

Thursday, September 15th

2016 INVESTOR DAY

biotechne[®]

Disclaimer

Cautionary Statements

This presentation contains “forward-looking statements” within the meaning of the federal securities laws. Except for historical information contained herein, the statements in this presentation are forward-looking and made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements made herein relate to, among other things, future sales, earnings, return on equity, cost savings, process improvements, free cash flow, share repurchases, capital expenditures, acquisitions, benefits of investments and partnerships, business strategies and other matters. Such statements can be identified by words such as: “expected,” “expects,” “expect,” “forecast,” “would,” “estimate,” “will,” or similar references to future periods.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Actual results could differ materially from those stated or implied in the forward-looking statements. For a list of factors, risks and uncertainties which could make our actual results differ from expected results, please see our latest Annual Report on Form 10-K. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, as a result of new information, future developments or otherwise.

This presentation also contains non-GAAP financial information. Management uses this information in its internal analysis of results and believes this information may be informative to investors in gauging the quality of our financial performance, identifying trends in our results and providing meaningful period-to-period comparisons. For definitions of applicable non-GAAP financial measures and reconciliations of non-GAAP financial information to GAAP financial information, see the Reconciliations of GAAP to Non-GAAP Financial Measures included in the Company’s financial reports on Forms 10-Q and 10-K and related press releases.

EXECUTING TO A STRATEGY

AGENDA

1. INTRODUCTION Chuck Kummeth, President and CEO
2. BUSINESS GROUPS DESCRIPTION
Kevin Gould, Sr. VP Diagnostics
Bob Gavin, Sr. VP Protein Platforms
Dave Eansor, Sr. VP Biotechnology
3. PRODUCTS AND TECHNOLOGIES ROAD MAP Fernando Bazan, Chief Tech. Officer
4. FINANCIAL RETURNS ON STRATEGY Jim Hippel, Chief Financial Officer
5. Q&A All

Corporate Leadership Team



Chuck Kummeth
CEO



Gerry Andros
Vice President
Sales



Dr. Fernando Bazan
Chief Technology
Officer



Ruth Bright
Managing Director
R&D Systems
Europe



Peter Breloer
Vice President
Asia Pacific



Dave Eansor
Sr. Vice President
Biotech Division



Brenda Furlow
Senior Vice President
and General Counsel



Bob Gavin
Senior Vice President
Protein Platforms



Kevin Gould
Sr Vice President
Diagnostic Division



Jim Hippel
Chief Financial
Officer

Corporate Leadership Team



Dave LePage
Chief Information
Officer



Dr. Frank Mortari
Vice President
Corporate Development



Karen Padgett
Vice President
Marketing



Dr. Kevin Reagan
Vice President
Diagnostics Markets



Struan Robertson
Vice President
Human Resources



Dr. Wendy Shao
Managing Director
R&D Systems
China



Gary Stapleton
Vice President
European Operations



Marcel Veronneau
Senior Vice President
Clinical Controls

What is our Mission?

EPIC TOOLS FOR EPIC SCIENCE

Empowerment

Passion

Innovation

Collaboration

Large Addressable Market Opportunities

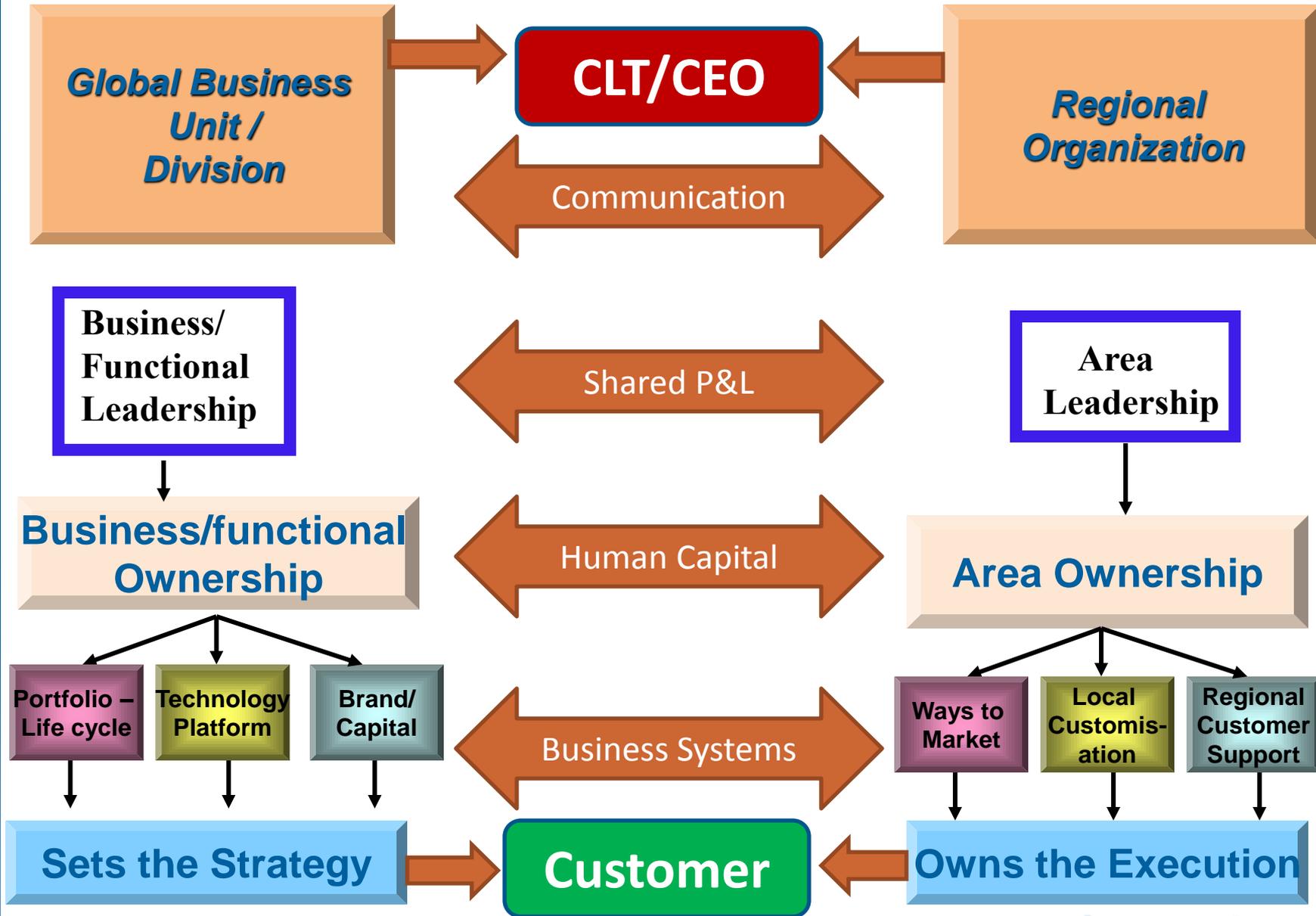


Customers Served

- Pharma
- Biotech
- Academia
- CROs
- Hospitals
- Foundations
- Government

Bio-Techne Subsidiary Model

TECH

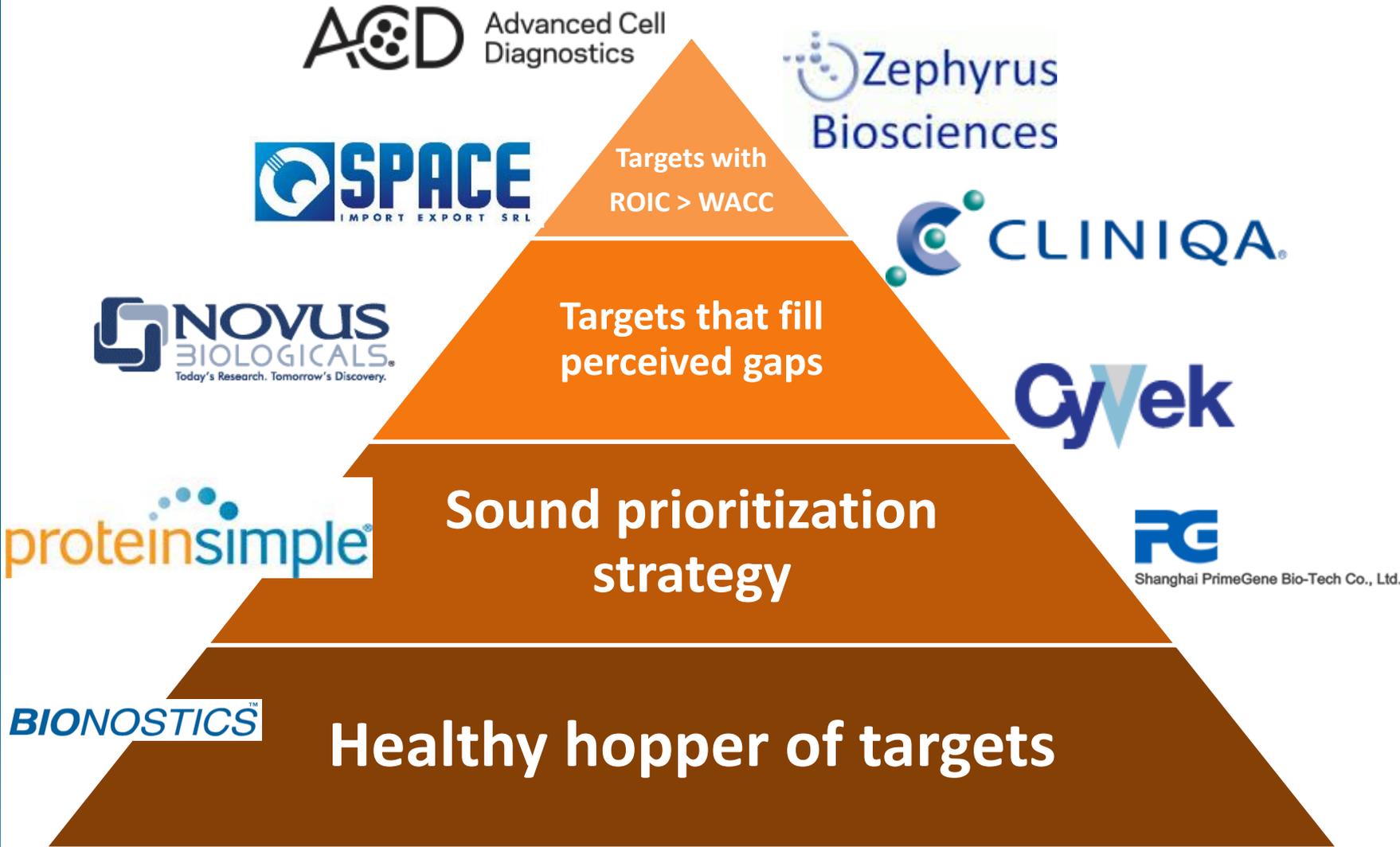


3 Years Accomplishments

- ❑ \$310MM in Revenue growing to \$500MM
- ❑ Company's first 5 year strategic plan
- ❑ \$168MM in Adj. Operating Income to near \$200MM
- ❑ 500% increase in first year product sales
- ❑ 9 acquisitions in 3 years, cash and debt strategy strictly adhered to
- ❑ 12 new senior executives (ThermoFisher, LifeTech, 3M, Genentech)
- ❑ Enterprise wide business systems (SFDC, ERP, Hyperion, LMS, Ultipro, etc.)
- ❑ 689 employees to near 1700
- ❑ New company name and branding strategy
- ❑ Complete new website with over 70+ active pathways for researchers
- ❑ New EPIC Human capital and culture plan
- ❑ 200%+ growth in China (\$14MM in revenue to near \$40MM)
- ❑ Global Subsidiary model implemented with 3 divisions and 3 regions
- ❑ IR group and process to address investors
- ❑ 24,000 self manufactured products to over 40,000
- ❑ 120+ employees given bonus and equity incentive plans

M&A Strategy Results

TECH

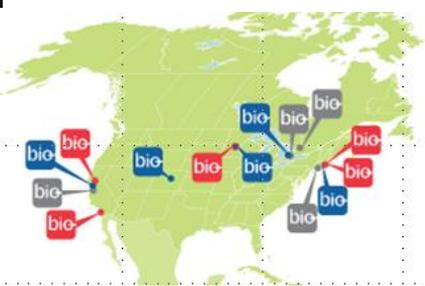


24 Global Sites

North America



- Minneapolis
- San Marcos
- Devens
- Cambridge
- San Jose
- Newark
- Emeryville
- Littleton
- Oakville
- Toronto
- Ottawa
- Wallingford



Europe



- Abingdon
- Langley
- Bristol
- Wiesbaden
- Lille
- Milan
- Zug



Asia

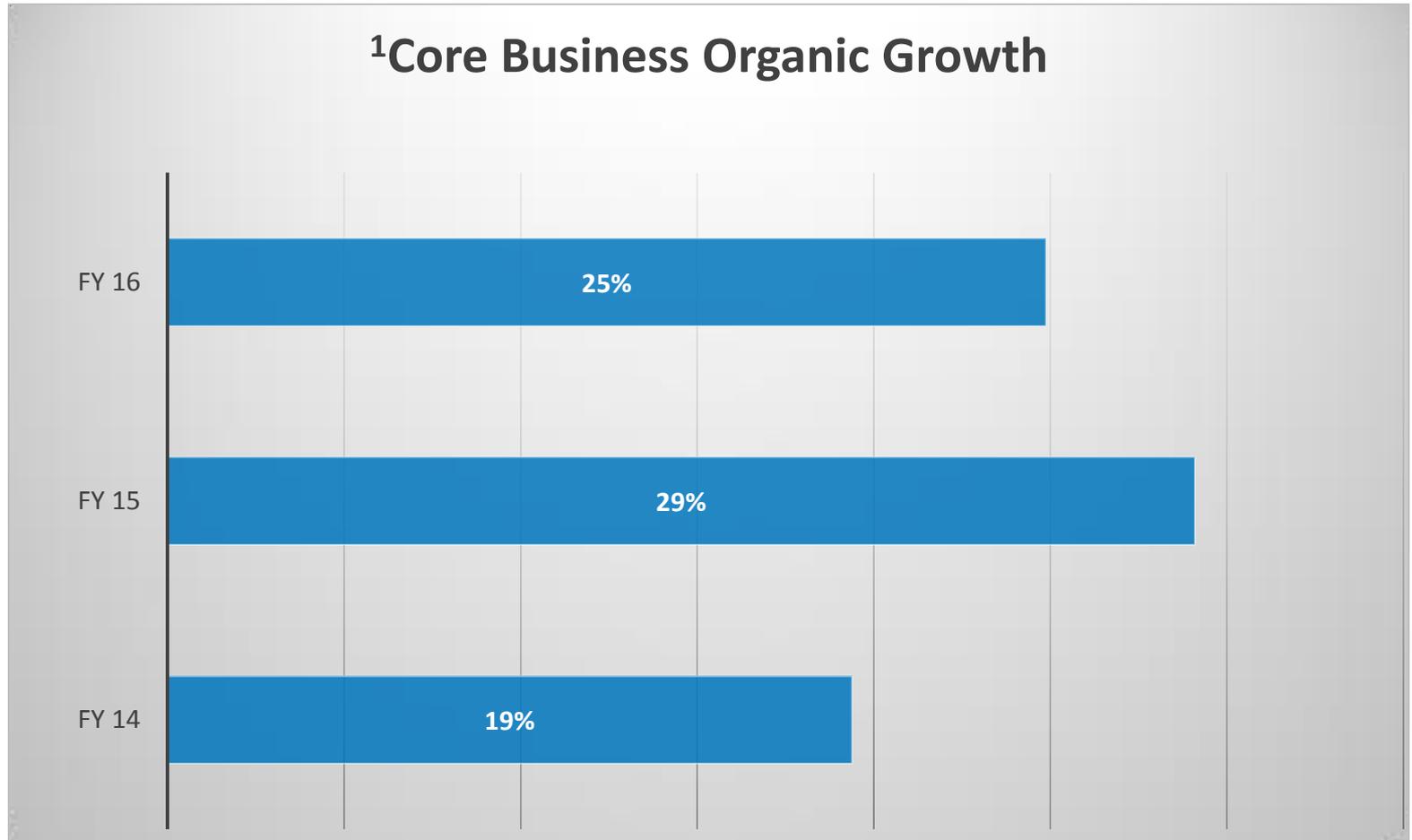


- Shanghai
- Beijing
- Hong Kong
- Singapore
- Tokyo



Total Geographic Sites – 24
 Total WW Employees - ~1700

Organic Sales Growth- Mainland China



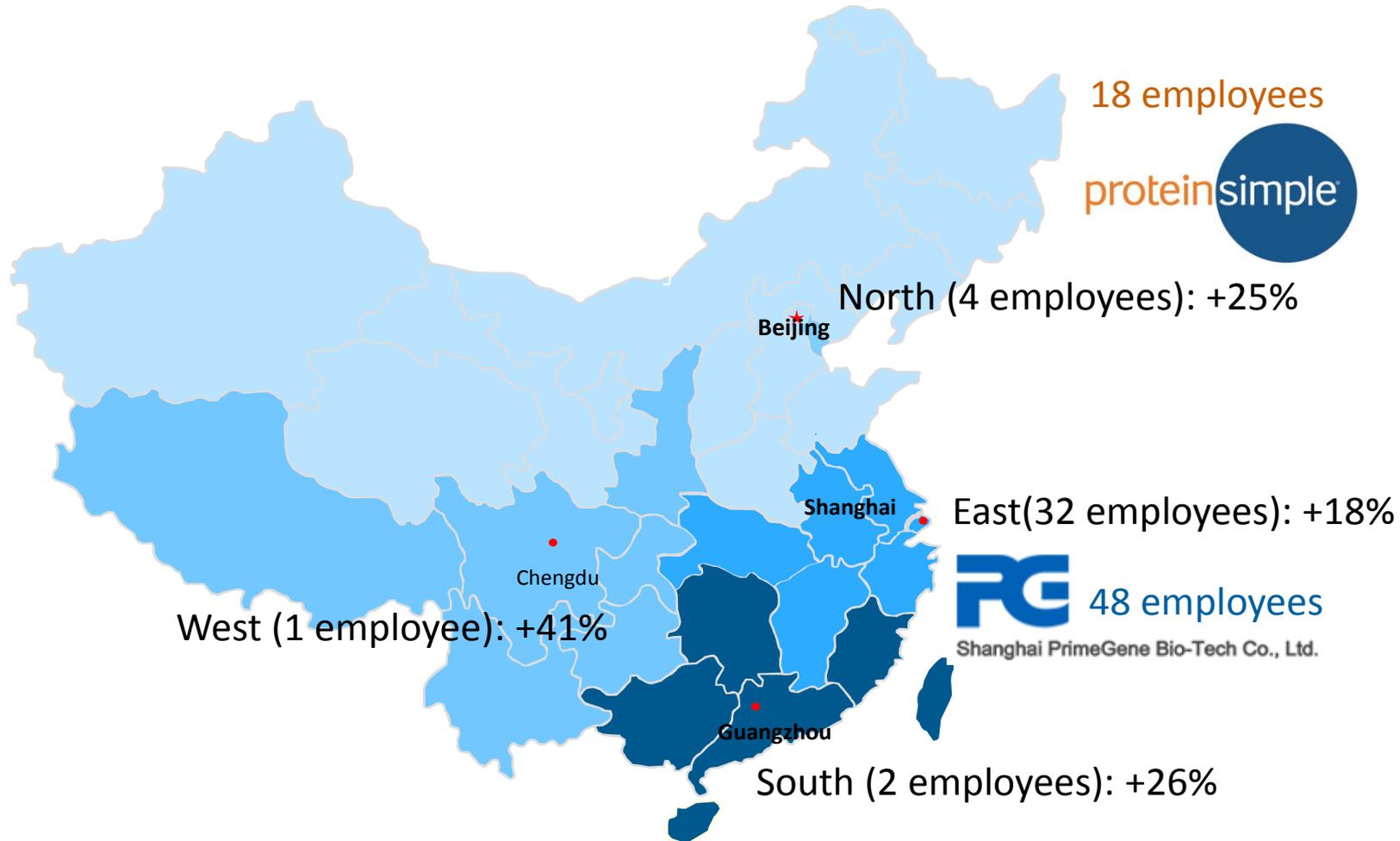
¹Tocris, R&D Systems, Novus products

Key Initiatives to Support China Growth Strategy

- **Hiring of an experienced commercial lead for Asia**
- **Increase in on-the-ground sales force for greater customer visibility**
- **Integrated sales functions between the three business units in China: Bio-Techne legacy business, PrimeGene and ProteinSimple (ACD is next!)**
- **Greater regional coverage through the distributor network**
- **Continued emphasis on the use of web-based marketing to better serve our customers**
- **Broad based Trade Show plan, dozens occur in many cities annually**

FY 16 Mainland China Sales Growth By Regions and Staffing

TECH



* R&D Systems, Tocris

Europe Summary

Regional Mfg
and Logistics



>200
Employees



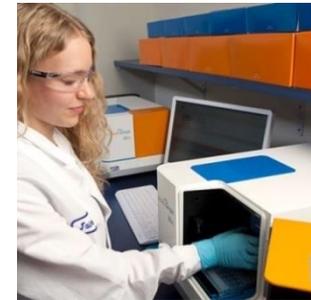
>90%
Direct
Sales



5
Commercial
Sites



2
Operating
Divisions



In region
distribution and
manufacturing

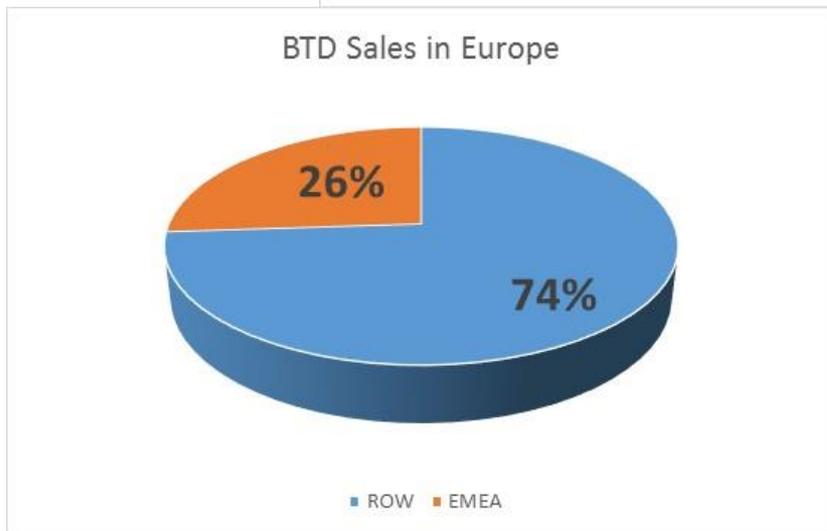
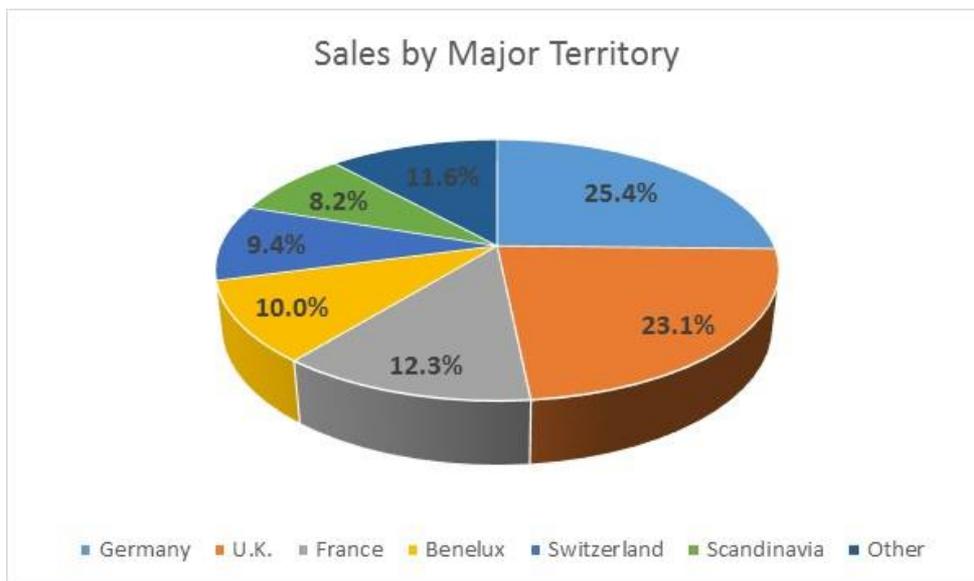
> 30% of
European
employees PhD
qualified

Selling more directly
with our customers

UK
Germany
Switzerland
France
Italy

Protein
Platforms and
Biotech
divisions now
operating
regional model

Europe (EMEA) Key Financial Metrics



Europe continues to deliver strong mid-single digit organic growth

Prioritization Process: Why Prioritize?

