UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

CURRENT REPORT Pursuant
to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of report (Date of earliest event reported): **November 25, 2015**

Enzo Biochem, Inc.
(Exact Name of Registrant as Specified in Its Charter)

New York
(State or Other Jurisdiction of Incorporation)

001-09974	**13-2866202**
(Commission File Number)	(IRS Employer Identification No.)
527 Madison Avenue **New York, New York**	**10022**
(Address of Principal Executive Offices)	(Zip Code)

(212) 583-0100
(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure

On November 25, 2015, Enzo Biochem, Inc. (the "Company") released a corporate strategy presentation as an update of Enzo's strategy providing low cost solutions for meeting reimbursement and cost challenges in the molecular diagnostics market. The presentation materials are furnished as Exhibit 99.2 hereto and are incorporated herein by reference.

The information in this report (including Exhibit 99.2) shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

99.1	Press Release of Enzo Biochem, Inc., dated November 25, 2015
99.2	Enzo Biochem Corporate Strategy Presentation

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ENZO BIOCHEM, INC.

Date: November 27, 2015

By: /s/ Barry W. Weiner
Barry W. Weiner
President

news release

Enzo Biochem, Inc.
527 Madison Avenue
New York, NY 10022

FOR IMMEDIATE RELEASE

Enzo Biochem Releases New Investor Presentation on Corporate Strategy

NEW YORK, NY, November 25, 2015 – Enzo Biochem, Inc. (NYSE: ENZ) today released a new investor presentation that, in light of recently announced approval for the Company's HCV viral load testing by the New York State Department of Health, centers on an update of Enzo's strategy providing low cost solutions for meeting reimbursement and cost challenges in the molecular diagnostic market.

The presentation may be accessed at
http://www.enzo.com/uploads/Corporate.Strategy.Presentation.pdf

About Enzo Biochem

Enzo Biochem is a pioneer in molecular diagnostics, leading the convergence of clinical laboratories, life sciences and therapeutics through the development of unique diagnostic platform technologies that provide numerous advantages over previous standards. A global company, Enzo Biochem utilizes cross-functional teams to develop and deploy products systems and services that meet the ever-changing and rapidly growing needs of health care both today and into the future. Underpinning Enzo Biochem's technologies, platforms and products is a broad and deep intellectual property portfolio, with patent coverage across a number of key enabling technologies.

Except for historical information, the matters discussed in this news release may be considered "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include declarations regarding the intent, belief or current expectations of the Company and its management, including those related to cash flow, gross margins, revenues, and expenses are dependent on a number of factors outside of the control of the company including, inter alia, the markets for the Company's products and services, costs of goods and services, other expenses, government regulations, litigations, and general business conditions. See Risk Factors in the Company's Form 10-K for the fiscal year ended July 31, 2015. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties that could materially affect actual results. The Company disclaims any obligations to update any forward-looking statement as a result of developments occurring after the date of this press release.

Contact:
For: Enzo Biochem, Inc.
Steve Anreder, 212-532-3232 or Michael Wachs, CEOcast, Inc., 212-732-4300
steven.anreder@anreder.com mwachs@ceocast.com

Company Strategy and Overview

November 2015
www.enzo.com

LEGAL DISCLAIMER

Except for historical information, the matters discussed herein may be considered "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include declarations regarding the intent, belief or current expectations of the Company and its management, including those related to cash flow, gross margins, revenues, and expenses are dependent on a number of factors outside of the control of the company including, inter alia, the markets for the Company's products and services, costs of goods and services, other expenses, government regulations, litigations, and general business conditions. See Risk Factors in the Company's Form 10-K for the fiscal year ended July 31, 2015. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties that could materially affect actual results. The Company disclaims any obligations to update any forward-looking statement as a result of developments occurring after the date of this presentation.

TABLE OF CONTENTS

Molecular Diagnostics Strategy… From Challenges of Industry to Opportunities for Enzo

November 2015
www.enzo.com

Summary of Company Strategy

ENZO BIOCHEM, INC. ("ENZO" OR THE "COMPANY") IS AN INTEGRATED DIAGNOSTICS ENTITY THAT IS UNIQUELY STRUCTURED TO CAPITALIZE UPON ONGOING REIMBURSEMENT PRESSURES IN THE MOLECULAR DIAGNOSTICS MARKET

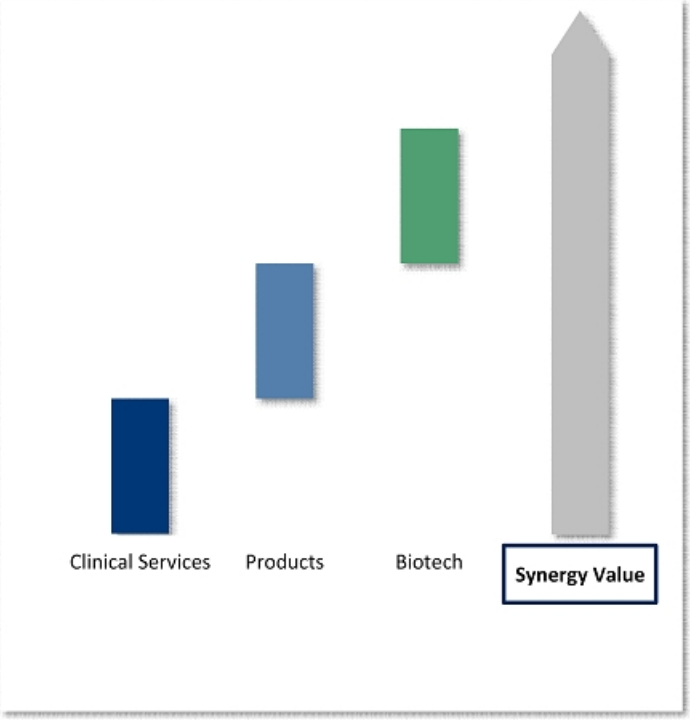
- Enzo's vertically integrated structure positions it to benefit as a **disruptor in molecular diagnostics (MDx)**:
  - **Biotech**: Develops technologies and platforms that serve as the engine for innovative product development
  - **Molecular Diagnostics**: Develops, formats, and manufactures high-performance MDx products on a large scale
  - **Clinical Services**: Enzo's state-of-the-art clinical lab provides the Company with meaningful insight and knowledge, allowing it to commercialize high-value diagnostic assays
- Enzo's structure is designed to deliver on the development and production of cost-effective, high-performance, easily adaptable products and services that, we believe, provide:
  - **30%-50% savings to the current MDx market**
  - **Superior product performance**
  - **Seamless fit into customers' normal workflows**

Our current market position is the culmination of extensive strategic planning and years of work developing core competencies that cannot be easily replicated

Enzo Is Positioned to Address the Margin Dilemma of the Molecular Diagnostic Market Which Can Create Sustained Value for Its Shareholders

THE SYNERGISTIC VALUE OF THE WHOLE FAR EXCEEDS THE SUM-OF-THE-PARTS AND ALLOWS ENZO TO CONTINUE TO EXECUTE ON ITS STRATEGY

Basic Components of Value



- **Clinical Services**
  - New York State and College of American Pathologists accredited clinical laboratories with global reach
  - Provides channel to market for Enzo products
- **Products**
  - Designed for use in open systems
  - New product flow deriving from Enzo's proprietary technologies and platforms
  - Large MDx pipeline
- **Biotech**
  - Extensive IP and self-developed and financed content
  - Development engine for our platforms and technologies
  - Fundamental to our overall business strategy
  - IP has also generated $80 million in settlements and $300 million+ in licensing and other revenue[1]
  - CEO co-inventor of majority of patents
    - ➤ Has allowed Company to self-generate output

Benefits of Vertical Integration: Freedom to Operate, Cost Avoidance, Superior Margins, and Rapid Commercialization

Note: Block sizes are purely illustrative
(1) Company estimates

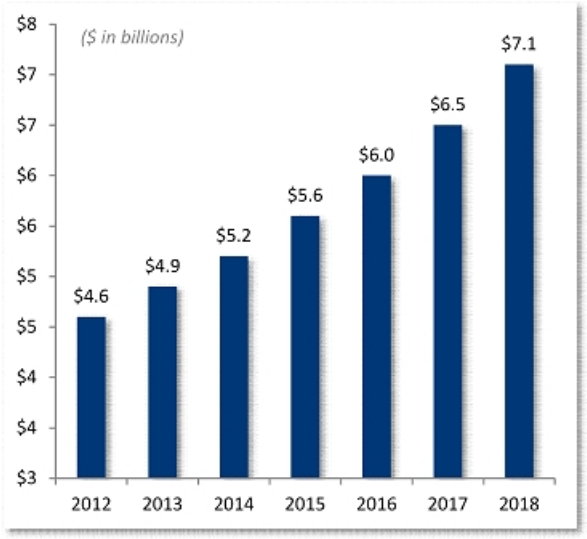
Industry Dynamics: Growth and Challenges

