# PacBio Announces Fourth Quarter and Fiscal Year 2024 Financial Results

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MENLO PARK, Calif., Feb. 13, 2025 (GLOBE NEWSWIRE) -- PacBio (NASDAQ: PACB) today announced financial results for the quarter and fiscal year ended December 31, 2024.

**Fourth quarter results**

- Revenue of $39.2 million, a 33% decrease compared with $58.4 million in the prior-year period.
- Instrument revenue of $15.3 million compared with $35.1 million in the prior-year period. Instrument revenue in the fourth quarter of 2024 included 23 Revio® sequencing systems and 7 Vega™ sequencing systems.
- Consumables revenue of $18.8 million compared with $18.9 million in the prior-year period.
- Service and other revenue of $5.1 million compared with $4.4 million in the prior-year period.

Gross margin, operating expenses, net income (loss), and net income (loss) per share are reported on a GAAP and non-GAAP basis. The non-GAAP measures are described below and reconciled to the corresponding GAAP measures at the end of this release.

GAAP gross margin of 26% in the fourth quarter of 2024 compared to 16% for the fourth quarter of 2023. Non-GAAP gross margin of 31% in the fourth quarter of 2024 compared to 19% in the fourth quarter of 2023.

GAAP operating expenses totaled $161.9 million for the fourth quarter of 2024, compared to $97.1 million for the fourth quarter of 2023. Non-GAAP operating expenses totaled $68.6 million for the fourth quarter of 2024, compared to $88.4 million for the fourth quarter of 2023. GAAP and non-GAAP operating expenses for the fourth quarter of 2024 and the fourth quarter of 2023 included non-cash share-based compensation of $14.8 million and $15.4 million, respectively.

Operating expenses, net income, and basic net income per share for the quarter ended December 31, 2024 include the impact of estimated preliminary non-cash impairment charges of approximately $90.1 million related to goodwill and in-process research and development. The impairments were driven by macroeconomic headwinds and a revised outlook on future cash flows, among other factors. These preliminary estimates are subject to finalization as the Company completes its interim assessment and year-end financial reporting procedures. The final impairment charges reported in the Annual Report on Form 10-K may differ materially from these estimates.

GAAP net income for the fourth quarter of 2024 was $3.6 million, compared to a GAAP net loss of $82.0 million for the fourth quarter of 2023. GAAP basic net income per share for the fourth quarter of 2024 was $0.01 compared to GAAP basic net loss per share of $0.31 for the fourth quarter of 2023. GAAP net income and GAAP basic net income per share for the quarter ended December 31, 2024 include a $154.4 million gain on debt restructuring in relation to our note exchange that closed on November 21, 2024. Non-GAAP net loss was $55.3 million for the fourth quarter of 2024, compared to $72.5 million for the fourth quarter of 2023. Non-GAAP basic net loss per share for the fourth quarter of 2024 was $0.20 compared to $0.27 for the fourth quarter of 2023.

Cash, cash equivalents, and investments, excluding restricted cash, at December 31, 2024, totaled $389.9 million, compared to $631.4 million at December 31, 2023.

**Highlights since PacBio's last earnings release**

- **Accelerated Launch of Vega:** Commenced shipments of Vega, our benchtop sequencing platform, ahead of schedule —expanding access to HiFi long-read sequencing for a broader range of customers.
- **Clinical Collaboration with Berry Genomics:** Delivered the first Vega systems as part of an early access agreement, supporting targeted assay development for prenatal health, carrier screening, and newborn screening programs in China and other markets. Additionally, Berry plans to obtain NMPA approval for its thalassemia carrier screening assay on existing PacBio technology.
- **Breakthrough in Cost and Efficiency with SPRQ Chemistry:** Commenced shipment of SPRQ chemistry, enabling sub-$500 HiFi long-read human genome sequencing while reducing DNA input requirements by 75%, driving increased sample throughput and helped drive Revio instrument placements at new customers in the fourth quarter.
- **Strengthened Financial Position:** Executed the convertible note exchange, reducing the outstanding principal balance of the convertible notes by $259 million by replacing $459 million in 1.5% convertible notes due 2028 with $200 million in new 1.5% convertible notes due August 2029, 20.5 million shares of common stock and $50 million in cash.
- **Scientific Leadership in Genetic Disease Research:**
    - Radboud University Medical Center Study: Used Revio to identify 93% of pathogenic variants in samples that had been difficult to detect and required multiple testing modalities.

