Harvard Bioscience

Enabling discovery, safety and production of tomorrow's therapeutics

NASDAQ: HBIO

HBIO Investor Overview

Sidoti MicroCap Virtual Conference

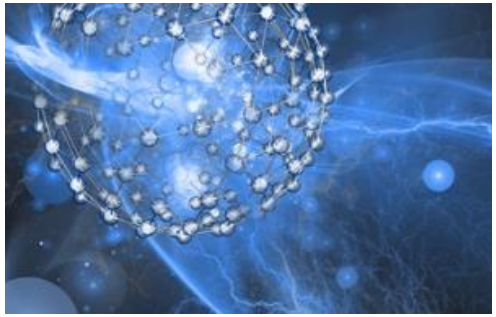
January 22, 2025

Jim Green, Chairman, President & CEO
Jennifer Cote, CFO & Treasurer

Forward-Looking Statements

This document contains forward-looking statements within the meaning of the federal securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as “may,” “will,” “expect,” “plan,” “anticipate,” “estimate,” “intend” and similar expressions or statements that do not relate to historical matters. Forward-looking statements include, but are not limited to, information concerning expected future financial and operational performance including revenues, gross margins, earnings, cash and debt position, growth and the introduction of new products, and the strength of the Company’s market position and business model and anticipated macroeconomic conditions. Forward-looking statements are not guarantees of future performance and involve known and unknown uncertainties, risks, assumptions, and contingencies, many of which are outside the Company’s control. Risks and other factors that could cause the Company’s actual results to differ materially from those described its forward-looking statements include those described in the “Risk Factors” section of the Company’s most recently filed Annual Report on Form 10-K as well as in the Company’s other filings with the Securities and Exchange Commission. Forward-looking statements are based on the Company’s expectations and assumptions as of the date of this document. Except as required by law, the Company assumes no obligation to update forward-looking statements to reflect any change in expectations, even as new information becomes available.

Trusted provider of advanced life science tools to leading academic research institutions, contract research organizations, and pharmaceutical and bio-tech companies



CELLULAR & MOLECULAR

Technologies and tools necessary for research, discovery and creation of tomorrow's breakthrough drugs, vaccines and therapies

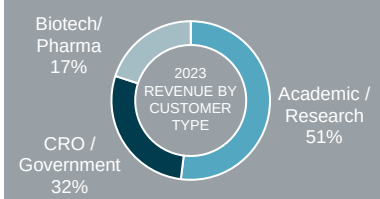
PRE-CLINICAL SYSTEMS

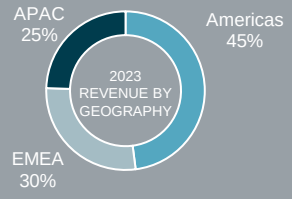
Recognized gold standard for data acquisition, processing, and regulatory report generation for safety pharmacology and toxicology testing

COMPANY PROFILE

- NASDAQ: HBIO
- Global sales footprint, 3 core manufacturing facilities
- Approx. 350 employees, ~ half are scientists / engineers
- 35%+ recurring revenues
- Headquarters: Greater Boston, MA

BALANCED PORTFOLIO





Revenues allocations are approximate

Harvard Bioscience Investment Thesis

Long standing relationships with blue-chip customers

Direct sales force complemented by distributors for global reach

Trusted reputation with limited competitors

Strong established brands

Disciplined capital allocation balancing growth and financial performance

Long term target: Double digit revenue growth, 60% gross margin, 20% EBITDA margin

