Risk Factors Comparison 2024-03-13 to 2023-03-21 Form: 10-K

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In analyzing our Company, you should consider carefully the following risk factors, together with all of the other information included in this Annual Report. Factors that could cause or contribute to differences in our actual results include those discussed in the following subsection, as well as those discussed above in " Management' s Discussion and Analysis of Financial Condition and Results of Operations " and elsewhere throughout this Annual Report. Each of the following risk factors, either alone or taken together, could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our Company. The risks and uncertainties described below are not the only ones we face. Additional risks not currently known to us or other factors not perceived by us to present significant risks to our business at this time also may impair our business operations. Risks Related to Our ~~BusinessWe~~ -- **Business We** have incurred losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We are not currently profitable, and we may never achieve or sustain profitability. We were founded in 2009 and completed our first commercial sale in 2012. We did not start generating revenues until 2016. We are not profitable and have incurred losses in each period since our inception in 2009. For the ~~year~~ **years** ended December 31, **2023 and** 2022 ~~and 2021~~, we reported net losses of $ **11, 099, 488 and $** 10, 245, 922 ~~and $ 8, 961, 815~~, respectively. We had an accumulated deficit of $ ~~48~~ **59** , ~~265~~ **364** , ~~324~~ **812** as of December 31, ~~2022~~ **2023** . We expect to continue to incur losses for the foreseeable future, and we expect these losses to increase as we continue to invest in the growth of our business. We may encounter unforeseen expenses, difficulties, complications, delays, and other unknown factors that may adversely affect our business. The magnitude of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate and grow revenue. Even if we achieve profitability in a future period, we may not be able to sustain profitability in subsequent periods. Our prior losses and expected future losses have had and will continue to have adverse effects on our stockholders' equity (deficit) and working capital. ~~In~~ **There is substantial doubt about our ability to continue as a going concern. Our audited financial statements included in this Annual Report include an explanatory paragraph that indicates that** ~~the~~ **they** ~~future,~~ **were prepared assuming that** we ~~may~~ **would continue as a going concern. We have suffered recurring net losses and accumulated deficits as of December 31, 2023. These conditions raise substantial doubts about our ability to continue as a going concern. Our plan for continuing as a going concern included improving our profitability and obtaining additional financing, including public and private placements of capital stock for additional funding to meet our operating needs. There can be no assurance that we will be successful in our plans described above or in attracting equity or alternative financing on acceptable terms, or if at all. These consolidated financial statements do not include any adjustments to the recoverability and classification of recorded asset amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern. During the year ended December 31, 2023, we** ~~identify~~ **identified a** material ~~weaknesses~~ -- **weakness** in our internal ~~controls~~ - **control** over financial reporting that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate ~~any~~ **this** material ~~weaknesses~~ -- **weakness** or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected. We are required to comply with the SEC' s rules implementing Sections 302 and 404 of the Sarbanes- Oxley Act **of 2002 (the " Sarbanes- Oxley Act ")** , which requires management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of our controls over financial reporting. **We** ~~Although we~~ are **also** required to ~~disclose changes made in our internal controls and procedures on a quarterly basis, we are not required to~~ make ~~our first annual~~ assessment of our internal controls over financial reporting pursuant to Section 404 **. We have included in this** ~~until the later of (i) the year following our first annual~~ **Annual** ~~report~~ **Report management' s** ~~required to be filed with the SEC or (ii) the date we are no longer an emerging growth company. This~~ assessment ~~will need to include~~ disclosure of any material weaknesses ~~identified by our management~~ in our internal control over financial reporting **. Our** ~~, as well as a statement that our independent registered public accounting firm has issued an opinion on the effectiveness of our internal control over financial reporting, provided that our~~ independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting until our first annual report required to be filed with the ~~Securities and Exchange Commission, or~~ SEC, following the later of the date we are deemed to be an " accelerated filer " or a " large accelerated filer, " each as defined in the Exchange Act, or the date we are no longer an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (the " JOBS Act "). We could be an emerging growth company for up to five years **after the date of our initial public offering (" IPO ")** . A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis **. As described elsewhere in this Annual Report, we identified a material weakness in our internal control over financial reporting related to a failure to design and maintain adequate controls to maintain appropriate documentation for the tax exempt status of its customers, calculate and collect sales tax at point of sale, and subsequently report and remit in a timely manner to the relevant tax jurisdictions sales tax obligations. We initiated and implemented several remediation measures including, but not limited to, (i) engaging external tax advisors to complement internal resources and efforts and provide support in assessing the appropriate sales tax treatment associated with the Company' s products for all prior years in which the Company had generated revenue, (ii) obtaining sales tax exemption letters, representation letters or proof of payments of compensating use tax from our customers and we have started a collection effort of these**

sales taxes from certain customers who have notified the Company that they do not have a sales tax exemption letter, (iii) implementing a sales tax software platform solution for the calculation, communication, collection, and remittance of sales tax for all non- exempt future sales, and assisting with the collection and tracking of Voluntary Disclosure Agreements received from states where a potential sales tax liability may exist, (iv) designing and implementing enhanced policies, procedures and controls related to the calculation, communication, collection, and remittance of sales tax to relevant jurisdictions, and (v) training appropriate personnel in the effective design and execution of our enhanced policies, procedures, and controls, including the importance of the ongoing, consistent effective execution of such procedures and controls. We believe the measures described above should address the material weakness identified and strengthen our internal control over financial reporting. These measures are expected to result in future costs for us. While we continue the process to implement our plan to remediate the material weakness, we cannot predict the success of such plan or the outcome of our assessment of this plan until the remediation initiatives have been completed and have been operating effectively for a sufficient period of time. We can give no assurance 19that these measures will remediate the deficiencies in internal control or that additional material weaknesses or significant deficiencies in our internal control over financial reporting will not be identified in the future. Our failure to implement and maintain effective internal control over financial reporting could result in errors in our financial statements that may lead to a restatement of our financial statements or cause us to fail to meet our reporting obligations for the year ended December 31, 2023, any of which could diminish investor confidence in us and cause a decline in our stock price . We may identify future material weaknesses in our internal controls over financial reporting or fail to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes- Oxley Act, and we may be unable to accurately report our financial results, or report them within the timeframes required by law or stock exchange regulations. We cannot assure that additional material weaknesses will not exist or otherwise be discovered, any of which could adversely affect our reputation, financial condition and results of operations. We may likely require additional capital in the future and an inability to meet future capital needs could adversely impact our ability to operate. We require substantial capital to fund our business growth and we will likely need additional capital in the future to fund our operations. In addition to investing in personnel growth commensurate with business growth, we believe we must continue to invest in the development of our iSpecimen Marketplace platform to enhance and improve its performance, functionality, ease of use, and reliability ~~19to~~ **to** carry out our business strategies. New industry standards, the availability of alternative products, and evolving life science research needs could render our products and services obsolete and / or new third- party marketplace technology may be introduced that makes it easier for our competitors to create their own marketplace platforms. Our success will depend, in part, on our ability to develop new products and services and make corresponding technology enhancements that address the increasingly sophisticated and varied needs of our suppliers and customers and respond to technological advances and emerging industry standards and practices on a cost- effective and timely basis. We cannot be certain that additional financing will be available to us if required on favorable terms or at all. To the extent that we cannot raise capital if needed, we may not be able to continue operations. **Our revenue trend is not predictive** ~~We have a relatively short operating history~~ which can lead to difficulty in accurately forecasting future results. **Our** ~~While we had a small amount of~~ revenue **trend is** ~~beginning in 2012, we did~~ not **predictive** ~~have any full- time sales~~ and ~~marketing personnel to build our commercial operations until 2016. As a result of our relatively short history of revenue generation,~~ our ability to accurately forecast future results is limited and is impacted by a number of factors, including: ØOur revenue is transactional and not recurring. Researchers pay us to provide specimens when they have a need for specimens. We do not currently charge our customer or supply chain for access to the iSpecimen Marketplace; ØOur revenue is significantly concentrated and varies by customer year- over- year. There **was one customer that accounted for approximately 25 % of our revenue in 2023. In 2022, there** were two customers that represented approximately 14 % and 12 % of our revenue ~~in 2022. In 2021~~ , **respectively** ~~there were no customers that accounted for more than 10 % of our revenue~~ ; ØResearcher needs may change over the lifetime of a project, based on the stage of the project. A research customer in one time period may not have a need for specimens again in the next; ØResearch projects get terminated or suspended for a variety of reasons, including funding issues or unexpected results. Any termination or suspension of a project may cause a corresponding cancellation or delay in purchase orders we have received for specimens; ~~ØSuppliers~~ **andØSuppliers** may not accurately estimate how long it will take them to fulfill specimen requests, making it more difficult to accurately forecast when we will recognize revenue on these specimen requests ~~; andØWe created our first sales team in the fourth quarter of 2019, which we have continued to expand, and therefore we have limited historical selling data per salesperson upon which to generate future revenue forecasts~~ . Many of these are outside of our control and all of which may change from time to time. Our historical revenue results should not be taken as predictive of future performance. There are many risks that could impact future performance resulting in variations in expected results which could lead to a negative business impact. ~~Our~~ **20Our** growth strategy may not prove viable and we may not realize expected results. Our business strategy is to grow by improving and expanding iSpecimen' s Marketplace platform. This growth is expected to come through: (i) expansion of our platform capabilities to drive increased acquisition of annotated biospecimens through the platform, (ii) further expansion of our customer and supplier base in and outside the United States, and (iii) expansion into new lines of business such as patient recruitment and data licensing. Expansion of our existing business and entry into new lines of business will require a significant investment in technology development, supply development, operations, and marketing and sales. We may not achieve market expansion and acceptance and we may incur problems introducing new solutions and services. We may experience losses related to these investments, which could have a material adverse effect on our results of operations. Our growth strategy involves a number of risks and uncertainties, including: ØWe may not successfully enter into contracts with healthcare providers to gain access to specimens, subjects, and data on terms favorable to us or at all. This can limit our ability to grow in existing lines of business and expand into new lines of business; ~~20ØWe~~ -- **ØWe** may not obtain new customers or may lose existing