- University of Washington & UDN Research: Demonstrated PacBio's ability to simultaneously analyze the genome, methylome, epigenome, and transcriptome, providing novel insights into a rare and complex Mendelian condition.

- **Leadership Appointments:**
  - Appointed David Ruggiero as Head of Global Sales and Service, bringing deep experience in sales leadership across technology and life sciences, including Zoom Video Communications, Microsoft Corporation, and Thermo Fisher Scientific.
  - Added Chris Smith, Chief Executive Officer of NeoGenomics, Inc., to the Board of Directors, leveraging his expertise in genomics, diagnostics, and corporate strategy to support PacBio's growth initiatives.

"2024 was a challenging yet transformative year for PacBio, marked by the successful launch of new products, disciplined cost management, and strategic progress in our clinical strategy. Despite macroeconomic pressures, we have continued to innovate and expand accessibility to HiFi sequencing," said Christian Henry, President and CEO of PacBio. "Looking ahead to 2025, while the macro environment remains uncertain, I believe PacBio can return to growth and expand market share as the Vega benchtop platform and SPRQ chemistry enable more researchers, clinical labs, and smaller institutions to harness the power of HiFi sequencing."

**Quarterly Conference Call Information**

Management will host a quarterly conference call to discuss its fourth quarter ended December 31, 2024 results today at 4:30 p.m. Eastern Time. Investors may listen to the call by dialing 1-888-349-0136 if outside the U.S., by dialing 1-412-317-0459, requesting to join the "PacBio Q4 Earnings Call". The call will be webcast live and available for replay at PacBio's website at https://investor.pacificbiosciences.com.

**About PacBio**

PacBio (NASDAQ: PACB) is a premier life science technology company that designs, develops, and manufactures advanced sequencing solutions to help scientists and clinical researchers resolve genetically complex problems. Our products and technologies stem from two highly differentiated core technologies focused on accuracy, quality and completeness which include our HiFi long-read sequencing and our SBB® short-read sequencing technologies. Our products address solutions across a broad set of research applications including human germline sequencing, plant and animal sciences, infectious disease and microbiology, oncology, and other emerging applications. For more information, please visit www.pacb.com and follow @PacBio.

PacBio products are provided for Research Use Only. Not for use in diagnostic procedures.

**Statement regarding use of non-GAAP financial measures**

PacBio reports non-GAAP results for basic net income and loss per share, net income, net loss, gross margins, gross profit and operating expenses in addition to, and not as a substitute for, or because it believes that such information is superior to, financial measures calculated in accordance with GAAP. PacBio believes that non-GAAP financial information, when taken collectively, may be helpful to investors because it provides consistency and comparability with past financial performance. However, non-GAAP financial information is presented for supplemental informational purposes only, has limitations as an analytical tool and should not be considered in isolation or as a substitute for financial information presented in accordance with GAAP. In addition, other companies may calculate similarly titled non-GAAP measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of PacBio's non-GAAP financial measures as tools for comparison.

PacBio's financial measures under GAAP include substantial charges that are listed in the itemized reconciliations between GAAP and non-GAAP financial measures included in this press release, such as impairment charges, merger-related expenses, changes in fair value of contingent consideration, loss on extinguishment of debt, gain on debt restructuring, amortization of acquired intangible assets, income tax benefits, restructuring costs and other adjustments and rounding differences. The amortization of acquired intangible assets excluded from GAAP financial measures relates to acquired intangible assets. The amortization related to these intangible assets will occur in future periods until they are fully amortized. Management has excluded the effects of these items in non-GAAP measures to assist investors in analyzing and assessing past and future operating performance. In addition, management uses non-GAAP measures to compare PacBio's performance relative to forecasts and strategic plans and to benchmark its performance externally against competitors.

