Risk Factors Comparison 2023-11-03 to 2022-10-14 Form: 10-K

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Our failure to establish and maintain effective internal controls over financial reporting and information technology access could result in material misstatements in our consolidated financial statements, our failure to meet our reporting obligations and cause investors to lose confidence in our reported financial information, which in turn could cause the trading price of our common stock to decline. Under Section 404 of the Sarbanes- Oxley Act of 2002 and rules promulgated by the SEC, companies are required to conduct a comprehensive evaluation of their internal control over financial reporting. As part of this process, we are required to document and test our internal control over financial reporting; management is required to assess and issue a report concerning our internal control over financial reporting; and our independent registered public accounting firm may be required to attest to the effectiveness of our internal control over financial reporting. Our internal control over financial reporting may not prevent or detect misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Because of the inherent limitations in a cost- effective control system, misstatements due to error or fraud may occur and not be prevented or detected timely. Even effective internal controls over financial reporting can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. The existence of a material weakness could result in errors in our financial statements that could result in a restatement of financial statements, which could cause us to fail to meet our reporting obligations, lead to a loss of investor confidence and have a negative impact on the trading price of our common stock. In connection with our April 30, 2023 unaudited consolidated financial statements, Enzo' s management identified a deficiency, which it considers to be a " material weakness, " which could reasonably result in a material misstatement in the Company' s financial statements. The Company has implemented remediation measures. However, the material weakness cannot be considered remediated until the applicable controls have operated for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. Enzo has concluded that there are material weaknesses in its internal control over financial reporting, which, if not remediated, could materially adversely affect its ability to timely and accurately report its results of operations and financial condition. The accuracy of Enzo' s financial reporting depends on the effectiveness of its internal controls over financial reporting. Internal controls over financial reporting can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements and may not prevent or detect misstatements. Failure to maintain effective internal controls over financial reporting, or lapses in disclosure controls and procedures, could undermine the ability to provide accurate disclosure (including with respect to financial information) on a timely basis, which could cause investors to lose confidence in Enzo' s disclosures (including with respect to financial information), require significant resources to remediate the lapse or deficiency, and expose it to legal or regulatory proceedings. In connection with our April 30, 2023 unaudited consolidated financial statements, Enzo' s management identified a deficiency, which it considers to be a " material weakness, " which could reasonably result in a material misstatement in the Company' s financial statements. The Company has implemented remediation measures. However, the material weakness cannot be considered remediated until the applicable controls have operated for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. Business Risks Our operating results may vary from period to period. Our operating results may vary significantly from quarter to quarter and from year to year, depending on a variety of factors including: ● customer demand for our products due to changes in purchasing requirements and research needs; ● the introduction of new products by us or our competitors; ● the timing of our research and development, sales and marketing expenses; ● general worldwide economic conditions affecting funding of research; ● expenses associated with defending our intellectual property portfolio ● foreign currency exchange rate fluctuations; ● changes in tax laws, the results of tax audits or the measurement of tax uncertainties; and ● the success of identifying, acquiring and integrating businesses that complement our product offerings, add new technology or add presence in a market; Consequently, results for any interim or full year period may not necessarily be indicative of results in subsequent periods. A significant proportion of our Products revenues are from academic centers, funded by government grants in our major markets globally. Governments around the world have been reviewing long term public funding of life science research in response to the problems arising from global financial pressures. As a result, the available funds for discretionary purchases from market to market have been capped or reduced based on available National budgets. Reduced grants for researchers could impact our business, in the amount, price and type of products bought and used by customers. A significant proportion of our Products revenues are from customers in pharmaceutical and biotech companies. Globally, pharmaceutical companies are challenging internal budgets, and the return of investment from their R & D spend. This could impact our business, in the amount, price and type of products bought and used by customers. Our future success will depend in part upon our ability to enhance existing products, develop and introduce new products and realize commercial acceptance of those products, in a rapidly changing technological environment. The market for our products is characterized by rapidly changing technology, evolving industry standards and new product introductions, which may make our existing products obsolete. Our future success will depend in part upon our ability to enhance existing products, develop and introduce new products, and realize commercial acceptance

of those products. The development of new or enhanced products is a complex and uncertain process requiring the accurate anticipation of technological and market trends as well as precise technological execution. In addition, the successful development of new products will depend on the development of new technologies. We will be required to undertake time- consuming and costly development activities and to seek regulatory approval for these new products. We may experience difficulties that could delay or prevent the successful development, introduction and marketing of these new products. Regulatory clearance or approval of any new products may not be granted by the FDA, state- wide agency or foreign regulatory authorities on a timely basis, or at all, and the new products may not be successfully commercialized. Our inability to carry out certain of our marketing and sales plans may make it difficult for us to grow or maintain our business. The Products segment continues a marketing program designed to more directly service its end users, while simultaneously promoting the Enzo Life Science brand, with reference to our acquired brands. We will continue to reach out to our customers using our direct field sales force, in- house business team, the on- going enhancement of our interactive websites, continued attendance at top industry trade meetings, and publications to customers and in leading scientific journals. In addition to our direct sales, we operate worldwide through wholly- owned subsidiaries (in USA, Switzerland, Belgium, Germany, and the UK), a branch office in France and a network of third- party distributors in most other significant markets. If we are unable to successfully continue these programs, we may be unable to grow and our business could suffer. We face significant competition, which could cause us to decrease the prices for our products or render our products uneconomical or obsolete, any of which could reduce our revenues and limit our growth. Our competitors in the biotechnology industry in the United States and abroad are numerous and include major pharmaceutical, energy, food and chemical companies, as well as specialized genetic engineering firms. Many of our large competitors have substantially greater resources than us and have the capability of developing products which compete directly with our products. Many of these companies are performing research in the same areas as we are. The markets for our products are also subject to competitive risks because markets are highly price competitive. Our competitors have competed in the past by lowering prices on certain products. These competitive conditions could, among other things: ● require us to reduce our prices to retain market share; ● require us to increase our marketing efforts which could reduce our profit margins; ● increase our cost of labor to attract qualified personnel; ● render our biotechnology products uneconomical or obsolete or; ● reduce our revenue Ethical, legal and social concerns surrounding the use of genetic information could reduce demand for our products. Genetic testing has raised ethical issues regarding privacy and the appropriate uses of the resulting information. For these reasons, governmental authorities may call for limits on or regulation of the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, such concerns may lead individuals to refuse to use genetics tests even if permissible. Any of these scenarios could reduce the potential markets for our molecular diagnostic products, which could have a material adverse effect on our business, financial condition and results of operations. We depend on distributors and contract manufacturers and suppliers for materials that could impair our ability to manufacture or distribute our products. We manufacture and distribute our own brand products and the products of third party manufacturers and suppliers. Distributors also sell our branded products. To the extent we are unable to maintain or replace a distributor in a reasonable time period, or on commercially reasonable terms, if at all, our operations could be disrupted. Outside distributors, suppliers and contract manufacturers provide key finished goods, components and raw materials used in the sale and manufacture of our products. Although we believe that alternative sources for components and raw materials are available, any supply interruption in a limited or sole source component or raw material would harm our ability to manufacture our products until a new source of supply is identified and qualified. In addition, an uncorrected defect or supplier' s variation in a component or raw material, either unknown to us or incompatible with our manufacturing process, could harm our ability to manufacture products. We might not be able to find a sufficient alternative supplier in a reasonable time period, or on commercially reasonable terms, if at all. If we fail to obtain a supplier for the components of our products, our operations could be disrupted. We use hazardous materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be costly and time- consuming. Our manufacturing ~~, clinical laboratory~~ and research and development processes involve the storage, use and disposal of hazardous substances, including hazardous chemicals, biological hazardous materials and radioactive compounds. We are subject to governmental regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety and environmental management practices and procedures for handling and disposing of these hazardous materials are in accordance with good industry practice and comply with applicable laws, permits, licenses and regulations, the risk of accidental environmental or human contamination or injury from the release or exposure of hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result, including environmental clean- up or decontamination costs, and any such liability could exceed the limits of, or fall outside the coverage of, our insurance. We may not be able to maintain insurance on acceptable terms, or at all. We could be required to incur significant costs to comply with current or future environmental and public and workplace safety and health laws and regulations. We are required to expend significant resources for research and development for our diagnostic products in development and these products may not be developed successfully. Failure to successfully develop these products may prevent us from earning a return on our research and development expenditures. The diagnostic products we are developing are at various stages of development and clinical evaluations and may require further technical development and investment to determine whether commercial application is practicable. There can be no assurance that our efforts will result in products with valuable commercial applications. Our cash requirements may vary materially from current estimates because of results of our research and development programs, competitive and technological advances and other factors. In any event, we will require substantial funds to conduct development activities, apply for regulatory approvals and commercialize products, if any, that are developed. We do not have any commitments or arrangements to obtain any additional

financing and there is no assurance that required financing will be available to us on acceptable terms, if at all. Even if we spend substantial amounts on research and development, our potential diagnostic products may not be developed successfully. If our diagnostic product candidates on which we have expended significant amounts for research and development are not commercialized, we will not earn a return on our research and development expenditures, which may harm our business. We rely on network and information systems..... reputation and materially affect our business. Risks relating to our Intellectual Property and Regulatory Approval Protecting our proprietary rights is difficult and costly. If we fail to adequately protect or enforce our proprietary rights, we could lose potential revenue from licensing and royalties. Our potential revenue and success depends in large part on our ability to obtain, maintain and enforce our patents. Our ability to commercialize any product successfully will largely depend on our ability to obtain and maintain patents of sufficient scope to prevent third parties from developing similar or competitive products. In the absence of patent protection, competitors may impact our business by developing and marketing substantially equivalent products and technology. Patent disputes are frequent and can preclude the commercialization of products. We have in the past been, are currently, and may in the future be, involved in material patent litigation, such as the matters discussed under " Part I- Item 3. Legal Proceedings " in this report. Patent protection litigation is time- consuming and we have incurred and anticipate continuing to incur significant legal costs. In addition, an adverse decision could force us to either obtain third- party licenses at a material cost or cease using the technology or product in dispute. We have filed applications for United States and foreign patents covering certain aspects of our technology, but there is no assurance that pending patents will issue or as to the degree of protection which any ~~issued~~ **owned** patent might afford. Lawsuits, including patent infringements, in the biotechnology industry are not uncommon. If we become involved in any significant litigation, we would suffer as a result of the diversion of our management' s attention, the expense of litigation and any judgments against us. In addition to intellectual property litigation for infringement, other substantial, complex or extended litigation could result in large expenditures by us and distraction of our management. Patent litigation is time- consuming and costly in its own right and could subject us to significant liabilities to third parties. In addition, an adverse decision could force us to either obtain third- party licenses at a material cost or cease using the technology or product in dispute. In addition, lawsuits by employees, stockholders, collaborators or distributors could be very costly and substantially disrupt our business. Disputes from time to time with companies or individuals are not uncommon in the biotechnology industry, and we cannot assure you that we will always be able to resolve them out of court. We also utilize certain unpatented proprietary technology and no assurance can be given that others will not independently develop substantially equivalent proprietary technology, that such proprietary technology will not be disclosed or that we can meaningfully protect our rights to such proprietary technology. Our business is subject to governmental laws and regulations. Changes in the way the FDA regulates the reagents, and other consumables we use when developing, validating, and performing our tests could result in delay or additional expense in bringing our tests to market or performing such tests for our customers. We may be unable to obtain or maintain regulatory approvals for our diagnostic products, which could reduce our revenue or prevent us from earning a return on our research and development expenditures. Our research, preclinical development, product manufacturing and marketing are subject to regulation by the FDA and similar health authorities in foreign countries. The FDA has regulatory responsibility over, among other areas, instruments, software, test kits, reagents and other devices used by clinical laboratories to perform diagnostic testing in the U. S. The tests we develop internally are offered as lab developed tests or LDTs. The FDA has claimed regulatory authority over all LDTs, but has stated that it exercised enforcement discretion with regard to most LDTs performed by high complexity CLIA- certified laboratories. As the FDA moves to regulate more clinical laboratory testing, its approach to regulation is impacting industry practices and participants, new competitors may enter the industry, and competition may come in new forms. In late 2018, legislation was introduced in Congress that would enable the FDA to regulate LDTs, in vitro diagnostics, software and other items used in the diagnosis of disease. If this legislation were to become law, the FDA could regulate diagnostic tests and components and platforms used as part of these tests. If such legislation were to become law, it could have a significant impact on the clinical laboratory testing industry, including regulating LDTs in new ways and creating avenues of opportunity and competition regarding clinical laboratory testing. New competitors may enter the industry, and competition may come in new forms. Pursuant to the 21st Century Cures Act, the FDA issued guidance regarding its position on the regulation of clinical decision software, which may be used in, or in connection with, LDTs. The guidance attempts to clarify whether FDA approval of certain software is required. In January 2019 **,** the FDA issued draft guidance on a pre- certification pilot program to help software developers have a speedier and less restrictive path to clearance or approval of their software. We cannot be sure that we can obtain necessary regulatory approvals on a timely basis, if at all, for any of the products we are developing or manufacturing or that we can maintain necessary regulatory approvals for our existing products, and all of the following could have a material adverse effect on our business: ● significant delays in obtaining or failing to obtain required approvals; ● loss of, or changes to, previously obtained approvals; ● failure to comply with existing or future regulatory requirements and; ● changes to manufacturing processes, manufacturing process standards or **GMP** ~~Good Manufacturing Practices~~ following approval or changing interpretations of these factors. Adverse perception and increased regulatory scrutiny of gene medicine and genetic research might limit our ability to conduct our business. Ethical, social and legal concerns about gene medicine, genetic testing and genetic research could result in additional regulations restricting or prohibiting the technologies we or our collaborators may use. Recently, gene medicine studies have come under increasing scrutiny, which has delayed on- going and could delay future clinical trials and regulatory approvals. Federal and state agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. More restrictive regulations or claims that our products are unsafe or pose a hazard could prevent us from commercializing any products. Financial Risks **We** ~~With the exception of fiscal years 2021 and 2019, we~~ have experienced significant losses in our **continuing** ~~previous five fiscal years and quarter to quarter over such periods and our losses have resulted in the use of cash in~~ operations **in** ~~. If such losses and cash uses continue, the value of your investment could decline significantly. Although for fiscal years 2021 and 2019, when we reported net income of $ 7. 9 million~~

~~and $ 2. 5 million, respectively, we incurred net losses of $ 18. 3 million, $ 28. 5 million, and $ 10. 3 million for the~~ fiscal years ended July 31, **2023 and** 2022 **and our losses have resulted in the use of cash in operations. If such losses and cash uses continue , the value of your investment could decline significantly. We incurred net losses before income taxes from continuing operations of $ 25. 0 million and $ 20. 3 million, for the fiscal years ended July 31,** ~~2020~~ **2023** ~~,~~ and ~~2018~~ **2022** , respectively. If our revenues do not increase, or if our operating expenses exceed expectations or cannot be reduced, we may continue to suffer substantial losses and use cash in operations which could have an adverse effect on our business and adversely affect your investment in our Company. We have an accumulated deficit of $ ~~288, 261~~ **268. 4 million** as of July 31, ~~2022~~ **2023** and net cash used in operating activities was $ ~~16, 590~~ **37. 0 million** for the fiscal year ~~2022~~ **2023** . We may continue to generate net losses ~~for the foreseeable future~~ . We believe ~~the combination of~~ our cash and cash equivalents at July 31, ~~2022~~ **2023** ~~,~~ ~~expected cash flows from operations, and re~~ **are ~~-~~** ~~activation of the Controlled Equity Offering program, if necessary, as disclosed in Note 12 of the financial statements will be~~ sufficient for our operations and non- discretionary capital needs for at least twelve months from the filing of this report. ~~There can be no assurances as to the market price or demand if and when we utilize the Controlled Equity Offering. Additionally, failure~~ **Failure** to generate additional **product** revenues **at higher margins** , obtain additional capital or manage discretionary spending could have an adverse effect on our financial position, results of operations and liquidity. ~~Due to our historical operating losses we anticipate needing additional capital to fund growth, which may not be available on acceptable terms or at all, and could result in our business plan being limited and our business being harmed. Our ability to increase revenue and improve profitability and liquidity will depend in part on our ability to grow our products business with higher margin products and increase our market share and continue to grow the Laboratory Services business with new tests with higher reimbursements and increase our service volume which may require significant additional capital that may not be available to us. We may need additional financing due to future developments, changes in our business plan or failure of our current business plan to succeed, which could result from increased marketing, distribution or research and development costs. Our actual funding requirements could vary materially from our current estimates. If additional financing is needed, we may not be able to raise sufficient funds on favorable terms or at all. If we issue common stock or securities convertible into common stock in the future, such issuance will result in the then- existing stockholders sustaining dilution to their relative proportion of our outstanding equity. If we fail to obtain any necessary financing on a timely basis, then our ability to execute our current business plan may be limited, and our business, liquidity and financial condition could be harmed. Our outstanding debt may impair our financial and operating flexibility and a failure to satisfy the covenants under agreements governing our outstanding debt could limit the availability of borrowings or result in an event of default under such agreements. The Company had $ 22. 6 million in cash, cash equivalents and restricted cash on its balance sheet as of July 31, 2022. Also as of that date, we had approximately $ 3. 5 million of short term debt, primarily the current portion of operating lease liabilities and $ 16. 8 million in long term debt, of which $ 12. 8 million is non- current operating lease liabilities. The other component of long term debt is primarily a ten- year mortgage obligation of approximately $ 3. 8 million with Citibank, N. A., which bears a fixed interest rate of 5. 09 % per annum and contains various restrictive covenants. These restrictions could limit our ability to use operating cash flow in other areas of our business because we must use a portion of these funds to make principal and interest payments on our debt. Our ability to comply with the restrictive financial ratio and liquidity covenants in the mortgage debt agreement will depend upon our future performance and various other factors, including but not limited to the impact on our business, consolidated results of operations, financial condition and cash flows associated with the COVID- 19 pandemic, any prolonged recessionary economic environment that may develop and competitive and regulatory factors, many of which are beyond our control. We may not be able to maintain compliance with all of the covenants. In that event, we may not be able to find and access any other borrowing availability and we may need to seek waivers to the covenants or amendments to the mortgage agreement or would need to refinance the mortgage. There can be no assurance that we can obtain additional waivers of our mortgage agreement covenants, or be able to refinance it, and, even if we were able to obtain a waiver or additional amendment in the future, such relief may only last for a limited period. Any noncompliance by us with the covenants under our mortgage agreement could result in an event of default under the agreement, which may allow the lender to accelerate payment of the mortgage. In the event our creditor accelerates the repayment of our mortgage, we cannot assure that we would have sufficient assets to make such repayment. We may incur impairment charges on our goodwill which would reduce our earnings. We are subject to Statement of Financial Accounting Standards ASC 350, " Intangibles- Goodwill and Other (" ASC 350 ") which requires that goodwill and other intangible assets that have an indefinite life be tested at least annually for impairment. Goodwill and other intangible assets with indefinite lives must also be tested for impairment between the annual tests if a triggering event occurs that would likely reduce the fair value of the asset below its carrying amount. Intangible assets with finite lives are assessed for impairment when, and if, an indicator of potential impairment is identified. As of July 31, 2022, goodwill represented approximately 8 % of our total assets. If we determine that there has been impairment, our financial results for the relevant period would be reduced by the amount of the impairment, net of tax effects, if any. As of July 31, 2022 the Company has no other intangible assets. Risks relating to our Clinical Laboratory Services segment The clinical testing business is highly competitive, and if we fail to provide an appropriately priced level of service or otherwise fail to compete effectively it could have a material adverse effect on our revenues and profitability. The clinical testing business is a fragmented and highly competitive industry. We primarily compete with three types of clinical testing providers: other commercial clinical laboratories, hospital- affiliated laboratories and physician- office laboratories. We also compete with other providers, including anatomic pathology practices and large physician group practices. Hospitals generally maintain on- site laboratories to perform testing on their patients (inpatient or outpatient). In addition, many hospitals compete with commercial clinical laboratories for outreach (non- hospital patients) testing. Hospitals may seek to leverage their relationships with community clinicians and encourage the clinicians to send their outreach testing to the hospital' s laboratory. As a result of this affiliation between hospitals and community clinicians, we compete against hospital- affiliated laboratories primarily based on quality and scope of service as~~

well as pricing. In addition, hospitals that own physician practices may require the practices to refer testing to the hospital' s laboratory. In recent years, there has been a trend of hospitals acquiring physician practices, increasing the percentage of physician practices owned by hospitals. Increased hospital ownership of physician practices may enhance clinician ties to hospital- affiliated laboratories and may strengthen their competitive position. The diagnostic information services industry also is faced with changing technology and new product introductions. Competitors may compete using advanced technology, including technology that enables more convenient or cost- effective testing. Competitors also may compete on the basis of new service offerings. Competitors also may offer testing to be performed outside of a commercial clinical laboratory, such as (1) point- of- care testing that can be performed by physicians in their offices; (2) advanced testing that can be performed by hospitals in their own laboratories; and (3) home testing that can be carried out without requiring the services of outside providers. Our clinical laboratory services business is subject to extensive government regulation and our loss of any required certifications or licenses could require us to cease operating this part of our business, which would reduce our revenue and injure our reputation. The clinical laboratory industry is subject to significant governmental regulation at the Federal, state and local levels. Under the Clinical Laboratory Improvement Act of 1967 and the Clinical Laboratory Improvement Amendments of 1988 (collectively, as amended, " CLIA ") virtually all clinical laboratories, including ours, must be certified by the Federal government. Many clinical laboratories also must meet other governmental standards, undergo proficiency testing and are subject to inspection. Certifications or licenses are also required by various state and local laws. The failure of our clinical laboratory to obtain or maintain such certifications or licenses under these laws could interrupt our ability to operate our clinical laboratory business and injure our reputation. Reimbursements from third- party payers including managed care organizations and Medicare, upon which our clinical laboratory business is dependent, are subject to varying rates and coverage and legislative reform that are beyond our control. Any reforms that decrease coverage and rates could reduce our earnings and harm our business. Our clinical laboratory services business is primarily dependent upon reimbursement from third- party payers, such as Medicaid, Medicare (which principally serves patients 65 and older) and commercial insurers. We are subject to variances in reimbursement rates among different third- party payers, as well as constant renegotiation of those reimbursement rates. Government and non- government payers have in the past sought, and continue to seek, to reduce and limit utilization and reimbursement of healthcare services, including the areas of clinical and genetic testing. We also are subject to audit by Medicare and the commercial insurers, which can result in the return of payments made to us under these programs. These variances in reimbursement rates and audit results could reduce our margins and thus our earnings. The health care industry continues to undergo significant change as third- party payers' increase their efforts to control the cost, utilization and delivery of health care services. In an effort to address the problem of increasing health care costs, legislation has been proposed or enacted at both the Federal and state levels to regulate health care delivery in general and clinical laboratories in particular. Some of the proposals include managed competition, global budgeting and price controls. Changes that decrease reimbursement rates or coverage, or increase administrative burdens on billing third- party payers could reduce our revenues and increase our expenses. Since each payer makes its own decision as to whether to establish a policy or enter into a contract to cover our tests, as well as the amount it will reimburse for a test, seeking these approvals is a time- consuming and costly process. In addition, the determination by a payer to cover and the amount it will reimburse for our tests will likely be made on an indication by indication basis. To date, we have obtained policy- level reimbursement approval or contractual reimbursement for some indications for our test from a small number of commercial third- party payers, and have not obtained coverage from Medicare or any state Medicaid program. Further, we believe that establishing adequate reimbursement from Medicare is an important factor in gaining adoption from healthcare providers. Our claims for reimbursement from commercial payers may be denied upon submission, and we must appeal the claims. The appeals process is time consuming and expensive, and may not result in payment. In cases where there is not a contracted rate for reimbursement, there is typically a greater co- insurance or co-payment requirement from the patient which may result in further delay or decreased likelihood of collection. We expect to continue to focus substantial resources on increasing adoption of, and coverage and reimbursement for, our current tests and any future tests we may develop. We believe it may take several years to achieve coverage and adequate contracted reimbursement with a majority of third- party payers. However, we cannot predict whether, under what circumstances, or at what payment levels payers will reimburse for our tests. If we fail to establish and maintain broad adoption of, and coverage and reimbursement for, our tests, our ability to generate revenue could be harmed and our future prospects and our business could suffer. Government payers, such as Medicare and Medicaid, have taken steps to reduce the utilization and reimbursement of healthcare services, including clinical testing services. U. S. healthcare reform legislation may result in significant change and our business could be adversely impacted if we fail to adapt. We face efforts by government payers to reduce utilization of and reimbursement for diagnostic information services. We expect efforts to reduce reimbursements, to impose more stringent cost controls and to reduce utilization of clinical test services will continue. Pursuant to The Protecting Access to Medicare Act of 2014 (PAMA), which was implemented in 2018, the Centers for Medicare and Medicaid Services (CMS) promulgated revised reimbursement rate schedules for the years 2018 through 2020 for clinical laboratory testing services provided under Medicare. Reimbursement rates for clinical laboratory testing were reduced in 2018 and 2019 and were reduced again by approximately 10 % in 2020. PAMA calls for further revision of the Medicare Clinical Laboratory Fee Schedule (CLFS) for years after 2021, based on future surveys of private payer market rates; reimbursement rate reduction from 2021- 23 is capped by PAMA at 15 % annually. Beginning in May 2020, there was a suspension of sequestration, which resulted in a small benefit to us in the form of higher reimbursement rates for diagnostic testing services performed on behalf of Medicare beneficiaries than had been expected. During December 2021, the suspension of Medicare sequestration was further extended through March 31, 2022 and it was reduced to 1 % from April 1, 2022 to June 30, 2022, with the full annual 2 % reduction in rates resuming thereafter. Private health plans and other third parties have taken steps to reduce the utilization and reimbursement of health services, including clinical testing services. We face efforts by non- governmental third- party payers, including health plans, to reduce

