Harvard Bioscience

Enabling discovery, safety and production of tomorrow's therapeutics

HBIO Investor Overview

Jim Green, Chairman, President & CEO

March 22, 2023

Forward-Looking Statements and Non-GAAP Financial Information

Forward-Looking Statements

Information in this presentation or in oral statements of the management of the Company may include forward-looking statements within the meaning of the federal securities laws, including the Private Securities Litigation Reform Act of 1995. You can identify these statements by our use of such words as "will," "guidance," "objectives," "optimistic," "potential," "future," "expects," "plans," "estimates," "continue," "drive," "strategy," "potential," "potentially," "growth," "long-term," "projects," "projected," "intends," "believes," "goals," "sees," "seek," "develop" "possible" "new," "emerging," "opportunity," "pursue" and similar expressions that do not relate to historical matters. Forward-looking statements in this presentation or that may be made during our presentation may include, but are not limited to, statements or inferences about the Company's or management's beliefs or expectations, our anticipated future revenues and earnings, the strength of our market position and business model, industry outlook, the impact of the COVID-19 pandemic and related supply chain disruptions on our business, our business strategy. the positioning of our Company for growth, the market demand and opportunity for our current products, or products we are developing or intend to develop, and our plans, objectives and intentions that are not historical facts. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Investors should note that many factors, as more fully described under the caption “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2022, or described in our other public filings and as otherwise enumerated herein or therein may cause our actual results to differ materially from those in the forward-looking statements. The forward-looking statements in this presentation are qualified by these risk factors. Our results may also be affected by factors of which we are not currently aware. We may not update these forward-looking statements, even though our situation may change in the future, unless we have obligations under the federal securities laws to update and disclose material developments related to previously disclosed information.

Management’s Use of Non-GAAP Financial Information

In this presentation, we have included non-GAAP financial information, including adjusted EBITDA. We believe that this non-GAAP financial information provides investors with an enhanced understanding of the underlying operations of the business. For the periods presented, these non-GAAP financial measures of revenue and income have excluded certain expenses and income primarily resulting from purchase accounting or events that we do not believe are related to the underlying operations of the business such as amortization of intangibles related to acquisitions, costs related to acquisition, disposition and integration initiatives, impairment charges, severance and restructuring and other business transformation expenses, and stock-based compensation expense. They also exclude the tax impact of the reconciling items. This non-GAAP financial information approximates information used by our management to internally evaluate the operating results of the Company. Any non-GAAP measures included herein are accompanied by a reconciliation to the nearest corresponding GAAP measure within this presentation.

The non-GAAP financial information provided in this presentation should be considered in addition to, not as a substitute for, the financial information provided and presented in accordance with GAAP and may be different than other companies’ non-GAAP financial information.

Trusted Partner: Enabling Discovery, Safety and Regulatory Testing, and Production of Tomorrow's Therapeutics

Recognized market leader in technologies, solutions, consumables & services that enable advances across life science research and drug development – from groundbreaking therapy discovery, to pre-clinical regulatory safety pharmacology and toxicology testing, to bio-production.

Two Product Families:
Cellular & Molecular Technologies (CMT) and Preclinical Systems

Foundation in Place for Sustainable, Profitable Growth

HIGH PERFORMANCE STRUCTURE IN PLACE

2019-2022 organizational transformation with improved product lines, lower cost structure, optimized sales organization and proven leadership team

FROM TRANSFORMATION TO SUSTAINABLE LONG TERM PROFITABLE GROWTH

Pivoting focus from transformation to long term targets of sustainable high single digit growth, with 60% gross margins & 20%+ adjusted EBITDA* margin

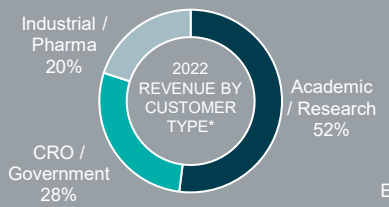
LOYAL CUSTOMER BASE IN DRUG DISCOVERY, SAFETY & REGULATORY, PRODUCTION

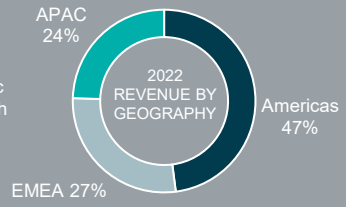
Trusted partner in large high-growth therapeutics markets with extensive blue-chip customer base and growing recurring revenue