customers if we cannot offer products and services that they need on a timely basis or at all; ØWe may fail in the development of our technology and it may not adequately keep pace to support an expansion of our existing line of business or our entry into new lines of businesses; ØThe market adoption rate of our marketplace technology may be too slow, and we may fail to get our customers and suppliers to transact for products and services using our technology; ØWe may fail to continue to expand outside of the United States, especially if we are required to comply with laws and regulations that differ from geographies in which we currently operate; ØWe may fail to gain market acceptance for new products or services; and / orØWe may lose to competitors, some of whom may have greater resources than we do. This competition may intensify due to the ongoing consolidation in the biospecimen industry, which may increase our costs to pursue opportunities. If we fail to properly evaluate and execute existing and new business opportunities properly, we may not achieve anticipated benefits and may incur increased costs. There can be no assurance that we will be able to successfully capitalize on growth opportunities, which may adversely impact our business model, revenues, results of operations, and financial condition. ~~The continued COVID- 19 pandemic could continue to adversely affect our business. We are subject to the risks arising from the COVID- 19 outbreak' s social and economic impacts on the healthcare services industry. In response to this risk, we have put in place additional health and safety protocols. We continue to monitor and revise these protocols as appropriate to address the evolving nature of the pandemic. While we have seen a return to business as usual in our industry, we continue to monitor the future impact of the COVID- 19 pandemic on the Company, which includes such factors such as length of time of the pandemic; the responses of federal, state and local government; the impact of future variants that may emerge; vaccination rates among the population; the efficacy of the COVID- 19 vaccines; the longer- term impact of the pandemic on the economy and consumer behavior; and the effect on our employees, vendors and suppliers. We will continue to monitor and evaluate the ongoing COVID- 19 pandemic and will work to respond appropriately to the impact of COVID- 19 on our business, as well as customers' and suppliers' businesses.~~ International operation expansion could expose us to additional risks which could harm our business, prospects, results of operation, and financial condition. We operate internationally and expect to expand internationally. For example, we procure specimens from sites outside of the United States and we also distribute samples to organizations located around the world. As of December 31, ~~2022~~ **2023** , we had customers in ~~21~~ **23** countries, supply sites in ~~18~~ **19** countries, and two international distributors. International expansion exposes us to additional risks, including: Øchanges in local political, economic, social, and labor conditions, which may adversely affect our business; Ørisks associated with trade restrictions and foreign import requirements, including the importation and exportation of our solutions, as well as changes in trade, tariffs, restrictions or requirements; Øheightened risks of unethical, unfair or corrupt business practices, actual or claimed, in certain geographies; ~~Øfluctuations~~ **21Øfluctuations** in currency exchange rates, which may make doing business with us less appealing as our contracts are generally denominated in U. S. dollars; Øgreater difficulty in enforcing contracts; ~~21Ølack~~ -- **Ølack** of brand awareness that can make commercializing our products more difficult and expensive; Ømanagement communication and integration problems resulting from cultural differences and geographic dispersion; Øthe uncertainty and limitation of protection for intellectual property rights in some countries; Øincreased financial accounting and reporting burdens and complexities as a result of being a public company; Ølack of familiarity with local laws, customs and practices, and laws and business practices favoring local competitors or partners; Øpotentially different pricing environments, longer payment cycles in some countries, increased credit risk, and higher levels of payment fraud; Øuncertainty regarding liability for products and services, including uncertainty as a result of local laws and lack of legal precedent; Ødifferent employee / employer relationships, existence of workers' councils and labor unions, and other challenges caused by distance, language, and cultural differences, making it harder to do business in certain jurisdictions; Øcompliance with complex foreign and U. S. laws and regulations applicable to international operations may increase the cost of doing business in international jurisdictions. These numerous and sometimes conflicting laws and regulations include internal control and disclosure rules, data privacy requirements, research ethics and compliance laws, anti- corruption laws, and anti- competition regulations, among others. Violations of these laws and regulations could result in fines and penalties, criminal sanctions against us, our officers, or our employees, prohibitions on the conduct of our business and on our ability to offer our products and services in one or more countries, and could also materially affect our brand, our international expansion efforts, our ability to attract and retain employees, our business, and our operating results; and Øinstability, disruption or destruction in a significant geographic region, regardless of cause, including war, terrorism, riot, civil insurrection or social unrest; and natural or man- made disasters, including famine, flood, fire, earthquake, storm or disease, including without limitation, the war between Russia and Ukraine which started in February 2022, regions from which we obtain specimen supplies. The occurrence of any one of these risks could harm our international business and, consequently, our results of operations. Additionally, operating in international markets requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required to operate in other countries will produce desired levels of revenue or profitability. We, or the third parties who provide services for us, may be adversely affected by external events for which our business continuity plans may not adequately prepare us. The occurrence of severe weather, natural disasters, health epidemics, acts of war or terrorism, military conflicts such as the war between Russia and Ukraine, and other adverse external events or conditions that impact us or the operations of third parties who provide services for us have the potential to significantly impact our ability to conduct business. Although we have business continuity plans in place, including an emergency succession plan, there is no guarantee that our plans can be successfully implemented. Even if we were to successfully implement our continuity plans, we may incur substantial expenses and there is no guarantee that our business, financial condition, and results of operations will not be materially impacted. 22We rely upon our technology solution for the operation of our business and if our technology platform contains defects or fails to perform as expected, we may need to suspend its availability and divert development resources, and our business and reputation may be harmed. Technology as complex as ours may contain unknown and undetected errors or performance problems. There could be numerous reasons for performance and quality issues including new and updated features, defects in integrated commercial and open source technologies, outages and disruptions in the cloud

infrastructure on which our platform relies, human error or malfeasance, scale constraints, design flaws, and bad actions by external factors including security and performance related incidents. Many serious defects are frequently found during the period immediately following introduction and initial release of new capabilities or enhancements to existing platforms. Although we attempt to resolve errors that we believe would be considered serious by our users before making our platforms available to them, our products are not error- free. If a significant failure occurs that prevents our customers, suppliers, or our Company from using the iSpecimen Marketplace, our operations may be disrupted, and it may be difficult or, in certain cases, impossible for us to continue our business for a period of time until the failure is corrected. Any performance or quality problem could result in lost revenues or delays in user acceptance that would be detrimental to our business and reputation. We may not be able to detect and correct errors before releasing our product commercially. Undetected errors or performance problems in our existing or future products may be discovered in the future and known errors, considered minor by us, may be considered serious by our customers, resulting in a loss of customers and a decrease in our revenues. Sustainable future revenue growth is dependent upon the development of technology solutions that enable scale and address new markets. Our iSpecimen Marketplace technology consists of four major functional areas: data ingestion and harmonization, search, workflow management, and administration, compliance and reporting. Each of these functional areas need continual development to both enable our current business to scale and to enable us to enter new markets. ~~Our~~ **As financial resources become available, our** intention is to focus most of our engineering resources on the development of the iSpecimen Marketplace platform for the foreseeable future. In fiscal year ~~2022~~ **2023**, we incurred $ ~~4~~ **5**, ~~449~~ **386**, ~~206~~ **165** in technology expenses, and capitalized $ ~~2~~ **3**, ~~975~~ **767**, ~~686~~ **332** for internally developed software. While we **have** ~~are spending, and expect to continue to spend~~ **spent**, a significant amount of time and resources on the development of this platform, we cannot provide any assurances of our iSpecimen Marketplace' s short or long- term success or growth ~~. While we believe that the net proceeds from our initial public offering closed in June 2021~~ and ~~in our private placement offering closed in December 2021 will be sufficient to fund our current operating plans,~~ there is no assurance that the resources being allocated for the platform will be sufficient to complete planned additional capabilities, or that such completion will result in significant revenues or profit for us. If our customers or suppliers do not perceive this platform to be of high value and quality, we may not be able to retain them or acquire new customers or suppliers. Our platform may become technologically obsolete or commoditized. We must continue to enhance and improve the performance, functionality, ease of use, and reliability of our iSpecimen Marketplace platform or it may become obsolete or commoditized. New industry standards, the availability of alternative products, and evolving life science research needs could render our products and services obsolete and / or new third- party marketplace technology may be introduced that makes it easier for our competitors to create their own marketplace platforms. Our success will depend, in part, on our ability to develop new products and services that address the increasingly sophisticated and varied needs of our suppliers and customers and respond to technological advances and emerging industry standards and practices on a cost- effective and timely basis. The development of our technology involves significant technical and business risks. We may fail to use new technologies effectively or to adapt our proprietary technology and systems to user requirements or emerging industry standards. If we are unable to adapt to changing market conditions, user requirements, or emerging industry standards, we may not be able to increase our revenue and expand our business. Additionally, if existing or future competitors develop or offer products or services that provide significant performance, price, creative or other advantages over this platform, demand for our services through the iSpecimen Marketplace may decrease and our business, prospects, results of operations and financial condition could be adversely affected. If our security measures are breached, or if our services are subject to attacks that degrade or deny the ability of users to access our platforms, our platforms and applications may be perceived as not being secure, customers and suppliers may curtail or stop using our services, and we may incur significant legal and financial exposure. Our platforms and the network infrastructure that are hosted by third- party providers involve the storage and transmission of healthcare data as well as proprietary information about organizations and programs, and security breaches could expose us to a risk of loss of this ~~23information~~ -- **information**, litigation, and potential liability. Our security measures may be breached due to the actions of outside parties, employee ~~error~~ **23error**, malfeasance, security flaws in the third party hosting service that we rely upon, or any number of other reasons and, as a result, an unauthorized party may obtain access to our suppliers' or customers' data. Although we have never had any breach of data in our third- party provider' s environment, any future breach or unauthorized access could result in significant legal and financial exposure, damage to our reputation, and a loss of confidence in the security of our platforms and applications that could potentially have an adverse effect on our business. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures on a timely basis. If an actual or perceived breach of our security occurs, the market perception of the effectiveness of our security measures could be harmed and we could lose suppliers and customers and we may have difficulty obtaining merchant processors or insurance coverage essential for our operations. We, and the third- party providers upon which we rely, have experienced, and may in the future experience, cybersecurity threats, including threats or attempts to disrupt our information technology infrastructure and unauthorized attempts to gain access to sensitive or confidential information. Our and our third-party vendors' technology systems may be damaged or compromised by malicious events, such as cyberattacks (including computer viruses, malicious and destructive code, phishing attacks, and denial of service attacks), physical or electronic security breaches, natural disasters, fire, power loss, telecommunications failures, personnel misconduct, and human error. Such attacks or security breaches may be perpetrated by internal bad actors, such as employees or contractors, or by third parties (including traditional computer hackers, persons involved with organized crime, or foreign state or foreign state- supported actors). Cybersecurity threats can employ a wide variety of methods and techniques, which may include the use of social engineering techniques, are constantly evolving, and have become increasingly complex and sophisticated; all of which increase the difficulty of detecting and successfully defending against them. Furthermore, because the techniques used to obtain