Essential natural growth end markets

High touch sales approach with elite applications & data scientists

High barrier innovative technologies

Expand to high volume applications

Focus on commercial expansion and efficient operations

Targeted growth strategy

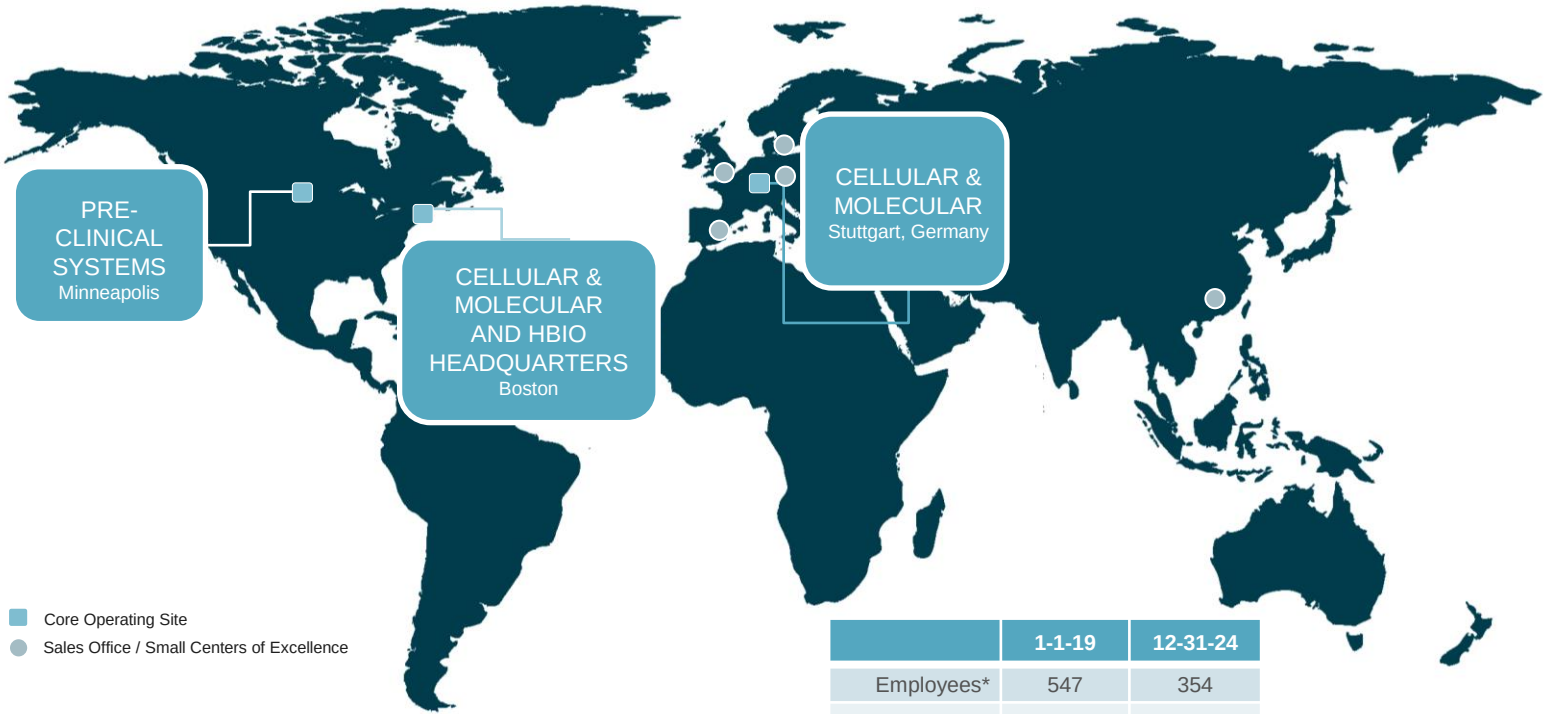
DIVERSIFIED CUSTOMER / REVENUE MODEL

Systems & Software

Consumables

Services

Today’s Global Footprint



	1-1-19	12-31-24
Employees*	547	354
Product Lines	18	10
Sites	14	8

Headcount is approximate

Blue Chip Customers: Technologies Essential to New Drug Development / Test

ACADEMIC RESEARCH

- Scientific Research labs primarily government & grant funded
- Early discovery of new novel drugs and compounds for therapies and vaccines
- Advanced cellular testing & gene editing