COMPANY PROFILE

- Global sales footprint
- 3 Core Manufacturing facilities
- ~455 Employees
- 2022 Revenue: $113M
- 2022 Adjusted EBITDA*: $11M (10% of rev)
- 35%+ recurring revenues
- Founded 1901
- Headquarters: Greater Boston, MA

DIVERSE, BALANCED PORTFOLIO

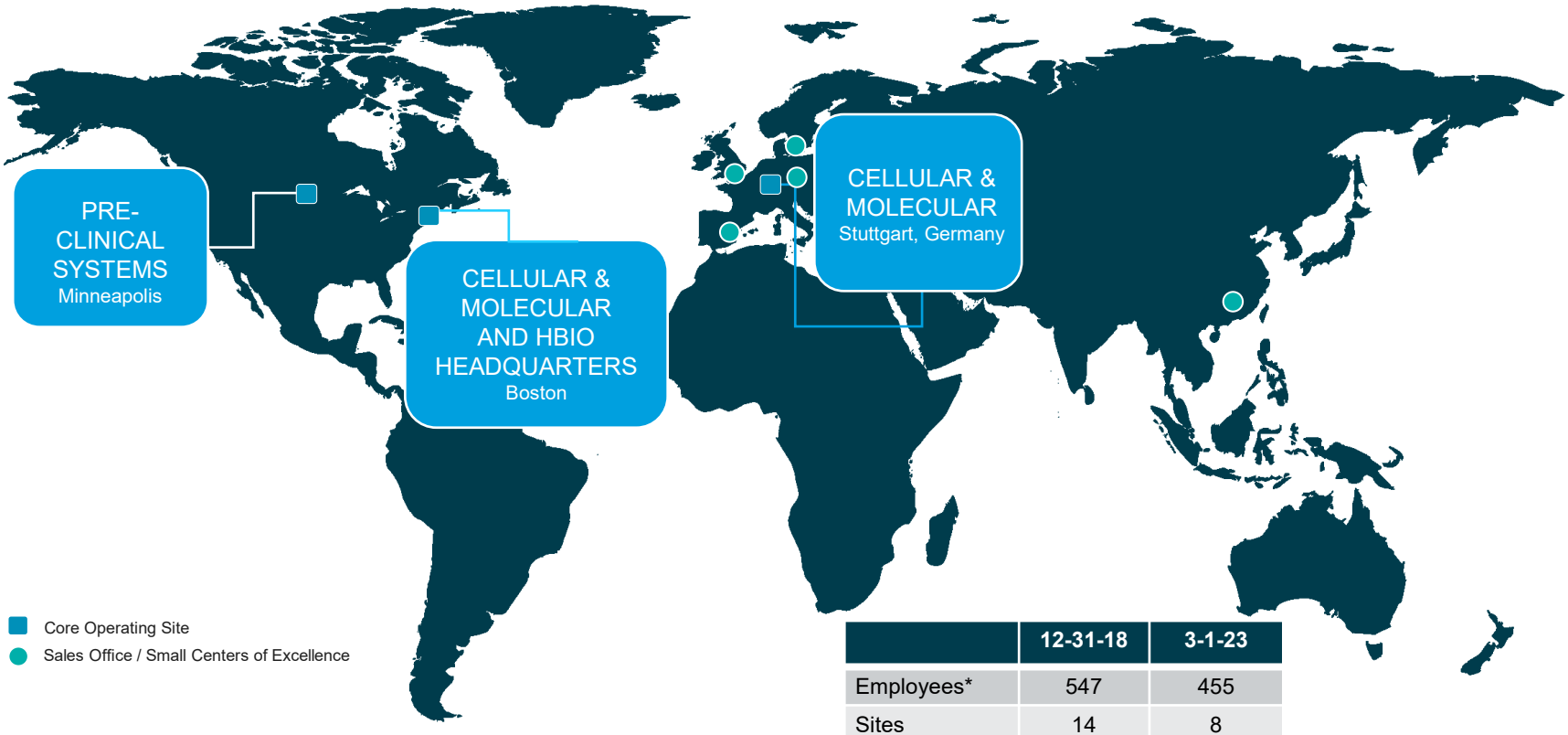




2022 Revenue: Revenues by customer type include estimation for small % of revenues

* *Non-GAAP measure, reconciliations to GAAP financial measures are available in the appendix*