- Prioritization provides clear direction for **investment decisions** across the whole business that deliver or exceed the Strategic Plan goals
- Provide answers to...
 - Which programs generate the **best return** and should therefore be resourced?
 - Which programs generate a **poor return** and should therefore be put on hold or killed to **release resources** to invest in growth programs?
 - What investment is needed to **fully resource** the programs that maximize financial and commercial success?

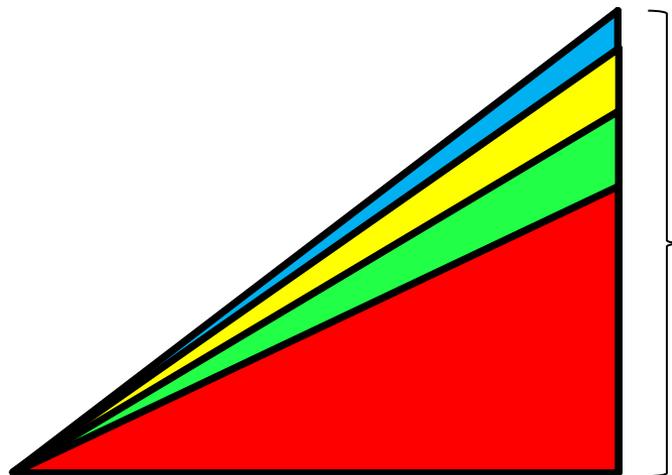
Process – Comparing strategic investments

Scoring Criteria Using Three questions:

1. What are the resources required to deliver the project?
2. What are the benefits of the project, assuming success?
3. What is the probability of success?

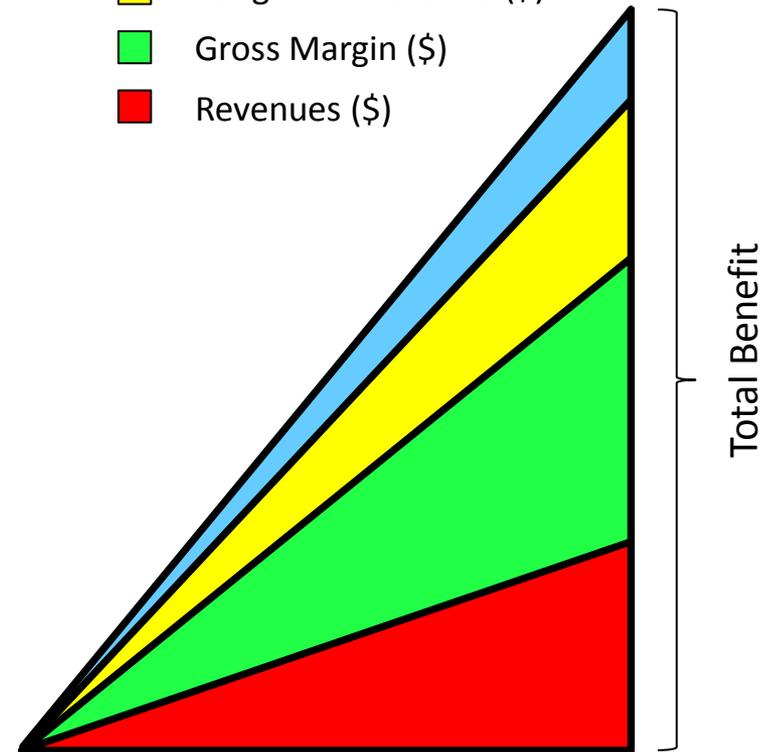
Benefit Filters

- Strategic Growth
- Competitive Differentiation
- Talent & Retention
- Long Term Revenue (\$)
- Gross Margin (\$)
- Revenues (\$)



Cost - \$, FTE & other costs

Option A

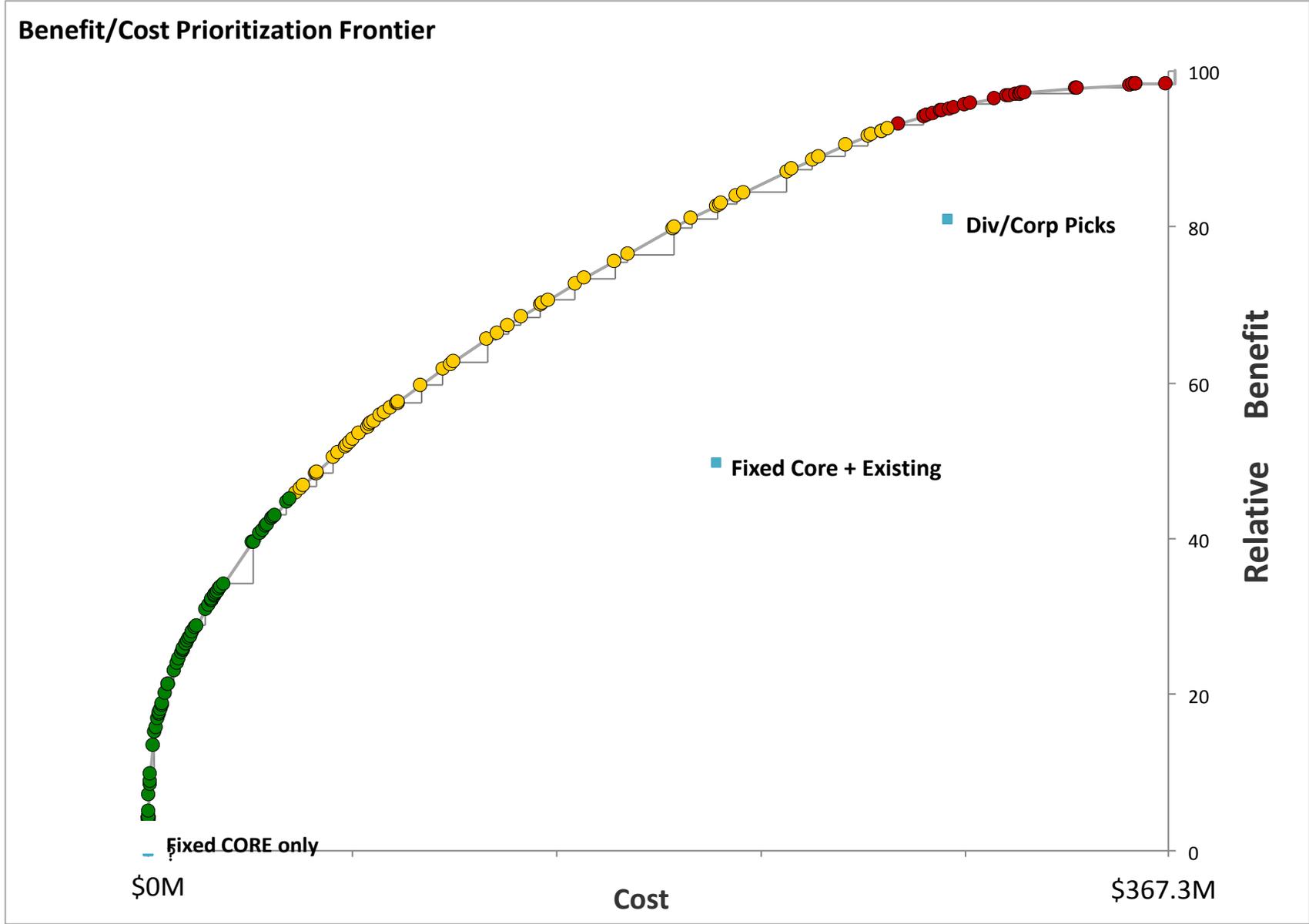


Cost - \$, FTE & other costs

Option B

Bio-Techne – Optimized Portfolio

TECH



EPIC - Bio-Techne Pride

EMPOWERMENT

PASSION

INNOVATION

COLLABORATION

- The guiding principle from which leaders lead
- The cultural heartbeat connecting each and every site
- The mobilization of a global workforce
- The benchmark by which all people initiatives are measured
- The word that challenges us to imagine what is possible

EPIC - Bio-Techne Pride

- **Global Recognition Program**
- **Bio-Techne Training Squad**
- **Community Affairs**
- **Groundbreaking Performance Mgt**
- **Women In Science Program**
- **EPIC Top Banana and Minions**
- **Global Leadership Development**
- **Total Compensation Focus**

Bio-Techne Training Squad

TECH

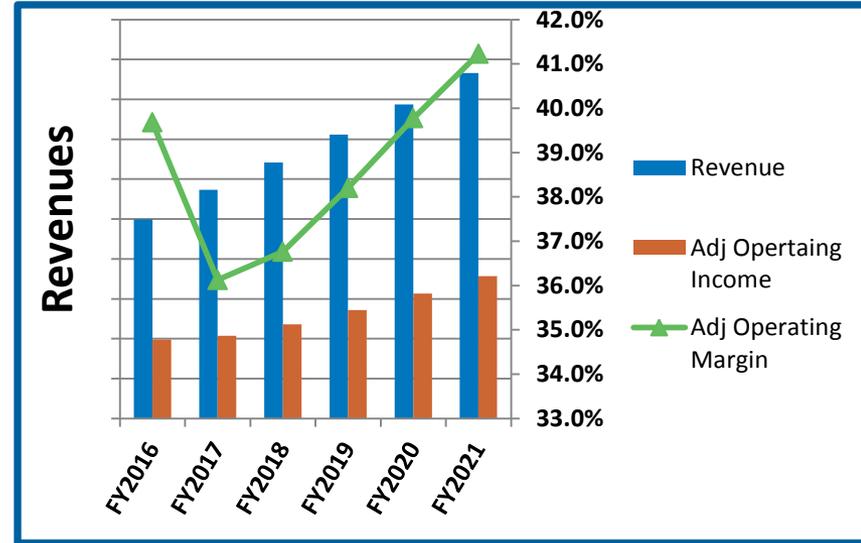


Strategic Plan Summary

Today



- Global footprint, with offices in NA, Europe and Asia
 - Minneapolis, MN based headquarters
 - Strong balance sheet with exceptional profitability through high gross margins and operational efficiency
- Deep product portfolio and application expertise that includes cytokine/growth factors, immunoassays, small molecules, antibodies, automated protein analysis and quantitation, and clinical controls
- Current leadership position in cytokines and immunoassays for research
- Provider of biological content for research, diagnostic and clinical instruments
- First to market with difficult-to-make bioactive proteins
- Adopted new mission and vision statements: EPIC Tools for EPIC Science



Going Forward

- Build on Bio-Techne's history of product and financial success.
- Innovation and expansion of core products & technology both organically and via M&A
- Bring automation to the customer's workflow that leverage our reagents
- Expansion of our geographic footprint in both commercial and scientific collaborations (eg.: KOL network)
- Build development and operational processes that allow us to scale efficiently
- Recruit, develop and retain the most talented staff

Strategic Goals



China over \$100MM



Op Margins 30%-35%



2500+ employees



\$1B Revenue!



4-6 divisions



Global EPIC Culture

Bio-Techne Summary

TECH

300,000
Products



Our brands bring you >300,000 quality products

+1,700
Employees



Over 1700 employees globally

40
Years



Our companies have been manufacturing and sourcing reagents for 40 years

500,000
Citations



Generated using our products

6
Instruments



6 instrument platforms that leverage biological content

Diagnostics Division

**Kevin Gould
Sr Vice President**



Clinical Diagnostic Products

Comprehensive Test Segment Product Portfolio

We develop and manufacture the full spectrum of reagents, calibrators and quality controls for the following diagnostic areas:

- General Chemistry
- Hematology
- Diabetes (Blood glucose, HbA1c)
- Blood Gas/Electrolytes
- Cardiac Markers
- Coagulation
- Urine Chemistry/Urinalysis
- Lipids
- Specific Proteins
- Tumor (Cancer) Markers
- Immunochemistry
- TDM
- Toxicology



Biological Materials and Plasma Processing



- Protein purification – Affinity chromatography
- Stabilization of proteins in Liquid Matrices
- Enzyme stabilization
- Fractionation
- Plasma processing
- Custom processing : defibrination, delipidization,
- Ultra-filtration/Dialysis
- Heat inactivation
- Fermentation
- Disease state plasmas



“We enable IVD companies globally to produce their products”

Regulatory Certifications

FDA Registered Establishment and Device Listing

Device Manufacturing Licenses

ISO 13485:2003 Certification

ISO 9001:2008 Certification

Compliant with cGMP/QSRs (US), ISO, IVDD and other regulations (EU), ANVISA

Canadian Medical Device Regulation (CMDR) and Establishment License



All Bio-Techne Diagnostics locations are compliant to current regulations and certifications

Custom Products and Contract Manufacturing

- Customization for specific applications and instrument platforms
- Key supporting products:
 - Calibration Verification/Linearities
 - Standards
 - Proficiency Products
 - Reagents



Products for the Point of Care Market

- Industry leading experience developing products for automated and manual POC analyzers and test systems
- We produce the consumable fluids and reagents for the IVD industry's leading companies and platforms



Diagnostics Division-Today

- Customer oriented organization
- Four locations: ~225,000 square feet
- Management team with extensive IVD industry experience
- Balance of infrastructure and technology
- Strict Regulatory Compliance with an exemplary quality record:
 - Last FDA Audits
 - **No Observations (483's)**
- Substantial 510K Portfolio
 - Over 175 approved 510K's

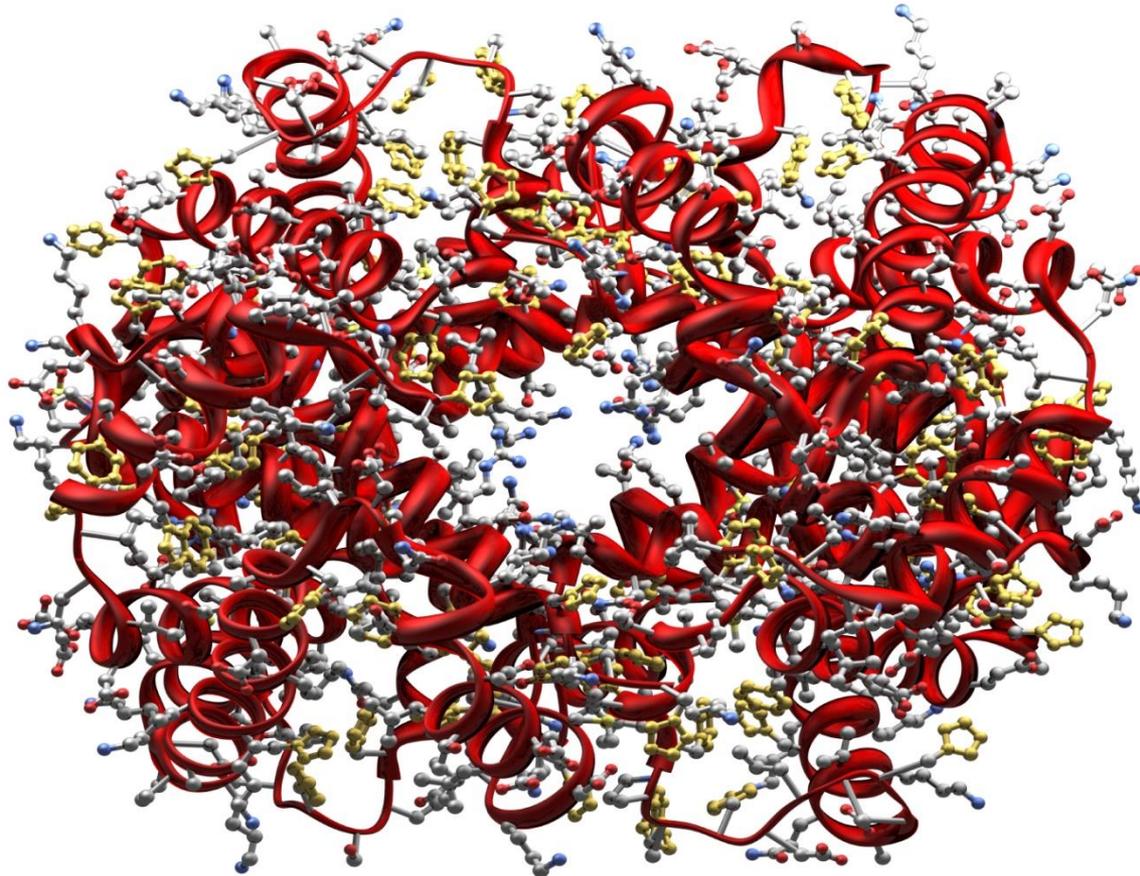


Protein Platforms Division

**Bob Gavin
Sr Vice President**

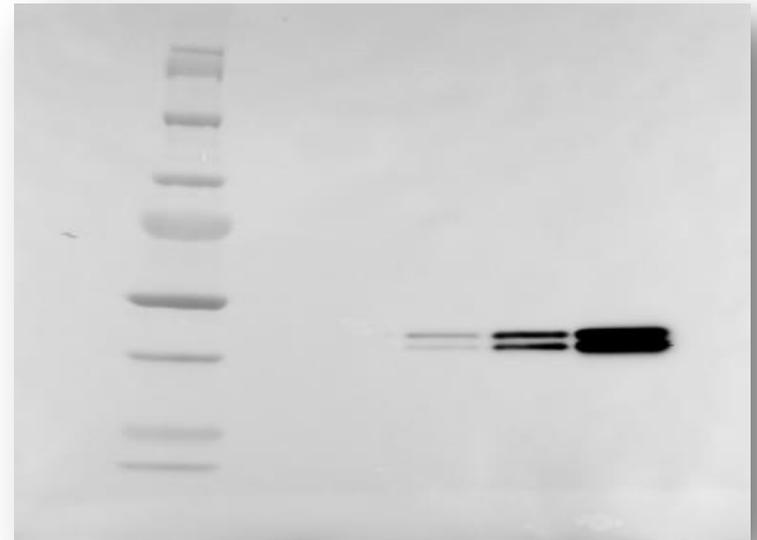
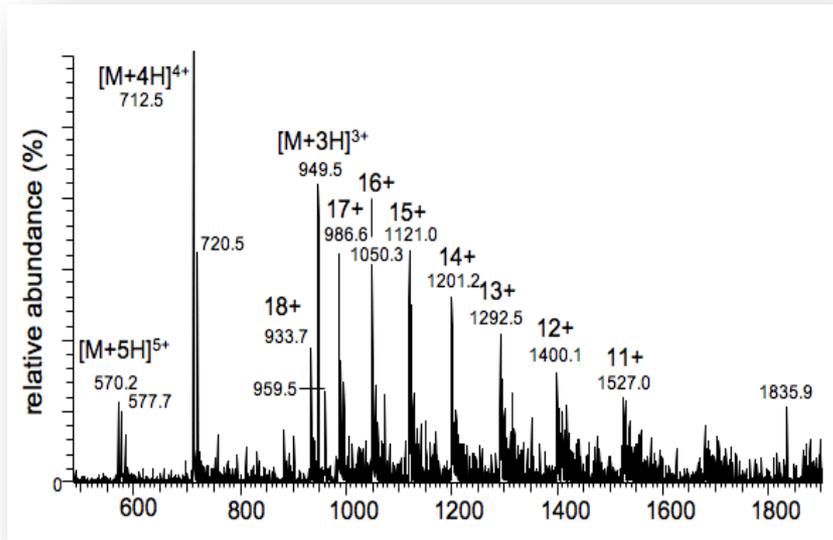
Why Proteins?