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
- Leverage discoveries from academics & bio-techs
- Bridge to bio-production

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

charles river · labcorp · MEDICILON 美迪西生物医药 · WuXi AppTec · ALTASCIENCES · inotiv · BATTELLE

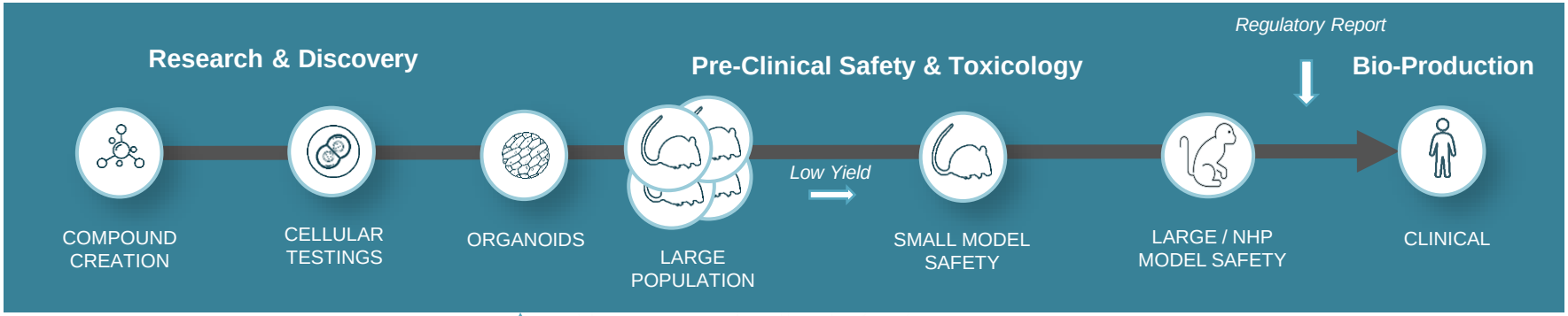
AstraZeneca · REGENERON · abbvie · Pfizer · gsk · SANOFI · BAYER · Lilly · NOVARTIS · MERCK

Value Proposition

Breakthrough technologies and applications, increase innovative publications	Reduced test cycle-time increases volume and study types, drives CROs revenue growth	Reduced development cycle time means more compounds, drives BioPharma revenue growth

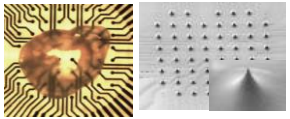
Subset of blue-chip recurring customers

Streamlining the Drug Development Cycle: Our Investment Focus



Cellular Platforms (Electrophysiology)

BTX® Electroporation / Electrofusion

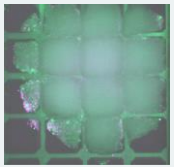


Micro Electrode Array MEA

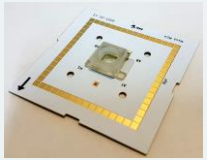
Patchclamp (Individual Cell)

First: MeshMEA™ Organoid Platform

Mesh



Consumable chip



In-Vitro Electrophysiology Analysis
- Reduce test time/cost, increase yield
- Neuro and cardiac longitudinal studies
- Refine/Reduce/Replace animal models

Implanted Telemetry

VivaMARS™ Neuro-Behavioral System

BTX

Tera byte level algorithmic / AI analysis

New Product Introductions: Focused on Commercialization

STRENGTHEN THE BASE: DELIVER > MARKET GROWTH

PRECLINICAL

CMT

- Ponemah™ Enterprise Data Acquisition/Analysis GLP platform
- Introduced SoHo™ shared housing implantable telemetry system to extend leadership in wireless telemetry
- Introduced VivaMARS™ high-volume GLP behavioral system
- Well established cellular/molecular/inhalation-respiration technologies for research/discovery
- Recurring revenue streams from consumables and services