TREMENDOUS DEMAND FOR MOLECULAR DIAGNOSTICS

Molecular Diagnostics Opportunity

- In the span of 25 years, molecular diagnostics (MDx) have burgeoned from a practically non-existent market of approximately $10 million in product sales to $5.2 billion worldwide in 2014
  - Estimated annual growth rate of 7.5% from 2012 to 2018
- Thousands of labs in the U.S. can be enabled with MDx technologies, but they lack capability
  - Today's MDx technologies are expensive
    - Closed systems, high-cost reagents
    - Require specially trained med-techs
    - Inexpensive open systems lack content due to IP barriers

Molecular Diagnostics Opportunity



Source: Enterprise Analysis Corporation "Molecular Diagnostics Update: Market Trends and Outlook," 2014

MARKET GROWTH AND CHALLENGES… AND ENZO'S OPPORTUNITY

Problem to Address: MDx Market Margins are Under Intense Pressure

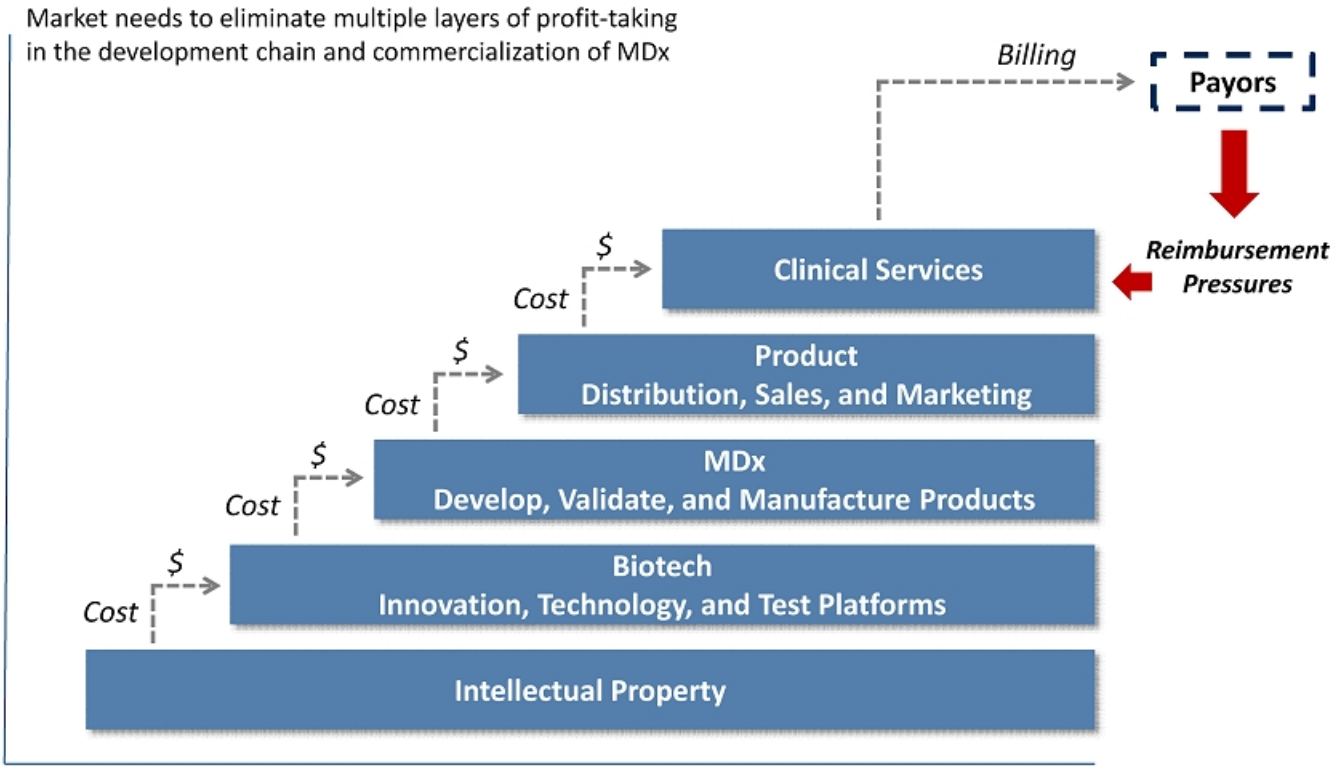
- Demand for MDx is rapidly increasing
  - Growing at 2x the rate of the overall diagnostic market[1]
- However, reimbursement for these tests is in long-term decline
  - MDx margins within labs could decline by another 20-30 percentage points under PAMA[1]
- Clinical labs have already reduced labor and other expenses and, we believe, cannot make further significant cuts
- Meanwhile, the costs for performing MDx tests are increasing
  - MDx reagent costs can reach upwards of 20% of MDx total revenue dollars[1]
  - Clinical labs have been held hostage to higher reagent costs because of their reliance on "closed systems"
  - Closed system development is very expensive and time-consuming, making MDx product companies unable and unwilling to respond to clinical lab margin pressure
- Inexpensive open systems have recently become widely available, but high-value content is lacking due to IP barriers – this presents a material opportunity for Enzo
- **Selling MDx content into this large installed base of open systems presents a significant opportunity for Enzo to disrupt the closed system market and offset margin pressures in the market**

Enzo believes that it can fulfill this challenge and deliver to its customers a 30%-50% savings through its integrated solutions

(1) Company estimate

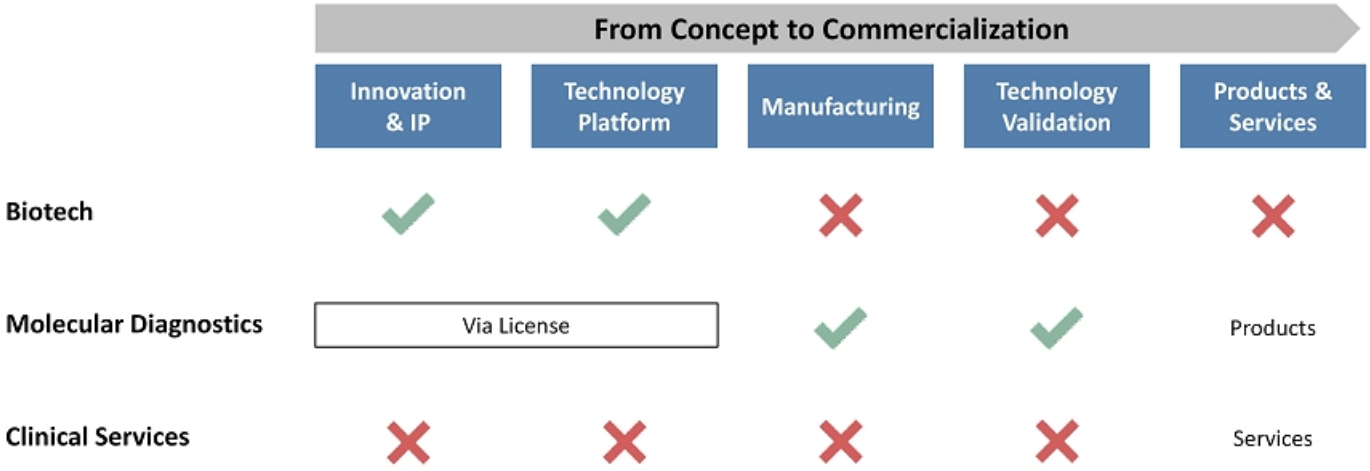
VERTICAL INTEGRATION ELIMINATES INEFFICIENCIES

THE CURRENT FRAGMENTED MARKET STRUCTURE HAS MATERIAL INEFFICIENCIES



THE MDx CHALLENGE: VERTICAL INTEGRATION

BIOTECH, MDx, AND CLINICAL SERVICES COMPANIES IN TODAY'S MARKET ENVIRONMENT LACK THE NECESSARY OPERATING STRUCTURE AND RESOURCES TO EFFECTIVELY MEET THE CHALLENGES OF THE MDx MARKET



- *<u>Without</u> an integrated vertical structure and associated resources, the market incurs incremental licensing, high fixed overhead costs, and distributor costs that restrict the ability to operate in a low-cost, high-quality manner*
- *Unlike Enzo, these companies are trapped in their singular limited structures that are not adaptive to reimbursement challenges nor capable of creating innovative technology products serving market participants*

COMPANIES THAT ARE NOT VERTICALLY INTEGRATED AND/OR LACK INTERNALLY DEVELOPED ASSETS CANNOT EFFICIENTLY MEET THE MARKET CHALLENGE

OUR COMPETITORS LACK SOME OR ALL OF THE FOLLOWING:

