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of Contents Â Â Â Â UNITED STATESSECURITIES AND EXCHANGE COMMISSIONWashington, D.C. 20549FORM 10-Q(Mark One)â˜’QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934For the quarterly period ended June 30, 2024ORâ˜TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934For the transition period from to Commission File Number: 001-38720Twist Bioscience Corporation(Exact Name of Registrant as Specified in its Charter)Delaware46-2058888(State or other jurisdiction of(I.R.S. Employerincorporation or organization)Identification No.)681 Gateway Blvd, South San Francisco, CA 94080(Address of principal executive offices and zip code)(800) 719-0671(Registrantâ€™s telephone number, including area code)Title of each classTrading Symbol(s)Name of each exchange on which registeredCommon StockTWSTThe Nasdaq Global Select MarketIndicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes â˜’ No â˜Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (Â§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes â˜’ No â˜Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of â€œlarge accelerated filer,â€ â€œaccelerated filer,â€ â€œsmaller reporting companyâ€ and â€œemerging growth companyâ€ in Rule 12b-2 of the Exchange Act. (Check one):Large accelerated filerâ˜’Accelerated filerâ˜Non-accelerated filerâ˜Smaller reporting companyâ˜Â Â Emerging growth companyâ˜Table of ContentsIf an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. â˜Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes â˜ No â˜’APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PRECEDING FIVE YEARS:Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes â˜ No â˜APPLICABLE ONLY TO CORPORATE ISSUERSIndicate the number of shares outstanding of each of the issuerâ€™s classes of common stock, as of the latest practicable date.The number of shares of the Registrantâ€™s common stock outstanding as of JulyÂ 31, 2024, was 58,585,960.Table of ContentsTWIST BIOSCIENCE CORPORATIONQUARTERLY REPORT ON FORM 10-QFOR THE QUARTER ENDED JUNEÂ 30, 2024TABLE OF CONTENTS

1Table of ContentsForward-looking statementsThis Quarterly Report on Form 10-Q for the quarter ended JuneÂ 30, 2024, or Form 10-Q, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to, among other matters, plans for product development and licensing to third parties, plans and timeframe for the commercial development of DNA data storage capabilities, expectations regarding market penetration, anticipated customer conversions to our products, plans to expand in the international markets, and identification and development of potential antibody candidates. Forward-looking statements are also identified by the words â€œbelieve,â€ â€œwill,â€ â€œmay,â€ â€œestimate,â€ â€œcontinue,â€ â€œanticipate,â€ â€œintend,â€ â€œshould,â€ â€œplan,â€ â€œexpect,â€ â€œpredict,â€ â€œcould,â€ â€œpotentiallyâ€ and variations of such words and similar expressions. You should not rely upon forward-looking statements as predictions of future events. Such statements are based on managementâ€™s expectations as of the date of this filing and involve many risks and uncertainties that could cause our actual results, events or circumstances to differ materially from those expressed or implied in our forward-looking statements. Such risks and uncertainties include:â€¢our ability to increase our revenue and our revenue growth rate;â€¢our ability to accurately estimate capital requirements and our needs for additional financing; our estimates of the size of our market opportunities;â€¢our ability to increase DNA production, reduce turnaround times and drive cost reductions for our customers;â€¢our ability to effectively manage our growth;â€¢our ability to successfully enter new markets and manage our international expansion;â€¢our ability to develop and commercialize additional products in the synthetic biology, biologic drug and data storage industries, including our Express Genes product;â€¢our ability to leverage our investment in our manufacturing facility in Wilsonville, Oregon; â€¢our ability to protect our intellectual property, including our proprietary DNA synthesis platform;â€¢costs associated with defending intellectual property infringement and other claims;â€¢the effects of increased competition in our business;â€¢our ability to keep pace with changes in technology and our competitors;â€¢our ability to successfully identify, evaluate and manage any future acquisitions of businesses, solutions or technologies;â€¢the success of our marketing efforts;â€¢a significant disruption in, or breach in security of our information technology systems and resultant interruptions in service and any related impact on our reputation;â€¢our ability to attract and retain qualified employees and key personnel;â€¢the effects of natural or man-made catastrophic events or public health emergencies;â€¢the effectiveness of our internal controls;â€¢changes in government regulation affecting our business;â€¢uncertainty as to economic and market conditions and the impact of adverse economic conditions; andâ€¢other risk factors included under the section titled â€œRisk factorsâ€ contained in Item 1A of our Annual Report on Form 10-K filed with the SEC on November 21, 2023, our Quarterly Report on Form 10-Q filed with the SEC on February 2, 2024 and this Quarterly Report on Form 10-Q.2Table of ContentsYou should not rely upon forward-looking statements as predictions of future events. Such statements are based on managementâ€™s expectations as of the date of this filing and involve many risks and uncertainties that could cause our actual results, events or circumstances to differ materially from those expressed or implied in our forward-looking statements.Readers are urged to carefully review and consider all of the information in this Form 10-Q and in other documents we file from time to time with the Securities and Exchange Commission, or SEC. We undertake no obligation to update any forward-looking statements made in this Form 10-Q to reflect events or circumstances after the date of this filing or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.When we use the terms â€œTwist,â€ â€œTwist Bioscience,â€ the â€œCompany,â€ â€œwe,â€ â€œusâ€ or â€œourâ€ in this report, we are referring to Twist Bioscience Corporation and its consolidated subsidiaries unless the context requires otherwise. Sequence space and the Twist logo are trademarks of Twist Bioscience Corporation. All other company and product names may be trademarks of the respective companies with which they are associated.3Table of ContentsPART I. Financial informationItem 1. Financial statementsTwist Bioscience CorporationCondensed Consolidated Balance Sheets (unaudited)(In thousands except per share data)June 30,2024September 30,2023AssetsÂ Â Current assets:Â Cash and cash equivalents $239,142Â $286,470Â Short-term investments50,27649,943Accounts receivable, net31,98844,064Inventories28,48432,063Prepaid expenses and other current assets11,94111,716Total current assets$361,831Â $424,256Â Property and equipment, net106,339131,830Operating lease right-of-use assets61,27771,531Goodwill85,81185,811Intangible assets, net14,74154,483Restricted cash, non-current2,8952,811Other non-current assets5,2245,681Total assets$638,118Â $776,403Â Liabilities and stockholdersâ€™ equityCurrent liabilities:Accounts payable $6,626Â $14,052Â Accrued expenses14,83810,754Accrued compensation31,65925,818Current portion of operating lease liability14,55514,896Other current liabilities6,0797,803Total current liabilities$73,757Â $73,323Â Operating lease liability, net of current portion72,62579,173Other non-current liabilities597475Total liabilities $146,979Â $152,971Â Commitments and contingencies (Note 6)Stockholdersâ€™ equityCommon stock, $0.00001 par value â€"100,000 and 100,000 shares authorized at JuneÂ 30, 2024 and SeptemberÂ 30, 2023, respectively; 58,519 and 57,557 shares issued and outstanding at JuneÂ 30, 2024 and SeptemberÂ 30, 2023, respectively$â€"Â $â€"Â Additional paid-in capital1,699,1271,657,222Accumulated other comprehensive income(735)(756)Accumulated deficit(1,207,253)(1,033,034)Total stockholdersâ€™ equity$491,139Â $623,432Â Total liabilities and stockholdersâ€™ equity$638,118Â $776,403Â The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.4Table of ContentsTwist Bioscience CorporationCondensed Consolidated Statements of Operations and Comprehensive Loss (unaudited)Three months endedJune 30,Nine months endedJune 30,(In thousands, except per share data)2024202320242023Revenues [1]$81,464Â $63,740Â $228,264Â $178,163Â Operating expenses:Cost of revenues$46,193Â $41,845Â $133,148Â $112,956Â Research and development22,46924,52869,71883,148Selling, general and administrative56,79446,057165,256142,347Restructuring and other costsâ€"Â 9,052Â â€"Â 9,052Â Impairment of long-lived assets44,930Â 3,620Â 44,930Â 3,620Â Change in fair value of contingent considerations and holdbacksâ€"(581)â€"(5,913)Total operating expenses$170,386Â $124,521Â $413,052Â $345,210Â Loss from operations$(88,922)$(60,781)$(184,788)$(167,047)Interest income3,6633,96811,72410,472Interest expenseâ€"(1)â€"(4)Other income (expense), net(121)41(351)(422)Loss before income taxes$(85,380)$(56,773)$(173,415)$(157,001)Income tax provision(191)(622)(656)(1,374)Net loss attributable to common stockholders$(85,571)$(57,395)$(174,071)$(158,375)Other comprehensive loss:Change in unrealized gain (loss) on investments(21)(208)561,308Foreign currency translation adjustment(54)(538)(35)(100)Comprehensive loss(85,646)(58,141)(174,050)(157,167)Net loss per share attributable to common stockholdersâ€"basic and diluted(1.47)(1.01)(3.01)(2.79)Weighted average shares used in computing net loss per share attributable to common stockholdersâ€"basic and diluted58,14557,04157,80656,753[1] During the three and nine months ended JuneÂ 30, 2024, the Company generated revenues from related parties totaling of $4.1 million and $9.7 million, respectively. During the three and nine months ended JuneÂ 30, 2023, the Company generated revenues from related parties totaling $0.9 million and $3.6 million, respectively.The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.5Table of ContentsTwist Bioscience CorporationCondensed Consolidated Statements of Stockholdersâ€™ Equity (unaudited)Three months ended June 30, 2024CommonstockAdditional paid-incapitalAccumulated OthercomprehensivelossAccumulateddeficitTotalstockholders'equity (In thousands)SharesAmountBalances as of March 31, 202458,162$â€"Â $1,682,473Â (660)(1,121,682)$560,131Â Vesting of restricted stock units223$â€"Â $â€"Â $â€"Â $â€"Â $â€"Â Exercise of stock options134â€"2,915â€"â€"2,915Repurchases of common stock for income tax withholdingâ€"â€"(7)â€"â€"(7)Stock-based compensationâ€"â€"13,746â€"â€"13,746Other comprehensive incomeâ€"â€"â€"(75)â€"(75)Net lossâ€"â€"â€"â€"(85,571)(85,571)Balances as of June 30, 202458,519$â€"Â $1,699,127Â (735)(1,207,253)$491,139Â Three months ended June 30, 2023CommonstockAdditional paid-incapitalAccumulated OthercomprehensiveincomeAccumulateddeficitTotalstockholders'equity (In thousands)SharesAmountBalances as of March 31, 202357,105$â€"Â $1,633,217Â $111Â $(929,396)$703,932Â Vesting of restricted stock units182$â€"Â $â€"Â $â€"Â $â€"Â $â€"Â Exercise of stock options45â€"342â€"â€"342Repurchases of common stock for income tax withholding(70)â€"(1,014)â€"â€"(1,014)Issuance of shares from business acquisition105â€"1,767â€"â€"1,767Stock-based compensationâ€"â€"10,664â€"â€"10,664Other comprehensive incomeâ€"â€"â€"(746)â€"(746)Net lossâ€"â€"â€"â€"(57,395)(57,395)Balances as of June 30, 202357,367$â€"Â $1,644,976Â (635)(986,791)$657,550Â The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.6Table of ContentsNine months ended June 30, 2024CommonstockAdditional paid-incapitalAccumulated OthercomprehensivelossAccumulateddeficitTotalstockholders'equity (In thousands)SharesAmountBalances as of September 30, 202357,557$â€"Â $1,657,222Â (756)(1,033,034)$623,432Â Impact of ASU 2016-13 adoption (Note 2)â€"$â€"Â $â€"Â $â€"Â (148)(148)Vesting of restricted stock units712â€"â€"â€"â€"â€"Exercise of stock options261â€"5,183â€"â€"5,183Issuance of shares under the employee stock purchase program124â€"2,047â€"â€"2,047Repurchases of common stock for income tax withholding(135)â€"(3,967)â€"â€"(3,967)Stock-based compensationâ€"â€"38,642â€"â€"38,642Other comprehensive incomeâ€"â€"â€"21â€"21Net lossâ€"â€"â€"â€"(174,071)(174,071)Balances as of June 30, 202458,519$â€"Â $1,699,127Â (735)(1,207,253)$491,139Â Nine months ended June 30, 2023CommonstockAdditional paid-incapitalAccumulated OthercomprehensiveincomeAccumulateddeficitTotalstockholders'equity (In thousands)SharesAmountBalances as of September 30, 202256,523$â€"Â $1,619,644Â $(1,843)$(828,416)$789,385Â Vesting of restricted stock units504$â€"Â $â€"Â $â€"Â $â€"Â $â€"Â Exercise of stock options102â€"1,195â€"â€"1,195Issuance of shares under the employee stock purchase plan132â€"2,536â€"â€"2,536Repurchases of common stock for income tax withholding(171)â€"(3,275)â€"â€"(3,275)Issuance of shares from business acquisition277â€"5,860â€"â€"5,860Stock-based compensationâ€"â€"19,016â€"â€"19,016Other comprehensive incomeâ€"â€"â€"1,208â€"1,208Net lossâ€"â€"â€"â€"(158,375)(158,375)Balances as of June 30, 202357,367$â€"Â $1,644,976Â (635)(986,791)$657,550Â The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.7Table of ContentsTwist Bioscience CorporationCondensed Consolidated Statements of Cash Flows (unaudited)Nine months endedJune 30,(in thousands)Â 20242023Cash flows from operating activitiesNet loss$(174,071)$(158,375)Adjustments to reconcile net loss to net cash used in operating activitiesDepreciation and amortization24,77620,810Impairment of long-lived assets44,9303,620Non-cash lease expense6471,040Stock-based compensation38,57818,531Change in fair value of acquisition considerationâ€"(5,913)Other