~85% of FY23 Rev

EXPAND TO HIGH GROWTH: BIO-PRODUCTION

CMT

- BTX® electroporation/ electrofusion system
- Supports latest applications in cell and gene editing, cell and gene therapy (CGT)
- Introduced BTX for bioproduction
- Introduced Amino Acid Analysis for bioproduction

~10% of FY23 Rev

EXPAND TO HIGH GROWTH: IN-VITRO ORGANOID APPS

CMT - ORGANOIDS

- Introduced breakthrough MeshMEA™ organoid platform
- Leverages leadership position in advanced electrophysiology
- Adapts our leading MEA technology to emerging organoid applications in neuro and cardiac safety toxicology

~5% of FY23 Rev

New Product Introductions: Supports Long Term Growth Targets

Growth Category	Product Line	2024 Achievements	2025 Goals
Base	• SoHo™ (Shared Housing) NextGen Implantable Telemetry	• First shipments for temperature and activity	• Expand to additional endpoints including cardiac and neuro
	• VivaMARS™ Neuro-Behavioral System	• First Publication VivaMARS at Safety Pharmacology Society (coauthored with initial customer Labcorp)	• Extend Labcorp adoption to additional sites; initial adoption by second large CRO customer
Electroporation & Bridge to Bioproduction	• BTX™ Electroporation System	• Initial BTX bioproduction customer reaches ~$1M consumables	• Extend initial customer adoption to second production site
	• Amino Acid Analysis (AAA) System	• First production shipments of cGMP system	• Expand adoption of AAA for bioprocessing QC • Launch NextGen BTX Platform
MeshMEA™ / Organoid	• MEA Systems • 3D & Mesh Sensors (consumables)	5 Active Beta Sites • Academics: UT, Michigan • CRO: Synaxis for Neuro Safety/Tox • Leading BioPharma: Neuro & Cardiac • Early Adopters: Placed 10 systems including Mayo Clinic and Stanford	• Expanded adoption by leading academic sites and US, UK & European government labs, NIH • Healthy pipeline of customer proof sources and publications • Penetrate large Biopharma opportunities

Investment Thesis: Deliver Strong, Profitable, Long-Term Growth

NEW PRODUCT INTRODUCTIONS FOCUSED ON TOP-LINE GROWTH & RECURRING REVENUES

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

FOCUSED ON LONG TERM DOUBLE DIGIT TOPLINE GROWTH, 60% GROSS MARGIN & 20%+ ADJUSTED EBITDA MARGIN

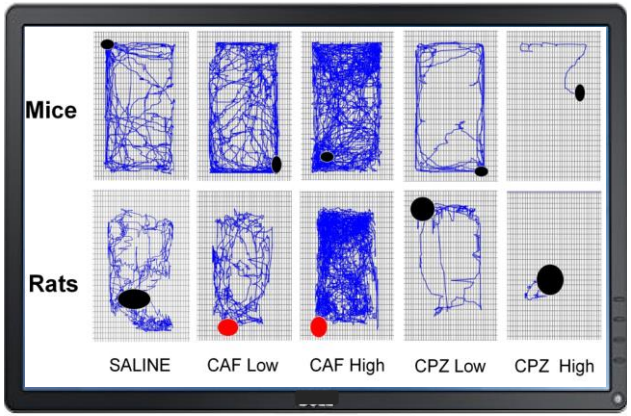
Unique New Product Introductions

VivaMARS: High-Capacity Automated Behavioral Analysis System

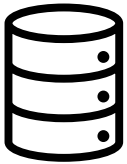
Large population (up to 100 subjects) neuropharmacology and neurotoxicology studies

Lights out automatic infrared tracking, behavioral analysis, report generation and GLP compliant

VivaMARS 10 subject rack.



