, accreditation or licensure will remain subject to regulatory scrutiny and our failure to maintain our regulatory clearances, authorizations, approvals, accreditations or licensures could adversely affect our reputation, business and results of operations. Even if we or our collaborators obtain regulatory clearance, authorization, approval, accreditation or licensure in a jurisdiction for our products and services, the applicable regulatory authority may still impose significant restrictions on the indicated uses or marketing of our products and services, or impose ongoing requirements for potentially costly post- approval studies or post- market surveillance of our or our collaborators' manufacturing and distribution. Advertising for certain devices and labeling, including promotional labeling, for all devices must comply with FDA requirements. In addition, device advertising and promotion may also be subject to other federal and state laws. For example, the FDA shares jurisdiction over the regulation of device advertising with the FTC. Advertising for devices characterized as restricted by the FDA is subject to specified FDA requirements, while advertising for non- restricted devices is regulated by the FTC. If we or our collaborators fail to comply with applicable regulatory requirements following clearance, authorization, approval, accreditation or licensure of any of our products and services, a regulatory agency may: • initiate an inspection of our or our collaborators' facilities; • issue an untitled or warning letter asserting that we or our collaborators are in violation of law; • seek an injunction or impose civil or criminal penalties or monetary fines; • suspend or withdraw regulatory clearance, authorization or approval, or revoke a license or accreditation; • suspend any ongoing clinical studies; • delay or refuse clearance, authorization or approval of a pending regulatory submission or supplement submitted by us or our collaborators; • impose restrictions on our or our collaborators' cleared, authorized, approved, accredited or licensed products or services; • seize or recall the product or service; • partially suspend or entirely shut down our or our collaborators' manufacturing or laboratory operations; • issue advisories or other field actions; • impose operating restrictions; • refuse to allow us or our collaborators to enter into supply contracts, including government contracts; or • refer matters to the DOJ or other enforcement or regulatory bodies. Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our and our collaborators' ability to commercialize any cleared, authorized or approved products and services and generate revenues. If any of our diagnostic products or services cause or contribute to a death or serious injury, or malfunction in certain ways, we will be required to report such death, serious injury or malfunction under applicable medical device reporting regulations, and such events can result in voluntary corrective actions or agency enforcement actions. Under FDA medical device reporting regulations, medical device manufacturers are required to report to the FDA information that a device has or may have caused or contributed to a death or serious injury or has malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction of the device or one of our similar devices were to recur. If such a death, serious injury or malfunction were to occur, and we or our collaborators are unable to demonstrate that the adverse events were caused by factors other than our or our collaborator' s products and services, regulatory authorities could order us to cease further development of, or deny clearance, authorization or approval of, any of our or our collaborators' products and services for any or all targeted indications. Even if we and our collaborators are able to demonstrate that any serious adverse events are not related to our products and services, such occurrences could affect patient recruitment or the ability of enrolled trial participants to complete the trial. Moreover, if we or our collaborators elect, or are required, to delay, suspend or terminate any clinical trial of any product in development, the commercial prospects of such product in development may be harmed and our ability to generate product revenues may be delayed or eliminated. Any of these occurrences may harm our and our collaborators' ability to identify and develop future products and services, and may significantly harm our business, financial condition, result of operations and prospects. We are subject to various laws and regulations, such as healthcare fraud and abuse laws, false claim laws and health information privacy and security laws, among others, and failure to comply with these laws and regulations may have an adverse effect on our business. Healthcare providers, physicians, hospitals and third- party payors often play a primary role in the recommendation and prescription of any currently marketed products and services for which we may obtain clearance, authorization or approval. Our current and future arrangements with healthcare providers, physicians, hospitals and third- party payors, and our sales, marketing and educational activities related to our products and services, may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations at the federal and state level that may constrain our business or financial arrangements, and the relationships through which we market, sell and distribute our products and services. In addition, our operations are also subject to various federal and state fraud and abuse, physician payment transparency, and privacy and

security laws, including, without limitation: • The AKS, which prohibits, among other things, persons and entities, including clinical laboratories, from knowingly and willfully soliciting, receiving, offering or paying remuneration, whether directly or indirectly, overtly or covertly, in case or in kind, to induce or reward or in return for either the referral of an individual or the purchase, lease, order or recommendation of an item or service reimbursable, in whole or in part, under a federal healthcare program such as Medicare or Medicaid. The AKS has been interpreted broadly to apply to, among other things, arrangements between clinical laboratories and prescribers and purchasers of our tests. The term " remuneration " expressly includes kickbacks, bribes or rebates and has been broadly interpreted to include anything of value, including gifts, discounts, waivers of payment, ownership interests and any goods or services provided at less than their fair market value. There are several statutory exceptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, however, these exceptions and safe harbors are drawn narrowly, and practices that do not fit squarely within an exception or safe harbor may be subject to scrutiny. The failure to meet all of the requirements of a particular statutory exception or regulatory safe harbor does not make the conduct per se illegal under the AKS. Instead, the legality of the arrangement will be evaluated on a case- by- case basis based on a cumulative review of the facts and circumstances to determine whether one purpose of the remuneration in the arrangement was to induce referrals or generate business that is payable by a federal healthcare program. A violation of the AKS may be grounds for the government or a whistleblower to assert that a claim for payment of items or services resulting from such violation constitutes a false or fraudulent claim for purposes of the False Claims Act. Moreover, certain AKS safe harbors currently protecting rebates paid by device manufacturers to third parties and other arrangements between device manufacturers and third parties may later be modified or repealed pursuant to a pending regulatory proposal, which could require us to revisit or modify our business practices. Our practices may not meet all of the criteria for safe harbor protection from AKS liability in all cases. A person or entity does not need to have actual knowledge of the AKS or specific intent to violate any AKS provisions to have committed a violation. In addition, renumeration may not be offered or provided to beneficiaries under the monetary penalty law provision prohibiting inducements to beneficiaries. • Section 8122 of the SUPPORT Act, EKRA, which establishes an all- payor anti- kickback prohibition that extends to arrangements with recovery homes, clinical laboratories and clinical treatment facilities. EKRA includes a number of statutory exceptions, and directs agencies to develop further exceptions. Current EKRA exceptions in some cases reference, and in others differ from, the AKS safe harbors. Significantly, the EKRA prohibitions apply to the soliciting or receipt of remuneration for any referrals to recovery homes, clinical treatment facilities or clinical laboratories, whether or not related to the treatment of substance use disorders. Further, the EKRA prohibitions cover the payment or offer of remuneration to induce a referral to, or in exchange for, an individual using the services of such providers. EKRA creates additional risk that relationships with referral sources could be problematic. • Federal civil and criminal false claims laws and civil monetary penalty laws, including the False Claims Act, which prohibits individuals or entities from, among other things, knowingly presenting, or causing to be presented, claims for payment to, or approval by, the federal government that are false, fictitious or fraudulent, or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to avoid, decrease or conceal an obligation to pay money to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes " any request or demand " for money or property presented to the federal government. The False Claims Act also permits a private individual acting as a " whistleblower " to bring actions on behalf of the federal