utilization of and reimbursement for clinical testing services. Examples include increased use of prior authorization requirements and increased denial of coverage for services. Since the passage of ACA, there is increased market activity regarding alternative payment models, including bundled payment models. We expect continuing efforts by third- party payers, including in their rules, practices and policies, to reduce reimbursements, to impose more stringent cost controls and to reduce utilization of clinical testing services. The healthcare industry has experienced a trend of consolidation among health insurance plans, resulting in fewer but larger insurance plans with significant bargaining power to negotiate fee arrangements with healthcare providers, including clinical testing providers. These health plans, and independent physician associations, may demand that clinical testing providers accept discounted fee structures or assume all or a portion of the financial risk associated with providing testing services to their members through capitated payment arrangements. Some health plans also are reviewing test coding, evaluating coverage decisions and requiring preauthorization of certain testing. There are also an increasing number of patients enrolling in consumer driven products and high deductible plans that involve greater patient cost- sharing. The increased consolidation among health plans also has increased pricing transparency and bargaining power and the potential adverse impact of ceasing to be a contracted provider with any such insurer. Changes in provider mix, including continued growth in capitated managed- cost health care and changes in certain third party provider agreements could have a material adverse impact on the Company' s net revenues and profitability. Certain third party provider companies have adopted national and regional programs which include multiple managed- care reimbursement models. If the Company is unable to participate in these programs or if the Company would lose a material contract, it could have a material adverse impact on the Company' s net revenues and profitability. The number of individuals covered under managed care contracts or other similar arrangements has grown over the past several years and may continue to grow in the future. In addition, Medicare and other government healthcare programs may continue to shift to managed care. Entities providing managed care coverage have reduced payments for medical services, including clinical laboratory services, in numerous ways such as entering into arrangements under which payments to a service provider are capitated, limiting testing to specified procedures, denying payment for services performed without prior authorization and refusing to increase fees for specified services. These trends reduce our revenues and limit our ability to pass cost increases to our customers. Also, if these or other managed care organizations do not select us as a participating provider, we may lose some or all of that business, which could have an adverse effect on our business, financial condition and results of operations. Because of competitive pressures, impacts of the economy on patient visits to our customer physician locations and the complexity and expense of the billing process in our clinical laboratory services business, we must obtain new customers while maintaining existing customers to grow our business. Intense competition in the clinical laboratory business, increasing administrative burdens upon the reimbursement process, reduced patient traffic, and reduced coverage and payments by insurers make it necessary for us to increase our volume of laboratory services. To do so, we must obtain new customers while retaining existing customers. Our failure to attract new customers or the loss of existing customers or a reduction in business from those customers could significantly reduce our revenues and impede our ability to grow. Compliance with Medicare administrative policies, including those pertaining to certain automated blood chemistry profiles, may reduce the reimbursements we receive. Containment of health care costs, including reimbursement for clinical laboratory services, has been a focus of on- going governmental activity. Clinical laboratories must bill Medicare directly for the services provided to Medicare beneficiaries and may only collect the amounts permitted under this fee schedule. Reimbursement to clinical laboratories under the Medicare Fee Schedule has been steadily declining since its inception. Because a significant portion of our costs is fixed, these Medicare reimbursement reductions and changes have a direct adverse effect on our operating results and cash flows. The development of new, more cost- effective tests that can be performed by our customers or by patients, and the continued internalization of testing by hospitals or physicians, could negatively impact our testing volume and revenues. The diagnostic industry is faced with changing technology and new product introductions, including technology that enables more convenient or cost- effective testing. Some of our competitors also may offer testing to be performed outside of a commercial clinical laboratory, such as point- of- care testing that can be performed by physicians in their offices; complex testing that can be performed by hospitals in their own laboratories; and home testing that can be carried out without requiring the services of outside providers. Advances in technology also may lead to the need for less frequent testing. Further, diagnostic tests approved or cleared by the FDA for home use are automatically deemed to be " waived " tests under CLIA and may be performed by patients in their homes; test kit manufacturers could seek to increase sales to patients of such test kits. Development of such technology and its use by our customers would reduce the demand for our laboratory- based testing services and negatively impact our revenues. Our business could be harmed from the loss or suspension of a license or imposition of a fine or penalties under, or future changes in, or changing interpretations of, CLIA or state laboratory licensing laws to which we are subject. The clinical laboratory testing industry is subject to extensive federal and state regulation, and many of these statutes and regulations have not been interpreted by the courts. The CLIA amendments are federal regulatory standards that apply to virtually all clinical laboratories (regardless of the location, size or type of laboratory), including those operated by physicians in their offices, by requiring that they be certified by the federal government or by a federally approved accreditation agency. CLIA does not pre- empt state law, which in some cases may be more stringent than federal law and require additional personnel qualifications, quality control, record maintenance and proficiency testing. The sanction for failure to comply with CLIA and state requirements may be suspension, revocation or limitation of a laboratory' s CLIA certificate, which is necessary to conduct business, as well as significant fines and / or criminal penalties. Several states have similar laws and we may be subject to similar penalties. We cannot assure that applicable statutes and regulations will not be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that would adversely affect our business. Potential sanctions for violation of these statutes and regulations include significant fines and the suspension or loss of various licenses, certificates and authorizations, which could have a material adverse effect on our business. In addition, compliance with future legislation could impose additional requirements on us, which may be costly. Our business operations and reputation may be

materially impaired if we do not comply with privacy laws or information security policies. In our business, we collect, generate, process or maintain sensitive information, such as patient data and other personal information. If we do use or not adequately safeguard that information in compliance with applicable requirements under federal, state and international laws, or if it were disclosed to persons or entities that should not have access to it, our business could be materially impaired, our reputation could suffer and we could be subject to fines, penalties and litigation. In the event of a data security breach, we may be subject to notification obligations, litigation and governmental investigation or sanctions, and may suffer reputational damage, which could have an adverse impact on our business. We are subject to laws and regulations regarding protecting the security and privacy of certain healthcare and personal information, including: (a) the federal Health Insurance Portability and Accountability Act (HIPPA) and the regulations thereunder, which establish (i) a complex regulatory framework including requirements for safeguarding protected health information and (ii) comprehensive federal standards regarding the uses and disclosures of protected health information; (b) state laws; and (c) the European Union' s General Data Protection Regulation. FDA regulation of laboratory- developed tests, analyte specific reagents, or genetic testing could lead to increased costs and delays in introducing new genetic tests. The FDA has regulatory responsibility over, among other areas, instruments, test kits, reagents and other devices used by clinical laboratories to perform diagnostic testing in the U. S. A number of tests we develop internally are offered as lab developed tests (LDTs). The FDA has claimed regulatory authority over all LDTs, but has stated that it exercised enforcement discretion with regard to most LDTs performed by high complexity CLIA- certified laboratories. The FDA has published a " Discussion Document " that provides the FDA' s views on legislation to govern LDTs. New legislation could significantly impact the clinical laboratory testing business, including by increasing or modifying the regulation of LDTs, hindering our ability to develop and market new services, causing an increase in the cost of our services, delaying our ability to introduce new tests or hindering our ability to perform testing. We are subject to federal and state healthcare fraud and abuse and other laws and regulations and could face substantial penalties if we are unable to fully comply with such laws. As a provider of clinical laboratory testing services, we are subject to extensive and frequently changing federal, state and local laws and regulations governing various aspects of our business. For example, we are subject to healthcare fraud and abuse regulation and enforcement by both the federal government and the states in which we conduct our business. These healthcare laws and regulations include, for example: ● federal anti- kickback laws, which constrain our marketing practices, educational programs, pricing policies, and relationships with healthcare providers or other entities, including third- party laboratories, by prohibiting, among other things, persons or entities from soliciting, receiving, offering or providing remuneration, directly or indirectly, in return for or to induce either the referral of an individual for, or the purchase, lease order or recommendation of, any good, facility, item or services for which payment may be made, in whole or in part, under a federal healthcare program such as the Medicare and Medicaid programs; ● federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid or other third- party payers that are false or fraudulent, and which may apply to entities like us to the extent that our interactions with customers may affect their billing or coding practices; ● HIPAA, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information, and also established federal crimes for knowingly and willfully executing a scheme to defraud any healthcare benefit program or making false statements in connection with the delivery of or payment for healthcare benefits, items or services, and which imposed certain requirements relating to privacy, security, and transmission of individually identifiable health information; ● the federal physician self- referral law, commonly known as the Stark Law, which prohibits a physician from making a referral to an entity for certain designated health services reimbursed by Medicare or Medicaid if the physician (or a member of the physician' s family) has a financial relationship with the entity, and which also prohibits the submission of any claims for reimbursement for designated health services furnished pursuant to a prohibited referral; ● the federal Physician Payment Sunshine Act, and its implementing regulations, which requires manufacturers of certain drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children' s Health Insurance Program (with certain exceptions) to report annually to the United States Department of Health and Human Services information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members; ● federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and ● state law equivalents of each of the above federal laws, such as anti- kickback and false claims laws, which may apply to items or services reimbursed by any third- party payer, including commercial insurers and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, with differing effects. We are unable to predict what additional federal or state legislation or regulatory initiatives may be enacted in the future regarding our business or the healthcare industry in general, or what effect such legislation or regulations may have on us. Federal or state governments may impose additional restrictions or adopt interpretations of existing laws that could have an adverse effect on us. We incur significant costs in complying with these laws and regulations. Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If our operations, or our sales techniques or product placement strategies, are found to be in violation of, or to encourage or assist the violation by third parties of, any of the laws described above or any other governmental regulations that apply to us, or if we fail to maintain, renew or obtain necessary permits, licenses and approvals related to our in- house laboratory, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from the Medicare and Medicaid programs, disgorgement, contractual damages, reputational harm, diminished profits and future earnings, suspension or revocation of certifications or licenses that are required to operate our business, injunctions and other associated remedies, the curtailment or restructuring of our operations, denial or withdrawal of product clearances, or private " qui tam " actions brought by individual whistleblowers

~~in the name of the government, any of which could have an adverse effect on our business. If we or others determine that any of our existing customer relationships do not comply with applicable laws and regulations, either due to changes in such laws and regulations or evolving interpretations of such laws and regulations, we may be required to renegotiate or terminate such relationships. Any penalties, damages, fines, exclusions, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. The risk of our being found in violation of these laws is increased by the fact that many of these laws are broad and their provisions are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management' s attention from the operation of our business.~~ Other risks relating to our business ~~If we fail to maintain or monitor our information systems our businesses could be adversely affected. We depend on information systems throughout our Company to control our manufacturing, inventory, distribution and website and the clinical laboratory services processes for: processing specimens, managing inventory, processing test results and submitting claims, collecting from insurers and patients, responding to inquiries, contributing to our overall internal control processes, maintaining records of our property, plant and equipment, and recording and paying amounts due vendors and other creditors. If we were to experience a prolonged disruption in our information systems that involve interactions with customers and suppliers, it could result in the loss of sales and customers and / or increased costs, which could adversely affect our business.~~ Cyber security risks and the failure to maintain the confidentiality, integrity, and availability of our computer hardware, software, and Internet applications and related tools and functions could result in damage to the Company' s reputation and / or subject the Company to costs, fines, or lawsuits. The integrity and protection of our own data, and that of its customers and employees, is critical to the Company' s business. The regulatory environment governing information, security and privacy laws is increasingly demanding and continues to evolve. Maintaining compliance with applicable security and privacy regulations may increase the Company' s operating costs and / or adversely impact the Company' s ability to market its products and services to customers. Although the Company' s computer and communications hardware is protected through physical and software safeguards, it is still vulnerable to fire, storm, flood, power loss, earthquakes, telecommunications failures, physical or software break- ins, software viruses, and similar events. These events could lead to the unauthorized access, disclosure and use of non- public information. The techniques used by criminal elements to attack computer systems are sophisticated, change frequently and may originate from less regulated and remote areas of the world. As a result, the Company may not be able to address these techniques proactively or implement adequate preventative measures. If the Company' s computer systems are compromised, it could be subject to fines, damages, litigation, and enforcement actions, customers could curtail or cease using its applications, and the Company could lose trade secrets, the occurrence of which could harm its business. ~~,~~ **We rely on network and information systems and other technology whose failure or misuse could cause** a disruption of services or loss or improper disclosure of personal data,business information,including intellectual property,or other confidential information,resulting in increased costs,loss of revenue or other harm to our business.Network and information systems and other technologies,including those related to the Company' s network management,are important to its business activities.The Company also relies on third party providers for certain technology and " cloud- based " systems and services that support a variety of business operations.Network and information systems- related events affecting the Company' s systems,or those of third parties upon which the Company' s business relies,such as computer compromises,cyber threats and attacks, ~~ransomware attacks,~~ computer viruses,worms or other destructive or disruptive software,process breakdowns,denial of service attacks,malicious social engineering or other malicious activities,or any combination of the foregoing,as well as power outages,equipment failure,natural disasters (including extreme weather),terrorist activities,war,human or technological error or malfeasance that may affect such systems,could result in disruption of the Company' s business and / or loss,corruption or improper disclosure of personal data,business information,including intellectual property,or other confidential information.In addition,any design or manufacturing defects in,or the improper implementation of,hardware or software applications the Company develops or procures from third parties could unexpectedly compromise information security.In recent years,there has been a rise in the number of cyber- attacks ~~and ransomware attacks~~ on companies' network and information systems,and such attacks have become more sophisticated,targeted and difficult to detect and prevent **against** .As a result,the risks associated with such an event continue to increase,particularly as the Company' s digital businesses expand. ~~The~~ **While the** Company ~~' s~~ **has developed and implemented** security measures and internal controls that are designed to protect personal data,business information,including intellectual property,and other confidential information,to prevent data loss,and to prevent or detect security breaches, **such security measures** ~~have not always provided,and~~ cannot provide ~~,~~ absolute security ~~and have at times failed~~ and may not be successful in preventing these events from occurring,particularly given that techniques used to access,disable or degrade service,or sabotage systems change frequently,and any network and information systems- related events ~~have required and~~ could ~~continue to~~ require the Company to expend significant resources to remedy such event.Moreover,the development and maintenance of these measures is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become more sophisticated. ~~The~~ **While the** Company **maintains** ~~' s~~ cyber risk **insurance,this** insurance may not be sufficient to cover all losses from any future breaches of our systems.A significant ~~cyber attack,ransomware attack,~~ failure,compromise,breach or interruption of the Company' s systems,or those of third parties upon which its business relies,could result in a disruption of its operations,customer,audience or advertiser dissatisfaction,damage to its reputation or brands,regulatory investigations and enforcement actions,lawsuits,remediation costs,a loss of customers,advertisers or revenues and other financial losses.If any such failure,interruption or similar event results in the improper disclosure of information maintained in the Company' s information systems and networks or those of its vendors,including financial,personal,credit card,confidential and proprietary information relating to personnel,customers,vendors and the Company' s business,including its intellectual property,the Company could also be subject to liability under relevant contractual obligations and laws and regulations protecting personal data and privacy.In addition,media or other reports of perceived security vulnerabilities to our systems or those of third parties upon which the

Company' s business relies,even if nothing has actually been attempted or occurred,could also adversely impact our brand and reputation and materially **affect our business.** If we fail to attract and retain key personnel, including our senior management, our business could be adversely affected. Most of our products and services are highly technical in nature. In general, only highly qualified and trained scientists and technician personnel have the necessary skills to develop proprietary technological products and market our products ~~,~~ **and** support our research and development programs ~~and provide our clinical laboratory services~~ . In addition, some of our manufacturing, quality control, safety and compliance, information technology and e- commerce related positions are highly technical as well. Further, our sales personnel **are** highly trained and are important to retaining and growing our businesses. Our success depends in large part upon our ability to identify, hire, retain and motivate highly skilled professionals. We face intense competition for these professionals from our competitors, customers, marketing partners and other companies throughout the industries in which we compete. Since our inception we have successfully recruited and hired qualified key employees. Any failure on our part to hire, train, and retain a sufficient number of qualified professionals would seriously damage our business. We depend heavily on the services of our senior management. We believe that our future success depends on the continued services of such management. Our business may be harmed by the loss of a significant number of our senior management in a short period of time. The insurance we purchase to cover our potential business risk may be inadequate. Although we believe that our present insurance coverage is sufficient to cover our current estimated exposures, we cannot assure that we will not incur losses or liabilities in excess of our policy limits. In addition, although we believe that will be able to continue to obtain adequate coverage, we cannot assure that we will be able to do so at acceptable costs **. We are, and may become subject to, legal proceedings, arbitration proceedings, investigations, and other claims or disputes, which are costly to defend and, if determined adversely to us, could require us to pay fines or damages, undertake remedial measures, or prevent us from taking certain actions, any of which could adversely affect our business. We are, and in the future may become, a party to legal proceedings, arbitration proceedings, investigations, and other claims or disputes, which have related and may relate to subjects including our recent ransomware attack and data breach, breach of fiduciary duties relating to our commercial transactions, intellectual property, securities, employee relations, or compliance with applicable laws and regulations (see Part I- Item 3, Legal Proceedings). We face a significant risk due to ongoing litigation that has the potential to result in future financial obligations, adversely impacting the company' s business and profitability. The outcome of the present legal proceedings may lead to financial liabilities, such as settlements or damages, posing a material threat to our financial condition and cash flow. Moreover, adverse litigation outcomes may harm our reputation, affecting customer trust and investor confidence, thereby influencing market share and brand value. While we are actively managing and addressing the litigation, uncertainties persist, emphasizing the importance of transparency in communication with stakeholders and the implementation of effective risk mitigation strategies** . Risks relating to our international operations Foreign currency exchange rate fluctuations may adversely affect our business. Since we operate as a multinational corporation that sells and sources products in many different countries, changes in exchange rates could in the future, adversely affect our cash flows and results of operations. Furthermore, reported sales and purchases made in non- U. S. currencies by our international businesses, when translated into U. S. dollars for financial reporting purposes, fluctuate due to exchange rate movement. Due to the number of currencies involved, the variability of currency exposures and the potential volatility of currency exchange rates, we cannot predict the effect of exchange rate fluctuations on future sales and operating results. We are subject to economic, political and other risks associated with our significant international business, which could adversely affect our financial results. We operate internationally primarily through wholly- owned subsidiaries located in North America and Europe. Revenues outside the United States were approximately ~~12~~ **40** % of total revenues in fiscal **year** ~~2022~~ **2023** . Our sales and earnings could be adversely affected by a variety of factors resulting from our international operations, including ● future fluctuations in foreign currency exchange rates; ● complex regulatory requirements and changes in those requirements; ● trade protection measures and import or export licensing requirements; ● multiple jurisdictions and differing tax laws, as well as changes in those laws; ● restrictions on our ability to repatriate investments and earnings from foreign operations; ● changes in the political or economic conditions in a country or region, including the actual and potential impact Brexit has on our UK operations; ● changes in shipping costs; and ● difficulties in collecting on accounts receivable. If any of these risks materialize, we could face substantial increases in costs, the reduction of profit and the inability to do business. With our commercialization activities outside of the United States, we are subject to the risk of inadvertently conducting activities in a manner that violates the U. S. Foreign Corrupt Practices Act and similar laws. If that occurs, we may be subject to civil or criminal penalties which could have a material adverse effect on our business, financial condition, results of operations and growth prospects. We are subject to the U. S. Foreign Corrupt Practices Act (" FCPA "), which prohibits corporations and individuals from paying, offering to pay, or authorizing the payment of anything of value to any foreign government official, government staff member, political party, or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. We are also subject to the UK Anti- Bribery Act, which prohibits both domestic and international bribery, as well as bribery across both public and private sectors. In the course of establishing and expanding our commercial operations and seeking regulatory approvals outside of the United States, we will need to establish and expand business relationships with various third parties and we will interact more frequently with foreign officials, including regulatory authorities. Expanded programs to maintain compliance with such laws will be costly and may not be effective. Any interactions with any such parties or individuals where compensation is provided that are found to be in violation of such laws could result in substantial fines and penalties and could materially harm our business. Furthermore, any finding of a violation under one country' s laws may increase the likelihood that we will be prosecuted and be found to have violated another country' s laws. If our business practices outside the United States are found to be in violation of the FCPA, UK Anti- Bribery Act or other similar law, we may be subject to significant civil and criminal penalties which could have a material adverse effect on our financial condition and

results of operations. Risks Relating to our Common Stock Our stock price has been volatile, which could result in substantial losses for investors. Our common stock is quoted on the New York Stock Exchange, and there has been historical volatility in the market price of our common stock. The trading price of our common stock has been, and is likely to continue to be, subject to significant fluctuations due to a variety of factors, including: ● fluctuations in our quarterly operating and earnings per share results; ● the gain or loss of significant contracts; ● ~~the carrying value of our goodwill and intangible assets; ●~~ loss of key personnel; ● announcements of technological innovations or new products by us or our competitors; ● delays in the development and introduction of new products; ● legislative or regulatory changes; ● general trends in the industries we operate; ● recommendations and / or changes in estimates by equity and market research analysts; ● biological or medical discoveries; ● disputes and / or developments concerning intellectual property, including patents and litigation matters; ● public concern as to the safety of new technologies; ● sales of common stock of existing holders; ● securities class action or other litigation; ● developments in our relationships with current or future customers and suppliers and; ● general economic conditions, both in the United States and worldwide. In addition, the stock market in general has experienced extreme price and volume fluctuations that have affected the market price of our common stock, as well as the stock of many companies in our industries. Often, price fluctuations are unrelated to operating performance of the specific companies whose stock is affected. In the past, following periods of volatility in the market price of a company' s stock, securities class action litigation has occurred against the issuing company. If we were subject to this type of litigation in the future, we could incur substantial costs and a diversion of our management' s attention and resources, each of which could have a material adverse effect on our revenue and earnings. Any adverse determination in this type of litigation could also subject us to significant liabilities. Because we ~~do~~ **have** not ~~intend to~~ **and may never** pay cash dividends on our common stock, an investor in our common stock ~~will~~ **may only** benefit ~~only~~ if it appreciates in value. We currently intend to retain our retained earnings and future earnings, if any, to finance the expansion of our business and ~~do~~ **may** not ~~expect to~~ pay any cash dividends on our common stock in the foreseeable future. As a result, the success of an investment in our common stock ~~will~~ **may** depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value or even maintain the price at which investors purchased their shares. It may be difficult for a third party to acquire us, which could inhibit stockholders from realizing a premium on their stock price. Our certificate of incorporation, as amended, and by- laws contain provisions that could have the effect of delaying, deferring or preventing a change in control of us that stockholders may consider favorable or beneficial due to a majority stockholder vote requirement. These provisions could discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock. These provisions include advance notice requirements for the submission by stockholders of nominations for election to the board of directors and for proposing matters that can be acted upon by stockholders at a meeting **.** Future sales of shares of our common stock or the issuance of securities senior to our common stock could adversely affect the trading price of our common stock and our ability to raise funds in new equity offerings. We are not restricted from issuing additional common stock, preferred stock or securities convertible into or exchangeable for common stock. Future sales of a substantial number of our shares of common stock or equity- related securities in the public market or privately, or the perception that such sales could occur, could adversely affect prevailing trading prices of our common stock, and could impair our ability to raise capital through future offerings of equity or equity- related securities. No prediction can be made as to the effect, if any, that future sales of shares of common stock or the availability of shares of common stock for future sale will have on the trading price of our common stock. ~~Our failure to establish and maintain effective internal controls over financial reporting and information technology access could result in material misstatements in our consolidated financial statements, our failure to meet our reporting obligations and cause investors to lose confidence in our reported financial information, which in turn could cause the trading price of our common stock to decline. Under Section 404 of the Sarbanes- Oxley Act of 2002 and rules promulgated by the SEC, companies are required to conduct a comprehensive evaluation of their internal control over financial reporting. As part of this process, we are required to document and test our internal control over financial reporting; management is required to assess and issue a report concerning our internal control over financial reporting; and our independent registered public accounting firm may be required to attest to the effectiveness of our internal control over financial reporting. Our internal control over financial reporting may not prevent or detect misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Because of the inherent limitations in a cost- effective control system, misstatements due to error or fraud may occur and not be prevented or detected timely. Even effective internal controls over financial reporting can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. The existence of a material weakness could result in errors in our financial statements that could result in a restatement of financial statements, which could cause us to fail to meet our reporting obligations, lead to a loss of investor confidence and have a negative impact on the trading price of our common stock. Item 1B. Unresolved Staff Comments None Item 2. Properties The following are the principal facilities of the Company: Leased or Square Location Primary use Segments owned footage Farmingdale, NY (Note 1) Clinical laboratory and research Clinical Laboratory Services Leased 43, 000 Farmingdale, NY Manufacturing, research, sales and administrative office Life Sciences Products, Therapeutics Owned 22, 000 Farmingdale, NY (Note 2) Manufacturing and administrative office Clinical Laboratory Services and Life Sciences Products Owned 36, 000 Farmingdale, NY (Note 3) Corporate headquarters and administrative office Clinical Laboratory Services, Life Sciences Products, and Other Leased 12, 000 New York, NY (Note 4) Administrative office Other Leased 11, 300 Lausen, Switzerland (Note 5) Operational headquarters in Europe, including sales and distribution Life Sciences Products Leased 9, 626 Note 1 On October 9, 2015, this lease was amended and extended through March 31, 2027. Note 2 On November 27, 2018 we closed on the $ 6 million purchase of this facility, which was subleased through June 30, 2020. Note 3 This lease commenced June 15, 2021 and expires on June 15, 2024. Note 4 In June 2017, the lease, which includes~~

4, 100 square feet under a sublease rental agreement through December 31, 2019, was extended through June 2028. In July 2022, we sublet 7, 200 square feet of this space for the remaining term of the lease, expiring June 2028. Note 5 In June 2019, the lease was amended and extended through July 2020 and automatically renews for one year on each anniversary. We believe the current facilities are suitable and adequate for the Company' s current operating needs for its clinical laboratory services, life science products, and therapeutics segments and that the production capacity in various locations is sufficient to manage services and product requirements. The Company has brought cases in the United States District Court for the District of Delaware (" the Court "), alleging patent infringement against various companies. In 2017, the Court ruled that the asserted claims of the' 180 and' 405 Patents are invalid for nonenablement in cases involving Abbott, Becton Dickinson, Gen- Probe, Hologic, and Roche. That ruling was affirmed by the United States Court of Appeals for the Federal Circuit (" Federal Circuit ") in June 2019. Enzo subsequently filed a petition for certiorari regarding the invalidity ruling for the' 180 and' 405 Patents in February 2020; the Supreme Court denied Enzo' s petition on March 30, 2020. The Company, along with its subsidiary Enzo Life Sciences, Inc., resolved its claims against Roche regarding the ' 197 Patent before the Court (civil action No. 12 cv- 00106) in July 2022. There is currently one case that was originally brought by the Company that is still pending in the Court. In that case, Enzo alleges patent infringement of the ' 197 patent against Becton Dickinson Defendants. The claims in that case are stayed. In separate inter partes review proceedings before the U. S. Patent and Trademark Office (PTO) involving, among others, Becton Dickinson, certain claims of the' 197 Patent were found unpatentable as anticipated or obvious and cancelled by the Patent Trial and Appeals Board (" Board "). Enzo appealed that decision to the Federal Circuit. On August 16, 2019, the Federal Circuit affirmed the Board' s decision, finding that each of the challenged claims is unpatentable. The Company filed a petition for rehearing and rehearing en banc on October 30, 2019, which the Federal Circuit denied on December 4, 2019. The Company filed a petition for certiorari with the Supreme Court on March 3, 2020, which was denied. In April 2019, the Company entered into an agreement with Hologic and Grifols, resolving litigation resulting from four cases originally brought by the Company in the Court. As a result, Enzo dismissed (1) a stayed patent litigation regarding the' 180 and' 197 Patent against Hologic in the Court; (2) the Consolidated Appeals against Gen- Probe and Hologic resulting from two cases filed in the Court, and (3) the Company' s appeal in the litigation involving the' 581 Patent that involved both Hologic and Grifols. As a result of the agreement with Hologic, Hologic withdrew from Enzo' s Federal Circuit appeal of the Board' s adverse rulings in the inter partes review proceedings regarding the' 197 Patent filed by Hologic and joined by Becton Dickinson mentioned above. On September 2, 2021, the PTO issued a non- final office action in an ex parte reexamination concerning the' 197 Patent. In the office action, the PTO rejected certain claims of the' 197 Patent under 35 U. S. C. § 102 and for nonstatutory double- patenting. Enzo responded to the office action on January 3, 2022. Beckton Dickinson filed another ex parte reexamination, or a request for the United States Patent Office to reexamine an already- granted patent based on other patents and publications, concerning the ' 197 patent on July 26, 2022. On February 5, 2020, Harbert Discovery Fund, LP and Harbert Discovery Co- Investment Fund I, LP (" HDF ") brought an action in the United States District Court for the Southern District of New York against the Company and five of its present or former Directors, Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce A. Hanna, Dov Perlysky and Rebecca Fischer. On March 26, 2020, HDF filed an amended complaint against the same defendants. Count I asserted the Company violated Section 14 (a) of the Securities and Exchange Act of 1934 and Rule 14a- 9 thereunder by disseminating proxy materials that made purportedly false statements. Count II asserted a claim against the individual defendants under Section 20 (a) of the Exchange Act premised on Enzo' s purported violation of Section 14 (a) and Rule 14a- 9. Count III asserted the individual defendants breached their fiduciary duty, based on the same conduct and by seeking to entrench themselves. Finally, Count IV purported to assert a derivative claim for a declaration that any amendment to Article II, Section 2 requires the approval of 80 % of Enzo' s shareholders. On July 16, 2020, the day before the defendants' motion to dismiss was due, HDF asked the Court to dismiss their claims without prejudice. Defendants asked HDF to dismiss the claims with prejudice, but they refused. On July 17, 2020, the Court dismissed the claims without prejudice. On November 27, 2020, the Company brought an action in the United States District Court for the Southern District of New York against Harbert Discovery Fund, LP, Harbert Discovery Co- Investment Fund I, LP, Harbert Fund Advisors, Inc., Harbert Management Corp. and Kenan Lucas (together, " Harbert "). The Company alleges Harbert made false and misleading representations, or omitted to state material facts necessary to make their statements not misleading, in proxy materials they disseminated seeking the election to the Company' s Board of Directors at its 2019 Annual Meeting of two candidates they nominated, in violation of Section 14 (a) of the 1934 Exchange Act and Rule 14a- 9 thereunder. The Company seeks damages and injunctive relief. On October 12, 2021, HDF filed nine counterclaims against the Company and present and former directors Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce A. Hanna, Dov Perlysky, Rebeca Fischer, Dr. Mary Tagliaferri and Dr. Ian B. Walters. HDF claims the Company made false and misleading representations in proxy materials it disseminated in connection with its 2019 Annual Meeting, in violation of Section 14 (a) of the 1934 Exchange Act and Rule 14a- 9 thereunder, and that the Company' s directors at that time are liable under Section 20 (a) of the Exchange Act for the Company' s purported misstatements. HDF also claims that current and former Company directors breached their fiduciary duties by taking four corporate actions: (a) adjourning the 2019 meeting for 25 days; (b) purportedly causing the two Harbert candidates for director, who were elected at the 2019 Meeting, to resign in November 2020; (c) authorizing the November 27, 2020 Lawsuit; and (d) not accepting Dr. Rabbani' s resignation as a director in March 2021. On November 10, 2021, the Company and the other counterclaim defendants moved to dismiss HDF' s counterclaims. On December 9, 2021, the court granted the motion to dismiss HDF' s counterclaims except HDF' s Section 14 (a) claim against the Company concerning its statement that it intended to " delay " the 2019 Annual Meeting, and HDF' s Section 20 (a) and breach of fiduciary duty counterclaims against Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce Hanna, Dov Perlysky and Rebecca Fischer with respect to that statement. The Court allowed HDF to move for leave to replead with respect to its dismissed counterclaims. On June 7, 2022, the Court " so ordered " a stipulation of dismissal with prejudice of the Company' s claims against Harbert Discovery Fund, LP, Harbert Discovery Co- Investment Fund I, LP, Harbert Fund Advisors,