- Proteins Are Complex

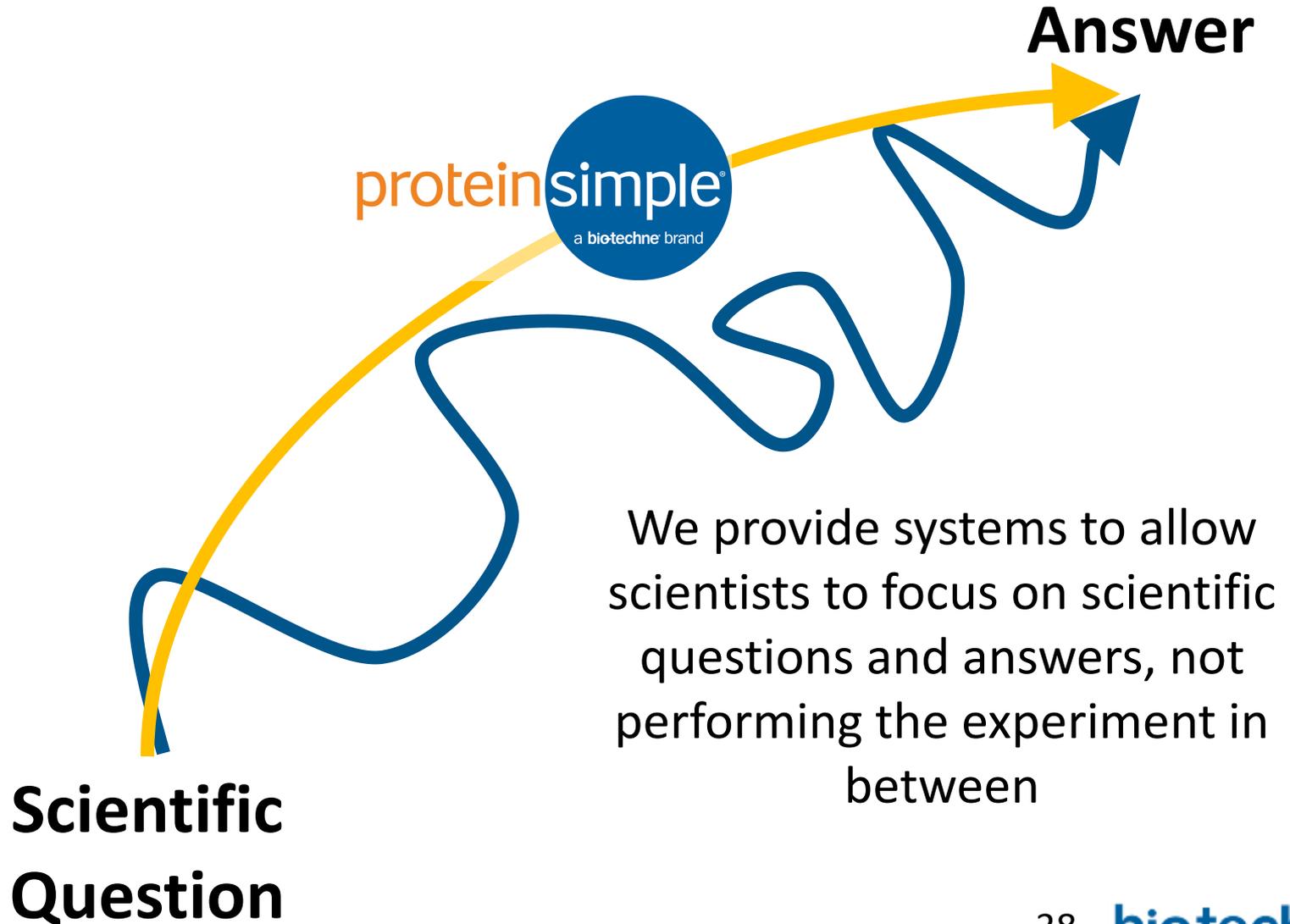


Why Proteins?

- Today's Protein Tools Can Be Even More So



Tools Don't Need To Be Complex



Systems Based Approach

TECH



Imaging



Separation



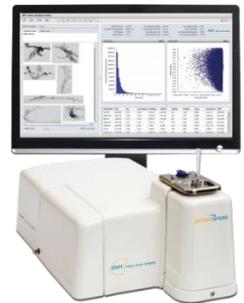
Immunoassay



Microfluidics



Measurement



Analysis

protein**simple**[®]

a biotechne brand

Unique Protein Analysis Focus

TECH



FluorChem
AlphaImager



Simple Western



Single-Cell



Simple Plex



iCE



MFI

protein simple®

a biotechne® brand

Proven Track Record of Innovation



NP1000 NP100 Simon Sally Peggy Peggy Sue Wes Maurice



2009 2010 2011 2012 2013 2014 2015 2016



FCE FCM MFI5200 iCE3 Bot1 FCR Sally Sue Ella Milo

ProteinSimple

[**proh**-teen **sim**-puh l]

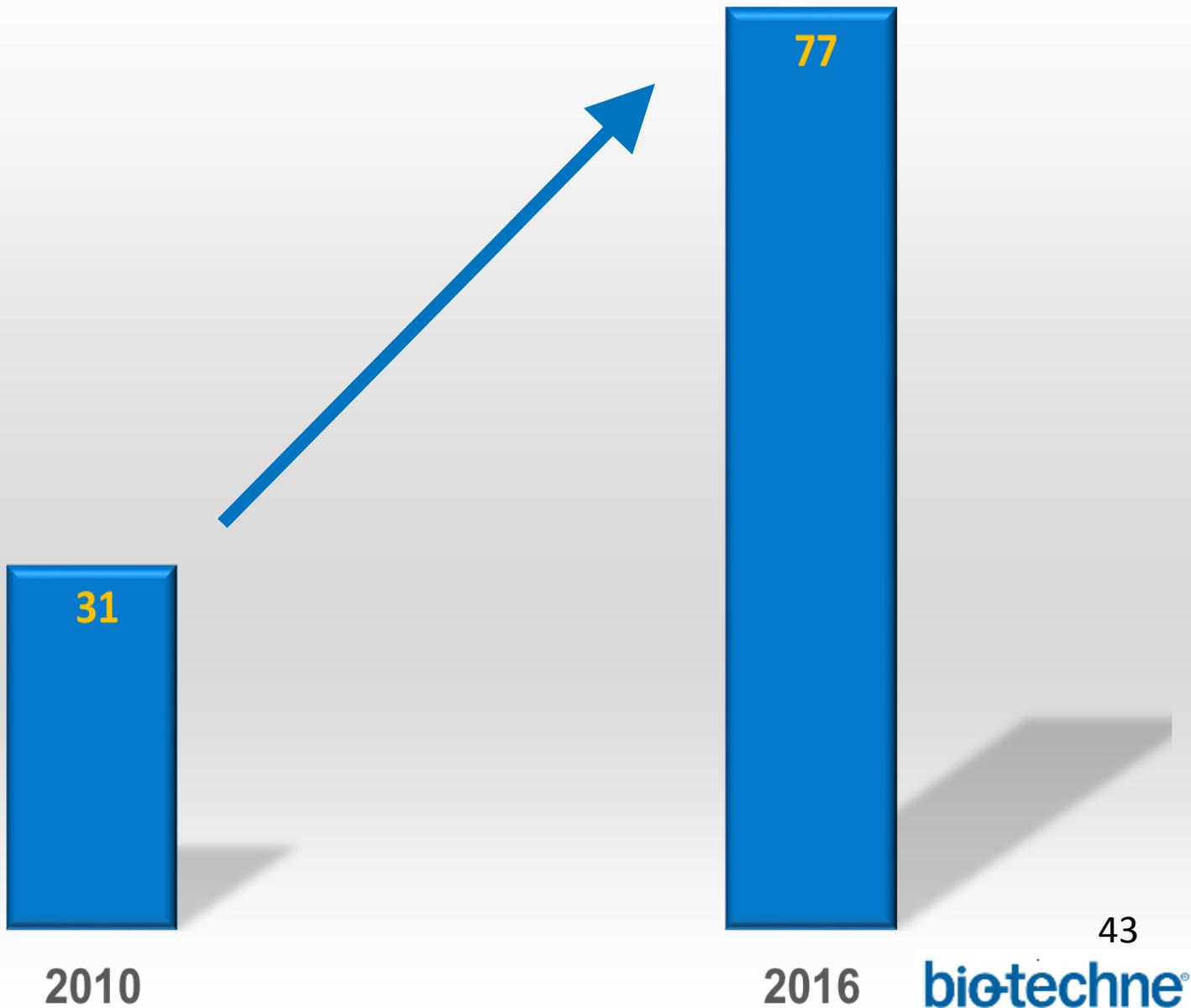
- Examples
- Word Origin

verb (used with object), **ProteinSimple it!**

1. to rethink complex scientific problems into simple, elegant solutions that are delightful to use.

We took that old fashioned Western Blot and ProteinSimplified it!

Innovation Drives Revenue



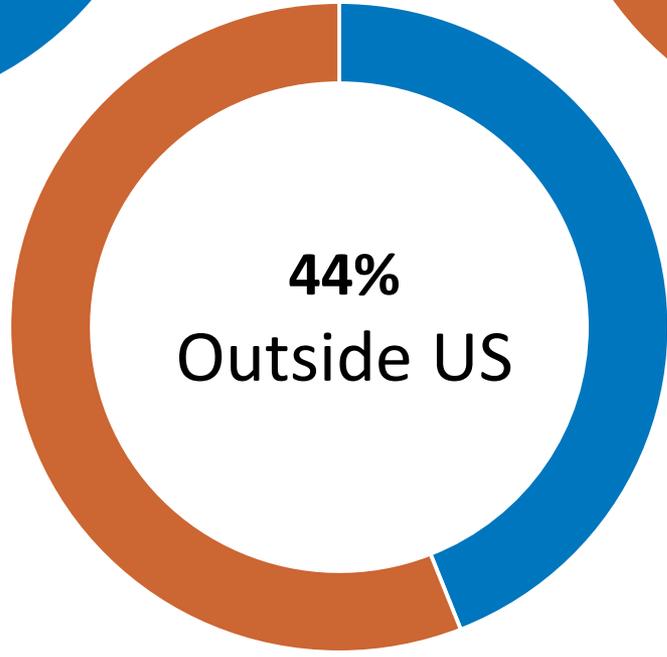
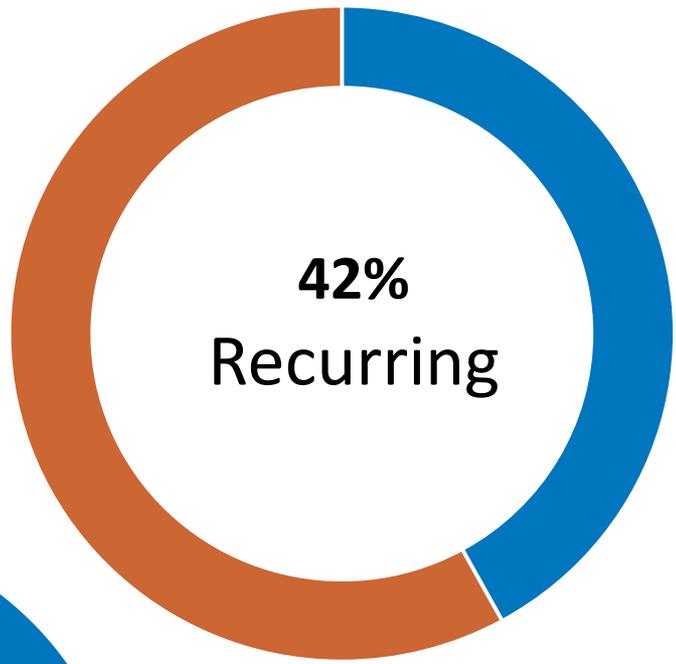
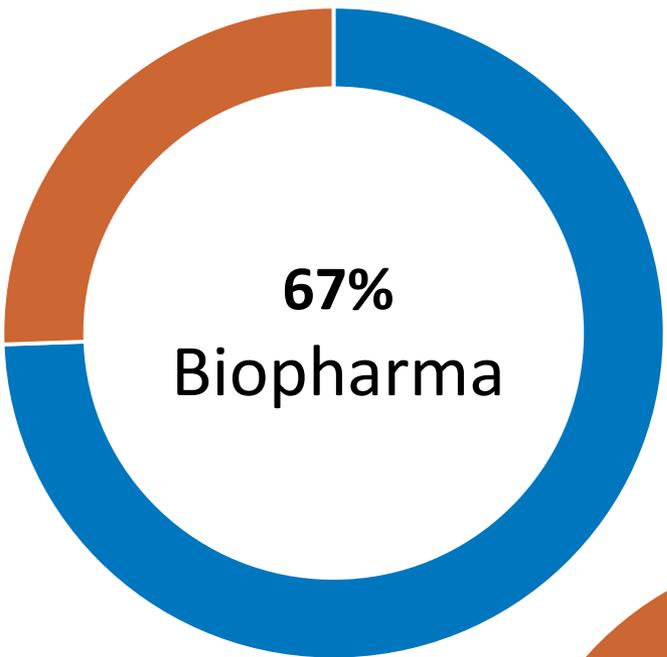
Global Footprint

- 16,000+ Installed Base
- ~300 Employees Worldwide
- Production facilities in San Jose, Wallingford, Toronto, Ottawa
- Demo facilities in San Jose, Boston, Abingdon, Minneapolis, Shanghai, Tokyo
- Direct sales in NA, Europe and Asia



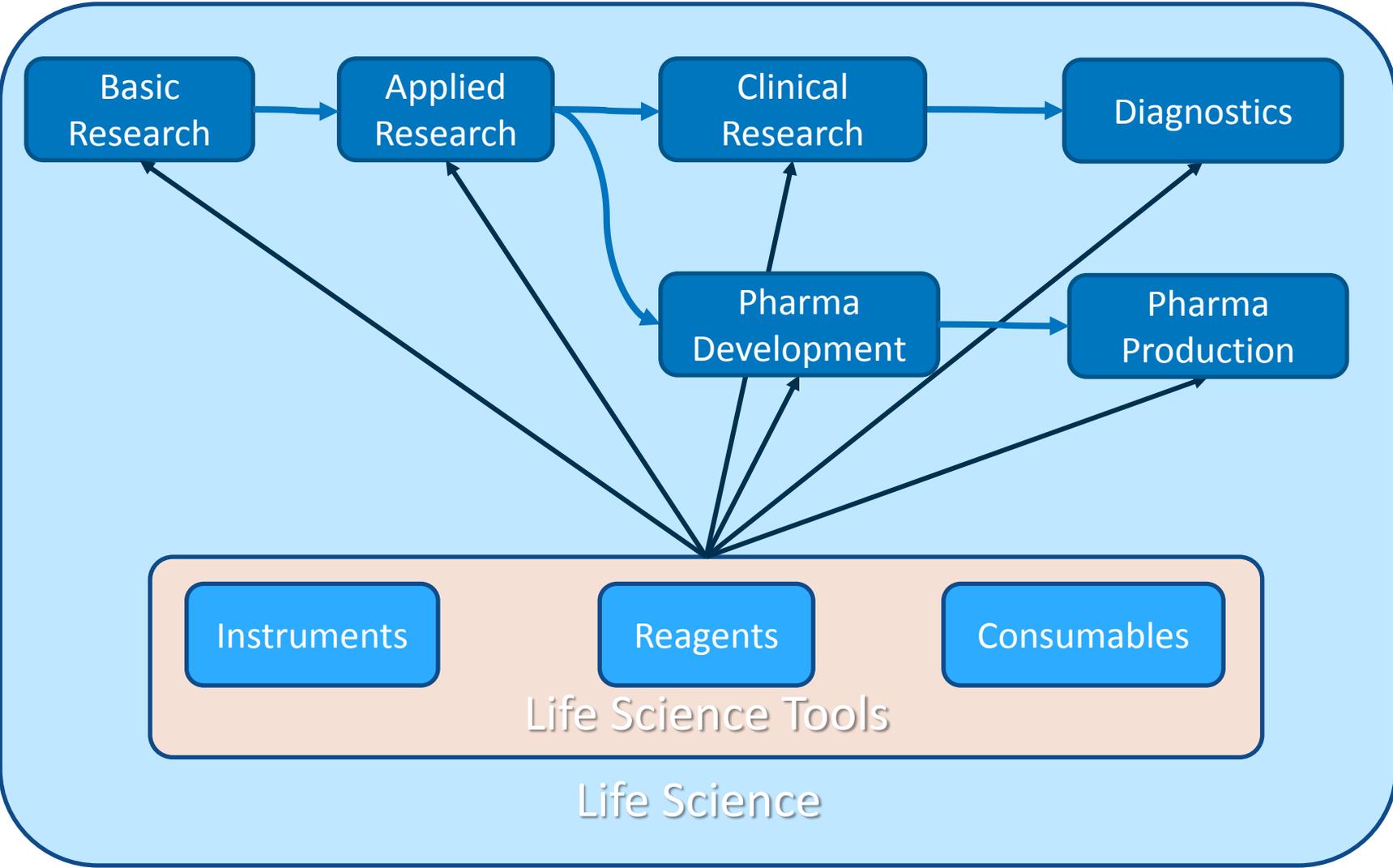
Attractive Revenue Mix

TECH



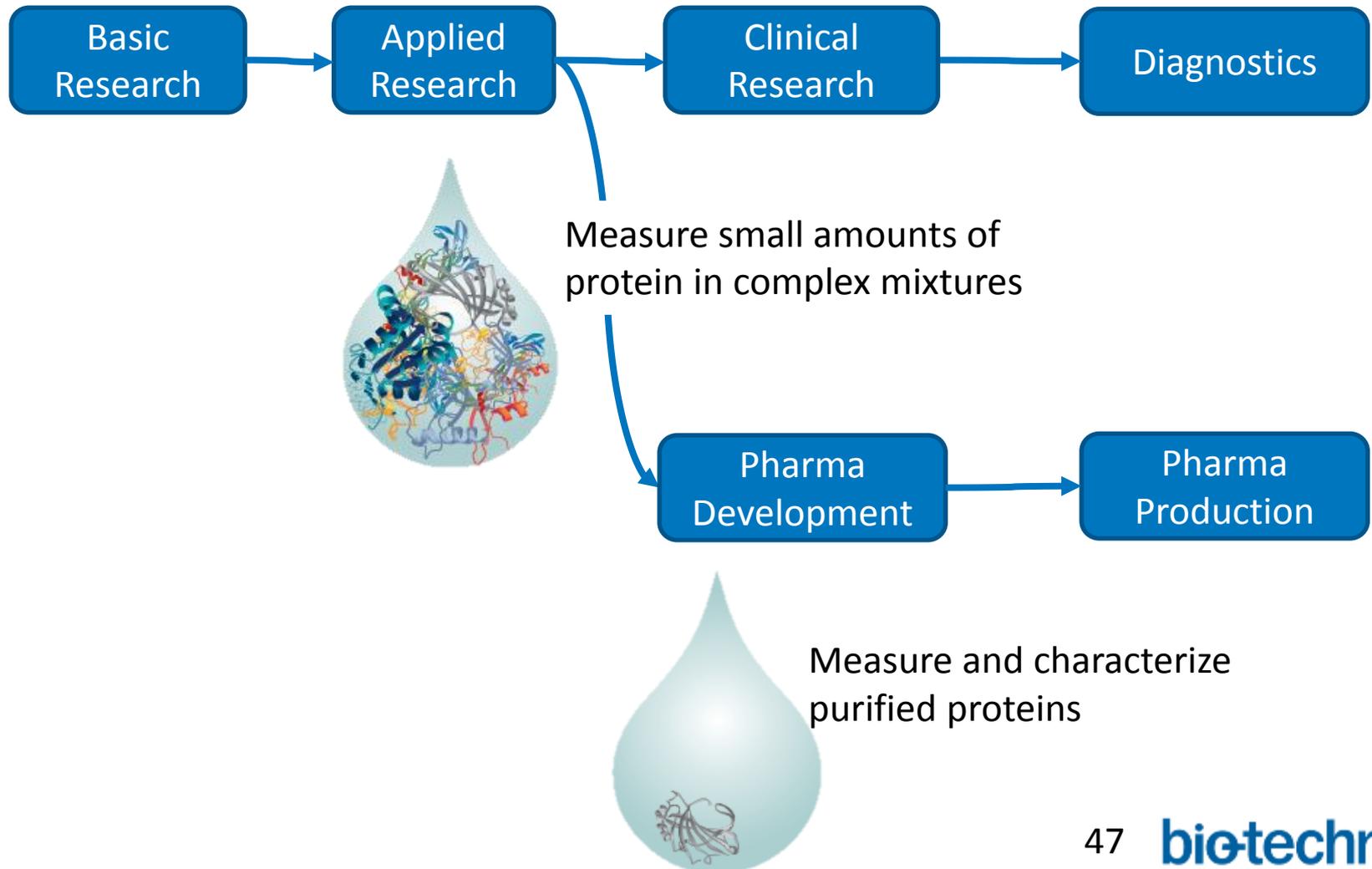
Serving All Aspects of Life Science

TECH



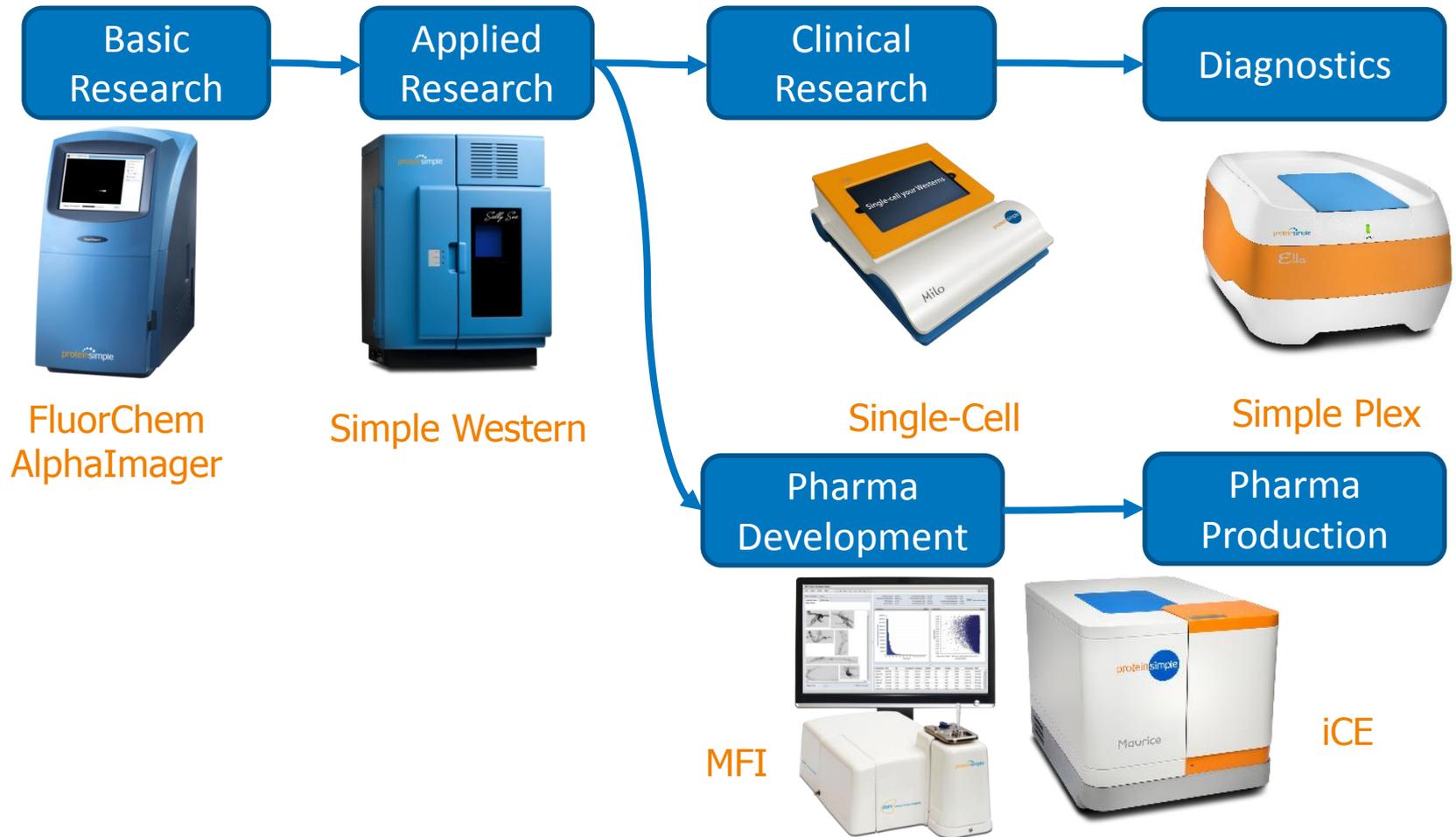
What's In Your Sample?