unauthorized access or sabotage systems change frequently and generally are not identified until after they are launched against a target, we and our third- party providers may be unable to anticipate these techniques or implement adequate preventative measures. Although prior cyberattacks directed at us have not had a material impact on our financial results, and we are continuing to bolster our threat detection and mitigation processes and procedures, we cannot guarantee that future cyberattacks, if successful, will not have a material impact on our business or financial results. While we have security measures in place to protect our information and our customers' **and suppliers'** information and to prevent data loss and other security breaches, there can be no assurance that in the future we will be able to anticipate or prevent security breaches or unauthorized access of our information technology systems or the information technology systems of the third- party providers upon which we rely. Despite our implementation of network security measures and internal information security policies, data stored on personnel computer systems is also vulnerable to similar security breaches, unauthorized tampering or human error. Many governments **and other regulatory bodies including the SEC** have enacted laws requiring companies to provide notice of data security incidents involving certain types of data, including personal data. If an actual or perceived breach of security measures, unauthorized access to our system or the systems of the third- party providers that we rely upon, or any other cybersecurity threat occurs, we may face direct or indirect liability, costs, or damages, contract termination, our reputation in the industry and with current and potential customers may be compromised, our ability to attract new customers could be negatively affected, and our business, financial condition, and results of operations could be materially and adversely affected. We maintain cybersecurity insurance and other types of insurance, subject to applicable deductibles and policy limits, but our insurance may not be sufficient to cover all costs associated with a potential data security incident. We also cannot be sure that our existing general liability insurance coverage and coverage for cyber liability or errors or omissions will continue to be available on acceptable terms or will be available in sufficient amounts to cover one or more large claims or that the insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co- insurance requirements, could harm our financial condition. Changes in demand for our products and services could affect profitability. We are fundamentally a matchmaking service provider between researchers who have needs for access to subjects, samples, and data, and healthcare providers and other organizations that have them. Any change that either reduces the demand for our services or changes the composition of the demand could adversely impact our financial results. 24Overall customer demand could change for many reasons outside of our control, reducing demand or making it more difficult to match up to our supply chain' s capabilities. These reasons include: Øgeneral economic downturn that impacts the research and development budgets of biopharma; Øchanges in the disease landscape, like COVID- 19, that affect the types of products and services needed; Øchanges in drugs and therapies and the desire to study subjects on these drugs and therapies; Øchanges in diagnostic tests performed (like genomic sequencing) that drive the need for subjects and samples with these new or novel test results; Øchanges in data requirements, such as the need to know specific outcomes data; Øoverall changes in biomarker research, such as emerging liquid biopsy or cell therapy research, that drives the need for different products and services; Øleadership changes within our customers resulting in loss of sponsorship; Ønew (alternative) products introduced by competitors and / or developed by customers, which may have potential to reduce or replace the need for certain types of biospecimens that we provide; Øcompetitive forces, which make it easier for customers to find products and services elsewhere; and / orØcancellation or delay of research programs, due to funding issues or preliminary research result issues. If we fail to address these factors in a timely manner or at all, our financial results could be adversely affected. Additionally, overall customer demand could decrease if we fail to: Øprovide high quality products and services; Øprovide products and services at a competitive price; Ødeliver products and services in a reasonable amount of time; Øoffer high levels of customer service; Øoffer adjacent services that researchers want to procure along with our existing products and services; Øadequately invest in sales and marketing programs and teams to drive demand or operational support to fulfill requests; Ødevelop a large and diverse supply network to satisfy demand; orØprovide a technology solution that simplifies the biospecimen procurement process for researchers and specimen providers alike. ~~25Challenges~~ -- **Challenges** or unanticipated costs in establishing the sales, marketing, and distribution capabilities necessary to successfully commercialize our products globally could affect profitability. To generate revenue, we need to expand our sales, marketing, and distribution capabilities to support our operations in North America, Europe, and Asia Pacific and proceeds raised in our initial public and in our private placement offering closed in December 2021 has ~~allowed~~ **25allowed** to enhance our sales, marketing, and distribution capabilities. It may be expensive and difficult for us to develop a global sales and marketing presence and therefore, we will likely seek distributors to the life sciences industry to market and sell some of our products and services outside of the United States. We have started the process of identifying potential distributors to market and sell our products and services to key geographic areas outside the United States. We may not be able to provide adequate compensation to these distributors for them to spend time and resources marketing and selling our products and some of our products may be too complex for them to adequately represent them. In addition, any third- party distributors with whom we work may not successfully sell our products and services, thereby exposing us to potential expenses in exiting such distribution agreements. We, and any distributors, must also market our services in compliance with federal, state, local and international laws relating to the provision of incentives and inducements. Violation of these laws can result in substantial penalties. We incur credit risk with our customers, and we may provide them with products and services for which we do not get paid. Our customers generally place orders for our products and services using a purchase order and we invoice our customers after they have received the products or services from us. During this procurement process, we become obligated to pay our suppliers for any products or services we procure from them on behalf of our customers regardless of whether our customers ultimately pay us for these products or services. Therefore, we bear the responsibility for the credit risk of our customers. We mitigate this credit risk through procedures that evaluate the creditworthiness of customers prior to accepting a purchase order from them. However, our procedures may not successfully identify all those who ultimately

fail to pay us for our products and services and any non- payments may negatively impact our revenues, results of operations, and financial condition. Our customer mix increases the risk of customers not paying our invoices. We derive, and believe that we may continue to derive, a significant portion of our revenues from privately held, investor- backed biopharma companies that are not profitable and have little operating history. These organizations may be at a higher risk of not paying for provided products and services on a timely basis or at all. If these companies fail to pay our invoices, our profitability will be adversely impacted. We rely upon relatively few customers for a significant portion of revenue and do not have a recurring revenue business model. A loss of large customers could affect our ability to operate. We have derived, and believe that we may continue to derive, a significant portion of our revenue from a limited number of customers that vary each year. ~~While for~~ **During the year ended December 31, 2023, one customer represented 25 % of the Company' s revenues, and during** the year ended December 31, 2022, two customers represented 14 % and 12 % of ~~the Company' s revenues, for the year ended December 31, 2021, no customer represented more than 10 % of~~ our revenue **, respectively** . We do not have a recurring revenue model and our customers may buy less of our products or services depending on their research and development cycles, internal budget cycles, product and service requirements, and competitive offerings. A major customer in one year may not purchase any of our products or services in another year, which may adversely affect our financial performance. Customers and customer prospects may be averse to using a self- service marketplace to procure specimens and may continue to require iSpecimen personnel in the procurement process, impacting our scalability and profitability. The iSpecimen Marketplace functions as a lead generation system to capture customer requests for specimens and as a workflow engine to allow customers, suppliers, and our Company to track and manage specimen requests. Currently, it does not fully support self- service eCommerce because key capabilities required to satisfy these transactions across all of our product lines, such as a pricing engine and patient- level search, have yet to be incorporated. Therefore, currently all customer requests for specimens require assistance from iSpecimen sales personnel. At a minimum, our sales personnel are involved in the generation of customer quotes, but they often also act in a consulting role to help develop specimen request specifications on more complex projects or to perform searches on the customer or customer prospect' s behalf. ~~26While~~ -- **While** we continue to invest in capabilities to support customer self- service in the iSpecimen Marketplace ~~, and will be utilizing the proceeds of our initial public and in our private placement offering closed in December 2021 for this effort~~ , we do not know when we will consider these capabilities to be fully developed. Additionally, we do not know if researchers will utilize the iSpecimen Marketplace to transact without the intervention of iSpecimen personnel which could limit our scalability. We may continue to invest in software which may never provide a return on its investment and diverts resources from the development of software that drives other parts of our procurement workflow. ~~Our~~ **26Our** business may be materially and adversely impacted by the reduction, delay or cancellation of orders from our customers. Our contracts with our customers generally allow them to reduce, delay, or cancel the unfulfilled portion of their specimen order with a two- week notice. Customers may reduce, delay, or cancel their unfulfilled orders due to a variety of reasons including they make changes to project requirements and the open request no longer meets their needs; their budgets change or projects get cancelled; they place orders with multiple specimen providers and cancel open orders when they have procured sufficient quantity of samples across all their sources; or we are unable to fulfill the entire order before the project deadline. For orders received **in 2023** and ~~closed (either fully fulfilled, reduced, or cancelled) for~~ 2022 ~~and 2021~~ , we fulfilled approximately **77** ~~73. 0~~ % and **76** ~~73. 5~~ %, respectively, of the total value of these orders **. These percentages do not take into consideration long term or open- ended projects that are not intended to be completely fulfilled at year end** . Our business, financial condition, results of operations and cash flows may be materially and adversely impacted by the reduction, delay or cancellation of orders. We have entered into contracts with U. S. government agencies and contractors which subjects us to federal contract and audit risks. We entered into contracts with U. S. government agencies and contractors, representing approximately **1. 0 % and** 8. 3 ~~% and 1. 6~~ % of our total revenue for **2023 and** 2022 ~~and 2021~~ , respectively, that may contain unfavorable termination provisions and are subject to audit and modification by the government at its sole discretion, which subjects us to additional risks. These risks include the ability of the U. S. government to unilaterally: Øsuspend or prevent us for a set period of time from receiving new contracts or extending existing contracts; Øterminate our existing contracts; Øreduce the scope and value of our existing contracts; Øaudit and object to our contract- related costs and fees, including allocated indirect costs; andØchange certain terms and conditions in our contracts. The U. S. government may terminate any of its contracts with us either for its convenience or if we default by failing to perform in accordance with the contract schedule and terms. Termination for convenience provisions may enable us to recover only our costs incurred or committed, and settlement expenses and profit on the work completed prior to termination. Termination for default provisions may not permit these recoveries and make us liable for excess costs incurred by the U. S. government in procuring undelivered items from another source. As a U. S. government contractor and subcontractor, we may become subject to periodic audits and reviews. Based on the results of these audits, the U. S. government may adjust our contract- related costs and fees, including allocated indirect costs. As part of any such audit or review, the U. S. government may review the adequacy of, and our compliance with, our internal control systems and policies, including those relating to our purchasing, property, compensation, and / or management information systems. In addition, if an audit or review uncovers any improper or illegal activity, we may be subject to civil and criminal penalties and administrative sanctions, including termination of our contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U. S. government. We could also suffer serious harm to our reputation if allegations of impropriety were made against us. Although we have not had any government audits and reviews to date, future audits and reviews could cause adverse effects. ~~27Sustainable~~ -- **Sustainable** future revenue growth is dependent on growth in the capabilities of our supply network which we may not be able to achieve. Our business is fundamentally a match- making business between healthcare providers who have access to subjects, samples, and data and life science researchers who need them. Currently, we receive more requests for our products and services than we have access to in our supply network and we are therefore supply constrained. Although we ~~have~~ **continue to** ~~allocated~~ **allocate resources** ~~proceeds of our initial public~~