non-cash adjustments(185)(33)Changes in assets and liabilities:Accounts receivable, net11,398(2,508)Inventories3,5782,949Prepaid expenses and other current assets(185)(1,935)Other non-current assets4721,050Accounts payable(6,927)(4,431)Accrued expenses4,1321,278Accrued compensation5,932348Other liabilities(1,849)1,799Net cash used in operating activities$(48,774)$(121,770)Cash flows from investing activitiesPurchases of property and equipment$(3,074)$(25,386)Purchases of investments(30,712)(58,255)Proceeds from maturity of investments32,000136,500Net cash (used in) provided by investing activities$(1,786)$52,859Â Cash flows from financing activitiesProceeds from exercise of stock options$5,183Â $1,208Â Proceeds from issuance of common stock under employee stock purchase plan2,0472,536Repurchases of common stock for income tax withholding(3,967)(3,275)Net cash provided by financing activities$3,263Â $469Â Effect of exchange rates on cash, cash equivalents and restricted cash$53Â $21Â Net decrease in cash, cash equivalents, and restricted cash(47,244)(68,421)Cash, cash equivalents, and restricted cash at beginning of period289,281380,259Cash, cash equivalents, and restricted cash at end of period$242,037Â $311,838Â Supplemental disclosure of cash flow informationIncome taxes paid, net of refunds$363Â $241Â Non-cash investing and financing activitiesProperty and equipment additions included in accounts payable and accrued expenses$226Â $1,686Â Operating lease right-of-use assets obtained in exchange for operating lease liabilitiesâ€"Â 4,215Â Issuance of common stock in connection with the business acquisitionâ€"Â 5,860Â Tenant improvement allowance capitalized in property and equipment2,719Â â€"Â Conversion of convertible notesâ€"Â 3,711Â The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.8Table of ContentsTwist Bioscience CorporationNotes to Unaudited Condensed Consolidated Financial Statements1. The CompanyTwist Bioscience Corporation (the Company) was incorporated in the state of Delaware on February 4, 2013. The Company is a synthetic biology and genomics company that has developed a disruptive DNA synthesis platform. DNA is used in many applications across different industries: industrial chemicals/materials, academic, healthcare and food/agriculture. The Companyâ€™s fiscal year ends on SeptemberÂ 30.The core of the Companyâ€™s platform is a proprietary technology that pioneers a new method of manufacturing synthetic DNA by â€œwritingâ€ DNA on a silicon chip. The Company has combined this technology with proprietary software, scalable commercial infrastructure and an e-commerce platform to create an integrated technology platform that enables the Company to achieve high levels of quality, precision, automation, and manufacturing throughput at a significantly lower cost than its competitors. The Company is leveraging its unique technology to manufacture a broad range of synthetic DNA-based products, including synthetic genes, tools for next generation sample preparation, and antibody libraries for drug discovery and development.The Company has a limited operating history and its prospects are subject to risks, expenses and uncertainties frequently encountered by companies in this industry. These risks include, but are not limited to, the uncertainty of availability of additional financing, market acceptance of its products, the ability to retain and attract new customers, and the uncertainty of achieving future profitability.The Company has generated net losses in all periods since its inception. As of JuneÂ 30, 2024, the Company had an accumulated deficit of $1,207.3 million and has not generated positive cash flows from operations since inception. Losses are expected to continue as the Company continues to invest in product development, manufacturing, and sales and marketing.As of JuneÂ 30, 2024, the Company had cash and cash equivalents and short-term investments of $289.4 million, which the management believes will be sufficient to fund operations for at least one year from the issuance of these consolidated financial statements. However, if the Company needs to obtain additional financing to fund operations beyond this period, there can be no assurance that it will be successful in raising additional financing on terms which are acceptable to the Company.If the Company requires but is unable to obtain additional funding, the Company could be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or the Company may be unable to continue operations.2. Summary of significant accounting policiesBasis of presentation and use of estimatesThe accompanying unaudited condensed consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information. Certain information and disclosures normally included in the consolidated financial statements prepared in accordance with GAAP have been condensed or omitted. Accordingly, these unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the related notes included in the Annual Report on Form 10-K for the fiscal year ended SeptemberÂ 30, 2023 (the Annual Report on Form 10-K) filed with the Securities and Exchange Commission on NovemberÂ 21, 2023. The condensed consolidated financial statements are unaudited and have been prepared on a basis consistent with that used to prepare the audited annual consolidated financial statements and include, in the opinion of management, all adjustments, consisting of normal and recurring items, necessary for the fair statement of the condensed consolidated financial statements. The condensed consolidated balance sheet at SeptemberÂ 30, 2023 is derived from audited consolidated financial statements but does not include all disclosures required by GAAP. The operating results for the three and nine months ended JuneÂ 30, 2024 are not necessarily indicative of the results expected for the full year ending SeptemberÂ 30, 2024 or any interim period.The presentation of unaudited condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates. The Companyâ€™s unaudited 9Table of Contentscondensed consolidated financial statements include its wholly owned subsidiaries. All intercompany balances and accounts are eliminated in consolidation.To conform with current fiscal 2024 presentation, we reclassified $3.6 million of impairment of property and equipment included within restructuring and other costs to impairment of long-lived assets in the condensed consolidated statement of operations and comprehensive loss for the three and nine months ended JuneÂ 30, 2023. This reclassification had no impact on our condensed statement of operations and comprehensive loss for the three and nine months ended JuneÂ 30, 2023.The following table provides a reconciliation of the Companyâ€™s cash and cash equivalents and non-current portion of restricted cash reported within the unaudited condensed consolidated balance sheets that sum to the total cash, cash equivalents and restricted cash shown in the Companyâ€™s condensed consolidated statements of cash flows:(in thousands)June 30,2024September 30,2023Cash and cash equivalents$239,142Â $286,470Â Restricted cash, non-current2,895Â 2,811Â Total cash, cash equivalents and restricted cash$242,037Â $289,281Â Restricted cash represents cash held at financial institutions that are pledged as collateral for stand-by letters of credit for lease commitments and is included in non-current assets.Significant accounting policiesThere have been no material changes in the accounting policies from those disclosed in the audited consolidated financial statements and the related notes included in the Annual Report on Form 10-K other than disclosed below. Allowance for Credit LossesThe Company maintains an allowance for credit losses for expected uncollectible accounts receivable and contract assets, which is recorded as an offset to accounts receivable or contract assets and provisions for credit losses are recorded in general and administrative expense in the consolidated statements of income. Under the application of Accounting Standards Codification (â€œASCâ€) Topic 326-20,Â Financial Instrumentsâ€”Credit LossesÂ (â€œASC 326â€), the allowance for current expected credit losses is based on a review of customer accounts and considers historical credit loss information that is adjusted for current economic and business conditions and anticipated future economic events that may impact collectability. In developing its expected credit loss estimate, the Company evaluated the appropriate grouping of accounts receivable and contract assets based upon its evaluation of risk characteristics, including consideration of region and industries of the customers. The allowance for credit losses is reviewed on a quarterly basis to assess the adequacy of the allowance. Allowance for credit losses was $0.7 million as of JuneÂ 30, 2024. Short-term investmentsThe Company invests in various types of securities, including United States government, commercial paper, and corporate debt securities. The Company classifies its investments as available-for-sale and records them at fair value based upon market prices at period end. For available-for-sale debt securities in an unrealized loss position, the Company evaluates whether a current expected credit loss exists based on available information relevant to the credit rating of the security, current economic conditions and reasonable and supportable forecasts. The allowance for credit loss is recorded in other income (expense), net, on the consolidated statements of income, not to exceed the amount of the unrealized loss. Any excess unrealized loss other than the credit loss is recognized in accumulated other comprehensive income or loss in the stockholders' equity section of the consolidated balance sheets. The cost of securities sold is based on the specific identification method and realized gains and losses are included in other income (expense), net. Dividend and interest income are recognized when earned. The Company may sell these securities at any time for use in current operations. There was no allowance for credit losses relating to the short-term investments recognized as of JuneÂ 30, 2024.RevenueThe Company had contract assets of $2.6 million and contract liabilities of $2.9 million as of JuneÂ 30, 2024. The Company had contract assets of $2.8 million and contract liabilities of $3.0 million as of SeptemberÂ 30, 2023. For the three and nine months ended JuneÂ 30, 2024, the Company recognized revenue of $0.7 million and $2.9 million, respectively, from the amount that was included in the contract liability balance at the beginning of each period. For the three and nine months ended JuneÂ 30, 2023, the Company recognized revenue of $0.6 million and $2.8 million, respectively, from the amount that was included in the contract liability balance at the beginning of each period. In addition, for all periods presented, there 10Table of Contentswas no revenue recognized in a reporting period from performance obligations satisfied in previous periods. The aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied as of JuneÂ 30, 2024 was $7.1 million. The Company expects to recognize revenue over the next twelve months relating to performance obligations unsatisfied as of JuneÂ 30, 2024.Based on the nature of the Company's contracts with customers, which are recognized over a term of less than 12 months, the Company has elected to use the practical expedient whereby costs to obtain a contract are expensed as they are incurred.The Company states its revenues net of any taxes collected from customers that are required to be remitted to various government agencies. The amount of taxes collected from customers and payable to governmental entities is included on the balance sheet as part of â€œAccrued expenses and other current liabilities.â€Recent accounting pronouncementsChanges to GAAP are established by the Financial Accounting Standards Board (â€œFASBâ€) in the form of accounting standards updates (â€œASUsâ€) to the FASBâ€™s ASC. The Company considered the applicability and impact of all recent ASUs. ASUs not listed below were assessed and determined to be not applicable to the Companyâ€™s consolidated financial position and results of operations.Recent accounting pronouncements adoptedIn June 2016, FASB issued ASU No. 2016-13 â€œFinancial Instruments-Credit Losses: Measurement of Credit Losses on Financial Instrumentsâ€ and has since modified the standard with several ASUs (collectively, â€œTopic 326â€). Topic 326 requires measurement and recognition of expected credit losses for financial assets. The ASU replaced previous incurred loss impairment guidance and established a single expected credit losses allowance framework for financial assets carried at amortized cost. It also eliminated the concept of other-than-temporary impairment and requires credit losses related to certain available-for-sale debt securities to be recorded through an allowance for credit losses. On October 1, 2023, the Company adopted this standard using a modified retrospective approach, which requires a cumulative-effect adjustment to the opening balance of retained earnings to be recognized on the date of adoption and, accordingly, recorded a net increase of $0.1 million to accumulated deficit as of the beginning of fiscal 2024. In connection with the adoption of Topic 326, the Company made an accounting policy election to not measure an allowance for credit losses for accrued interest receivable.Recently issued accounting pronouncement not yet adopted In December 2023, the FASB issued ASU No. 2023-09 "Income Taxes (Topic 740)". The amendments in this ASU require that public business entities on an annual basis (1) disclose specific categories in the rate reconciliation and (2) provide additional information for reconciling items that meet a quantitative threshold. The amendments in this update are effective for annual periods beginning after December 15, 2024. The standard is not expected to have a material impact to the Company's condensed consolidated financial statements.In November 2023, the FASB issued ASU No. 2023-08 "Segment Reporting (Topic 280)". The amendments in this ASU improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. The amendments in this update are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The standard is not expected to have a material impact to the Company's condensed consolidated financial statements.The Company has evaluated other recently issued accounting pronouncements and has concluded that the impact of recently issued standards that are not yet effective will not have a material impact on the Companyâ€™s financial position or results of operations upon adoption.3. Fair value measurementThe Company assesses the fair value of financial instruments based on the provisions of ASC 820, Fair Value Measurements. ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:Level 1â€”Quoted prices in active markets for identical assets or liabilities.11Table of ContentsLevel 2â€”Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.Level 3â€”Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as considering counterparty credit risk in its assessment of fair value.The following table sets forth the cash and cash equivalents, short-term investments and equity securities as of JuneÂ 30, 2024:(in thousands)Amortized costGross unrealized gainsGross unrealized lossesFair valueCash and cash equivalents$239,142Â $â€"Â $â€"Â $239,142Â Short-term investments:U.S. government treasury bills50,304Â â€"Â (29)50,276Â Non-current assets - investment in equity securities3,711Â â€"Â â€"Â 3,711Â Total$293,158Â $â€"Â (29)293,129Â The following table sets forth the cash and cash equivalents, short-term investments and equity securities as of SeptemberÂ 30, 2023:(in thousands)Amortized costGross unrealized gainsGross unrealized lossesFair valueCash and cash equivalents$286,470Â $â€"Â $â€"Â $286,470Â Short-term investments:Corporate bonds14,918Â â€"Â (29)14,889Â U.S. government treasury bills35,111Â â€"Â (57)35,054Â Non-current assets - investment in equity securities3,711Â â€"Â â€"Â 3,711Â Total$340,210Â $â€"Â (86)340,124Â As of JuneÂ 30, 2024, financial assets and liabilities measured and recognized at fair value are as follows:(in thousands)Level 1Level 2Level 3Fair valueAssetsÂ Â Â Â Money market funds$196,413Â $â€"Â $â€"Â $196,413Â U.S. government treasury bills50,276Â â€"Â â€"Â 50,276Â Non-current assets - investment in equity securitiesâ€"Â â€"Â 3,711Â 3,711Â Total$246,689Â $â€"Â $3,711Â $250,400Â Total financial liabilities $â€"Â $â€"Â $â€"Â $â€"Â 12Table of ContentsAs of SeptemberÂ 30, 2023, financial assets and liabilities measured and recognized at fair value are as follows:(in thousands)Level 1Level 2Level 3Fair valueAssetsÂ Â Â Money market funds$245,654Â $â€"Â $â€"Â $245,654Â Corporate bondsâ€"Â 14,889Â â€"Â 14,889Â U.S. government treasury bills35,054â€"Â â€"Â 35,054Non-current assets - investment in equity securitiesâ€"Â â€"Â 3,711Â 3,711Â Total financial assets$280,708Â $14,889Â $3,711Â $299,308Â Total financial liabilities$â€"Â $â€"Â $â€"Â $â€"Â Contractual maturities of all the investments, as of JuneÂ 30, 2024, were less than 12 months. The Company does not intend to sell the money market funds and short-term investments and it is not more likely than not that the Company will be required to sell the investments before recovery of their amortized cost basis. The Company's short-term investments have been in a continuous unrealized loss position for less than 12 months. Accrued interest receivable balances included in the prepaid expenses and other current assets within the condensed consolidated balance sheets were $1.0 million and $1.2 million as of JuneÂ 30, 2024 and SeptemberÂ 30, 2023, respectively. As of JuneÂ 30, 2024, the gross unrealized losses on short-term investments are related to market interest rate changes and not attributable to credit.During 2021 and as amended in 2022, the Company entered into convertible promissory note agreements with a privately held company (â€œBorrowerâ€) pursuant to which the Company agreed to loan to the Borrower $3.5Â million in a series of loan installments, evidenced by a convertible promissory note having a maturity date of May 1, 2023 (â€œConvertible Noteâ€). The Convertible Note included an option to convert the Convertible Note into the Borrowerâ€™s equity at the Borrowerâ€™s next round of equity financing, and accrued interest at a rate of 4% per annum. In April 2023, the Company exercised the option and the Borrower issued to the Company ordinary shares which represent a 15% equity interest. As of JuneÂ 30, 2024, the Companyâ€™s equity investments were categorized as Level 3 within the fair value hierarchy. The equity investment held by the Company is a VIE, but the Company is not the primary beneficiary. The Company does not have the power to direct the activities that most significantly impact the economic performance of the investee. The Companyâ€™s maximum exposure to loss from this VIE consist of an equity investment of $3.7Â million. Equity investments held by the Company lack readily determinable fair values and therefore the securities are measured at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar equity securities of the same issuer. The Company reviews the carrying value of its equity investments for impairment whenever events or changes in business circumstances indicate the carrying amount of such asset may not be fully recoverable. Impairments, if any, are based on the excess of the carrying amount over the recoverable amount of the asset. There were no such impairments during the three months ended JuneÂ 30, 2024 and JuneÂ 30, 2023. As of JuneÂ 30, 2024 and SeptemberÂ 30, 2023, there were no financial liabilities categorized as level 3 within the fair value hierarchy. There were no transfers between Level 1, Level 2 and Level 3 in the periods presented. The following table provides a reconciliation of beginning and ending balances of the Level 3 financial assets during the three months ended JuneÂ 30, 2024:(in thousands)Equity investmentsTotalBalance as of SeptemberÂ 30, 2023$3,711Â $3,711Â Change in fair value â€"â€"Additions during the year â€"â€"Balance as of JuneÂ 30, 2024$3,711Â $3,711Â 4. Balance sheet componentsInventories consist of the following:13Table of Contents(in thousands)June 30,2024September 30,2023Raw materials$22,000Â $27,024Â Work-in-process2,2131,113Finished goods4,2713,926$28,484Â $32,063Â There is no consigned inventory balance as of JuneÂ 30, 2024 and SeptemberÂ 30, 2023.Property and Equipment, net consists of the following:(in thousands)Â June 30,2024September 30,2023Laboratory equipment$99,354Â $104,508Â Furniture, fixtures and other equipment3,279Â 3,484Â Vehicles211Â 85Â Computer equipment3,555Â 3,103Â Computer software9,077Â 5,507Â Leasehold improvements58,197Â 57,271Â Construction in progress3,296Â 8,528Â $176,969Â $182,486Â Less: Accumulated depreciation (70,630)(50,656)$106,339Â $131,830Â As of JuneÂ 30, 2024, the construction in progress mainly represents equipment costs and software development costs. For the three and nine months ended JuneÂ 30, 2024, the total depreciation expense was $7.0 million and $20.9 million, respectively. For the three and nine months ended JuneÂ 30, 2023 the total depreciation expense was $6.9 million and $16.8 million, respectively. The Company recorded impairment charges of $9.1 million for the three and nine months ended JuneÂ 30, 2024. See note 13.The other current liabilities consist of the following:(in thousands)June 30,2024September 30,2023Income and other taxes payable$2,343$4,374Contract liabilities2,9402,999Other current liabilities796430$6,079Â $7,803Â 5. Goodwill and intangible assetsThere were no changes to the carrying value of goodwill during the nine months ended JuneÂ 30, 2024.The goodwill balance is presented below:(in thousands)June 30, 2024September 30, 2023Balance at beginning of period/year$85,811Â $85,811Â Balance at end of period/year $85,811Â $85,811Â The intangible assets balances are presented below:14Table of ContentsJune 30, 2024(in thousands, except for years)Weighted averageAmortization periodin yearsGrosscarryingamountImpairmentAccumulatedamortizationNet bookvalueDeveloped Technology17$50,020Â $(25,198)$(10,081)$14,741Â Customer Relationshipsâ€"15,210Â (10,541)(4,669)â€"Â Tradenames & Trademarksâ€"900Â (125)(775)â€"Â Total finite-lived intangible assets$66,130Â $(35,864)$(15,525)$14,741Â September 30, 2023(in thousands, except for years)Weighted averageAmortization periodin yearsGrosscarryingamountAccumulatedamortizationNet bookvalueDeveloped Technology15$50,020Â $(7,636)$42,384Â Customer Relationships1115,210Â (3,461)11,749Â Tradenames & Trademarks3$900Â (550)350Â Total finite-lived intangible assets$66,130Â $(11,647)$54,483Â Total amortization expense related to finite-lived intangible assets was $1.3 million for the three months ended JuneÂ 30, 2024 and $1.3Â million for the three months ended JuneÂ 30, 2023. Total amortization expense related to finite-lived intangible assets was $3.9Â million for the nine months ended JuneÂ 30, 2024 and $3.9Â million for the nine months ended JuneÂ 30, 2023. The Company recorded impairment charges of $35.9Â million for the three and nine months ended JuneÂ 30, 2024. See note 13. 6. Commitments and contingenciesLegal proceedingsThe Company may be subject to litigation, claims and disputes in the ordinary course of business. There is an inherent risk in any litigation or dispute and no assurance can be given as to the outcome of any claims.Securities Class ActionOn December 12, 2022, a putative securities class action lawsuit captioned Peters v. Twist Bioscience Corporation, et al., Case No. 22-cv-08168 (N.D. Cal.) (â€œSecurities Class Actionâ€) was filed in federal court in the Northern District of California (â€œCourtâ€) against the Company, its Chief Executive Officer, and its Chief Financial Officer (the â€œDefendantsâ€) alleging violations of federal securities laws. The Securities Class Actionâ€™s claims are based in large part on allegations made in a report issued on November 15, 2022 by Scorpion Capital (â€œScorpion Reportâ€) concerning, among other things, the Companyâ€™s DNA chip technology and accounting practices. The initial complaint filed in the Securities Class Action alleges that various statements that the defendants made between December 13, 2019 and November 14, 2022 were materially false and misleading in light of the allegations in the Scorpion Report. The plaintiff who initiated the lawsuit sought to represent a class of shareholders who acquired shares of the Companyâ€™s common stock between December 13, 2019 and November 14, 2022 and sought damages as well as certain other costs. On July 28, 2023, the Court appointed a new plaintiff, not the original plaintiff who filed the case, as lead plaintiff in the case and appointed a new law firm as lead counsel. On October 11, 2023, the lead plaintiff filed an amended complaint. The amended complaint is purportedly brought on behalf of all persons other than the Defendants who acquired the Companyâ€™s securities between December 20, 2018 and November 15, 2022. The amended complaint alleges that certain statements regarding, among other things, the Companyâ€™s DNA products and accounting practices were false and misleading.This case remains in the preliminary stage. Given the inherent uncertainty of litigation and the legal standards that must be met, including class certification and success on the merits, the Company cannot express an opinion on the likelihood of an unfavorable outcome or on the amount or range of any potential loss. The Company and the other defendants intend to vigorously defend themselves against the claims asserted against them and filed a motion to dismiss the amended complaint on December 6, 2023, which the Court has taken under submission.Derivative Action15Table of ContentsOn September 25, 2023, a shareholder derivative suit captioned Shumacher vs. Leproust et al., No. 1:23-cv-01048-UNA, was filed in the United States District Court for the District of Delaware against directors of the Company and an employee (the â€œDerivative Actionâ€). The suit is based on substantially the same allegations in the Securities Class Action and seeks to recover, on behalf of the Company, damages to the Company arising from, among other things, the Securities Class Action. On November 13, 2023, the parties to the Derivative Action entered into a stipulation staying the Derivative Action pending resolution of the anticipated motion to dismiss the defendants have filed in the Securities Class Action.IndemnificationsIn the ordinary course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend the indemnified parties for losses suffered or incurred by the indemnified party. Some of the provisions will limit losses to those arising from third-party actions. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. To date, the Company has not incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. From time to time, the Company has entered into indemnification agreements with its directors and officers that requires it to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by law. The Company also has directorsâ€™ and officersâ€™ insurance.LeasesThe Company leases certain of its facilities under non-cancellable operating leases expiring at various dates through 2044. The Company is also responsible for utilities, maintenance, insurance, and property taxes under these leases. The Company's lease payments consist primarily of fixed rental payments for the right to use the underlying leased assets over the lease terms, as well as payments for common-area-maintenance and administrative services. The Company often receives customary incentives from its landlords, such as reimbursements for tenant improvements and rent abatement periods, which effectively reduce the total lease payments owed for these leases. Leases are classified as operating or financing at commencement. The Company does not have any material financing leases.Certain leases include options to renew or terminate at the Companyâ€™s discretion. The lease terms include periods covered by these options if it is reasonably certain the Company will renew or not terminate. The Companyâ€™s lease agreements do not contain any material residual value guarantees or restrictive covenants.Supplemental balance sheet information related to the Companyâ€™s operating leases as of JuneÂ 30, 2024 is as follows:(in thousands)June 30,2024Assets:Â Operating lease right-of-use asset$61,277Â Current liabilities:Current portion of operating lease liabilities$14,555Â Noncurrent liabilities:Operating lease liabilities, net of current portion$72,625Â Future minimum lease payments under all non-cancelable operating leases that have commenced as of JuneÂ 30, 2024 are as follows:16Table of Contents(in thousands)OperatingleasesYears ending September 30:Â Remainder of 2024$3,636Â 202514,814202613,88520278,37120288,471Thereafter88,014Total minimum lease payments$137,191Â Less: imputed interest(50,011)Total operating lease liabilities$87,180Â Less: current portion(14,555)Operating lease liabilities, net of current portion$72,625Â The statement of cash flows for the nine months ended JuneÂ 30, 2024 include changes in right-of-use assets and operating lease liabilities of $7.5 million and $6.9 million, respectively. For the nine months ended JuneÂ 30, 2023, changes in right-of-use assets and operating lease liabilities were $2.9 million and $1.9 million, respectively.During the three and nine months ended JuneÂ 30, 2024, operating lease expense was $3.8 million and $11.8 million, respectively. Cash payments for amounts included in the measurement of operating lease liabilities were $3.7 million and $11.1 million for the three and nine months ended JuneÂ 30, 2024, respectively. During the three and nine months ended JuneÂ 30, 2023, operating lease expense was $3.9 million and $12.2 million, respectively. Cash payments for amounts included in the measurement of operating lease liabilities were $3.6 million and $11.1 million for the three and nine months ended JuneÂ 30, 2023, respectively. As of JuneÂ 30, 2024, the weighted-average remaining lease term was 15.2 years and the weighted-average discount rate was 6.5%. 7. Related party transactionsDuring the three months ended JuneÂ 30, 2024 and 2023, the Company purchased raw materials from a related party in the amount of $1.7 million and $1.4 million, respectively. During the nine months ended JuneÂ 30, 2024 and 2023, the purchases of raw materials from a related party were $4.5 million and $5.0 million, respectively. During the three and nine months ended JuneÂ 30, 2024, the Company had revenues from the related party in the amount of $4.1 million and $9.7 million, respectively. During the three and nine months ended JuneÂ 30, 2023, the Company generated revenues from the related party totaling $0.9 million and $3.6 million, respectively. As of JuneÂ 30, 2024, payable balances and receivable balances with the related party were $0.2 million and $0.8 million, respectively. Receivable balances with the related party were $1.7 million as of SeptemberÂ 30, 2023. Payable balances with the related parties were immaterial as of SeptemberÂ 30, 2023.8. Income taxesIn determining quarterly provisions for income taxes, the Company uses the annual estimated effective tax rate applied to the actual year-to-date profit or loss, adjusted for discrete items arising in that quarter. For the three and nine months ended JuneÂ 30, 2024, the Company recorded provisions for income taxes of $0.2 million and $0.7 million, respectively. For the three and nine months ended JuneÂ 30, 2023, the Company recorded provisions for income taxes of $0.6 million and $1.4 million, respectively. 9. Common stockAs of JuneÂ 30, 2024, the Company had reserved sufficient shares of common stock, with a par value of $0.00001 per share, for issuance upon exercise of outstanding stock options. Each share of common stock is entitled to one vote. The holders of shares of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the board of directors.10. Stock-based compensationThe Company grants stock-based awards, consisting of stock options and restricted stock, to its employees, certain non-employee consultants and certain members of its board of directors. The Company measures stock-based compensation 17Table of Contentsexpense for restricted stock and stock options granted to its employees and directors on the date of grant and recognizes the corresponding compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. The Company measures stock-based compensation expense for restricted stock and stock options granted to non-employee consultants on the date of grant and recognizes the corresponding compensation expense of those awards over the period in which the related services are received. The Company adjusts for actual forfeitures as they occur.2018 Equity Incentive PlanOn September 26, 2018, the board of directors adopted the 2018 Equity Incentive Plan (the â€œ2018 Planâ€) as a successor to the 2013 Stock Plan (the â€œ2013 Planâ€). Any shares subject to outstanding awards under the 2013 Plan that are canceled or repurchased subsequent to the 2018 Planâ€™s effective date are returned to the pool of shares reserved for issuance under the 2018 Plan. Awards granted under the 2018 Plan may be non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, and performance units.Inducement Equity Incentive Plan On August 22, 2023, the board of directors adopted an inducement equity incentive plan (the â€œInducement Planâ€). The maximum aggregate number of shares that may be issued under the Inducement Plan is 700,000 of the Company's common stock. The Inducement Plan permits the grant of non-statutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares. The shares issuable under the Inducement Plan are registered pursuant to a registration statement on Form S-8 filed with the Securities and Exchange Commission on August 25, 2023. Restricted Stock UnitsRestricted stock consists of restricted stock unit awards (â€œRSUsâ€) which have been granted to employees and non-employee directors. The value of an RSU award is based on the Companyâ€™s stock price on the date of grant. Employee grants generally vest over four years and non-employee director grants generally vest over one year. Forfeitures of RSUs are recognized as they occur. The shares underlying the RSU awards are not issued until the RSUs vest. Upon vesting, each RSU converts into one share of the Companyâ€™s common stock.Activity with respect to the Companyâ€™s restricted stock units during the nine months ended JuneÂ 30, 2024 was as follows:(in thousands, except per share data)SharesWeighted average grant date fair value per shareNonvested shares at September 30, 20231,620$40.73Â Granted1,41426.10Vested/Issued(604)39.61Forfeited(262)40.08Nonvested shares at June 30, 20242,168$31.62Â As of JuneÂ 30, 2024, there was $62.3 million of total unrecognized compensation cost related to these awards that is expected to be recognized over a weighted average period of 2.6 years. The total grant date fair value of RSUs awarded during the nine months ended JuneÂ 30, 2024 was $36.9 million. Performance Stock UnitsPerformance stock unit awards (â€œPSUsâ€) granted to Company executives will vest upon achievement of multiple year revenue, gross profit and cash balance metrics as determined by the board of directors, and to certain non-employee consultants will vest upon achievement of operational milestones. Stock compensation expense for PSUs is recorded over the vesting period based on the grant date fair value of the awards and probability of the achievement of specified performance targets. The grant date fair value is equal to the closing share price of the Companyâ€™s common stock on the date of grant. For Company executives, PSUs generally vest over a two to three-year service period following the grant date, provided that the recipient is a Company employee at the time of vesting and the performance targets applicable to each award are achieved. For non-employees, PSUs generally vest over a one to three-year service period following the grant date, provided that the performance targets applicable to each award are achieved. The percentage of PSUs that vest will depend on the achievement of specified performance targets at the end of the performance period and can range from 0% to 150% of the number of units granted. Any PSUs that are unvested at the end of the performance period are forfeited. Forfeitures of PSUs are recognized as they occur. 18Table of ContentsActivity under the PSUs during the nine months ended JuneÂ 30, 2024 is summarized below:(in thousands, except per share data)SharesWeighted average grant date fair value per shareNonvested shares at September 30, 2023932$36.82Â Granted61718.71Vested/Issued(84)80.67Forfeited(81)29.28Nonvested shares at June 30, 20241,384$26.52Â As of JuneÂ 30, 2024, the unrecognized compensation costs related to these awards was $18.1Â million based on the maximum achievement of the performance targets. The Company expects to recognize those costs over a weighted average period of 1.3 years. The total grant date fair value of PSUs awarded during the nine months ended JuneÂ 30, 2024 was $11.5Â million.Options Options are generally granted to employees and were granted to non-employee directors until FY 2020. Stock options entitle the holder to purchase, at the end of the vesting term, a specified number of shares of Company common stock at an exercise price per share equal to the closing market price of the common stock on the date of grant. Stock options have a contractual life from the date of the grant and a vesting schedule as established by the board of directors. The maximum term of stock options granted under the 2018 Plan is 10 years and the awards generally vest over a four-year period. Forfeitures of options are recognized as they occur. The fair value of each service based stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company has not granted any stock options during the three and nine months ended JuneÂ 30, 2024 or 2023.Options activity during the nine months ended JuneÂ 30, 2024 is summarized below:(in thousands, except per share data)SharesWeighted average exercise price per shareWeighted average remaining contractual term (years)Aggregate intrinsic valueOutstanding at September 30, 20232,119Â $24.18Â 5.25$6,715Â Forfeited(115)38.64â€”Â â€”Â Exercised(261)19.85â€”Â 5,123Â Outstanding at June 30, 20241,743Â Â $23.88 4.41$47,265Â Nonvested at June 30, 20246Â 106.257.03â€”Â Exercisable at June 30, 20241,737Â $23.61Â 4.40$47,265Â As of JuneÂ 30, 2024, the unrecognized compensation costs related to these awards was $0.3Â million. The Company expects to recognize those costs over a weighted average period of 1.1 years. The Company did not grant any options during the nine months ended JuneÂ 30, 2024.Performance Stock OptionsOn September 1, 2020, the board of directors approved the implementation of a revised annual equity award program for executive officers, senior level employees and consultants to be granted as performance-based stock options ("PSOs") under the 2018 Plan. The PSOs issued to executive officers and senior level employees vested in prior years. The number of PSOs ultimately earned under the awards to a consultant is calculated based on the achievement of certain operational milestones. The maximum term of performance stock options granted under the 2018 Plan is 10 years for both employees and non-employees. The awards generally vest over a two-year period for executive officers and senior level employees. Awards to non-employees generally vest over a five-year period.The provisions of the PSOs are considered a performance condition, and the effects of that performance condition are not reflected in the grant date fair value of the awards. The Company used the Black-Scholes method to calculate the fair value at the grant date without regard to the vesting condition and will recognize compensation cost for the options that are expected to vest. Forfeitures of PSOs are recognized as they occur. The Company reassesses the probability of the performance condition at each reporting period and adjusts the compensation cost based on the probability assessment. As 19Table of Contentsof JuneÂ 30, 2024, the Company determined that 30,000 shares are expected to vest based on the probability of the performance condition that will be achieved under this equity award program.Activity under the PSOs during the nine months ended JuneÂ 30, 2024 is summarized below:(in thousands, except per share data)SharesWeighted average exercise price per shareWeighted average remaining contractual term (years)Aggregate intrinsic valueOutstanding at September 30, 2023289$60.82Â 7.37$â€”Â Nonvested at September 30, 202330$31.29Â 8.57$â€”Â Exercisable at September 30, 202325964.24Â 7.23â€”Â Forfeited(12)$67.85Â â€”Â $â€”Â Exercisable at June 30, 2024247$64.07Â 6.49$810Â Nonvested at June 30, 20243031.29Â 7.82540Â Outstanding at June 30, 2024277$60.53Â 6.63$1,349Â As of JuneÂ 30, 2024, the unrecognized compensation costs related to these awards was $0.2Â million. The Company expects to recognize those costs over a weighted average period of 0.8 years. Total stock-based compensation expense recognized was as follows:Three months endedJune 30,Nine months endedJune 30,(in thousands)2024202320242023Cost of revenues$1,033Â $1,286Â $3,006Â $3,898Â Research and development2,4003,3298,61410,837Selling, general and administrative10,3015,98326,9583,796Total stock-based compensation$13,734Â $10,598Â $38,578Â $18,531Â During the three and nine months ended JuneÂ 30, 2023, stock-based compensation decreased primarily as a result of departing employee share forfeitures, and a stock-based credit related to a business combination due to non-achievement of a performance condition. An immaterial amount of stock-based compensation was capitalized to inventories attributable to employees who support the manufacturing of the Company's products for the three and nine months ended JuneÂ 30, 2024 and 2023. An immaterial amount of stock-based compensation was capitalized to property and equipment related to capitalized software development costs for the three and nine months ended JuneÂ 30, 2024. The stock-based compensation of $0.1Â million and $0.5Â million was capitalized to property and equipment related to the capitalized software development costs for the three and nine months ended JuneÂ 30, 2023. 