- Different scientists, different questions



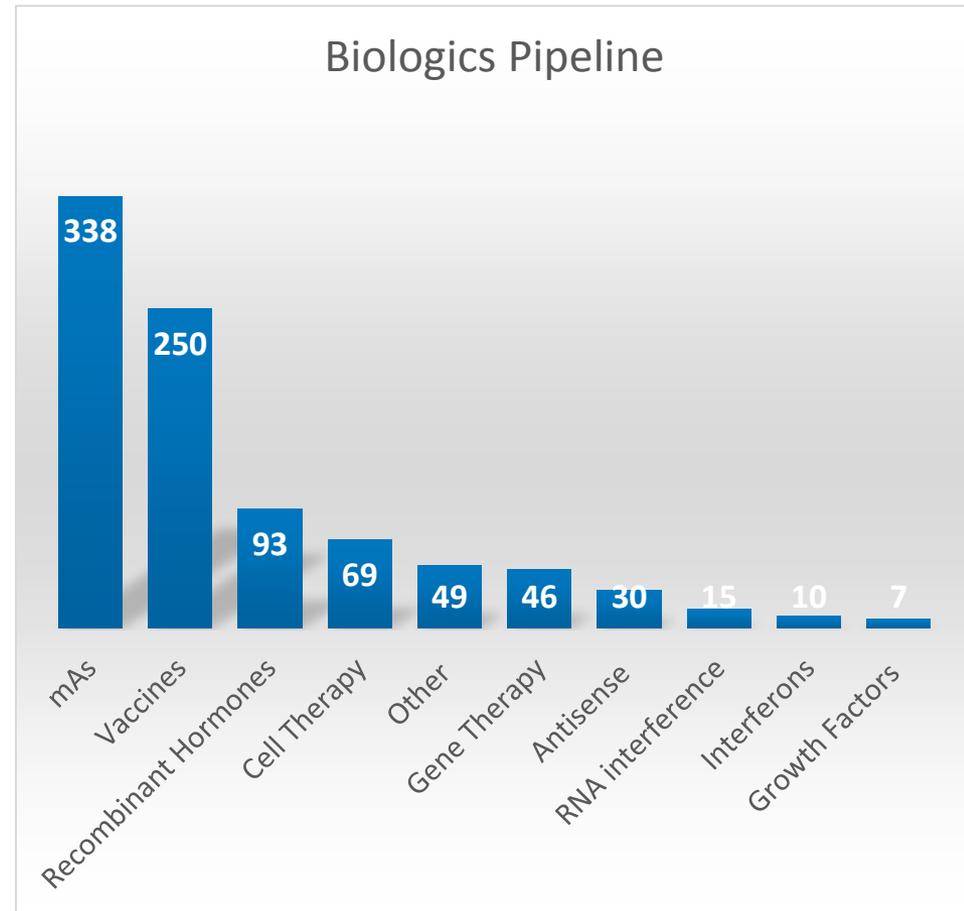
What's In Your Sample?

- Different questions, different tools



Biologics Drive Pharma Growth

- Purified Proteins as Drugs
- ~700 companies worldwide researching and commercializing biologics
- Pipeline of Biologics in Phase I to Application Submission >900



Pure Proteins, Deeply Characterized

Identity

SDS-PAGE, IEX, IEF, CZE, MS, **iCE**

General

pH, Osmolality, Viscosity, Appearance

Purity

SDS-PAGE, IEX, SEC, RP, IEF, CZE, **HIC, iCE**

Structure

CD, FTIR, NMR, DSC, ITC, SEC, MS, X-Ray Cryst.

iCE

Impurities

ELISA, PCR, ISPR, LO, DLS, SEC, AUC, MS, SDS-PAGE, **MFI**

Stability

MS, LO, DLS, SEC, AUC, SDS-PAGE, IEX, IEF, CZE, pH, **MFI**

Safety

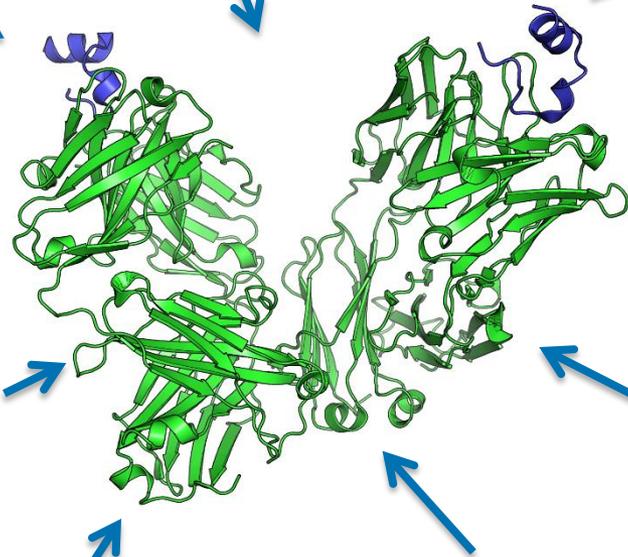
Endotoxin, Bioburden, Sterility, LO, DLS, AUC, **MFI**

Concentration

A280 Absorbance, HPLC

Potency

Bioassay, ELISA



Many analytical techniques are required

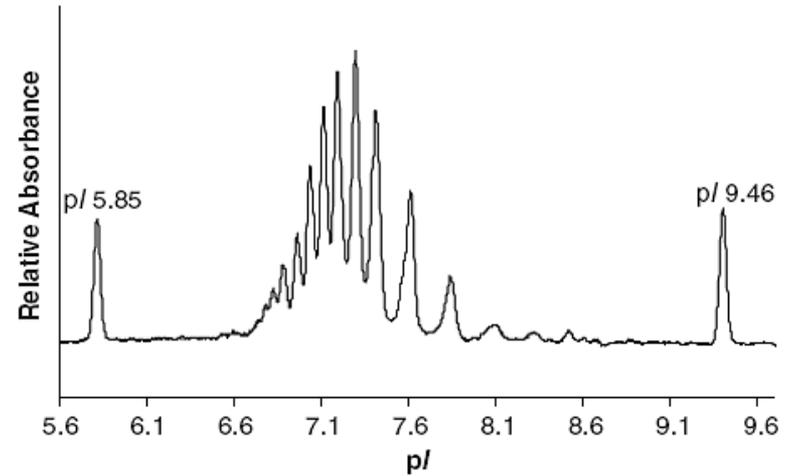
iCE – Is My Drug Consistent?



iCE3



Maurice



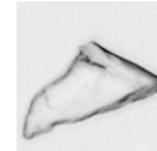
Charge Signature

Gold Standard for Charge Heterogeneity
Installed in development and QC

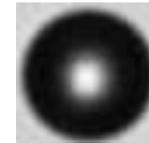
MFI – Is Drug Contaminated?



MFI



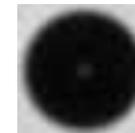
Glass



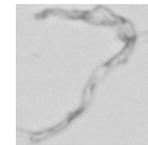
Oil



Rubber



Air bubbles

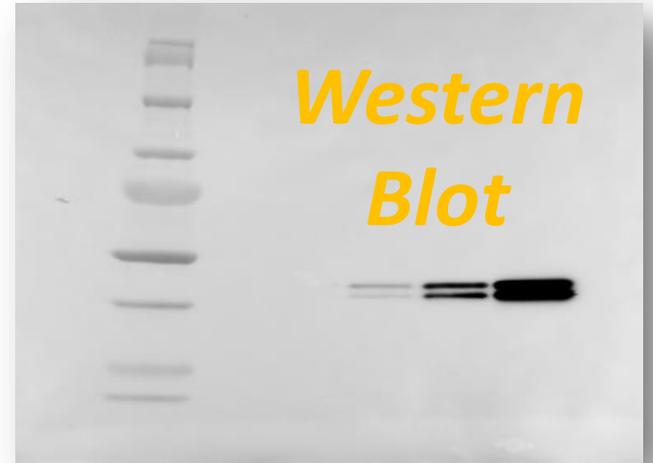
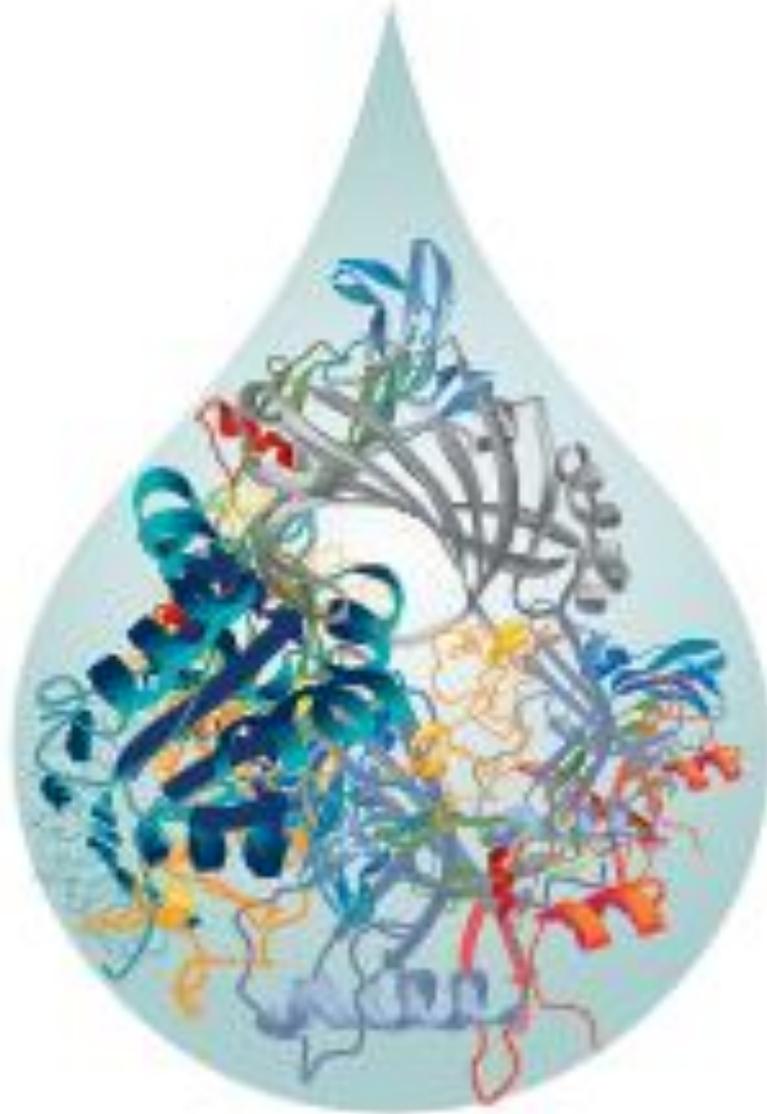


Aggregate

Particle Images

Defined the field for monitoring protein aggregation

What's in your sample?



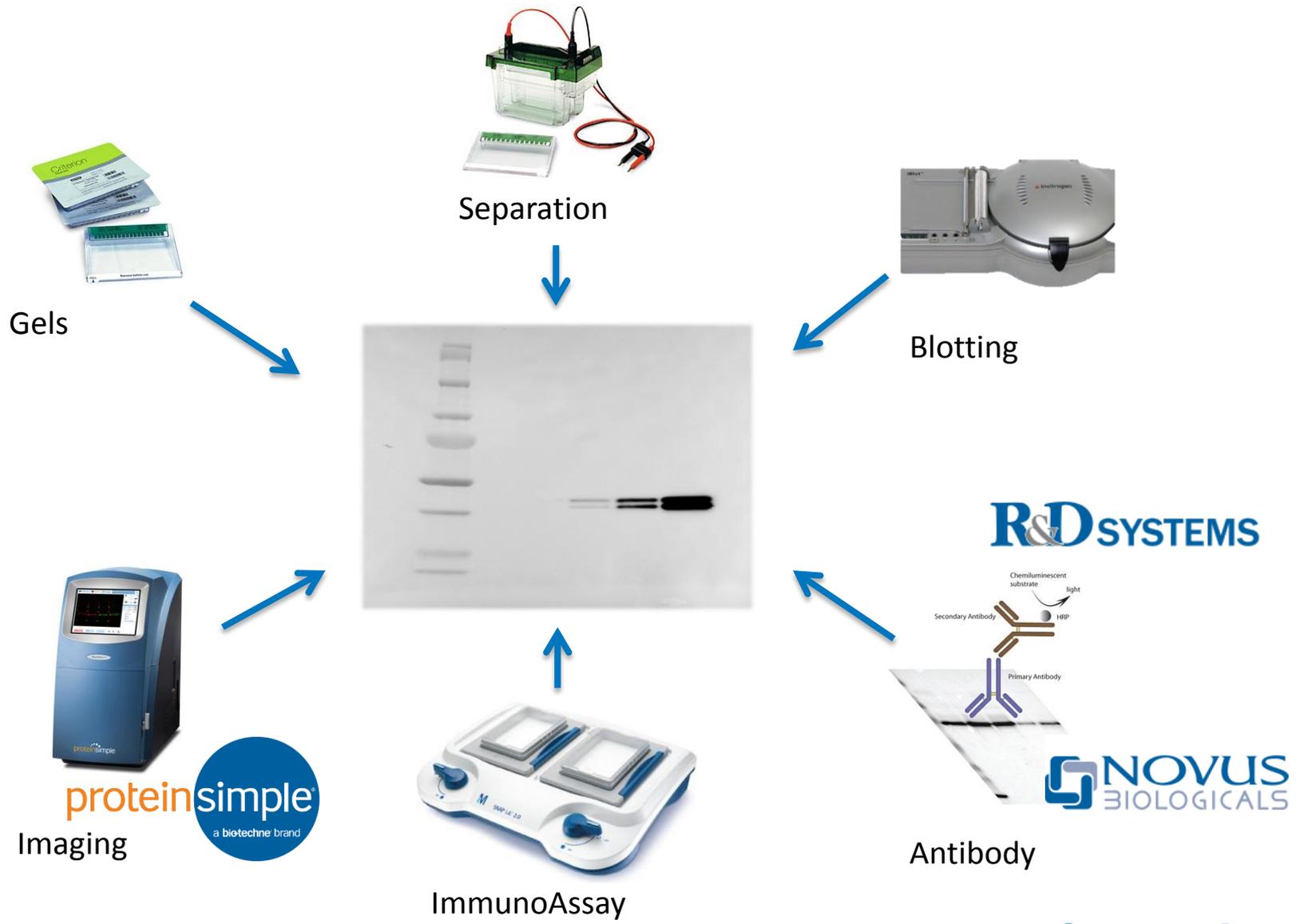
A Western blot image showing a single prominent band at approximately 850K. The band is dark and well-defined. Above the band, the text "1:2" is written in large blue font. Below the band, the text "850K" is written in large orange font. The background is light gray with some faint, blurry bands visible on the left side.

1:2

850K

Start with a Lot of Gear...

TECH

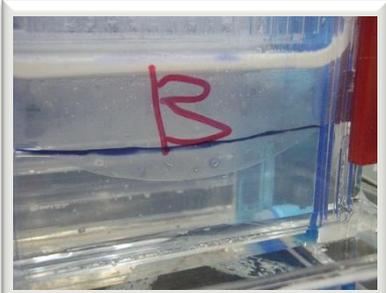


Spend Up to Two Days...

TECH



Load gel



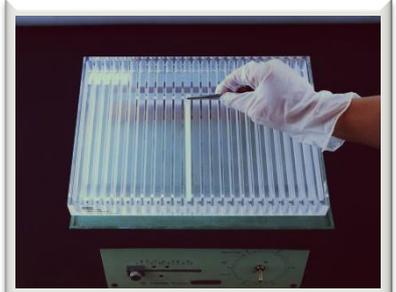
Run gel



Prep gel



Build Sandwich



Membrane Transfer



Primary Probe



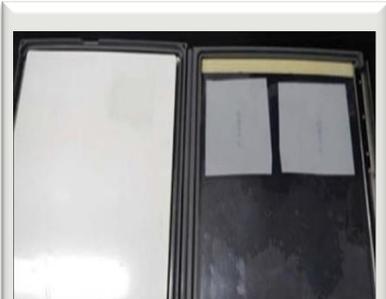
Wash



Secondary Probe



Wash Again



Expose



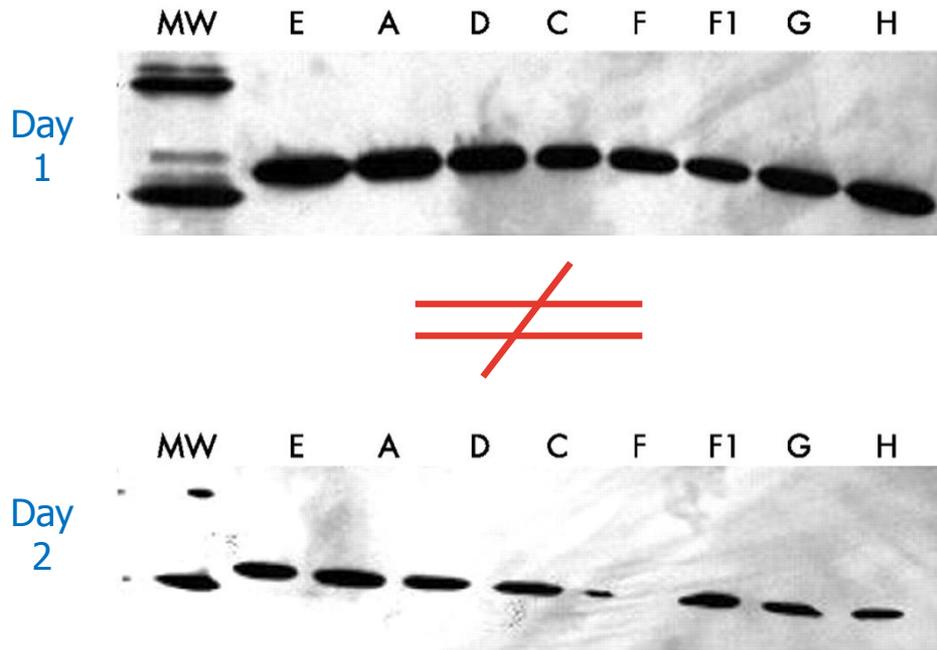
Develop



Detect

And Get Inconsistent Data!

- ✗ Manual
- ✗ Time consuming
- ✗ Inconsistent
- ✗ Non-reproducible
- ✗ Semi-quantitative at best



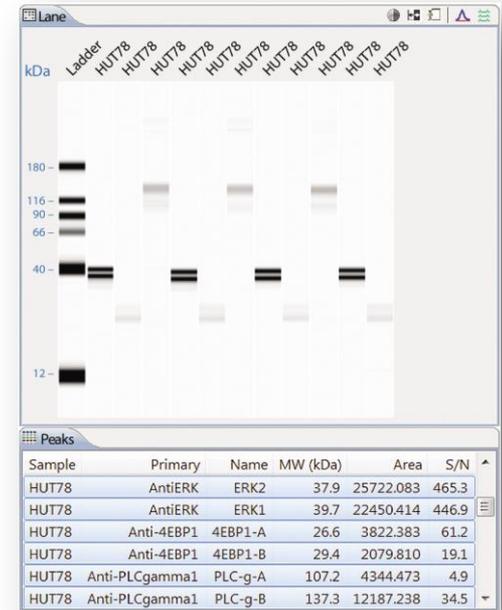
Simple Western is the Future...



Prepare
samples



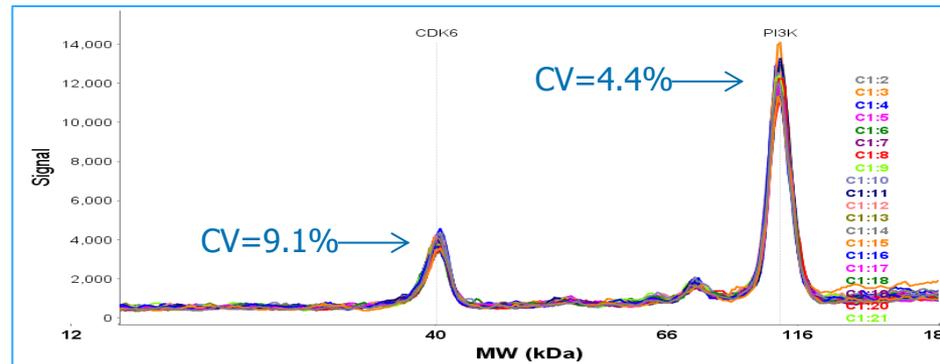
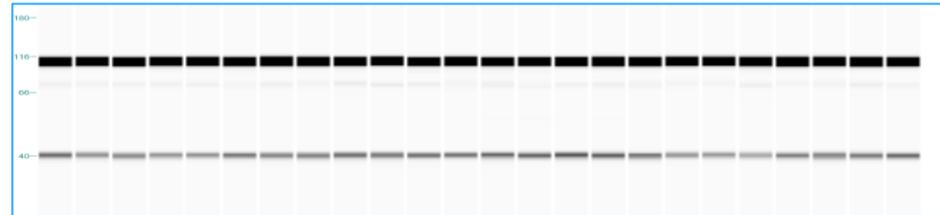
Click start



Results
automatically

...with Data you can Rely on

- ✓ Fully automated
- ✓ Fast
- ✓ Consistent
- ✓ Reproducible
- ✓ Fully quantitative



Gel-free. Blot-free. Hands-free.

TECH



Wes
25 samples



Peggy Sue
96 size/charge



Sally Sue
96 size



NanoPro 1000
96 charge

ELISA – That's a lot of plates!