~~offering closed in June 2021 and our private placement offering closed in December 2021~~ to supply development and commensurately grow our supply network capabilities to keep pace with demand, this supply- demand imbalance could increase in the future if we do not continue or increase our investment in this area. ~~Additionally~~ **27Additionally** , demand for specimens we receive is becoming more specific, requiring access to a greater population of subjects, samples, and data to find those that meet a researcher' s inclusion and exclusion criteria. It takes a larger network of subjects, samples, and data to access a wide enough population of subjects to meet a growing number of requests with more stringent criteria. Delays, difficulties, or unanticipated costs in developing our supply network capabilities necessary to successfully procure products and services could adversely affect revenue and profitability. Sustainable future revenue growth is dependent upon gaining access to more healthcare data from our supply network and a failure to obtain this data may adversely affect our growth. Key to our growth strategy is the accessibility and availability of deep medical record data from our healthcare provider supply sites. This data is used to automate the process of matching researchers to subjects, samples, and data, and also used to automate the procurement workflow. Currently, we have gained access to laboratory data to support the distribution of clinical lab specimens as well as biorepository data to support the distribution of banked specimens. However, we have not gained access to deeper medical record data sets from a broad set of healthcare providers to support custom specimen collections, clinical trial recruitment, or data licensing. Should we fail in our ability to access deeper healthcare data, we may not be able to effectively compete in our served markets or grow as anticipated and our business may suffer. The adoption cycle of our supply network tends to be very lengthy, which may adversely affect our ability to scale rapidly and increase revenues. The business development cycle for the adoption of our technology solution at healthcare provider supply partners can take up to 18 months or more from initial contact with the prospect through execution of a contract. We may spend significant resources to attempt to secure a new supply partner without successfully engaging the supply partner. Even if we are successful in securing a new supply partner, once a contract is executed, implementation of our technology in the supply partner' s environment can take another several months to a year or more. Because of the lengthy adoption cycle, we may fail to expand our supply network quickly enough to reach our revenue growth targets. Potential adverse ~~effect~~ **effects** from changes in the healthcare industry, including consolidations and regulatory changes, could affect access to subjects, samples, and data and affect our growth. Changing healthcare- related legislation and regulation may impact the fiscal stability and sustainability of our supply partners. Additionally, many healthcare providers are consolidating to create larger healthcare systems and / or integrated healthcare delivery systems. These changes can divert resources at our healthcare provider supply sites away from the evaluation or implementation of the iSpecimen solution to the adoption of new infrastructure, policies, and procedures to support the changes, thereby extending their timeline to adopt the iSpecimen solution. We cannot predict whether or when future healthcare reform initiatives at the international, federal, or state level, consolidations, or other initiatives affecting healthcare providers' businesses will be proposed, enacted, or implemented or what impact those initiatives may have on our business, results of operations, and financial condition. Our supply chain may not provide adequate resources to quickly respond to requests for specimens and delays in the procurement process can affect our reputation, revenue, and profitability. Many of the healthcare providers in our supply network are not- for- profit organizations whose primary business is to provide clinical care to patients. Supporting biospecimen research may be an adjunct activity for them. These organizations may lack adequate resources ~~28to~~ **to** quickly respond to our requests for specimens now and into the future. Should we and our customers experience slow turnaround times on specimen requests, our reputation may be damaged and there may be an adverse impact on our revenue and profitability. We do not control the end- to- end quality of specimens and data collected in our supply chain and quality issues can affect our reputation, revenue, and profitability. We rely upon our supply sites and their quality control processes to provide us with products and services that meet order specifications. In certain situations, products are shipped directly from the supply sites to our customers. When we receive products from our supply sites, we perform a visual inspection of the products, but we do not perform an in- depth quality control check to ensure that products meet all specifications. ~~Instead~~ **28Instead** , we rely upon our customers to perform quality checks themselves and offer refunds or replacements for products that do not meet specification. We receive products from supply sites and ship them to our customers. In ~~2022~~ **2023** , the percent of specimens that met specifications was 99 % for clinical remnant specimens, **97 % for banked research specimens and 99 % for custom research collections. In 2022, the percent of specimens that met specifications was 99 % for clinical remnant specimens,** 99 % for banked research specimens and 99 % for custom research collections. **Percentage** ~~In 2021, the percent~~ of specimens that met specifications ~~was 98 % for clinical remnant~~ **decreased year over year from 2022. Following feedback from our customers, we implemented a robust return and exchange program to better meet customer needs. iSpecimen is also terminating contracts with suppliers with lower quality** specimens ~~, 99 % for banked research specimens and 97 % for custom research collections. Refunds and replacements for our products that did not meet specifications for 2022 were nominal~~ . Any issues with quality from our supply sites can adversely affect our reputation, revenue, and profitability. Reliance on relatively few supply partners for significant supplies and services could affect our ability to operate and grow. We have derived, and believe that we may continue to derive, a significant portion of our revenues from products we procure from a limited number of supply sites **. For the year ended December 31, 2023, there was one supplier who accounted for 13 % of our total cost of revenue and three other suppliers who, together, accounted for an additional 23 % of our total cost of revenue** . For the year ended December 31, 2022, there were two suppliers who each accounted for 12 % of our total cost of revenue and two other suppliers who, together, accounted for an additional 16 % of our total cost of revenue. ~~For the year ended December 31, 2021, there were two suppliers who each accounted for 11 % of our total cost of revenue and two other suppliers who, together, accounted for an additional 20 % of our total cost of revenue.~~ Any change in the ability of a major supply site to provide us with products and services (such as financial health of the supply site, key leadership, research focus, information technology, competitive demand for specimens from third- parties, pricing structures, contract status and changes in the general economy) may adversely affect our financial performance. Our supply partners' inventories may become obsolete, which could have a material adverse effect upon our ability to generate revenue. During the year ended

December 31, ~~2022~~ **2023**, approximately ~~56~~ **52** % of our revenue was derived from specimens that were procured from our supply partners' existing sample inventories in their biobanks. These inventories may become obsolete due to changes in regulatory requirements such as a requirement for new consent form disclosures; changes in researcher requirements for the types of specimens, subjects, and data they need for their studies; and / or general degradation in the quality of stored specimens. Any change in regulations, researcher needs, or specimen quality could render our supply partners' inventories obsolete and may adversely affect our financial performance. Specimen collection from human subjects, including the possible occurrence of adverse events during or after tissue collection, could provide exposure to claims and litigation. There are inherent risks associated with collecting specimens from human subjects. Although specimen collections are completed by certified staff according to established industry standards, specimen donors vary in their ability to tolerate specimen collection protocols and such donors may potentially have an adverse health reaction either during or following a specimen collection. Research subjects or their legally authorized representative may file claims related to a specimen collection and these claims could result in litigation that could be expensive, and time consuming to defend or result in judgements that exceed the resources of the Company and its insurance coverage. ~~29We~~ **We** procure specimens and data from organizations outside of the U. S. and as such, we rely upon these organizations to collect and distribute specimens and data in accordance with their local regulations as well as our contractual requirements. A failure by our sites to comply with both applicable regulations and our contractual requirements could introduce us to compliance risk. Some of the organizations from which we procure specimens and data reside outside of the U. S. in jurisdictions that may have data protection rules, human research protection rules, and other pertinent rules that relate to the collection and distribution of specimens and data that vary from U. S. regulations. We, as an organization are not knowledgeable about all the pertinent rules and regulations of all of the jurisdictions in which these sites operate, and therefore we rely upon our contractual relationships with supply sites to ensure that they have legal responsibility for compliance with their own jurisdiction- specific regulations. Should any site fail to comply with the applicable regulations, we may suffer reputational risks if we have distributed specimens and data from that site. Additionally, any compliance failure on the part of our supply sites that impacts our research customers' ability to utilize specimens and data they previously obtained from us, as well as utilize any research results, they derived from these specimens and data, may subject us to claims by these customers. These claims could result in litigation that could be expensive to defend or result ~~in~~ **29in** judgements that exceed our resources and our insurance coverage. Any such litigations and judgement could adversely affect our business, financial condition, and results of operations. We may experience delays or interruption in the shipments of our specimens due to factors outside of our control, and such disruption could lead to lost revenue and customer satisfaction issues. We distribute biological specimens to customers around the world. These specimens need to be delivered over a range of temperatures from ambient to cryogenic and delivery timeframes that can be as quick as hours. We rely on third- party shipping materials (such as thermal containers) as well as shipping services (such as FedEx) to transport specimens to our customers. Shipping materials may be defective and third- party shipping services, including international shipping services, could become disrupted by adverse weather conditions, natural disasters, military conflicts, flight cancellations, ground logistics issues, customs delays, and other service interruptions. Any defect in our shipping materials or delays in shipping service times could cause damage to these specimens and render them unusable by our customers. If we are unable to deliver our specimens in a timely matter and without damage, our revenue could be negatively impacted and our reputation with our customers could suffer, resulting in material harm to our business. The Company' s business was negatively impacted during the first half of 2022 by the ongoing war between Russia and Ukraine. At the start of the war, the Company had approximately $ 1 million of purchase orders that were slated to be fulfilled by the Company' s supply network in Ukraine and Russia. This supply network shut down quickly at the start of the war. Ukrainian suppliers were disabled due to war conditions and evacuations and some of the Company' s Russian suppliers were disabled by sanctions. While the Company mobilized to shift these purchase orders to other suppliers in the network, the process of getting specimen collections from other supply sites took time, which caused a delay in the fulfillment of such purchase orders. As of December 31, ~~2022~~ **2023**, the Company' s supply sites in Russia that had not been under sanctions were now accessible and the Company' s supply sites in Ukraine had mostly reopened. However, due to the uncertainty caused by the ongoing war, Ukraine suppliers may again become inaccessible to the Company. Therefore, as long as the uncertainty continues, the Company does not use them as sole specimen sources at a purchase order level. Alternate suppliers do not have the same favorable unit economics or specimen collection rates. The short and long- term implications of the war are difficult to predict at this time. The imposition of more sanctions and counter sanctions may have an adverse effect on the economic markets generally and could impact the Company' s business and the businesses of the Company' s supply partners, especially those in Ukraine and Russia. Because of the highly uncertain and dynamic nature of these events, it is not currently possible to estimate the impact of the war on the Company' s business and the companies from which the Company obtains supplies and distributes specimens ~~. Recent changes in our management may lead to instability and negatively affect our business. In September 2022, Christopher Ianelli, our former President and Chief Executive Officer, vacated his positions with the Company and, in October 2022, Jill Mullan, our former Chief Operating Officer, vacated her position with the Company. Dr. Ianelli' s employment with the Company and Ms. Mullan' s employment with the Company were each terminated on October 24, 2022. In September 2022, our board of directors appointed then Chief Financial Officer, Tracy Curley, to serve as our Interim Chief Executive Officer, while continuing to serve as Chief Financial Officer. In January 2023, the board of directors appointed Ms. Curley to serve as our full- time Chief Executive Officer and she continues to also serve as our Chief Financial Officer. Since October 2022, Ms. Curley has assumed all 30the responsibilities formerly held by our Chief Executive Officer, Chief Operating Officer and Chief Financial Officer. We cannot be certain that the changes in management and the challenges of one officer serving solely in the three highest executive positions of the Company will not negatively affect our business in the future or that additional changes in management will not occur. Additionally, we may be negatively impacted by a lack of internal control processes as a result of our having one officer serving in the positions of both principal executive officer and principal financial~~