PacBio encourages investors to carefully consider its results under GAAP, as well as its supplemental non-GAAP information and the reconciliation between these presentations, to more fully understand its business. A reconciliation of PacBio's non-GAAP financial measures to their most directly comparable financial measure stated in accordance with GAAP has been provided in the financial statement tables included in this press release.

**Statement regarding preliminary financial results**

This press release contains preliminary financial results which are unaudited and based on current expectations and may be adjusted as a result of, among other things, completion of annual audit procedures.

**Forward-Looking Statements**

This press release contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and the U.S. Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward-looking statements, including statements relating to the availability, uses, accuracy, coverage, advantages, quality or performance of, or benefits or expected benefits of using, PacBio products or technologies; expectations with respect to commercialization, development and shipment of PacBio products; PacBio's financial guidance and expectations for future periods; the amounts of the preliminary estimated non-cash impairment charges; and developments affecting our industry and the markets in which we compete, including the impact of new products and technologies. Reported results and orders for any instrument system should not be considered an indication of future performance. You should not place undue reliance on forward-looking statements because they are subject to assumptions, risks, and uncertainties and could cause actual outcomes and results to differ materially from currently anticipated results, including, challenges inherent in developing, manufacturing, launching, marketing and selling new products, and achieving anticipated new sales; potential cancellation of existing instrument orders; assumptions, risks and uncertainties related to the ability to

attract new customers and retain and grow sales from existing customers; risks related to PacBio's ability to successfully execute and realize the benefits of acquisitions; the impact of U.S. export restrictions on the shipment of PacBio products to certain countries; rapidly changing technologies and extensive competition in genomic sequencing; unanticipated increases in costs or expenses; interruptions or delays in the supply of components or materials for, or manufacturing of, PacBio products and products under development; potential product performance and quality issues and potential delays in development timelines; the possible loss of key employees, customers, or suppliers; customers and prospective customers curtailing or suspending activities using PacBio's products; third-party claims alleging infringement of patents and proprietary rights or seeking to invalidate PacBio's patents or proprietary rights; risks associated with international operations; other risks associated with general macroeconomic conditions and geopolitical instability; additional sustained declines in PacBio's stock price and further changes in the timing of expected future cash flows; and adjustments arising in connection with the preparation and audit of PacBio's financial statements as of and for the year ended December 31, 2024 resulting in changes to the amounts of the preliminary estimated non-cash impairment charges and other preliminary financial results presented in this press release. Additional factors that could materially affect actual results can be found in PacBio's most recent filings with the Securities and Exchange Commission, including PacBio's most recent reports on Forms 8-K, 10-K, and 10-Q, and include those listed under the caption "Risk Factors." These forward-looking statements are based on current expectations and speak only as of the date hereof; except as required by law, PacBio disclaims any obligation to revise or update these forward-looking statements to reflect events or circumstances in the future, even if new information becomes available.

The unaudited condensed consolidated financial statements that follow should be read in conjunction with the notes set forth in PacBio's Annual Report on Form 10-K when filed with the Securities and Exchange Commission.

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**Pacific Biosciences of California, Inc.**
**Unaudited Condensed Consolidated Statements of Operations**