- **INNOVATION AND IP**
  - Clinical labs have little or no IP
  - Molecular diagnostic companies are dependent on third-party licensing and are capital-intensive
- **SOPHISTICATED TECHNOLOGY PLATFORM DEVELOPMENT**
  - Clinical labs are dependent on manufacturers' "closed systems" and other technologies that are royalty-burdened
  - "Closed system" manufacturers set pricing on a cost-recovery basis
- **SCALABLE MANUFACTURING**
  - Clinical labs have no expertise in manufacturing, and therefore, no path to gain cost efficiencies
  - Many closed system manufacturers have significant capital investment and, as a result, we believe, have limited incentive to continuously innovate
- **VALIDATION**
  - Manufacturers forced to spend large amounts on system validation to meet a high level of regulatory demand
    - These costs are passed on to their current customers
- **PRODUCTS AND SERVICES**
  - Clinical labs scale services primarily based on customer demands irrespective of the cost of goods
  - Reimbursements and costs are not necessarily correlated – resulting in increased margin pressure

INDUSTRY'S INABILITY TO RESPOND TO REIMBURSEMENT PRESSURE

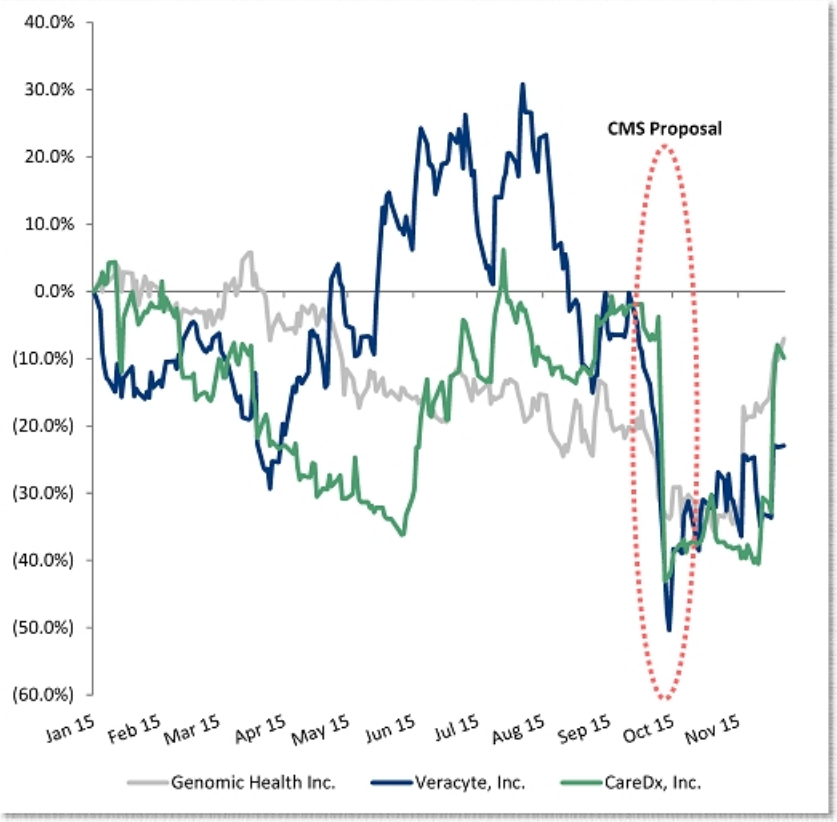
THE PROTECTING ACCESS TO MEDICARE ACT OF 2014 (OR "PAMA") IS RESETTING THE ENTIRE LABORATORY FEE SCHEDULE – THIS "RESETTING" IS RESULTING IN SUBSTANTIAL CUTS TO LABORATORY REIMBURSEMENT RATES

- **OPERATIONAL EFFICIENCIES HAVE ALREADY VIRTUALLY MAXED OUT**
  - Clinical labs have made substantial efforts to reduce costs and have focused their effort on labor expenses
    - Market consolidation is largely complete
    - Due to government mandated staffing levels, clinical labs are no longer able to continue to cut labor costs as aggressively as in the past
    - The cost of referring MDx tests to other clinical labs has not responded to reimbursement pressure either
    - *Thus, clinical labs cannot effectively respond to reimbursement limitations*
- **MDx COMPANIES HAVE NOT AND CANNOT REDUCE PRICES**
  - In many clinical labs, the costs of reagents – utilized to run diagnostic tests – are 20% of their revenues(1)
    - MDx companies have generally refused to – or have been unable to – reduce the prices they charge to clinical labs due to margin pressure
      - If MDx companies did reduce price as the market needs, their profits would be reduced
      - *Therefore, clinical labs cannot receive margin relief from MDx companies*
  - Closed systems complete the margin squeeze
    - Diagnostic companies are single-platform-centric, meaning that they sell test kits to the clinical labs *that generally only work on the instrumentation with which they were sold*
      - ***This antiquated razor-razorblade model, which has dominated the industry for years, is in desperate need of disruption***

(1) Company estimate

IMPACT OF IMPENDING REIMBURSEMENT CUTS ON DIAGNOSTIC COMPANIES

YTD Total Shareholder Return[1]



*"We expect several **diagnostics stocks to trade off sharply following announced price cuts** by the Centers for Medicare and Medicaid Services (CMS) for several diagnostic tests."*

Leerink Partners, September 28, 2015

*"The most dramatic proposal as it relates to our coverage list was changes to payments for a number of tests with new CPT codes proposed for 2016… CMS proposed cross-walking for a number of these codes, which would lead to draconian cuts if passed and led to **meaningful stock depreciation for a number of stocks**."*

William Blair, October 5, 2015

Source: CapitalIQ
(1) As of November 23, 2015

UNIQUE CAPABILITIES AND ASSETS ARE REQUIRED TO CAPITALIZE ON THIS DISRUPTIVE OPPORTUNITY

MARKET NEED TO ELIMINATE MULTIPLE LAYERS OF PROFIT-TAKING IN THE DEVELOPMENT CHAIN AND COMMERCIALIZATION OF MDx

CAPABILITIES AND ASSETS REQUIRED:

- Existing IP, technologies, and test platforms
- Ability to internally generate capital to finance innovation, technology, platforms, IP, product development, marketing, and accessibility
- Ability to address multitude of test platforms – different technologies fit different applications
- Knowledge of the market's needs and lab workflows
- Test validation and high-quality manufacturing in scale
- Existing access to patient samples
- A sales channel with global reach
- Freedom to operate at every stage in the process
- Ability to internally and rapidly generate IP, technology, platforms, products, and distribution

LOGICAL SOLUTION: A COMPANY WITH A VERTICALLY INTEGRATED STRUCTURE, INTERNALLY DEVELOPED AND FINANCED ASSETS THAT HAVE ALREADY BEEN PAID FOR AND CAN DEVELOP COST-EFFECTIVE, HIGH-PERFORMANCE, AND EASILY ADAPTABLE SOLUTIONS

ENZO PRODUCTS STRUCTURED TO DISRUPT THE MARKET WITHOUT APPEARING DISRUPTIVE

Biotech	■ Leverages Enzo's extensive IP to develop technologies and platforms which serve as the engine for innovative product development and generates significant capital for the Company • The Company has developed and analyzed numerous platforms, and advanced those that can deliver not only in terms of performance and cost, but also be seamlessly compatible with our customers' regular operations
MDx	■ Develops, manufactures, and commercializes high-performance MDx products on a large scale anticipated to be sold at 30%-50% less than the current market pricing
Clinical Services	■ Well-equipped clinical laboratories, which allow Enzo to commercialize high-value MDx content for the global market while generating capital to support its own operation

We avoid the intermediate costs at each step... savings that we pass on to the market and real value for delivery to our shareholders

Building this Vertically Integrated, Self-Supporting, and Cash-Generating Business Requires a Focused, Diligent Strategy – ENZO HAS SUCH A STRATEGY