~~officer of the Company. We are currently in the process of searching for a new Chief Financial Officer to replace Ms. Curley in her position as Chief Financial Officer, but there can be no assurance as to when we will be able to complete such search or that the transition to a new Chief Financial Officer will not, itself, lead to instability and / or negatively affect our business~~ . Our future success depends on our ability to retain our key personnel and to attract, retain and motivate qualified personnel. Our future success will depend upon our ability to retain our key management and other personnel and will also depend in large part on our ability to attract and retain additional qualified software developers, bioinformaticists, operations personnel, sales and marketing personnel, and business development personnel. Competition for these types of employees is intense due to the limited number of qualified professionals and the high demand for them, particularly in the Boston, Massachusetts area where our headquarters are located. We have in the past experienced difficulty in recruiting qualified personnel, especially in the area of sales. Failure to attract, assimilate, and retain personnel would have a material adverse effect on our business and potential growth. Our senior management team has limited experience managing a public company. Our senior management team has limited experience managing a public company, and regulatory compliance may divert its attention from the day- to- day management of our business. Our management team may not successfully or efficiently manage our continued transition to a public company that will be subject to significant regulatory oversight and reporting obligations under the federal securities laws. In particular, these obligations will require substantial attention from our senior management and could divert their attention away from the day- to- day management of our business, which could materially and adversely impact our business operations. Our competitors may have greater resources than us and may outspend us to grow more quickly. Our competitors are highly fragmented and comprise of thousands of biobanks, healthcare providers, and commercial biospecimen organizations. We expect to continue to experience significant and increasing levels of competition in the future, especially from several larger biospecimen providers who have consolidated via mergers and acquisitions and who are well- capitalized by private equity. These ~~organizations~~ **30organizations** are currently acquiring smaller biospecimen businesses and have larger customer bases, their own collection centers, biospecimen inventories, larger marketing and sales budgets, and an international presence. They may also be developing their own technology solution that could be better or less costly to develop than our own iSpecimen Marketplace, thereby eliminating one of our key competitive advantages. They may continue to outspend us to grow more quickly and we may not be able to successfully compete with a competitor that has greater resources; hence such competition may adversely affect our business. We may lose business to competitors which have or develop their own biorepositories and / or collection centers that can meet customers' needs. Many of our competitors have their own biorepository of specimens that they have collected or procured over time. These inventories, when they meet a customer' s needs for product, almost always provide our competitors with a time- to- delivery advantage because they can directly fulfill requests from their own inventories, whereas we must procure products through our supply network after an order has been received from our customers. Additionally, some competitors have their own collection facilities and direct access to eligible research subjects which also provides a time- to- delivery advantage. We have lost and will continue to lose business to competitors when they can provide samples more quickly than we can from our supply network. We may face pricing pressure from competitors who may lower prices to reduce biorepository inventories or because they have more favorable specimen acquisition costs. Many competitors invest in biorepositories of specimens and data. These competitors may be incented to drop prices in order to more quickly recoup their inventory carrying costs, especially when they have held inventory for longer periods of time. This may cause downward pricing pressure on us. Additionally, some competitors may have cost advantages on some types of collections either because ~~31of~~ **of** more favorable supply relationships or because they have their own collection centers, and they can likewise exert pricing pressure in the market. Lower prices will adversely impact our revenue and gross margins. Our overall business results may suffer from an economic downturn. We rely upon researchers from biopharma companies as the primary source of our revenue. During an economic downturn, the biopharma industry typically experiences a drop in the annual growth rate of research and development spending and allocates fewer resources towards it. An economic downturn could adversely affect the demand for our products and services and have a corresponding impact on our revenue and profitability. A prolonged economic downturn may cause us to reduce investment in the longer- term growth of our Company in order to reduce short term costs. Our operations and performance depend on economic conditions in the United States and other countries where we do business. Deterioration in general economic conditions, whether due to COVID- 19 or otherwise, could negatively affect our and our customers' purchasing power. Our results of operations and financial condition may be adversely impacted from high inflation rates. We have experienced negative effects from inflation in certain areas of our business due to the recent high rates of inflation in the U. S. and around the world. Inflation is causing the cost of employee salaries to rise and our salaries account for a significant portion of our overall operating costs. Additionally, costs of supplies and other sales, marketing and general and administrative costs have increased due to inflation. Inflation has not had a significant adverse impact on the cost of specimens due to our long- term contracts maintained with vendors, which include revenue sharing plans. However, if inflation continues, it may have an adverse impact on the costs of our samples in the future. Our timely fulfillment of customer orders may be adversely impacted due to constraints in the supply chain. Our operations are heavily reliant on specimen availability and delays or shortages in obtaining specimens caused by constraints in the supply chain, may adversely impact the timing and extent of our ability to fulfill our customer orders which could adversely impact our results of operations and financial condition. ~~We~~ **31We** may have difficulty managing growth in our business, which could adversely affect our financial condition and results of operations. Significant growth in the size and scope of our operations could place a strain on our financial, technical, operational, and management resources. The failure to continue to upgrade our technical, administrative, operating and financial control systems, or the occurrences of unexpected expansion difficulties, could have a material adverse effect on our financial condition and our ability to timely execute our business plans. **We have incurred losses from** ~~Our revenue may be adversely affected if we are required to charge~~ sales tax ~~or other transaction~~ **obligations owed to various jurisdictions by us because we did not collect** taxes on **taxable** ~~all or a portion of our past and future~~ sales **in prior years, and we may never be able to**

recover the prior sales taxes from the customers . States and other jurisdictions have varying policies regarding when a company has a taxable presence in their locale. ~~There~~ **We** are **required** ~~many factors~~ to **collect taxes on taxable sales in prior** ~~consider when determining if a locale nexus exists and if yes~~ **years but we failed** ~~, whether products and services offered by the Company are subject~~ to **do so and thus have incurred losses from** sales tax **obligations owed to various jurisdictions** . ~~To date, we~~ **We are in discussions with those tax jurisdictions to rectify and** have **made** ~~not paid any sales~~ tax ~~in any state on~~ **payments to some of** ~~the~~ **those jurisdictions** ~~provision of services to distribute biospecimens~~ . ~~However, it is possible that we could~~ **We have also reached out to our customers who** owe sales **taxes and recovered partial** tax **payments from certain customers. However, we may never be able to recover the prior sales taxes from all the customers, which could have a material adverse effect** on ~~past sales or~~ **our financial condition** ~~in the future if laws and policies, court decisions, Federal law, or our decisions about where and when sales tax is owed changes~~ . Our ability to utilize net operating loss carryforwards may be limited, resulting in income taxes sooner than currently anticipated. As of December 31, ~~2022~~ **2023** , we had federal net operating loss carryforwards (" NOLs ") of approximately $ ~~40~~ **50** . 8 million for federal income tax purposes of which approximately $ 13 million expires at various periods through 2037 and approximately $ ~~27~~ **37** . 8 million can be carried forward indefinitely. These NOLs may be used to offset future taxable income, to the extent we generate any taxable income, ~~32and~~ -- **and** thereby reduce or eliminate our future federal income taxes otherwise payable. Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, imposes limitations on a corporation' s ability to utilize NOLs if it experiences an ownership change as defined in Section 382. In general terms, an ownership change may result from transactions increasing the ownership of certain stockholders in the stock of a corporation by more than 50 % over a three- year period. In the event that an ownership change has occurred, or were to occur, utilization of our NOLs would be subject to an annual limitation under Section 382 determined by multiplying the value of our stock at the time of the ownership change by the applicable long- term tax- exempt rate as defined in the Code. Any unused annual limitation may be carried over to later years. We may be found to have experienced an ownership change under Section 382 as a result of events in the past or the issuance of shares of common stock in the future. If so, the use of our NOLs, or a portion thereof, against our future taxable income may be subject to an annual limitation under Section 382, which may result in expiration of a portion of our NOLs before utilization. ~~A pandemic, epidemic, or outbreak of an infectious disease in the United States or worldwide could adversely affect our business. Outbreaks of pandemic, epidemic, or infectious diseases, such as the current COVID- 19 pandemic, Ebola virus, Middle East Respiratory Syndrome, Severe Acute Respiratory Syndrome, or the H1N1 virus, could disrupt the operations of our business, much as with the current COVID- 19 pandemic. Our supply chain' s ability to collect specimens from subjects may be disrupted if medical resources are re- allocated to focus on the treatment of disease, medical personnel work remotely, or patient appointments are cancelled or move to virtual appointments. Our customers' demand for specimens may be reduced if research projects are cancelled, paused, or temporarily slowed due to an economic downturn caused by a widespread health crisis or our customers move to remote work environments where they cannot use our products and services. Limitations on travel may disrupt our supply development and customer development initiatives. Our ability to fulfill requests for products and services, develop our technology, and market and sell our solutions may be impacted if there is a closure of our facilities.~~ We may acquire other businesses, products, or technologies that could disrupt our business, reduce our financial resources, or cause dilution to our stockholders. Although we have not identified such an opportunity, as part of our business strategy, we may, in the future, pursue acquisitions of businesses and assets or pursue strategic alliances and joint ventures that leverage our core technology and industry experience to expand our offerings, increase our customer base, or increase our supply base. We have no experience with acquiring other companies and limited experience with forming strategic alliances and joint ventures. We may not be able to find suitable partners 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 these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in significant write- offs or the incurrence of debt and contingent liabilities, 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 would otherwise focus on developing our existing business. We may experience losses related to acquisitions of other companies, which could have a material adverse effect on our results of operations. We may not identify or complete these transactions in a timely manner, on a cost- effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, technology license, strategic alliance, 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 stockholders. 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. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all. ~~We currently maintain all of our cash with one financial institution and, therefore, our cash could be adversely affected if the financial institution in which we hold our cash fails. We currently maintain all of our cash with one financial institution. At the current time, our cash balance with this financial institution is in excess of the Federal Deposit Insurance Corporation insurance (" FDIC ") insurance limit. If this bank fails in the future, we may not be able to immediately (or ever) recover our cash in excess of the FDIC insurance limits which would adversely impact our operating liquidity and could negatively impact our operations, results of operations and financial performance. 33Risks~~ **32Risks** Related to Intellectual PropertyWe use third- party technology licenses as part of our technology solution. The iSpecimen Marketplace uses third parties for certain technology to support development, delivery, and operations of the platform including product management, software development, cloud hosting, data processing, content mapping, and security services and may need to license additional technology in the future for use in the ongoing operations as part of our technology solution. Most of the software (including source code) and other materials we use are distributed under a " free, " " open source, " or similar licensing model. We also use software and services from commercial providers. However,