2018 Employee Stock Purchase PlanOn September 26, 2018, the board of directors adopted the 2018 Employee Stock Purchase Plan (the "2018 ESPP"). The number of shares reserved for issuance under the 2018 ESPP upon approval was 275,225 shares of the Companyâ€™s common stock, and it increases automatically on the first day of each fiscal year, following the fiscal year in which the 2018 ESPP became effective, by a number equal to the least of 249,470 shares, 1% of the shares of common stock outstanding at that time, or such number of shares determined by the Companyâ€™s board of directors. The number of shares reserved for issuance at JuneÂ 30, 2024 was as follows:(In thousands)SharesavailableOutstanding at SeptemberÂ 30, 2023539Additional shares authorized249Shares issued during the period(124)Outstanding at JuneÂ 30, 202466420Table of ContentsSubject to any plan limitations, the 2018 ESPP allows eligible service providers (through qualified and non-qualified offerings) to contribute, normally through payroll deductions, up to 15% of their earnings for the purchase of the Companyâ€™s common stock at a discounted price per share. The offering periods begin in February and August of each year, except the initial offering period which commenced with the initial public offering in October 2018 and ended on August 20, 2019.Unless otherwise determined by the board of directors, the Companyâ€™s common stock will be purchased for the accounts of employees participating in the 2018 ESPP at a price per share that is the lesser of 85% of the fair market value of the Companyâ€™s common stock on the first trading day of the offering period or 85% of the fair market value of the Companyâ€™s common stock on the last trading day of the offering period. During the three and nine months ended JuneÂ 30, 2024 ESPP expenses of $0.5 million and $1.3 million, respectively was recognized. During the three and nine months ended JuneÂ 30, 2023, activity under the 2018 ESPP was immaterial. 401(k) Savings PlanDuring 2018, the Company adopted a 401(k) savings plan for the benefit of its employees. In January 2022, the Company modified its plan to include an employer matching contribution. The Company is required to make matching contributions to the 401(k) plan equal to 50% of the first 6% of wages deferred by each participating employee. The Company incurred expenses for employer matching contributions of $0.7 million and $2.0 million for the three and nine months ended JuneÂ 30, 2024, respectively. The Company incurred expenses for employer matching contributions of $0.7 million and $2.2 million for the three and nine months ended JuneÂ 30, 2023, respectively.AbX Biologics, Inc. (Abveris) AcquisitionAt September 30, 2022, management determined that the achievement of the performance condition relating to the equity awards granted in connection with the Abveris acquisition awards was probable, and cumulative stock-based compensation expense of $9.9 million was recognized during the year ended September 30, 2022. At December 31, 2022, management determined that the performance condition was not achieved, and therefore the cumulative stock-based compensation expense recognized to date was reversed, resulting in a reduction of stock compensation expense of $9.9 million in the three months ended December 31, 2022. 11. Net loss per share attributable to common stockholdersThe following table sets forth the computation of the Companyâ€™s basic and diluted net loss per share attributable to common stockholders:Three months endedJune 30,Nine months endedJune 30,(in thousands, except per share data)2024202320242023Numerator:Net loss attributable to common stockholders$(85,571)$(57,395)$(174,071)$(158,375)Denominator:Weighted average shares used in computing net loss per share, basic and diluted58,14557,04157,80656,753Net loss per share attributable to common stockholders, basic and diluted(1.47)(1.01)(3.01)(2.79)The potentially dilutive common shares that were excluded from the calculation of diluted net loss per share because their effect would have been antidilutive for the periods presented are as follows:21Table of ContentsThree and nine months endedJune 30,(in thousands)20242023Shares subject to options (including performance options) to purchase common stock2,0202,546Unvested restricted stock units and performance stock units 3,5522,371Shares subject to employee stock purchase plan8678Total5,6584,99512. Geographic, product and industry informationThe table below sets forth revenues by geographic region, based on ship-to destinations. Americas consists of the United States of America, Canada, Mexico and South America; EMEA consists of Europe, the Middle East, and Africa; and APAC consists of Japan, China, South Korea, India, Singapore, Malaysia, Australia, New Zealand, Thailand and Taiwan.Three months endedJune 30,Nine months endedJune 30,(in thousands)2024202320242023Americas$51,389Â $39,016Â $141,221Â $107,586Â EMEA23,58119,06967,06454,179APAC6,4945,65519,97916,398Total$81,464Â $63,740Â $228,264Â $178,163Â The table below sets forth revenues by products.Three months endedJune 30,Nine months endedJune 30,(in thousands)2024202320242023Synthetic genes$24,948Â $19,302Â $67,031Â $53,488Â Oligo pools4,1663,73512,29510,749DNA libraries3,8482,88010,3187,542Antibody discovery5,1024,58015,02919,785NGS tools43,40033,243123,59186,599Total$81,464Â $63,740Â $228,264Â $178,163Â The table below sets forth revenues by industry.Three months endedJune 30,Nine months endedJune 30,(in thousands)2024202320242023Industrial chemicals/materials$23,188Â $16,801Â $59,730Â $44,785Â Academic research14,89212,42142,38733,556Healthcare42,82333,988124,63797,764Food/agricultural5615301,5102,058Total$81,464Â $63,740Â $228,264Â $178,163Â 13. Impairment of long-lived assets During the three months ended JuneÂ 30, 2024, the Company identified an impairment indicator with respect to an asset group associated with our antibody discovery services product line (â€œBiopharma asset groupâ€) due to lower than forecasted revenues. Therefore, the Company performed a recoverability test of long-lived assets by comparing the net book value of the long-lived asset group, to the future undiscounted net cash flows attributable to such assets. The Company concluded 22Table of Contentsthat the carrying value of the asset group was not recoverable as it exceeded the future undiscounted cash flows the assets are expected to generate from the use and eventual disposition. To measure, allocate and recognize the impairment loss, the Company estimated the fair value of the Biopharma asset group by applying a discounted cash flow method. Calculating the fair value of an asset group involves significant estimates and assumptions. These estimates and assumptions include, among others, the level and timing of revenues, operating expenses, taxes, and working capital, capital asset requirements over the remaining life of the primary asset in the asset group, and discount rates, the Company believes to be consistent with the inherent risks associated with the asset group, which was approximately 14%. Changes in these factors and assumptions used can materially affect the amount of impairment loss recognized in the period the asset group was considered impaired.The implied allocated impairment loss to any individual asset within the long-lived asset group shall not reduce the carrying amount of that asset below its fair value. The Company estimated the fair value of the developed technology intangible asset and the customer relationships intangible assets using an excess earnings model (income approach). The Company estimated the fair value of the trade name intangible asset using a relief from royalty approach. Key assumptions include the level and timing of expected future revenue, conditions and demands specific to each intangible asset over its remaining useful life. The fair value of these intangible assets is primarily affected by the projected revenues, gross margins, operating expenses, and the anticipated timing of the projected income associated with each intangible asset coupled with the discount rates used to derive their estimated present values. The Company determined the fair value of property and equipment based on a market participant perspective. For lease right-of-use assets, the Company determined the estimated fair value of the assets by comparing the discounted contractual rent payments to estimated market rent using an acceptable valuation methodology. Significant assumptions used to determine the fair values of certain lease right-of-use assets included the current market rent and discount rate.These fair value measurements were based on significant inputs not observable in the market and thus represent a Level 3 measurement. The Company believes the level and timing of expected future cash flows appropriately reflects market participant assumptions.As a result of allocating the impairment, the Company recorded the following impairment charges, which are included in â€œImpairment of long-lived assetsâ€ on our condensed consolidated statements of operations and comprehensive loss for the three and nine months ended JuneÂ 30, 2024:Three months endedJune 30,Nine months endedJune 30,(in thousands)2024202320242023Property and equipment $9,066Â $3,620Â $9,066Â $3,620Â Finite-lived intangible assets 35,864Â â€”Â 35,864Â â€”Â Total$44,930Â $3,620Â $44,930Â $3,620Â During the three and nine months ended JuneÂ 30, 2023, the Company recognized impairment of property and equipment. See note 14. 14. 2023 Restructuring and other costs On May 3, 2023, the Companyâ€™s Board of Directors approved a strategic restructuring plan to reduce costs, build a leaner organization and increase operating efficiencies. The restructuring plan included a reduction in force which affected approximately 270 employees worldwide, representing approximately 25% of the Companyâ€™s total workforce. The majority of these employees separated from the Company by September 30, 2023. The reduction in force is subject to local regulatory requirements. Furthermore, as part of the plan the Company removed the duplication of synthetic biology production across its South San Francisco, California and Wilsonville, Oregon facilities. The plan was implemented beginning in May 2023 and was substantially completed by the end of fiscal year 2023. Total restructuring and other costs of $12.7 million was incurred by the Company during the three and nine months ended June 30, 2023 and included employee severance and related benefit costs of $8.6 million, restructuring and non-restructuring related impairment of property and equipment of $3.6 million, and other costs associated with restructuring of $0.4 million. * * * * *23Table of ContentsItem 2. Managementâ€™s discussion and analysis of financial condition and results of operationsYou should read the following discussion and analysis of our financial condition and results of operations together with the unaudited condensed consolidated financial statements and related notes that are included elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended SeptemberÂ 30, 2023 filed with the U.S. Securities and Exchange Commission, or the SEC, on NovemberÂ 21, 2023, or our Annual Report on Form 10-K. This discussion contains forward-looking statements based upon current plans, expectations and beliefs that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including, but not limited to, those discussed in the section entitled â€œRisk Factorsâ€ and elsewhere in this Quarterly Report on Form 10-Q. In preparing this MD&A, we presume that readers have access to and have read the MD&A in our Annual Report on Form 10-K, pursuant to Instruction 2 to paragraph (b) of Item 303 of Regulation S-K.OverviewWe are an innovative synthetic biology and genomics company that has developed a scalable DNA synthesis platform to industrialize the engineering of biology. The core of our platform is a proprietary technology that pioneers a new method of manufacturing synthetic DNA by â€œwritingâ€ DNA on a silicon chip. We have miniaturized traditional chemical DNA synthesis reactions to write over one million short pieces of DNA on each silicon chip, approximately the size of a large mobile phone. We have combined this technology with proprietary software, scalable commercial infrastructure, and an e-commerce platform to create an integrated technology platform that enables us to achieve high levels of quality, precision, automation, and manufacturing throughput at a significantly lower cost than our competitors. We are leveraging our unique technology to manufacture a broad range of synthetic DNA based products, including synthetic genes, tools for next-generation sample preparation, and antibody libraries for drug discovery and development. Additionally, we believe our platform will enable new value-added opportunities, such as discovery partnerships for biologic drugs, and will enable new applications for synthetic DNA, such as digital data storage. We sell our synthetic DNA and synthetic DNA-based products to a customer base of approximately 3,450 customers annually across a broad range of industries.We launched the first application of our platform, synthetic genes and oligo pools, in April 2016 to disrupt the gene synthesis market and make legacy DNA synthesis methods obsolete.We have grown rapidly and generated revenues of $81.5 million and $63.7 million in the three months ended JuneÂ 30, 2024 and 2023, respectively, while incurring net losses of $85.6 million and $57.4 million for the three months ended JuneÂ 30, 2024 and 2023, respectively. Since our inception, we have incurred significant operating losses and have accumulated net deficit of $1,207.3 million. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the success of our existing products and the development and commercialization of additional products in the synthetic biology, biologic drug and data storage industries, including our Express Genes which we launched in the fall of 2023, as well as leveraging our investment in our manufacturing facility in Wilsonville, Oregon.For the three months ended JuneÂ 30, 2024 and 2023, the number of customers who purchased products from us were approximately 2,300 and 2,200 customers, respectively.Highlights from three months ended JuneÂ 30, 2024 compared with three months ended JuneÂ 30, 2023 include:â€¢Revenue growth of 28% to $81.5 million from $63.7 million, primarily due to order growth in NGS tools and synthetic genes; â€¢Number of our genes shipped increased to 212,000 from 171,000; â€¢Gross margin increased to 43.3% from 34.4%; In addition, for the nine months ended JuneÂ 30, 2024, the net cash used in operating activities decreased to $48.8 million from $121.8 million for the nine months ended JuneÂ 30, 2023.We have built a scalable commercial platform that enables us to serve a diverse customer base in a variety of industries including healthcare, industrial chemicals/materials, academic research, food/agriculture and data storage. To address this diverse customer base, we have employed a multichannel strategy comprised of a direct sales force targeting synthetic DNA customers, international distributors, and an e-commerce platform. Launched in fiscal 2018, our e-commerce platform allows customers to design, validate and place on-demand orders of customized DNA online. This is a key 24Table of Contentscomponent of our strategy to address and support our diverse and growing customer base, as well as support commercial productivity, enhance the customer experience, and promote loyalty.Financial overviewThe following table summarizes certain selected historical financial results:Three months ended Nine months endedJune 30,June 30,(in thousands)2024202320242023Revenues$81,464Â $63,740Â $228,264Â $178,163Â Loss from operations(88,922)(60,781)(184,788)(167,047)Net loss attributable to common stockholders(85,571)(57,395)(174,071)(158,375)RevenuesWe generate revenue from sales of synthetic genes, oligo pools, NGS tools, DNA libraries and antibody discovery services. Our ability to increase our revenues will depend on our ability to further penetrate the domestic and international markets, generate sales through our direct sales force, distributors and over time from our e-commerce digital platform and launch new products.Revenues by geographyWe have one reportable segment from the manufacturing of synthetic DNA products. The following table shows our revenues by geography, based on our customersâ€™ shipping addresses. Americas consists of United States, Canada, Mexico and South America; EMEA consists of Europe, Middle East and Africa; and APAC consists of Japan, China, South Korea, India, Singapore, Malaysia, Australia, New Zealand, Thailand and Taiwan.Three months ended June 30,Nine months ended June 30,(in thousands, except percentages)2024% 2023% 2024%2023%Americas$51,389Â 61Â %$39,016Â 58Â %$141,221Â 61Â %$107,586Â 60Â %EMEA23,58130Â %19,06931Â %67,06430Â %54,17931Â %APAC6,4949Â %5,65511Â %19,9799Â %16, revenues$81,464Â 100Â %$63,740Â 100Â %$228,264Â 100Â %$178,163Â 100Â %Revenues by productThe table below sets forth revenues by product:Three months ended June 30,Nine months ended June 30,(in thousands, except percentages)2024% 2023% 2024%2023%Synthetic genes$24,948Â 29Â %$19,302Â 30Â %$67,031Â 28Â %$53,488Â 30Â %Oligo pools4,166Â 6Â %3,7355Â %12,295Â 6Â %10,749Â 6Â %DNA libraries3,848Â 5Â %2,8805Â %10,318Â 4Â %7,542Â 4Â %Antibody discovery5,102Â 6Â %4,58012Â %15,029Â 7Â %19,785Â 13Â %NGS tools43,400Â 54Â %33,24348Â %123,591Â 55Â %86,599Â 47Â %Total revenues$81,464Â 100Â %$63,740Â 100Â %$228,264Â 100Â %$178,163Â 100Â %Revenues by industryThe table below sets forth revenues by industry:25Table of ContentsThree months ended June 30,Nine months ended June 30,(in thousands, except percentages)2024% 2023% 2024%2023%Industrial chemicals/materials$23,188Â 27Â %$16,801Â 24Â %$59,730Â 25Â %$44,785Â 24Â %Academic research14,892Â 18Â %12,42119Â %42,387Â 18Â %33,55619Â %Healthcare42,823Â 54Â %33,98856Â %124,637Â 56Â %97,76456Â %Food/agriculture561Â 1Â %5301Â %1,510Â 1Â %2,0581Â % revenues$81,464Â 100Â %$63,740Â 100Â %$228,264Â 100Â %$178,163Â 100Â %Product shipments including synthetic genesShipments of all products and number of genes shipped in the three months ended JuneÂ 30, 2024, March 31, 2024, December 31, 2023, September 30, 2023, June 30, 2023, March 31, 2023, December 31, 2022, and September 30, 2022 were as follows:Three months endedJune 30,March 31,December 31,September 30,June 30,March 31,December 31,September 30,(in thousands)20242024202320232023202320222022Number of genes shipped2121931711777171152134146Number of shipments23201817171514(1)20(1) Previously reported number of shipments have been updated to conform to the current period presentation.Comparison of the three months ended JuneÂ 30, 2024 and 2023RevenuesThree months endedJune 30,(in thousands, except percentages)Â 20242023Change%Revenues$81,464Â $63,740Â $17,724Â 28Â %Revenues increased 28% to $81.5 million for the three months ended JuneÂ 30, 2024, as compared to $63.7 million for the three months ended JuneÂ 30, 2023. The increase in revenue reflects growth in NGS tools revenue of $10.2 million and growth in synthetic genes revenue of $5.6 million, including Express Genes product line. The increase in revenue is primarily attributable to our top customers in the healthcare, industrial chemicals/materials, and academic research industries and an increase in customers. The number of our genes shipped in the three months ended JuneÂ 30, 2024 increased to approximately 212,000 genes compared to approximately 171,000 genes in the three months ended JuneÂ 30, 2023, an increase of 24%. Cost of revenuesThree months endedJune 30,(in thousands, except percentages)20242023Change%Cost of revenues$46,193Â $41,845Â $4,348Â 10Â %Gross profit $35,271Â $21,895Â $13,376Â 61Â %Gross margin43.3Â %34.4Â %8.9Â %Cost of revenues increased 10% to $46.2 million for the three months ended JuneÂ 30, 2024, as compared to $41.8 million for the three months ended JuneÂ 30, 2023. The increase is primarily attributable to an increase in material costs of $5.1 26Table of Contentsmillion due to higher sales volume. Gross margin increased 895 basis points to 43.3% for the three months ended JuneÂ 30, 2024 as compared to 34.4% for the three months ended JuneÂ 30, 2023 mainly due to increase in revenue and the fixed costs being spread over larger revenue base resulting in an increase in gross margin.Research and development expensesThree months endedJune 30,(in thousands, except percentages)20242023Change%Research and development$22,469Â $24,528Â $(2,059)(8)%Research and development expenses decreased 8% to $22.5 million for the three months ended JuneÂ 30, 2024, as compared to $24.5 million for the three months ended JuneÂ 30, 2023. The decrease is primarily due to decreases in personnel costs of $1.2 million, including stock-based compensation expense of $0.9 million due to the reduction of headcount related to the 2023 restructuring plan, outside services costs of $1.3 million and lab supplies costs of $0.4 million. These decreases are partially offset by a lack of grant reimbursement in 2024 where we received $0.8 million in 2023, which are netted against the research and development expenses.Selling, general and administrativeThree months endedJune 30,(in thousands, except percentages)20242023Change% Selling, general and administrative$56,794Â $46,057Â $10,737Â 23Â %Selling, general and administrative expenses increased 23% to $56.8 million for the three months ended JuneÂ 30, 2024, as compared to $46.1 million for the three months ended JuneÂ 30, 2023. The increase is primarily due to increases in personnel costs of $8.4 million, including stock-based compensation expense of $4.2 million, outside service costs $2.7 million, and IT services costs of $0.8 million. These increases are partially offset by the decrease in the Wilsonville manufacturing facility pre-commercialization costs of $1.1 million, which was completed when the Wilsonville manufacturing facility began shipping product in January 2023. Restructuring and other costsThree months endedJune 30,(in thousands, except percentages)20242023Change%Restructuring and other costs $â€”Â $9,052Â $(9,052)100Â %We recognized restructuring and other costs of $9.1 million resulting from the 2023 restructuring plan during the three months ended JuneÂ 30, 2023.Change in fair value of contingent consideration and holdbacksThree months endedJune 30,(in thousands, except percentages)20242023Change%Change in fair value of contingent consideration and holdbacks$â€”Â (581)581Â (100)%There was no change in fair value of contingent consideration and holdbacks for the three months ended JuneÂ 30, 2024 as the contingent consideration and holdbacks liabilities were settled in the prior year. During the three months ended JuneÂ 30, 2023, we recognized a change in fair value of holdbacks of $0.6 million related to the acquisition of AbX Biologics, Inc. ("Abveris') primarily as a result of the change in fair value of our stock price as of JuneÂ 30, 2023.Impairment of long-lived assets 27Table of ContentsThree months endedJune 30,(in thousands, except percentages)20242023Change%Impairment of long-lived assets $44,930Â $3,620Â $41,310Â 1,141Â %We recognized impairment of intangible assets and property and equipment of $44.9 million related to the Biopharma asset group during the three months ended JuneÂ 30, 2024 (see discussion in critical accounting policies and significant management estimates â€" impairment of long-lived assets below), as compared to impairment of property and equipment of $3.6 million during the three months ended JuneÂ 30, 2023 related primarily to costs associated with transferring assets between labs and professional service assistance related to the 2023 restructuring plan.Interest and other income (expense), netThree months endedJune 30,(in thousands, except percentages)20242023Change%Interest income$3,663Â $3,968Â $(305)(8)%Interest expenseâ€"Â (1)1Â (100)%Other expense(121)41Â (162)(395)%Total interest and other income (expense), net$3,542Â $4,008Â $(466)(12)%Interest income decreased 8% to $3.7 million for the three months ended JuneÂ 30, 2024, as compared to $4.0 million for the three months ended JuneÂ 30, 2023, resulting from a decrease in cash equivalents and short-term investments balances. Income tax provisionThree months endedJune 30,(in thousands, except percentages)20242023Change%Income tax provision(191)(622)$431Â (69)%We recorded an income tax provision of $0.2 million and $0.6 million for the three months ended JuneÂ 30, 2024 and JuneÂ 30, 2023, respectively.Comparison of the nine months ended JuneÂ 30, 2024 and 2023RevenuesNine months endedJune 30,(in thousands, except percentages)Â 20242023Change%Revenues$228,264Â $178,163Â $50,101Â 28Â %Revenues increased 28% to $228.3 million for the nine months ended JuneÂ 30, 2024, as compared to $178.2 million for the nine months ended JuneÂ 30, 2023. The increase in revenue reflects growth in NGS tools revenue of $37.0 million and growth in synthetic genes revenue of $13.5 million, including the Express Genes product line. The increase is primarily attributable to our top customers in the healthcare, industrial chemicals/materials and academic research industries and an increase in customers. The number of our genes shipped in the nine months ended JuneÂ 30, 2024 increased to approximately 576,000 genes, compared to approximately 457,000 genes in the nine months ended JuneÂ 30, 2023, an increase of 26%. Cost of revenues28Table of ContentsNine months endedJune 30,(in thousands, except percentages)20242023Change%Cost of revenues$133,148Â $112,956Â $20,192Â 18Â %Gross profit $95,116Â $65,207Â $29,909Â 46Â %Gross margin41.7Â %36.6Â %5.1Â %Cost of revenues increased 18% to $133.1 million for the nine months ended JuneÂ 30, 2024, as compared to $113.0 million for the nine months ended JuneÂ 30, 2023. The increase is primarily attributable to an increase in material costs of $14.9 million, due to higher sales volume, and an increase in depreciation and amortization expense of $4.4 million primarily due to the capital investment to increase manufacturing capacity in prior years. The remaining increase is attributable to an increase in lab supplies. Gross margin increased 507 basis points to 41.7% for the nine months ended JuneÂ 30, 2024 as compared to 36.6% for the nine months ended JuneÂ 30, 2023 mainly due to increase in revenue and the fixed costs being spread over larger revenue base resulting in an increase in gross margin.Research and development expensesNine months endedJune 30,(in thousands, except