Enzo's Solution - Efficient, Self-Generated Development and Commercialization

THE FUNDAMENTAL BASIS FOR ENZO'S SOLUTION

ECONOMIC BENEFITS OF ENZO'S VERTICALLY INTEGRATED STRUCTURE

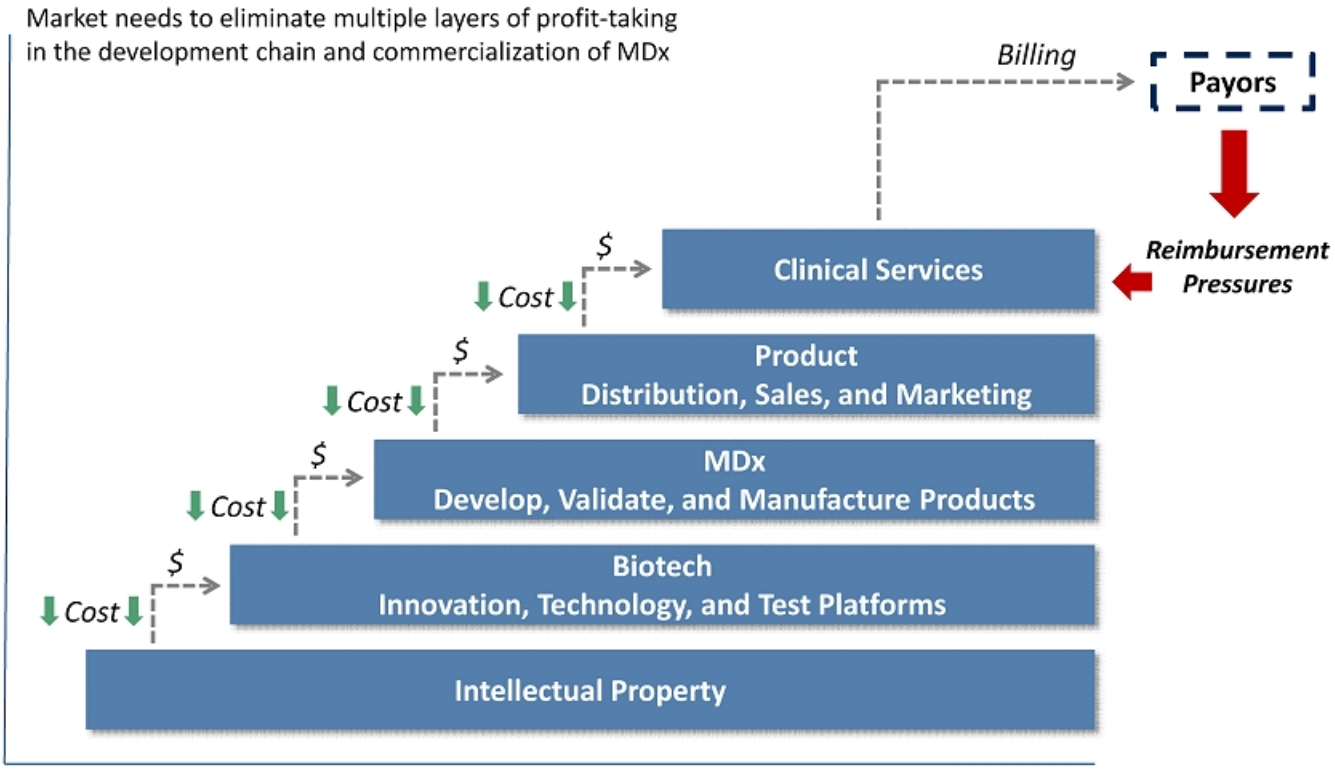
HOW ENZO CAN DELIVER SIGNIFICANT SAVINGS TO ITS CUSTOMERS

Average Gross Margin of Clinical Services Companies[1]	**~30%**
Potential MDx Savings:	
Cumulative Royalty Relief	
■ *Enzo owns all of its IP*	10%-15%
■ *Intellectual property generation already paid for*	
Lower Cost of Goods	
■ *Enzo's cumulative technological capability is the foundation*	
■ *Enzo's robust product development pipeline emanates from a multiplicity of platforms with a low cost of product development for open systems*	10%-20%
No Capital Investment	
■ *Enzo's products do not require dedicated/expensive instrumentation*	5%-10%
Anticipated Margin After Enzo Savings – 2016	**55%-75%**
Anticipated Margin After Enzo Savings – 2018 (After PAMA)[2]	**35%-55%**
■ *Even with further reimbursement erosion, we deliver cost relief to the market while maintaining healthy margins for Enzo*	

(1) *Company estimates – average assumed segment lab gross margin*
(2) *Assumes PAMA reimbursement rates are approximately 20 percentage points lower than 2016 levels*

ENZO'S VERTICAL INTEGRATION ELIMINATES COST REDUNDANCIES

THE CURRENT LAYERED MARKET STRUCTURE ADDS MATERIAL COSTS



ENZO'S SOLUTION: VERTICAL INTEGRATION

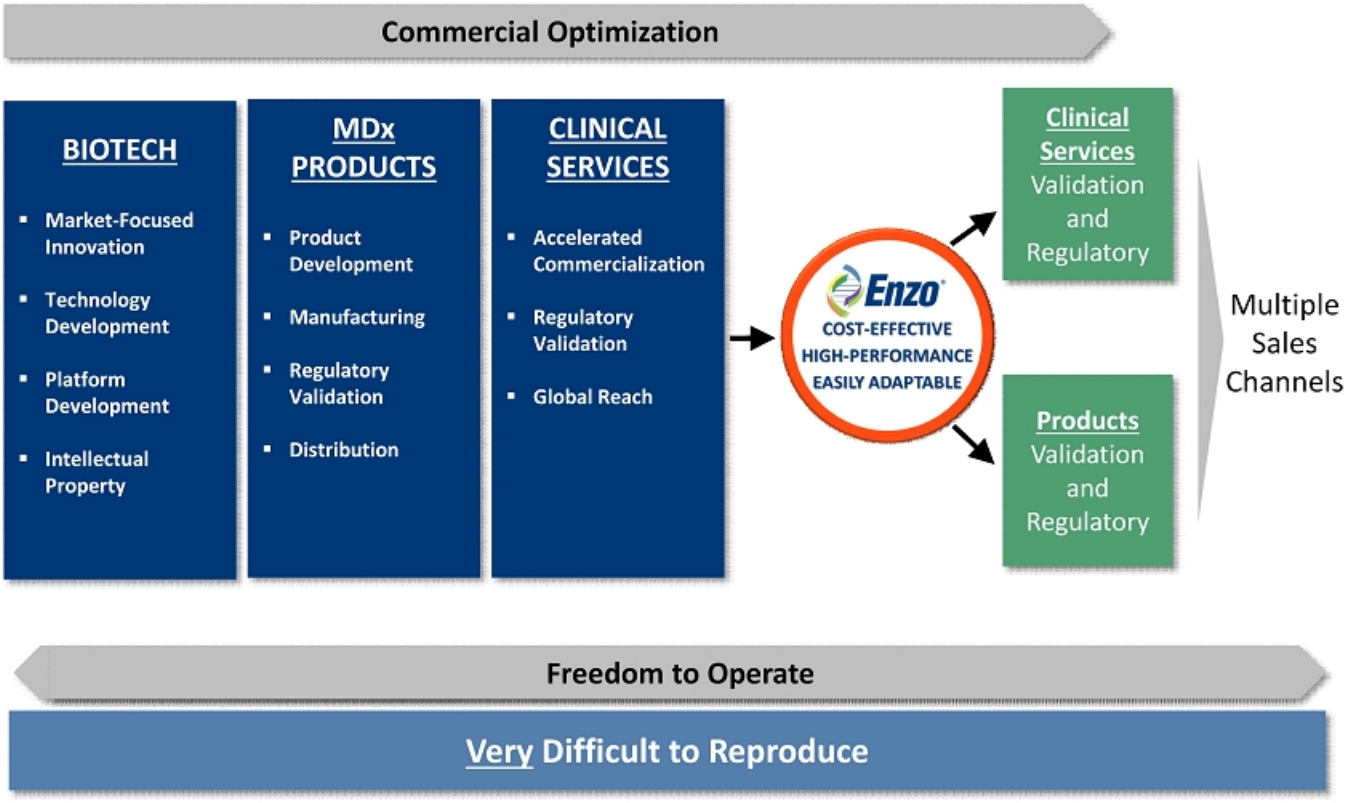
BIOTECH, MDx, AND CLINICAL SERVICES COMPANIES IN TODAY'S MARKET ENVIRONMENT LACK THE NECESSARY OPERATING STRUCTURE AND RESOURCES TO EFFECTIVELY MEET THE CHALLENGES OF THE MDx MARKET

From Concept to Commercialization

	Innovation & IP	Technology Platform	Manufacturing	Technology Validation	Products & Services
Biotech	✓	✓	✗	✗	✗
Molecular Diagnostics	Via License		✓	✓	Products
Clinical Services	✗	✗	✗	✗	Services
Enzo	✓	✓	✓	✓	✓

- *<u>Without</u> an integrated vertical structure and associated resources, the market incurs incremental licensing, high fixed overhead costs, and distributor costs that restrict the ability to operate in a low-cost, high-quality manner*
- *Unlike Enzo, these companies are trapped in their singular limited structure that is not adaptive to reimbursement challenges nor creates innovative technology products serving market participants*

ENZO'S SOLUTION: VERTICAL INTEGRATION (continued)



BIOTECH CONTRIBUTION

- Enzo's platforms and technologies are the result of its development engine
- These lead to products that are:
  - **Cost-effective**
  - **High-performance**
  - **Easily adaptable**

Enzo's Intellectual Property Assets Generate Returns that Serve as the Company's Foundation