| | Three Months Ended | | |
|---|---|---|---|
| *(in thousands, except per share amounts)* | **December 31, 2024** | **September 30, 2024** | **December 31, 2023** |
| Revenue: | | | |
| Product revenue | $ 34,098 | $ 35,296 | $ 54,001 |
| Service and other revenue | 5,126 | 4,671 | 4,356 |
| Total revenue | 39,224 | 39,967 | 58,357 |
| Cost of Revenue: | | | |
| Cost of product revenue [1] | 23,476 | 23,278 | 40,421 |
| Cost of service and other revenue | 3,469 | 3,484 | 3,496 |
| Amortization of acquired intangible assets | 2,221 | 3,201 | 1,433 |
| Loss on purchase commitment | — | — | 3,436 |
| Total cost of revenue | 29,166 | 29,963 | 48,786 |
| Gross profit | 10,058 | 10,004 | 9,571 |
| Operating Expense: | | | |
| Research and development | 27,466 | 25,516 | 44,544 |
| Sales, general and administrative [2] | 41,641 | 43,746 | 45,996 |
| Impairment charges [3] | 90,100 | — | — |
| Merger-related expenses [4] | — | — | 63 |
| Change in fair value of contingent consideration [5] | (1,950) | 1,170 | 1,100 |
| Amortization of acquired intangible assets | 4,629 | 3,649 | 5,416 |
| Total operating expense | 161,886 | 74,081 | 97,119 |
| Operating loss | (151,828) | (64,077) | (87,548) |
| Gain on debt restructuring [6] | 154,407 | — | — |
| Interest expense | (2,757) | (3,538) | (3,571) |
| Other income, net | 4,065 | 6,890 | 8,383 |
| Income (loss) before income taxes | 3,887 | (60,725) | (82,736) |
| Income tax provision (benefit) [7] | 316 | — | (718) |
| Net income (loss) | 3,571 | (60,725) | (82,018) |
| Net income (loss) per share: | | | |
| Basic | $ 0.01 | $ (0.22) | $ (0.31) |

| | | | |
|---|---|---|---|
| Diluted | $ (0.49) | $ (0.22) | $ (0.31) |
| Weighted average shares outstanding used in calculating net income (loss) per share | | | |
| Basic | 282,999 | 272,915 | 267,121 |
| Diluted | 306,892 | 272,915 | 267,121 |

(1) Balance for the three months ended September 30, 2024 includes restructuring costs. Refer to the Reconciliation of Non-GAAP Financial Measures table below for additional information on such costs and related amounts.

(2) Balances for the three months ended December 31, 2024 and September 30, 2024 include restructuring costs. Refer to the Reconciliation of Non-GAAP Financial Measures table below for additional information on such costs and related amounts.

(3) Preliminary estimated goodwill and in-process research and development impairment charges during the three months ended December 31, 2024 driven primarily by macroeconomic factors which have impacted our cash flow projections, among other factors.

(4) Merger-related expenses for the three months ended December 31, 2023 consisted of transaction costs arising from the acquisition of Apton.

(5) Change in fair value of contingent consideration during the three months ended December 31, 2024, September 30, 2024, and December 31, 2023 was due to fair value adjustments of milestone payments payable upon the achievement of the respective milestone event.

(6) Gain on debt restructuring during the three months ended December 31, 2024, represents the gain resulting from the November 2024 convertible notes exchange transaction.

(7) Deferred income tax benefits during the three months ended December 31, 2023 are related to the release of the valuation allowance for deferred tax assets due to the recognition of deferred tax liabilities in connection with the Apton acquisition.