- ~2,000,000 ELISAs are performed annually
- ~1,000,000 are ELISA kits
- Typical lab does 50-100 plates per year on 6-10 different targets

ELISA

- Sensitive & Accurate
- Laborious



R&D SYSTEMS

Traditional ELISA

1. Coat Plate with Capture Ab



2. Wash Plate



3. Add Antigen (sample)



4. Wash Plate



R&D SYSTEMS

5. Add 2° Ab and incubate



6. Wash Plate



R&D SYSTEMS

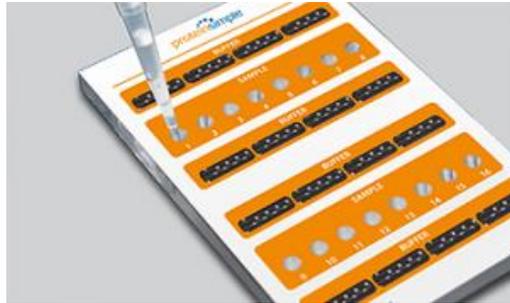
7. Add Detection Reagent and incubate



8. Read in plate reader and analyze



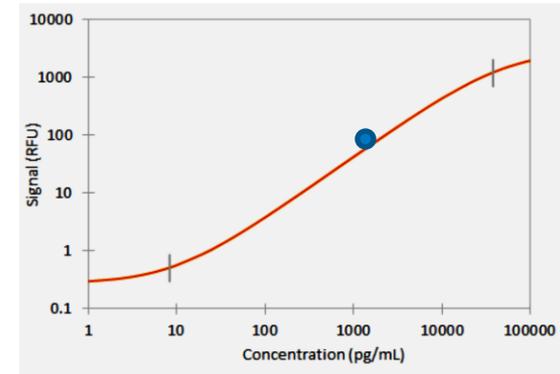
Simple Plex – A New Way to ELISA



Prepare samples



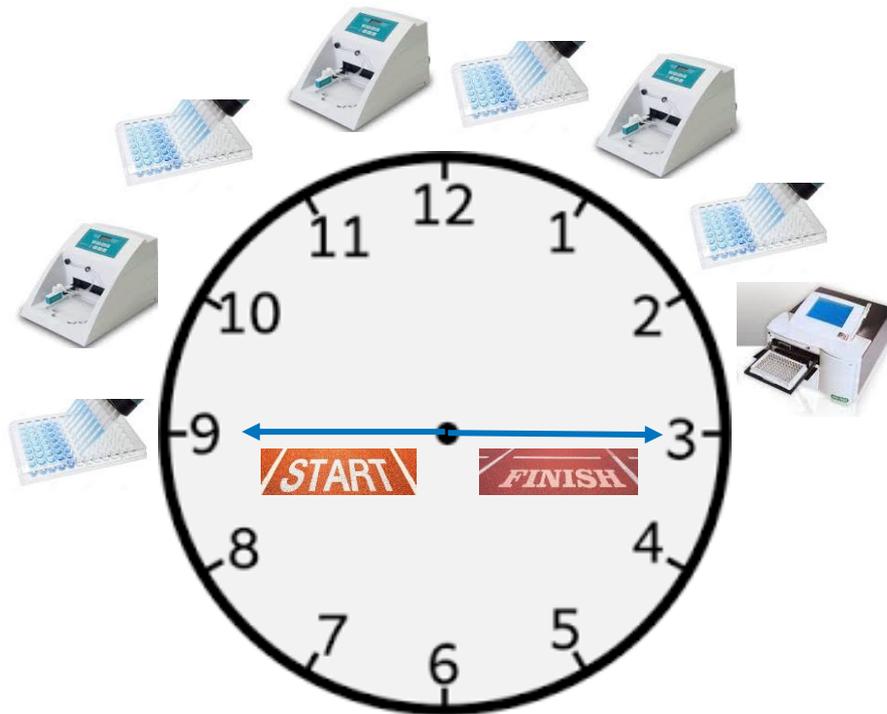
Click start



Results automatically

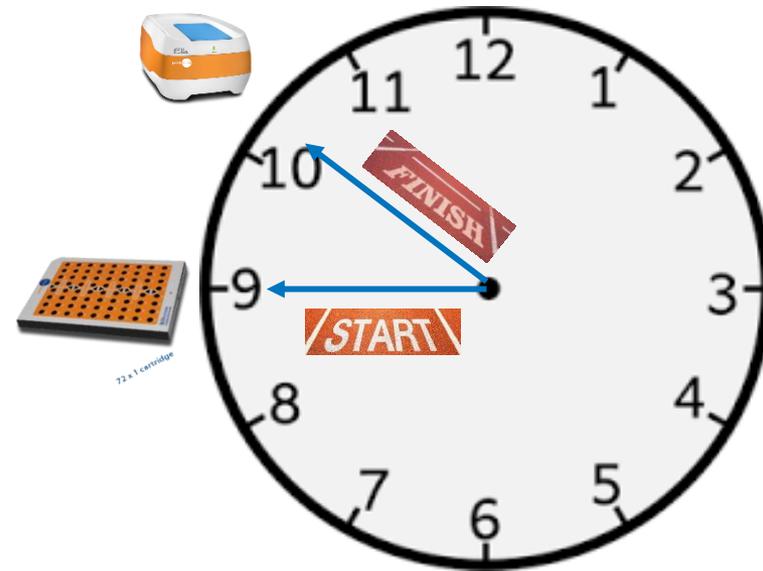
Simple Plex Removes the Tedium

Traditional ELISA



- Traditional ELISA
 - Up to 8 separate steps
 - Each Step adds variability
 - May take up to 6 hours
 - Requires larger sample volumes

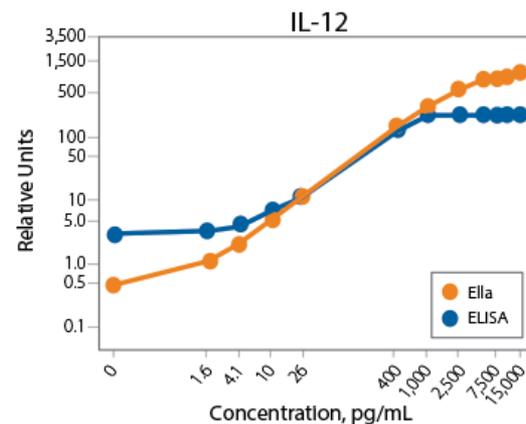
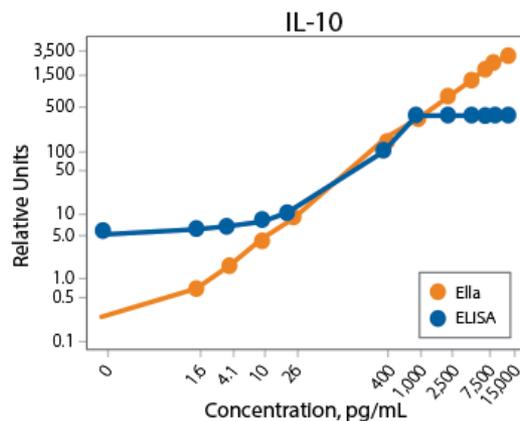
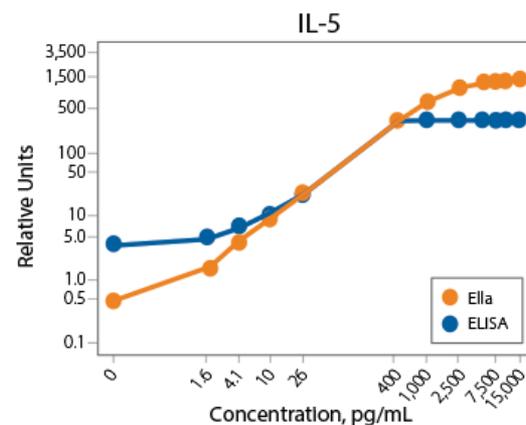
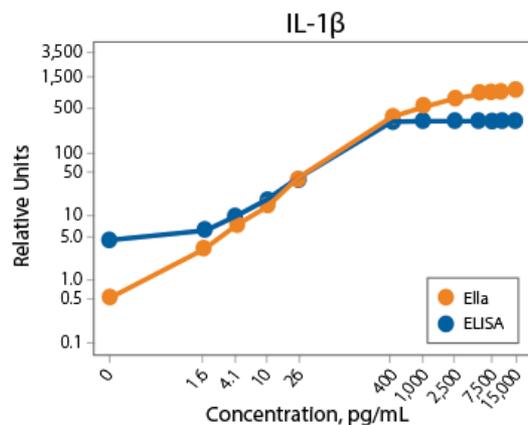
Simple Plex ELISA



- Simple Plex ELISA
 - Only 2 separate steps
 - Variability is low
 - Only takes up to 1.25 hours
 - Requires low sample volume

Produces More and Better Data

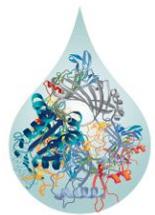
- Up to 4 targets per sample
- Wider dynamic range
- Lower detection limits



Four Growth Platforms



Biologics



Simple Plex



Simple Western



Single-Cell



Unique Combination and Opportunity

TECH

protein simple®



R&D systems™

biotechne®

Biotechnology Division

**Dave Eansor
Sr Vice President**

Our Business Today: Biotech

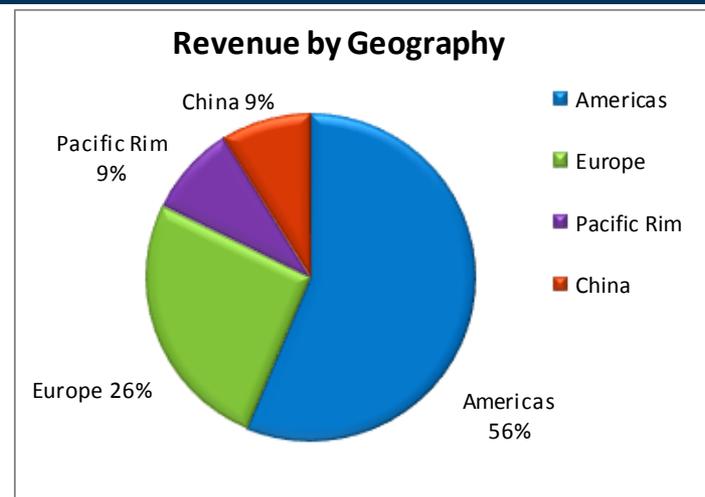
Business Overview

- Largest, most profitable Division of Bio-technne
- Highest Quality reagents for Life Science Research and Diagnostics
- World Leader in Proteins, ELISA and Immunoassay Reagent Content
- Mid/Upper Single Digit Growth
- Improving Operational Productivity

Key Growth Drivers

- New Reagent Development (Novel Content)
- Revenue Sharing (with OEM Customers)
- Value-Added Products (Assays, Cell Culture, GMP Applications, Diagnostic Assays)
- Digital Marketing, Search Engine Optimization
- Synergies with Captive Instrument Platforms
- Acquisitions (PrimeGene, Novus, ACD, Space)
- Geographic Expansion (esp. China, S. Korea)

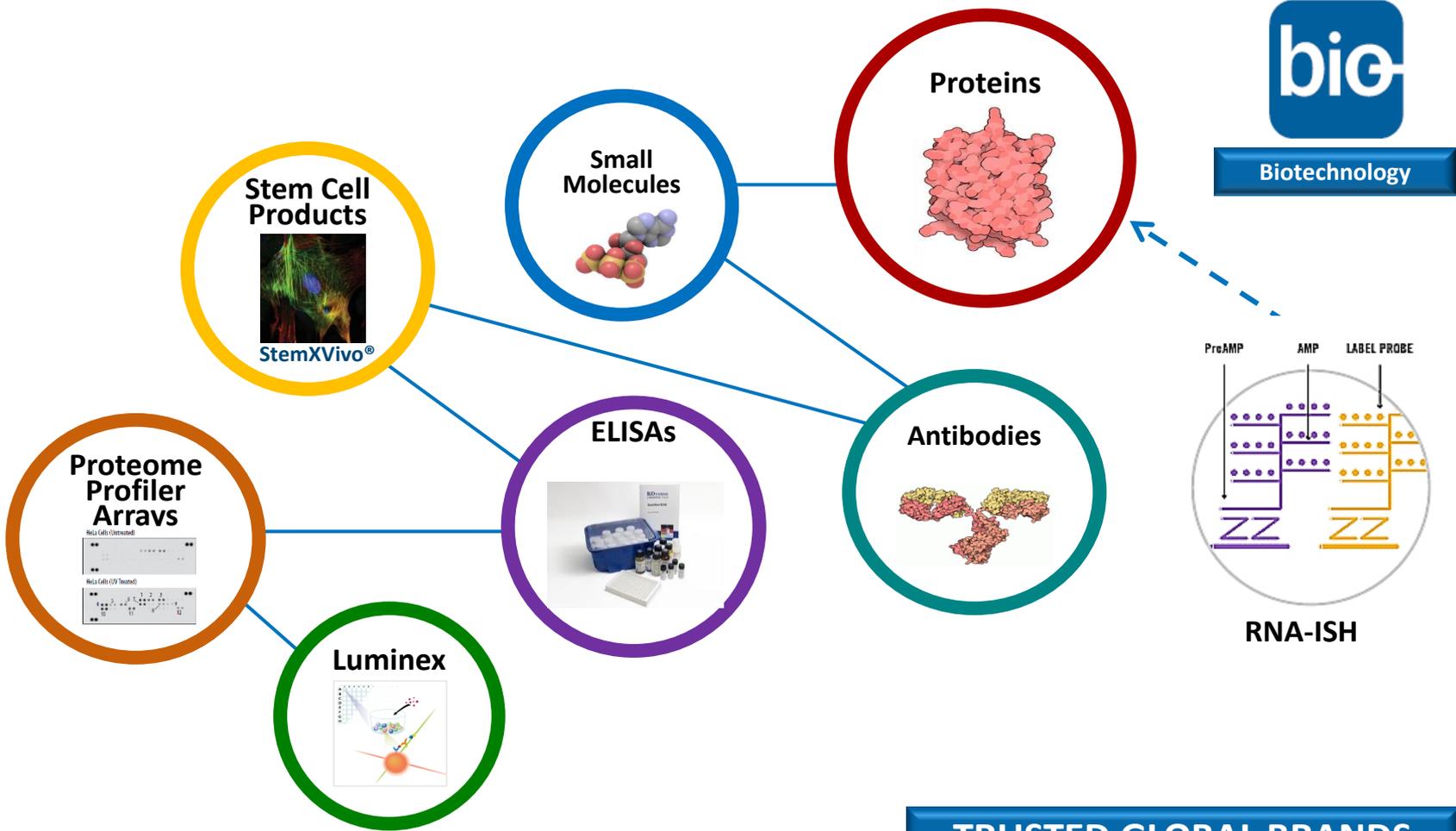
FY2016 Revenue: \$317.3M



Historical Financials

- Maintaining Operating Margins in mid 50s%
- Organic Growth Transition from Slightly Negative in FY13 to +6% in FY16
- Reflects GM Preservation, Efficiency Gains and Disciplined Expense Management

HIGHEST-QUALITY PRODUCT PORTFOLIO



TRUSTED GLOBAL BRANDS

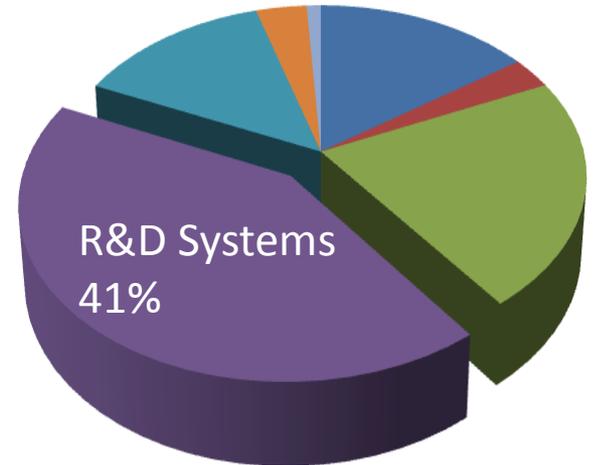




Proteins

2500+ Recombinant proteins
95% Developed and tested in-house
43 GMP-grade proteins
Custom protein development service

**1800 Papers Citing
Recombinant Proteins**



*R&D Systems: The
most widely used
proteins in the world*

High Value/High Growth Applications

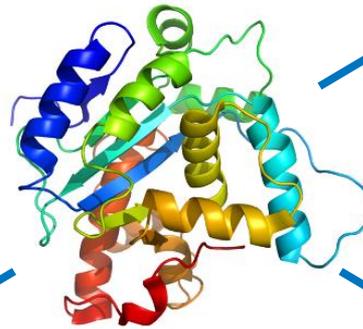
Specialty Media
Supplements



Bioprocessing
(Growth Factors for Lg scale Production)

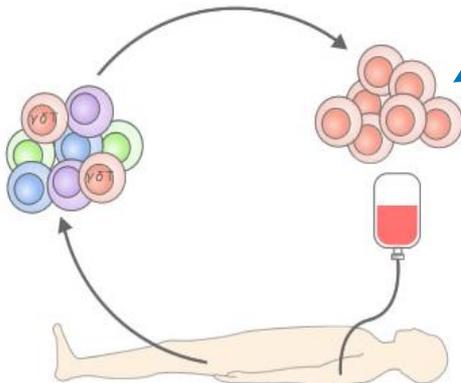


R&D SYSTEMS
a biotechne brand

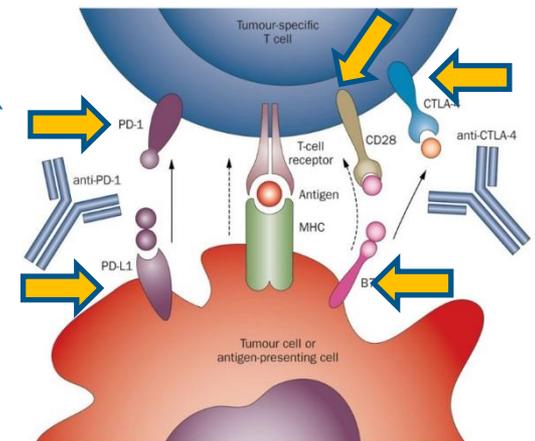


Proteins

Cell Therapy
(GMP Proteins)



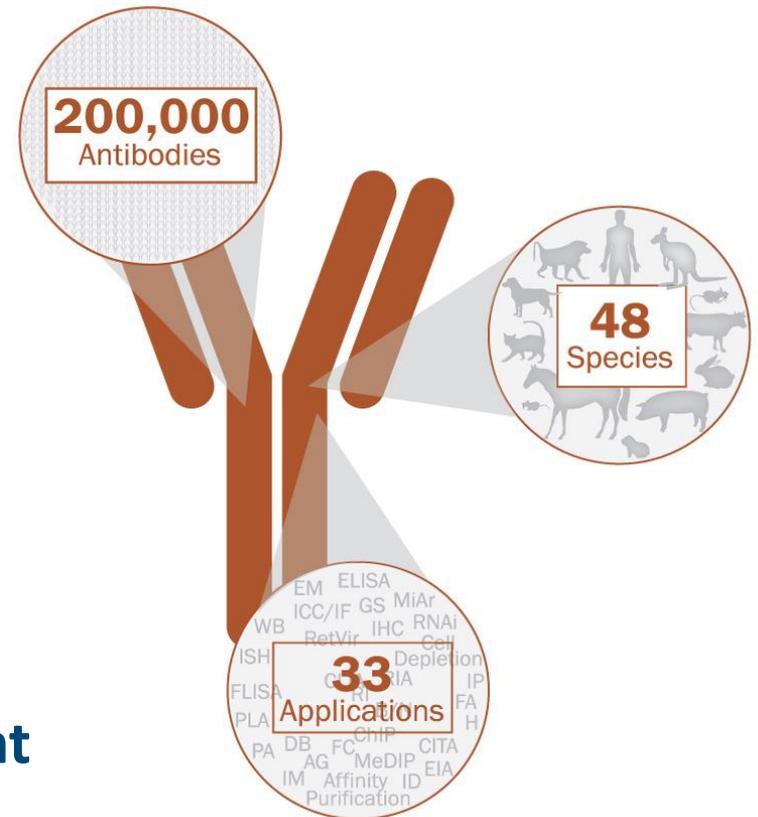
Cancer Immunotherapy Research
(Immune Checkpoint Proteins)





Antibodies

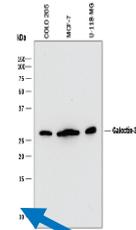
- In-house manufacturing & testing
- Polyclonal, monoclonal, recombinant
- Antibodies for Diagnostic assays
- Custom Antibody development services



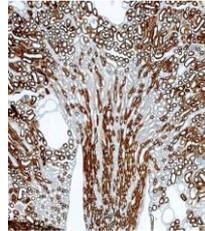
The Versatility of High Quality Antibodies

TECH

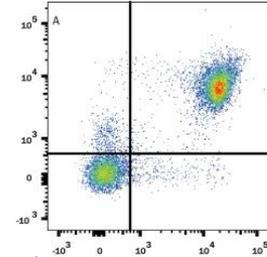
Western Blot and Simple Western



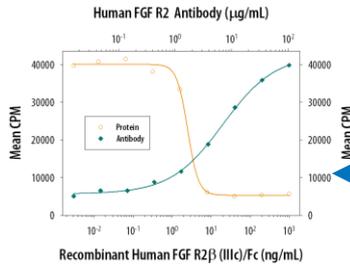
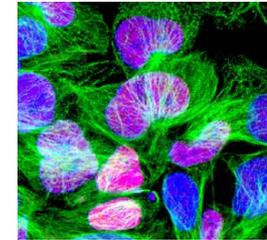
IHC