Advanced infrared tracking supports therapy development by providing behavioral information in real-time



Tera byte level algorithmic / AI analysis

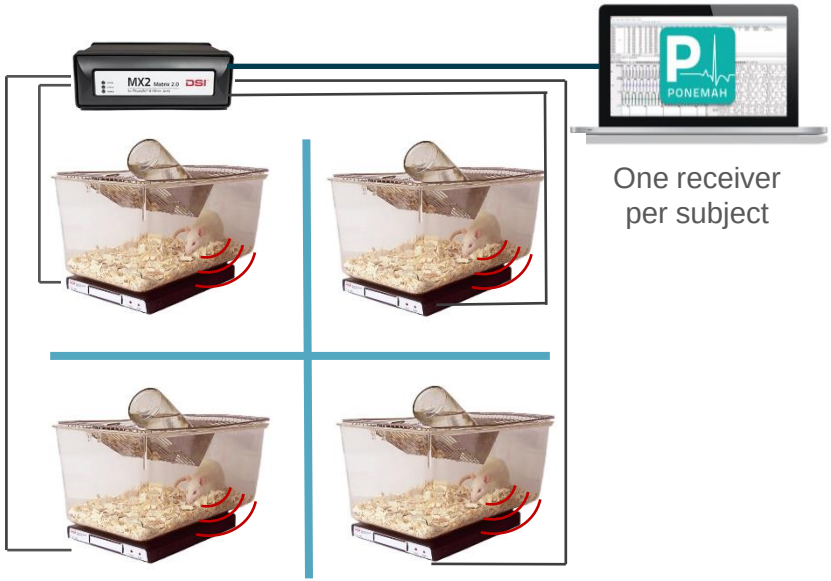
Maximum Throughput, Minimal Time & Labor

- Reduced customer operating/labor expenses
- Reduced setup & test cycle time for customer revenue growth

Next Generation Telemetry: SoHo™ Small Animal Implantable Telemetry System

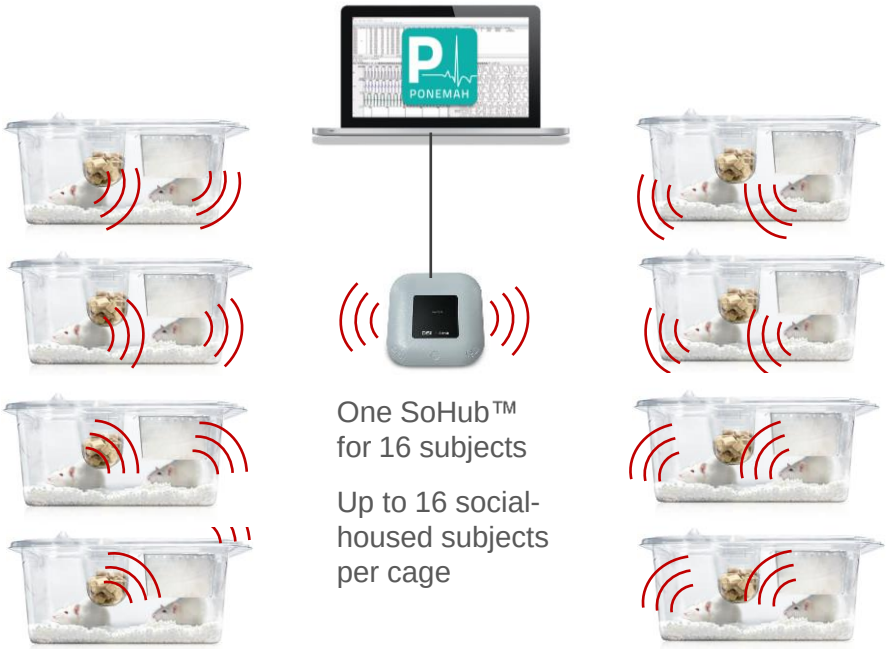
HIGH-DENSITY GROUP HOUSED ENVIRONMENTS

Legacy system – single housed



One receiver per subject

SoHo system

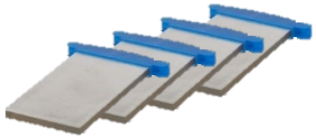


One SoHub™ for 16 subjects

Up to 16 social-housed subjects per cage

BTX Electroporation/Electrofusion: Now a Bridge to Bio-Production

HBIO IS A PIONEER IN ELECTROPORATION AND ELECTROFUSION, DRIVING NOVEL DISCOVERIES IN DRUG CREATION



Consumable: Flatpack Reaction Chamber

NeXT Gen Platform (late FY2025)