percentages)20242023Change%Research and development$69,718Â $83,148Â $(13,430)(16)%Research and development expenses decreased 16% to $69.7 million for the nine months ended JuneÂ 30, 2024, as compared to $83.1 million for the nine months ended JuneÂ 30, 2023. The decrease is primarily due to decreases in personnel costs of $8.2 million, including stock-based compensation expense of $2.2 million, due to the reduction of headcount related to the 2023 restructuring plan, lab supplies of $5.3 million, depreciation and amortization expense of $0.7 million, and outside service costs of $1.5 million. These decreases are partially offset by a lack of grant reimbursement in 2024 where we received $2.7 million in 2023, which are netted against the research and development expenses. Selling, general and administrativeNine months endedJune 30,(in thousands, except percentages)20242023Change% Selling, general and administrative$165,256Â $142,347Â $22,909Â 16Â %Selling, general and administrative expenses increased 16% to $165.3 million for the nine months ended JuneÂ 30, 2024, as compared to $142.3 million for the nine months ended JuneÂ 30, 2023. The increase is primarily due to an increase in personnel costs of $32.1 million, including an increase in stock-based compensation expense of $23.4 million. The increase in stock-based compensation expense is due to a reversal of $15.9 million in the first quarter 2023 because of employee stock forfeitures related to an acquisition performance condition not being met and the remaining increase is due to stock based awards granted to existing and new employees. Further, the increase is attributable to increases in facilities costs of $3.3 million, IT-related service costs of $3.2 million, marketing costs of $2.2 million and depreciation and amortization expense of $0.8 million. These increases are partially offset by the decrease in the Wilsonville manufacturing facility pre-commercialization costs of $18.5 million, which was completed when the Wilsonville manufacturing facility began shipping product in January 2023. Restructuring and other costs Nine months endedJune 30,(in thousands, except percentages)20242023Change%Restructuring and other costs $â€"Â $9,052Â $(9,052)100Â %We recognized restructuring and other costs of $9.1 million during the nine months ended JuneÂ 30, 2023 resulting from the 2023 restructuring plan.29Table of ContentsChange in fair value of contingent consideration and holdbacksNine months endedJune 30,(in thousands, except percentages)20242023Change%Change in fair value of contingent consideration and holdbacks$â€"Â $(5,913)$5,913Â (100)%There was no change in fair value of contingent consideration and holdbacks for the nine months ended JuneÂ 30, 2024 as the contingent consideration and holdbacks liabilities were settled in the prior year. During the nine months ended JuneÂ 30, 2023, we recognized a change in fair value of the contingent consideration and holdbacks of $5.5 million and $0.4 million related to the acquisitions of Abveris and iGenomX, as a result of not achieving the Abveris revenue target for calendar year 2022 and a change in fair value of our stock price as of JuneÂ 30, 2023.Impairment of long-lived assets Nine months endedJune 30,(in thousands, except percentages)20242023Change%Impairment of long-lived assets $44,930Â $3,620Â $41,310Â 1,141Â %We recognized impairment of intangible assets and property and equipment of $44.9 million related to the Biopharma asset group during the nine months ended JuneÂ 30, 2024 (see discussion in critical accounting policies and significant management estimates â€" impairment of long-lived assets below), as compared to impairment of property and equipment of $3.6 million during the nine months ended JuneÂ 30, 2023 related primarily to costs associated with transferring assets between labs and professional service assistance related to the 2023 restructuring plan.Interest and other income (expense), netNine months endedJune 30,(in thousands, except percentages)20242023Change%Interest income$11,724Â $10,472Â $1,252Â 12Â %Interest expenseâ€"Â (4)4Â (100)%Other expense(351)(422)71Â (17)%Total interest and other income (expense), net$11,373Â $10,046Â $1,327Â 13Â %Interest income increased 12% to $11.7 million for the nine months ended JuneÂ 30, 2024, as compared to $10.5 million for the nine months ended JuneÂ 30, 2023, resulting from an increase in interest rates on our cash equivalents and short-term investments. Income tax provisionNine months endedJune 30,(in thousands, except percentages)20242023Change%Income tax provision(656)(1,374)$718Â (52)%We recorded an income tax provision of $0.7 million and $1.4 million during the nine months ended JuneÂ 30, 2024 and JuneÂ 30, 2023, respectively.Liquidity and capital resourcesSources of liquidity30Table of ContentsTo date, we have financed our operations principally through public equity raises, private placements of our convertible preferred stock, borrowings from credit facilities and revenue from our commercial operations.Since our inception on February 4, 2013 and through JuneÂ 30, 2024, we have received an aggregate of $1,333.7 million in net proceeds from the issuance of equity securities in public offerings and an aggregate of $13.8 million from debt issuances. At JuneÂ 30, 2024, we had a balance of $239.1 million of cash and cash equivalents and $50.3 million in short-term investments.Operating capital requirementsOur primary uses of capital are, and we expect will continue to be for the near future, compensation and related expenses, manufacturing costs, laboratory and related supplies, legal and other regulatory expenses and general overhead costs and capital expenditures. We had $1.1 million in commitments for capital expenditures as of JuneÂ 30, 2024.Cash flowsThe following table summarizes our sources and uses of cash and cash equivalents:Nine months endedJune 30,(in thousands)20242023Net cash used in operating activities$(48,774)$(121,770)Net cash provided by (used in) investing activities(1,786)52,859Â Net cash provided by financing activities3,263Â 469Â Operating activitiesNet cash used in operating activities was $48.8 million during the nine months ended JuneÂ 30, 2024 and consisted primarily of a net loss of $174.1 million adjusted for non-cash items including depreciation and amortization expense of $24.8 million, stock-based compensation expense of $38.6 million, impairment of long-lived assets of $44.9 million and a net change in operating assets and liabilities of $16.6 million. The change in operating assets and liabilities was mainly due to decreases in accounts receivable of $11.4 million, inventories of $3.6 million, other non-current assets of $0.5 million, accounts payable of $6.9 million and other liabilities of $1.8 million offset by increases in prepaid expenses of $0.2 million, accrued compensation of $5.9Â million and accrued expenses of $4.1 million.Net cash used in operating activities was $121.8 million during the nine months ended June 30, 2023 and consisted primarily of a net loss of $158.4 million adjusted for non-cash items including depreciation and amortization expenses of $20.8 million, stock-based compensation expense of $18.5 million, non-cash lease expense of $1.0 million, change in fair value of contingent consideration of $5.9 million, and a net change in operating assets and liabilities of $1.5 million. The change in operating assets and liabilities was mainly due to increases in inventories of $2.9 million, other non-current assets of $1.1 million and accounts payable of $4.4 million offset by decreases in accounts receivable of $2.5 million, prepaid expenses of $1.9 million, accrued compensation of $0.3 million, accrued expenses of $1.3 million and other liabilities of $1.8 million.Investing activitiesNet cash used in investing activities was $1.8 million during the nine months ended JuneÂ 30, 2024, which consisted of the purchases of laboratory property, equipment and computers of $3.1 million offset by the proceeds from the net impact of purchases and maturity of investments of $1.3 million.In the nine months ended June 30, 2023, our investing activities generated net cash of $52.9 million. The net cash was generated primarily from the net impact of purchases, sale and maturity of investments of $78.2 million and purchases of laboratory property, equipment and computers of $25.4 million.Financing activities31Table of ContentsNet cash provided by financing activities was $3.3 million in the nine months ended JuneÂ 30, 2024, which consisted of $5.2 million from the exercise of stock options and $2.0 million proceeds from issuance of shares under the 2018 ESPP offset by $4.0 million in repurchases of common stock for income tax withholdings. Net cash provided by financing activities was $0.5 million in the nine months ended June 30, 2023, which consisted of $2.5 million from proceeds from issuance of shares under the 2018 ESPP and $1.2 million from the exercise of stock options, offset by $3.3 million in repurchases of common stock for income tax withholdings.Off-balance sheet arrangementsWe do not have any off-balance sheet arrangements.Contractual obligations and other commitmentsOur contractual obligations have not materially changed from those reported in our Annual Report on Form 10-K. Critical accounting policies and significant management estimatesThe preparation of our Condensed Consolidated Financial Statements in accordance with generally accepted accounting principles in the United States of America requires management to make estimates and judgments that affect the reported amounts in the financial statements and related disclosures. On an ongoing basis, we evaluate our significant accounting policies and estimates. We base our estimates on historical experience and on various market-specific and other relevant assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Estimates are assessed each period and updated to reflect current information. Actual results may differ significantly from these estimates. A summary of our critical accounting policies and estimates is presented in Part II, Item 7 of our Annual Report on Form 10-K for the year ended SeptemberÂ 30, 2023. There were no other material changes to our critical accounting policies and estimates during the nine months ended JuneÂ 30, 2024 other than the updates to the critical accounting policies and estimates set forth below.Valuation of long-lived assetsWe recorded impairment charges totaling $44.9 million related to property and equipment and finite-lived intangible assets which are included in â€œImpairment of long-lived assetsâ€ on our condensed consolidated statements of operations and comprehensive loss for the three and nine months ended JuneÂ 30, 2024. During the three months ended JuneÂ 30, 2024, we identified an impairment indicator with respect to an asset group associated with our antibody discovery services product line (â€œBiopharma asset groupâ€) due to lower than forecasted revenues. Therefore, we performed a recoverability test of long-lived assets by comparing the net book value of the long-lived asset group, to the future undiscounted net cash flows attributable to such assets. We concluded that the carrying value of the asset group was not recoverable as it exceeded the future undiscounted cash flows the assets are expected to generate from the use and eventual disposition of the asset group.To measure, allocate and recognize the impairment loss, we estimated the fair value of the Biopharma asset group by applying a discounted cash flow method. Calculating the fair value of an asset group involves significant estimates and assumptions. These estimates and assumptions include, among others, the level and timing of revenues, operating expenses, taxes, and working capital, capital asset requirements over the remaining life of the primary asset in the asset group, and discount rates, we believe to be consistent with the inherent risks associated with the asset group, which was approximately 14%. Changes in these factors and assumptions used can materially affect the amount of impairment loss recognized in the period the asset group was considered impaired.The implied allocated impairment loss to any individual asset within the long-lived asset group shall not reduce the carrying amount of that asset below its fair value. We estimated the fair value of the developed technology intangible asset and the customer relationships intangible assets using an excess earnings model (income approach). We estimated the fair value of the trade name intangible asset using a relief from royalty approach. Key assumptions include the level and timing of expected future revenue, conditions and demands specific to each intangible asset over its remaining useful life. The fair value of these intangible assets is primarily affected by the projected revenues, gross margins, operating expenses, and the 32Table of Contentsanticipated timing of the projected income associated with each intangible asset coupled with the discount rates used to derive their estimated present values. After consideration of the impairment charge recorded in the current quarter, the remaining carrying amount of long-lived assets within the Biopharma asset group is approximately $11.6 million, which primarily comprises of lease right-of-use assets. We believe the remaining long-lived assets of Biopharma asset group are not presently at risk for future impairment.Recent issued accounting pronouncementsFor a description of accounting changes and recent accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our condensed consolidated financial statements, see Note 2, â€œSummary of significant accounting policiesâ€ in Item 1 of Part I of this Quarterly Report on Form 10-Q.Item 3. Quantitative and qualitative disclosures about market riskInterest rate sensitivityWe are