Flow Cytometry



Immunocytochemistry



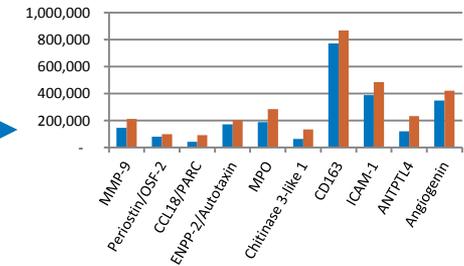
Blocking/Neutralization Assays



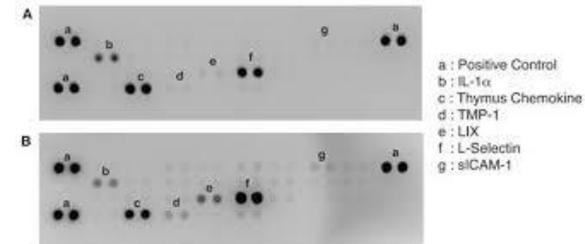
ELISA Assays



Ella



Luminex® Assays

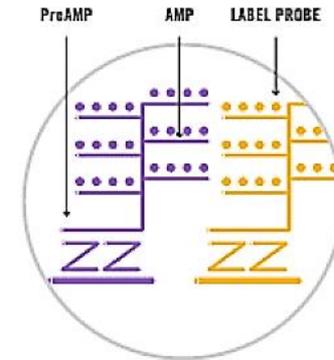


Arrays

Advanced Cell Diagnostics

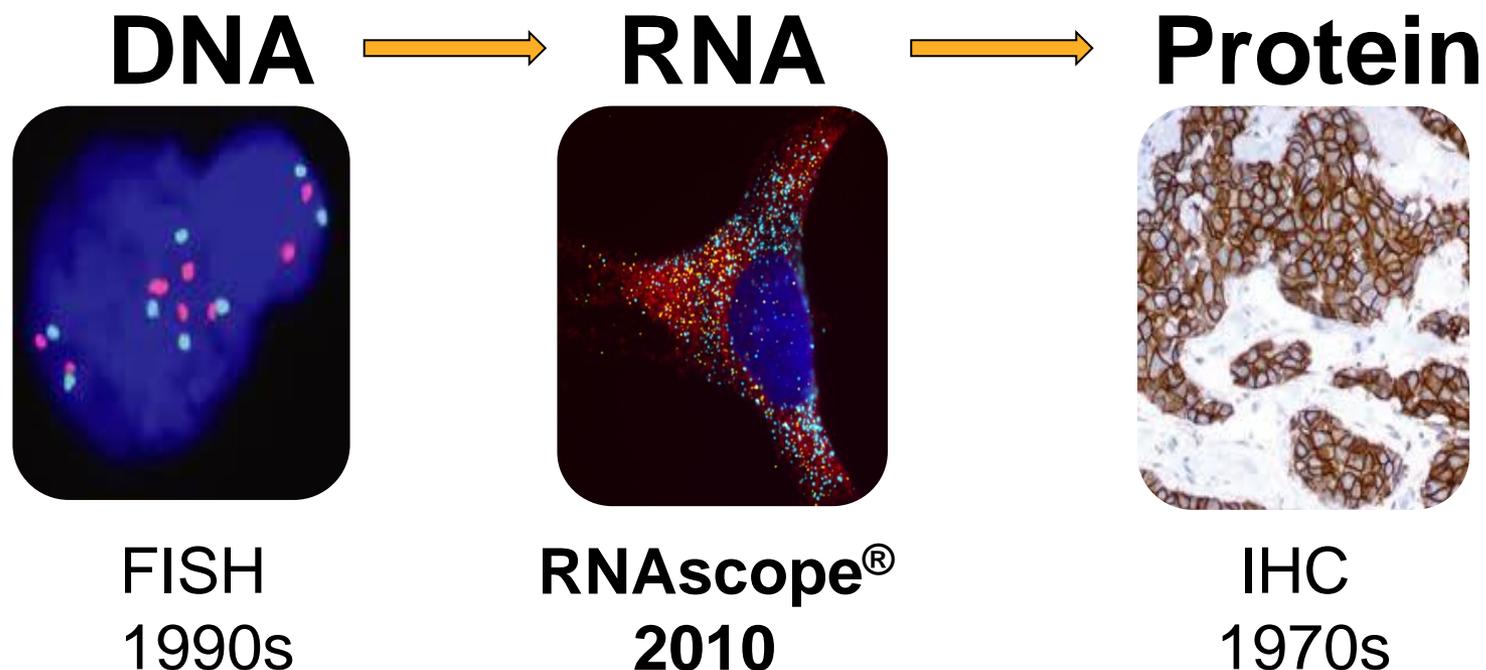


- Acquired in August 2016
- Newark, CA based company with ~120 employees
- Developed technology to improve detection of genes and gene transcripts using probes (in-situ hybridization) with initial focus on RNA transcript detection (RNAScope)
- Key improvements:
 - Binding specificity to target RNA
 - Better signal amplification (b-DNA)
 - Retention of morphological context
- Could be an aid to pathology practices where IHC reagents are deficient or lacking
- 9,000 current products, first commercialized in 2011, sold to both research and clinical customers



In Situ RNA Analysis- the Unmet Need

- IHC and FISH are important tools for research & tissue diagnostics
- No sensitive and robust technology for *in situ* RNA detection prior to...

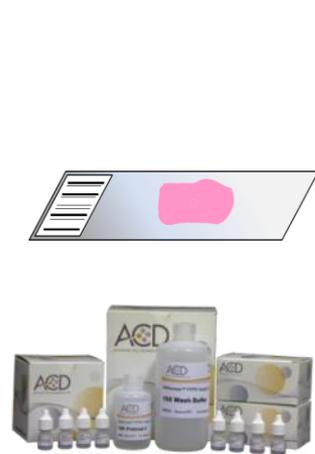


Automation for Research and Clinical Diagnostics

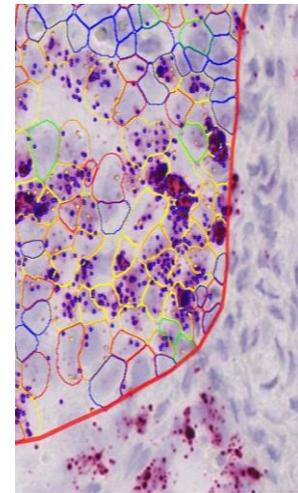
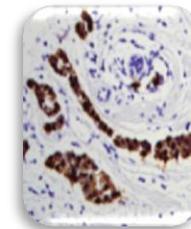
Automated Hybridization & Amplification

Visualize

Quantify



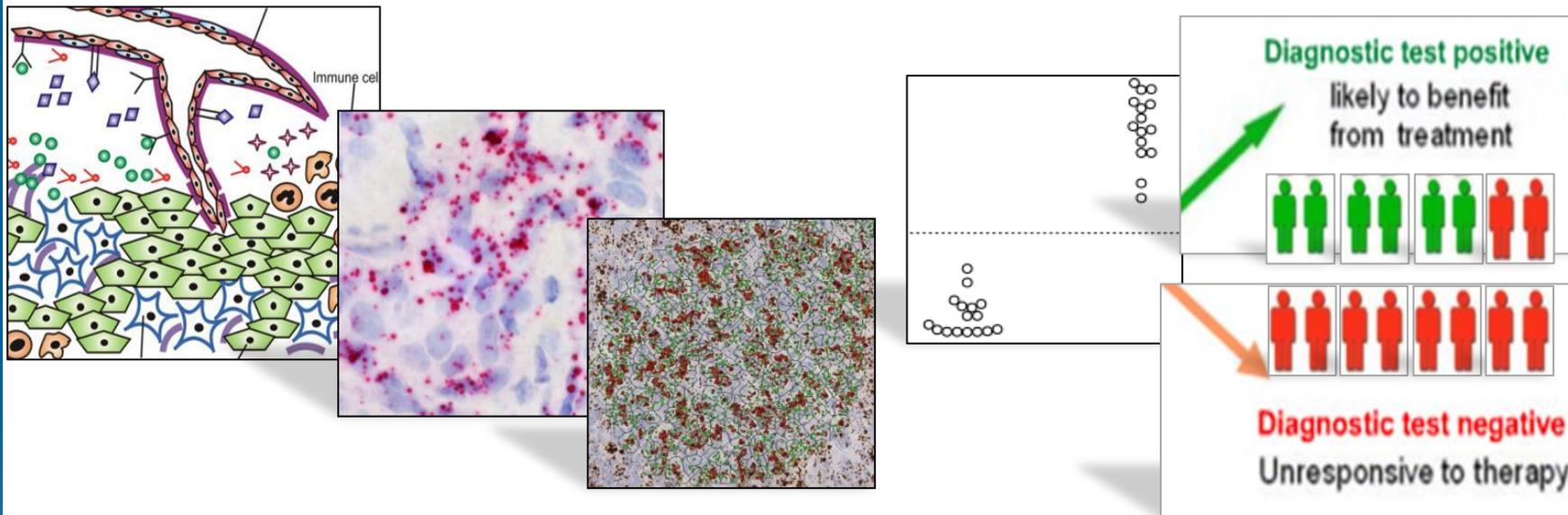
*RNAscope
Reagents*



VENTANA: Discovery Ultra, Discovery XT
LEICA: Leica Bond III and Rx

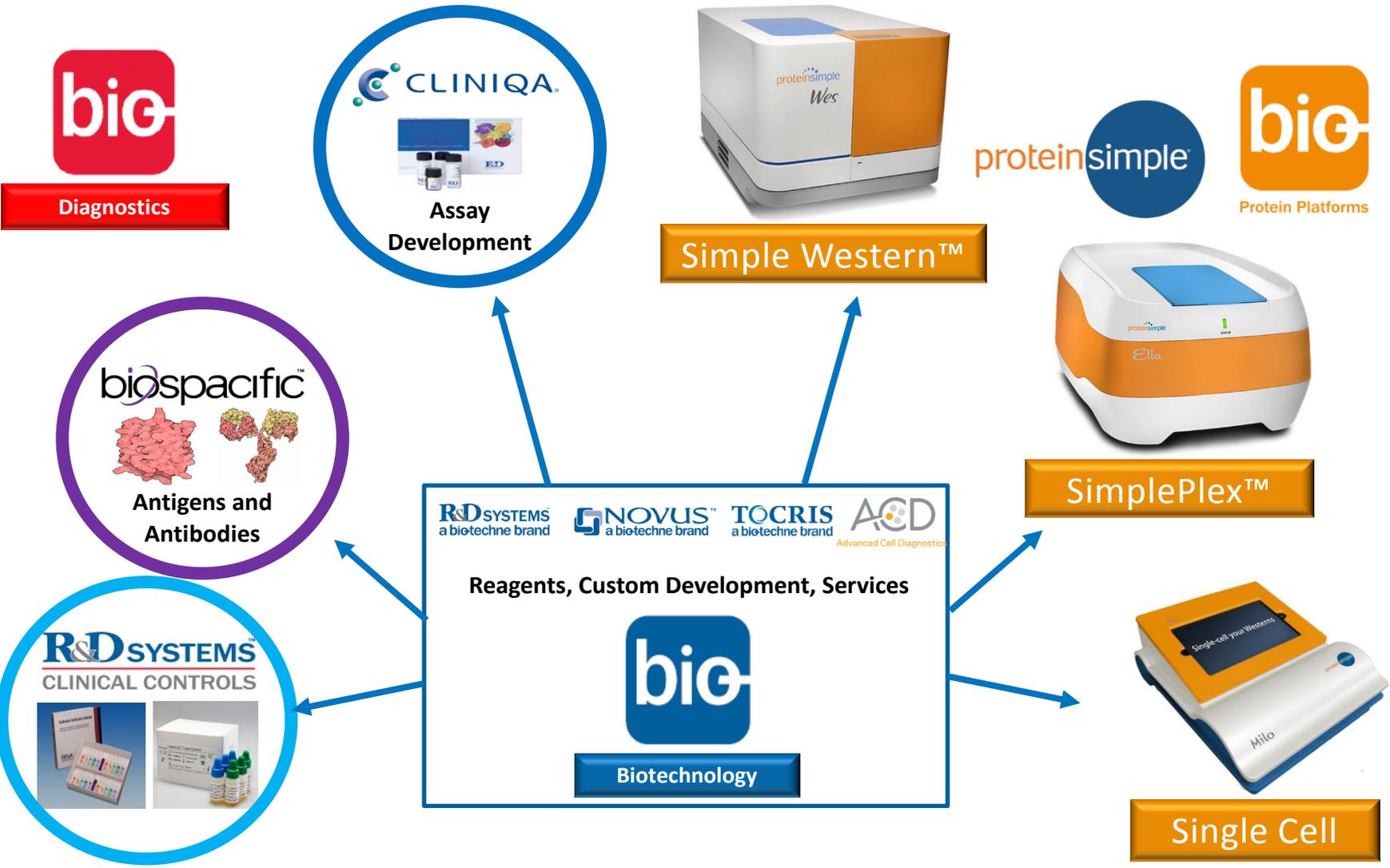
**Commercial Launch of RNAscope ASRs on Leica's Bond III Clinical Platform in late 2016*

RNAscope Biomarker Assays and CDx

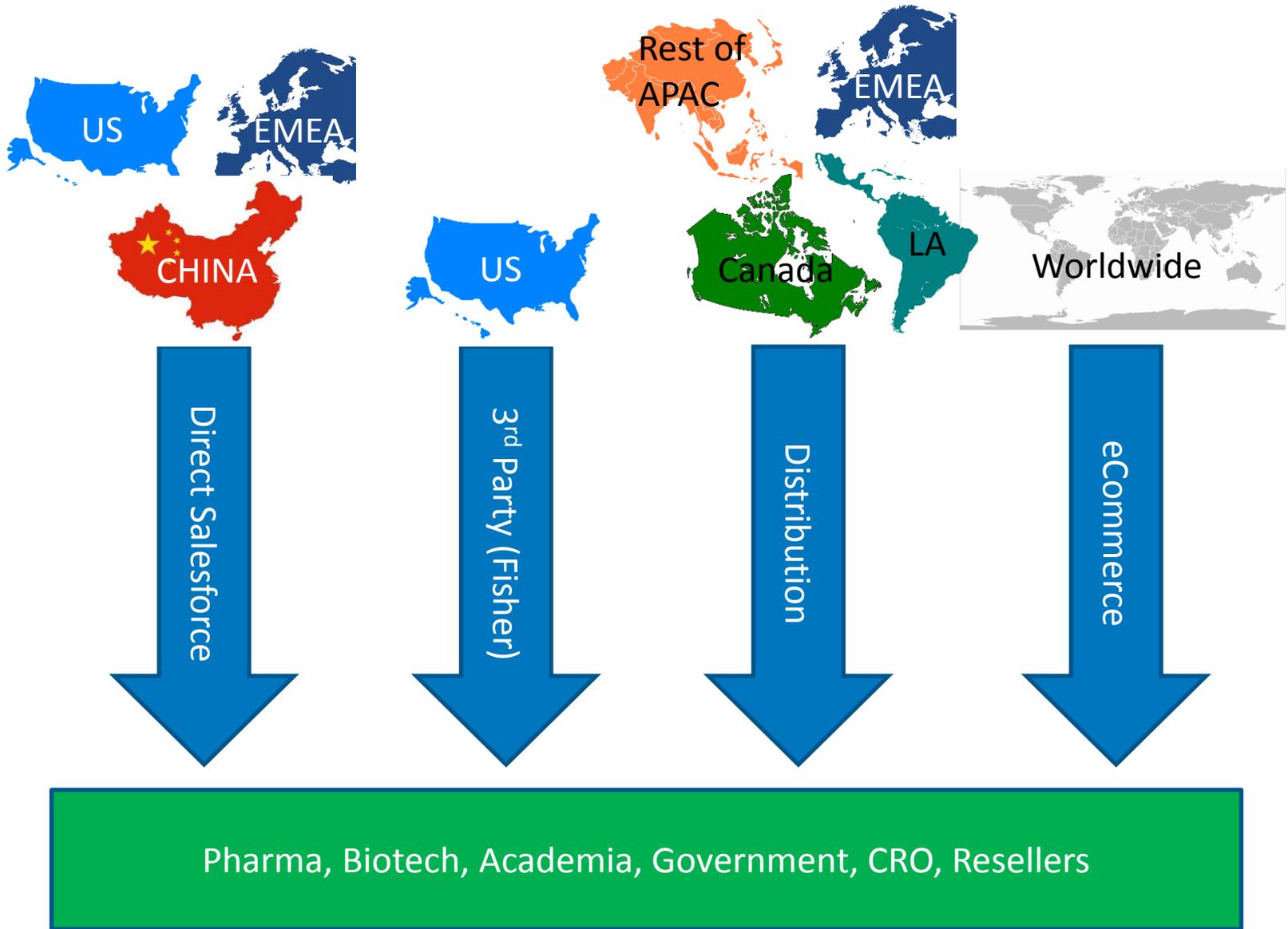


Example: Merrimack Pharmaceuticals, Inc. is using ACD's RNAscope technology to select patients for its Phase 2 ... clinical trial of its product candidate MM-121. **Merrimack** will utilize RNAscope to identify heregulin positive patients, with locally advanced or metastatic non-small cell lung cancer...

Synergies between Divisions



Biotech Channels to Market



Best-in-class Websites & Search Engine Optimization

TECH

.rndsystems.com/pathways/apoptosis-signaling-pathway

biotechne R&D SYSTEMS NOVUS BIOLOGICALS TOCRIS proteinsimple bioaspacific CLINIQA RNA MEDICAL R&D SYSTEMS CLINICAL CONTROLS

sign in or register Quick Order Items in Cart (0) United States

R&D SYSTEMS a biotechne brand

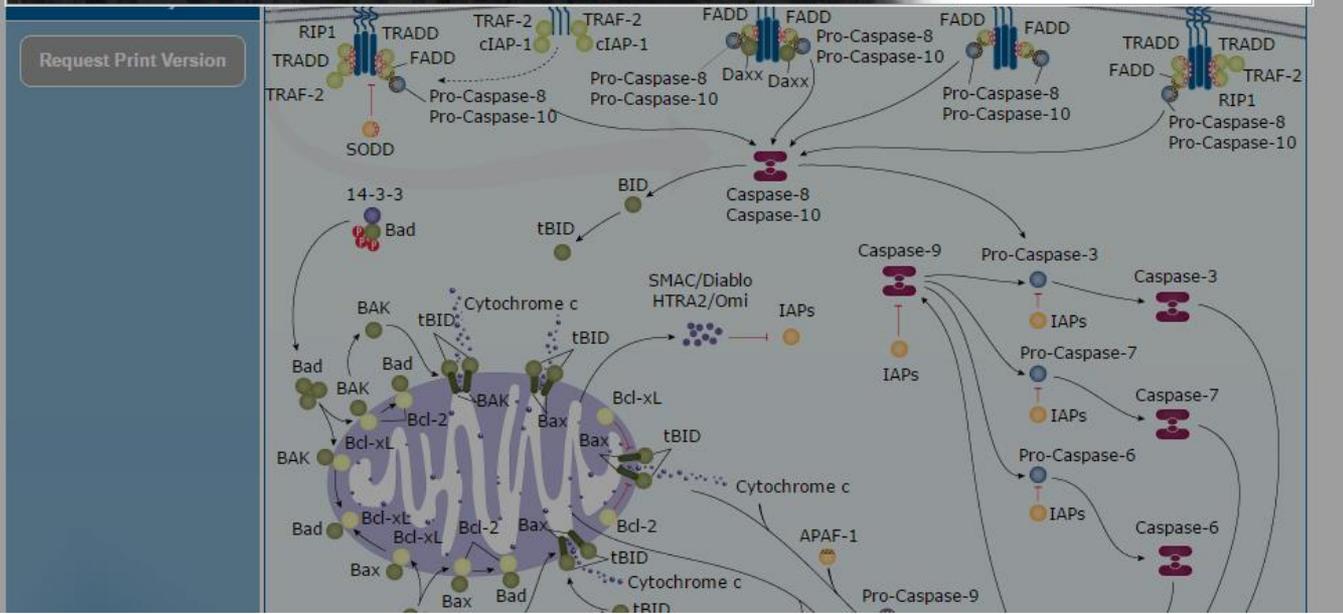
Search keyword, molecule name, target, catalog number, or product type

- PRODUCTS
- SERVICES
- PATHWAYS
- RESOURCES
- R&D SYSTEMS QUALITY
- ABOUT US



Experts in Reagent Quality

- Quality Philosophy
- People
- Place
- Performance
- Product Development
- Customer Satisfaction
- The R&D Systems Quality Advantage
- Documents, Certifications, & FAQs



Deep, Relevant, Contextual Scientific Content

Datasheet

Reviews & Publications

Protocols & FAQs

Support Products

Research Tools

Bioinformatics Tool for HIF-1 alpha

Discover related pathways, diseases and genes to HIF-1 alpha. Need help? Read the [Bioinformatics Tool Guide](#) for instructions on using this tool.

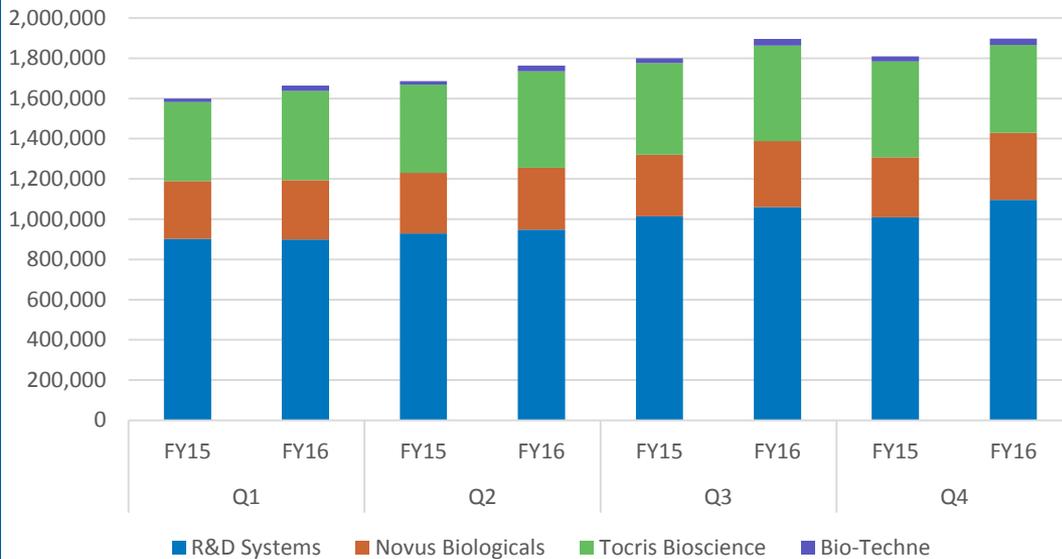
The screenshot displays a web-based bioinformatics tool interface. At the top, there are navigation tabs: Datasheet, Reviews & Publications, Protocols & FAQs, Support Products, and Research Tools. Below these is a header for the 'Bioinformatics Tool for HIF-1 alpha'. A brief instruction text follows. The main area features a network diagram with a central node labeled 'HIF1A'. Radiating from this center are several biological processes: CELL PROLIFERATION, PATHOGENESIS, RESPONSE TO HYPOXIA, CELL DIFFERENTIAL..., CELL DEATH, APOPTOTIC PROCESS, and ANGIOGENESIS. A 'Show Products' button is positioned above the central node. A toolbar at the top of the diagram area includes icons for home, back, forward, grid, delete, zoom in, zoom out, pan, refresh, and other utility functions. A 'Supporting Bibliography' popup window is overlaid on the right side of the diagram, titled 'HIF1A - PATHOGENESIS'. It contains a list of three scientific references.