government alleging violations of the False Claims Act and to share in any monetary recovery. In addition, AKS violations implicate the False Claims Act. Conduct that results in a False Claims Act violation may also implicate various federal criminal statutes. • The Criminal Health Care Fraud Statute, which imposes criminal and civil liability for knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third- party payors, and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the AKS, a person or entity does not need to have actual knowledge or specific intent to violate the Criminal Health Care Fraud Statute. • The Stark Law, which is directed at " self- referral, " prohibits, with certain exceptions, referrals for certain DHS, including laboratory services, that are covered by Medicare and Medicaid by physicians who personally, or through a family member, have an investment or ownership interest in, or a compensation arrangement with, an entity performing the tests. The prohibition also extends to payment for any testing referred in violation of the Stark Law. Because the Stark Law is a strict liability statute, proof of specific intent to violate the law is not a required element of a violation. Any person who engages in a scheme to circumvent the Stark Law' s referral prohibition may be subject to significant fines for each such arrangement or scheme. In addition, any person who presents or causes to be presented a claim to Medicare or Medicaid in violation of the Stark Law is subject to civil monetary penalties applied to each bill submission, an assessment of up to three times the amount claimed and possible exclusion from participation in federal governmental payor programs, and those claims are considered false claims for which the parties to the arrangement may be liable under the False Claims Act. Bills submitted in violation of the Stark Law may not be paid by Medicare or Medicaid, and any person collecting any amounts with respect to any such prohibited bill is obligated to refund such amounts. Many states have comparable laws that are not limited to Medicare and Medicaid referrals. The Stark Law also places an annual cap on the amount of non- monetary compensation, which consists of meal spend and educational items, that a company can spend on a physician in the aggregate. We occasionally enter into financial relationships, usually compensation relationships, such as a consulting arrangement, with physicians who refer patients for testing. If these arrangements do not meet the Stark Law' s requirements, any claims submitted to Medicare or Medicaid could violate the law and put both the physician referral source and us at risk. • The administrative simplification provisions of HIPAA, as amended and supplemented by HITECH, impose, among other things, obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of protected health information (" PHI ") held by

certain healthcare providers, health plans and healthcare clearinghouses, known as covered entities, and their respective business associates ~~. Among other things, HITECH made certain aspects of HIPAA' s rules, notably the " HIPAA Security Rule, " directly applicable to business associates, independent contractors or agents of covered entities that create, receive, maintain or transmit PHI in connection with providing a function on behalf of, or a service to, a covered entity~~ . HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates and gave state attorneys general new authority to file civil actions for damages or injunctions in federal court to enforce the federal HIPAA regulation and seek attorneys' fees and costs associated with pursuing federal civil actions. The HHS Office for Civil Rights (" OCR ") has increased its focus on compliance and continues to train state attorneys general for enforcement purposes. ~~The OCR has recently increased both its efforts to audit HIPAA compliance and its level of enforcement, with one recent penalty exceeding $ 16 million.~~ • GINA, which restricts employers and health insurance companies from requiring or using the results of genetic tests in specific contexts and does not provide a private right of action. A number of states have also adopted laws regarding genetic tests, some aligned with GINA and some with broader applicability, including granting broader rights to individuals and imposing strict obligations on organizations to safeguard genetic data and the results of any such testing. • The Physician Payments Sunshine Act created under the ACA, and its implementing regulations, which requires applicable manufacturers of covered drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the State Children' s Health Insurance Program, with certain exceptions, to annually report to HHS information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. The Physician Payments Sunshine Act has been extended to payments and transfers of value to physician assistants, nurse practitioners and other mid- level healthcare providers for payments and other transfers of value made to these practitioners. In addition, certain state and local laws may impose additional transparency and healthcare compliance requirements on medical device manufacturers, as well as certain restrictions or limits on interactions with healthcare professionals. • The FTCA, which the FTC interprets to require taking appropriate steps to secure consumers' personal information and considers the failures to do so to constitute unfair acts or practices in or affecting commerce in violation of Section 5 (a) of the FTCA. The FTC expects a company' s data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. ~~Medical data~~ **Health information** is considered sensitive data that merits stronger safeguards, and the FTC' s guidance for appropriately securing consumers' personal information is consistent with what is required by the HIPAA Security Rule. **Many states have passed comprehensive privacy laws,** ~~Some~~ **some** states, most notably Massachusetts and Nevada, also have adopted laws requiring the implementation of security measures to protect personal information, and all 50 states and the District of Columbia, Puerto Rico and Guam, have adopted breach notification laws. • Analogous state laws and regulations, such as state anti- kickback, self- referral and false claims laws, which may apply to items or services reimbursed by any third- party payor, including commercial insurers, and in some cases even in self- pay scenarios. In addition, some state laws require life sciences companies to comply with the industry' s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or to impose transparency requirements or restrictions on marketing activities. • Various state, federal and foreign laws and regulations govern our ability to communicate, prospect, advertise and market our products and services through email, phone, text messages, facsimile and online methods. Because of the breadth of these laws and the narrowness of the exceptions and safe harbors available under them, it is possible that certain of our business activities could be subject to challenge under one or more of such laws. The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state enforcement bodies have recently increased their scrutiny of the ongoing interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Ensuring that business arrangements with third parties comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time- and resource- consuming and can divert management' s attention from our business. If our operations are found to be in violation of any of the health regulatory laws described above or any other laws that apply to us, we may be subject to penalties, including, but not limited to, criminal, civil and administrative penalties, damages, fines, disgorgement, individual imprisonment, possible exclusion from participation in government healthcare programs, injunctions, private qui tam actions brought by individual whistleblowers in the name of the government and the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non- compliance with these laws, any of which could adversely affect our ability to operate our business and our results of operations. Our collection, use and disclosure of personal information, including health and employee information, is subject to state, federal and foreign privacy and security regulations, and our failure to comply with those regulations or to adequately secure the information we hold could result in significant liability or reputational harm. The privacy and security of personal information stored, maintained, received or transmitted, including electronically, is a major issue in the U. S. and abroad. While we strive to comply with all applicable privacy and security laws and regulations, including, in our case, our own posted privacy policies, legal standards for privacy, including but not limited to " unfairness " and " deception, " as enforced by the FTC and state attorneys general, these laws and regulations continue to evolve and any failure or perceived failure to comply may result in proceedings or actions against us by government entities or others, or could cause us to lose customers, which could have a material adverse effect on our business. Recently, there has been an increase in public awareness of privacy issues in the wake of revelations about the data- collection activities of various government agencies and in the number of private privacy- related lawsuits filed against companies (including a private right of action under the **California Consumer Privacy Act ("** CCPA **")** and other similar state laws, as