we believe all of them are generally commercially available to us from other parties. We continue to evaluate partners whose capabilities can help us deliver our iSpecimen Marketplace solution in areas such as functionality, efficiency, and security and expect to continue to leverage and consider additional third- party capabilities in our ongoing Marketplace development. However, there is no assurance that these third- party technology licenses will continue to be available to us on acceptable commercial terms or at all which could significantly harm our business, financial condition, and operating results. We use open source licenses as part of our technology solution, which may subject us to claims from third parties claiming ownership and unauthorized use. We use open source software in our software solutions and technology- enabled services. We may encounter claims from third parties claiming ownership and unauthorized use of the software purported to be licensed under the open source terms, demanding release of derivative works of open source software that could include our proprietary source code, or otherwise seeking to enforce the terms of the applicable open source licenses. These claims could result in litigation that could be expensive to defend. If we become liable to third parties for such claims, we could be required to make our software source code available under the applicable open source license, utilize or develop alternative technology, or cease using, selling, offering for sale, licensing, implementing or supporting the applicable solutions or technology- enabled services. In addition, use of certain open source software may pose greater risks than use of third- party commercial software, as most open source licensors and distributors do not provide commercial warranties or indemnities or controls on the origin of the software. We may become subject to third parties' claims alleging infringement of their patents and proprietary rights, which could be costly, time consuming, and prevent the use of our technology solution. We cannot assure you that third parties will not claim our current or future products or services infringe their intellectual property rights. Any such claims, with or without merit, could cause costly litigation that could consume significant management time. As the number of product and services offerings in our market increases and functionalities increasingly overlap, companies such as ours may become increasingly subject to infringement claims. These claims also might require us to enter into royalty or license agreements. If required, we may not be able to obtain such royalty or license agreements or obtain them on terms acceptable to us. We do not have any patents protecting our intellectual property and if we are unable to protect the confidentiality of our trade secrets, know- how and other proprietary and internally developed technology, our business could be adversely affected. Our success depends upon our proprietary technology. We do not have registered patents on any of our technology because we do not believe that we could obtain blocking patents and that the costs of patent monitoring and prosecution outweigh the benefits. Instead, we rely upon software copyright laws, service marks, trade secret laws, confidentiality procedures, and contractual provisions to establish and protect our proprietary rights as well as the skills, knowledge and experience of our technical and operational personnel, our consultants and advisors, and contractors. Because we operate in a highly competitive industry, we rely in part on trade secrets to protect our proprietary technology and processes. However, trade secrets are difficult to protect. We enter into confidentiality or non- disclosure agreements with our corporate partners, employees, consultants, collaborators, and other advisors. These agreements generally require that the receiving party keep confidential and not disclose to third- parties confidential information developed by the receiving party or made known to the receiving party by us during the course of the receiving party' s relationship with us. These agreements also generally provide that inventions conceived by the receiving party in the course of rendering services to us will be our exclusive property, and we enter into assignment agreements to protect our rights. These confidentiality, inventions and assignment agreements may be breached and may not effectively assign intellectual property rights to us. Our trade secrets also could be independently discovered by competitors, in which case we may not be able to prevent the use of such trade secrets ~~34by~~ **33by** our competitors. The enforcement of a claim alleging that a party illegally obtained and was using our trade secrets could be difficult, expensive and time consuming and the outcome would be unpredictable. In addition, effective protection of intellectual property rights is unavailable or limited in certain foreign countries. The failure to obtain or maintain meaningful trade secret protection could adversely affect our competitive position. Risks Related to Regulatory EnvironmentFailure to comply with federal and state data protection regulations could result in fines, penalties, and litigation, and have a material adverse effect upon our business. Because we may gain access to protected healthcare or personal data, we must comply with various data protection regulations worldwide, including the Health Insurance Portability and Accountability Act of 1996, as amended by HITECH, and their implementing regulations at 45 CFR Parts 160- 164 (collectively, " HIPAA "). As part of the operation of our business, we act in the capacity of a HIPAA business associate with respect to protected health information (" PHI "), we receive from our healthcare provider partners. As a HIPAA business associate, we are required to protect the privacy and confidentiality of PHI, and we are required to comply with HIPAA security regulations requiring certain administrative, physical, and technical safeguards to ensure the confidentiality, integrity, and availability of electronic PHI (" ePHI "). To comply with our regulatory and contractual obligations, which may change over time, we may have to reorganize processes and invest in new technologies. We also are required to train personnel regarding data protection requirements. If we, or any of our employees or agents, are unable to maintain the privacy, confidentiality, and security of the PHI that is entrusted to us, we could be subject to civil and criminal fines and sanctions imposed by the HHS or state regulatory authorities, and we could be found to have breached our HIPAA business associate agreements with our healthcare provider suppliers. In addition to the HIPAA requirements that we are subject to, we may be subject to similar state laws and regulations, which regulate the collection, handling, processing, and storage of sensitive personal information. While we have never had a data breach, we cannot guarantee that it will not happen in the future nor can we guarantee that we will always be in compliance with these regulations. Failure to comply with federal, state and local laws and regulations could subject the Company to denial of the right to conduct business, fines, criminal penalties, and / or other enforcement actions which would have a material adverse effect on its business. In addition, compliance with future legislation could impose additional requirements on the Company which may be costly. Failure to comply with international laws related to data protection, such as the **General Data Protection Regulation (“** GDPR **”)** could result in fines, penalties, and litigation, and have a material adverse effect upon the Company' s business. We may be required to comply with international laws, such as the

~~EU~~ GDPR. The GDPR took effect in May 2018 and regulates the collection, storage, use, disclosure, transfer, and / or other processing of personal data of identified or identifiable individuals located in the European Economic Area (" EEA "), including the EU. This data specifically includes personal health data that generally is provided as part of biospecimen collection studies. The GDPR imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates for processing (with some exceptions), allowing individuals to revoke consents granted, enabling individuals the right to have their data erased (with some exceptions), amended, or transferred to another data controller (known as " data portability "), providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, limiting the transfer of data to countries outside of the EU, providing notification of data breaches, and taking certain measures when engaging third- parties who may also use or process the data. In addition, EU member states may make their own further laws and regulations limiting the processing of personal data, including biometric, genetic or health data. The GDPR covers areas where we may not have expertise and the GDPR and the regulatory guidance enforcing GDPR may be actively evolving. We, or our other third- party customers, suppliers and / or distribution partners, may not be able to maintain regulatory compliance with the GDPR or may incur significant costs in obtaining or maintaining regulatory compliance. Any action brought against us for violations of this law, even if successfully defended, could cause us to incur significant legal expenses, reputational risks, and divert our management' s attention from the operation of our business. In addition, compliance with future legislation could impose additional requirements on the Company which may be costly. ~~35Failure~~ **34Failure** to comply with federal and state laws around environmental, health and safety, biohazards and dangerous goods, and imports / exports could result in fines, penalties, and litigation, and have a material adverse effect upon our business. Because we receive, store, and ship specimens, we are subject to regulation under federal, state, and local laws and regulations relating to the protection of the environment and human health and safety, including laws and regulations relating to the handling, transportation, and disposal of specimens and infectious and hazardous waste materials, as well as regulations relating to the safety and health of laboratory employees. Our laboratory is subject to applicable federal and state laws and regulations relating to biohazard disposal of all laboratory specimens, and we utilize outside vendors for disposal of such specimens. In addition, the federal Occupational Safety and Health Administration has established extensive requirements relating to workplace safety for healthcare employers whose workers may be exposed to blood- borne pathogens such as HIV, COVID- 19, and the hepatitis B virus. These requirements, among other things, require work practice controls, protective clothing and equipment, training, medical follow- up, vaccinations, and other measures designed to minimize exposure to, and transmission of, blood- borne pathogens. There are also federal laws related to import and export of biospecimens and related data. Failure to comply with federal, state and local laws and regulations could subject us to denial of the right to conduct business, fines, criminal penalties, and / or other enforcement actions which would have a material adverse effect on our business. In addition, compliance with future legislation could impose additional requirements on us which may be costly. Failure to comply with other international laws around environmental, health and safety, biohazards and dangerous goods, imports / exports, and other regulations could result in fines, penalties, and litigation, and have a material adverse effect upon our business. Because we procure specimens from and distribute specimens to countries outside of the United States, we are subject to international and foreign rules similar to any of the aforementioned U. S. rules, including those related to environmental, health and safety, biohazards, and imports / exports. We may be unaware of those international and foreign rules. These laws cover areas where we may not have expertise and, in many areas, these laws are actively evolving. We, or our other third- party customers, suppliers and / or distribution partners, may not be able to maintain regulatory compliance in such countries or may incur significant costs in obtaining or maintaining our foreign regulatory compliance. Any action brought against us for violations of these laws or regulations, even if successfully defended, could cause us to incur significant legal expenses, reputational risks, and divert our management' s attention from the operation of our business. In addition, compliance with future legislation could impose additional requirements on us which may be costly. Failure to comply with laws and regulations related to the protection of research subjects could result in fines, penalties, and litigation, and have a material adverse effect upon our business. We are subject to regulation under international, federal, state, and local laws and regulations relating to the protection of research subjects. Federally- funded human- subject research in the United States, including the collection of identifiable human biospecimens, is governed by 45 CFR Part 46, also known as the Health and Human Services Policy for Protection of Human Research Subjects or the " Common Rule. " Use of biospecimens in certain other research is subject to FDA regulations for the Protection of Human Subjects and Institutional Review Boards at 21 CFR Parts 50 and 56. Research funded by the National Institutes of Health (" NIH ") may be subject to grant or contract requirements, as well as NIH Certificates of Confidentiality. When collecting specimens for research in the United States, iSpecimen and its collection sites are responsible for ensuring that specimens are collected in accordance with these regulations. In addition, other countries have their own regulations around the ethical collection of human specimens for research. While we believe that we are in compliance with these laws, we may not be aware of all such laws or may fail to properly audit and identify gaps in compliance. Similarly, we may find errors in our technology and processes and may fail to properly match the compliance requirements of our researchers to the compliance requirements of our suppliers. Failure of our Company or our suppliers to comply with international, federal, state, and local laws and regulations could subject us to denial of the right to conduct business, fines, criminal penalties, and / or other enforcement actions which could have a material adverse effect on our business. ~~36Our~~ **35Our failure to comply with** ~~lack of knowledge of all the~~ **other** laws and regulations related to our business operations ~~may result in~~ **also have a material adverse effect upon** our **business** ~~failure to abide by these rules~~ . In addition to the above- described laws and regulations, there are many other federal, state and international laws and regulations applicable to iSpecimen. The following list contains some of the other laws and regulations that could directly or indirectly affect our ability to operate the business: ØOccupational Safety and Health regulations and requirements; ØCenters for Disease Control Import Permit Program rules related to biological agents;