Inc., Harbert Management Corp., and Kenan Lucas, and HDF' s counterclaims against the Company, Dr. Bruce Hanna, Dov Perlysky, Rebecca Fischer, Dr. Ian B. Walters and Dr. Mary Tagliaferri. The only remaining claims are HDF' s counterclaims against Dr. Rabbani and Mr. Weiner. HDF has asked the Court to dismiss those claims without prejudice. Dr. Rabbani and Mr. Weiner have asked the Court to dismiss those counterclaims with prejudice and to allow them to take discovery from HDF, the Company, and possibly others. There can be no assurance that the Company will be successful in any of these litigations. Even if the Company is not successful, management does not believe that there will be a significant adverse monetary impact on the Company. The Company is party to other claims, legal actions, complaints, and contractual disputes that arise in the ordinary course of business. The Company believes that any liability that may ultimately result from the resolution of these matters will not, individually or in the aggregate, have a material adverse effect on its financial position or results of operations. As described in Note 3, third- party payers, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. During the third fiscal quarter of 2019, a significant third- party payer informed us outside of their typical business practice that they believe it overpaid the Company during certain periods of fiscal 2018. The Company disputed these claims and formally sent legal appeal letters to the payer. During the fiscal 2020 period, we recorded $ 0. 8 million in legal and related expenses as a result of reduced reimbursements this payer made to us. In April 2020, we and the payer entered into a settlement agreement and release whereby the parties agreed that the $ 0. 8 million previously withheld by the payer shall fully and completely satisfy the dispute. The Company, along with its subsidiary Enzo Life Sciences, Inc. entered into a Settlement Agreement as of July 26, 2022 (the " Agreement) with Roche Molecular Systems, Inc., et al. with respect to an action between the Company and Roche before the U. S. District Court, Southern District of New York, civil action No. 12 cv- 00106. Roche agreed to pay the Company $ 0. 5 million in settlement pursuant to the Agreement, which is included in Legal Settlements. The Company paid $ 0. 15 million as an attorney contingency payment, which is included in Legal and related expenses. Former executives arbitration The Company terminated the employment of Elazar Rabbani, Ph. D. the Company' s former Chief Executive Officer, effective April 21, 2022. Dr. Rabbani remains a board director of the Company. Dr. Rabbani is a party to an employment agreement with the Company, which entitles him to certain termination benefits, including severance pay, acceleration of vesting of share- based compensation, continuation of benefits and tax gross up certain of these termination benefits. Based on the terms of his employment agreement, the Company estimated and accrued a charge of $ 2, 600 in fiscal 2022 which is included in Selling, general and administrative expenses. The charge was partially offset by the reversal of bonus accruals. In May 2022, the Company paid Dr. Rabbani $ 2, 123 in accordance with terms of the employment contract. In July 2022, the Company paid income and other withholding taxes of $ 1, 024 related to that payment on Dr. Rabbani' s behalf, which is included in " prepaid expense and other current assets " as of July 31, 2022, as the payment is reimbursable from Dr. Rabbani. Dr. Rabbani disputed the Company' s decision to not award him a bonus for fiscal year 2021 and the amount of severance that was owed to him under his employment agreement. On July 8, 2022, the Company filed a demand for arbitration with the American Arbitration Association (the " AAA ") seeking, among other things, a declaration that the Company has fully satisfied its contractual obligations to Dr. Rabbani. On August 4, 2022, Dr. Rabbani filed counterclaims in the arbitration seeking, among other things, a bonus for fiscal year 2021 and additional severance that he asserts is owed to him. The parties have chosen an arbitrator from the AAA' s panel and a hearing is scheduled for June 8- 16, 2023. On February 25, 2022, Barry Weiner, the Company' s co- founder and President, notified the Company that he was terminating his employment as President of the Company for " Good Reason " as defined in his employment agreement. The Company accepted Mr. Weiner' s termination, effective April 19, 2022 but disagrees with Mr. Weiner' s assertion regarding " Good Reason. " On July 20, 2022, Barry Weiner, the Company' s former Chief Financial Officer, filed a demand for arbitration with the AAA asserting, among other things, that his annual bonus for fiscal year 2021 was too low and that his resignation (effective April 19, 2022) was for " Good Reason " under the terms of his employment agreement. He seeks, among other things, payment of a higher 2021 bonus, and severance payments and benefits. An arbitrator has not yet been selected from the AAA' s panel. As of July 31, 2022, the Company has not accrued any charges related to Mr. Weiner' s termination. Item 4. Mine Safety Disclosures Not applicable. Part II Item 5. Market for Registrant' s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities The common stock of the Company is traded on the New York Stock Exchange (Symbol: ENZ). The following table sets forth the closing high and low price of the Company' s common stock for the periods indicated as reported on the New York Stock Exchange. 2022 Fiscal Year (August 1, 2021 to July 31, 2022): High Low 1st Quarter $ 4. 09 $ 3. 04 2nd Quarter $ 3. 60 $ 3. 06 3rd Quarter $ 3. 47 $ 2. 55 4th Quarter $ 2. 62 $ 2. 00 2021 Fiscal Year (August 1, 2020 to July 31, 2021): High Low 1st Quarter $ 2. 61 $ 1. 82 2nd Quarter $ 3. 20 $ 1. 89 3rd Quarter $ 4. 08 $ 2. 75 4th Quarter $ 3. 40 $ 2. 86 As of October 3, 2022, the Company had approximately 785 stockholders of record of its common stock. The Company has not paid a cash dividend on its common stock and intends to continue a policy of retaining earnings to finance and build its operations. Accordingly, the Company does not anticipate the payment of cash dividends to holders of common stock in the foreseeable future. Item 6. [Reserved] Not applicable, reserved. Item 7. Management' s Discussion and Analysis of Financial Condition and Results of Operations See in this Form 10- K for the fiscal year ended July 31, 2022 Part 1. Item 1. Business, for Forward Looking Cautionary Statements. The Company' s Enzo Clinical Laboratory Services and Enzo Life Sciences Products reporting units, as described below, are affected by different US and global economic conditions which are included in Item 1A, Risk Factors. Impact of COVID- 19 pandemic COVID- 19 has severely impacted the economy of the United States and other countries around the world. Federal, state and local governmental policies and initiatives designed to reduce the transmission of COVID- 19 have resulted in, among other things, a significant reduction in physician office visits, the cancellation of elective medical procedures, customers of our products closing or severely curtailing their operations (voluntarily or in response to government orders), and the adoption of work- from- home or shelter- in- place policies. The COVID- 19 impact on the Company' s

operations is consistent with the overall industry and publicly issued statements from competitors, partners, and vendors. Enzo was granted EUAs and EUA extensions for our molecular diagnostic and serological testing for COVID- 19 and related antibody testing options, for our sample collection kit, an innovative virus- inactivating specimen collection media that lessens transmission risks for healthcare providers and clinical laboratory personnel, for our use of pooled samples, and for our rapid extraction method. Other innovations include the development of more relevant positive controls for the tests, and improved sensitivity. During fiscal 2021, we experienced growing demand for COVID- 19 testing and we made significant investments to expand our capacity throughout the period in order to satisfy the demand, which substantially increased our testing volumes. The demand for COVID- 19 testing continued into fiscal 2022 but declined during the latter half of that fiscal period. The extent to which our businesses may continue to be affected by the COVID- 19 pandemic will largely depend on both current and future developments, including its duration, spread and emergence of variants, its treatment with approved and authorized vaccines, mask and vaccine mandates, work and travel advisories and restrictions, and the timing of their easing, all of which are highly uncertain and cannot be reasonably predicted at this time. We expect COVID- 19 volume to decline in the quarters ahead as the percentage of Americans who are vaccinated increases, although the emergence and spread of variants may cause our COVID- 19 testing volume to increase again. Global supply chain issues due to the pandemic continue to hamper both the manufacturing of products within the life science segment as well as testing capabilities in the clinical laboratory. The Coronavirus Aid, Relief, and Economic Security Act (CARES Act) In March 2020, in response to the COVID- 19 pandemic, the CARES Act was signed into law. The CARES Act provides numerous tax provisions and other stimulus measures. The CARES Act also includes a number of benefits that are applicable to us and other healthcare providers including, but not limited to: ● Providing clinical laboratories a one- year reprieve from the Centers for Medicare and Medicaid Services (CMS) private payer prices reporting requirements under the Protecting Access to Medicare Act (" PAMA ") as well as a one- year delay of a reimbursement rate reduction of 15 % for clinical laboratory services provided under Medicare that was scheduled to take place starting January 1, 2021. Further revisions of the Medicare Clinical Laboratory Fee Schedule (CLFS) for calendar years after 2021 will be based on future surveys of private payer market rates. Medicare and Medicaid reimbursement reduction for calendar years 2022- 2024 is capped by PAMA at 15 % annually, which we estimate could then negatively impact our annualized Medicare and Medicaid revenues by approximately $ 1. 7 million based on our fiscal 2022 Medicare revenues. In this regard, the American Clinical Laboratory Association (ACLA) has filed a federal civil action challenging the legal basis for the private payer data collection methodology CMS used to derive the data from which median prices were calculated. ACLA continues to work with Congress on potential legislative reform of PAMA, which if adopted could reduce the negative impact of PAMA as currently implemented by CMS. The long- term effect of these efforts on Medicare CLFS rates is not determinable ● Appropriating $ 100 billion to health care providers for related expenses or lost revenues that are attributable to the COVID- 19 pandemic. In April 2020, we received from Medicare a CARES Act Relief Payment grant of approximately $ 750 from the initial tranche and in July 2020 we received a second grant of approximately $ 750. ● Allocated $ 349 billion to small businesses as Payment Protection Program (PPP) loans through the Small Business Administration (SBA). In April 2020, we received approximately $ 7. 0 million from the initial tranche of this program. In June 2021 the SBA fully forgave our PPP loan. ● Providing an advance on testing services payments which can be either paid back at any time or earned back starting one year from receipt. In April 2020 we applied for and received a Medicare advance payment of $ 2. 5 million, which has been paid back. ● Suspended Medicare sequestration from May 2020 to December 2020. The Consolidated Appropriations Act of 2021 extended the suspension period to March 31, 2021. An Act to Prevent Across- the- Board Direct Spending Cuts, and for Other Purposes, signed into law on April 14, 2021, extended the suspension period to December 31, 2021. We estimate that the suspension of Medicare sequestration resulted in a small benefit to us in the form of higher reimbursement rates for diagnostic testing services performed on behalf of Medicare beneficiaries. We are comprised of three operating companies that have evolved out of our core competence: the use of nucleic acids as informational molecules and the use of compounds for immune modulation. These wholly- owned operating companies and the foreign subsidiaries of Enzo Life Sciences conduct their operations through three reportable segments. Below are brief descriptions of each of the three operating segments (see Note 16 in the Notes to Consolidated Financial Statements). Enzo Clinical Laboratory Services is a regional clinical laboratory serving the greater New York and New Jersey medical communities and expanding into Connecticut. The Company believes having clinical diagnostic services allows us to capitalize first hand on our extensive advanced molecular and cytogenetic capabilities and the broader trends in predictive and personalized diagnostics. We offer a menu of routine and esoteric clinical laboratory tests or procedures used in general patient care by physicians to establish or support a diagnosis, monitor treatment or medication, or search for an otherwise undiagnosed condition. We operate a full- service clinical laboratory in Farmingdale, New York, a network of over 30 patient service centers throughout greater New York and New Jersey, a free- standing " STAT " or rapid response laboratories in New York City and Connecticut, and a full- service phlebotomy center and an in- house logistics department. Payments for clinical laboratory testing services are made by the Medicare program, healthcare insurers and patients. The Clinical Laboratory Services reporting unit is impacted by various risk factors, including among others, reduced reimbursements from third party payers for testing performed and from recent health care legislation. Despite the growth we have experienced in previous years, there can be no assurance future growth can be achieved. The introduction of new molecular and esoteric tests is expected to increase our revenue per test and could offset impacts from the above factors. The Company anticipates improved profitability with increased service volume. Enzo Life Sciences Products manufactures, develops and markets products and tools to life sciences, drug development and clinical research customers world- wide and has amassed a large patent and technology portfolio. Enzo Life Sciences, Inc. is a recognized leader in labeling and detection technologies across research and diagnostic markets. Our strong portfolio of proteins, antibodies, peptides, small molecules, labeling probes, dyes and kits provides life science researchers tools for target identification / validation, high content analysis, gene expression analysis, nucleic acid detection, protein biochemistry and detection, and cellular analysis. We are globally recognized and acknowledged as a leader in

manufacturing, in- licensing, and commercialization of over 20, 000 products. Our strategic focus is directed to innovative high quality research reagents and kits in the primary key research areas of genomics, immunohistochemistry, immunoassays, cellular analysis, and small molecule chemistry. The segment is an established source for a comprehensive panel of products to scientific experts in the fields of cancer, cardiovascular disease, neurological disorders, diabetes and obesity, endocrine disorders, infectious and autoimmune disease, hepatotoxicity and renal injury. Enzo Therapeutics is a biopharmaceutical venture that has developed multiple novel approaches in the areas of gastrointestinal, infectious, ophthalmic and metabolic diseases, many of which are derived from the pioneering work of Enzo Life Sciences. Enzo Therapeutics has focused its efforts on developing treatment regimens for diseases and conditions for which current treatment options are ineffective, costly, and / or cause unwanted side effects. This focus has generated a clinical and preclinical pipeline, as well as more than 109 patents and patent applications. The following table summarizes the sources of revenues for the fiscal years ended July 31, 2022, 2021 and 2020 (in $ 000' s and percentages): Fiscal year ended July 31, 2022 2021 2020 Clinical laboratory services $ 74, 428 70 % $ 86, 984 74 % $ 47, 964 63 % Product revenues 32, 643 30 30, 747 26 26, 561 35 Grant income — — — — — — 1, 496 2 Total $ 107, 071 100 % $ 117, 731 100 % $ 76, 021 100 % Fiscal year ended July 31, 2022 compared to July 31, 2021 (in 000s) Comparative Financial Data for the Fiscal Years Ended July 31, 2022 2021 Favorable (Unfavorable) % Change Revenues $ 107, 071 $ 117, 731 $ (10, 660) (9) Operating costs and expenses: Cost of revenues 65, 104 64, 154 (950) (1) Research and development 3, 767 3, 252 (515) (16) Selling, general and administrative 48, 018 44, 905 (3, 113) (7) Legal and related expenses 5, 689 4, 728 (961) (20) Legal settlement (500) — 500 * * Total operating costs and expenses 122, 078 117, 039 (5, 039) (4) Operating (loss) income (15, 007) 692 (15, 699) * * Other income (expense): Interest 159 8 151 * * Other (1, 191) 6, 905 (8, 096) * * Foreign currency gain (2, 222) 270 (2, 492) * * (Loss) income before income taxes $ (18, 261) $ 7, 875 $ (26, 136) * * * * not meaningfulConsolidated Results: The " 2022 period " and the " 2021 period " refer to the fiscal year ended July 31, 2022 and 2021, respectively. Impacts of Covid- 19 We made substantial investments to expand and maintain the amount of COVID- 19 testing available in the communities we serve. During the fiscal years ended July 31, 2022 and 2021, the Company generated substantial increases in COVID- 19 related products and services. Enzo applied its technical expertise in molecular diagnostics to develop next generation COVID- 19 diagnostic and antibody testing options which were approved under the FDA Emergency Use Authorization (EUA). This testing had a significantly positive impact on revenue, profitability and cash flow throughout fiscal 2021 and most of fiscal 2022. Revenues from COVID- 19 testing represented 44 %, 48 %, and 8 % of Clinical services revenues in the fiscal 2022, 2021 and 2020 periods, respectively. In March 2022, the U. S. Health Resources and Services Administration (" HRSA ") informed providers that, after March 22, 2022, it would stop accepting claims for testing and treatment for uninsured individuals under the HRSA COVID- 19 Uninsured Program and that claims submitted prior to that date would be subject to eligibility and availability of funds. Although we believe that our estimates for contractual allowances and patient price concessions are appropriate, actual results could differ from those estimates. If the HRSA receives additional funding, it might again accept claims under the Uninsured Program. The rate of transmission of COVID- 19 and its variants is on the decline in the US and the economy has reopened. However, federal, state and local governmental policies and initiatives designed to reduce the transmission of COVID- 19 resulted in, among other things, a significant reduction in physician office visits, the cancellation of elective medical procedures, and the continuation of work- from- home policies. The COVID- 19 impact on the Company' s operations is consistent with the overall industry and our competitors, partners, and vendors. While we anticipate that COVID- 19 will continue to impact our business into the future, increases in vaccination rates and booster shots, the development of new therapeutics and greater availability of rapid COVID- 19 tests has resulted in a continued, significant decline in demand for our COVID- 19 testing. As a result, COVID- 19 testing volume, revenues, profitability, and cash flow in fiscal year 2022 did not match 2021 levels. We expect COVID- 19 testing volume will continue to decline in the periods ahead as the percentage of Americans who are vaccinated increases, the severity of its variants declines, and the general use of at home testing. However, the emergence and spread of more serious variants may cause our COVID- 19 testing volume to increase again. Even after the COVID- 19 pandemic has moderated and the business and social distancing restrictions have eased, we may continue to experience similar adverse effects to our businesses, consolidated results of operations, financial position and cash flows resulting from a recessionary economic environment that may persist. Clinical services revenues for the 2022 period were $ 74. 4 million compared to $ 87. 0 million in the 2021 period, a decrease of $ 12. 6 million or 14 %. Revenues from COVID- 19 testing represented 44 % and 48 % of Clinical revenues in the 2022 and 2021 periods, respectively. The period over period decline was due to lower testing volume and lower reimbursement rates. Diagnostic testing volume measured by the total number of accessions for all our testing services decreased approximately 14 % period over period, which resulted in the 2022 period' s revenue decrease. Estimated collection amounts are subject to the complexities and ambiguities of third- party payer billing, reimbursement regulations and claims processing, as well as issues unique to Medicare and Medicaid programs, and require us to consider the potential for adjustments when estimating variable consideration in the recognition of revenue in the period that the related services are rendered. In 2014, Congress passed the U. S. Protecting Access to Medicare Act of 2014 (PAMA), which included substantial changes to the way in which clinical laboratory services are paid under Medicare. Beginning in 2018, Medicare payments for clinical laboratory services are paid based upon the volume- weighted median of private payer rates as reported by certain clinical laboratories across the US, replacing the previous system which was based upon fee schedules derived from historical charges for clinical laboratory tests. We estimate that the effect of PAMA directly negatively impacted reimbursements from Medicare and Medicaid in the 2022 and 2021 periods by $ 1. 1 million and $ 1. 4 million, respectively. Product revenues were $ 32. 6 million in the 2022 period and $ 30. 7 million in the 2021 period, an increase of $ 1. 9 million or 6 %. During the 2022 period, we completed a bulk sale of a GMP reagent to a large industrial customer in the US in the amount of $ 2. 8 million. It is not known at this time if there will be repeat sales to this customer. Excluding this bulk sale, an increase in sales in the US market was not enough to offset larger declines, primarily in the European market and to a lesser extent the Asia Pacific market. During the first quarter of the 2022 period, we completed the

winding down and closure of our manufacturing and distribution center in Ann Arbor, MI and moved the operations to our Farmingdale, NY campus. As a result of the winding down, we experienced some disruption in the manufacture and distribution of our products, and experienced delays in product availability and fulfillment, which particularly impacted our customers in Europe. These disruptions were resolved during latter part of the 2022 period. The cost of Clinical Services was $ 45. 9 million in the 2022 period and $ 48. 2 million in the 2021 period, a decrease of $ 2. 3 million or 5 %. During the 2022 period, we reduced our outside reference testing costs for COVID- 19 by approximately $ 2. 8 million by utilizing our internal manufacturing capabilities, thereby reducing some of our reliance on testing and reagents sourced from third parties, as compared to the 2021 period. Due to lower accessions for testing other than COVID- 19, reagent and other supplies costs declined $ 1. 5 million in the 2022 period. These cost reductions were partially offset by higher personnel costs related to COVID- 19 testing, totaling $ 2. 1 million. The gross profit margin on Clinical Services revenues in the 2022 and 2021 periods was approximately 38 % and 45 % respectively. The lower margin in the 2022 period was due to the decline in the volume of COVID- 19 testing, which has higher margins than non- specialty testing. The reimbursements for COVID- 19 testing also decreased in the 2022 period versus the 2021 period. The cost of Product revenues was $ 19. 2 million in the 2022 period and $ 16. 0 million in the 2021 period, an increase of $ 3. 2 million or 20 %. Approximately $ 2. 5 million of the increase is due to increased revenues and the impact of inflation on component materials and $ 0. 7 million due to reorganization of structure and market adjustment salary increases at our Farmingdale, NY campus for manufacturing. The gross profit margin on Products was 41 % in the 2022 period and 48 % in the 2021 period. In the 2022 period, we completed the winding down and closure of our manufacturing and distribution center in Ann Arbor, MI and moved the operations to our Farmingdale, NY campus. As a result of the operational transition, there was a temporary increase and overlap in manufacturing headcount and overhead costs during the first half of the period, which negatively affected the 2022 period gross profit margin. Research and development expenses were $ 3. 8 million in the 2022 period and $ 3. 3 million in the 2021 period, an increase of $ 0. 5 million or 16 %. Research activities include lab developed tests (LDTs) for sexually transmitted infection (STI) panels and the detection of COVID- 19. Research expenses declined for the Therapeutics segment, due to a focus on the Clinical Labs and Life Sciences segments. Selling, general and administrative expenses were $ 48. 0 million during the 2022 period versus $ 44. 9 million during the 2021 period, an increase of $ 3. 1 million or 7 %. The Life Sciences Products segment expense increased $ 0. 6 million during the 2022 period, which includes $ 0. 4 million for employee severance expenses associated with the completion of the winding down and closure of our manufacturing and distribution center in Ann Arbor, MI and the cost of moving its operations to our Farmingdale, NY campus at the beginning of the period. The segment also experienced increases in marketing expenses such as website ads, promotions and campaigns, trade shows, an increase in sales and marketing headcount, and an increase in facility expenses such as maintenance and utilities. The Other segment expense increased $ 2. 4 million during the 2022 period and includes compensation expense (on a net basis) of $ 1. 3 million for a former executive' s severance. The expense also increased in the 2022 period by $ 1. 3 million for salary increases, bonus accruals and share based compensation and $ 0. 1 million for facility costs. The Clinical Services expense increased $ 0. 1 million period over period. Increases in facility costs of $ 1. 2 million and market adjustment salary increases of $ 0. 3 million were almost offset by lower commissions earned in the 2022 period of $ 1. 4 million. Legal and related expenses were $ 5. 7 million on a net basis during the 2022 period compared to $ 4. 7 million in the 2021 period, an increase of $ 1. 0 million or 20 %. In the 2022 period, we incurred higher legal expense for activities associated with strategic initiatives and other corporate matters, which were partially offset by the recognition of a credit of $ 1. 0 million associated with a fee settlement and release agreement with a former legal services provider. Legal settlement income was $ 0. 5 million in the 2022 period. The Company as plaintiff finalized and executed a settlement agreement with Roche. Interest income, net was $ 0. 2 million in the 2022 period versus interest income, net of less than $ 0. 1 million in the 2021 period, a favorable variance of $ 0. 2 million. During the 2022 period, we earned interest on marketable securities in bond funds, net of interest expense primarily on a mortgage. During the 2021 period, we were not invested in interest earning marketable securities until the latter part of that period, earned insignificant interest on cash and cash equivalents, and incurred interest expense on the mortgage. Other (expense) income in the 2022 period was ($ 1. 2) million and $ 6. 9 million in the 2021 period, an unfavorable variance of $ 8. 1 million. During the 2022 period, the primary component of the expense was realized losses, net on marketable securities in bond funds of $ 1. 3 million. As of the end of the third quarter of the 2022 period, we had sold all our holdings in these bond funds. During the 2022 and 2021 periods, we earned interest from these investments approximating $ 0. 3 million and $ 0. 1 million respectively, which amounts are included in interest income, net. In June 2021, our $ 7. 0 million PPP loan was fully forgiven by the Small Business Administration and the loan liability was reversed into income. The foreign currency revaluation (loss) gain recognized by the Life Sciences Products segment during the 2022 period was $ (2. 2) million compared to a gain of $ 0. 3 million in the 2021 period, an unfavorable variance of $ 2. 5 million. The 2022 period revaluation loss was due to the substantial depreciation of the Euro, British pound and Swiss franc versus the U. S. dollar as of the end of the period compared to its start, ranging from 4. 9 % to 13. 8 %. The revaluation gain in the 2021 period was due to appreciation of the Euro, British pound and Swiss franc versus the U. S. dollar as of the end of that period compared to its start, ranging from 0. 3 % to 5. 9 %. Fiscal year ending July 31, 2021 compared to July 31, 2020 (in 000s) 2021 2020 Favorable (Unfavorable) % Change Revenues $ 117, 731 $ 76, 021 $ 41, 710 55 Operating costs and expenses: Cost of revenues 64, 154 52, 251 (11, 903) (23) Research and development 3, 252 4, 448 1, 196 27 Selling, general and administrative 44, 905 42, 960 (1, 945) (5) Legal and related expenses 4, 728 6, 729 2, 001 30 Total operating costs and expenses 117, 039 106, 388 (10, 651) (10) Operating income (loss) 692 (30, 367) 31, 059 * * Other income (expense): Interest 8 454 (446) (98) Other 6, 905 488 6, 417 * * Foreign currency gain 270 905 (635) (70) Income (loss) before income taxes $ 7, 875 $ (28, 520) $ 36, 395 * * * * not meaningfulThe " 2021 period " and the " 2020 period " refer to the fiscal year ended July 31, 2021 and 2020, respectively. Impacts of COVID- 19 In July 2020, Enzo was granted an FDA EUA for its molecular diagnostic and serological testing for COVID- 19 and related antibody testing options. In January 2021, Enzo received an