described below). Concerns about our practices with regard to the collection, use, retention, disclosure or security of personal information or other privacy- related matters, even if unfounded and even if we are in compliance with applicable laws, could damage our reputation and harm our business. Additionally, we receive personal information, including PHI from third parties, and if such third parties breach their representations to us regarding their compliance with applicable privacy and security laws, we could be exposed to proceedings or actions by government agencies or others. Numerous foreign, federal and state laws and regulations govern the collection, dissemination, use and confidentiality of personal information, including genetic, biometric and health information, including state privacy, data security and breach notification laws, federal and state consumer protection and employment laws, HIPAA, GINA, **CCPA** ~~the GDPR~~ and ~~other~~ foreign data protection laws **like the GDPR** . These laws and regulations are increasing in complexity and number, may change frequently and sometimes conflict. The HIPAA privacy, security and breach notification regulations, including the expanded requirements under HITECH, establish comprehensive federal standards with respect to the uses and disclosures of PHI by health plans, healthcare providers, including laboratories, and healthcare clearinghouses, in addition to setting standards to protect the confidentiality, integrity and security of PHI. The regulations establish a complex regulatory framework on a variety of subjects, including: • the circumstances under which uses and disclosures of PHI are permitted or required without a specific authorization by the patient; • a patient' s rights to access, amend and receive an accounting of certain disclosures of PHI; • requirements to notify individuals if there is a breach of their unsecured PHI; • the contents of notices that must be provided to patients regarding our privacy practices for PHI; • administrative, technical and physical safeguards required of entities that use or receive PHI; and • the safeguarding of PHI. Penalties for violations of these laws vary. For instance, penalties for failure to comply with a requirement of HIPAA and HITECH vary significantly, and include substantial per violation civil monetary penalties for each provision of HIPAA that is violated up to a statutory cap and, in certain circumstances, significant criminal penalties with fines per violation and potential imprisonment. A single breach can result in findings of violations of multiple provisions, leading to possible penalties in excess of any applicable cap for violations in a calendar year. Any person who knowingly obtains or discloses PHI in violation of HIPAA may face a significant criminal penalty and up to one year of imprisonment. The criminal penalties increase if the wrongful conduct involves false pretenses or the intent to sell, transfer or use identifiable health information for commercial advantage, personal gain or malicious harm. In addition, responding to government investigations or related third- party private rights of action regarding alleged violations of these and other laws and regulations, even if they ultimately result in no findings of violations or no penalties imposed, can consume our resources and impact our business and, if public, harm our reputation. Computer networks are vulnerable to breach and unauthorized persons may in the future be able to exploit weaknesses in the security systems of our computer networks and gain access to PHI. Additionally, we share PHI with third- party contractors, and while they are contractually obligated under business associate agreements to safeguard and maintain the confidentiality of PHI, their indemnification of us would not insulate us from reputational harm. Unauthorized persons may be able to gain access to PHI stored in such third- party contractors' computer networks. Any wrongful use or disclosure of PHI by us or our third- party contractors, including disclosure due to data theft or unauthorized access to our or our third- party contractors' computer networks, could subject us to fines or penalties that could adversely affect our business and results of operations. Although HIPAA and the regulations promulgated thereunder do not provide for a private right of action, we could incur damages under state laws to private parties for the wrongful use or disclosure of confidential health information or other private personal information. Further, various states, such as **Washington,** California ~~, New York~~ and ~~Massachusetts~~ **Colorado** , have implemented similar privacy laws and regulations (such as the California Confidentiality of Medical Information Act, **CCPA** ~~California Consumer Privacy Act~~ and California Privacy Rights Act) that impose restrictive requirements regulating the use and disclosure of personal information, while other states are considering adoption of similar provisions. These laws and regulations are not necessarily preempted by HIPAA, but they have a wider scope and afford greater protection to individuals than HIPAA. Where state laws are more protective, we and our collaborators must comply with the stricter provisions where they apply. In addition to fines and penalties imposed upon violators, some of these state laws also afford private rights of action to individuals who believe their personal information has been misused. The interplay of federal and state laws may be subject to varying interpretations by courts and government agencies, creating complex compliance issues for us and our customers and potentially exposing us to additional expense, adverse publicity and liability. Further, as regulatory focus on privacy, security and data use issues continues to increase and laws and regulations concerning the protection of personal information expand and become more complex, these potential risks to our immune medicine platform and related products and services could intensify. Changes in laws or regulations associated with the enhanced protection of certain types of sensitive data, such as PHI, along with increased customer demand for enhanced data security infrastructure, could greatly increase the cost of providing our products and services, decrease demand for our products and services, reduce our revenue and subject us to additional liabilities. We currently operate in some and may eventually operate in additional countries outside of the U. S. whose laws may in some cases be more stringent than the requirements in the U. S. For example, the **GDPR imposes strict rules on the** ~~EU has specific requirements relating to cross- border transfers~~ **transfer** of personal data **out of the EU** ~~to certain jurisdictions, including~~ to the U. S **., and the obligations may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other requirements or our practice** . In addition, some countries have stricter consumer notice or consent requirements relating to personal data collection, use or sharing, have more stringent requirements relating to organizations' privacy programs and provide stronger individual rights. Moreover, international privacy and data security regulations are becoming more complex and may result in greater penalties. For instance, the GDPR governs the collection and use of personal data of data subjects in the EU and the EEA. The GDPR applies extra- territorially under certain circumstances and imposes stringent requirements on controllers and processors of personal data, including, for example, requirements to obtain consent or other legal bases from individuals to process their personal data, provide robust disclosures to individuals, accommodate a set of individual data rights, provide data security breach notifications after becoming aware of the breach, limit

retention of personal information and apply enhanced protections to health data and other special categories of personal data. The GDPR also applies to pseudonymized data, which is defined as " the processing of personal data in such a way that the data can no longer be attributed to a specific data subject without the use of additional information, " and imposes additional obligations when we contract with third- party processors in connection with the processing of any personal data. The GDPR provides that EU member states may make their own further laws and regulations limiting the processing of personal data, including genetic, biometric or health data, which could limit our ability to use and share personal data, could cause our costs to increase and could harm our financial condition. ~~Failure to comply with the requirements of the GDPR and the applicable national data protection laws of the EU member states may result in substantial fines in a lump sum or a percentage of our worldwide annual turnover of our preceding fiscal year, whichever is higher, and other administrative penalties.