Today's Global Footprint



	12-31-18	3-1-23
Employees*	547	455
Sites	14	8

*Headcount is approximate

Serving Well Funded, High Growth Market Segments Driven By Demographic Tailwinds

DRIVERS

Rising incidence of disease – cardiac, cancer, immunology, respiratory, diabetes, obesity, Alzheimer's, neurological, infectious

Increased funding for research and development of **advanced therapeutics**

Increased demand for research tools, devices and systems that improve efficiency & productivity and **enable therapeutics discovery and safety & regulatory thru bio-production**

END MARKET SEGMENTS

	PHARMACEUTICAL[1]	BIOTECH[2]	CONTRACT RESEARCH ORGANIZATIONS[3]	ACADEMIC RESEARCH[4]
Estimated Size & Projected CAGR	Global **$1.6T** 2022 7.7% 2022-2026	Global **$372B** 2021 15.5% 2022-2030	Global **$61B** 2021 10.9% 2021-2030	US Federal **$179B** 2021 9.3% 2016-2021
Estimated R&D Expenditure within HBIO markets	R&D **$222B** (2021)	R&D **$60B** (2021)		NIH Grants **$30.2B** (2021)

1) https://www.researchandmarkets.com/reports/5553406/pharmaceuticals-global-market-report-2022-by
2) https://www.acumenresearchandconsulting.com/biotechnology-market
3) https://www.emergenresearch.com/request-sample/1221
4) https://ncses.nsf.gov/pubs/nsf22323

Blue Chip Customer Base

ACADEMIC RESEARCH

- Research labs primarily government & grant funded
- Scientific research & teaching
- Early discovery of new drugs and compounds for therapies and vaccines

CONTRACT RESEARCH ORGANIZATIONS

- Pre-clinical studies to determine safety and efficacy of new pharmaceuticals
- Pharmaceutical companies are outsourcing significant pre-clinical activities to CROs

BIOTECH, PHARMACEUTICAL

- Perform early discovery and then transition from discovery through pre-clinical regulatory and on to production
- Often leverage discoveries from academics & bio-techs
- Bridge to bioproduction

MGH 1811 · MAYO CLINIC · UNIVERSITY OF OXFORD · UCSF University of California San Francisco · Duke University · University of Cambridge · Harvard University · CDC Centers for Disease Control and Prevention

charles river · labcorp · COVANCE · WuXi AppTec

AstraZeneca · REGENERON · abbvie · Pfizer · gsk · SANOFI · BAYER · Lilly · NOVARTIS · MERCK

Subset of blue-chip recurring customers

Foundation to Deliver the Vision

Experienced Leadership Team

Seasoned leaders with a proven track record of creating value through business fundamentals focused on revenue & earnings growth, operating cash flow and deleveraging

Trusted Sales/Application Experts

Welcomed and trusted partner to academic research, pharma, biotech and CRO customers for solutions to their toughest challenges

Experienced R&D Team

Track record delivering exciting new products focused on high-growth therapeutics with renewed focus on solutions, annuity consumable and service streams

Lean Operating Platform

Focused on lean operating structure dedicated to continuous improvement

2023 Strategic Priorities

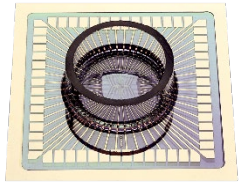
Accelerate Revenue Growth	▪ New product introductions. ▪ Expand cellular and molecular sales to Pharma, Biotech, CROs. ▪ Penetrate bioproduction.
Operating Discipline	▪ Improve operating leverage with leaner operations, reducing COGS and improved gross margins. ▪ Reduce working capital through reductions of inventories while improving selected lead times. ▪ Improve supply chain through efficient consolidation to best suppliers, reduce cash-to-cash cycle. ▪ Significant improvement of adj. EBITDA*, working capital management, expand operating cash flows.
Strategic Capital Allocation	▪ Pay down debt and reduce net leverage to ~2x levels by end of 2023. ▪ Modest CAPEX increase to accelerate new product launches and manufacturing growth.