expansion of its EUA from the FDA authorizing the use of pooled samples containing up to five individual swab specimens with the Company' s AMPIPROBE ® SARS- Cov- 2 Test System utilizing tests on three different platforms including Enzo' s proprietary GENFLEX ® automated high- throughput platform. In July 2021, Enzo received an expansion of its FDA EUA for the Company' s rapid extraction method on its proprietary test system. Due to the effects of the pandemic and COVID- 19 testing, accession volume in the 2021 period exceeded accession volume in the 2020 period by 65 %, offsetting reductions in non- COVID- 19 accessions due to the continuing restrictive effects of COVID- 19. At this time, it is too early to determine the long term significance of the positive impact from COVID- 19 testing and the Company' s proprietary product offerings on revenue, profitability and cash flow. We experienced a decline in COVID- 19 accession volume in the fourth quarter of the 2021 period and fully expect COVID- 19 volume to decline in the quarters ahead as the percentage of Americans who are vaccinated increases. However, the emergence and spread of variants have caused our COVID- 19 testing volume to increase again subsequent to the end of the fiscal year period. We expect continued COVID- 19 testing opportunities based on testing for entertainment and travel as well as for school and workplace reopenings. Clinical services revenues for the 2021 period were $ 87. 0 million compared to $ 49. 5 million in the 2020 period, an increase of $ 37. 5 million or 76 %. Revenues from COVID- 19 testing represented 48 % and 8 % of Clinical revenues in the 2021 and 2020 periods, respectively. Revenues for the 2020 period include two CARES Act Relief Payment grants totaling $ 1. 5 million; there were no grants in the 2021 period. Diagnostic testing volume measured by the total number of accessions for all our testing services increased approximately 65 % period over period due to the positive impact from COVID- 19 testing, resulting in the 2021 period' s revenue increase. COVID- 19 testing services have higher reimbursement rates than our core and specialty testing resulting in an improvement in our overall liquidation rate for collections and revenue per accession. Excluding the impact of COVID- 19 testing and the CARES Act grant, revenues for the 2021 period were $ 1. 1 million higher than the 2020 period, and non COVID- 19 testing volume was 1 % higher. Estimated collection amounts are subject to the complexities and ambiguities of third party payer billing, reimbursement regulations and claims processing, as well as issues unique to Medicare and Medicaid programs, and require us to consider the potential for adjustments when estimating variable consideration in the recognition of revenue in the period that the related services are rendered. The effect of PAMA directly negatively impacted reimbursements from Medicare and Medicaid in the 2021 and 2020 periods by approximately $ 1. 4 million and $ 1. 2 million, respectively. Product revenues were $ 30. 7 million in the 2021 period and $ 26. 6 million in the 2020 period, an increase of $ 4. 2 million or 16 %. During the 2020 period, the negative effect of COVID- 19 related government policies intended to reduce the spread of the pandemic impacted our Products revenues in the U. S. markets more than in markets in the rest of the world. A greater portion of the 2021 period increase came from markets outside the U. S., though the U. S. market also increased, especially in the fourth quarter of the 2021 period. The worldwide growth is due to the improvement in infection rates and a rebound in demand as academia returned from complete shutdown, though some industrial customers still have not returned to full operations. The cost of Clinical Services was $ 48. 2 million in the 2021 period and $ 38. 9 million in the 2020 period, an increase of $ 9. 3 million from increased COVID- 19 testing volume. Utilizing our internal manufacturing capabilities we reduced some of our reliance on reagents sourced from third parties. The gross profit margin on Clinical Services revenues in the 2021 period was approximately 45 % versus 19 % in the 2020 period, excluding the 2020 period grants. In the 2021 period, the high margin on COVID- 19 testing and liquidation rate improvements offset the effect of reduced volumes of certain specialty testing services, such as genetics testing. The cost of Product revenues was $ 16. 0 million in the 2021 period and $ 13. 4 million in the 2020 period, an increase of $ 2. 6 million or 19 %. The gross profit margin on Products was 48. 0 % in the 2021 period and 49. 6 % in the 2020 period, negatively impacted by an increase in headcount, overhead and the cost of production materials. Research and development expenses were $ 3. 3 million in the 2021 period and $ 4. 4 million in the 2020 period, a decrease of $ 1. 2 million or 27 %. The decrease is attributable to the Clinical Services segment, where with the increased commercialization of COVID- 19 testing, certain research and development resources transitioned to testing services in the current period. During the 2020 period, the segment' s efforts were directed toward lab developed tests (LDTs) for the detection of COVID- 19 and antibodies. Research and development expenses also declined for the Therapeutics segment, due to the timing of activities. Selling, general and administrative expenses were $ 44. 9 million during the 2021 period versus $ 43. 0 million during the 2020 period, an increase of $ 1. 9 million or 5 %. The Clinical Services expense increased $ 2. 5 million primarily due to higher sales commissions and support services compensation resulting from higher revenues and activity from COVID- 19, partially offset by the impact of cost savings initiatives undertaken throughout our fiscal year that ended July 31, 2020. The Life Sciences Products expense increased $ 0. 5 million due to higher information technologies expenses and accrual of plant closure costs. The Other segment decreased $ 1. 1 million primarily due to lower self- insured healthcare benefit costs. Legal and related expenses were $ 4. 7 million during the 2021 period compared to $ 6. 7 million in the 2020 period, a decrease of $ 2. 0 million or 30 %. There were contested proxy activities in both periods, but we incurred legal expenses relating to the contested proxy through more of the 2020 period compared to the 2021 period. Interest income, net was zero in the 2021 period versus interest income, net of $ 0. 5 million in the 2020 period, an unfavorable variance of $ 0. 5 million, and in both periods represents interest on cash and cash equivalents and marketable securities net of interest expense, primarily on a mortgage. During the latter half of the 2021 period, we invested in and began to earn interest on marketable securities in bond funds since no interest was being earned on cash in money market funds because the Federal Reserve cut its target interest rates to near zero in response to COVID- 19. During most of the 2020 period, we earned interest in money market funds, which earned a significant yield prior to the Federal Reserve' s interest rate cuts as it targeted near zero interest rates. Other income in the 2021 and 2020 period was $ 7. 0 million and $ 0. 5 million respectively, an increase of $ 6. 4 million. In June 2021, our $ 7. 0 million PPP loan was fully forgiven by the Small Business Administration and the loan liability was reversed into income. The foreign currency revaluation gain recognized by the Life Sciences Products segment during the 2021 period was $ 0. 3 million compared to a revaluation gain of $ 0. 9 million in the 2020 period, an unfavorable variance of $ 0. 6 million. The 2021 period revaluation gain was due to

significant appreciation of the British pound versus the U. S. dollar as of the end of the period compared to its start. The revaluation gain in the 2020 period was larger due to significant appreciation of the British pound, Swiss franc and Euro versus the U. S. dollar as of the end of that period compared to its start. Liquidity and Capital Resources At July 31, 2022, the Company had cash and cash equivalents totaling $ 21. 6 million of which $ 0. 6 million was in foreign accounts, as compared to cash and cash equivalents and marketable securities of $ 43. 5 million, of which $ 0. 9 million was in foreign accounts at July 31, 2021. It is the Company' s current intent to permanently reinvest these foreign funds outside of the United States, and its current plans do not demonstrate a need to repatriate them to fund its United States operations. The Company had working capital of $ 29. 8 million at July 31, 2022, compared to $ 44. 5 million at July 31, 2021, a decrease of $ 14. 7 million. The decrease in working capital was due to the use of cash and cash equivalents to fund operations and capital expenditures. Net cash used in operating activities during the 2022 period was $ 16. 6 million, compared to net cash provided by operating activities of $ 0. 4 million during the 2021 period, an unfavorable variance of $ 17. 0 million. The net cash used in the 2022 period was due to the net loss of $ 18. 3 million, a net increase of $ 5. 2 million in operating assets, primarily accounts receivable and inventories, and a net decrease of $ 1. 6 million in operating liabilities, primarily accrued liabilities. These uses were partially offset by non- cash expense adjustments of $ 8. 5 million. Net cash provided by operating activities during the fiscal 2021 period of $ 0. 4 million was due to net income of $ 7. 9 million which was offset by net non- cash adjustments of $ 2. 7 million and by a net increase of $ 4. 8 million in operating assets and liabilities including, but not limited to inventories and accounts receivable. Net cash provided by investing activities during the 2022 period was approximately $ 25. 2 million as compared to cash used in investing activities of $ 34. 5 million in the 2021 period. During the 2022 period, we sold all of the marketable securities we had purchased in the 2021 period. Capital expenditures in the 2022 and 2021 periods were $ 3. 5 million and $ 4. 4 million, respectively and represent expenditures to support and grow our existing operations, including investments in laboratory equipment, information technology, and the buildout of our Farmingdale campus. Cash used in financing activities in the 2022 and 2021 periods approximated $ 0. 2 million for payments related to a mortgage and finance leases. As of July 31, 2022 we had a mortgage principal balance of $ 3. 8 million entered into for the purchase of a building facility at our Farmingdale campus, which bears a fixed interest rate of 5. 09 % per annum. It requires monthly mortgage payments totaling $ 0. 4 million annually. Our obligations under the mortgage agreement are secured by the facility and by a $ 1. 0 million cash collateral deposit with the mortgagee as additional security, which is included in other assets as of July 31, 2022. Effective October 19, 2020, the Company and the mortgagee agreed to a covenant restructure whereby the mortgagee waived the Company' s financial ratio covenant for the fiscal period ended July 31, 2020 and modified the mortgage to replace a financial ratio covenant with a liquidity covenant. The liquidity covenant required that we own and maintain at all times, and throughout the remaining term of the loan, at least $ 25 million of liquid assets, defined as time deposits, money market accounts and commercial paper, and obligations issued by the U. S. government or any of its agencies. The cash collateral agreement was also modified to require compliance with the liquidity covenant for two consecutive fiscal years before the collateral is released back to us. As of July 31, 2021, the Company was in compliance with the financial and liquidity covenants in effect at that time related to this mortgage. Effective September 29, 2021, the Company and the mortgagee agreed to further covenant restructuring whereby (a) the liquidity covenant was reduced to 150 % of the loan principal (or approximately $ 5. 7 million at July 31, 2022) from $ 25 million previously, and (b) the collateral requirement would be increased from $ 0. 75 million to $ 1. 0 million. The Company increased the collateral deposit to $ 1. 0 million in November 2021 and was in compliance with the liquidity covenant as of July 31, 2022. The Company believes based on our fiscal 2023 forecast that its current cash and cash equivalents level are sufficient for its foreseeable liquidity and capital resource needs over at least the next twelve (12) months, although there can be no assurance that future events will not alter such view. Although there can be no assurances, in the event additional capital is required, the Company believes it has the ability to raise additional funds through the utilization of the Controlled Equity Offering Program as disclosed in Note 12 in the Notes to the Consolidated Financial Statements, or other sources. Our liquidity plans are subject to a number of risks and uncertainties, including those described in the Item 1A. " Risk Factors " section of this Form 10- K for the year ended July 31, 2022, some of which are outside our control. Macroeconomic conditions could limit our ability to successfully execute our business plans and therefore adversely affect our liquidity plans. Effect of New Accounting Pronouncements Recently Adopted Accounting Pronouncements In December 2019, the Financial Accounting Standards Board (" FASB ") issued Accounting Standards Update (" ASU ") No. 2019- 12 Income Taxes (Topic 740) Simplifying the Accounting for Income Taxes. The amendments in the ASU simplify the accounting for income taxes by removing certain exceptions to the general principles of Topic 740. The amendments also improve consistent application of and simplify U. S. GAAP for other areas of Topic 740 by clarifying and amending existing guidance. We adopted the amendments in this ASU beginning August 1, 2021. The adoption of the amendments in this ASU did not have a material impact on our consolidated results of operations, financial position or cash flows. Pronouncements Issued but Not Yet Adopted In June 2016, FASB issued ASU No. 2016- 13 Financial Instruments – Credit Losses (Topic 326). This standard changes the impairment model for most financial instruments, including trade receivables, from an incurred loss method to a new forward- looking approach, based on expected losses. The estimate of expected credit losses will require entities to incorporate considerations of historical information, current information and reasonable and supportable forecasts. Adoption of this standard is required for our annual and interim periods beginning August 1, 2023 and must be adopted using a modified retrospective transition approach. We are currently assessing the impact of the adoption of this standard on our results of operations, financial position and cash flows. We reviewed all other recently issued accounting pronouncements and have concluded they are not applicable or not expected to be significant to the accounting for our operations. Contractual Obligations The Company has entered into various real estate and equipment operating leases, reagent rental agreements, and employment agreements with certain executive officers. The real estate lease for the Company' s Farmingdale Clinical Lab and Research facility is with a related party. See Item 2, Properties, and Note 9 and Note 14 in the Notes to the Consolidated Financial Statements for a further description of these leases and

obligations. Management is not aware of any material claims, disputes or settled matters concerning third- party reimbursements that would have a material effect on our financial statements. Off- Balance Sheet Arrangements The Company does not have any " off- balance sheet arrangements " as such term is defined in Item 303 (a) (4) of Regulation S- K. Critical Accounting Policies and Estimates The Company' s discussion and analysis of its financial condition and results of operations are based upon Enzo Biochem, Inc.' s consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and judgments also affect related disclosure of contingent assets and liabilities. On an on- going basis, we evaluate our estimates, including those related to contractual expense, allowance for uncollectible accounts, inventory, intangible assets and income taxes. The Company bases its estimates on experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Contingencies Contingencies are evaluated and a liability is recorded when the matter is both probable and reasonably estimable. Gain contingencies are evaluated and not recognized until the gain is realizable or realized. Products revenues consist of the sale of single- use products used in the identification of genomic information and are recognized at a point in time following the transfer of control of such products to the customer, which generally occurs upon shipment. Payment terms for shipments to end- user and distributor customers may range from 30 to 90 days. Any claims for credit or return of goods may be made generally within 30 days of receipt. Revenues are reduced to reflect estimated credits and returns, although historically these adjustments have not been material. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenue. Amounts billed to customers for shipping and handling are included in revenue, while the related shipping and handling costs are reflected in cost of products. Revenues- Clinical laboratory services Net revenues in the Company' s clinical services business are primarily comprised of a high volume of relatively low- dollar transactions. The services business, which provides clinical testing services, satisfies its performance obligation and recognizes revenues upon completion of the testing process for a specific patient and reporting to the ordering physician. The Company may also perform clinical testing services for other laboratories and will recognize revenue from those services when reported to the ordering laboratory. The Company estimates the amount of consideration it expects to receive from customer groups using the portfolio approach. These estimates of the expected consideration include the impact of contractual allowances and price concessions on our customer group portfolios consisting of healthcare insurers, government payers, client payers and patients. Contracts with customers in our laboratory services business do not contain a financing component, based on the typically limited period of time between performance of services and collection of consideration. The transaction price includes variable consideration in the form of the contractual allowance and price concessions as well as the collectability of the transaction based on patient intent and ability to pay. The Company uses the expected value method in estimating the amount of the variability included in the transaction price. Contractual Adjustment The Company' s estimate of contractual adjustment is based on significant assumptions and judgments, such as its interpretation of payer reimbursement policies, and bears the risk of change. The estimation process is based on the experience of amounts approved as reimbursable and ultimately settled by payers, versus the corresponding gross amount billed to the respective payers. The contractual adjustment is an estimate that reduces gross revenue based on gross billing rates to amounts expected to be approved and reimbursed. Gross billings are based on a standard fee schedule we set for all third party payers, including Medicare, health maintenance organizations (" HMO' s ") and managed care. The Company adjusts the contractual adjustment estimate quarterly, based on its evaluation of current and historical settlement experience with payers, industry reimbursement trends, and other relevant factors. The other relevant factors that affect our contractual adjustment include the monthly and quarterly review of: 1) current gross billings and receivables and reimbursement by payer, 2) current changes in third party arrangements and 3) the growth of in- network provider arrangements and managed care plans specific to our Company. Our clinical laboratory services business is primarily dependent upon reimbursement from third- party payers, such as Medicare (which principally serves patients 65 and older) and insurers. We are subject to variances in reimbursement rates among different third- party payers, as well as constant changes of reimbursement rates. Changes that decrease reimbursement rates or coverage would negatively impact our revenues. The number of individuals covered under managed care contracts or other similar arrangements has grown over the past several years and may continue to grow in the future. In addition, Medicare and other government healthcare programs continue to shift to managed care. These trends will continue to reduce our revenues. During the years ended July 31, 2022, 2021 and 2020, the contractual adjustment percentages, determined using current and historical reimbursement statistics, were approximately 83 %, 83 %, and 88 %, respectively, of gross billings. The Company believes a decline in reimbursement rates or a shift to managed care, or similar arrangements may be offset by the positive impact of an increase in the number of tests we perform. However, there can be no assurance that we can increase the number of tests we perform or that if we do increase the number of tests we perform, that we can maintain that higher number of tests performed, or that an increase in the number of tests we perform would result in increased revenue. The Company estimates (by using a sensitivity analysis) that each 1 % point change in the contractual adjustment percentage could result in a change in clinical laboratory services revenues of approximately $ 4. 5 million, $ 5. 1 million and $ 3. 9 million for the years ended July 31, 2022, 2021, and 2020, respectively, and a change in the net accounts receivable of approximately $ 0. 4 million and $ 0. 6 million as of July 31, 2022 and 2021, respectively. Our clinical laboratory financial billing system records gross billings using a standard fee schedule for all payers and does not record contractual adjustment by payer at the time of billing. Therefore, we are unable to quantify the effect of contractual adjustment recorded during the current period that relate to revenue recorded in a previous period. However, we can reasonably estimate our monthly contractual adjustment to revenue on a timely basis based on our quarterly review process, which includes: ● an analysis of industry reimbursement trends; ● an evaluation of third- party reimbursement rates changes and changes in reimbursement

arrangements with third- party payers; ● a rolling monthly analysis of current and historical claim settlement and reimbursement experience statistics with payers; ● an analysis of current gross billings and receivables by payer. Accounts Receivable Accounts receivable are reported at realizable value, net of allowances for doubtful accounts, which is estimated and recorded in the period of the related revenue. The following is a table of the Company' s net accounts receivable by segment. The Clinical Laboratory Services segment' s net receivables are detailed by billing category and as a percent to its total net receivables. As of July 31, 2022 and 2021, approximately 59 % of the Company' s net accounts receivable relates to its Clinical Laboratory Services business, which operates in the New York, New Jersey and Connecticut medical communities. The Life Sciences products segment' s accounts receivable includes approximately $ 1. 1 million or 24 % and $ 1. 4 million or 33 % of foreign receivables as of July 31, 2022 and 2021, respectively. Net accounts receivable (in thousands) July 31, 2022 July 31, 2021 Net accounts receivable by segment Amount % Amount % Clinical Labs (by billing category) Third party payers $ 2, 647 40 $ 2, 195 36 Patient self- pay 2, 779 41 2, 007 33 Medicare 768 11 1, 122 19 HMO' s 560 8 692 12 Total Clinical Labs 6, 754 100 % 6, 016 100 % Total Life Sciences 4, 762 4, 182 Total accounts receivable — net $ 11, 516 $ 10, 198 The Company' s ability to collect outstanding receivables from third party payers is critical to its operating performance and cash flows. The primary collection risk lies with uninsured patients or patients for whom primary insurance has paid but a patient portion remains outstanding. The Company assesses the current state of its billing functions in order to identify any known collection or reimbursement issues. The Company assesses the impact, if any, on the allowance estimates, which involves Company' s management judgment. It is important to note that the collection of these receivables is not guaranteed from Third Party Payers. The Company believes that the collectability of its receivables is directly linked to the quality of its billing processes, most notably, those related to obtaining the accurate patient information to effectively bill for the services provided. Should circumstances change (e. g. shift in payer mix, decline in economic conditions or deterioration in aging of receivables), our estimates of net realizable value of receivables could be reduced by a material amount. As of July 31, 2022 and 2021, approximately 23 % and 27 %, respectively of Clinical Labs receivables are from two payers other than Medicare. Billing for laboratory services is complicated due to several factors, including, but not limited to, the differences between our standard gross fee schedule for all payers and the reimbursement rates of the various payers we deal with, disparity of coverage and information requirements among the various payers, and disputes with payers as to which party is responsible for reimbursement. The Company accounts for income taxes under the liability method of accounting for income taxes. Under the liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The liability method requires that any tax benefits recognized for net operating loss carry forwards and other items be reduced by a valuation allowance where it is not more likely than not the benefits will be realized in the foreseeable future. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under the liability method, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. It is the Company' s policy to provide for uncertain tax positions, if any, and the related interest and penalties based upon management' s assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the Company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the Company' s effective tax rate in a given financial statement period may be affected. Inventory The Company values inventory at the lower of cost (first- in, first- out) or net realizable value. Work- in- process and finished goods inventories consist of material, labor, and manufacturing overhead. Write downs of inventories to net realizable value are based on a review of inventory quantities on hand and estimated sales forecasts based on sales history and anticipated future demand. Unanticipated changes in demand could have a significant impact on the value of our inventory and require additional write downs of inventory which would impact our results of operations. Goodwill and Intangible Assets Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. Intangible assets (exclusive of patents), arose primarily from acquisitions, and primarily consist of customer relationships, trademarks, licenses, and website and database content. Finite- lived intangible assets are amortized according to their estimated useful lives, which range from 4 to 15 years. The Company tests goodwill annually as of the first day of the fourth quarter, or more frequently if indicators of potential impairment exist. In assessing goodwill for impairment, the Company has the option to first perform a qualitative assessment to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the Company determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company is not required to perform any additional tests in assessing goodwill for impairment. However, if the Company concludes otherwise or elects not to perform the qualitative assessment, then it identifies the reporting units and compares the fair value of each of these reporting units to their respective carrying amount. If the carrying amount of the reporting unit is less than its fair value, no impairment exists. If the carrying amount of the reporting unit is higher than its fair value, the impairment charge is the amount by which the carrying amount exceeds its fair value, not to exceed the total amount of goodwill allocated to the reporting unit. The Company performed a quantitative assessment in 2022, 2021 and 2020, and concluded there were no goodwill impairments. The goodwill is held in the Clinical Labs reporting unit, which in 2022 had income before taxes of $ 839. In 2022, we estimated the fair value of this reporting unit by determining the multiple of enterprise value to revenues for a peer group of clinical reference labs, discounted that multiple, and applied it to our reporting unit' s annualized revenues. The resulting estimate of the fair value of the reporting unit exceeded the carrying amount of the reporting unit by approximately $ 55, 000, well in excess of the unit' s goodwill. The Company reviews the recoverability of the carrying value of long- lived assets (including intangible assets with finite lives) of an asset or asset group for impairment annually as of the end of the fiscal year, or more frequently if indicators of potential impairment exist. Should indicators of impairment exist, the carrying values of the assets are evaluated in relation to the

operating performance and future undiscounted cash flows of an asset or asset group. The net book value of the long lived asset is adjusted to fair value if its expected future undiscounted cash flow is less than its book value. During fiscal years 2022, 2021 and 2020, there was no impairment of goodwill or long- lived assets. During the fiscal year ended July 31, 2022, all intangible assets, which were finite lived, became fully amortized. Item 7A. Quantitative and Qualitative Disclosures About Market Risk We are exposed to market risk from changes in foreign currency exchange rates resulting from activities in foreign locations (See Item 1A. Risk Factors and Note 1 in the Notes to Consolidated Financial Statements) that could impact our results of operations and financial position. We do not currently engage in any hedging or market risk management tools. Foreign Currency Exchange Rate Risk The financial reporting of our non- U. S. subsidiaries is denominated in currencies other than the U. S. dollar. Since the functional currency of our non- U. S. subsidiaries is the local currency, foreign currency translation adjustments are accumulated as a component of accumulated other comprehensive income in stockholders' equity. Assuming a hypothetical increase of 10 % in the value of the U. S. dollar versus foreign currencies at July 31, 2022, our assets and liabilities would decrease by $ 0. 4 million and $ 0. 1 million, respectively, and our net revenues and net income (loss) would decrease by $ 0. 9 million and $ 0. 4 million, respectively, on an annual basis. We also maintain intercompany balances and loans with subsidiaries in different local currencies. These amounts are at risk of foreign exchange losses if exchange rates fluctuate. Assuming a hypothetical increase of 10 % in the value of the U. S. dollar versus foreign currencies, our pre- tax earnings (loss) would be unfavorably impacted by approximately $ 1. 9 million on an annual basis. Interest Rate Risk As of July 31, 2022, we have fixed interest rate financing on mortgage debt and equipment finance leases. Item 8. Financial Statements and Supplementary Data The response to this item is submitted in a separate section of this report. See Item 15 (a) (1) and (2). Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure None. Item 9A. Controls and Procedures 1. Disclosure Controls and Procedures We maintain disclosure controls and procedures (Disclosure Controls) within the meaning of Rules 13a- 15 (e) and 15d- 15 (e) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our Disclosure Controls are designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act, such as this Annual Report on Form 10- K, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission' s rules and forms. Our Disclosure Controls are also designed to ensure that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our Disclosure Controls, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily applied its judgment in evaluating and implementing possible controls and procedures. As of the end of the period covered by this Annual Report on Form 10- K, we evaluated the effectiveness of the design and operation of our Disclosure Controls, which was done under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer. Based on the evaluation of our Disclosure Controls, our Chief Executive Officer and Chief Financial Officer have concluded that, as of July 31, 2022, our Disclosure Controls were effective to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC' s rules and forms and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. 2. Change in Internal Control over Financial Reporting There were no changes in our internal control over financial reporting that occurred during the year ended July 31, 2022, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. 3. Management' s Report on Internal Control Over Financial Reporting Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a- 15 (f) and 15d- 15 (f) promulgated under the Exchange Act as a process designed by, or under the supervision of, a company' s principal executive and principal financial officers and effected by the company' s board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U. S. generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect of our consolidated financial statements. There are inherent limitations on the effectiveness of any system of internal controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate. Accordingly, even effective internal controls and procedures can only provide reasonable assurance of achieving their control objectives. Management assessed the effectiveness of our internal control over financial reporting as of July 31, 2022. In making this assessment, management used the criteria established in Internal Control- Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (" COSO "). Based on this assessment, management has concluded that, as of July 31, 2022, our internal control over financial reporting was effective. 4. Report of Independent Registered Accounting Firm EisnerAmper LLP, our independent registered public accounting firm, has audited the effectiveness of the Company' s internal control over financial reporting as of July 31, 2022, as stated in their report which is included herein. REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM To the Board of Directors and Stockholders of Opinion on Internal Control over Financial Reporting We have audited Enzo Biochem, Inc.' s (the " Company ") internal control over financial reporting as of July 31,