~~ Compliance with the GDPR requires us to put in place and maintain additional policies, procedures and documentation as the law and updates to it require, which may result in other substantial expenditures. This may be onerous and adversely affect our business. Failure to comply with the GDPR and other countries' privacy or data security- related laws, rules or regulations could result in material penalties imposed by regulators, affect our compliance with contracts entered into with our collaborators and other third- party payors, and have an adverse effect on our business and financial condition ~~. The GDPR also imposes strict rules on the transfer of personal data out of the EU to the U. S. These obligations may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other requirements or our practices~~ . In addition to the GDPR, we continue to expand our business into several countries that have or are developing data privacy laws. Compliance with such laws may be onerous and adversely impact expansion of our business. Because of the breadth of these data protection laws and the narrowness of their exceptions and safe harbors, it is possible that our business or data protection policies could be subject to challenge under one or more of such laws. The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of heightened regulatory focus on data privacy and security issues. If our operations are found to be in violation of any of the data protection laws described above or any other laws that apply to us, we may be subject to penalties, including, but not limited to, criminal, civil and administrative penalties, damages, fines, disgorgement, individual imprisonment, possible exclusion from participation in government healthcare programs, injunctions, private qui tam actions brought by individual whistleblowers in the name of the government, class action litigation and the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corrective action plan or other agreement to resolve allegations of non- compliance with these laws, any of which could adversely affect our ability to operate our business and our results of operations. In addition, within the U. S., an increasing number of states and the federal government are considering or have proposed adoption of new data privacy laws. While not all of these bills become law, they add significant uncertainty about additional obligations or potential penalties which we may face in conducting our business. These uncertainties are confounded by parallel changes in laws adjacent to privacy, such as those impacting machine learning and artificial intelligence or data use, and we may incur substantial expense or experience disruption as related to compliance with these laws, which would adversely affect our ability to conduct our business. Security and cybersecurity breaches, loss of data and other disruptions could compromise confidential, personal and sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation. In the ordinary course of our business, we and our collaborators collect and store sensitive data, including PHI, personal information, financial information, intellectual property and proprietary business information owned or controlled by ourselves or our customers, third- party payors, our collaborators, government entities, insurance companies and other parties. We manage and maintain our applications and data through a combination of on- site systems and cloud- based data centers. We utilize external security and infrastructure vendors to manage components of our data centers. We also transmit sensitive data, including patient data, telephonically, through our website and pursuant to arrangements with multiple third- party vendors and their subcontractors. These applications and data encompass a wide variety of critical business information, including research and development information, patient data, commercial information and financial information. We face a number of risks related to protecting this critical information, including loss- of- access risk, unauthorized access, use, disclosure or modification, and the risk of our inability to adequately monitor, audit and modify our respective control over our critical information. This risk extends to the data we entrust to the third- party vendors and subcontractors that help us manage this sensitive data or otherwise process it on our behalf. The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take reasonable measures to protect sensitive and proprietary data from unauthorized access, use or disclosure, no security measures can be perfect and our respective information technology and infrastructure may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other malicious or inadvertent disruptions. Any such breach or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, breach or other loss of information could result in legal claims or proceedings, liability under federal or state laws that protect the privacy of personal information, such as HIPAA or HITECH, and regulatory penalties. Notice of breaches may be required to be provided to affected individuals, the Secretary of HHS or other federal, state and foreign regulators, the media or state attorneys general. Such a notice could harm our reputation and ability to compete. Although we have implemented security measures and formal, dedicated enterprise security programs to prevent unauthorized access to patient and other personal data, including policies and procedures to safeguard us from various types of cybersecurity threats, such data is currently accessible through multiple channels and we may experience one or more data or cybersecurity breaches. Unauthorized access, loss or dissemination could also disrupt our operations and damage our reputation, which could adversely affect our results of operations and financial condition. In addition, a growing number of states **and countries** are considering or have adopted cybersecurity requirements for cloud- based provision of services which we may be required to comply with as a condition of doing business with government- affiliated organizations, such as state

universities. Implementation of the controls required by such laws can be onerous and may affect our ability to provide services to government- affiliated organizations in such states, adversely affecting our results of operations. No TCR- based cellular therapies have been approved in this new potential category of medicines and may never be approved as a result of efforts by others or us. TCR- based cellular therapy drug discovery has substantial clinical development and regulatory risks due to the novel and unprecedented nature of this new category of immune medicines. As a potential new category of medicines, no TCR- based cellular therapies have been approved to date by the FDA or other regulatory agency. Successful discovery and development of TCR- based cellular therapies by us and our collaborators is highly uncertain and depends on numerous factors, many of which are beyond our and their control. We and our collaborators have made and will continue to make a series of business decisions and take calculated risks to advance our development efforts and pipeline of immune- driven therapeutic product candidates, including those related to TCR- based cellular therapies, delivery technology and manufacturing processes, which may be shown to be incorrect based on further work by us, our collaborators or others. Our cellular therapeutics product candidates that appear promising in the early phases of development may fail to advance, experience delays in the clinic, experience clinical holds or fail to reach the market for many reasons, including: • discovery efforts identifying potential TCR- based cellular therapies may not be successful; • nonclinical or preclinical study results may show potential TCR- based cellular therapies to be less effective than desired or to have harmful or problematic side effects; • clinical trials may fail to meet one or more endpoints, or results may show the TCR- based cellular therapies to be less effective than expected or to have unacceptable side effects or toxicities; • adverse effects relating to any one of our therapeutic product candidates or adverse effects relating to our therapeutics discovery process may lead to delays in or termination of one or more of our products or services; • the inability of our translational models to reduce risk or predict outcomes in humans, given that each component of our therapeutic product candidates may have a dependent or independent effect on safety, tolerability and efficacy, and that such effects may, among other things, be species- dependent; • manufacturing failures or insufficient supply of current good manufacturing practices (“ cGMP ”) materials for future clinical trials, or higher than expected cost, could delay or set back clinical trials or make TCR- based cellular therapies commercially unattractive; • our collaborators’ improvements in the manufacturing processes for this new class of potential immune medicines may not be sufficient to satisfy the clinical or commercial demand of our jointly developed TCR- based cellular therapies or regulatory requirements for clinical trials; • changes that we or our collaborators make to optimize manufacturing, testing or formulating of cGMP materials could impact the safety, tolerability and efficacy of our therapeutic products in development; • pricing or reimbursement issues or other factors that delay clinical trials or make any TCR- based cellular therapies uneconomical or noncompetitive with other therapeutic products; • failure to timely advance our or our collaborators’ therapeutic products or receive the necessary regulatory clearances, authorizations or approvals or a delay in receiving such clearances, authorizations or approvals due to, among other reasons, slow or failure to complete enrollment in clinical trials, withdrawal by trial participants from trials, failure to achieve trial endpoints, additional time requirements for data analysis, data integrity issues, Biologics License Application or the equivalent application, discussions with the FDA or the European Medicines Agency, a regulatory request for additional nonclinical or clinical data, or safety formulation or manufacturing issues may lead to our inability to obtain sufficient funding; and • the proprietary rights of others and their competing products and services that may prevent our TCR- based cellular therapies from being commercialized or threaten future commercialization activities. **We** could be adversely affected by violations of the FCPA and other worldwide anti- bribery laws.As we expand geographically,commercialize our products and services,and attempt to obtain required clearances,authorizations or approvals required to offer products and services for sale,we or our collaborators may be deemed to do business outside the U.S.,including because international customers may be able to order our products and services.As a result,we or our collaborators would be subject to the FCPA,which prohibits companies and their intermediaries from making payments in violation of law to