Supporting Bibliography
HIF1A - PATHOGENESIS

1. 'Impairment of Angiogenic Sphingosine Kinase-1/Sphingosine-1-Phosphate Receptors Pathway in Preeclampsia.' *PLoS One*, Jun, 2016, vol. 11, pp. e0157221, Pubmed: 27284992
2. 'The Endothelial Prolyl-4-Hydroxylase Domain 2/Hypoxia-Inducible Factor 2 Axis Regulates Pulmonary Artery Pressure in Mice.' *Mol Cell Biol*, May, 2016, vol. 36, pp. 1584-94, Pubmed: 26976644
3. 'An HRE-Binding Pv-Im Polyamide Impairs

Digital Marketing

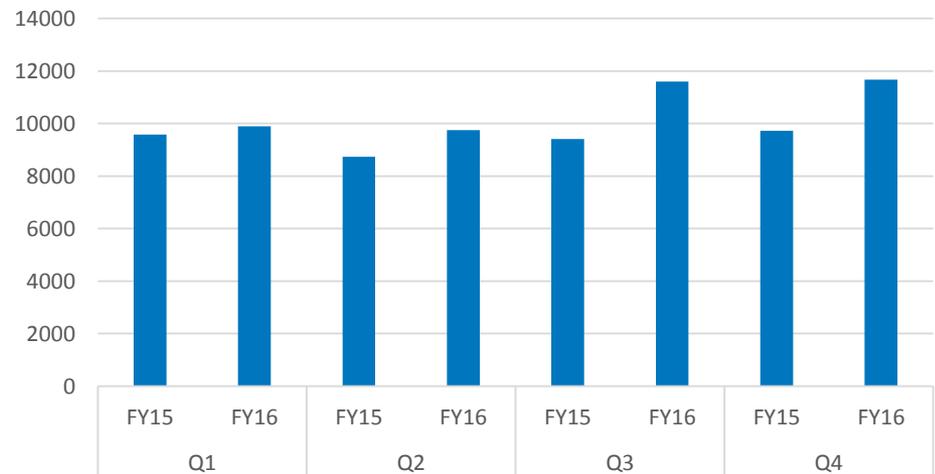
Bio-Techne Web Traffic



- Optimization of digital channels is driving >10% traffic growth YOY for newly developed Bio-Techne web properties

- Online orders have increased by 15% YOY as a result of optimizing digital channels for conversion and improving user experience across the sites

Online Orders



Traditional RUO Product Lines

High Growth Applications

Proteins & Small Molecules



Novel Content, Stem Cells, GMP Applications, Specialty Medias, Assay Standards

Antibodies/Antibody Pairs



Novel Content, New ELISAs, Diagnostics, Luminex (Multiplex Assays), SimplePlex, Wes, Arrays

Traditional ELISAs



Custom ELISA Development, Diagnostic ELISAs, SimplePlex Assays

ACD RNA (CISH) Assays



New IHC Assays, DNA Assays, Splice Variants, Mutations, Diagnostics

Bulk, OEM Supplier



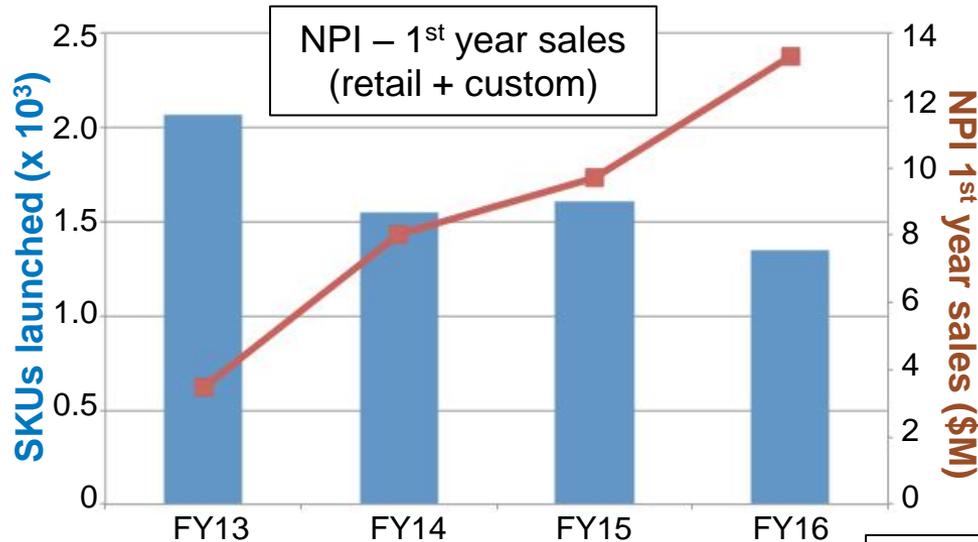
Value Added Assay Development & Content Provider, Premium Pricing & Royalties

Roadmaps to Products and Technologies

**J. Fernando Bazan
Chief Technology Officer**

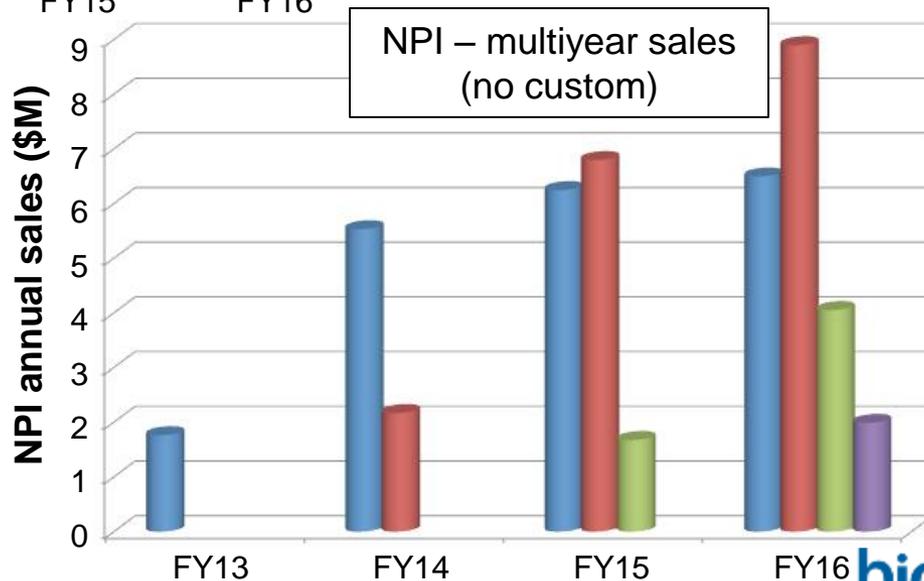
Our Core Products Vitality

Our extensive portfolio of reagent products is unrivaled, and continually strives to capture *new* proteins, antibodies, small molecules and assays, that drive discovery in life science and clinical research



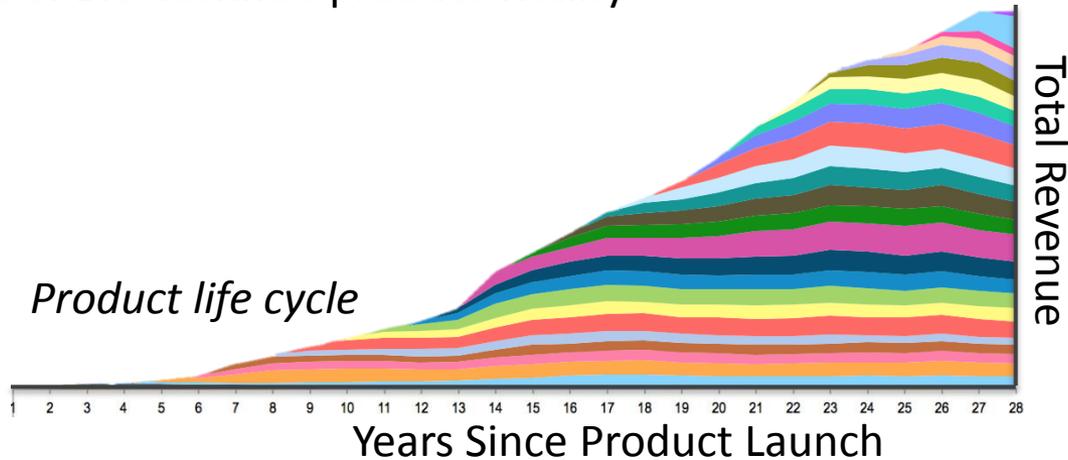
Our New Product Introductions (NPIs) are higher impact, and better tailored to market needs

Product vitality remains remarkably consistent

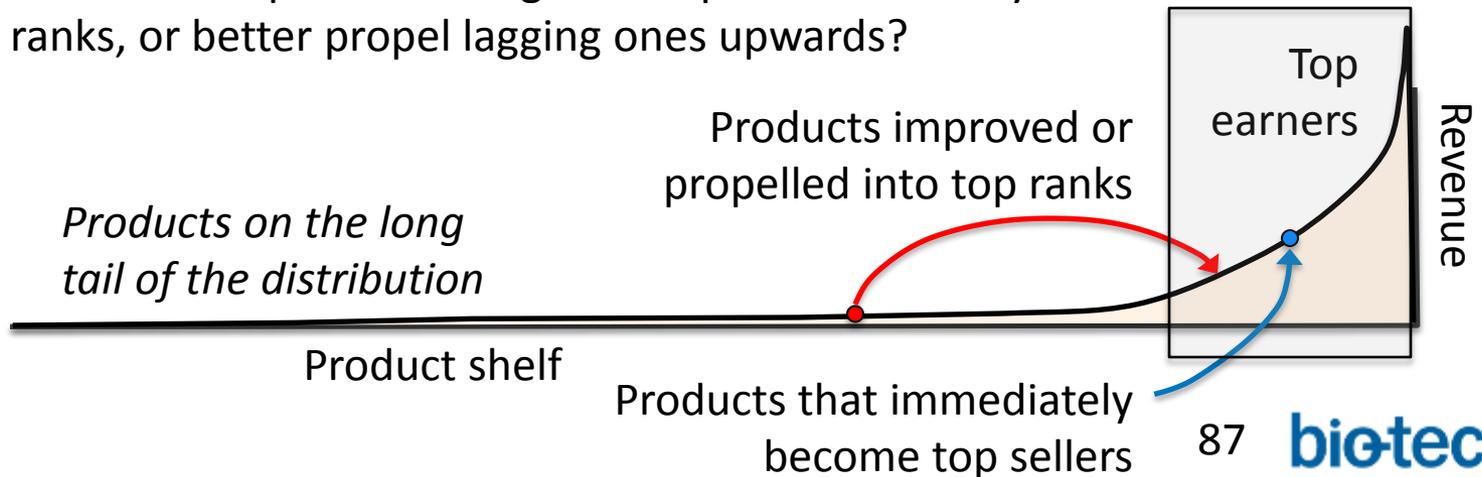


Product Vitality and the Role of Innovation

- This iconic picture of long-term product sales shows how they typically ascend from their (NPI) introduction to reach a high sustained level, and this is the nature of Bio-Techne's product vitality



- Our deep product shelf is a remarkable resource that reaches into every life science field, and that we continuously grow and refresh
- How can we improve seeding of new products directly into the top ranks, or better propel lagging ones upwards?



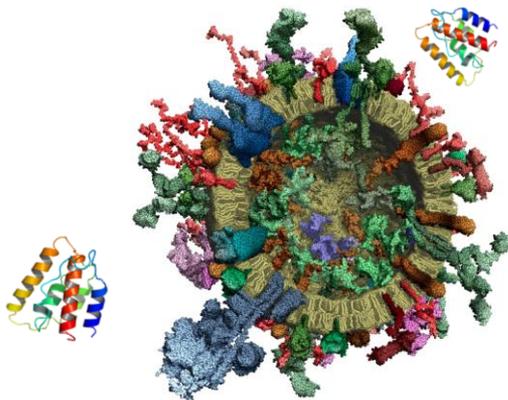
Product Discovery Challenges

- We are refining the way we choose and develop new product candidates—target proteins, specific antibodies and sensitive assays—to not only rely on characterized molecules from publications..

because papers in journals capture past work, & don't necessarily reflect current research or market needs



- See the 'dark proteome' as a target of opportunity, and source of new molecules with intriguing biology to uncover, IP to capture, papers, collaborations, etc.
- New emphasis on molecular systems—biologically relevant families, pathways and networks—over one-off targets

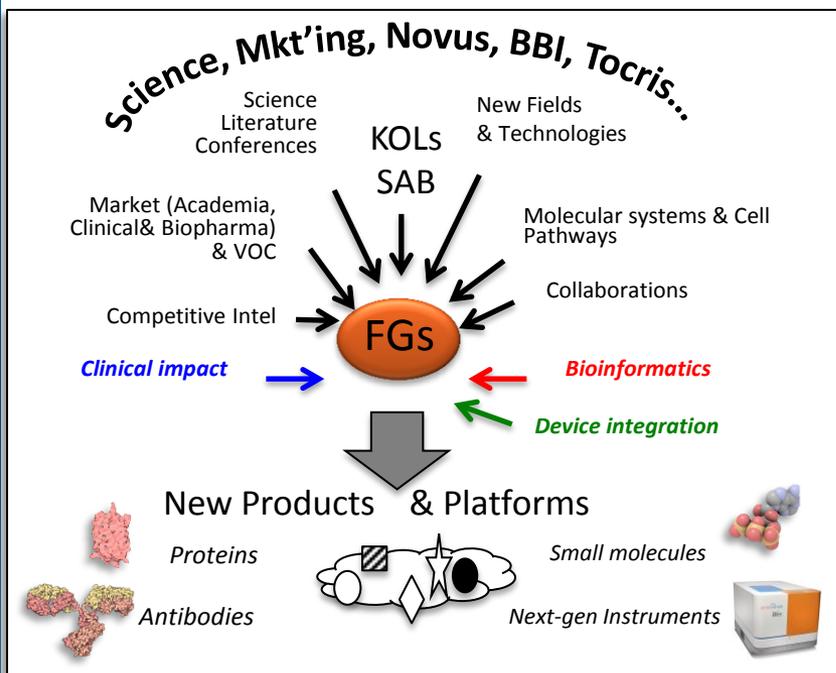


- Focus on the extracellular proteome
- Get closer to pre-publication, cutting-edge research, & participate in the discovery process
- Shift our stance from a reactive reagent provider, to a catalytic, impactful player in science

Focus Group Strategies

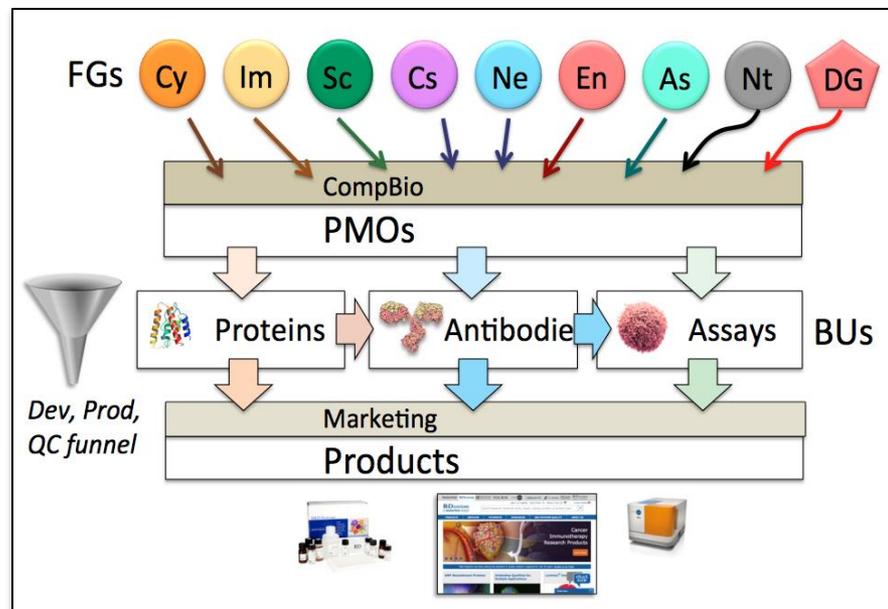
FGs are cross-functional teams of scientists, marketing specialists and product managers, tasked with mapping new strategies and products we drive forward, capture emerging trends, VOC, trigger seminars, and interface with our KOL network

- Integrate data from a number of sources, to define and prioritize new systems or groupings of product candidates



- *FGs provide a dynamic, collaborative engine for innovative product discovery*

- FG roadmaps cover areas like cancer signaling, stem cells, cytokines, immunology, neuroscience, enzymes, New Technology, and the new Discovery Group

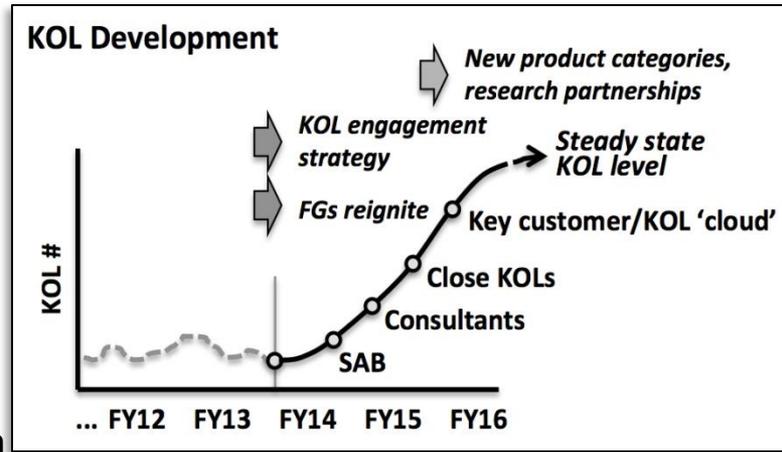
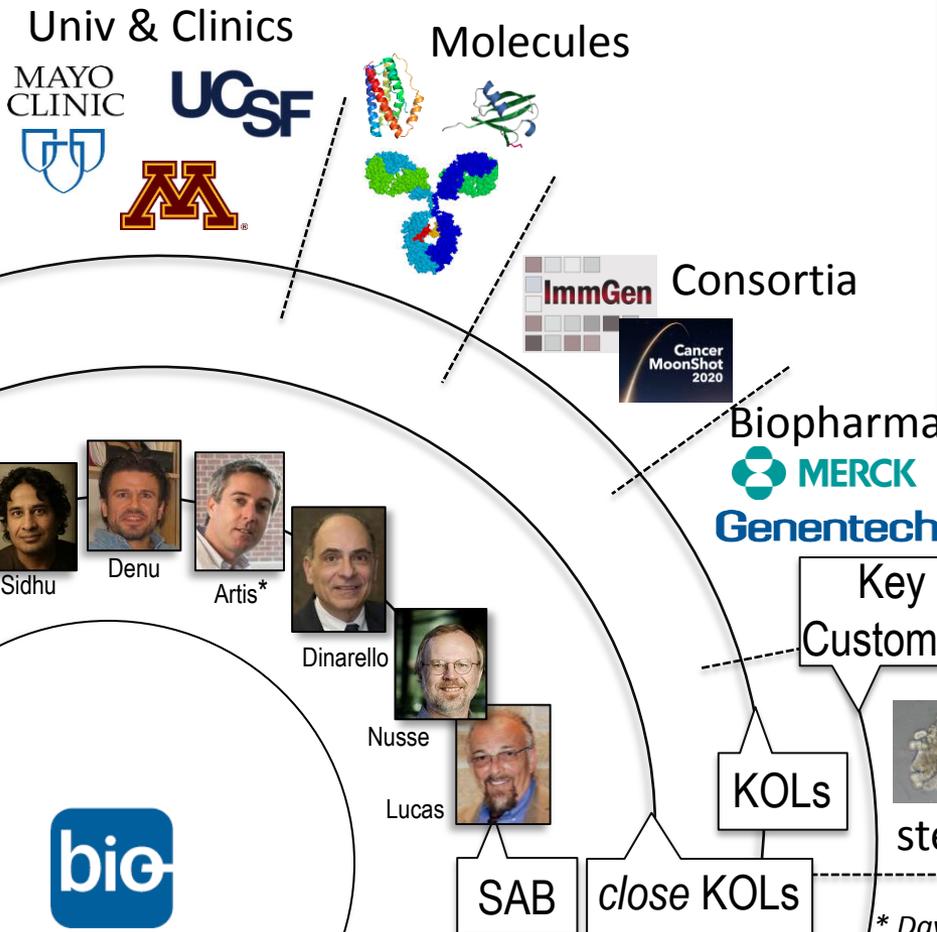


- Aligned to Business Units **biotechne**

Key Opinion Leaders Strategies

KOLs can be organized as a dynamic 'constellation' from our inner ring of closest Scientific Advisory Board (SAB) members, to a bench of close KOLs and consultants, to a larger outer set of reliable KOLs and top customers. We can organize the KOLs by discipline, institution, molecular interests, consortiums, biotech/biopharma, etc.