2022, based on criteria established in the Internal Control- Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (" COSO "). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of year- end 2022, based on criteria established in the Internal Control- Integrated Framework (2013) issued by COSO. We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (" PCAOB "), the consolidated balance sheets of Enzo Biochem, Inc. as of July 31, 2022 and 2021, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three- year period ended July 31, 2022, and the related notes and the financial statement schedule identified in Item 15 and our report dated October 14, 2022 expressed an unqualified opinion. Basis for Opinion The Company' s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying document, Management' s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company' s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U. S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion. Definition and Limitations of Internal Control over Financial Reporting An entity' s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. An entity' s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the entity; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the entity are being made only in accordance with authorizations of management and directors of the entity; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the entity' s assets that could have a material effect on the financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. / s / EisnerAmper LLP EISNERAMPER LLP New York, New York Item 9B. Other Information Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections PART III Item 10. Directors, Executive Officers and Corporate Governance The information required under this item will be set forth in the Company' s proxy statement to be filed with the Securities and Exchange Commission on or before November 23, 2022 and is incorporated herein by reference. Item 11. Executive Compensation Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters Item 13. Certain Relationships and Related Transactions, and Director Independence Item 14. Principal Accountant Fees and Services The information required under this item will be set forth in the Company' s proxy statement expected to be filed with the Securities and Exchange Commission on or before November 23, 2022 and is incorporated herein by reference. PART IV Item 15. Exhibits, Financial Statement Schedules (a) (1) Consolidated Financial Statements Consolidated Balance Sheets- July 31, 2022 and 2021 F- 3 Consolidated Statements of Operations- Years ended July 31, 2022, 2021 and 2020 F- 4 Consolidated Statements of Comprehensive Income (Loss)- Years ended July 31, 2022, 2021 and 2020 F- 5 Consolidated Statements of Stockholders' Equity- Years ended July 31, 2022, 2021 and 2020 F- 6 Consolidated Statements of Cash Flows- Years ended July 31, 2022, 2021 and 2020 F- 7 Notes to Consolidated Financial Statements F- 8 (2) Financial Statement Schedule Schedule II- Valuation and Qualifying Accounts S- 1All other schedules have been omitted because the required information is included in the consolidated financial statements or the notes thereto or because they are not required. (3) ExhibitsThe following documents are filed as Exhibits to this Annual Report on Form 10- K: Exhibit No. Description 3 (a) Certificate of Incorporation (1) 3 (b) Certificate of Incorporation, as amended on March 17, 1980. (1) 3 (c) Certificate of Amendment of the Certificate of Incorporation as amended on June 16, 1981. (2) 3 (d) Certificate of Amendment to the Certificate of Incorporation as of July 22, 1988. (3) 3 (e) Amended and restated Bylaws (4) 3 (f) Amended and restated Bylaws (29) 3 (g) Amended and restated Bylaws (31) 3 (h) Restated Certificate of Incorporation (34) 3 (j) Amended and restated Bylaws (34) 10 (a) 1994 Stock Option Plan. (5) 10 (b) 1999 Stock Option Plan. (6) 10 (c) 2005 Equity Compensation Incentive Plan (7) 10 (d) 2011 Incentive Plan (8) 10 (e) Lease agreement with Pari Management (9) 10 (f) Settlement and Release Agreement between the Company and Sigma Aldrich (10) 10 (g) Stock Purchase Agreement By and Among Enzo Life Sciences, Inc., Axxora Life Sciences Inc., and the Stock holders, Option holders and Warrant holders (12) 10 (h) Stock Asset Purchase Agreement By and Among Buyer Parties and Seller Parties with respect to the Biomol International and affiliate acquisition (13) 10 (i) Asset Purchase Agreement By and Among Enzo Life Sciences, Acquisition, Inc. and Assay Designs, Inc. (14) 10 (j) Amendment No. 1 to Amended and Restated Employment Agreement with Elazar Rabbani (15) 10 (k) Amendment No. 1 to Amended and Restated Employment Agreement with Barry Weiner (15) 10 (l) Controlled Equity Offering Sales Agreement with Cantor Fitzgerald & Co, as sales agent (16) 10 (m) Revolving Loan and Security Agreement among the Enzo Biochem, Inc., Enzo Clinical Labs, Inc., Enzo Life Sciences, Inc., Axxora, LLC and Enzo Realty, LLC as borrowers, and Enzo Therapeutics, Inc. as a guarantor, and Healthcare Finance Group, LLC as Lender (17) 10 (n) Settlement and Release Agreement between the Company and Affymetrix (18) 10 (o) Settlement and Release Agreement between the Company and

PerkinElmer (19) 10 (p) Settlement and Release Agreement between the Company and U. S. Department of Justice (20) 10 (q) Settlement and Release Agreement between the Company and Luminex Corporation (21) 10 (r) Settlement and Release Agreement between the Company and Siemens Healtheare Diagnostics Inc. (22) 10 (s) Amendment of Lease with Pari Management (23) 10 (t) Settlement and Release Agreement between the Company and Affymetrix (24) 10 (u) Settlement and Release Agreement between the Company and Illumina, Inc. (25) 10 (v) Purchase and Sale Agreement by and between Building Blocks Realty Co. LLC (seller) and Enzo Realty LLC (Purchaser) (26) 10 (w) Settlement Release Agreement between the Company and Roche Diagnostics GmbH and Roche Molecular Systems Inc. (27) 10 (y) Settlement Release Agreement between the Company and Hologic, Inc., Grifolds, S. A. and Grifolds Diagnostic Solutions Inc. (28) 10 (z) Fee and Leasehold Mortgage and Security Agreement from the Town of Babylon Industrial Development Agency and Enzo Realty II, LLC, to Citibank, N. A. (30) 10 (aa) Paycheck Protection Program Loan Note (32) 10 (ab) Amended and Restated 2011 Incentive Plan (33) 10 (ae) Employment agreement for Hamid Erfanian, CEO (35) 10 (ad) Cooperation agreement by and among Enzo Biochem, Inc. and the Radoff Parties (36) 10 (ae) * Sublease agreement between Enzo Biochem, Inc. and Siemens Corporation 14 (a) Code of Ethics (11) 21 * List of subsidiaries of the Company 23. 1 * Consent of Independent Registered Public Accounting Firm 31 (a) * Certification of CEO Pursuant to Section 302 of the Sarbanes- Oxley Act of 2002 (b) * Certification of CFO Pursuant to Section 302 of the Sarbanes- Oxley Act of 2002 32 (a) * Certification of CEO Pursuant to Section 906 of the Sarbanes- Oxley Act of 2002 32 (b) * Certification of CFO Pursuant to Section 906 of the Sarbanes- Oxley Act of 2002 101. INS * Inline XBRL Instance Document 101. SCH * Inline XBRL Taxonomy Extension Schema Document. 101. CAL * Inline XBRL Taxonomy Extension Calculation Linkbase Document. 101. DEF * Inline XBRL Taxonomy Extension Definition Linkbase Document. 101. LAB * Inline XBRL Taxonomy Extension Label Linkbase Document. 101. PRE * Inline XBRL Taxonomy Extension Presentation Linkbase Document. 104 * Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101). Notes to exhibits * Filed herewith * * XBRL (Extensible Business Reporting Language) information is being furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934. (1) The exhibits were filed as exhibits to the Company' s Registration Statement on Form S- 18 (File No. 2- 67359) and are incorporated herein by reference. (2) This exhibit was filed as an exhibit to the Company' s Annual Report on Form 10- K for the year ended July 31, 1981 and is incorporated herein by reference. (3) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 1989 and is incorporated herein by reference. (4) This exhibit was filed with the Company' s Current Report on Form 8- K dated January 22, 2013 and is incorporated herein by reference. (5) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 1995 and is incorporated herein by reference. (6) This exhibit was filed with the Company' s Registration Statement on Form S- 8 (333- 87153) and is incorporated herein by reference. (7) This exhibit was filed with the Company' s Proxy Statement on Schedule 14A filed on November 26, 2004 and is incorporated herein by reference. (8) This exhibit was filed as appendix B to the Company' s Definitive Proxy Statement on Schedule 14A, which was filed on November 16, 2010 and is incorporated herein by reference. (9) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 2005 and is incorporated herein by reference. (10) This exhibit was filed with the Company' s Current Report on Form 8- K on September 21, 2006 and is incorporated herein by reference. (11) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 2003 and is incorporated here by reference. (12) This exhibit was filed with the Company' s Current Report on Form 8- K on May 30, 2007 and is incorporated herein by reference. (13) This exhibit was filed with the Company' s Current Report on Form 8- K on May 8, 2008 and is incorporated herein by reference. (14) This exhibit was filed with the Company' s Current Report on Form 8- K on March 13, 2009 and is incorporated herein by reference. (15) This exhibit was filed with the Company' s Current Report on Form 8- K on January 10, 2017 and is incorporated herein by reference. (16) This exhibit was filed with the Company' s Current Report on Form 8- K on March 28, 2013 and incorporated herein by reference. (17) This exhibit was filed with the Company' s Current Report on Form 10- K for the year ended July 31, 2013 and incorporated herein by reference. (18) This exhibit was filed with the Company' s Current Report on Form 8- K on April 24, 2014 and incorporated herein by reference. (19) This exhibit was filed with the Company' s Current Report on Form 8- K on June 23, 2014 and incorporated herein by reference. (20) This exhibit was filed with the Company' s Current Report on Form 10- K for the year ended July 31, 2014 and is incorporated herein by reference. (21) This exhibit was filed with the Company' s Current Report on Form 8- K on July 7, 2015 and incorporated herein by reference. (22) This exhibit was filed with the Company' s Current Report on Form 8- K on July 22, 2015 and incorporated herein by reference (23) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 2015 and is incorporated herein by reference (24) This exhibit was filed with the Company' s Current Report on Form 8- K on October 13, 2015 and incorporated herein by reference. (25) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 2016 (26) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 2018 and is incorporated herein by reference. (27) This exhibit was filed with the Company' s Current Report on Form 8- K on February 11, 2019 and is incorporated herein by reference (28) This exhibit was filed with the Company' s Current Report on Form 8- K on April 22, 2019 and is incorporated herein by reference (29) This exhibit was filed with the Company' s Current Report on Form 8- K on December 3, 2018 and is incorporated herein by reference (30) This exhibit was filed with the Company' s Current Report on Form 8- K on November 21, 2018 and is incorporated herein by reference (31) This exhibit was filed with the Company' s Current Report on Form 8- K on March 2, 2020 and is incorporated herein by reference (32) This exhibit was filed with the Company' s Current Report on Form 8- K on April 24, 2020 and is incorporated herein by reference (33) This exhibit was filed with the Company' s Annual Report on Form 10- K for the year ended July 31, 2021 (34) This exhibit was filed with the Company' s Current Report on Form 8- K on April 27, 2022 and is incorporated herein by reference (35) This exhibit was filed with the Company' s Current Report on Form 8- K on October 18, 2021 and is incorporated herein by reference (36) This exhibit was filed with the Company' s Current Report on Form 8- K on January 4, 2022 and is incorporated herein by

referenceSIGNATURES Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized. ENZO BIOCHEM, INC. Date: October 14, 2022 By: / s / Hamid Erfanian Hamid Erfanian Chief Executive OfficerPursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated. By: / s / Hamid Erfanian October 14, 2022 Hamid Erfanian Chief Executive Officer, Director By: / s / David Bench October 14, 2022 David Bench, Chief Financial Officer, Principal Accounting Officer Elazar Rabbani, Ph. D., Director October 14, 2022 By: / s / Bradley L. Radoff October 14, 2022 Bradley Radoff, Director By: / s / Mary Tagliaferri October 14, 2022 Mary Tagliaferri, M. D., Chair of the Board By: / s / Ian B. Walters October 14, 2022 Ian B. Walters, M. D., Director FORM 10- K, ITEM 15 (a) (1) and (2) LIST OF CONSOLIDATED FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULE The following consolidated financial statements and financial statement schedule of Enzo Biochem, Inc. are included in Item 15 (a): List of Consolidated Financial Statements and Financial Statements Schedule F- 1 Report of Independent Registered Public Accounting Firm (PCAOB ID 274) F- 2 Consolidated Balance Sheets- July 31, 2022 and 2021 F- 3 Consolidated Statements of Operations- Years ended July 31, 2022, 2021 and 2020 F- 4 Consolidated Statements of Comprehensive Income (Loss)- Years ended July 31, 2022, 2021 and 2020 F- 5 Consolidated Statements of Stockholders' Equity- Years ended July 31, 2022, 2021 and 2020 F- 6 Consolidated Statements of Cash Flows- Years ended July 31, 2022, 2021 and 2020 F- 7 Notes to Consolidated Financial Statements F- 8 Schedule II- Valuation and Qualifying Accounts — As of and for the Years ended July 31, 2022, 2021 and 2020 S- 1 All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted. REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM Opinion on the Financial Statements We have audited the accompanying consolidated balance sheets of Enzo Biochem, Inc. (the " Company ") as of July 31, 2022 and 2021, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three- year period ended July 31, 2022, and the related notes and the financial statement schedule identified in Item 15 (collectively referred to as the " financial statements "). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of July 31, 2022, and the results of its operations and its cash flows for each of the years in the three- year period ended July 31, 2022, in conformity with accounting principles generally accepted in the United States of America. We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (" PCAOB "), the Company' s internal control over financial reporting as of July 31, 2022, based on criteria established in Internal Control- Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (" COSO "), and our report dated October 14, 2022 expressed an unqualified opinion. These financial statements are the responsibility of the Company' s management. Our responsibility is to express an opinion on the Company' s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U. S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion. Critical Audit Matter The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which it relates. Valuation Clinical Labs — Contractual Adjustment As described in Notes 1 and 3 to the consolidated financial statements, the Company' s Clinical Labs net revenues and accounts receivables are recorded among four payer categories, which include third- party payers, Medicare, Health Maintenance Organizations (HMO' s), and patient self- pay. The Clinical Labs net accounts receivables were $ 6. 8 million as of July 31, 2022, and the Clinical Labs revenues were $ 74 million for the year ended July 31, 2022. Management' s process to determine the amount of consideration it expects to receive from its payer categories is based on the amounts billed, net of a contractual adjustment for differences between the amounts billed and the estimated consideration Clinical Labs expects to receive from such payers, which considers historical collection experience, payer denials, terms of contractual arrangements, and other external factors that could affect the collectability of its receivables. We identified the valuation of the contractual adjustment for Clinical Labs revenues and related accounts receivables as a critical audit matter due to the significant judgment and estimation by management to determine the contractual adjustment. This in turn led to a high degree of auditor judgment and subjectivity, and significant audit effort was required in performing procedures to evaluate the valuation of the contractual adjustment for Clinical Labs revenues and related accounts receivables. Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. We obtained an understanding of and evaluated the design of controls relating to the valuation of the contractual adjustment for Clinical Labs revenues and related accounts receivables. Our procedures included, among others, testing management' s process for developing the estimate for the contractual adjustments, including evaluating the appropriateness of the methodology, testing the accuracy of the billing and collection data, which is used as an input in management' s analysis, and performing a

retrospective analysis of actual cash collected to the prior year estimate of net accounts receivables. We have served as the Company' s auditor since 2013. CONSOLIDATED BALANCE SHEETS (in thousands, except share and per share data) July 31, 2022 July 31, 2021 ASSETS Current assets: Cash and cash equivalents $ 21, 603 $ 13, 524 Marketable securities — 29, 978 Accounts receivable, net 11, 516 10, 198 Inventories, net 15, 411 12, 652 Prepaid expenses and other current assets 5, 824 4, 230 Total current assets 54, 354 70, 582 Property, plant, and equipment, net 17, 259 16, 585 Right- of- use assets 15, 174 17, 020 Goodwill 7, 452 7, 452 Intangible assets, net — 244 Other, including restricted cash of $ 1, 000 and $ 750 at July 31, 2022 and 2021, respectively 1, 618 1, 808 Total assets $ 95, 857 $ 113, 691 LIABILITIES AND STOCKHOLDERS' EQUITY Current liabilities: Accounts payable- trade $ 8, 508 $ 8, 123 Accrued liabilities 12, 300 14, 301 Current portion of operating lease liabilities 3, 432 3, 419 Other current liabilities and finance leases short term 310 233 Total current liabilities 24, 550 26, 076 Other liabilities and finance leases long term 39 115 Operating lease liabilities, non- current 12, 729 14, 558 Long term debt, net 4, 077 4, 356 Total liabilities $ 41, 395 $ 45, 105 Commitments and contingencies — see Notes 15 and 16 Stockholders' equity: Preferred Stock, $. 01 par value; authorized 25, 000, 000 shares; no shares issued or outstanding — — Common Stock, $. 01 par value; authorized 75, 000, 000 shares; shares issued and outstanding: 48, 720, 454 at July 31, 2022 and 48, 471, 771 at July 31, 2021 487 485 Additional paid- in capital 339, 462 337, 126 Accumulated deficit (288, 638) (270, 377) Accumulated other comprehensive income 3, 151 1, 352 Total stockholders' equity 54, 462 68, 586 Total liabilities and stockholders' equity $ 95, 857 $ 113, 691 The accompanying notes are an integral part of these consolidated financial statements CONSOLIDATED STATEMENTS OF OPERATIONS (in thousands, except per share data) Years ended July 31, 2022 2021 2020 Revenues $ 107, 071 $ 117, 731 $ 76, 021 Operating costs, expenses and legal settlements, net: Cost of revenues 65, 104 64, 154 52, 251 Research and development 3, 767 3, 252 4, 448 Selling, general, and administrative 48, 018 44, 905 42, 960 Legal and related expenses 5, 689 4, 728 6, 729 Legal settlements (500) — — Total costs, expenses and legal settlements, net 122, 078 117, 039 106, 388 Operating (loss) income (15, 007) 692 (30, 367) Other income (expense): Interest 159 8 454 Other (1, 191) 6, 905 488 Foreign exchange (loss) gain (2, 222) 270 905 (Loss) income before income taxes (18, 261) 7, 875 (28, 520) Income taxes — — — Net (loss) income $ (18, 261) $ 7, 875 $ (28, 520) Net (loss) income per common share: Basic $ (0. 38) $ 0. 16 $ (0. 60) Diluted $ (0. 38) $ 0. 16 $ (0. 60) Weighted average common shares outstanding: Basic 48, 594 48, 191 47, 696 Diluted 48, 594 48, 325 47, 696 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) Years Ended July 31, 2022 2021 2020 Net (loss) income $ (18, 261) $ 7, 875 $ (28, 520) Other comprehensive income (loss): Foreign currency translation adjustments 1, 799 (329) (899) Comprehensive (loss) income $ (16, 462) $ 7, 546 $ (29, 419) The accompanying notes are an integral part of these consolidated financial statements. CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY Years ended July 31, 2022, 2021, and 2020 (in thousands, except share data) Common Stock Shares Issued Common Stock Amount Additional Paid- in Capital Accumulated Deficit Accumulated Other Comprehensive Income Total Stockholders' Equity Balance at July 31, 2019 47, 556, 807 $ 476 $ 332, 704 $ (249, 732) $ 2, 580 $ 86, 028 Net (loss) for the year ended July 31, 2020 — — — (28, 520) — (28, 520) Vesting of restricted stock 811 — — — — — — Issuance of common stock for share- based compensation 4, 167 — 10 — — — 10 Share- based compensation charges — — — 923 — — — 923 Issuance of common stock for employee 401 (k) plan match 333, 265 3 836 — — — 839 Foreign currency translation adjustments — — — — — — (899) (899) Balance at July 31, 2020 47, 895, 050 $ 479 $ 334, 473 $ (278, 252) $ 1, 681 $ 58, 381 Net income for the year ended July 31, 2021 — — — 7, 875 — 7, 875 Vesting of restricted stock 817 — — — — — — Exercise of stock options 34, 667 1 96 — — — 97 Issuance of common stock for previously accrued bonuses 332, 700 3 872 — — — 875 Share- based compensation charges — — — 907 — — — 907 Issuance of common stock for employee 401 (k) plan match 208, 537 2 778 — — — 780 Foreign currency translation adjustments — — — — — — (329) (329) Balance at July 31, 2021 48, 471, 771 $ 485 $ 337, 126 $ (270, 377) $ 1, 352 $ 68, 586 Net (loss) for the year ended July 31, 2022 — — — (18, 261) — (18, 261) Exercise of stock options 11, 300 — 28 — — 28 Share- based compensation charges — — — 1, 496 — — — 1, 496 Issuance of common stock for employee 401 (k) plan match 237, 383 2 812 — — — 814 Foreign currency translation adjustments — — — — — — 1, 799 1, 799 Balance at July 31, 2022 48, 720, 454 $ 487 $ 339, 462 $ (288, 638) $ 3, 151 $ 54, 462 CONSOLIDATED STATEMENTS OF CASH FLOWS Years ended July 31, 2022 2021 2020 Cash flows from operating activities: Net (loss) income $ (18, 261) $ 7, 875 $ (28, 520) Adjustments to reconcile net (loss) income to net cash (used in) provided by operating activities: Depreciation and amortization of property, plant and equipment 2, 566 2, 332 2, 256 Amortization of intangible assets 261 321 524 Share- based compensation charges 1, 496 907 933 Share- based 401 (k) employer match expense 843 731 836 Foreign exchange loss (gain) 2, 057 (88) (1, 165) Realized and unrealized loss on marketable securities 1, 283 83 — Paycheck Protection Program (PPP) loan forgiveness — (7, 000) — Changes in operating assets and liabilities: Accounts receivable (1, 299) (1, 110) 1, 617 Inventories (2, 736) (4, 937) 85 Prepaid expenses and other assets (1, 174) (707) (216) Accounts payable — trade 390 (395) 1, 214 Accrued liabilities, other current liabilities and other liabilities (2, 016) 2, 375 5, 257 Total adjustments 1, 671 (7, 488) 11, 341 Net cash (used in) provided by operating activities (16, 590) 387 (17, 179) Cash flows from investing activities: Capital expenditures (3, 472) (4, 436) (2, 170) Sales (purchases) of marketable securities 28, 695 (30, 061) — Net cash provided by (used in) investing activities 25, 223 (34, 497) (2, 170) Cash flows from financing activities: Proceeds from borrowings under government programs and mortgage agreement — — — 7, 412 Repayments under mortgage agreement and capital leases (269) (339) (411) Proceeds from exercise of stock options 28 97 — Net cash (used in) provided by financing activities (241) (242) 7, 001 Effect of exchange rate changes on cash and cash equivalents (63) 11 67 Increase (decrease) in cash and cash equivalents and restricted cash 8, 329 (34, 341) (12, 281) Cash and cash equivalents and restricted cash- beginning of year 14, 274 48, 615 60, 896 Cash and cash equivalents and restricted cash- end of year $ 22, 603 $ 14, 274 $ 48, 615 Composition of cash and cash equivalents and restricted cash is as follows: Cash and cash equivalents 21, 603 13, 524 47, 865 Restricted cash 1, 000 750 750 Total cash and cash equivalents and restricted cash $ 22, 603 $ 14, 274 $ 48, 615 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Dollars in thousands except share data) Note 1- Summary of significant accounting policies Nature of business Enzo Biochem, Inc. (the " Company ") is an integrated diagnostics, clinical lab, and life sciences company engaged in research,

development, manufacturing and marketing of diagnostic and research products based on genetic engineering, biotechnology and molecular biology. These products are designed for the diagnosis of and / or screening for infectious diseases, cancers, genetic defects and other medically pertinent diagnostic information and are distributed in the United States and internationally. The Company also conducted research and development activities in the development of therapeutic products based on the Company' s technology platform of genetic modulation and immune modulation. The Company operates a clinical laboratory that offers and provides molecular and esoteric diagnostic medical testing services in the New York, New Jersey, and Connecticut medical communities. The Company operates in three segments (see Note 16). We have incurred net losses historically and have an accumulated deficit of $ 288, 261 as of July 31, 2022. We had a net loss of $ 18, 261 for the year ended July 31, 2022, and net cash used in operating activities was $ 16, 590. We may continue to generate net losses for the foreseeable future. We believe the combination of our cash and cash equivalents at July 31, 2022, expected cash flows from operations, and re- activation of the Controlled Equity Offering program, if necessary, as disclosed in Note 12 will be sufficient for our operations and non- discretionary capital needs for at least twelve months from the filing of this report. There can be no assurances as to the market price or demand if and when we utilize the Controlled Equity Offering. Additionally, failure to generate additional revenues, obtain additional capital or manage discretionary spending could have an adverse effect on our financial position, results of operations and liquidity. Impacts of COVID- 19 pandemic As a novel strain of coronavirus (COVID- 19) impacted the economy of the United States and other countries around the world, we committed to being a part of the coordinated public and private sector response to this unprecedented challenge. We made substantial investments to expand and maintain the amount of COVID- 19 testing available in the communities we serve. During the fiscal years ended July 31, 2022 and 2021, the Company generated substantial increases in COVID- 19 related products and services. Enzo applied its technical expertise in molecular diagnostics to develop next generation COVID- 19 diagnostic and antibody testing options which were approved under the FDA Emergency Use Authorization (EUA). This testing had a significantly positive impact on revenue, profitability and cash flow throughout fiscal 2021 and most of fiscal 2022. Revenues from COVID- 19 testing represented 44 %, 48 %, and 8 % of Clinical services revenues in the fiscal 2022, 2021 and 2020 periods, respectively. The rate of transmission of COVID- 19 and its variants is on the decline in the US and the economy has reopened. However, federal, state and local governmental policies and initiatives designed to reduce the transmission of COVID- 19 resulted in, among other things, a significant reduction in physician office visits, the cancellation of elective medical procedures, and the continuation of work- from- home policies. The COVID- 19 impact on the Company' s operations is consistent with the overall industry and our competitors, partners, and vendors. While we anticipate that COVID- 19 will continue to impact our business into the future, increases in vaccination rates and booster shots, the development of new therapeutics and greater availability of rapid COVID- 19 tests has resulted in a continued, significant decline in demand for our COVID- 19 testing. As a result, fiscal year 2022 COVID- 19 testing volume, revenues, profitability, and cash flow did not match 2021 levels. The extent to which the COVID- 19 pandemic has and will continue to impact the Company' s business and financial results depend on numerous evolving factors including, but not limited to: the magnitude and duration of the COVID- 19 pandemic, the impact to worldwide macroeconomic conditions including interest rates, employment rates and health insurance coverage, the speed of the economic recovery, and governmental and business reactions to the pandemic. These factors are beyond the Company' s knowledge and control, and as a result, at this time the Company cannot reasonably estimate the impact the COVID- 19 pandemic will have on its businesses but the impact could be material. The Company assessed certain accounting matters that generally require consideration of forecasted financial information in context with the information reasonably available to the Company and the unknown future impacts of COVID- 19 as of July 31, 2022 and through the date of this Annual Report. The accounting matters assessed included, but were not limited to, the Company' s patient self- pay revenue concessions and credit losses in the Clinical Services segment, accounts receivable, inventories and the carrying value of goodwill and other long- lived assets. The Company' s future assessment of the magnitude and duration of COVID- 19, as well as other factors, could result in additional material impacts to the Company' s consolidated financial statements in future reporting periods. We expect COVID- 19 testing volume will continue to decline in the periods ahead as the percentage of Americans who are vaccinated increases, the severity of its variants declines, and the general use of at home testing. However, the emergence and spread of more serious variants may cause our COVID- 19 testing volume to increase again. Even after the COVID- 19 pandemic has moderated and the business and social distancing restrictions have eased, we may continue to experience similar adverse effects to our businesses, consolidated results of operations, financial position and cash flows resulting from a recessionary economic environment that may persist, including inflation and actions by the Federal Reserve to increase interest rates. Principles of consolidation The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (" U. S. GAAP ") and include the accounts of the Company and its wholly- owned subsidiaries, Enzo Clinical Labs, Inc., Enzo Life Sciences, Inc. (and its wholly- owned foreign subsidiaries), Enzo Therapeutics, Inc., Enzo Realty LLC (" Realty ") and Enzo Realty II, LLC (" Realty II "). All intercompany transactions and balances have been eliminated. Use of Estimates The preparation of financial statements in conformity with U. S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates. Contingencies are evaluated and a liability is recorded when the matter is both probable and reasonably estimable. Gain contingencies are evaluated and not recognized until the gain is realizable or realized. Foreign Currency Translation / Transactions The Company has determined that the functional currency for its foreign subsidiaries is the local currency. For financial reporting purposes, assets and liabilities denominated in foreign currencies are translated at current exchange rates and profit and loss accounts are translated at weighted average exchange rates. Resulting translation gains and losses are included as a separate component of stockholders' equity as accumulated other comprehensive income or loss. Gains or losses resulting from transactions entered into in other than the functional currency are recorded as