non- U.S.government officials for the purpose of obtaining or retaining business or securing any other improper advantage.In addition,our collaborators or any third- party distributors could be deemed to be our agents and we could be held responsible for their actions,including violations of the FCPA.Other U.S.companies in the life sciences industry have faced criminal penalties under the FCPA for allowing their agents to deviate from appropriate practices in doing business with non- U.S.government officials.We may also become subject to similar anti- bribery laws in the jurisdictions in which we may operate,including the United Kingdom’ s Bribery Act of 2010,which also prohibits commercial bribery and makes it a crime for companies to fail to prevent bribery.These laws are complex and far- reaching in nature,and we may be required in the future to alter one or more of our practices to be in compliance with these laws.Accordingly,our expansion internationally will demand a high degree of vigilance,and any violations of these laws,or allegations of such violations,could disrupt our operations,involve significant management distraction,involve significant costs and expenses,including legal fees,and could result in a material adverse effect on our business,prospects,financial condition or results of operations.We could also suffer severe penalties,including criminal and civil penalties,disgorgement and other remedial measures. ~~We~~ Risks Relating to our Intellectual Property We may not be successful in obtaining or maintaining sufficient intellectual property protection for our products, services and technologies and uses thereof, and the scope of the intellectual property protection obtained may not be sufficiently broad. As is the case with other companies engaged in the life sciences industry, our success depends in large part on our ability to obtain and maintain protection of the intellectual property we may own solely and jointly with others, or license from third parties, particularly patents, in the U. S. and other countries with respect to our products, services and technologies. We rely on patent protection in addition to trademark, copyright, trade secret and other intellectual property rights protection and contractual restrictions to protect our proprietary technologies, all of which provide limited protection and may not adequately protect our rights or enable us to gain or maintain any competitive advantage. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us. In addition, we may incur substantial litigation costs in our attempts to recover or restrict use of our intellectual property. To the extent our intellectual property offers inadequate protection, or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition. If our intellectual property

does not provide adequate barriers to competition, our competitive position could be adversely affected, as could our business. We apply for and have in- licensed patents covering our products and technologies and uses thereof, as we deem appropriate. However, obtaining and enforcing patents is costly, time- consuming and complex, and we may fail to apply for patents on important products, services and technologies in a timely fashion or at all, or we may fail to apply for patents in potentially relevant jurisdictions. We may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. We may not have the right to control the preparation, filing and prosecution of patent applications or to maintain the rights to patents licensed from third parties. Consequently, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. As of December 31, ~~2023~~ **2024** , we own or have rights to **416** ~~more than 450~~ active patents and patent applications filed in the U. S., Europe and elsewhere. Of these, there are **70** ~~more than 55~~ pending patent applications. Our pending patent applications may not result in issued patents in a timely fashion or at all. Even if patents are granted, they may not provide a basis for intellectual property protection of commercially viable products or services, may not provide us with any competitive advantages, or may be challenged and invalidated by third parties. It is also possible that others will design around our current or future patented technologies. Some of our patents, licensed patents or patent applications may be challenged in the future, and we may not be successful in defending any such challenges. For example, we may be subject to a third- party pre- issuance submission of prior art to the U. S. Patent and Trademark Office (" USPTO "), or become involved in opposition, derivation, reexamination, inter partes review, post- grant review or interference proceedings challenging our patent rights. Any successful third- party challenge to our patents could result in patent claims being narrowed, or patents being invalidated or held unenforceable, in whole or in part, which could lead to increased competition to our business. Conversely, we may have to challenge the patents or patent applications of third parties. The outcome of patent litigation or other proceeding can be uncertain, and any attempt by us to enforce our patent rights against others or to challenge the patent rights of others may not be successful, or, if successful, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future products or services. The patent positions of biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. Inconsistent policies regarding the eligibility for patent protection and the breadth of patentable claims in such companies' patents has emerged to date in the U. S. or elsewhere. Courts frequently render opinions in the biotechnology field that may affect the patentability of certain inventions or discoveries, including opinions that may affect the patentability of diagnostic methods and biological molecules. The patent position of companies engaged in the development and commercialization of clinical diagnostic tests (like our clonoSEQ diagnostic test) and of biologic material (such as TCRs) are particularly uncertain. Various courts, including the U. S. Supreme Court, have rendered decisions that affect the eligibility and scope of patentability of certain inventions or discoveries relating to certain diagnostic tests, naturally-occurring molecules and related technology. These decisions state, among other things, that a patent claim that recites an abstract idea, natural phenomenon or law of nature (for example, the relationship between particular immune receptors and cancer) may not be patentable. Precisely what constitutes a law of nature is uncertain, and it is possible that certain aspects of our clinical diagnostics would be considered natural laws. The evolving case law in the U. S. may adversely affect our ability to obtain patents or defend patents we have obtained or have licensed and may facilitate third- party challenges to any owned or licensed patents. The laws of some foreign countries do not protect intellectual property rights to the same extent or for the same subject matter as the laws of the U. S., and we may encounter difficulties in protecting and defending such rights in foreign jurisdictions. The legal systems of many other countries do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patents in such countries. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. We may not be able to protect our intellectual property rights throughout the world. Filing, prosecuting and defending patents on our products and services in all countries throughout the world would be prohibitively expensive. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the U. S., and we may encounter difficulties in protecting and defending such rights in foreign jurisdictions. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the U. S., or from selling or importing products made using our inventions in and into the U. S. or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may also export infringing products to territories where we have patent protection, but enforcement is not as strong as that in the U. S. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of many other countries do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patents in such countries. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license. Changes in patent law in the U. S. and other jurisdictions could diminish the value of patents in general, thereby

impairing our ability to protect our products and services. Changes in either the patent laws or in interpretations of patent laws in the U. S. or other countries or regions may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third- party patents. In addition, a third party that files a patent application before us could be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant of the time from invention to filing of a patent application. Since patent applications in the U. S. and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either file any patent application related to our products or services or invent any of the inventions claimed in our or our licensor' s patents or patent applications. Third parties may also submit prior art to the USPTO during patent prosecution to attack the validity of a patent and it is also possible in the U. S. and other countries for third parties to challenge granted patents through Patent Office proceedings such as, in the U. S., post- grant review, inter partes review and derivation proceedings. In the U. S., a lower evidentiary standard is imposed in USPTO proceedings compared to the evidentiary standard in U. S. federal courts necessary to invalidate a patent claim. As such, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The uncertainties and costs surrounding the prosecution of our owned or in- licensed patent applications and the enforcement or defense of our owned or in- licensed issued patents could have a material adverse effect on our business. Recent U. S. Supreme Court rulings have also narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations, including with respect to naturally occurring biological molecules such as the immune cell receptors which are a focus of our immune medicine platform. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U. S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. Issued patents covering our products and services could be found invalid or unenforceable if challenged. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability and some of our patents or patent applications, including licensed patents, may be challenged, in courts or patent offices in the U. S. and abroad, in opposition, derivation, reexamination, inter partes review, post- grant review or interference. Additionally, if we and our licensing partners initiate or become involved in legal proceedings against a third party to enforce a patent covering one of our products or technologies, the defendant could counterclaim that the patent covering our product is invalid or unenforceable. In patent litigation in the U. S., counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including patent eligible subject matter, lack of novelty, obviousness or non- enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. In addition, the U. S. now awards patent priority to the first party to file a patent application, and others may submit patent claims covering our inventions prior to us. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. A successful third- party challenge to our patents could result in the unenforceability or invalidity of such patents, which could have a material adverse impact on our business. Furthermore, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future products and services. We may not be aware of all third- party intellectual property rights potentially relating to our immune medicine platform, products and services. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U. S. and other jurisdictions are typically not published until approximately 18 months after filing or, in some cases, not until such patent applications issue as patents. We might not have been the first to make the inventions covered by each of our pending patent applications and we might not have been the first to file patent applications for these inventions. To determine the priority of these inventions, we may have to participate in interference proceedings, derivation proceedings or other post- grant proceedings declared by the USPTO. The outcome of such proceedings is uncertain, and other patent applications may have priority over our patent applications. Such proceedings could also result in substantial costs to us and divert our management' s attention and resources. We rely on a third party license in relation to certain sequencing technology and if we lose these licenses then we may be subjected to future litigation. We are a party to a license agreement that grants us rights to use certain intellectual property, including patents and patent applications, typically in certain specified fields of use. Some of those licensed rights could provide us with freedom to operate for aspects of our products and services. We may need to obtain additional licenses from others to advance our research, development and commercialization activities. Our success may depend in part on the ability of our licensor to obtain, maintain and enforce patent protection for our licensed intellectual property. Our licensor may not successfully prosecute the patent applications we license. Even if patents issue in respect of these patent applications, our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents or may pursue such litigation less aggressively than we would. Without protection for the intellectual property we license, other companies might be able to offer substantially identical products for sale, which could adversely affect our competitive business position and harm our business prospects. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects. Moreover, disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including: • the scope of rights granted under the license agreement and other interpretation- related issues; •

whether, and the extent to which, our products, services, technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement; • our right to sublicense patent and other rights to third parties under collaborative development relationships; • our diligence obligations under the license agreement and what activities satisfy those diligence obligations; • the inventorship and ownership of inventions and know- how resulting from the joint creation or use of intellectual property by our licensors and us and our collaborators; and • the priority of invention of patented technology. If we do not prevail in such disputes, we may lose any or all of our rights under such license agreement. In addition, the agreement under which we currently license intellectual property or technology from third parties is complex and certain provisions in such agreements may be susceptible to multiple interpretations. If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed. In addition to patent protection, we take steps to protect our intellectual property and proprietary technology by entering into agreements, including confidentiality agreements, non- disclosure agreements and intellectual property assignment agreements, with our employees, consultants, collaborators, academic institutions, life sciences research partners and, when needed, our advisers as well as other third parties. However, we cannot be certain that such agreements have been entered into with all relevant parties, and we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. For example, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure. If we are required to assert our rights against such party, it could result in significant cost and distraction. Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time- consuming, and the outcome would be unpredictable. In addition, courts outside the U. S. may be less willing to protect trade secrets. We also seek to preserve the integrity and confidentiality of our confidential proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems. Besides the possibility that these security measures could be breached, such measures may not, for example, in the case of misappropriation of a trade secret by an employee or third party with authorized access, provide adequate protection for our proprietary information. Our security measures may also not prevent an employee or consultant from misappropriating our trade secrets and providing them to a competitor, and recourse we take against such misconduct may not provide an adequate remedy to protect our interests fully. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time- consuming, and the outcome is unpredictable. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by us. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, our competitive position could be harmed. Certain former employees have obtained employment with companies or academic institutions that could be considered competitive with us. This competition may be limited by contractual provisions which may or may not be enforceable by us in certain jurisdictions. In addition, we may not be aware of such competitive employment arrangements until after our trade secrets have been disclosed to potentially competitive companies. We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers. We employ, and expect to employ in the future, individuals who were previously employed at universities or other companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and independent contractors do not use the proprietary information or know- how of others in their work for us, we may be subject to claims that our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers or other third parties, or to claims that we have improperly used or obtained such trade secrets. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely impact our business. A loss of key research personnel work product could hamper or prevent our ability to commercialize potential products and services, which could harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management and other employees. We may not be able to protect and enforce our trademarks. We have not yet registered certain of our trademarks in all of our potential markets, although we have registered Adaptive Biotechnologies, our corporate logo, clonoSEQ, pairSEQ and other trademarks in the U. S., the EU and a number of other countries and are seeking to register additional trademarks, including our new corporate logos and certain slogans. As we apply to register our unregistered trademarks in the U. S. and other countries, our applications may not be allowed for registration in a timely fashion or at all, and our registered trademarks may not be maintained or enforced. In addition, opposition or cancellation proceedings may be filed against our trademark applications and registrations, and our trademarks may not survive such proceedings. In certain countries outside of the U. S., trademark registration is required to enforce trademark rights. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would. We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property. We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in our owned or in- licensed patents, trade secrets or other intellectual property as an inventor or co- inventor. Ownership disputes may arise, for example, from conflicting obligations of employees, consultants or others who are involved in developing our future products and services. Litigation may be necessary to defend against these and other claims by a third party challenging inventorship of our or our licensors' ownership of our owned or in- licensed patents, trade secrets or other intellectual property.