Bio30+ AAA system

Bio-Production Applications and Configuration

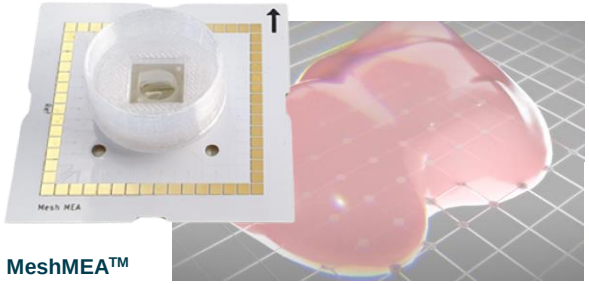
- Used for today's most challenging cell modifications, CAR T-Cell transfection, monoclonal antibodies, Cell and Gene Therapy (CGT), CRISPR
- Ideal for bioproduction when Biotech or Pharma customers utilize our system to create the original cell line
- Low barrier transition to production, faster time to market and reduced cost

Amino Acid Analyzer (AAA) for Bio-Production

- High precision amino acids/protein analysis
- For biologic processes that rely on precise amino acid content
- Enables on-site bioproduction testing of buffers and solutions to improve production cycle time

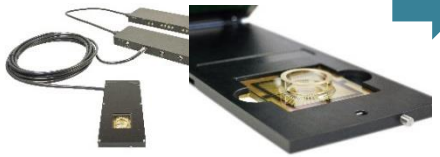
Emerging Adoption of Organoids: MeshMEA™ and Software Technologies

HBIO / MCS: A LEADER IN ELECTROPHISIOLOGY WITH OVER 30 YEARS MICRO ELECTRODE ARRAY ELECTROPHYSIOLOGY

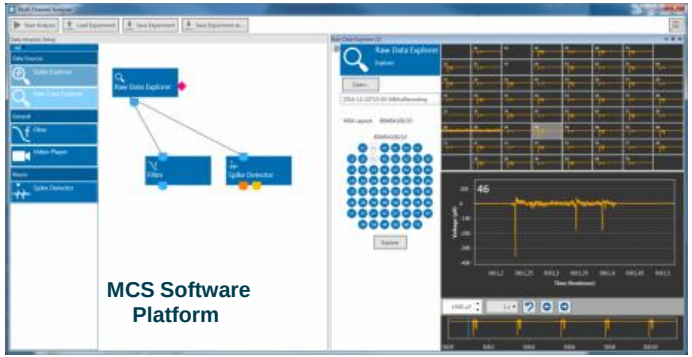


MeshMEA™

Measurements inside the organoids



MEA2100 System



MCS Software Platform

Organoid Electrophysiology Applications and Configuration

- First of a kind solution for longitudinal cellular recording inside an organoid
- Enable long term analysis on neuronal activity in brain organoids
- Ideal for testing compounds for neurologic diseases like Alzheimer's, epilepsy, and seizures study and cardiovascular studies like Arrhythmia
- Efficient in-vitro alternative to high cost large population live animal in-vivo experiments, allowing longitudinal studies with developing organoids

Analysis Software

- High precision software suite review large data pools
- Neuro and Cardiac analysis with event tracking
- Enables in-vitro to in-vivo correlation / early tox/safety
- Potential to improve drug compound yields, reduce time to market, increase customer revenue

MeshMEA Video Link


HB Harvard Bioscience
Enabling discovery, safety and production of tomorrow's therapeutics
Thank You