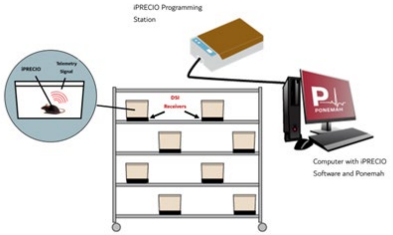
** Non-GAAP measure, reconciliations to GAAP financial measures are available in the appendix*

Leading Technologies, Competitive Advantage

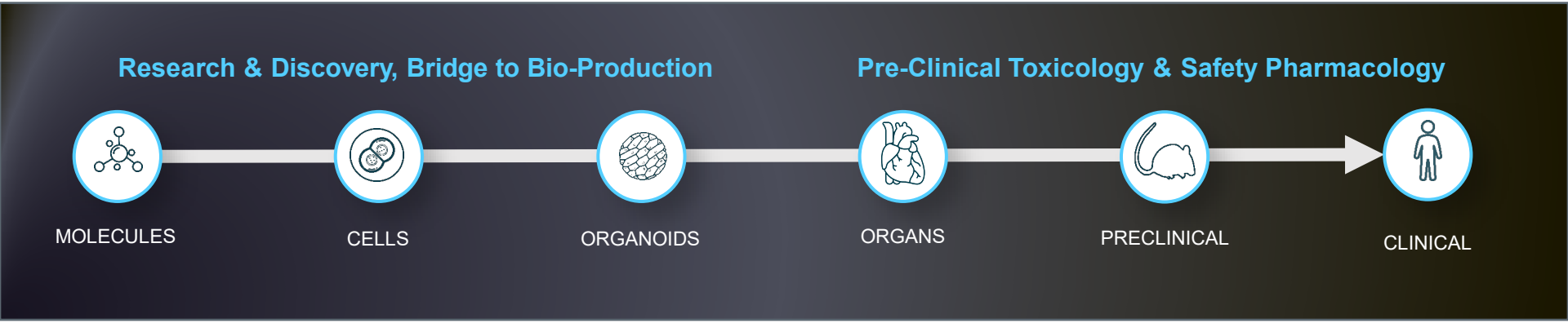
TARGETED PORTFOLIO OF TECHNOLOGY EXPERTISE

Mixed-signal ASIC Design	RF Communication	Ultra-low-noise Amplifiers	Precision High Voltage
Spectrophotometry	Chromatography	Large Data Pool Analysis	Formal Regulatory Reporting





Enable Research and Development Across the Continuum



GROWTH DRIVERS 2023 AND BEYOND

- ✓ Cellular and Molecular (CMT): Expand Discovery and Enter Bioproduction
- ✓ Pre-Clinical Systems: Extend Bundle adding Cellular & Behavioral Products
- ✓ Expand Recurring Revenues: Consumables and Services

Cellular and Molecular: Expand Discovery, Enter Production

TOP DISEASE TARGETS: CARDIOVASCULAR, IMMUNOLOGY / VIROLOGY, NEUROLOGY, & ONCOLOGY

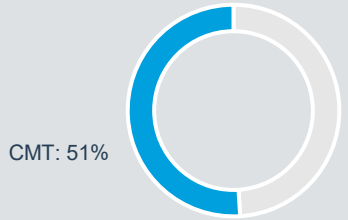
APPLICATIONS

- ✓ Market leader in high efficiency electroporation systems for hard-to-transfect cell lines, CAR T- cell creation, CRISPR related transfection
- ✓ Market leader in electrofusion systems for monoclonal antibody generation and embryo and oocyte manipulation
- ✓ High density micro electrode arrays for cell-based studies and bridge to organoids
- ✓ High performance liquid chromatography for amino acid analysis

GROWTH STRATEGY

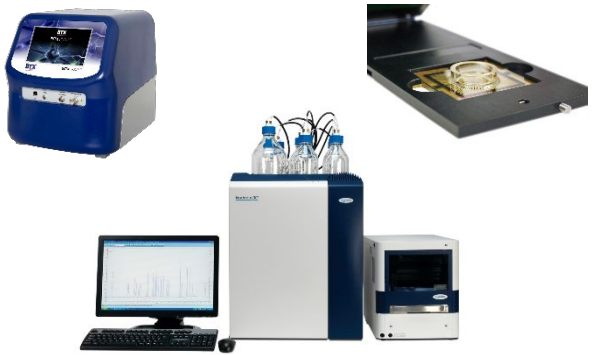
- ✓ Expand product offerings and solutions targeted to CROs, Pharma, Biotech
- ✓ Scale up customers leveraging our electroporation portfolio to bio-production
- ✓ Expand Amino Acid Analyzer consumables, penetrate pharma production QC