If we or our licensors fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our product or services. Alternatively, we may need to obtain one or more additional licenses from the third party which will be time-consuming and expensive and could result in substantial costs and diversion of resources and could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects. If we become involved in patent litigation or other proceedings related to a determination of rights, we could incur substantial costs and expenses, substantial liability for damages or be required to stop our development and commercialization efforts of our products and services. There is a substantial amount of litigation, both within and outside the U. S., involving patent and other intellectual property rights in the life sciences, clinical diagnostics and drug discovery industries, including patent infringement lawsuits, declaratory judgment litigation and adversarial proceedings before the USPTO, including interferences, derivation proceedings, ex parte reexaminations, post- grant review and inter partes review, as well as corresponding proceedings in foreign courts and foreign patent offices. We ~~are currently involved in appeals by us or the opponent from Opposition Proceedings at the European Patent Office related to four of our patents: EP2364368, EP2387627, EP3059337, and EP3144673. We~~ may, in the future, become involved with litigation or actions at the USPTO or foreign patent offices with various third parties. We expect that the number of such claims may increase as our industry expands, more patents are issued, the number of products or services increases and the level of competition in our industry increases. Any infringement claim, regardless of its validity, could harm our business by, among other things, resulting in time- consuming and costly litigation, diverting management' s time and attention from the development of our business, requiring the payment of monetary damages (including treble damages, attorneys' fees, costs and expenses) or royalty payments. It may be necessary for us to pursue litigation or adversarial proceedings before the patent office in order to enforce our patent and proprietary rights or to determine the scope, coverage and validity of the proprietary rights of others. The outcome of any such litigation might not be favorable to us, and even if we were to prevail, such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on our business, operating results or financial condition. As we move into new markets and expand our products or services offerings, incumbent participants in such markets may assert their patents and other proprietary rights against us as a means of slowing our entry into such markets or as a means to extract substantial license and royalty payments from us. In addition, future litigation may involve patent holding companies or other adverse patent owners who have no relevant product or service revenue and against whom our own patents may provide little or no deterrence or protection. Third parties may assert that we are employing their proprietary technology without authorization. Given that clinical diagnostics and drug discovery fields are intense and highly competitive areas, there may be third- party intellectual property rights that others believe could relate to our immune medicine platform, products and services. One or more third- party patent owners or licensees may pursue or threaten to pursue litigation against us to enforce one or more patents. It would be costly and time- consuming to defend such claims. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our current or future products, technologies and services may infringe. We cannot be certain that we have identified or addressed all potentially significant third- party patents in advance of an infringement claim being made against us. In addition, similar to what other companies in our industry have experienced, we expect our competitors and others may have patents or may in the future obtain patents and claim that making, having made, using, selling, offering to sell or importing our products or services infringes these patents. Defense of infringement and other claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and employee resources from our business. Parties making claims against us may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize and sell products or services and could result in the award of substantial damages against us, including treble damages, attorneys' fees, costs and expenses if we are found to have willfully infringed. In the event of a successful claim of infringement against us, we may be required to pay damages and ongoing royalties and obtain one or more licenses from third parties, or be prohibited from selling certain products or services. We may not be able to obtain these licenses on acceptable or commercially reasonable terms, if at all, or these licenses may be non- exclusive, which could result in our competitors gaining access to the same intellectual property. In addition, we could encounter delays in product or service introductions while we attempt to develop alternative products or services to avoid infringing third- party patents or proprietary rights. Defense of any lawsuit or failure to obtain any of these licenses could prevent us from commercializing products or services, and the prohibition of sale of any of our products or services could materially affect our business and our ability to gain market acceptance for our products or services. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. In addition, our agreements with some of our customers, suppliers or other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in infringement claims, including the types of claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, operating results or financial condition. Patent terms may be inadequate to protect our competitive position on our products and services for an adequate amount of time. Patents have a limited lifespan. In the U. S., if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from

its earliest U. S. non- provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our products and services are obtained, once the patent life has expired, we may be open to competition from competitive products. Given the amount of time required for the development, testing and regulatory review of new products and services, patents protecting such products and services might expire before or shortly after such products and services are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. Risks Relating to our Common Stock and Capital Structure The market price of our common stock is volatile and is likely to continue to fluctuate substantially. The market price of our common stock has been and is likely to continue to be highly volatile, with a 52- week high closing price of $ ~~10~~ **8** . ~~11~~ **52** and a 52- week low closing price of $ ~~3~~ **2** . ~~46~~ **34, in each case as of February 26, 2025** , and may fluctuate substantially due to many factors, many of which are beyond our control. These factors include: • the commencement or termination of our collaborations; • the timing of achievement of specified milestones in the development of our products and services; • introductions of new or expanded products or services or new pricing policies by us or by our competitors; • changes in the status of our regulatory clearances, authorizations, approvals or applications, or those jointly developed with our collaborators; • where required, the results of clinical trials of our future products and services, those jointly developed with our collaborators or those of our competitors; • the success of competitive products or technologies; • announcements by us or our competitors of significant acquisitions, collaborators or divestitures; • changes in governmental regulations and regulatory or legal developments in the U. S. and other countries; • developments or disputes concerning patent applications, issued patents or other proprietary rights; • the recruitment or departure of key personnel; • actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts; • variations in our financial results or those of companies that are perceived to be similar to us; • changes in the structure of healthcare payment systems; • market conditions in the life sciences, clinical diagnostics or drug discovery industry; • general economic, industry and market conditions; • sales of our securities, including sales by our directors, officers or significant shareholders; • speculation about our business in the media or the investment community; and • other factors, including factors unrelated to our operating performance or the operating performance of our competitors. In recent years, the stock markets generally have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of listed companies. If the market for stock in our industry or the stock market in general experiences uneven investor confidence, the market price of our common stock could decline for reasons unrelated to our business, operating results or financial condition. The market price of our common stock might also decline in reaction to events that affect other companies within, or outside, our industry even if these events do not directly affect us. Any decline in the market price of our common stock may impair our ability to raise capital through the sale of equity securities. In the past, securities class action litigation has often been instituted against companies following periods of volatility in their stock price. This type of litigation, if instituted against us, could result in substantial costs to us and divert our management' s attention and resources, which could seriously harm our business, financial condition, results of operations and prospects. Our Purchase Agreement with OrbiMed could limit cash flow available for our operations and expose us to risks that could adversely affect our business, financial condition and results of operations. Our obligations under the Purchase Agreement could have significant negative consequences for our security holders and our business, results of operations and financial condition by, among other things: • requiring the dedication of a portion of our cash flow from operations to service the Purchase Agreement obligations, which will reduce the amount of cash available for other purposes, and if our cash inflows and capital resources are insufficient to allow us to make required payments, we may have to reduce or delay additional investments in our operations or seek additional capital; • increasing our vulnerability to adverse economic and industry conditions; • limiting our ability to obtain additional financing; • placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital; and • if we fail to comply with the terms of the Purchase Agreement, resulting in an event of default that is not cured or waived, the Purchasers could seek to enforce their security interest. In addition, the Purchase Agreement contains customary affirmative and negative non- financial covenants and events of default, including covenants and restrictions that, among other things, grant a first- position security interest in our core assets and restrict our ability to incur liens, incur additional indebtedness, make loans and investments, make certain restricted payments or transfer core assets. Additionally, the Purchasers under the Purchase Agreement have an option (the" Put Option") to terminate the Purchase Agreement and to require us to repurchase future Revenue Interests at a price of 120 % to 175 % of Cumulative Purchaser Payments, less the sum of all Revenue Interest Payments made by us to the Purchasers prior to such date, upon enumerated events such as a bankruptcy event, a material judgment against us, a material divestiture or a change of control. The triggering of the Put Option, including by our failure to comply with these covenants, could permit the Purchasers to declare certain amounts to be immediately due and payable. If securities analysts do not publish research or reports about our business, or we are the subject of negative publicity, the price of our stock could decline. The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not control these analysts. If one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable evaluations of our company or our stock, the price of our stock could decline. If one or more of these analysts cease coverage of our company or fail to publish reports covering our company regularly, our stock may lose visibility in the market, which in turn could cause our stock price to decline. In addition, if we are the subject of negative publicity, whether from an analyst, academic, industry group or the general or financial press, our stock price may decline. If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock. The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States of America (“ GAAP ”) requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. We base our

estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. If our assumptions change or if actual circumstances differ from our assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock and potentially impair our ability to raise capital through the sale of equity securities. Substantial future sales or perceived potential sales of our common stock or other equity securities in the public market could cause the price of our common stock to decline significantly. Sales of substantial amounts of our common stock or other equity securities in the public market, particularly by our directors, executive officers and significant shareholders, including upon the expiration of any lock- up periods entered into in connection with offerings of our common stock or other equity securities, or the perception that these sales could occur, could materially and adversely affect the price of our common stock and impair our ability to raise capital through the sale of equity securities. We are subject to financial reporting and other requirements for which our accounting and other management systems and resources may not be adequately prepared. Pursuant to Section 404 of the Sarbanes- Oxley Act of 2002 (" Section 404 "), we are required to furnish a report by our management on our internal control over financial reporting, including an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. Our compliance with Section 404 necessitates that we incur substantial accounting expense and expend significant management efforts. We will continue to dedicate internal resources, potentially engage outside consultants, and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented, and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that neither we nor our independent registered public accounting firm will be able to conclude within the prescribed timeframe that our internal control over financial reporting is effective as required by Section 404. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our consolidated financial statements. We are also required to maintain disclosure controls and procedures. Disclosure controls and procedures means our controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the SEC. We do not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. We believe a control system, no matter how well- designed and operated, can provide only reasonable, not absolute, assurance that the control system' s objectives will be met. Due to the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and any design may not succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected. Evolving expectations around corporate responsibility practices, specifically related to environmental, social and governance (" ESG ") matters, may expose us to reputational and other risks. Investors, shareholders, customers, suppliers and other third parties are increasingly focusing on ESG and corporate social responsibility endeavors and reporting. Certain institutional investors, investment funds, other influential investors, customers, suppliers and other third parties are also increasingly focused on ESG practices. In particular, third party proxy advisory services which focus on shareholder rights provisions, such as majority voting, annual election of directors, and overboarding of outside directors, have recommended against voting for our directors in past elections as a result of our governance profile. Companies that do not adapt to or comply with the evolving investor or stakeholder expectations and standards, or which are perceived to have not responded appropriately, may suffer from reputational damage and result in the business, financial condition and / or stock price of a company being materially and adversely affected. Further, this increased focus on ESG issues may result in new regulations and / or third- party requirements that could adversely impact our business, or certain shareholders reducing or eliminating their holdings of our stock. Additionally, an allegation or perception that we have not taken sufficient action in these areas could negatively harm our reputation. Companies across all industries are facing increasing scrutiny relating to their ESG policies. If we are perceived to have not responded appropriately to the growing concern for governance issues, investors may reconsider their capital investment as a result of their assessment of our practices, and our reputation, business, financial condition, results of operations and cash flows may be adversely affected. Provisions in our charter documents and Washington law could make an acquisition of our company more difficult and limit attempts by our shareholders to replace or remove our current management. Our amended and restated articles of incorporation (" Articles of Incorporation ") and our amended and restated bylaws (" Bylaws "), as well as Washington law, contain provisions that may have the effect of deterring takeovers or delaying or preventing a change in control of us or changes in our management that a shareholder might deem to be in his or her best interest. Our Articles of Incorporation and Bylaws contain provisions that: • authorize " blank check " preferred stock, which could be issued by our board of directors without shareholder approval and may contain voting, liquidation, dividend and other rights superior to our common stock; • create a classified board of directors whose members serve staggered three- year terms, with one class being elected each year by our shareholders; • specify that special meetings of our shareholders can be called only by our board of directors, the Chairperson of our board of directors, our chief executive officer or our president; • provide that a director may only be removed from the board of directors for cause and then only by the affirmative vote of our shareholders; • provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even if less than a quorum; • specify that only our board of directors may change the size of our board of directors; • establish an advance notice procedure for shareholder proposals to be brought before an annual meeting of our shareholders, including

proposed nominations of persons for election to our board of directors; • specify that no shareholder is permitted to cumulate votes at any election of directors; • expressly authorize our board of directors to modify, alter or repeal our Bylaws; and • require supermajority votes of the holders of our common stock to amend specified provisions of our Articles of Incorporation and Bylaws. These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management or our board of directors. In addition, because we are incorporated in the State of Washington, we are governed by the provisions of Chapter 23B. 19 of the Washington Business Corporation Act (" WBCA "), which prohibits certain business combinations between us and certain significant shareholders unless specified conditions are met. These provisions may also have the effect of delaying or preventing a change in control of our company. Any provision of our Articles of Incorporation or Bylaws or Washington law that has the effect of delaying or deterring a change in control could limit the opportunity for our shareholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock. Our Articles of Incorporation provide that the state courts located in King County, Washington and, to the extent enforceable, the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our shareholders, which could limit our shareholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees. Our Articles of Incorporation provide that, unless we consent in writing to the selection of an alternative forum, the state courts located in King County, Washington (or, if the state courts located within King County, Washington do not have jurisdiction, the federal district court for the Western District of Washington) shall be the sole and exclusive forum for commencing and maintaining any proceeding (1) asserting a claim based on a violation of a duty under the laws of the State of Washington by any of our current or former directors, officers or shareholders in such capacity, (2) commenced or maintained in the right of our corporation, (3) asserting a claim arising pursuant to any provision of the WBCA, our Articles of Incorporation or our Bylaws (as either may be amended from time to time) or (4) asserting a claim concerning our internal affairs that is not included in clauses (1) through (3) above, in all cases to the fullest extent permitted by law and subject to the court having personal jurisdiction over the indispensable parties named as defendants. These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction. Our Articles of Incorporation provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act of 1933, as amended (" Securities Act "), subject to applicable law. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. Our exclusive forum provision will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our shareholders will not be deemed to have waived our compliance with these laws, rules and regulations. These exclusive- forum provisions may limit a shareholder' s ability to bring a claim in a judicial forum of its choosing for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees or cause shareholders to incur additional costs to bring claims in the forums designated in our Articles of Incorporation. If a court were to find these exclusive- forum provisions in our Articles of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could harm our results of operations. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a jurisdiction other than those designated in the exclusive forum provision, and the provision may not be enforced by a court in that jurisdiction. It is unclear whether Washington courts would reach a similar conclusion under Washington law. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management and other employees. Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third- party claims against us and may reduce the amount of money available to us. Our Articles of Incorporation provide that we will indemnify our directors and officers to the fullest extent permitted by Washington law. In addition, as permitted by Section 23B. 08. 510 through Section 23B. 08. 570 of the WBCA, our Articles of Incorporation and our indemnification agreements that we have entered into with most of our directors and officers provide that: • We will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Washington law. Washington law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to our best interests and, with respect to any criminal proceeding, had no reasonable cause to believe such person' s conduct was unlawful; • We may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law; • We are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification; • The rights conferred in our Articles of Incorporation are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and • We may not retroactively amend our Articles of Incorporation provisions to reduce our indemnification obligations to directors, officers, employees and agents. Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business, and do not anticipate paying any cash dividends on our common stock for the foreseeable future. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. ~~72~~ **71**