ØShipping rules such as IATA Dangerous Goods regulations; ØState and local laws and regulations for the disposal and handling of medical waste and biohazardous material; ØExport laws such as the U. S. Department of Commerce' s Bureau of Industry and Security Export Administration Regulations, U. S. State Department' s Directorate of Defense Trade Controls, and the U. S. Department of the Treasury' s Office of Foreign Assets Control in export licensing; ØImport laws such as the Customs and Border Protection Trade Act of 2002 and the Customs Modernization Act; ØThe federal Anti- Kickback Statute, which prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs; ØFederal, state, and local tax and tariff rules; ØOther laws and regulations administered by the FDA; ØOther laws and regulations administered by HHS; andØState and local laws and regulations governing human subject research and clinical trials. These laws cover **several** areas **of our business** ~~where we may not have expertise~~ and ~~, in many areas, these laws~~ are actively evolving. We, or our other third- party customers, suppliers and / or distribution partners, may not be able to maintain regulatory compliance or may incur significant costs in obtaining or maintaining regulatory compliance. Any action brought against us for violations of these laws or regulations, even if successfully defended, could cause us to incur significant legal expenses, reputational risks, and divert our management' s attention from the operation of our business. In addition, compliance with future legislation could impose additional requirements on us which may be costly. Failure to comply with governmental export and import regulations could result in fines, penalties, and litigation, and have a material adverse effect upon the Company' s business. Our products and services are subject to export control and import laws and regulations, including the U. S. Export Administration Regulations, U. S. Customs regulations, and various economic and trade sanctions regulations administered by the U. S. Treasury Department' s Office of Foreign Assets Controls. Exports of our products and services must be made in compliance with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including the possible loss of export or import privileges; fines, which may be imposed on us and responsible employees or managers; and, in extreme cases, the incarceration of responsible employees or managers. In addition, changes in our products and services or changes in applicable export or import laws and regulations may create delays in the introduction and sale of our products and services to international markets, prevent our customers from procuring our products and ~~37services~~ **36services** or, in some cases, prevent the export or import of our products and services to certain countries, governments or persons altogether. Any change in export or import laws and regulations, shift in the enforcement or scope of existing laws and regulations, or change in the countries, governments, persons or technologies targeted by such laws and regulations could also result in decreased use of our products and services, or in our decreased ability to export or sell our products and services to existing or potential customers. Any decreased use of our products and services or limitation on our ability to export or sell our products and services could adversely affect our business, financial condition and results of operations. Product safety and product liability, including bio- hazard risks, could provide exposure to claims and litigation. Specimens may have hazardous properties and may carry transmissible infectious agents. There are inherent risks in connection with the handling, storage, disposal, distribution, and / or use of the specimens. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by federal, state and local regulation and regulations of foreign jurisdictions, the risk of accidental contamination or injury from these materials cannot be completely eliminated. Individuals who use or come in contact with the specimens may file claims related to their use and these claims could result in litigation that could be expensive to defend or result in judgements that exceed our resources and our insurance coverage. Any such litigations and judgement could adversely affect our business, financial condition and results of operations. Risks Related to the Our SecuritiesIf we are not able to comply with the applicable continued listing requirements or standards of The Nasdaq Stock Market LLC, our common stock could be delisted from Nasdaq. Our common stock is currently listed on Nasdaq. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards, including those regarding director independence and independent committee requirements, minimum stockholders' equity, minimum share price, and certain corporate governance requirements. There can be no assurances that we will be able to comply with the applicable listing standards of The Nasdaq Stock Market LLC **. On October 9, 2023, we received a deficiency notice from Nasdaq informing us that our common stock fails to comply with the $ 1 minimum bid price required for continued listing on The Nasdaq Capital Market under Nasdaq Listing Rule 5550 (a) (2) based upon the closing bid price of our common stock for the 30 consecutive business days prior to the date of the notice from Nasdaq. Nasdaq' s notice has no immediate effect on the listing of the common stock on The Nasdaq Capital Market. Pursuant to Nasdaq Listing Rule 5810 (c) (3) (A), we have been provided an initial compliance period of 180 calendar days, or until April 8, 2024, to regain compliance with the minimum bid price requirement. To regain compliance, the closing bid price of the common stock must meet or exceed $ 1. 00 per share for a minimum of ten consecutive business days prior to April 8, 2024. If we are unable to regain compliance by April 8, 2024, we may be eligible for an additional 180 calendar day compliance period to demonstrate compliance with the bid price requirement. We intend to submit a plan of compliance to Nasdaq, by April 8, 2024, explaining how we plan to regain compliance with the minimum bid price requirement, including effecting a reverse stock split of our common stock on the Nasdaq Capital Market. If we do not qualify for the second compliance period or fail to regain compliance during the second 180- day period, Nasdaq will notify us of its determination to delist our common stock, at which point we would have an opportunity to appeal the delisting determination to a Hearings Panel. However, there is no assurance that we would be able to appeal the delisting determination to the Hearings Panel or such appeal will be successful** . In the event that our common stock is delisted from Nasdaq and is not eligible for quotation on another market or exchange, trading of our common stock could be conducted in the over- the- counter market or on an electronic bulletin board established for unlisted securities, such as the Pink Sheets or the OTC Markets. In such event, it could become more difficult to dispose of, or obtain accurate price quotations for, our common

stock, and there would likely also be a reduction in our coverage by securities analysts and the news media, which could cause the price of our common stock to decline further. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange. ~~In~~ **37In** the event that our common stock is delisted from Nasdaq, U. S. broker- dealers may be discouraged from effecting transactions in shares of our common stock because it may be considered a penny stock and thus be subject to the penny stock rules. The SEC has adopted a number of rules to regulate a " penny stock " that restricts transactions involving stock which is deemed to be a penny stock. Such rules include Rules 3a51- 1, 15g- 1, 15g- 2, 15g- 3, 15g- 4, 15g- 5, 15g- 6, 15g- 7, and 15g- 9 under the Exchange Act. These rules may have the effect of reducing the liquidity of penny stocks. " Penny stocks " generally are equity securities with a price of less than $ 5. 00 per share (other than securities registered on certain national securities exchanges or traded on Nasdaq if current price and volume information with respect to transactions in such securities is provided by the exchange or system). Our shares of common stock may, in the future constitute, a " penny stock " within the meaning of the rules. The additional sales practice and disclosure requirements imposed upon U. S. broker- dealers may discourage such broker- dealers from effecting transactions in shares of our common stock, which could severely limit the market liquidity of such shares of common stock and impede their sale in the secondary market. A U. S. broker- dealer selling a penny stock to anyone other than an established customer or " accredited investor " (generally, an individual with a net worth in excess of $ 1, 000, 000 or an annual income exceeding $ 200, 000, or $ 300, 000 together with his or her spouse) must make a special suitability determination for the purchaser and must receive the purchaser' s written consent to the transaction prior to sale, unless the broker- dealer or the transaction is otherwise exempt. In addition, the " penny stock " regulations require the U. S. broker- dealer to deliver, prior to any transaction involving a " penny stock ", a disclosure schedule prepared in accordance with SEC standards ~~38relating~~ -- **relating** to the " penny stock " market, unless the broker- dealer or the transaction is otherwise exempt. A U. S. broker- dealer is also required to disclose commissions payable to the U. S. broker- dealer and the registered representative and current quotations for the securities. Finally, a U. S. broker- dealer is required to submit monthly statements disclosing recent price information with respect to any " penny stock " held in a customer' s account and information with respect to the limited market in " penny stocks ". You should be aware that, according to the SEC, the market for " penny stocks " has suffered in recent years from patterns of fraud and abuse. Such patterns include (i) control of the market for the security by one or a few broker- dealers that are often related to the promoter or issuer; (ii) manipulation of prices through prearranged matching of purchases and sales and false and misleading press releases; (iii) " boiler room " practices involving high- pressure sales tactics and unrealistic price projections by inexperienced sales persons; (iv) excessive and undisclosed bid- ask differentials and markups by selling broker- dealers; and (v) the wholesale dumping of the same securities by promoters and broker- dealers after prices have been manipulated to a desired level, resulting in investor losses. Our management is aware of the abuses that have occurred historically in the penny stock market. Although we do not expect to be in a position to dictate the behavior of the market or of broker- dealers who participate in the market, management will strive within the confines of practical limitations to prevent the described patterns from being established with respect to our securities. The sale of substantial shares of our common stock may depress our stock price. As of December 31, ~~2022~~ **2023** , we had ~~8~~ **9** , ~~925~~ **083** , ~~808~~ **371** shares of common stock outstanding; outstanding stock options to purchase ~~297~~ **296** , ~~559~~ **268** shares of common stock at an average price of $ 2. ~~69~~ **17** per share; outstanding restricted stock units of ~~267~~ **116** , ~~505~~ **357** shares issuable upon vesting at an average price of $ 5. ~~43~~ **67** ; outstanding warrants to purchase 102, 500 shares of common stock at an average price of $ 9. ~~00~~ **88** per share. Additionally, the number of shares of common stock that are outstanding after our **IPO** ~~initial public offering~~ also includes up to an aggregate of 1, 312, 500 shares of common stock underlying the warrants to be offered and sold by the selling stockholders of the Company **, all of which were subsequently repurchased by us on February 13, 2024, and are no longer outstanding** . We have reserved ~~608~~ **1** , ~~000~~ **869, 500** shares to issue stock options, restricted stock or other awards under our 2021 Stock Incentive Plan (as defined below). Sales of a substantial number of shares of our common stock could cause the price of our common stock to fall and could impair our ability to raise capital by selling additional securities. Our directors, officers and principal stockholders have significant voting power and may take actions that may not be in the best interests of our other stockholders. As of December 31, ~~2022~~ **2023 ,** our officers, directors and principal stockholders each holding more than 5 % of our common stock collectively ~~controls~~ **controlled** approximately ~~41~~ **33** . ~~5~~ **7** % of our outstanding common stock. As a result, these stockholders, if they act together, will be able to control the management and affairs of our Company and most matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change of control, impeding a merger, consolidation or other business combination transaction involving us and discouraging a potential ~~acquiror~~ **38acquiror** from making a tender offer or otherwise attempting to obtain control of the Company and might adversely affect the market price of our common stock. This concentration of ownership may not be in the best interests of our other stockholders. Certain provisions of our certificate of incorporation, as amended, and our bylaws, as amended, may make it more difficult for a third party to affect a change- of- control. Our certificate of incorporation, as amended, authorizes the **board of directors (the "** Board ~~of Directors~~ **")** to issue up to 50, 000, 000 shares of preferred stock. The preferred stock may be issued in one or more series, the terms of which may be determined at the time of issuance by the Board ~~of Directors~~ without further action by the stockholders. These terms may include preferences as to dividends and liquidation, conversion rights, redemption rights and sinking fund provisions. The issuance of any preferred stock could diminish the rights of holders of our common stock, and therefore could reduce the value of such common stock. In addition, specific rights granted to future holders of preferred stock could be used to restrict our ability to merge with, or sell assets to, a third party. The ability of the Board ~~of Directors~~ to issue preferred stock could make it more difficult, delay, discourage, prevent or make it more costly to acquire or effect a change- in- control, which in turn could prevent our stockholders from recognizing a gain in the event that a favorable offer is extended and could materially and negatively affect the market price of our common stock. In addition, our certificate of incorporation, as amended, provides for a staggered Board ~~of Directors~~ . As a consequence, only a minority of the Board ~~of Directors~~ will be