EFFICIENT TRANSLATION OF BIOTECH CAPABILITIES TO PLATFORMS

ENZO'S PATENTED PROPRIETARY TECHNOLOGIES ARE UTILIZED TO OPTIMIZE OUR MDx PLATFORMS

Proprietary Technologies

- ✓ Non-radioactive labeling and detection of nucleic acids
- ✓ Amplification and quantification of nucleic acids
- ✓ Proprietary dyes, bleachers, quenchers, and blockers
- ✓ Enhanced detection of target via poly enzyme compounds
- ✓ Homogenous assays for nucleic acid detection
- ✓ Immobilization of nucleic acids to a solid support (array)

Our MDx Platforms

- ✓ AmpiProbe™ real-time amplification and detection(1)
- ✓ FlowScript™ flow cytometry for RNA expression(1)
- ✓ Super-CGH™ for genomics studies(2)
- ✓ Super-sensitive ELISA for immunochemistry(3)
- ✓ Immunohistochemistry (IHC) with enhanced detection(3)
- ✓ In-situ Hybridization (ISH) with enhanced detection(3)

Our Broad Technologies and Focused Platforms Permit Rapid, Efficient Product Development

(1) Incorporates: Non-radioactive labeling, amplification, proprietary dyes, and detection
(2) Incorporates: Non-radioactive labeling and arrays
(3) Incorporates: Proprietary dyes and detection

EXAMPLE: AMPIPROBE PLATFORM LEADS TO PRODUCTS THAT WE BELIEVE ARE 30%-50% THE COST OF REAL-TIME AMPLIFICATION DETECTION

DISRUPTING A MULTIBILLION REAL-TIME AMPLIFICATION REAGENTS MARKET

AMPIPROBE™

NEXT-GENERATION NUCLEIC ACID DETECTION

Less Sample	✓ Allows paneling/reduced reaction volume/lower prep costs
Multiplex Capability	✓ Able to run up to 30 assays simultaneously
Enhanced Sensitivity	✓ Compared to Roche and Abbott systems
Zero Background	✓ After more than 60 cycles ✓ Competitors have issues
100% Concordance	✓ Existing FDA-approved PCR technologies
Flexible, Adaptable & Universal	✓ Any open/dedicated system
Adaptive	✓ Fits into laboratory workflow seamlessly

One of Enzo's Proprietary Platforms

EXAMPLE: FLOWSCRIPT PLATFORM – FROM CONCEPT TO APPROVED ASSAY IN LESS THAN TWO YEARS

MOST EFFICIENT PLATFORM TO ANALYZE GENOMIC FUNCTION IN A SINGLE CELL

FLOWSCRIPT™

Multiplex Capability	✓ Simultaneous examinations of each cell in a sample
Higher Efficiency	✓ Designed to reduce hands-on time
Consistent	✓ Elimination of steps that can cause fluctuation in results
Flexible, Adaptable & Universal	✓ Work with virtually any flow cytometer with protocols that they are used to
Compatible with High-Through Instrumentation	✓ Scalability can reduce marginal cost
Broad Applicability	✓ Able to measure genomic activity, not just detect protein ✓ Immune mediated disorders, cancer, infectious diseases, drug development
Adaptive	✓ Fits into laboratory workflow seamlessly

One of Enzo's Proprietary Platforms

COMMERCIALLY FOCUSED MDx DEVELOPMENT

LEVERAGING THE TOTALITY OF ENZO'S ASSETS AND MARKET KNOWLEDGE

- Large, well-developed markets – no missionary marketing efforts required
  - Cost-effective, high-performing, and adaptable, Enzo's products poised to penetrate the market
  - Current MDx market pressures help create the need for these products
- Enzo's self-developed and financed content allows for substantially less costly products while still providing Enzo improving margins
  - The Company's operations have provided capital to fuel internal development
- Game-changing performance and cost; non-disruptive to customers' operations

Enzo IP Provides Durable Barrier to Entry

EXAMPLE: AMPIPROBE™ HCV

AMPIPROBE™ PLATFORM DEVELOPED FROM IN-HOUSE TECHNOLOGIES

- Platform formatted for both multiplexing(1) and paneling(2)
  - This increases number of tests that can be run on a single specimen
    - Reduces cost per test
    - Reduces need for patients to provide additional specimens
  - Can be run on virtually all commonly available open system
- Because of HCV's complex biological structure, an HCV diagnostic is difficult to develop
  - As a result, we were able to use this product as an execution of the AmpiProbe platform
    - Approved by the New York State Department of Health – extremely stringent validation process
- Tested side-by-side versus leading competitor's products under actual lab conditions
  - Exceed specifications of market leaders
  - Formatted for breadth and depth of market need
  - Clinically validated on 400 previously characterized human specimens
- Fits into a customer's workflow seamlessly – no additional training required

Can Sell Product at up to 50% Savings to the Market

(1) Simultaneous amplification of several DNA sequences
(2) Ability to run multiple different tests from the same unique specimen

EXAMPLE: FLOWSCRIPT™ HPV E6/E7

FLOWSCRIPT™ PLATFORM DEVELOPED FROM IN-HOUSE TECHNOLOGIES

- Expansion of Enzo's women's health related products and services
- Measures activity of genes that may indicate progression toward cervical cancer
- Platform formatted for use with commonly available open lab instrumentation
  - Assay can be run on high-throughput flow cytometers to increase efficiency
  - Validated across numerous instrument manufacturers
  - Clinically validated on more than 1,500 specimens
  - Clinically validated across virtually all high-risk HPV subtypes
  - Clinically validated using both leading sample collection devices to assure widest possible utility
- Fits into customer's workflow seamlessly – no additional training required
- Approved by the New York State Department of Health – can be marketed nationally
  - Line extension under development

Enzo IP Provides Durable Barrier to Entry

ENZO HAS A ROBUST MDx PIPELINE

Rapid Roll-Out

Product / Test Description	Expected Availability	Platform	Opportunity[1]
HPV E6/E7 Detection	Available	FLOWSCRIPT™ GENE EXPRESSION	$200mm+ product $500mm service
HCV Viral Load	Available	AMPIPROBE™ REAL-TIME AMPLIFICATION AND DETECTION	$300mm product $450mm service
Fertility Assay	Q1 2016	ENHANCED IMMUNOASSAY	$15mm product $40mm service
Cardiac Marker	Q2 2016	ENHANCED IMMUNOASSAY	$20mm product $30mm service
Women's Health Panel	Q3 2016	AMPIPROBE™ REAL-TIME AMPLIFICATION AND DETECTION	$500mm product $1bn service
HBV Viral Load	2017	AMPIPROBE™REAL-TIME AMPLIFICATION AND DETECTION	$250mm product $375mm service
HIV Viral Load	2017	AMPIPROBE™ REAL-TIME AMPLIFICATION AND DETECTION	$600mm product $900mm service
IHC Detection	2017	ENHANCED DETECTION	$50mm+ (clinical)
TH1/TH2	In development	FLOWSCRIPT™ GENE EXPRESSION	-
Cancer AB Panel	In development	AMPIFLOW™ ENHANCED DETECTION LABEL	-
Cancer Marker Panel	In development	FLOWSCRIPT™ GENE EXPRESSION	-

(1) Company estimates

CLINICAL SERVICES COMPONENT

Translational Capability

- ✓ *Bridge between product development from MDx platforms and service and product validation*
- ✓ *Enzo rapidly adapts its development efforts to the clinical services market through constant feedback*

Rapid Clinical Assay Validation (Clinical Trials)

- ✓ *New York State regulation is extremely rigorous, and it allows the tests to be offered on a national basis*
- ✓ *Enzo validates all of its assays under actual clinical conditions using real clinical specimens, not just control samples – as a result, our products are evaluated under the same conditions experienced by our customers*
- ✓ *The access to thousands of previously characterized specimens allows us to perform validations at a fraction of the cost of others that need to obtain such specimens from outside sources*
- ✓ *Our integrated premarketing insights and efforts provide for material efficiencies in development and commercialization of our assays*

Accelerated Commercialization

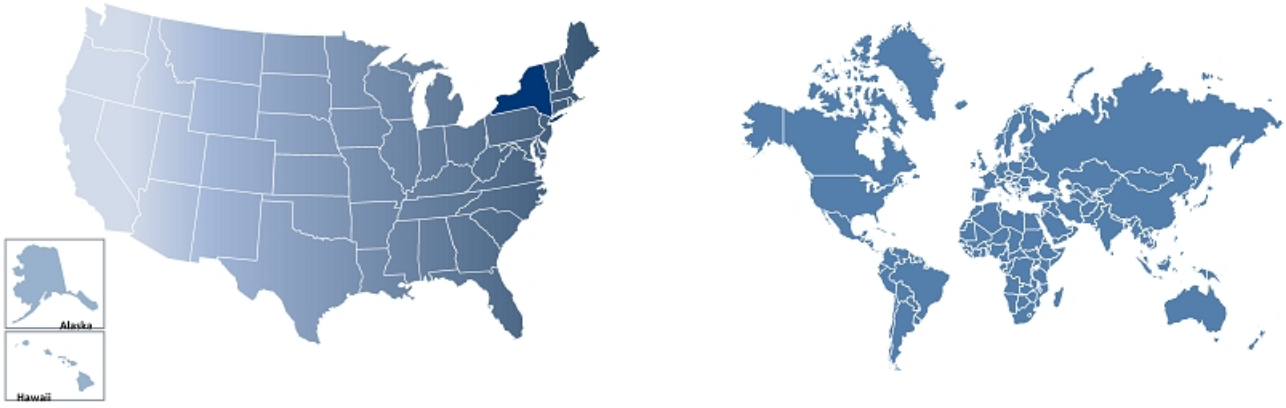
- ✓ *Technical support and service*
- ✓ *Market to clinical labs and payors*
- ✓ *Enzo's integrated structure provides unparalleled market knowledge and expertise as Enzo's clinical laboratory is one of its own customers*