foreign exchange gains and losses in the consolidated statements of operations. Fair Value Measurements The Company determines fair value measurements used in its consolidated financial statements based upon the exit price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants exclusive of any transaction costs, as determined by either the principal market or the most advantageous market. Inputs F- 9 used in the valuation techniques to derive fair values are classified based on a three- level hierarchy. The basis for fair value measurements for each level within the hierarchy is described below with Level 1 having the highest priority and Level 3 having the lowest. Level 1 Quoted prices in active markets for identical assets or liabilities. Level 2 Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and model- derived valuations in which all significant inputs are observable in active markets. Level 3 Valuations derived from valuation techniques in which one or more significant inputs are unobservable. Cash and cash equivalents consist of demand deposits with banks and highly liquid money market funds. At July 31, 2022 and 2021, the Company had cash and cash equivalents in foreign bank accounts of $ 590 and $ 909, respectively. As of July 31, 2021, the Company had investments in a mutual fund and an exchange traded fund (ETF) holding highly rated corporate bonds, asset backed securities, municipal bonds, mortgage obligations and government obligations. These investments were classified as trading securities and Level 1 fair value investments. As of July 31, 2021, the fair value of these investments was $ 29, 978 and the cost basis was $ 30, 061. We recognized unrealized losses of $ 83 for the fiscal year ended July 31, 2021. During fiscal 2022, these investments were sold resulting in a realized loss of $ 1, 283, which is included in Other income (expense). Concentration of Credit Risk Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash and cash equivalents and accounts receivable. The Company believes the fair value of the aforementioned financial instruments approximates the cost due to the immediate or short- term nature of these items. Concentration of credit risk with respect to the Company' s Life Sciences products segment is mitigated by the diversity of the Company' s customers and their dispersion across many different geographic regions. To reduce risk, the Company routinely assesses the financial strength of these customers and, consequently, believes that its accounts receivable credit exposure with respect to these customers is limited. The Company believes that the concentration of credit risk with respect to the Clinical Laboratory services accounts receivable is mitigated by the diversity of third party payers that insure individuals. To reduce risk, the Company routinely assesses the financial strength of these payers and, consequently, believes that its accounts receivable credit risk exposure, with respect to these payers, is limited. While the Company also has receivables due from the Federal Medicare program, the Company does not believe that these receivables represent a credit risk since the Medicare program is funded by the federal government and payment is primarily dependent on our submitting the appropriate documentation. Other than the Medicare program, two providers whose programs are included in the " Third party payers " and health maintenance organizations (" HMOs ") categories represent 21 %, 22 % and 24 %, respectively, of Clinical Services net revenue for the years ended July 31, 2022, 2021 and 2020 respectively, and represent 23 % and 27 % respectively, of the Clinical Services net accounts receivable as of July 31, 2022 and 2021. Other than the Medicare program, one provider whose programs are included in the " Third- party payers " and " Health Maintenance Organizations " (" HMO' s ") categories represents 11 % and 13 %, respectively, of Clinical Services net revenues for the years ended July 31, 2022 and 2021. F- 10 Accrual for Self- Funded Employee Medical Insurance Accruals for self- funded employee medical insurance are determined based on a number of assumptions and factors, including historical payment trends, claims history and current estimates. These estimated liabilities are not discounted as they are expected to be repaid within one year. If actual trends differ from these estimates, the financial results could be impacted. The Company' s estimate of contractual adjustment is based on significant assumptions and judgments, such as its interpretation of payer reimbursement policies, and bears the risk of change. The estimation process is based on the experience of amounts approved as reimbursable and ultimately settled by payers, versus the corresponding gross amount billed to the respective payers. The contractual adjustment is an estimate that reduces gross revenue based on gross billing rates to amounts expected to be approved and reimbursed. Gross billings are based on a standard fee schedule the Company sets for all third- party payers, including Medicare, HMO' s and managed care providers. The Company adjusts the contractual adjustment estimate quarterly, based on its evaluation of current and historical settlement experience with payers, industry reimbursement trends, and other relevant factors which include the monthly and quarterly review of: 1) current gross billings and receivables and reimbursement by payer, 2) current changes in third party arrangements and 3) the growth of in- network provider arrangements and managed care plans specific to our Company. During the years ended July 31, 2022, 2021 and 2020, the contractual adjustment percentages, determined using current and historical reimbursement statistics, were approximately 83 %, 83 % and 88 %, respectively, of gross billings. The Company' s ability to collect outstanding receivables from third- party payers is critical to its operating performance and cash flows. The primary collection risk lies with uninsured patients or patients for whom primary insurance has paid but a patient portion remains outstanding. The Company also assesses the current state of its billing functions in order to identify any known collection issues and to assess the impact, if any, on the allowance estimates which involves judgment. The Company believes that the collectability of its receivables is directly linked to the quality of its billing processes, most notably, those related to obtaining the correct information in order to bill effectively for the services provided. Should circumstances change (e. g. shift in payer mix, decline in economic conditions or deterioration in aging of receivables), our estimates of net realizable value of receivables could be reduced by a material amount. In the case of COVID- 19 diagnostic and antibody testing, collection risk for uninsured patients was minimized under the HRSA COVID- 19 Uninsured Program (the " Program "). The HRSA stopped accepting claims for testing and treatment for uninsured individuals under the Program in late March 2022. As of July 31, 2022, we had no material outstanding net accounts receivable associated with claims for reimbursement under the Program. The Clinical Laboratory Services segment' s net receivables are detailed by billing category and as a percent to its total net receivables. At July 31, 2022 and 2021, approximately 59 % of the Company' s net accounts receivable relates to its Clinical Laboratory Services business, which operates in the New York, New Jersey and Connecticut medical communities. F- 11 (Dollars in thousands except share data) As of July 31, 2020, total accounts

receivable – net were $ 9, 141 with Clinical Labs receivables representing 68 % or $ 6, 180 of the total. Life Sciences receivables were $ 2, 961 or 32 % of the total. The Company values inventory at the lower of cost (first- in, first- out) or net realizable value. Work- in- process and finished goods inventories consist of material, labor, and manufacturing overhead. Finished goods also include high throughput machines we intend to sell to laboratory customers. Write downs of inventories to net realizable value are based on a review of inventory quantities on hand and estimated sales forecasts based on sales history and anticipated future demand. Unanticipated changes in demand could have a significant impact on the value of our inventory and require additional write downs of inventory which would impact our results of operations. Property, plant and equipment Property, plant and equipment is stated at cost, and depreciated on the straight- line basis over the estimated useful lives of the various asset classes as follows: building and building improvements: 15- 30 years; laboratory machinery and equipment, office furniture and computer equipment: 3- 10 years. Leasehold improvements are amortized over the term of the related leases or estimated useful lives of the assets, whichever is shorter. Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. Intangible assets (exclusive of patents), arose primarily from acquisitions, and primarily consist of customer relationships, trademarks, licenses, and website and database content. Our intangible assets are all finite- lived and are amortized according to their estimated useful lives, which range from 4 to 15 years. Patents represent capitalized legal costs incurred in pursuing patent applications. When such applications result in an issued patent, the related capitalized costs, if any, are amortized over a ten year period or the life of the patent, whichever is shorter, using the straight- line method. The Company reviews its issued patents and pending patent applications, and if it determines to abandon a patent application or that an issued patent no longer has economic value, the unamortized balance in deferred patent costs relating to that patent is immediately expensed. Impairment testing for Goodwill and Long- Lived Assets F- 12 any additional tests in assessing goodwill for impairment. However, if the Company concludes otherwise or elects not to perform the qualitative assessment, then it will perform a quantitative assessment as it identifies the reporting units and compares the fair value of each of these reporting units to their respective carrying amount. If the carrying amount of the reporting unit is less than its fair value, no impairment exists. If the carrying amount of the reporting unit is higher than its fair value, the impairment charge is the amount by which the carrying amount exceeds its fair value, not to exceed the total amount of goodwill allocated to the reporting unit. The Company performed a quantitative assessment in 2022, 2021 and 2020, and concluded there were no goodwill impairments. The goodwill is held in the Clinical Labs reporting unit, which in 2022 had income before taxes of $ 839. In 2022, we estimated the fair value of this reporting unit by determining the multiple of enterprise value to revenues for a peer group of clinical reference labs, discounted that multiple, and applied it to our reporting unit' s annualized revenues. The resulting estimate of the fair value of the reporting unit exceeded the carrying amount of the reporting unit by approximately $ 55, 000, well in excess of the unit' s goodwill. The Company reviews the recoverability of the carrying value of long- lived assets (including its intangible assets, all of which have finite lives) of an asset or asset group for impairment annually as of the end of the fiscal year, or more frequently if indicators of potential impairment exist. Should indicators of impairment exist, the carrying values of the assets are evaluated in relation to the operating performance and future undiscounted cash flows of an asset or asset group. The net book value of the long lived asset is adjusted to fair value if its expected future undiscounted cash flow is less than its book value. There were no long- lived asset impairments in 2022, 2021 or 2020. Comprehensive income (loss) Comprehensive income (loss) consists of the Company' s consolidated net income (loss) and foreign currency translation adjustments. Foreign currency translation adjustments included in comprehensive income (loss) were not tax effected as the Company has a full valuation allowance at July 31, 2022, 2021, and 2020. Accumulated other comprehensive income is a separate component of stockholders' equity and consists of the cumulative foreign currency translation adjustments. Shipping and Handling Costs Shipping and handling costs associated with the distribution of finished goods to customers are recorded in cost of goods sold. Research and Development Research and development costs are charged to expense as incurred. Advertising All costs associated with advertising are expensed as incurred. Advertising expense, included in selling, general and administrative expense, approximated $ 577, $ 400, and $ 437 for the years ended July 31, 2022, 2021 and 2020, respectively. The Company accounts for income taxes under the liability method of accounting for income taxes. Under the liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The liability method requires that any tax benefits recognized for net operating loss carry forwards and other items be reduced by a valuation allowance when it is more likely than not that the benefits may not be realized. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under the liability method, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. F- 13 It is the Company' s policy to provide for uncertain tax positions and the related interest and penalties based upon management' s assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. At July 31, 2022 and 2021, the Company had no uncertain tax benefits recorded. To the extent the Company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the Company' s effective tax rate in a given financial statement period may be affected. Segment Reporting The Company separately reports information about each operating segment that engages in business activities from which the segment may earn revenues and incur expenses, whose separate operating results are regularly reviewed by the chief operating decision maker regarding allocation of resources and performance assessment and which exceed specific quantitative thresholds related to revenue and profit or loss. The Company' s operating activities are reported in three segments (see Note 16). Net income (loss) per share Basic net income (loss) per share represents net income (loss) divided by the weighted average number of common shares outstanding during the period. The dilutive effect of potential common shares, consisting of outstanding stock options, and unvested restricted stock units and performance stock units, is determined using the treasury stock method. For fiscal 2021 approximately 134, 000 of weighted average stock options were included in the calculation of diluted weighted average shares

outstanding. Diluted weighted average shares outstanding for fiscal 2022 and 2020 does not include the potential common shares from stock options and unvested restricted stock because to do so would have been antidilutive and as such is the same as basic weighted average shares outstanding for 2022 and 2020. The number of potential common shares (" in the money options ") and unvested restricted stock units and performance stock units excluded from the calculation of diluted weighted average shares outstanding for the year ended July 31, 2022 was approximately 472, 000. The number of potential common shares (" in the money options ") excluded from the calculation of diluted weighted average shares outstanding for the year ended July 31, 2020 was 40, 000. For the years ended July 31, 2022, 2021 and 2020, the effect of approximately 1, 499, 000, 1, 465, 000 and 1, 904, 000 respectively, of outstanding " out of the money " options to purchase common shares were excluded from the calculation of diluted weighted average shares outstanding because their effect would be anti- dilutive. The following table sets forth the computation of basic and diluted net income (loss) per share for the years ended July 31: 2022 2021 2020 Net (loss) income $ (18, 261) $ 7, 875 $ (28, 520) Weighted- average common shares outstanding — basic 48, 594 48, 191 47, 696 Add: effect of dilutive stock options and restricted stock — 134 — Weighted- average common shares outstanding — diluted 48, 594 48, 325 47, 696 Net (loss) income per share — basic $ (0. 38) $ 0. 16 $ (0. 60) Net (loss) income per share — diluted $ (0. 38) $ 0. 16 $ (0. 60) Share- Based Compensation The Company records compensation expense associated with stock options, restricted stock units and performance stock units based upon the fair value of the stock based awards as measured at the grant date. The Company determines the award values of stock options using the Black Scholes option pricing model. The expense is recognized by amortizing the fair values on a straight- line basis over the vesting period, adjusted for forfeitures when they occur. F- 14 For the years ended July 31, 2022, 2021 and 2020, share- based compensation expense relating to the fair value of stock options, restricted stock units and performance stock units was approximately $ 1, 496, $ 907 and $ 933, respectively (see Note 12). During the year ended July 31, 2020, the Company issued common stock as employee compensation in the amount of $ 10. No excess tax benefits were recognized for the year ended July 31, 2022, 2021 and 2020. The following table sets forth the amount of expense related to share- based payment arrangements included in specific line items in the accompanying statement of operations for the years ended July 31: 2022 2021 2020 Cost of clinical laboratory services $ 14 $ 93 $ 46 Selling, general and administrative 1, 482 814 887 $ 1, 496 $ 907 $ 933 Effect of New Accounting Pronouncements In December 2019, the Financial Accounting Standards Board (" FASB ") issued Accounting Standards Update (" ASU ") No. 2019- 12 Income Taxes (Topic 740) Simplifying the Accounting for Income Taxes. The amendments in the ASU simplify the accounting for income taxes by removing certain exceptions to the general principles of Topic 740. The amendments also improve consistent application of and simplify U. S. GAAP for other areas of Topic 740 by clarifying and amending existing guidance. We adopted the amendments in this ASU beginning August 1, 2021. The adoption of the amendments in this ASU did not have a material impact on our consolidated results of operations, financial position or cash flows. The estimate of expected credit losses will require entities to incorporate considerations of historical information, current information and reasonable and supportable forecasts. Adoption of this standard is required for our annual and interim periods beginning August 1, 2023, as we qualify as a smaller reporting company at the end of fiscal 2022 and must be adopted using a modified retrospective transition approach. We are currently assessing the impact of the adoption of this standard on our results of operations, financial position and cash flows. Reclassification Certain prior period amounts have been reclassified to conform to the current period presentation. These reclassifications had no effect on the reported results of operations. Note 2 — Goodwill and intangible assets The Company' s net carrying amount of goodwill is in the Clinical Laboratory Services segment and is $ 7, 452 as of July 31, 2022 and 2021. F- 15 The Company' s change in the net carrying amount of intangible assets, all in the Life Sciences Products segment is as follows: Gross Accumulated Amortization Net July 31, 2020 $ 27, 686 $ (27, 148) $ 538 Amortization expense — (296) (296) Foreign currency translation 89 (87) 2 July 31, 2021 $ 27, 775 $ (27, 531) $ 244 Amortization expense — (239) (239) Foreign currency translation (512) 507 (5) July 31, 2022 $ 27, 263 $ (27, 263) $ — Intangible assets, all finite- lived and fully amortized as of July 31, 2022, consist of the following: July 31, 2022 July 31, 2021 Gross Accumulated Amortization Net Gross Accumulated Amortization Net Patents $ 11, 027 (11, 027) $ — $ 11, 027 $ (11, 027) $ — Customer relationships 11, 771 (11, 771) — 12, 059 (11, 815) 244 Website and acquired content 1, 011 (1, 011) — 1, 025 (1, 025) — Licensed technology and other 470 (470) — 494 (494) — Trademarks 2, 984 (2, 984) — 3, 170 (3, 170) — Total $ 27, 263 (27, 263) $ — $ 27, 775 $ (27, 531) $ 244 Amortization expense for the years ended July 31, 2022, 2021, and 2020 was $ 239, $ 296 and $ 524, respectively. Note 3 — Revenue Recognition Clinical Services Revenue Service revenues in the Company' s clinical services business accounted for 70 %, 74 % and 63 % of the Company' s total revenues for fiscal years ended July 31, 2022, 2021, and 2020 respectively and are primarily comprised of a high volume of relatively low- dollar transactions. The services business, which provides clinical testing services, satisfies its performance obligation and recognizes revenues upon completion of the testing process for a specific patient and reporting to the ordering physician. The Company may also perform clinical testing services for other laboratories and will recognize revenue from those services when reported to the ordering laboratory. The Company estimates the amount of consideration it expects to receive from customer groups using the portfolio approach. These estimates of the expected consideration include the impact of contractual allowances and price concessions on our customer group portfolios consisting of healthcare insurers, government payers, client payers and patients as described below. Contracts with customers in our laboratory services business do not contain a financing component, based on the typically limited period of time between performance of services and collection of consideration. The transaction price includes variable consideration in the form of the contractual allowance and price concessions as well as the collectability of the transaction based on patient intent and ability to pay. The Company uses the expected value method in estimating the amount of the variability included in the transaction price. F- 16 The following are descriptions of our laboratory services business portfolios: Third party payers and Health Maintenance Organizations (HMO' s) Reimbursements from third party payers, primarily healthcare insurers and HMO' s are based on negotiated fee- for- service schedules and on capitated payment rates. Revenues consist of amounts billed net of contractual allowances for differences between amounts billed and the estimated consideration the Company expects to receive from such

payers, which considers historical collection and denial experience and the terms of the Company' s contractual arrangements. Adjustments to the allowances, based on actual receipts from the third- party payers, are recorded upon settlement. Collection of the consideration the Company expects to receive is normally a function of providing complete and correct billing information to these third party payers within the various filing deadlines, and typically occurs within 30 to 90 days of billing. Provided the Company has billed healthcare insurers accurately with complete information prior to the established filing deadline, there has historically been little to no collection risk. If there has been a delay in billing, the Company determines if the amounts in question will likely go past the filing deadline, and if so, will reserve accordingly for the billing. Third- party payers, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. Our revenues may be subject to adjustment as a result of these factors among others, including without limitation, differing interpretations of billing and coding guidance and changes by government agencies and payers in interpretations, requirements, and " conditions of participation " in various programs. Government Payer- Medicare Reimbursements from Medicare are based on fee- for- service schedules set by Medicare, which is funded by the government. Revenues consist of amounts billed net of contractual allowances for differences between amounts billed and the estimated consideration the Company expects to receive from Medicare, which considers historical collection and denial experience and other factors. Adjustments to the allowances, based on actual receipts from the government payers, are recorded upon settlement. Collection of consideration the Company expects to receive is normally a function of providing the complete and correct billing information within the various filing deadlines and typically occurs within 60 days of billing. Provided the Company has billed the government payer accurately with complete information prior to the established filing deadline, there has historically been little to no collection risk. If there has been a delay in billing, the Company determines if the amounts in question will likely go past the filing deadline, and, if so, it will reserve accordingly for the billing. Uninsured patients are billed based on established patient fee schedules or fees negotiated with physicians on behalf of their patients. Coinsurance and deductible responsibilities based on fees negotiated with healthcare insurers are also billed to insured patients and included in this portfolio. Collection of billings from patients is subject to credit risk and ability of the patients to pay. Revenues consist of amounts billed net of discounts provided to uninsured patients in accordance with the Company' s policies and implicit price concessions. Implicit price concessions represent differences between amounts billed and the estimated consideration the Company expects to receive from patients, which considers historical collection experience and other factors including current market conditions. Adjustments to the estimated allowances, based on actual receipts from the patients, are recorded upon settlement. Patient responsibility is invoiced and if it reaches 91 days outstanding, the account is sent to a collection agency for further processing. After the account has been with the collection agency for at least 105 days, it is written off. F- 17 The following table represents clinical services net revenues and percentages by type of customer: Year ended July 31, 2022 Year ended July 31, 2021 Year ended July 31, 2020 Revenue category Revenue % Revenue % Revenue % Third- party payers $ 43, 908 59 $ 52, 564 60 $ 24, 893 52 Medicare 10, 391 14 13, 084 15 10, 825 23 HMO' s 12, 070 16 11, 878 14 5, 983 12 Patient self- pay 8, 059 11 9, 458 11 6, 263 13 Total $ 74, 428 100 % $ 86, 984 100 % $ 47, 964 100 % For fiscal years ended July 31, 2022, 2021, and 2020 all of the Company' s clinical services revenues were generated within the United States. Under the CARES Act, we were eligible for and received two income grants in April and June 2020 totaling $ 1, 496 under the Department of Health and Human Services (HHS) Public Health and Social Services Emergency Fund for provider relief. The purpose of the payments is to reimburse the Company for health care related expenses or lost revenues attributable to COVID- 19. We certified that the grant funds were accepted per the regulations and recognized it as Grant income for the fiscal year ended July 31, 2020 in the Clinical Services segment. Products Revenue The Company accounts for revenue pursuant to ASC Update No. 2014- 09, Revenue from Contracts with Customer (ASC 606) and generates revenue from the sale of our single- use products used in the identification of genomic information. Revenue is recorded net of sales tax. The Company considers revenue to be earned when all of the following criteria are met: the Company has a contract with a customer that creates enforceable rights and obligations; promised products are identified; the transaction price is determinable; and the Company has transferred control of the promised items to the customer. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in the contract. The transaction price for the contract is measured as the amount of consideration the Company expects to receive in exchange for the goods expected to be transferred. A contract' s transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, control of the distinct good or service is transferred. Transfer of control for the Company' s products is generally at shipment or delivery, depending on contractual terms, but occurs when title and risk of loss transfers to the customer which represents the point in time when the customer obtains the use of and substantially all of the remaining benefit of the product. As such, the Company' s performance obligation related to product sales is satisfied at a point in time. The Company recognizes a receivable when it has an unconditional right to payment, which represents the amount the Company expects to collect in a transaction and is most often equal to the transaction price in the contract. Payment terms for shipments to end- user and distributor customers may range from 30 to 90 days. Amounts billed to customers for shipping and handling are included in revenue, while the related shipping and handling costs are reflected in cost of products. Products revenue by geography is as follows: 2022 2021 2020 United States $ 19, 781 $ 15, 617 $ 14, 824 Europe 8, 568 10, 386 7, 720 Asia Pacific 4, 294 4, 744 4, 017 Products revenue $ 32, 643 $ 30, 747 $ 26, 561 F- 18 Note 4- Supplemental disclosure for statement of cash flows In the years ended July 31, 2022, 2021, and 2020, interest paid by the Company approximated $ 231, $ 237 and $ 266, respectively. For the years ended July 31, 2022 and 2021, the net reductions in the measurement of right of use assets and liabilities included in cash flows from operating activities was approximately $ 29 and $ 74, respectively. The changes are included in changes in accrued liabilities, other current liabilities, and other liabilities in the statement of cash flows. For the years ended July 31, 2022, 2021 and 2020, tax on capital paid by the Company was $ 129, $ 305 and $ 90, respectively. There

was no cash paid for income taxes by the Company for the years ended July 31, 2022, 2021, and 2020. During the years ended July 31, 2022, 2021 and 2020, the Company issued common stock in connection with its share- based 401 (k) employer match in the amount of $ 814, $ 780 and $ 839, respectively. During the year ended July 31, 2021, the Company issued 332, 700 restricted shares of common stock to two senior executives in settlement of their accrued bonuses totaling $ 875. Note 5- Inventories Inventories, net consisted of the following at July 31: 2022 2021 Raw materials $ 1, 524 $ 1, 062 Work in process 2, 459 2, 534 Finished products 11, 428 9, 056 $ 15, 411 $ 12, 652 Note 6- Property, plant, and equipment At July 31, 2022 and 2021, property, plant, and equipment consist of: 2022 2021 Building and building improvements $ 11, 819 $ 10, 310 Machinery and equipment (includes assets under finance leases- see Note 9) 12, 491 12, 721 Office furniture and computer equipment 17, 034 15, 942 Leasehold improvements 5, 292 5, 692 46, 636 44, 665 Accumulated depreciation and amortization (31, 439) (30, 142) 15, 197 14, 523 Land and land improvements 2, 062 2, 062 $ 17, 259 $ 16, 585 At July 31, 2022, building and building improvements include construction in progress of approximately $ 323. Note 7- Income taxes The Company recorded no benefit or provision for income taxes for fiscal years ended July 31, 2022, 2021 or 2020. F- 19 On March 27, 2020, the CARES Act was signed into law. The CARES Act includes provisions relating to refundable payroll tax credits, deferment of the employer portion of certain payroll taxes, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. While the Company continues to evaluate the impact of the CARES Act, it does not currently believe it will have a material impact on the Company' s income taxes or related disclosures. Deferred tax assets and liabilities arise from temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements. The components of deferred tax assets (liabilities) as of July 31 are as follows: 2022 2021 Deferred tax assets: Federal tax carryforward losses $ 20, 303 18, 140 Provision for uncollectible accounts receivable 635 970 State and local tax carry forward losses 2, 758 1, 658 Stock compensation 1, 766 1, 088 Depreciation 875 850 Research and development and other tax credit carryforwards 1, 551 1, 527 Lease liabilities 4, 594 5, 194 Foreign tax carryforward losses 3, 213 2, 536 Intangibles and goodwill 481 858 Inventory 1, 769 1, 637 Accrued expenses 2, 199 1, 341 Other, net 12 17 Deferred tax assets 40, 156 35, 816 Right of use assets (4, 313) (4, 917) Prepaid expenses (1, 175) (946) Other, net (58) (79) Deferred tax liabilities (5, 546) (5, 942) Net deferred tax assets before valuation allowance 34, 610 29, 874 Less: valuation allowance (34, 610) (29, 874) Net deferred tax liabilities $ — $ — The Company recorded a valuation allowance during the years ended July 31, 2022 and 2021 equal to domestic and foreign net deferred tax assets. The Company believes that the valuation allowance is necessary as it is not more likely than not that the deferred tax assets will be realized in the foreseeable future based on positive and negative evidence available at this time. This conclusion was reached because of uncertainties relating to future taxable income, in terms of both its timing and its sufficiency, which would enable the Company to realize the deferred tax assets. For fiscal years 2022 and 2021, the change in the valuation allowance was $ 4, 736 and ($ 203), respectively. As of July 31, 2022, the Company had U. S. federal net operating loss carryforwards of approximately $ 96, 679 of which $ 58, 867, if not fully utilized, expire between 2030 and 2038 and which $ 37, 812 do not expire. Utilization is dependent on generating sufficient taxable income prior to expiration of the tax loss carryforwards. In addition, the Company has research and development tax credit carryforwards of approximately $ 1, 551 which expire between 2025 and 2042. As of July 31, 2022, the Company has state and local net operating loss carryforwards of approximately $ 38, 133, which if not fully utilized, expire between 2038 and 2042. As of July 31, 2022, the Company had foreign loss carryforwards of approximately $ 14, 831 which with few exceptions do not expire. F- 20 The geographic components of (loss) income before income taxes consisted of the following for the years ended July 31: 2022 2021 2020 United States operations $ (14, 267) $ 8, 832 $ (27, 690) International operations (3, 994) (957) (830) (Loss) income before taxes $ (18, 261) $ 7, 875 $ (28, 520) The benefit or (provision) for income taxes was at rates different from U. S. federal statutory rates for the following reasons for the years ended July 31: 2022 2021 2020 Federal statutory rate 21. 0 % (21. 0) % 21. 0 % Compensation and other expenses not deductible for income tax return purposes (2. 9) (3. 4) (1. 1) PPP loan forgiveness income not taxable for income tax return purposes — 18. 7 — Change in valuation allowance, net 18. 1 5. 7 (19. 9) — % — % — % Because there are no undistributed earnings at the Company' s foreign subsidiaries at July 31, 2022, no U. S. federal income taxes have been provided. As of July 31, 2022, the Company has no liabilities for uncertain tax positions. It is the Company' s policy to record interest and penalties as a component of tax expense. The Company files income tax returns in the U. S. Federal jurisdiction, various U. S. state jurisdictions and several foreign jurisdictions. With few exceptions, the fiscal years that remain subject to examination are July 31, 2019 through July 31, 2022. During fiscal 2021, the Swiss Federal Tax Administration completed of an examination for the fiscal years 2015 through 2018, which resulted in the tax returns being accepted as filed. During fiscal 2021, the Company received notification from the German tax authorities of an examination for the fiscal years 2015 through 2019. As of July 31, 2022, we had received no preliminary audit findings and no reserves have been recorded with respect to this audit. Note 8 — Long- term debt In connection with the purchase of a building in Farmingdale, NY on November 27, 2018, a wholly- owned subsidiary (the " mortgagor subsidiary ") of the Company entered into a Fee Mortgage and Security Agreement (the " mortgage agreement ") with Citibank, N. A. (the " mortgagee "). The mortgage agreement provides for a loan of $ 4, 500 for a term of 10 years, bears a fixed interest rate of 5. 09 % per annum and requires monthly mortgage payments of principal and interest of $ 30. Debt issuance costs of $ 72 are being amortized over the life of the mortgage agreement. The balance of unamortized debt issuance cost was $ 46 at July 31, 2022. At July 31, 2022, the balance owed by the subsidiary under the mortgage agreement was $ 3, 980. The Company' s obligations under the mortgage agreement are secured by the building and by a $ 1, 000 cash collateral deposit with the mortgagee as additional security. This restricted cash is included in other assets as of July 31, 2022. We assumed from the seller an operating lease for a tenant at the facility which expired on June 30, 2020. Rental income from the assumed lease is included in other income. F- 21 The mortgage agreement includes affirmative and negative covenants and events of default, as defined. Events of default include non- payment of principal and interest on debt outstanding, non- performance of covenants, material changes in business, breach of