**Pacific Biosciences of California, Inc.**
**Unaudited Condensed Consolidated Statements of Operations**

| | Three Months Ended December 31, | | Twelve Months Ended December 31, | |
|---|---|---|---|---|
| *(in thousands, except per share amounts)* | **2024** | **2023** | **2024** | **2023** |
| Revenue: | | | | |
| Product revenue | $ 34,098 | $ 54,001 | $ 136,149 | $ 183,872 |
| Service and other revenue | 5,126 | 4,356 | 17,865 | 16,649 |
| Total revenue | 39,224 | 58,357 | 154,014 | 200,521 |
| Cost of Revenue: | | | | |
| Cost of product revenue(1) | 23,476 | 40,421 | 92,284 | 127,568 |
| Cost of service and other revenue(1) | 3,469 | 3,496 | 14,057 | 14,754 |
| Amortization of acquired intangible assets | 2,221 | 1,433 | 9,393 | 1,983 |
| Loss on purchase commitment | — | 3,436 | 998 | 3,436 |
| Total cost of revenue | 29,166 | 48,786 | 116,732 | 147,741 |
| Gross profit | 10,058 | 9,571 | 37,282 | 52,780 |
| Operating Expense: | | | | |
| Research and development(1) | 27,466 | 44,544 | 134,922 | 187,170 |
| Sales, general and administrative(2) | 41,641 | 45,996 | 175,017 | 169,818 |
| Impairment charges(3) | 90,100 | — | 183,300 | — |
| Merger-related expenses(4) | — | 63 | — | 9,042 |
| Change in fair value of contingent consideration(5) | (1,950) | 1,100 | (850) | 15,060 |
| Amortization of acquired intangible assets | 4,629 | 5,416 | 18,006 | 6,157 |
| Total operating expense | 161,886 | 97,119 | 510,395 | 387,247 |
| Operating loss | (151,828) | (87,548) | (473,113) | (334,467) |
| Loss on extinguishment of debt(6) | — | — | — | (2,033) |
| Gain on debt restructuring(7) | 154,407 | — | 154,407 | — |
| Interest expense | (2,757) | (3,571) | (13,412) | (14,343) |
| Other income, net | 4,065 | 8,383 | 23,783 | 32,684 |
| Income (loss) before income taxes | 3,887 | (82,736) | (308,335) | (318,159) |
| Income tax provision (benefit)(8) | 316 | (718) | 316 | (11,424) |
| Net income (loss) | 3,571 | (82,018) | (308,651) | (306,735) |
| Net income (loss) per share: | | | | |
| Basic | $ 0.01 | $ (0.31) | $ (1.12) | $ (1.21) |

| | | | | |
|---|---|---|---|---|
| Diluted | $ (0.49) | $ (0.31) | $ (1.58) | $ (1.21) |
| Weighted average shares outstanding used in calculating net income (loss) per share | | | | |
| Basic | 282,999 | 267,121 | 274,488 | 253,629 |
| Diluted | 306,892 | 267,121 | 288,366 | 253,629 |

(1) Balance for the twelve months ended December 31, 2024 includes restructuring costs. Refer to the Reconciliation of Non-GAAP Financial Measures table below for additional information on such costs and related amounts.

(2) Balances for the three and twelve months ended December 31, 2024 include restructuring costs. Refer to the Reconciliation of Non-GAAP Financial Measures table below for additional information on such costs and related amounts.

(3) Preliminary estimated goodwill and in-process research and development impairment charges during the three and twelve months ended December 31, 2024 of $90.1 million was driven primarily by macroeconomic factors which have impacted our cash flow projections, among other factors. Goodwill impairment of $93.2 million included in the twelve months ended December 31, 2024 was related to a sustained decrease in the Company's share price, among other factors.

(4) Merger-related expenses for the three months ended December 31, 2023 consisted of transaction costs arising from the acquisition of Apton. Merger-related expenses for the twelve months ended December 31, 2023 consisted of $4.9 million of transaction costs arising from the acquisition of Apton, $2.8 million of compensation expense resulting from the liquidity event bonus plan in connection with the Apton merger, and $1.3 million of compensation expense resulting from the acceleration of certain equity awards in connection with the Apton merger.

(5) Change in fair value of contingent consideration during the three and twelve months ended December 31, 2024 and December 31, 2023 was due to fair value adjustments of milestone payments payable upon the achievement of the respective milestone event.

(6) Loss on extinguishment of debt during the twelve months ended December 31, 2023 is related to the exchange of a portion of PacBio's 1.50% Convertible Senior Notes due 2028 for PacBio's 1.375% Convertible Senior Notes due 2030.

(7) Gain on debt restructuring during the three and twelve months ended December 31, 2024, represents the gain resulting from the November 2024 convertible notes exchange transaction.