exposed to market risk related to changes in interest rates. We had cash, cash equivalents, and marketable securities of $289.4 million and $336.4 million as of JuneÂ 30, 2024 and SeptemberÂ 30, 2023, respectively, which consisted primarily of money market funds and marketable securities, largely composed of investment grade, short to intermediate term fixed income securities.The primary objective of our investment activities is to preserve capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of investments in a variety of securities of high credit quality and short-term duration, according to our board-approved investment policy. Our investments are subject to interest rate risk and could fall in value if market interest rates increase. A hypothetical 10% relative change in interest rates during any of the periods presented would not have a material impact on our condensed consolidated financial statements.Foreign currency sensitivityThe majority of our transactions occur in U.S. dollars. However, we do have certain transactions that are denominated in currencies other than the U.S. dollar, primarily the Euro, Chinese Yuan, and British Pound, and we therefore are subject to foreign exchange risk. The fluctuation in the value of the U.S. dollar against other currencies affects the reported amounts of expenses, assets and liabilities primarily associated with a limited number of manufacturing activities.We do not use derivative financial instruments for speculative trading purposes, nor do we hedge foreign currency exchange rate exposure in a manner that entirely offsets the effects of changes in foreign currency exchange rates. The counterparties to these forward foreign currency exchange contracts are creditworthy multinational commercial banks, which minimizes the risk of counterparty nonperformance. We regularly review our exposure and may, as part of this review, make changes to it.Inflation riskWhile we have experienced increased operating costs in recent periods, which we believe are due in part to the recent growth in inflation, we do not believe that inflation has had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could adversely affect our business, financial condition and results of operations.Item 4. Controls and ProceduresEvaluation of Disclosure Controls and ProceduresUnder the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of JuneÂ 30, 2024, which is the end of the period covered by this Quarterly Report. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Companyâ€™s disclosure controls and procedures to ensure that information required to be disclosed by the Company in reports we file or submit under the Exchange Act is (i) recorded, processed, summarized, evaluated and reported, as 33Table of Contentsapplicable, within the time periods specified in the SECâ€™s rules and forms and (ii) accumulated and communicated to the Companyâ€™s management, including the Companyâ€™s Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures were not effective as of JuneÂ 30, 2024 due to the material weakness in internal control over financial reporting described in Part II, Item 9A of the Annual Report on Form 10-K for the fiscal year ended SeptemberÂ 30, 2023. Notwithstanding the material weakness, the Company performed additional analysis and other post-closing procedures to determine its condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles. Accordingly, management believes that the unaudited condensed consolidated financial statements contained in this Quarterly Report on Form 10-Q fairly present, in all material respects, our financial condition, results of operations and cash flows for the periods presented in conformity with accounting principles generally accepted in the United States of America.Because of the 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.Previously Identified Material WeaknessesA material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of annual or interim financial statements would not be prevented or detected on a timely basis.Refer to the management report on internal control over financial reporting in Part II, Item 9A of our Annual Report on Form 10-K for a discussion of the material weakness existing as of SeptemberÂ 30, 2023, which continued to exist as of JuneÂ 30, 2024.Remediation Plan of Material WeaknessesAs previously described in Part II, Item 9A of our Annual Report on Form 10-K, we are continuing to enhance our overall control environment and are devoting substantial effort by enhancing our manual and automated controls to remediate the identified material weakness. For a more comprehensive discussion of the remedial measures which are being undertaken to address these material weaknesses, or the Remediation Plan, refer to Part II, Item 9A, â€œRemediation of Material Weaknesses,â€ of our Annual Report on Form 10-K.Additional changes and improvements may be identified and adopted as we continue to evaluate and implement our Remediation Plan. These material weaknesses will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that the enhanced control is operating effectively.Changes in Internal Control over Financial ReportingExcept for actions taken under the Remediation Plan described above, there were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended JuneÂ 30, 2024, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.PART II. Other informationItem 1. Legal proceedingsFor a description of material pending legal proceedings, see Note 6 â€œCommitments and Contingencies - Legal Mattersâ€ of the Notes to Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, which is incorporated herein by reference. In addition, we are subject to various legal proceedings and claims arising in the ordinary course of business. Although occasional adverse decisions or settlements may occur, management believes that the final disposition of such matters will not have a material adverse effect on our business, financial position, results of operations or cash flows.34Table of ContentsItem 1A. Risk factorsIn addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the risk factors and other cautionary statements described under the heading â€œItem 1A. Risk Factorsâ€ included in our Annual Report on Form 10-K filed with the SEC on NovemberÂ 21, 2023, as updated and supplemented in Part II, â€œItem 1A. Risk Factorsâ€ in our Quarterly Report on Form 10-Q filed with the SEC on February 2, 2024, which could materially affect our business, financial condition or future results. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially and adversely affect our business, financial condition or future results. There have been no material changes in our risk factors from those described in our Annual Report on Form 10-K, and our Quarterly Report on Form 10-Q filed with the SEC on February 2, 2024. We may disclose changes to risk factors or additional risk factors from time to time in our future filings with the SECItem 2. Unregistered sales of equity securities and use of proceedsSales of unregistered securities None. Item 3. Defaults upon senior securitiesNone.Item 4. Mine safety disclosuresNot applicable.Item 5. Other informationRule 10b5-1 Trading PlansDuring the fiscal quarter ended June 30, 2024, none of our directors or officers (as defined in Rule 16a-1(f) of the Exchange Act) informed us of the adoption, modification or termination of a â€œRule 10b5-1 trading arrangementâ€ or a â€œnon-Rule 10b5-1 trading arrangementâ€Â (both as defined in Item 408(a) of Regulation S-K).35Table of ContentsItem 6. ExhibitsExhibitNumberDescriptionÂ Filed / Furnished /Incorporated fromForm 31.1Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, Rule 13(a)-14(a)/15d-14(a), by Chief Executive Officer.Filed herewith31.2Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, Rule 13(a)-14(a)/15d-14(a), by Chief Financial Officer.Filed herewith32.1â€ Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Executive Officer.Furnished herewith32.2â€ Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Financial Officer.Furnished herewith101The following materials from Twist Bioscience Corporationâ€™s Quarterly Report on Form 10-Q for the quarter ended JuneÂ 30, 2024, formatted in iXBRL (inline eXtensible Business Reporting Language): (i) the Condensed Consolidated Balance Sheets, (ii) the Condensed Consolidated Statements of Operations and Comprehensive Loss, (iii) the Condensed Consolidated Balance Sheets, (iv) the Condensed Consolidated Statements of Stockholdersâ€™ Equity, (v) the Condensed Consolidated Statements of Cash Flows, and (vi) Notes to Unaudited Condensed Consolidated Financial Statements, tagged as blocks of text.Filed herewith104The cover page from the Companyâ€™s Quarterly Report on Form 10-Q for the quarter ended JuneÂ 30, 2024, formatted in Inline XBRL (included in Exhibit 101).Filed herewithâ€ The certifications attached as Exhibits 32.1 and 32.2 that accompany this Quarterly Report on Form 10-Q are not deemed filed with the SEC and are not to be incorporated by reference into any filing of Twist Bioscience Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, regardless of any general incorporation language contained in any filing.36Table of ContentsSIGNATURESPursuant to the requirements 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.August 2, 2024Twist Bioscience CorporationBy:/s/ Adam LaponisAdam LaponisChief Financial Officer(Authorized officer)37DocumentExhibit 31.1Certification of Principal Executive Officerpursuant toExchange Act Rules 13a-14(a) and 15d-14(a),as adopted pursuant toSection 302 of the Sarbanes-Oxley Act of 2002I, Emily M. Leproust, certify that:1.I have reviewed this Quarterly Report on Form 10-Q of Twist Bioscience Corporation for the quarter ended JuneÂ 30, 2024;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 registrant as of, and for, the periods presented in this report;4.The registrantâ€™s other certifying officer(s) 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 registrant 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 registrant, 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 registrantâ€™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; andd.Disclosed in this report any change in the registrantâ€™s internal control over financial reporting that occurred during the registrantâ€™s most recent fiscal quarter (the registrantâ€™s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrantâ€™s internal control over financial reporting.5.The registrantâ€™s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrantâ€™s auditors and the audit committee of registrantâ€™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 registrantâ€™s ability to record, process, summarize and report financial information; andb.Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrantâ€™s internal control over financial reporting./s/ Emily M. LeproustEmily M. LeproustChief Executive Officer(Principal Executive Officer)Date: AugustÂ 2, 2024DocumentExhibit 31.2Certification of Principal Financial Officerpursuant toExchange Act Rules 13a-14(a) and 15d-14(a),as adopted pursuant toSection 302 of the Sarbanes-Oxley Act of 2002I, Adam Laponis, certify that:1.I have reviewed this Quarterly Report on Form 10-Q of Twist Bioscience Corporation for the quarter ended JuneÂ 30, 2024;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 registrant as of, and for, the periods presented in this report;4.The registrantâ€™s other certifying officer(s) 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 registrant 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 registrant, 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 registrantâ€™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; andd.Disclosed in this report any change in the registrantâ€™s internal control over financial reporting that occurred during the registrantâ€™s most recent fiscal quarter (the registrantâ€™s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrantâ€™s internal control over financial reporting.5.The registrantâ€™s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrantâ€™s auditors and the audit committee of registrantâ€™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 registrantâ€™s ability to record, process, summarize and report financial information; andb.Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrantâ€™s internal control over financial reporting./s/ Adam LaponisAdam LaponisChief Financial OfficerDate: AugustÂ 2, 2024DocumentExhibit 32.1CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICERPURSUANT TO 18 U.S.C. SECTION 1350,AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEYACT OF 2002In connection with the Quarterly Report of Twist Bioscience Corporation (the â€œCompanyâ€) on Form 10-Q for the quarterly period ended JuneÂ 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the â€œReportâ€), I, Emily M. Leproust, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Â§ 1350, as adopted pursuant to Â§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, as amended; and2.The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.Date: AugustÂ 2, 2024/s/ Emily M. LeproustEmily M. LeproustChief Executive Officer(Principal Executive Officer)DocumentExhibit 32.2CERTIFICATION OF PRINCIPAL FINANCIAL OFFICERPURSUANT TO 18 U.S.C. SECTION 1350,AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEYACT OF 2002In connection with the Quarterly Report of Twist Bioscience Corporation (the â€œCompanyâ€) on Form 10-Q for the quarterly period ended JuneÂ 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the â€œReportâ€), I, Adam Laponis, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Â§ 1350, as adopted pursuant to Â§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, as amended; and2.The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.Date: AugustÂ 2, 2024/s/ Adam LaponisAdam LaponisChief Financial Officer