representations, bankruptcy or insolvency, and changes in control. The mortgage includes certain financial covenants. Effective October 2020, the Company and the mortgagee agreed to a covenant restructure whereby the mortgagee waived the Company' s financial ratio covenant for the fiscal period ended July 31, 2020 and modified the mortgage to replace that covenant with a liquidity covenant. The liquidity covenant requires that we own and maintain at all times and throughout the remaining term of the loan at least $ 25, 000 of liquid assets, defined as time deposits, money market accounts and obligations issued by the U. S. government or any of its agencies. The cash collateral agreement was also modified to require compliance with the liquidity covenant for two consecutive fiscal years before the collateral is released back to us. Effective September 29, 2021, the Company and the mortgagee agreed to further covenant restructuring whereby (a) the liquidity covenant was reduced to 150 % of the loan principal (or approximately $ 6, 000 as of July 31, 2022) from $ 25, 000 previously, and (b) the collateral requirement was increased from $ 750 to $ 1, 000. As of July 31, 2022, the Company was in compliance with all the financial and liquidity covenants related to this mortgage. In April 2020, our subsidiary in Switzerland received a loan of CHF 400 (or $ 400, based on the foreign exchange rate as of July 31, 2020) from the Swiss government under the " Corona Krise " emergency loan program in response to the pandemic. This loan is uncollateralized and bears 0 % interest. In January 2022, the bank agent of the Swiss government informed our subsidiary that the loan had to be fully amortized within a maximum of eight years and that the first of semiannual amortization payments of CHF 33 would begin in March 2022. In March 2022, the subsidiary made its first semi- annual principal repayment of CHF 33 (or $ 35 based on exchange rates). Based on this amortization schedule, the loan will be repaid by September 2027. The current portion of this loan is included in other current liabilities and the long term portion in long term debt – net as of July 31, 2022. The CARES Act expanded the U. S. Small Business Administration' s (SBA) business loan program to create the Paycheck Protection Program (PPP), which provided employers with uncollateralized loans whose primary purpose is to retain or maintain workforce and salaries for a twenty- four week period (" covered period ") following receipt of the loan. PPP loans have a 1 % fixed interest rate and are due from two to five years. The primary features of the PPP loan program are to provide funding to companies to cover eligible expenses, and the potential for forgiveness of that portion of the loan spent on payroll and other permitted operating expenses during the covered period, subject to reductions if the borrower fails to maintain or restore employee and salary levels. We applied for the PPP loan based on the eligibility and need requirements established when the program was announced and in April 2020 received $ 7, 000 through Citibank N. A., the Company' s existing lender, pursuant to the PPP (the " PPP Loan "). We accrued no interest on the loan. In June 2021, the SBA approved in full our request for loan forgiveness. For the year ended July 31, 2021, we recognized the forgiveness of the $ 7, 000 loan in Other income. The SBA announced its intention to audit loans in excess of $ 2, 000 and in June 2022 requested through Citibank N. A. the production of documents and information related to our loan and our request for forgiveness. We provided that information to the SBA via Citibank N. A. In October 2022 the SBA requested through Citibank N. A. that we complete a new version of their loan necessity questionnaire with respect our forgiven loan, which we will provide by the end of October 2022. Minimum future annual principal payments under these agreements as of July 31, 2022 are as follows: July 31, Total 2023 $ 230 2024 237 2025 247 2026 256 2027 266 Thereafter 3, 116 Total principal payments 4, 352 Less: current portion, included in other current liabilities and finance leases short term (229) unamortized mortgage cost (46) Long term debt- net $ 4, 077 F- 22 Note 9- Leases The Company determines if an arrangement is or contains a lease at contract inception. The Company leases buildings, office space, patient service centers, and equipment primarily through operating leases, and equipment through a limited number of finance leases. Generally, a right- of- use asset, representing the right to use the underlying asset during the lease term, and a lease liability, representing the payment obligation arising from the lease, are recognized on the balance sheet at lease commencement based on the present value of the payment obligation. For operating leases, expense is recognized on a straight- line basis over the lease term. For finance leases, interest expense on the lease liability is recognized using the effective interest method and amortization of the right- of- use asset is recognized on a straight- line basis over the shorter of the estimated useful life of the asset or the lease term. Short- term leases with an initial term of 12 months or less are not recorded on the balance sheet; the Company recognizes lease expense for these leases on a straight- line basis over the lease term. The Company primarily uses its incremental borrowing rate in determining the present value of lease payments as the Company' s leases generally do not provide an implicit rate. The Company has lease agreements with (i) right- of- use asset payments and (ii) non- lease components (i. e. payments related to maintenance fees, utilities, etc.,) which have generally been combined and accounted for as a single lease component. The Company' s leases have remaining terms of less than 1 year to 6 years, some of which include options to extend the leases for up to 5 years. The Company' s lease terms may include renewal options that are reasonably certain to be exercised and termination options that are reasonably certain not to be exercised. Certain of the Company' s lease agreements include rental payments adjusted periodically for inflation or a market rate which are included in the lease liabilities. Leases Balance Sheet Classification July 31, 2022 July 31, 2021 Assets Operating Right- of- use assets $ 15, 174 $ 17, 020 Finance Property, plant and equipment, net (a) 172 248 Total lease assets $ 15, 346 $ 17, 268 Liabilities Current: Operating Current portion of operating lease liabilities $ 3, 432 $ 3, 419 Finance Finance leases short term 81 88 Non- current: Operating Operating lease liabilities, non- current 12, 729 14, 558 Finance Other liabilities and finance leases long term 39 110 Total lease liabilities $ 16, 281 $ 18, 175 (a) Accumulated amortization of finance lease assets was approximately $ 210 and $ 1, 100 as of July 31, 2022 and 2021, respectively. For the years ended July 31, components of lease cost were as follows: Lease Cost 2022 2021 Operating lease cost $ 4, 431 $ 5, 474 Finance lease cost: Amortization of leased assets 76 137 Interest on lease liabilities 10 16 Total lease cost $ 4, 517 $ 5, 627 F- 23 The maturity of the Company' s lease liabilities as of July 31, 2022 is as follows: Maturity of lease liabilities, years ending July 31, Operating leases Finance leases Total 2023 $ 4, 129 $ 81 $ 4, 210 2024 3, 836 44 3, 880 2025 3, 503 — 3, 503 2026 3, 351 — 3, 351 2027 2, 507 — 2, 507 Thereafter 808 — 808 Total lease payments 18, 134 125 18, 259 Less: Interest (a) (1, 973) (5) (1, 978) Present value of lease liabilities $ 16, 161 $ 120 $ 16, 281 (a) Primarily calculated using the Company' s incremental borrowing rate. Lease term and discount rate for the years ended July 31 were as follows: Lease term and discount rate 2022 2021 Weighted- average

remaining lease term (years): Operating leases 4. 7 years 5. 6 years Finance leases 1. 5 years 2. 5 years Weighted- average discount rate: Operating leases 5. 0 % 4. 9 % Finance leases 4. 5 % 7. 4 % See Note 4 for cash flow information on cash paid for amounts included in the measurement of lease liabilities for the years ended July 31, 2022, 2021 and 2020. Note 10- Accrued Liabilities At July 31, accrued liabilities consist of: 2022 2021 Payroll, benefits and commissions $ 4, 912 $ 5, 856 Professional fees 801 628 Legal 4, 523 2, 554 Deferred revenue — 2, 675 Other 2, 064 2, 588 $ 12, 300 $ 14, 301 In order to increase cash flow to providers of services and suppliers impacted by the pandemic, the Centers for Medicare and Medicaid Services (CMS) expanded its Accelerated and Advance Payment Program to a broader group of Medicare providers. We applied for and received a $ 2, 526 payment advance from this program in April 2020. Since the Company had the right to repay the advance at any time, the entire balance was considered current. The recoupment of the CMS advance started April 2021 and was completed by April 2022. At July 31, 2021 and 2020, the deferred revenue related to the CMS payment advance was $ 1, 847 and $ 2, 526, respectively. F- 24 Self- Insured Medical Plan The Company self- funds medical insurance coverage for certain of its U. S. based employees. The risk to the Company is believed to be limited through the use of individual and aggregate stop loss insurance. As of July 31, 2022 and 2021, the Company had established reserves of $ 260 and $ 300 respectively, which are included in accrued liabilities for payroll, benefits and commissions, for claims that have been reported but not paid and for claims that have been incurred but not reported. The reserve is based upon the Company' s historical payment trends, claim history and current estimates. Note 11- Other current liabilities At July 31, other current liabilities consist of: 2022 2021 Finance lease obligations, current portion $ 81 $ 81 Current portion of mortgage loan 159 152 Current portion of Swiss government loan 70 — $ 310 $ 233 Note 12- Stockholders' equity The Company has a Controlled Equity OfferingSM Sales Agreement (the " Sales Agreement ") with Cantor Fitzgerald & Co., as sales agent (" Cantor "). Under the Sales Agreement, the Company may offer and sell, from time to time, through Cantor, shares of the Company' s common stock, par value $ 0. 01 per share (the " Common Stock "). The Company pays Cantor a commission of 3. 0 % of the aggregate gross proceeds received under the Sale Agreement. The Company is not obligated to make any sales of the Shares under the Sales Agreement. The offering of Shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the Shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by Cantor or the Company, as permitted therein. The initial agreement contemplated the sale of shares of the Company' s common stock having an aggregate offering price of up to $ 20. 0 million. In December 2014, the Sales Agreement was amended in order for the Company to offer and sell additional shares of Common Stock having an aggregate offering price of $ 20. 0 million. On September 1, 2017, the Company filed with the SEC a Form S- 3 " shelf " registration and sales agreement prospectus covering the offering, issuance and sale of our Common Stock that may be issued and sold under the existing Sales Agreement in an aggregate amount of up to $ 19. 2 million. A total of $ 150 million of securities may be sold under this shelf registration, which was declared effective September 15, 2017. The Form S- 3 expired in October 2020 but may be refiled at any time at the discretion of the Company. For the years ended July 31, 2022, 2021, and 2020, the Company did not sell any shares of common stock under the Sales Agreement. Common stock issuances In fiscal 2022, the Company issued 237, 383 shares of common stock pursuant to its employees' 401 (k) matching contribution obligation of $ 814. In fiscal 2021, the Company issued 208, 537 shares of common stock in settlement of its employees' 401 (k) matching contribution obligation of $ 780. In January 2021, the Company issued 332, 700 shares of common stock in payment of accrued executive bonuses of $ 875. In fiscal 2020, the Company issued 333, 265 shares of common stock in settlement of its employees' 401 (k) matching contribution obligation of $ 839 and also issued 4, 167 shares of common stock as employee compensation and recorded an expense of $ 10. F- 25 Incentive stock plans In January 2011, the Company' s stockholders approved the adoption of the 2011 Incentive Plan (the " 2011 Plan ") for the issuance of equity awards, including, among others, options, restricted stock, restricted stock units and performance stock units for up to 3, 000, 000 shares of common stock. In January 2018, the Company' s stockholders approved the amendment and restatement of the 2011 Plan (the " Amended and Restated 2011 Plan ") to increase the number of shares of common stock available for grant under the 2011 Plan by 2, 000, 000 shares of common stock bringing the total number of shares available for grant to 5, 000, 000 shares of common stock. On October 7, 2020, the Company' s Board of Directors approved the amendment and restatement of the Amended and Restated 2011 Plan, with an effective date of October 7, 2020 and subject to approval by the Company' s stockholders at the 2020 annual meeting of stockholders of the Company. The amendment and restatement of the Amended and Restated 2011 Plan was for purposes of, among other things, (i) increasing the shares of common stock available for grant under the Amended and Restated 2011 Plan by an additional 4, 000, 000 shares of common stock bringing the total number of shares available for grant to 9, 000, 000 shares of common stock and (ii) extending the term of the Amended and Restated 2011 Plan until October 7, 2030. In January 2021, the Company' s stockholders approved the amendment and restatement of the Amended and Restated 2011 Plan. The exercise price of options granted under the Amended and Restated 2011 Plan, as amended and restated, is equal to or greater than fair market value of the common stock on the date of grant. The Amended and Restated 2011 Plan, as amended and restated, will terminate at the earliest of (a) such time as no shares of common stock remain available for issuance under the plan, (b) termination of the plan by the Company' s Board of Directors, or (c) October 7, 2030. Awards outstanding upon expiration of the Amended and Restated 2011 Plan, as amended and restated, will remain in effect until they have been exercised or terminated, or have expired. As of July 31, 2022, there were approximately 4, 142, 000 shares of common stock available for grant under the Amended and Restated 2011 Plan, as amended and restated. The Company estimates the fair value of each stock option award on the measurement date using a Black- Scholes option pricing model. The fair value of awards is amortized to expense on a straight- line basis over the requisite service period. The Company expenses restricted stock awards based on vesting requirements, primarily time elapsed. Performance stock awards are not recognized until it is probable they will be earned. At such time, their expense is then recognized over the requisite service period, including that portion of the service period already elapsed. Effective November 8, 2021, the Company appointed Hamid Erfanian as Chief Executive Officer and granted equity awards to him comprised of options to purchase 700, 000 shares of common stock of the Company

and restricted stock units (RSUs) for 260, 000 shares of the common stock of the Company. Options granted pursuant to the plans may be either incentive stock options or non- statutory options. The 2011 Plan provides for the issuance of stock options, restricted stock and restricted stock unit awards which generally vest over a two or three year period. A summary of the option activity pursuant to the Company' s stock option plan for the years ended July 31, 2022, 2021, and 2020 is as follows: 2022 2021 2020 Options Weighted- Average Exercise Price Options Weighted- Average Exercise Price Options Weighted- Average Exercise Price Outstanding at beginning of year 2, 504, 563 $ 3. 74 2, 636, 496 $ 4. 05 2, 351, 040 $ 4. 53 New Grants 1, 858, 250 $ 2. 88 543, 104 $ 2. 57 773, 032 $ 2. 40 Exercised (11, 300) $ 2. 49 (34, 667) $ 2. 80 — $ — Expired or forfeited (409, 730) $ 7. 00 (640, 370) $ 3. 52 (487, 576) $ 3. 71 Outstanding at end of year 3, 941, 783 $ 3. 00 2, 504, 563 $ 3. 74 2, 636, 496 $ 4. 05 Exercisable at end of year 1, 794, 399 $ 3. 14 1, 561, 326 $ 4. 37 1, 457, 162 $ 5. 10 Weighted average fair value of options granted during year $ 1. 52 $ 1. 27 $ 1. 01 F- 26 The intrinsic value of stock option awards that vested during the fiscal year represents the value of the Company' s closing stock price on the last trading day of the fiscal year in excess of the exercise price multiplied by the number of options that vested. Total intrinsic value of outstanding options that vested and were exercisable during the fiscal years ended July 31, 2022, 2021, and 2020 was $ 68, $ 488, and $ 0, respectively. The intrinsic value of options outstanding at July 31, 2022, 2021, and 2020 was $ 193, $ 1, 323 and $ 79, respectively. The intrinsic value of the options exercised in fiscal 2022, 2021 and 2020 was $ 4, $ 38 and $ 0, respectively. Listed below are the assumptions used to determine the fair value of options granted during fiscal years 2022, 2021 and 2020: Grant Year Options Granted Exercise Price Range Term (years) Vesting Period (years) FMV of options Granted / Per Share Expected Life (years) Expected Volatility % Interest Rate % 1, 858, 250 $ 2. 21 – $ 3. 64 $ 1. 17 – $ 1. 78 3. 5 73. 25 – 74. 52 1. 73 – 3. 03 543, 104 $ 2. 14 – $ 2. 63 2- 3 $ 1. 04 – $ 1. 30 3. 25 – 3. 5 69. 36 – 73. 26 0. 19 – 0. 26 773, 032 $ 2. 20 – $ 3. 32 2- 3 $ 0. 86 – $ 1. 34 3. 25 – 3. 5 53. 77 – 66. 24 0. 27 – 1. 2F- 27 The following table summarizes information for stock options outstanding at July 31, 2022: Range of Exercise prices Shares Weighted- Average Remaining Contractual Life in Years Weighted- Average Exercise Price $ 2. 14- $ 3. 64 3, 554, 633 3. 6 $ 2. 73 $ 4. 42 290, 000 1. 0 $ 4. 42 $ 5. 52- $ 8. 36 97, 150 0. 6 $ 7. 47 3, 941, 783 The following table summarizes information for stock options exercisable at July 31, 2022: Range of Exercise prices Shares Weighted- Average Remaining Contractual Life in Years Weighted- Average Exercise Price $ 2. 14- $ 3. 64 1, 407, 249 2. 3 $ 2. 58 $ 4. 42 290, 000 1. 0 $ 4. 42 $ 5. 52- $ 8. 36 97, 150 0. 6 $ 7. 47 1, 794, 399 Performance Stock Units To better align the long- term interest of executives with growing U. S. practices, beginning in fiscal 2018, the Company granted long- term incentive awards in the form of time based stock options and performance- based restricted stock units (" Performance Stock Units " or " PSUs "). The PSUs earned will be determined over a three- year performance period. The primary performance metrics will be revenue and Adjusted EBITDA growth. Payouts are based on revenue and adjusted EBITDA goals met at threshold, target or maximum levels and will be modified based on Total Shareholder Return (" TSR ") performance relative to Enzo' s peer group. The remaining PSUs awarded to executive officers in fiscal 2018 expired in fiscal 2021 as the 3 year growth goals were not achieved. During the fiscal years ended 2020 and 2019, the Company awarded additional PSUs to its executive officers. These awards provide for the grant of shares of our common stock at the end of a three — year period based on the achievement of revenue growth and adjusted EBITDA growth goals met at threshold, target or maximum levels over the respective period. For the fiscal year ended July 31, 2022, the Company reversed net total PSU accruals of $ 124 for a former officer who forfeited 25, 300 and 20, 000 PSUs from the fiscal 2020 and fiscal 2019 awards, respectively, resulting in net PSU compensation expense of $ 70. For the fiscal year ended July 31, 2021, the Company accrued compensation expense of $ 272 for the outstanding PSUs awarded during fiscal 2020 and 2019 as the achievement of certain growth goals was deemed probable at that time. During fiscal 2021, a former officer forfeited 4, 000 PSUs awarded in fiscal 2019. During the fiscal year 2020, no compensation expense was recognized as the achievement of the growth goals was deemed not probable at that time. During fiscal 2020, a former executive forfeited 10, 500 PSUs from the fiscal 2019 award. F- 28 The following table summarizes PSU' s granted and outstanding through July 31, 2022: Grant Date Total Grant Forfeitures Outstanding Fair Market Value At Grant Date (000s) 10 / 15 / 2019 80, 500 (34, 500) 46, 000 $ 155 10 / 19 / 2020 98, 600 (25, 300) 73, 300 $ 153 Restricted Stock Units The Company awarded restricted stock units (" RSUs ") to our CEO who was appointed in November 2021. The award was for 260, 000 RSUs which vest over three years on the anniversary of his hiring. The fair market value of these RSUs at the date of grant was $ 881. The Company awarded to its 3 independent directors 117, 189 RSUs in April 2022 which vest over two years whose fair market value was $ 300. In July 2022 the Company awarded to its 3 independent directors 124, 998 RSUs which vest in one year and whose fair market value was $ 300. During fiscal 2022, the Company recognized shared based compensation expense of $ 295 for these RSUs. The following table summarizes RSU activity for the fiscal year ended July 31, 2022: Number of RSUs outstanding Weighted Average Fair Value per Unit at Date of Grant or Vesting Weighted Average Remaining Contractual Term Aggregate Intrinsic Value (000s) Granted 502, 187 $ Vested — — — Cancelled — $ — Outstanding at end of period 502, 187 $ 2. 95 1. 8 years $ 1, 190 Expected to vest at end of period 502, 187 $ 2. 95 1. 8 years $ 1, 190 As of July 31, 2022, there was $ 3, 835 of total unrecognized compensation cost related to non- vested share- based payment arrangements granted under the Company' s 2011 Incentive Plan, which will be recognized over a weighted average remaining life of approximately two years. Note 13- Employee benefit plans The Company has a qualified Salary Reduction Profit Sharing Plan (the " Plan ") for eligible U. S. employees under Section 401 (k) of the Internal Revenue Code. The Plan provides for voluntary employee contributions through salary reduction and voluntary employer contributions at the discretion of the Company. For the years ended July 31, 2022, 2021, and 2020, the Company authorized employer matched contributions of 50 % of the employees' contribution up to 10 % of the employees' compensation, payable in Enzo Biochem, Inc. common stock. The share- based 401 (k) employer matched contribution was approximately $ 814, $ 780 and $ 839 in fiscal years 2022, 2021, and 2020, respectively. As of July 31, 2022, 2021 and 2020 the Company accrued a total of $ 462, $ 433 and $ 481, respectively in 401 (k) matching contribution obligations within the Accrued liabilities account. F- 29 The Company' s Swiss operations provide a pension plan named the Enzo Life Sciences (ELS) AG Vertrag- Nr. 2 / 401144, (the " Swiss Plan ") under the Swiss government' s social security

system for Swiss employees. The current required minimum saving contribution is 13 % for employees over age 25 and minimum annual investment return is 1. 00 %. Employees are required to contribute based on a formula and the Company' s Swiss operations make contributions of at least 40 % of the employee contribution. The status of the Swiss Plan, which is substantially funded as of December 31, 2021, the latest plan year end, is as follows: As of December 31, 2021 2020 2019 Total Assets $ 2, 667 $ 2, 721 $ 2, 181 Accumulated Benefit Obligation $ 2, 760 $ 2, 890 $ 2, 401 Funded status 97 % 94 % 91 % Fiscal Year ended July 31, 2021 2020 2019 Employer contributions $ 144 $ 143 $ 165 The contract for the Swiss Plan automatically renews on its annual anniversary unless notice of termination is provided three months prior. The current contract will automatically renew on December 31, 2022. Currently the Company has no plans to change the current funding or plan design. No events have occurred that would impact the Swiss Plan status. Note 14- Commitments A related party entity owned by a director and a former executive officer of the Company owns the building that the Company leases as its main facility for clinical laboratory operations and certain research operations. In addition to the minimum annual rentals of space, the lease is subject to annual increases, based on the consumer price index. Annual increases are limited to 3 % per year. Rent expense for this lease, inclusive of real estate taxes, approximated $ 1, 867, $ 1, 815 and $ 1, 833 during fiscal years 2022, 2021 and 2020, respectively. Note 15 — Contingencies The Company has brought cases in the United States District Court for the District of Delaware (" the Court "), alleging patent infringement against various companies. In 2017, the Court ruled that the asserted claims of the' 180 and' 405 Patents are invalid for nonenablement in cases involving Abbott, Beeton Dickinson, Gen- Probe, Hologic, and Roche. That ruling was affirmed by the United States Court of Appeals for the Federal Circuit (" Federal Circuit ") in June 2019. Enzo subsequently filed a petition for certiorari regarding the invalidity ruling for the' 180 and' 405 Patents in February 2020; the Supreme Court denied Enzo' s petition on March 30, 2020. F- 30 On September 2, 2021, the PTO issued a non- final office action in an ex parte reexamination concerning the' 197 Patent. In the office action, the PTO rejected certain claims of the' 197 Patent under 35 U. S. C. § 102 and for nonstatutory double- patenting. Enzo responded to the office action on January 3, 2022. Beckton Dickinson filed another ex parte reexamination concerning the ' 197 patent on July 26, 2022. On February 5, 2020, Harbert Discovery Fund, LP and Harbert Discovery Co- Investment Fund I, LP (" HDF ") brought an action in the United States District Court for the Southern District of New York against the Company and five of its present or former Directors, Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce A. Hanna, Dov Perlysky and Rebecca Fischer. On March 26, 2020, HDF filed an amended complaint against the same defendants. Count I asserted the Company violated Section 14 (a) of the Securities and Exchange Act of 1934 and Rule 14a- 9 thereunder by disseminating proxy materials that made purportedly false statements. Count II asserted a claim against the individual defendants under Section 20 (a) of the Exchange Act premised on Enzo' s purported violation of Section 14 (a) and Rule 14a- 9. Count III asserted the individual defendants breached their fiduciary duty, based on the same conduct and by seeking to entrench themselves. Finally, Count IV purported to assert a derivative claim for a declaration that any amendment to Article II, Section 2 requires the approval of 80 % of Enzo' s shareholders. On July 16, 2020, the day before the defendants' motion to dismiss was due, HDF asked the Court to dismiss their claims without prejudice. Defendants asked HDF to dismiss the claims with prejudice, but they refused. On July 17, 2020, the Court dismissed the claims without prejudice. On November 27, 2020, the Company brought an action in the United States District Court for the Southern District of New York against Harbert Discovery Fund, LP, Harbert Discovery Co- Investment Fund I, LP, Harbert Fund Advisors, Inc., Harbert Management Corp. and Kenan Lucas (together, " Harbert "). The Company alleges Harbert made false and misleading representations, or omitted to state material facts necessary to make their statements not misleading, in proxy materials they disseminated seeking the election to the Company' s Board of Directors at its 2019 Annual Meeting of two candidates they nominated, in violation of Section 14 (a) of the 1934 Exchange Act and Rule 14a- 9 thereunder. The Company seeks damages and injunctive relief. On October 12, 2021, HDF filed nine counterclaims against the Company and present and former directors Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce A. Hanna, Dov Perlysky, Rebeca Fischer, Dr. Mary Tagliaferri and Dr. Ian B. Walters. HDF claims the Company made false and misleading representations in proxy materials it disseminated in connection with its 2019 Annual Meeting, in violation of Section 14 (a) of the 1934 Exchange Act and Rule 14a- 9 thereunder, and that the Company' s directors at that time are liable under Section 20 (a) of the Exchange Act for the Company' s purported misstatements. HDF also claims that current and former Company directors breached their fiduciary duties by taking four corporate actions: (a) adjourning the 2019 meeting for 25 days; (b) purportedly causing the two Harbert candidates for director, who were elected at the 2019 Meeting, to resign in November 2020; (c) authorizing the November 27, 2020 Lawsuit; and (d) not accepting Dr. Rabbani' s resignation as a director in March 2021. On November 10, 2021, the Company and the other counterclaim defendants moved to dismiss HDF' s counterclaims. On December 9, 2021, the court granted the motion to dismiss HDF' s counterclaims except HDF' s Section 14 (a) claim against the Company concerning its statement that it intended to " delay " the 2019 Annual Meeting, and HDF' s Section 20 (a) and breach of fiduciary duty counterclaims against Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce Hanna, Dov Perlysky and Rebecca Fischer with respect to that statement. The Court allowed HDF to move for leave to replead with respect to its dismissed counterclaims. On June 7, 2022, the Court " so ordered " a stipulation of dismissal with prejudice of the Company' s claims against Harbert Discovery Fund, LP, Harbert Discovery Co- Investment Fund I, LP, Harbert Fund Advisors, Inc., Harbert Management Corp., and Kenan Lucas, and HDF' s counterclaims against the Company, Dr. Bruce Hanna, Dov Perlysky, Rebecca Fischer, Dr. Ian B. Walters and Dr. Mary Tagliaferri. The only remaining claims are HDF' s counterclaims against Dr. Rabbani and Mr. Weiner. HDF has asked the Court to dismiss those claims without prejudice. Dr. Rabbani and Mr. Weiner have asked the Court to dismiss those counterclaims with prejudice and to allow them to take discovery from HDF, the Company, and possibly others. F- 31 As described in Note 3, third- party payers, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. During the third fiscal quarter of 2019, a significant third- party payer informed us outside of their typical