PORTFOLIO POSITION



* Based on FY 2022 revenue

PRODUCTS & SERVICES



Pre-Clinical Systems: Integrate/Bundle Cellular & Behavioral

SAFETY AND REGULATORY APPROVAL REQUIRED FOR ALL THERAPIES PRIOR TO HUMAN CLINICAL USE

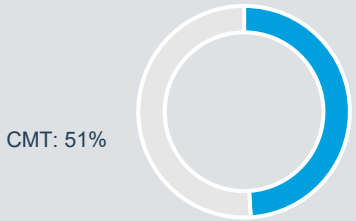
APPLICATIONS

- ✓ Leader in GLP compliant enterprise software systems for data collection, reduction and regulatory reporting, longitudinal studies, access for future AI applications
- ✓ Leader in wireless real-time telemetry and implantable devices for animal model research from mice to primates
- ✓ Realtime behavioral systems integrated with our enterprise system
- ✓ Inhalation systems for respiratory and exposure studies

GROWTH STRATEGY

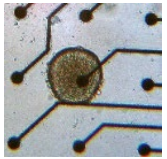
- ✓ Expand sales of Ponemah enterprise software systems w-consumables & services
- ✓ Next-gen continuous glucose monitoring – only vendor offering full telemetry
- ✓ Offer Integrated real-time behavior with telemetry via enterprise software platform
- ✓ Continued growth with our exclusive SmartStudy™ inhalation systems

PORTFOLIO POSITION



* Based on FY 2022 revenue

PRODUCTS & SERVICES

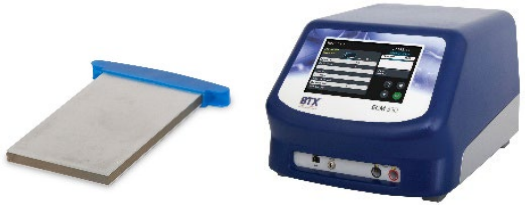


Expand Recurring Revenues: Consumables, Services

LEVERAGE OUR CURRENT LOYAL CUSTOMER INSTALLED BASE

- ✓ Expand software offering to integrate data models from our broad portfolio
- ✓ Expand product offering to include annual validation services
- ✓ Expand specialized field service programs targeted to pharma and biotech
- ✓ Expand manufacturing capabilities to support GMP bioprocessing

PRODUCTS & SERVICES



INCREASING FOCUS ON RECURRING ANNUITY REVENUES

Global Revenues

35%+ revenues recurring*

- ✓ Consumables (including probes)
- ✓ Enterprise Software Maintenance
- ✓ Services and repairs
- ✓ Supplies and accessories

- Based on FY 2022 revenue

Built for Sustainable, Profitable Growth in 2023 and Beyond

HIGH-MARGIN, LOWER COST STRUCTURE IN PLACE

3-year turnaround completed in Q4 2022 with new enhanced sales and operating structure and improved product lines with sustainable growth

LARGE, LOYAL CUSTOMER BASE IN DRUG RESEARCH & DISCOVERY, SAFETY & REGULATORY AND BIO-PRODUCTION MARKETS

NEW PRODUCT INTRODUCTIONS, FOCUS ON RECURRING REVENUES TO DRIVE SUSTAINABLE PROFITABLE GROWTH

Focused on strategic portfolio opportunities to drive sustainable long term topline growth, with 60% gross margins and 20%+ adjusted EBITDA margins*

* *Non-GAAP measure, reconciliations to GAAP financial measures are available in the appendix*

2023 Outlook: Looking Forward

New product introductions, focus on recurring consumables/services drive new growth

For FY2023, we expect:

- Reported revenue growth low-to-mid single digit range, includes ~4 percentage points of discontinued products
- Improved gross margins with significant expansion of adjusted EBITDA* margins
- Expanded EBITDA* combined with improved working capital cash flow allows us to significantly pay down debt
- Reduce net leverage from ~4x in FYE22 to 2X by FYE23

* *Non-GAAP measure, reconciliations to GAAP financial measures are available in the appendix*

Appendix:
GAAP to Non-GAAP Reconciliations

HARVARD BIOSCIENCE, INC.

Reconciliation of GAAP to Non-GAAP Financial Measures (unaudited)

(in thousands, except per share data)

	Year Ended December 31, 2022
GAAP net loss	**$ (9,516)**
Stock-based compensation	4,411
Acquired asset amortization	6,236
Settlement, restructuring, & other	5,603
Depreciation	1,338
Interest and other expense, net	2,426
Adjusted income taxes (1)	337
Adjusted EBITDA	**$ 10,835**
Adjusted EBITDA margin	9.6%

(1) Adjusted income taxes includes the tax effect of adjusting for the reconciling items using the tax rates in the jurisdictions in which the reconciling items arise.