Enzo Has Built a Clinical Service Lab Based on Many Years of Experience and Substantial Capital Investment

- ✓ Technical Expertise
- ✓ Accreditation
- ✓ Logistics
- ✓ IT – Lab
- ✓ IT – Clients - Integrated into customers' operations
- ✓ Financial Services
- ✓ Payor Relations – In-network with most major payors
- ✓ Reputation for Excellence
- ✓ Marketing and Sales

NATIONAL AND GLOBAL REACH

NEW YORK STATE LICENSURE ALLOWS FOR A NATIONAL REACH, WHILE ENZO ACCREDITATIONS AND GLOBAL FOOTPRINT ALLOW FOR WORLDWIDE REACH



- Continued expansion of national and worldwide sales and marketing presence
- Enzo's strategy provides optionality to the market
  - Products with 30%-50% savings
  - Comprehensive service for less than price of competitors' product alone

CLOSE ALIGNMENT WITH PAYORS

Private payors (insurance companies) increasingly control the practice of medicine and influence the specimen flow to service providers

- Enzo is currently in-network with most major payors
- We are well positioned to become the "first-choice" service provider to payors for MDx as the low-cost, high-quality provider
- The Company can offer significant savings in return for substantial increases in MDx sample volume nationwide

UnitedHealthcare · Oxford HealthCare · aetna · Anthem Blue Cross · Horizon Healthcare

Sample Volume

Enzo

ENZO'S SYNERGISTIC STRATEGY AND INTEGRATED STRUCTURE ADDRESSES THE CHALLENGES IN MDx MARKET

- The Company evaluated multiple internally generated technologies and platforms and selected those to further advance based on the development of:
  - Products that could be sold at 30%-50% less than the current market
  - Products that could perform at or superior to market leaders' products
  - Medically relevant information
  - Products that could fit into existing operations
  - **Products that result in greater margins for Enzo**
  - ***We have demonstrated that Enzo has the assets and capabilities to engineer a system that can generate products based on these features***
- We have been able to design proprietary products and protocols that are in lock step with current market operations WITHOUT the need to utilize third-party intellectual property

Company Strategically Positioned for Substantial Growth

To build the infrastructure we have developed would take hundreds of millions of dollars and many years –

and there would be no guarantee that such an entity could amass the innovation, intellectual property, and structural efficiencies that would allow it to address the market challenge

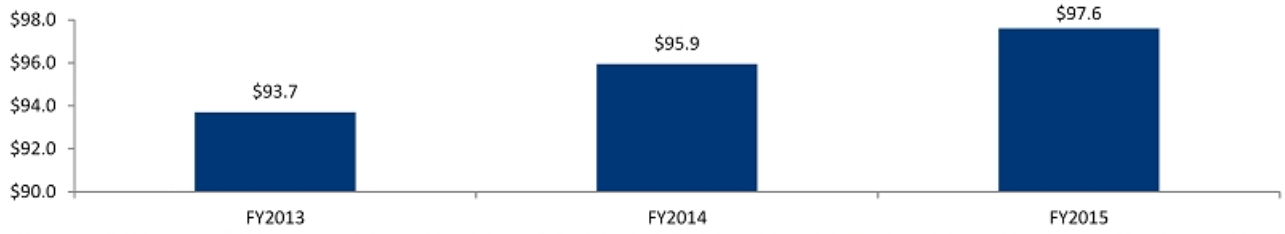
Enzo has Addressed the Market Challenge by Creating Products and Platforms as a Result of Its Culture and Infrastructure

Financial Overview

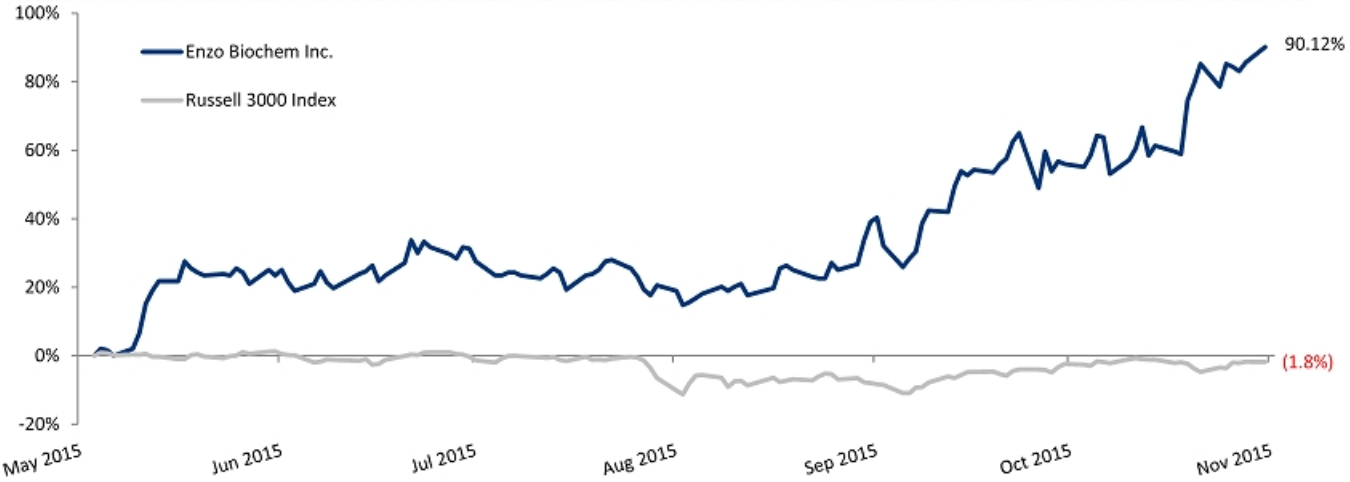
RECENT RESULTS

Total Revenue

($ in millions)

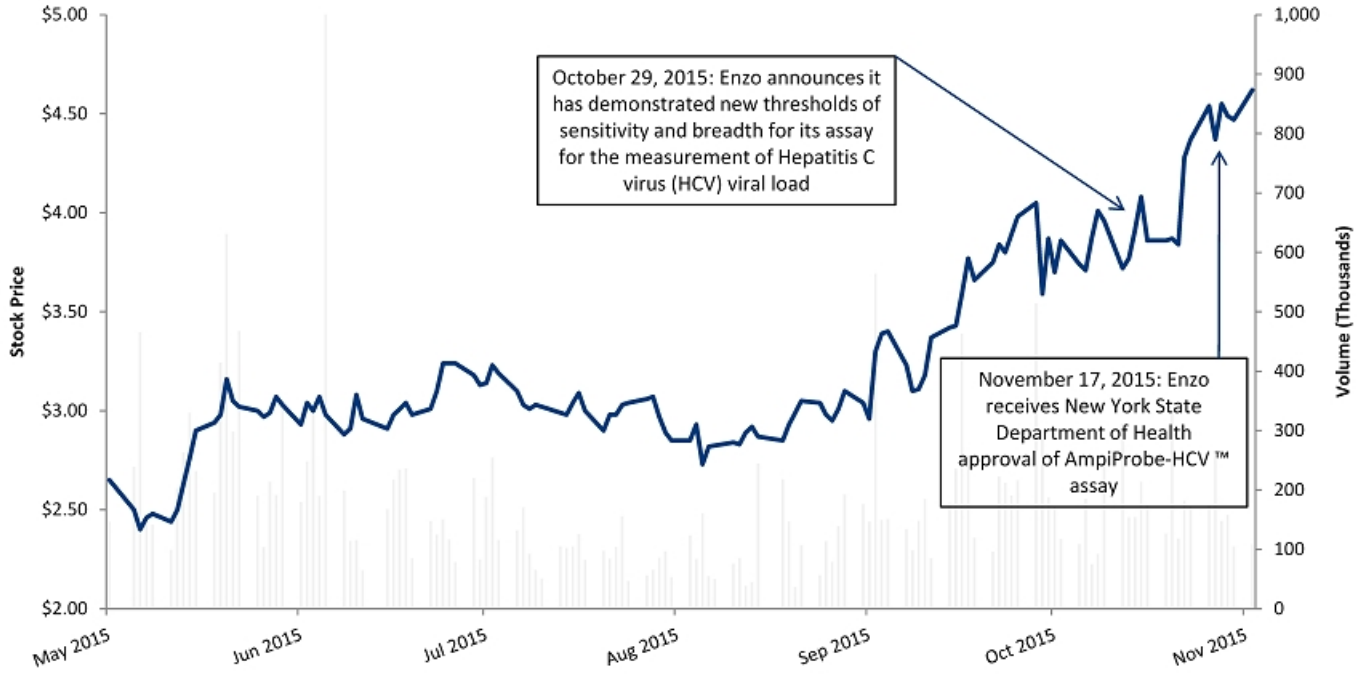


6-Month Total Shareholder Return[1]