business practice that they believe it overpaid the Company during certain periods of fiscal 2018. The Company disputed these claims and formally sent legal appeal letters to the payer. During the fiscal 2020 period, we recorded $ 0. 8 million in legal and related expenses as a result of reduced reimbursements this payer made to us. In April 2020, we and the payer entered into a settlement agreement and release whereby the parties agreed that the $ 0. 8 million previously withheld by the payer shall fully and completely satisfy the dispute. On February 25, 2022, Barry Weiner, the Company' s co- founder and President, notified the Company that he was terminating his employment as President of the Company for " Good Reason " as defined in his employment agreement. The Company accepted Mr. Weiner' s termination, effective April 19, 2022 but disagrees with Mr. Weiner' s assertion regarding " Good Reason. " On July 20, 2022, Barry Weiner, the Company' s former Chief Financial Officer, filed a demand for arbitration with the AAA asserting, among other things, that his annual bonus for fiscal year 2021 was too low and that his resignation (effective April 19, 2022) was for " Good Reason " under the terms of his employment agreement. He seeks, among other things, payment of a higher 2021 bonus, and severance payments and benefits. An arbitrator has not yet been selected from the AAA' s panel. As of July 31, 2022, the Company has not accrued any charges related to Mr. Weiner' s termination. F- 32 Note 16- Segment reporting The Company has three reportable segments: Clinical Services, Products and Therapeutics. The Clinical Services segment provides diagnostic services to the health care community. The Company' s Products segment develops, manufactures, and markets products to research and pharmaceutical customers. The Company' s Therapeutics segment conducts research and development activities for therapeutic drug candidates. The Company evaluates segment performance based on segment income (loss) before taxes. Costs excluded from segment income (loss) before taxes and reported as " Other " consist of corporate general and administrative costs which are not allocable to the three reportable segments. Legal and related expenses incurred to defend the Company' s intellectual property, which may result in settlements recognized in another segment and other general corporate matters are considered a component of the Other segment. Legal and related expenses specific to other segments' activities are allocated to those segments. Legal settlements, net, represent activities for which royalties would have been received in the Company' s Products segment. Management of the Company assesses assets on a consolidated basis only and therefore, assets by reportable segment have not been included in the reportable segments below. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. F- 33 The following financial information represents the operating results of the reportable segments of the Company: Year ended July 31, 2022 Clinical Laboratory Services Life Sciences Products Therapeutics Other Consolidated Revenues – Services and Products $ 74, 428 $ 32, 643 — — $ 107, 071 Operating costs and expenses: Cost of revenues 45, 891 19, 213 — — 65, 104 Research and development 1, 329 2, 383 $ 55 — 3, 767 Selling, general and administrative 26, 173 11, 604 — $ 10, 241 48, 018 Legal and related expenses 254 186 — 5, 249 5, 689 Legal settlements — (500) — — (500) Total operating costs and expenses 73, 647 32, 886 55 15, 490 122, 078 Operating income (loss) 781 (243) (55) (15, 490) (15, 007) Other income (expense) Interest (19) 45 — 133 159 Other 77 4 — (1, 272) (1, 191) Foreign exchange loss — (2, 222) — — (2, 222) Income (loss) before taxes $ 839 $ (2, 416) $ (55) $ (16, 629) $ (18, 261) Depreciation and amortization included above $ 1, 711 $ 813 — $ 303 $ 2, 827 Share- based compensation included above: Selling, general and administrative 190 22 — 1, 270 1, 482 Cost of sales 8 6 — — — 14 Total $ 198 $ 28 — $ 1, 270 $ 1, 496 Capital expenditures $ 929 $ 1, 915 — $ 628 $ 3, 472 F- 34 Year ended July 31, 2021 Clinical Laboratory Services Life Sciences Products Therapeutics Other Consolidated Revenues $ 86, 984 $ 30, 747 $ — $ — $ 117, 731 Operating costs and expenses: Cost of revenues 48, 179 15, 975 — — 64, 154 Research and development 615 2, 559 78 — 3, 252 Selling, general and administrative 26, 028 11, 015 62 7, 800 44, 905 Legal and related expenses 264 25 — 4, 439 4, 728 Total operating costs and expenses 75, 086 29, 574 140 12, 239 117, 039 Operating income (loss) 11, 898 1, 173 (140) (12, 239) 692 Other income (expense) Interest (17) 37 — (12) 8 Other (18) 7 — 6, 916 6, 905 Foreign exchange gain — 270 — — 270 Income (loss) before taxes $ 11, 863 $ 1, 487 $ (140) $ (5, 335) $ 7, 875 Depreciation and amortization included above $ 1, 609 $ 756 $ — $ 288 $ 2, 653 Share- based compensation included in above: Selling, general and administrative 33 102 — $ 679 814 Cost of sales 93 — — — — 93 Total $ 126 $ 102 $ — $ 679 $ 907 Capital expenditures $ 3, 352 $ 752 $ — $ 332 $ 4, 436 F- 35 Year ended July 31, 2020 Clinical Laboratory Services Life Sciences Products Therapeutics Other Consolidated Revenues – Services and Products $ 47, 964 $ 26, 561 — — $ 74, 525 Grant income 1, 496 — — — — 1, 496 Total 49, 460 26, 561 — — 76, 021 Operating costs and expenses: Cost of revenues 38, 855 13, 396 — — 52, 251 Research and development 1, 509 2, 190 $ 749 — 4, 448 Selling, general and administrative 23, 533 10, 485 — $ 8, 942 42, 960 Legal and related expenses 211 2 — 6, 516 6, 729 Total operating costs and expenses 64, 108 26, 073 749 15, 458 106, 388 Operating (loss) income (14, 648) 488 (749) (15, 458) (30, 367) Other income (expense) Interest (36) 56 — 434 454 Other 45 13 — 430 488 Foreign exchange gain — 905 — — 905 (Loss) income before taxes $ (14, 639) $ 1, 462 $ (749) $ (14, 594) $ (28, 520) Depreciation and amortization included above $ 1, 553 $ 964 — $ 263 $ 2, 780 Share- based compensation included above: Selling, general and administrative 57 74 — 756 887 Cost of sales 46 — — — — 46 Total $ 103 $ 74 — $ 756 $ 933 Capital expenditures $ 1, 811 $ 322 — $ 37 $ 2, 170 F- 36 Geographic financial information is as follows: Net Services, Products and Grant revenues from unaffiliated customers, Year ended July 31, 2022 2021 2020 United States $ 94, 209 $ 102, 601 $ 64, 284 Europe 8, 568 10, 386 7, 720 Asia Pacific 4, 294 4, 744 4, 017 Total $ 107, 071 $ 117, 731 $ 76, 021 Long- lived assets, at July 31, 2022 2021 United States $ 39, 866 $ 41, 249 Europe 19 52 Total $ 39, 885 $ 41, 301 The Company' s reportable segments are determined based on the services they perform and the products they sell, not on the geographic area in which they operate. The Company' s Clinical Laboratory Services segment operates 100 % in the United States with all revenue derived there. The Life Sciences Products segment earns product revenue both in the United States and foreign countries. The following is a summary of the Life Sciences Products segment product revenues attributable to customers located in the United States and foreign countries for the years ended July 31, 2022 2021 2020 United States $ 19, 782 $ 15, 617 $ 14, 824 Foreign countries 12, 861 15, 130 11, 737 $ 32, 643 $ 30, 747 $ 26, 561 F- 37 ENZO BIOCHEM, INC SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS As of and for the Years ended July 31, 2021, 2020 and 2019 (in thousands) Year ended July 31, Description Balance at Beginning of Year Charged (credited) to costs

and expenses Charged to other accounts Deductions Balance at end of Year 2022 Allowance for doubtful accounts receivable $ 180 $ 12 $ 31 (1) $ 161 2021 Allowance for doubtful accounts receivable 194 5 19 (1) 180 2020 Allowance for doubtful accounts receivable 166 28 — 194 2022 Deferred tax valuation allowance 29, 874 4, 736 — 34, 610 2021 Deferred tax valuation allowance 30, 077 (203) — 29, 874 2020 Deferred tax valuation allowance 23, 527 6, 550 — 30, 077 (1) Write- off of uncollectible accounts receivable. false FY2021- 08- 01 2022- 07- 312021- 01- 312022- 10- 112022- 07- 312021- 07- 312020- 08- 01 2021- 07- 312019- 08- 01 2020- 07- 31us- gaap: CommonStockMember2019- 07- 31us- gaap: AdditionalPaidInCapitalMember2019- 07- 31us- gaap: RetainedEarningsMember2019- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2019- 07- 312019- 07- 31us- gaap: CommonStockMember2019- 08- 01 2020- 07- 31us- gaap: AdditionalPaidInCapitalMember2019- 08- 01 2020- 07- 31us- gaap: RetainedEarningsMember2019- 08- 01 2020- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2019- 08- 01 2020- 07- 31us- gaap: CommonStockMember2020- 07- 31us- gaap: AdditionalPaidInCapitalMember2020- 07- 31us- gaap: RetainedEarningsMember2020- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2020- 07- 312020- 07- 31us- gaap: CommonStockMember2020- 08- 01 2021- 07- 31us- gaap: AdditionalPaidInCapitalMember2020- 08- 01 2021- 07- 31us- gaap: RetainedEarningsMember2020- 08- 01 2021- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2020- 08- 01 2021- 07- 31us- gaap: CommonStockMember2021- 07- 31us- gaap: AdditionalPaidInCapitalMember2021- 07- 31us- gaap: RetainedEarningsMember2021- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2021- 07- 31us- gaap: CommonStockMember2021- 08- 01 2022- 07- 31us- gaap: AdditionalPaidInCapitalMember2021- 08- 01 2022- 07- 31us- gaap: RetainedEarningsMember2021- 08- 01 2022- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2021- 08- 01 2022- 07- 31us- gaap: CommonStockMember2022- 07- 31us- gaap: AdditionalPaidInCapitalMember2022- 07- 31us- gaap: RetainedEarningsMember2022- 07- 31us- gaap: AccumulatedOtherComprehensiveIncomeMember2022- 07- 31enz: ClinicalRevenueMember2021- 08- 01 2022- 07- 31enz: ClinicalRevenueMember2020- 08- 01 2021- 07- 31enz: ClinicalRevenueMember2019- 08- 01 2020- 07- 31enz: ForeignBankMember2022- 07- 31enz: ForeignBankMember2021- 07- 31us- gaap: SalesRevenueNetMember enz: ThirdPartyPayerMember enz: ClinicalServicesMember2021- 08- 01 2022- 07- 31us- gaap: SalesRevenueNetMember enz: ThirdPartyPayerMember enz: ClinicalServicesMember2020- 08- 01 2021- 07- 31us- gaap: SalesRevenueNetMember enz: ThirdPartyPayerMember enz: ClinicalServicesMember2019- 08- 01 2020- 07- 31us- gaap: SalesRevenueNetMember enz: HealthMaintenanceOrganizationMember enz: ClinicalServicesMember2021- 08- 01 2022- 07- 31us- gaap: SalesRevenueNetMember enz: HealthMaintenanceOrganizationMember enz: ClinicalServicesMember2020- 08- 01 2021- 07- 31enz: ClinicalLabsMember2021- 08- 01 2022- 07- 31enz: ClinicalLabsMember2020- 07- 31enz: ClinicalLabsMember2019- 08- 01 2020- 07- 31enz: LifeScienceReceivablesMember2020- 07- 31enz: LifeScienceReceivablesMember2019- 08- 01 2020- 07- 31srt: MinimumMember us- gaap: BuildingAndBuildingImprovementsMember2021- 08- 01 2022- 07- 31srt: MaximumMember us- gaap: BuildingAndBuildingImprovementsMember2021- 08- 01 2022- 07- 31srt: MinimumMember us- gaap: MachineryAndEquipmentMember2021- 08- 01 2022- 07- 31srt: MaximumMember us- gaap: MachineryAndEquipmentMember2021- 08- 01 2022- 07- 31srt: MinimumMember2021- 08- 01 2022- 07- 31srt: MaximumMember2021- 08- 01 2022- 07- 31us- gaap: PatentsMember2021- 08- 01 2022- 07- 31enz: OutOfTheMoneyMember2021- 08- 01 2022- 07- 31enz: OutOfTheMoneyMember2020- 08- 01 2021- 07- 31enz: OutOfTheMoneyMember2019- 08- 01 2020- 07- 31enz: ThirdPartyPayersMember enz: ClinicalLabsMember2022- 07- 31enz: ThirdPartyPayersMember enz: ClinicalLabsMember2021- 07- 31enz: PatientSelfpaysMember enz: ClinicalLabsMember2022- 07- 31enz: PatientSelfpaysMember enz: ClinicalLabsMember2021- 07- 31enz: MedicareMember enz: ClinicalLabsMember2022- 07- 31enz: MedicareMember enz: ClinicalLabsMember2021- 07- 31enz: HealthMaintenanceOrganizationsMember enz: ClinicalLabsMember2022- 07- 31enz: HealthMaintenanceOrganizationsMember enz: ClinicalLabsMember2021- 07- 31enz: ClinicalLabsMember2022- 07- 31enz: ClinicalLabsMember2021- 07- 31enz: LifeScienceMember2022- 07- 31enz: LifeScienceMember2021- 07- 31enz: CostOfClinicalLaboratoryServicesMember2021- 08- 01 2022- 07- 31enz: CostOfClinicalLaboratoryServicesMember2020- 08- 01 2021- 07- 31enz: CostOfClinicalLaboratoryServicesMember2019- 08- 01 2020- 07- 31us- gaap: SellingGeneralAndAdministrativeExpensesMember2021- 08- 01 2022- 07- 31us- gaap: SellingGeneralAndAdministrativeExpensesMember2020- 08- 01 2021- 07- 31us- gaap: 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08-01-2022-07-31enz:ClinicalServicesMember2020-08-01-2021-07-31enz:ClinicalServicesMember2019-08-01-2020-07-31enz:ProductRevenueMembercountry:US2021-08-01-2022-07-31enz:ProductRevenueMembercountry:US2020-08-01-2021-07-31enz:ProductRevenueMembercountry:US2019-08-01-2020-07-31enz:ProductRevenueMembersrt:EuropeMember2021-08-01-2022-07-31enz:ProductRevenueMembersrt:EuropeMember2020-08-01-2021-07-31enz:ProductRevenueMembersrt:EuropeMember2019-08-01-2020-07-31enz:ProductRevenueMembersrt:AsiaPacificMember2021-08-01-2022-07-31enz:ProductRevenueMembersrt:AsiaPacificMember2020-08-01-2021-07-31enz:ProductRevenueMembersrt:AsiaPacificMember2019-08-01-2020-07-31enz:ProductRevenueMember2021-08-01-2022-07-31enz:ProductRevenueMember2020-08-01-2021-07-31enz:ProductRevenueMember2019-08-01-2020-07-31us-gaap:BuildingAndBuildingImprovementsMember2022-07-31us-gaap:BuildingAndBuildingImprovementsMember2021-07-31us-gaap:MachineryAndEquipmentMember2022-07-31us-gaap:MachineryAndEquipmentMember2021-07-31us-gaap:OfficeEquipmentMember2022-07-31us-gaap:OfficeEquipmentMember2021-07-31us-gaap:LeaseholdImprovementsMember2022-07-31us-gaap:LeaseholdImprovementsMember2021-07-31us-gaap:DomesticCountryMember2021-08-01-2022-07-31us-gaap:DomesticCountryMember2020-08-01-2021-07-31us-gaap:DomesticCountryMember2019-08-01-2020-07-31us-gaap:ForeignCountryMember2021-08-01-2022-07-31us-gaap:ForeignCountryMember2020-08-01-2021-07-31us-gaap:ForeignCountryMember2019-08-01-2020-07-312018-11-272018-11-01-2018-11-272021-09-01-2021-09-292020-04-302022-03-01-2022-03-31enz:CitibankNAMember2020-04-302014-12-31us-gaap:CommonStockMember2017-09-01us-gaap:CommonStockMember2017-08-01-2017-09-012020-12-25-2021-01-01enz:TwoThousandElevenPlanMember2011-01-31enz:TwoThousandElevenPlanMember2018-01-01-2018-01-31enz:TwoThousandElevenPlanMember2018-01-312020-10-01-2020-10-072021-11-082021-11-01-2021-11-08srt:MinimumMember2020-08-01-2021-07-31srt:MaximumMember2020-08-01-2021-07-31srt:MinimumMember2019-08-01-2020-07-31srt:MaximumMember2019-08-01-2020-07-31srt:MinimumMemberenz:StockOptionsOutstandingMemberenz:ExercisePriceRangeOneMember2021-08-01-2022-07-31srt:MaximumMemberenz:StockOptionsOutstandingMemberenz:ExercisePriceRangeOneMember2021-08-01-2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePriceRangeOneMember2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePriceRangeOneMember2021-08-01-2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePricessTwoMember2021-08-01-2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePricessTwoMember2022-07-31srt:MinimumMemberenz:StockOptionsOutstandingMemberenz:ExercisePriceRangeThreeMember2021-08-01-2022-07-31srt:MaximumMemberenz:StockOptionsOutstandingMemberenz:ExercisePriceRangeThreeMember2021-08-01-2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePriceRangeThreeMember2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePriceRangeThreeMember2021-08-01-2022-07-31enz:StockOptionsOutstandingMemberenz:ExercisePriceRangeFourMember2022-07-31srt:MinimumMemberenz:StockOptionsExcereisableMemberenz:ExercisePriceRangeOneMember2021-08-01-2022-07-31srt:MaximumMemberenz:StockOptionsExcereisableMemberenz:ExercisePriceRangeOneMember2021-08-01-2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePriceRangeOneMember2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePriceRangeOneMember2021-08-01-2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePricessTwoMember2021-08-01-2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePricessTwoMember2022-07-31srt:MinimumMemberenz:StockOptionsExcereisableMemberenz:ExercisePriceRangeThreeMember2021-08-01-2022-07-31srt:MaximumMemberenz:StockOptionsExcereisableMemberenz:ExercisePriceRangeThreeMember2021-08-01-2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePriceRangeThreeMember2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePriceRangeThreeMember2021-08-01-2022-07-31enz:StockOptionsExcereisableMemberenz:ExercisePriceRangeFourMember2022-07-31enz:GrantDateOneMember2021-08-01-2022-07-31enz:GrantDateOneMember2022-07-31enz:GrantDateTwoMember2021-08-01-2022-07-31enz:GrantDateTwoMember2022-07-31us-gaap:RestrictedStockUnitsRSUMember2021-08-01-2022-07-31us-gaap:RestrictedStockUnitsRSUMember2022-07-31enz:EnzoBiochemIncMember2021-08-01-2022-07-31enz:EnzoBiochemIncMember2020-08-01-2021-07-31enz:EnzoBiochemIncMember2019-08-01-2020-07-312018-08-01-2019-07-312022-05-01-2022-05-312022-07-01-2022-07-31us-gaap:GeneralAndAdministrativeExpenseMember2021-08-01-2022-07-31enz:ClinicalLaboratoryServicesMember2021-08-01-2022-07-31enz:LifeSciencesProductsMember2021-08-01-2022-07-31enz:TherapeuticsMember2021-08-01-2022-07-31us-gaap:AllOtherSegmentsMember2021-08-01-2022-07-31enz:ConsolidatedMember2021-08-01-2022-07-31enz:ClinicalLaboratoryServicesMember2020-08-01-2021-07-31enz:LifeSciencesProductsMember2020-08-01-2021-07-31enz:TherapeuticsMember2020-08-01-2021-07-31us-gaap:AllOtherSegmentsMember2020-08-01-2021-07-31enz:ConsolidatedMember2020-08-01-2021-07-31enz:ClinicalLaboratoryServicesMember2019-08-01-2020-07-31enz:LifeSciencesProductsMember2019-08-01-2020-07-31enz:TherapeuticsMember2019-08-01-2020-07-31us-gaap:AllOtherSegmentsMember2019-08-01-2020-07-31enz:ConsolidatedMember2019-08-01-2020-07-31country:US2021-08-01-2022-07-31country:US2020-08-01-2021-07-31country:US2019-08-01-2020-07-31srt:EuropeMember2021-08-01-2022-07-31srt:EuropeMember2020-08-01-2021-07-31srt:EuropeMember2019-08-01-2020-07-31srt:AsiaPacificMember2021-08-01-2022-07-31srt:AsiaPacificMember2020-08-01-2021-07-31srt:AsiaPacificMember2019-08-01-2020-07-31country:US2022-07-31country:US2021-07-31srt:EuropeMember2022-07-31srt:EuropeMember2021-07-31enz:ForeignCountriesMember2021-08-01-2022-07-31enz:ForeignCountriesMember2020-08-01-2021-07-31enz:ForeignCountriesMember2019-08-01-2020-07-31enz:AllowanceForDoubtfulAccountsReceivableMember2021-07-31enz:AllowanceForDoubtfulAccountsReceivableMember2021-08-01-2022-07-31enz:AllowanceForDoubtfulAccountsReceivableMember2022-07-31enz:AllowanceForDoubtfulAccountsReceivableMember2020-

07- 31enz: AllowanceForDoubtfulAccountsReceivableMember2020- 08- 01 2021- 07- 31enz: AllowanceForDoubtfulAccountsReceivableMember2019- 07- 31enz: AllowanceForDoubtfulAccountsReceivableMember2019- 08- 01 2020- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2021- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2021- 08- 01 2022- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2022- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2020- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2020- 08- 01 2021- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2019- 07- 31us- gaap: ValuationAllowanceOfDeferredTaxAssetsMember2019- 08- 01 2020- 07- 31iso4217: USD xbrli: sharesiso4217: USDxbrli: sharesxbrli: pure iso4217: CHFExhibit 10 (ae) EXHIBIT 21 Enzo Clinical Labs, Inc., a New York Corporation Enzo Life Sciences, Inc., a New York Corporation Enzo Life Sciences (ELS) AG, in Lausen, Switzerland, a wholly- owned subsidiary of Enzo Life Sciences, Inc. Enzo Therapeutics, Inc., a New York Corporation Enzo Realty LLC, a New York Corporation Enzo Realty II, LLC, a New York Corporation Exhibit 23. 1 CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM We consent to the incorporation by reference in the Registration Statements of Enzo Biochem, Inc. on Form S- 3 (No. 333- 220312) and Form S- 8 (Nos. 333- 87153, 033- 88826, 333- 89308, 333- 123712, 333- 172127, 333- 197028, 333- 226799, 333- 236958 and 333- 252159) of our reports dated October 14, 2022, on our audits of the financial statements and financial statement schedule as of July 31, 2022 and 2021 and for each of the years in the three- year period ended July 31, 2022, and the effectiveness of Enzo Biochem, Inc.' s internal control over financial reporting as of July 31, 2022, which reports are included in this Annual Report on Form 10- K to be filed on or about October 14, 2022. EXHIBIT 31 (a) CERTIFICATIONS In connection with the Annual Report on Form 10- K of Enzo Biochem, Inc. (" the Company ") for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof, I, Hamid Erfanian, Chief Executive Officer of the Company, certify, pursuant to 18 U. S. C. § 1350, as adopted pursuant to § 302 of the Sarbanes- Oxley Act of 2002, that: 1. I have reviewed this Annual Report on Form 10- K of Enzo Biochem, Inc. 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report; 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report; 4. The Company' s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a- 15 (e) and 15d- 15 (e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a- 15 (f) and 15d- 15 (f)) for the Company and have: (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared; (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; (c) Evaluated the effectiveness of the Company' s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and (d) Disclosed in this report any change in the Company' s internal control over financial reporting that occurred during the Company' s most recent fiscal quarter (the Company' s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company' s internal control over financial reporting; and 5. The Company' s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company' s auditors and the audit committee of the Company' s board of directors (or persons performing the equivalent functions): (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company' s ability to record, process, summarize and report financial information; and (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company' s internal control over financial reporting. Date: October 14, 2022 By: / s / Hamid Erfanian Hamid Erfanian Chief Executive Officer and DirectorEXHIBIT 31 (b) In connection with the Annual Report on Form 10- K of Enzo Biochem, Inc. (" the Company ") for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof, I, David Bench, Chief Financial Officer and Principal Accounting Officer of the Company, certify, pursuant to 18 U. S. C. § 1350, as adopted pursuant to § 302 of the Sarbanes- Oxley Act of 2002, that: (d) Disclosed in this report any change in the Company' s internal control over financial reporting that occurred during the Company' s most recent fiscal quarter (the Company' s fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company' s internal control over financial reporting; andDate: October 14, 2022 By: / s / David Bench David Bench Chief Financial Officer, Principal Accounting OfficerEXHIBIT 32 (a) CERTIFICATE PURSUANT TO 18 U. S. C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES- OXLEY ACT OF 2002 In connection with the Annual Report of Enzo Biochem, Inc., and Subsidiaries (" the Company ") on Form 10- K for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the " Report "), I, Hamid Erfanian, Chief Executive Officer of the Company, certify, pursuant to 18 U. S. C. § 1350, as adopted pursuant to § 906 of the Sarbanes- Oxley Act of 2002, that: (1) The Report fully complies with the requirements of Section 13 (a) or 15 (d) of the Securities Exchange Act of 1934; and (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. Dated: October 14, 2022 By: / s / Hamid Erfanian Hamid Erfanian Chief Executive Officer and DirectorA signed original of this written

~~statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Act Commission or its staff upon request. EXHIBIT 32 (b) In connection with the Annual Report of Enzo Biochem, Inc., and Subsidiaries (" the Company ") on Form 10- K for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the " Report "), I, David Bench, Chief Financial Officer and Principal Accounting Officer of the Company, certify, pursuant to 18 U. S. C. § 1350, as adopted pursuant to § 906 of the Sarbanes- Oxley Act of 2002, that: Date: October 14, 2022 By: / s / David Bench David Bench Chief Financial Officer, Principal Accounting Officer~~