(8) Deferred income tax benefits during the three and twelve months ended December 31, 2023 are related to the release of the valuation allowance for deferred tax assets due to the recognition of deferred tax liabilities in connection with the Apton acquisition.

**Pacific Biosciences of California, Inc.**
**Unaudited Condensed Consolidated Balance Sheets**

| *(in thousands)* | December 31, 2024 | December 31, 2023 |
|---|---|---|
| **Assets** | | |
| Cash and investments | $ 389,931 | $ 631,416 |
| Accounts receivable, net | 27,524 | 36,615 |
| Inventory, net | 58,755 | 56,676 |
| Prepaid and other current assets | 18,781 | 17,040 |
| Property and equipment, net | 30,505 | 36,432 |
| Operating lease right-of-use assets, net | 16,091 | 32,593 |
| Restricted cash | 2,222 | 2,722 |
| Intangible assets, net (1) | 394,572 | 456,984 |
| Goodwill (2) | 313,961 | 462,261 |
| Other long-term assets | 9,305 | 13,274 |
| **Total Assets** | $ 1,261,647 | $ 1,746,013 |
| **Liabilities and Stockholders' Equity** | | |
| Accounts payable | $ 16,590 | $ 15,062 |
| Accrued expenses | 22,595 | 45,708 |
| Deferred revenue | 19,764 | 21,872 |
| Operating lease liabilities | 24,940 | 41,197 |
| Contingent consideration liability | 18,700 | 19,550 |
| Convertible senior notes, net | 647,494 | 892,243 |
| Other liabilities | 3,770 | 9,077 |
| Stockholders' equity | 507,794 | 701,304 |
| **Total Liabilities and Stockholders' Equity** | $ 1,261,647 | $ 1,746,013 |

(1) Balance as of December 31, 2024 reflects preliminary estimated in-process research and development impairment charge of $35.0 million These

preliminary estimates are subject to finalization as the Company completes its interim assessment and year-end financial reporting procedures. The final Intangible assets, net, balance reported in the Annual Report on Form 10-K may differ materially from these estimates.

(2) Balance as of December 31, 2024 reflects preliminary estimated goodwill impairment charge of $55.1 million These preliminary estimates are subject to finalization as the Company completes its interim assessment and year-end financial reporting procedures. The final Goodwill balance reported in the Annual Report on Form 10-K may differ materially from these estimates.