Sources: Company Filings, CapitalIQ
(1) As of November 23, 2015

RECENT RESULTS (continued)



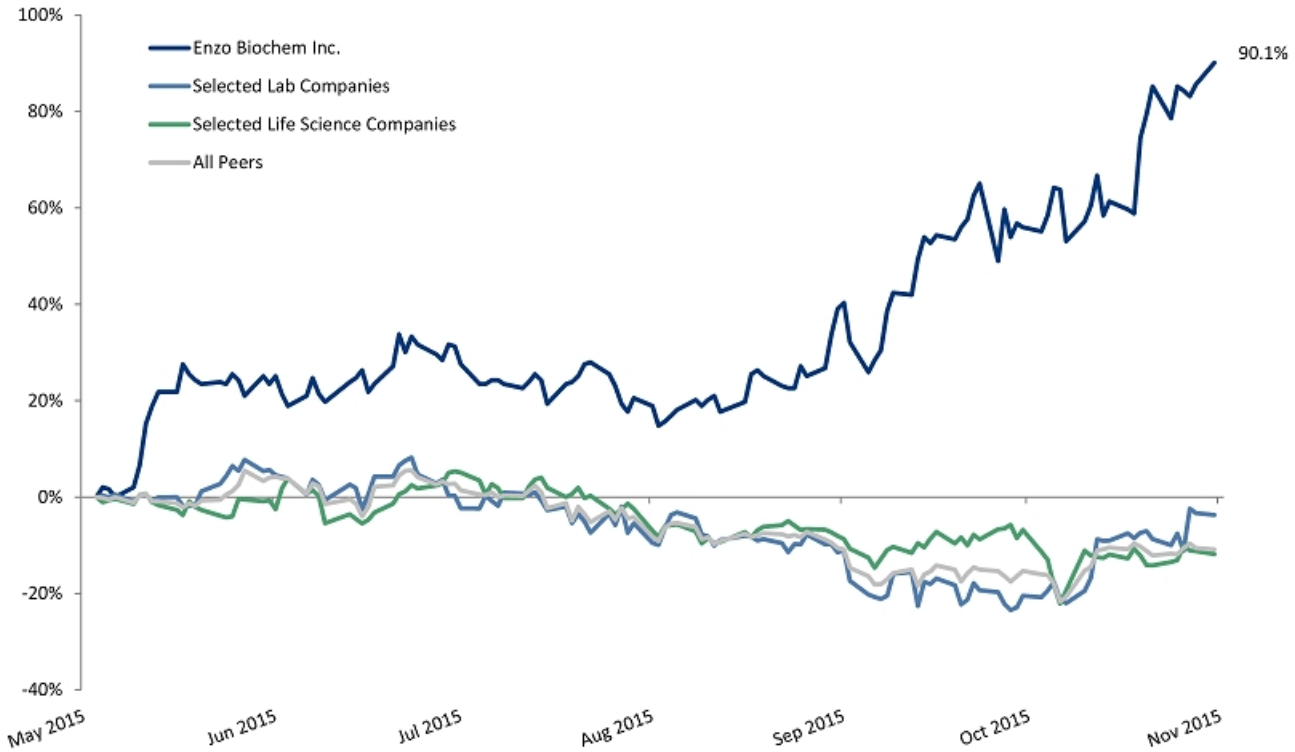
"A Solid End To F2015 – Better than Projected Lab Results And Another Positive Legal Settlement Reiterate BUY Rating And $6 Price Target"

Craig-Hallum Capital, October 14, 2015

Source: CapitalIQ

MARKET JUST STARTING TO RECOGNIZE ENZO'S POTENTIAL

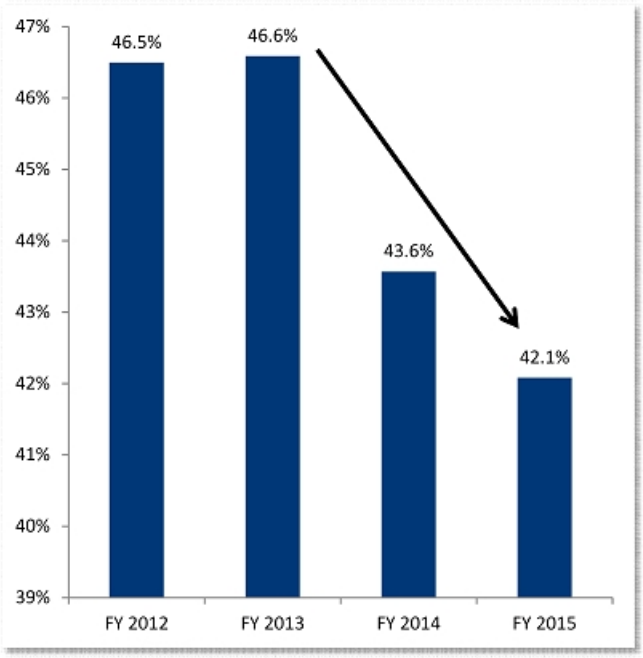
6-Month Total Shareholder Return[1]



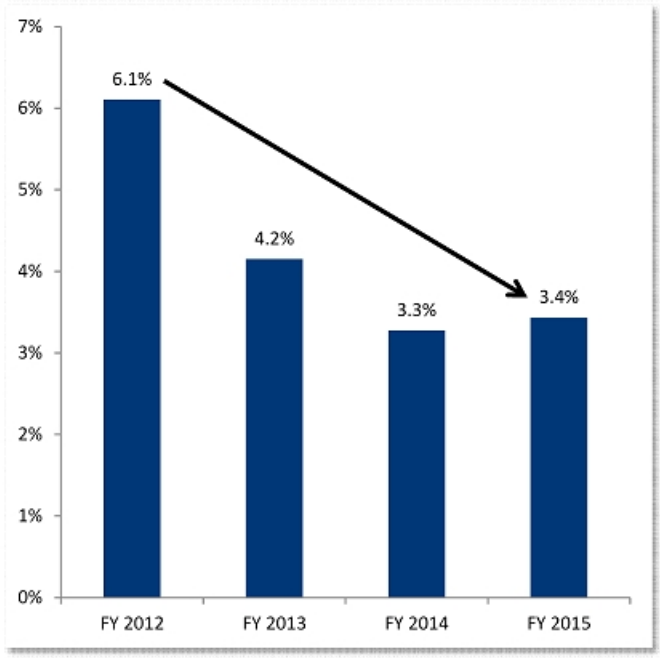
Note: Selected Lab Companies: GHDX, NEO, SQNM, SHL, NTRA and VCYT.
Note: Selected Life Science Companies: AFFX, NSTG, EXQ, HBIO and TECH.
Source: CapitalIQ
(1) As of November 23, 2015