considered for election at every annual meeting of stockholders, which may make the removal of management more difficult and may discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our securities. Additional provisions that may discourage unsolicited takeover proposals include (i) board ~~39vacancies~~ -- **vacancies** may be filled by a majority of the remaining board members, (ii) the board may adopt, repeal, rescind, alter or amend our bylaws without stockholder approval, (iii) stockholders holding more than 15 % of the outstanding shares may call a special meeting, (iv) a director may be removed from office only by the affirmative vote of a majority of the issued and outstanding stock entitled to vote; and (v) no cumulative voting in the election of directors, which would allow holders of less than a majority of the stock to elect some directors. Our bylaws, as amended, designate certain courts as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees. Our bylaws, as amended, provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for: (i) any derivative action or proceeding brought on behalf of the Company; (ii) any action asserting a claim for breach of a fiduciary duty owed by any director, officer, employee, or agent of ours to us or our stockholders; (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, the certificate of incorporation, or the bylaws; and (iv) any action asserting a claim governed by the internal affairs doctrine (the " Delaware Forum Provision "). Our bylaws further provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act (the " Federal Forum Provision "). In addition, our bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our common stock is deemed to have notice of and consented to the Delaware Forum Provision and the Federal Forum Provision. Section 27 of the Exchange creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the Delaware Forum Provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. We note, however, that there is uncertainty as to whether a court would enforce this provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. We recognize that the Delaware Forum Provision and the Federal Forum Provision in our bylaws may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware. Additionally, the Delaware Forum Provision and the Federal Forum Provision may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage such lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court were " facially valid " under Delaware law, there is uncertainty as to whether other courts will enforce the Federal Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving ~~such~~ **39such** matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the United States District Court may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders. Limitations on director and officer liability and indemnification of our officers and directors by us may discourage stockholders from bringing suit against an officer or director. Our certificate of incorporation, as amended, and bylaws, as amended, provide that, to the fullest extent permitted by Delaware law, as it presently exists or may be amended from time to time, a director shall not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director. Under Delaware law, this limitation of liability does not extend to, among other things, acts or omissions which involve intentional misconduct, fraud or knowing violation of law, or unlawful payments of dividends. These provisions may discourage stockholders from bringing suit against a director or officer for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by stockholders on our behalf against a director or officer. We are responsible for the indemnification of our officers and directors. Should our officers and / or directors require us to contribute to their defense, we may be required to spend significant amounts of our capital. Our certificate of incorporation, as amended, and bylaws, as amended, also provide for the indemnification of our directors, ~~40officers~~ -- **officers** , employees, and agents, under certain circumstances, against attorney' s fees and other expenses incurred by them in any litigation to which they become a party arising from their association with or activities on behalf of our Company. This indemnification policy could result in substantial expenditures, which we may be unable to recoup. If these expenditures are significant or involve issues which result in significant liability for our key personnel, we may be unable to continue operating as a going concern. We do not expect to pay dividends in the foreseeable future. Any return on investment may be limited to the value of our common stock. We have never paid cash dividends on our common stock and do not anticipate doing so in the foreseeable future. The payment of dividends on our common stock will depend on earnings, financial condition and other business and economic factors affecting us at such time as our Board ~~of Directors~~ may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on an investment will only occur if our stock price appreciates. We may need additional capital, and the sale of additional shares of common stock or other equity securities could result in additional dilution to our stockholders. **We** ~~While we believe that the net proceeds from our initial public offering closed in June 2021 and our private placement offering closed in December 2021 are sufficient to fund our current operating plans, if the estimates and assumptions upon which we have based this believe proves to be wrong we~~ may need to raise additional funds sooner than expected **to fund our current operating plans** . Until such time, if ever, ~~as we can generate substantial revenue,~~ we may finance our cash needs through a combination of

equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements, or other sources. ~~We~~ **Other than our current ATM, which provides for financing of up to $ 1. 5 million in gross proceeds, we** do not currently have any **other** committed external source of funds. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic alliances, or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies or future revenue streams or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate technology development or future commercialization efforts. Our quarterly revenue tends to fluctuate, making it harder to forecast and meet investor expectations. Quarterly revenue has been difficult to predict, has historically fluctuated, and may vary from quarter to quarter due to a variety of factors, many of which are beyond our control. Accordingly, comparing our operating results on a period- to- period basis may not be ~~meaningful~~ **40meaningful** . Factors that may affect our quarterly revenue and operating results may include: any material changes in demand for our products and services; changes in our supply sites' ability to collect and ship specimens or our ability to retain them; changes in the number, availability, and quality of competing products; our ability to maintain a timely delivery of high quality products and services; the timing and amount of sales and marketing expenses incurred by us to attract new customers; changes in the economic or business prospects of our customers or the economy generally; changes in the pricing policies of our competitors; unforeseen defects in our technology; changes in the regulatory environment; and unforeseen costs necessary to improve and maintain our technology. These factors affecting our future earnings are difficult to forecast and could harm our quarterly and / or annual operating results. The change in our earnings or general economic conditions may cause the market price of our common stock to fluctuate. Our stock price may be volatile. The market price of our common stock is likely to be highly volatile and could fluctuate widely in price in response to various risk factors, including the following: Øchanges in our industry; ~~41Øability~~ -- **Øability** to enhance our platform or to add new functionality; Øregulatory changes; Øcompetitive pricing or other pressures; Øfailures of our suppliers to deliver product on time; Øloss of supply partners; Øadditions or departures of key personnel; Øsales of our common stock; Øour ability to execute our business plan; Øoperating results that fall below expectations; Øloss of any strategic relationship including customers, suppliers and channel partners; and / orØeconomic and other external factors. In addition, the securities markets have from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These market fluctuations may also materially and adversely affect the market price of our common stock. General Risk FactorsOur status as an " emerging growth company " under the JOBS Act may make it more difficult to raise capital when we need to do it or make our common stock less attractive to investors. Because of the exemptions from various reporting requirements provided to us as an " emerging growth company, " and because we will have an extended transition period for complying with new or revised financial accounting standards, we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our financial accounting is not as transparent as other companies in ~~our~~ **41our** industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected. We have limited insurance which may not cover claims by third parties against us or our officers and directors. We have limited directors' and officers' liability insurance and commercial liability insurance policies. Claims by third parties against us may exceed policy amounts and we may not have amounts to cover these claims. Also, due to high self- insured retention costs and deductibles, we may incur significant costs from any claim made against us before insurance policies provide coverage. Any significant claims would have a material adverse effect on our business, financial condition, and results of operations. In addition, our limited directors' and officers' liability insurance may affect our ability to attract and retain directors and officers. The requirements of being a U. S. public company may strain our resources and divert management' s attention. As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes- Oxley Act, the Dodd- Frank Wall Street Reform and Consumer Protection Act of 2010 (the " Dodd- Frank Act ") and Nasdaq rules. The requirements of these rules and regulations result in significant legal and financial compliance costs, including costs associated with the employment of personnel, making some activities more difficult, time- consuming or costly, and may also place undue strain on our personnel, systems and resources and divert management' s attention.. **The Exchange Act requires, among other things, that we file annual, quarterly, and current reports with respect to our business and financial condition. The Sarbanes- Oxley Act requires, among other things, that we maintain disclosure controls and procedures and internal control over financial reporting. Ensuring that we have adequate internal financial and accounting controls and procedures in place, as well as maintaining these controls and procedures, is a costly and time- consuming effort that needs to be re- evaluated frequently. Additionally, various rules and regulations applicable to public companies make it more difficult and more expensive for us to maintain directors' and officers' liability insurance, and we may be required to accept reduced coverage or higher deductibles or incur substantially higher costs to maintain coverage. Evaluation of internal control and remediation of potential problems will be costly and time consuming and could expose weaknesses in financial reporting. Section 404 of the Sarbanes- Oxley Act (" Section 404 ") requires that we evaluate our internal control over financial reporting to enable management to report on the effectiveness of those controls annually. In connection with the Section 404 requirements, we could, as part of that documentation, identify material weaknesses, significant deficiencies, or other areas for further attention or improvement. Implementing any appropriate changes to our internal**

controls may require specific compliance training for our directors, officers, and employees, require the hiring of additional finance, accounting and other personnel, entail substantial costs to modify our existing accounting systems, and take a significant period of time to complete. Such changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and could materially impair our ability to operate our business. Moreover, adequate internal controls are necessary for us to produce reliable financial reports and are important to help prevent fraud. As a result, our failure to satisfy the requirements of Section 404 on a timely basis could result in the loss of investor confidence in the reliability of our financial statements, which in turn could cause the market value of our common stock to decline. Public company compliance may make it more difficult to attract and retain officers and directors. The Sarbanes- Oxley Act and new rules subsequently implemented by the SEC have required changes in corporate governance practices of public companies. As a public company, we are expected to follow Sarbanes- Oxley Act regulations and other public company rules, and these rules and regulations will increase our compliance costs and make certain activities more time consuming and costly. As a result, these rules and regulations may make it more difficult and expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult and costly for us to attract and retain qualified persons to serve on our Board or as executive officers.