**Pacific Biosciences of California, Inc.**
**Reconciliation of Non-GAAP Financial Measures**

| | Three Months Ended | | | Twelve Months Ended | |
|---|---|---|---|---|---|
| *(in thousands, except per share amounts)* | December 31, 2024 | September 30, 2024 | December 31, 2023 | December 31, 2024 | December 31, 2023 |
| GAAP net income (loss) | $ 3,571 | $ (60,725) | $ (82,018) | $ (308,651) | $ (306,735) |
| Impairment charges (1) | 90,100 | — | — | 183,300 | — |
| Merger-related expenses (2) | — | — | 63 | — | 9,042 |
| Change in fair value of contingent consideration (3) | (1,950) | 1,170 | 1,100 | (850) | 15,060 |
| Loss on extinguishment of debt (4) | — | — | — | — | 2,033 |
| Gain on debt restructuring (5) | (154,407) | — | — | (154,407) | — |
| Amortization of acquired intangible assets | 6,850 | 6,850 | 6,849 | 27,399 | 8,244 |
| Income tax benefit (6) | — | — | (718) | — | (11,424) |
| Restructuring (7) | 493 | 6,701 | 2,224 | 25,222 | 2,224 |
| Non-GAAP net loss | $ (55,343) | $ (46,004) | $ (72,500) | $ (227,987) | $ (281,556) |
| | | | | | |
| GAAP basic net income (loss) per share | $ 0.01 | $ (0.22) | $ (0.31) | $ (1.12) | $ (1.21) |
| Impairment charges (1) | 0.32 | — | — | 0.67 | — |
| Merger-related expenses (2) | — | — | — | — | 0.04 |
| Change in fair value of contingent consideration (3) | (0.01) | — | — | — | 0.06 |
| Loss on extinguishment of debt (4) | — | — | — | — | 0.01 |
| Gain on debt restructuring (5) | (0.55) | — | — | (0.56) | — |
| Amortization of acquired intangible assets | 0.02 | 0.03 | 0.03 | 0.10 | 0.03 |
| Income tax benefit (6) | — | — | — | — | (0.05) |
| Restructuring (7) | — | 0.02 | 0.01 | 0.09 | 0.01 |
| Other adjustments and rounding differences | 0.01 | — | — | (0.01) | — |
| Non-GAAP basic net loss per share | $ (0.20) | $ (0.17) | $ (0.27) | $ (0.83) | $ (1.11) |
| | | | | | |
| GAAP gross profit | $ 10,058 | $ 10,004 | $ 9,571 | $ 37,282 | $ 52,780 |
| Amortization of acquired intangible assets | 2,221 | 3,201 | 1,433 | 9,393 | 1,983 |
| Restructuring (7) | — | (207) | 112 | 4,443 | 112 |
| Non-GAAP gross profit | $ 12,279 | $ 12,998 | $ 11,116 | $ 51,118 | $ 54,875 |
| | | | | | |
| GAAP gross profit % | 26% | 25% | 16% | 24% | 26% |
| | | | | | |
| Non-GAAP gross profit % | 31% | 33% | 19% | 33% | 27% |
| | | | | | |
| GAAP total operating expense | $ 161,886 | $ 74,081 | $ 97,119 | $ 510,395 | $ 387,247 |
| Impairment charges (1) | (90,100) | — | — | (183,300) | — |
| Merger-related expenses (2) | — | — | (63) | — | (9,042) |
| Change in fair value of contingent consideration (3) | 1,950 | (1,170) | (1,100) | 850 | (15,060) |
| Amortization of acquired intangible assets | (4,629) | (3,649) | (5,416) | (18,006) | (6,261) |
| Restructuring (7) | (493) | (6,908) | (2,112) | (20,779) | (2,112) |
| Non-GAAP total operating expense | $ 68,614 | $ 62,354 | $ 88,428 | $ 289,160 | $ 354,772 |

(1) Preliminary estimated goodwill and in-process research and development impairment charges during the three and twelve months ended December 31, 2024 of $90.1 million was driven primarily by macroeconomic factors which have impacted our cash flow projections, among other factors. Goodwill impairment of $93.2 million included in the twelve months ended December 31, 2024 was related to a sustained decrease in the

Company's share price, among other factors.

(2) Merger-related expenses for the three months ended December 31, 2023 consisted of transaction costs arising from the acquisition of Apton. Merger-related expenses for the twelve months ended December 31, 2023 consisted of $4.9 million of transaction costs arising from the acquisition of Apton, $2.8 million of compensation expense resulting from the liquidity event bonus plan in connection with the Apton merger, and $1.3 million of compensation expense resulting from the acceleration of certain equity awards in connection with the Apton merger.

(3) Change in fair value of contingent consideration was due to fair value adjustments of milestone payments payable upon the achievement of the respective milestone event.

(4) Loss on extinguishment of debt is related to the exchange of a portion of PacBio's 1.50% Convertible Senior Notes due 2028 for PacBio's 1.375% Convertible Senior Notes due 2030.

(5) Gain on debt restructuring during the three and twelve months ended December 31, 2024, represents the gain resulting from the November 2024 convertible notes exchange transaction.

(6) Deferred income tax benefits during the three and twelve months ended December 31, 2023 are related to the release of the valuation allowance for deferred tax assets due to the recognition of deferred tax liabilities in connection with the Apton acquisition.

(7) Restructuring costs consist primarily of employee separation costs, accelerated amortization and depreciation for right-of-use assets, leasehold improvements, and furniture and fixtures relating to the abandonment of the San Diego office, including charges for excess inventory due to a decrease in internal demand relating to the expense reduction initiatives.