FOCUS ON IMPROVING EFFICIENCIES

SG&A Margin Improvement



R&D to Sales

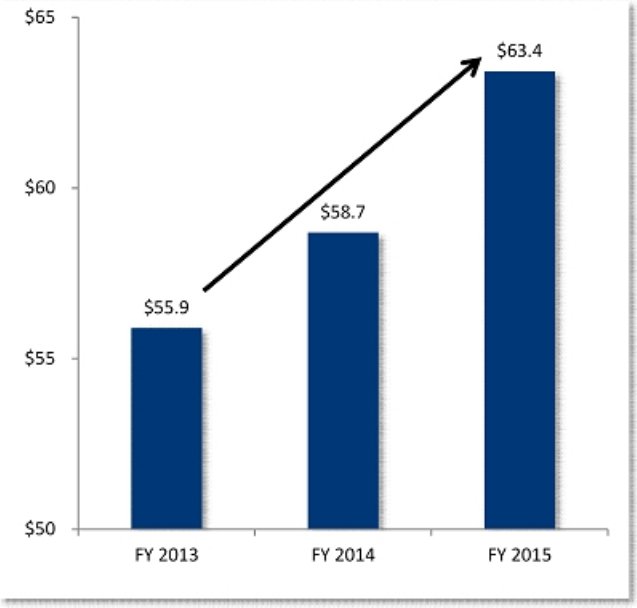


Proven Commitment to Control Costs

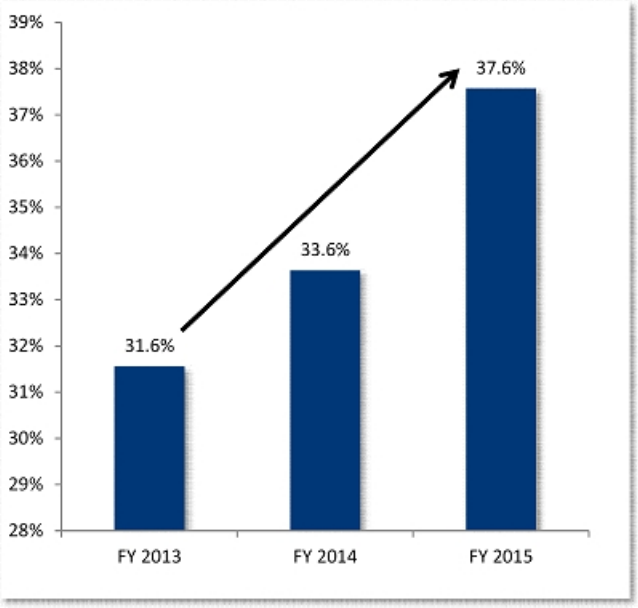
Source: Company filings

ENZO CLINICAL SERVICES: GROWTH AND OPERATING LEVERAGE

Enzo Clinical Services Revenue Growth



Enzo Clinical Services Gross Margins



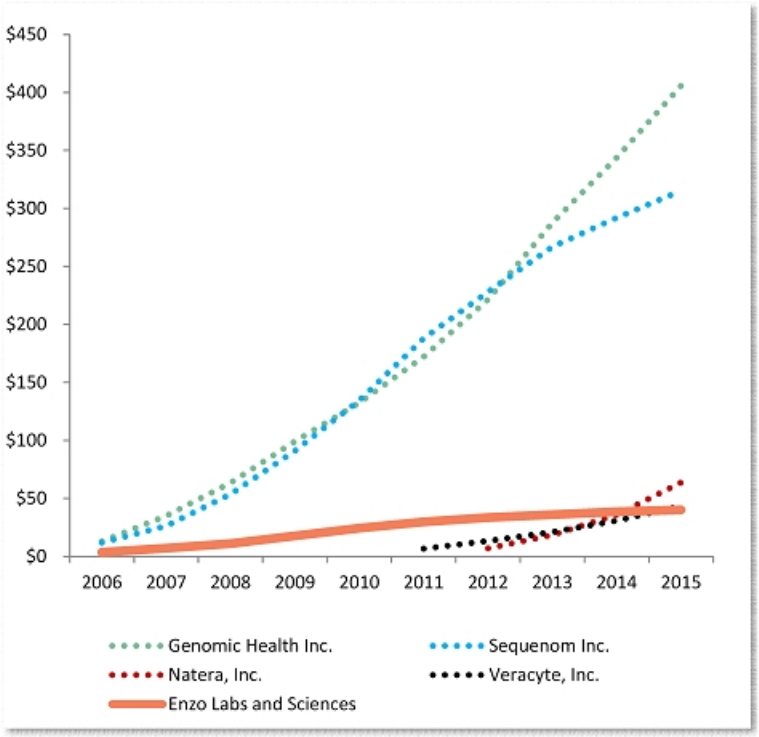
Enzo's Strategy Is Delivering Growth and Operating Efficiencies

Source: Company filings

EXTREMELY EFFICIENT R&D INVESTMENT

Cumulative R&D Expense

($ in millions)



R&D Spend	5 yr	10 yr	Sales	TEV
Genomic Health	$273	$406	281	$762
sequenom	181	315	137	261
natera	63	63	189	392
veracyte	43	43	48	157
Enzo	16[1]	40[1]	98	189

Note: Enzo's fiscal year ending 7/31
Source: Company filings
(1) Excludes Therapeutics R&D

Appendices

Appendix: IP Assets

RETURN ON IP LITIGATION INVESTMENT

THE FOUNDATION HAS BEEN LAID AND IS GENERATING RETURNS

	2011-15 Total (mm)
Total Legal Fee Expense	($25.9)
Legal Settlements, Net	27.6
IP Royalties	25.6
Net Gain	**27.3**

During the past five fiscal years, Enzo's settlement and licensing revenue was twice as large as the Company's total legal expense and contributing to the company's cash reserves

Source: Company filings

Appendix: Therapeutics

THERAPEUTICS' PRODUCT PIPELINE

Product / Indication	Discovery	Preclinical	Phase I	Phase II
Alequel™ for the treatment of Crohn's disease				
Optiquel™ for the treatment of Autoimmune Uveitis				

The Company Continually Reviews its Therapeutics Program Seeking to Maximize Shareholder Value

Appendix: Definitions

DEFINITIONS

- **Molecular Diagnostics (MDx):** The application of molecular techniques to detect, diagnose, and monitor diseases, it can include the use of nucleic acid (DNA/RNA) technologies, as well as monoclonal antibodies and ELISA-based assays for the study of immunology[1]
- **Immunohistochemistry:** The fundamental concept is the demonstration of antigens *(proteins)* within tissue sections by means of specific antibodies[2]
- ***In situ* hybridization:** The use of a DNA or RNA probe to detect complementary genetic material in cells or tissue[3]
  - *In situ* hybridization involves hybridizing a labeled nucleic acid to suitably prepared cells or tissues on microscope slides to allow visualization *in situ* (in the normal location)
- **Biotech:** An entity that is engaged in biological innovation, leading to enablement of that idea (technology) which could lead to intellectual property
- **Closed System/Open System:**
  - Closed systems are instruments that are usually formatted to be used with a dedicated reagent system, and no other, and therefore not adaptable for use with alternate reagents. Such instruments and reagents are usually sold together
  - Open systems are instruments that allow for numerous different reagents and allow flexibility to the user. However, such reagents may face IP barriers
- **Flow cytometry:** A technology that simultaneously measures and then analyzes multiple physical characteristics of single particles, usually cells, as they flow in a fluid stream through a beam of light[4]

(1) Molecular Diagnostics, 2006, Jain PharmaBiotech Report
(2) J. A. Ramos-Vara, Animal Disease Diagnostic Laboratory and Department of Comparative Pathobiology, Purdue University
(3) Medicine.net, October 2012
(4) BD Biosciences, 2000

Appendix: Management Biographies

ELAZAR RABBANI, Ph.D. is an Enzo Biochem founder and has served as the Company's Chairman of the Board and Chief Executive Officer since its inception in 1976 and Secretary since November 25, 2009. Dr. Rabbani has authored numerous scientific publications in the field of molecular biology, in particular, nucleic acid labeling and detection. He is also the lead inventor of most of the Company's pioneering patents covering a wide range of technologies and products. Dr. Rabbani received his Bachelor of Arts degree from New York University in Chemistry and his Ph.D. in Biochemistry from Columbia University.

BARRY W. WEINER, President, Chief Financial Officer, Principal Accounting Officer and Director and a founder of Enzo Biochem. He has served as the Company's President since 1996, and previously held the position of Executive Vice President. Before his employment with Enzo Biochem, he worked in managerial and marketing positions at the Colgate Palmolive Company. Mr. Weiner is a member of the New York Biotechnology Association. He received his Bachelor of Arts degree in Economics from New York University and his Master of Business Administration in Finance from Boston University.

JAMES M. O'BRIEN, Executive Vice President, Finance joined Enzo Biochem in February 2014. Mr. O'Brien has held leadership positions for Corporate and Business Unit budgeting and forecasting, SEC Reporting, Internal Controls and Accounting Operations for large and small multi-national public companies in pharmaceutical, consumer products and manufacturing industries. From 2010 to 2013 Mr. O'Brien was Vice President and Corporate Controller for Actavis, plc.,(now Allergan plc.) a global specialty pharmaceutical company. From 1998 to 2010, Mr. O'Brien held senior level Finance leadership roles at Nycomed US, Aptuit, Inc., Purdue Pharma LLP and Bristol Myers Squibb Company. From 1988 to 1998 Mr. O'Brien was with PricewaterhouseCoopers LLP. He received his Bachelor of Arts degree from George Washington University and his Master of Business Administration from Fordham University. Mr. O'Brien is a Certified Public Accountant.

DAVID C. GOLDBERG, Vice President of Corporate Development, has been employed with the Company since 1985. He also held several other executive positions within Enzo Biochem. Mr. Goldberg held management and marketing positions with DuPont-NEN and Gallard Schlesinger Industries before joining the Company. He received his Master of Science degree in Microbiology from Rutgers University and his Master of Business Administration in Finance from New York University.