- KOLs are involved in substantive collaborations, new product ideas and testing, and plug into Discovery Group projects, perhaps point to custom services, investments



- This graphic nicely frames the growth & level of engagement with our diverse KOLs
- new SAB members are recruited from our close KOLs

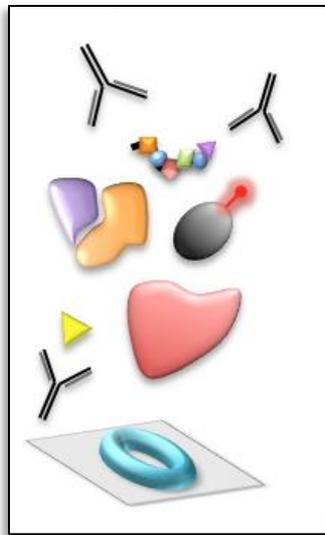


* David Masopust, new Immuno-SAB

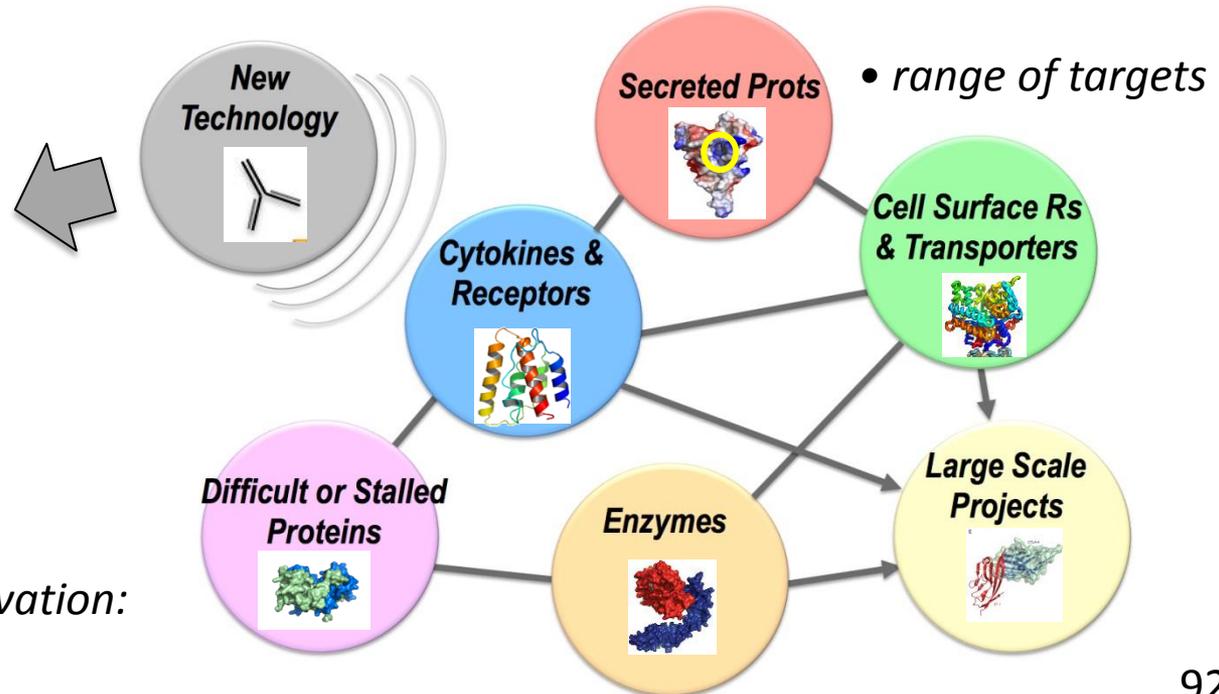
Discovery Initiatives

We are constantly refining our processes and improving our products, & driving innovation to address the more complex strategic needs of a diversified Bio-Techne, the changing nature of the reagent market, and new clinical and research needs

- A dedicated, agile Discovery Group tackles new and difficult targets for first-to-market opportunities, explores new technology and methods, is structurally rigorous and captures molecular interactions, heightened focus on drug targets, and has become a collaborative hub for the company and our KOLs
- Builds greater value products, competitively taps into new fields, integrates with Tocris & ProteinSimple, engages our customers at a higher level, and reaches adjacent markets, like diagnostics and personalized medicine

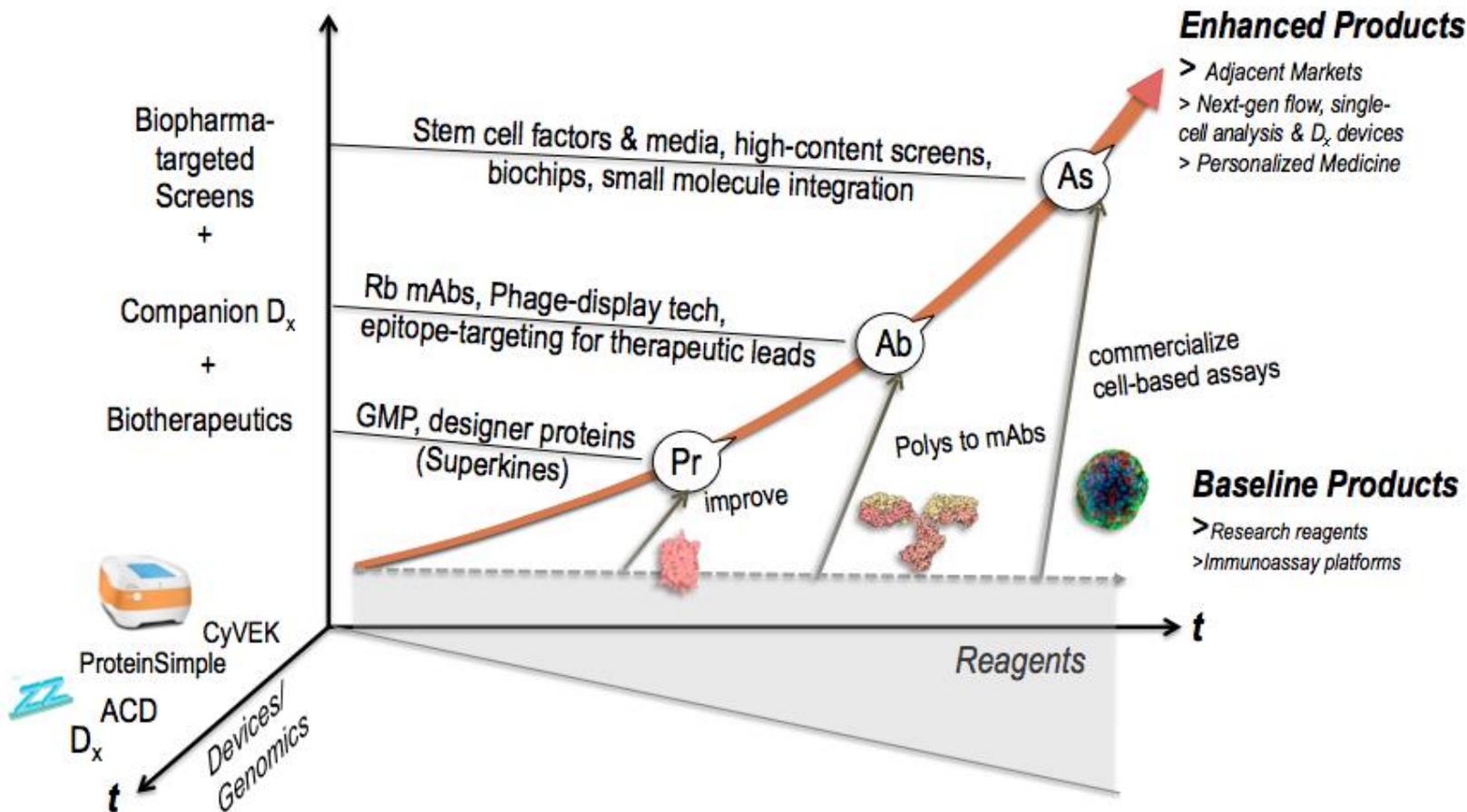


• *Antibody platform innovation: one size does not fit all*



Discovery & Innovation Drive Entrance into New Areas

- High-value reagents, together with next-gen devices & cutting-edge genomic tools, add new strategic dimensions to our products, & enlarge the addressable markets

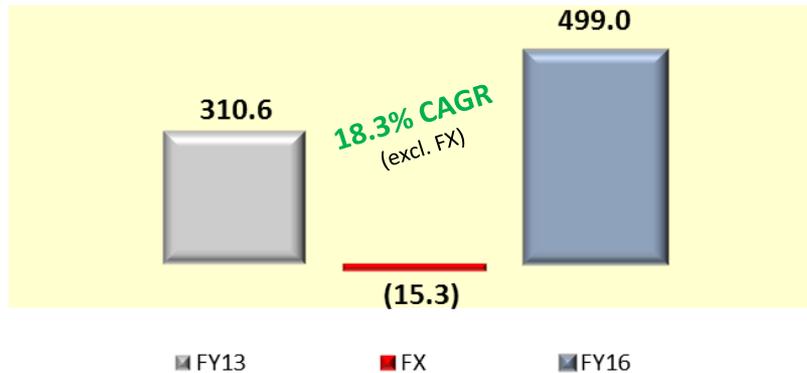


Turning Strategy into Financial Returns

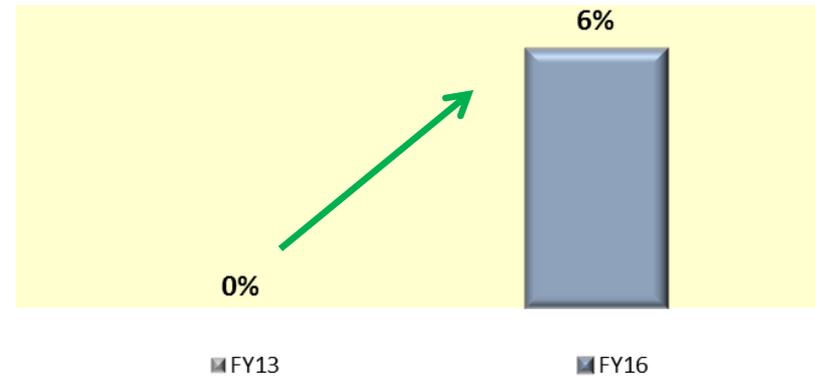
**Jim Hippel
Chief Financial Officer**

The results of our strategy so far...

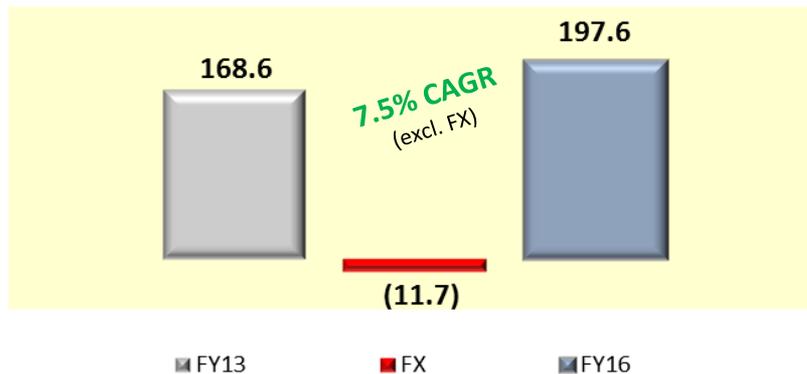
Revenue (\$mm)



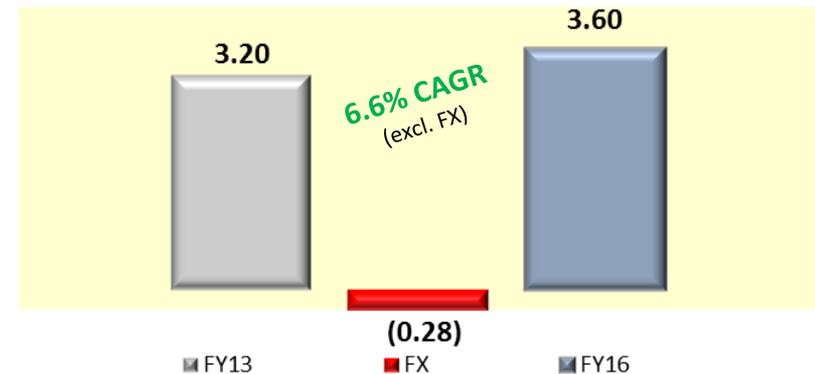
Organic Growth %



Adj. Operating Income (\$mm)



Adj. EPS (\$)

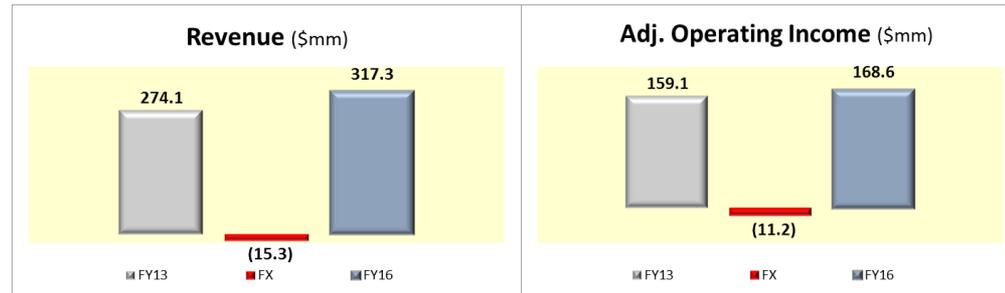


*On the way to \$1B Revenue with solid organic growth in our core,
profitability in line with organic growth,
and acquisitions positioned to accelerate both going forward*

Financial Performance by Segment

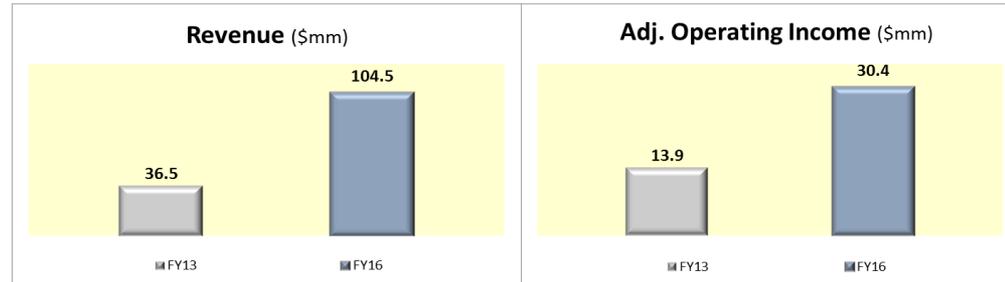
Biotechnology

- Organic growth improved from (1%) in FY13 to +5% in FY16.
- Adj. OM% decreased from 58% in FY13 to 53% in FY16 mostly due to the impact of FX and Novus acquisition.



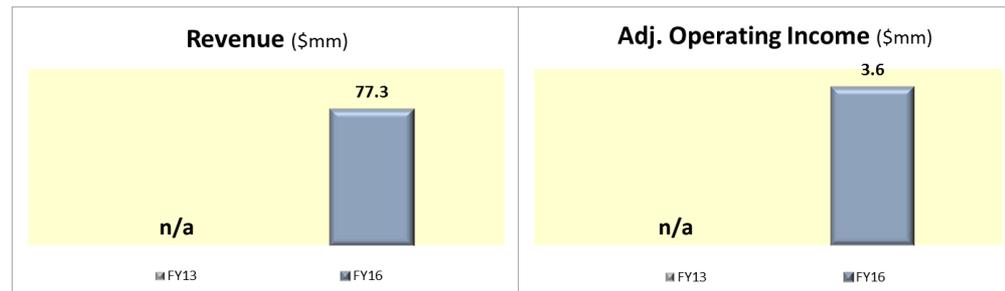
Diagnostics (formally Clinical Controls)

- Significant increase in Revenue due to Bionostics and Cliniqa acquisitions.
- Acquisitions contributed significantly to the income growth, although at a lower margin profile.



Protein Platforms

- Segment was created with the acquisitions of ProteinSimple, CyVek, and Zephyrus.
- Income will accelerate as these “start-ups” continue to ramp on revenue.



Bio-Techne has become a well diversified Life Science tools company, with a much improved growth trajectory from three years ago

The Impact of Our Acquisitions To-Date

BioTechnology

- PrimeGene China-for-China protein manufacturing, GMP capabilities in China.
- Novus Biologicals Extended breadth of antibody portfolio to over 200K SKUs; greatly improved web platform and digital commerce; enhanced marketing capabilities and creativity; bolstered leadership bench across the company.
- Space Expands direct sales force capabilities in Southern Europe.
- ACD Adjacent “picks-n-shovels” supplier for genomics market using in-situ hybridization; could be an aid to pathology practices where IHC reagents are deficient or lacking
- *FY16 Financials* Revenue ~ \$28mm (20%+ OG) adj. Op. Income ~ \$8mm

Diagnostics

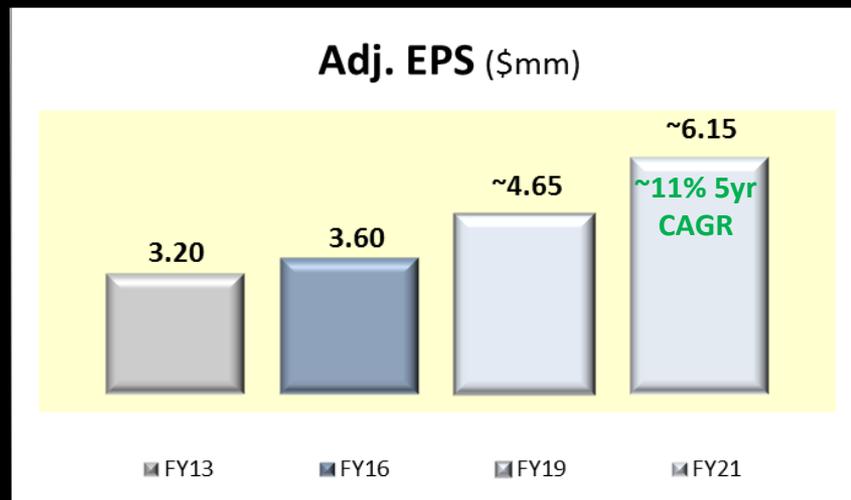
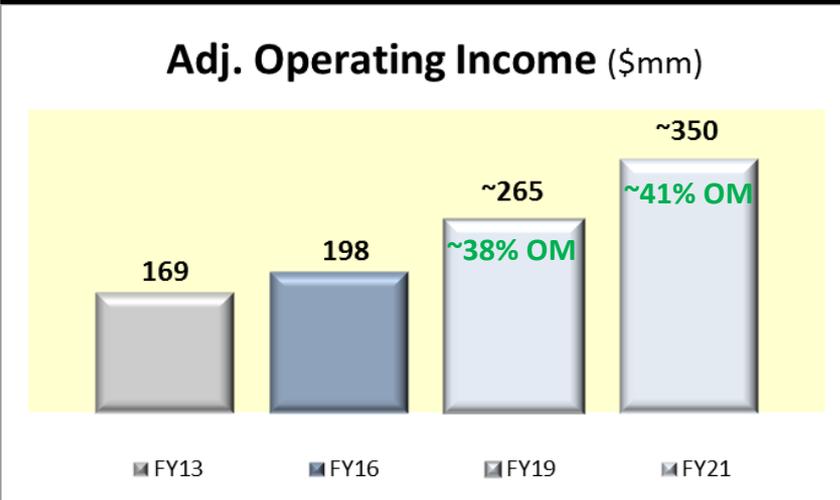
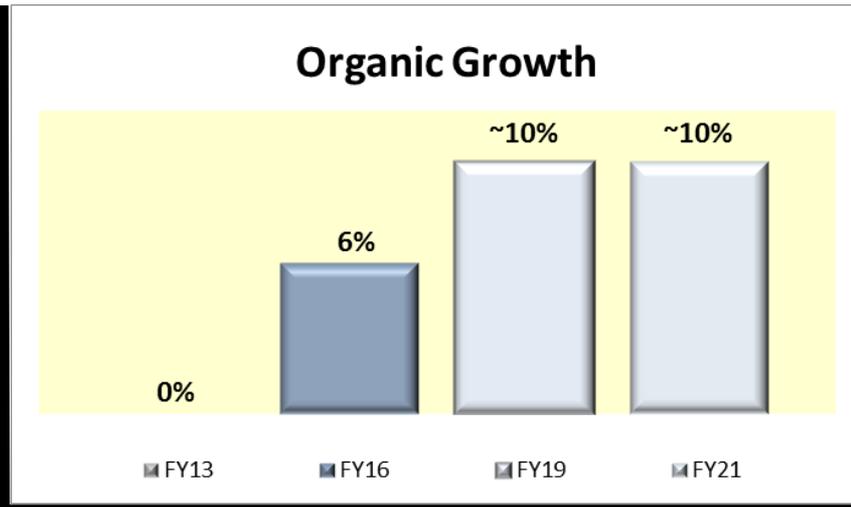
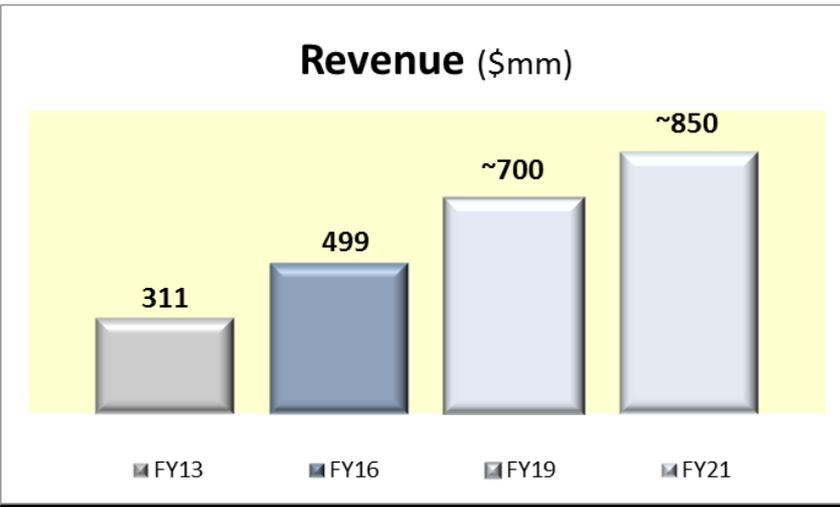
- Bionostics Expanded portfolio of blood chemistry-based controls to include glucose & gas
- Cliniaq Kit and reagent manufacturing for diagnostic assays, expanding our “picks-n-shovels” portfolio to better serve our diagnostic customers
- *FY16 Financials* Revenue ~ \$60mm (8% OG) adj. Op. Income ~ \$16mm

Protein Platforms

- ProteinSimple Instrument-based protein analysis tools that utilize our reagents; automation of Western Blot laboratory workflow; entrance into quality-control market for pharmaceutical mfg.
- CyVek Automated “super-ELISA” solution with potential diagnostic applications.
- Zephyrus Automated “single-cell” Western Blot analysis tool.
- *FY16 Financials* Revenue ~ \$77mm (20%+ OG) adj. Op. Income ~ \$4mm

Strategic additions that will bring financial strength

Potential Financial Returns on Current Portfolio



Our goal is to exit FY21 with both double-digit organic revenue growth and adjusted EPS growth rates

Key Assumptions by Segment

Biotechnology

- Continue to grow the “core” at mid-single digits
- Rapid growth in ACD as technology gains adoption in diagnostic pathology markets
- Protect/maintain “core” margins while greatly expanding ACD operating margins

Diagnostics

- Hematology Controls continue with mid-single digit growth
- Diagnostic kit manufacturing grows high-single digits with more POC applications
- Maintain solid margins with OEM customers

Protein Platforms

- Double-digit revenue CAGR with strong market adoption potential still ahead for Simple Western / Simple Plex platforms
- Expand margins by leveraging cost structure

With solid execution, the right portfolio to get to double digit top and bottom-line growth

What “gaps” do we still need to fill?



Opportunities

- Media
- Stem Cells
- Flow Cytometry
- PCR
- Single Cell
- Clinical Biomarkers
- Diagnostics
- Therapeutics
- China
- India
- South America
- Veterinary
- Cosmeceuticals

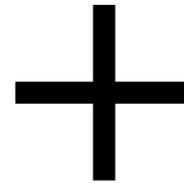
M&A will remain our #1 priority for capital allocation for the foreseeable future

What Does Our Acquisition Pipeline Look Like?



Always "working" ~ half a dozen at any given time

Key Criteria on Our Acquisition Filter



Actionable?



DEAL



Process, perseverance, and patience needed to be successful in M&A

How Much “Dry Powder” for More Acquisitions?



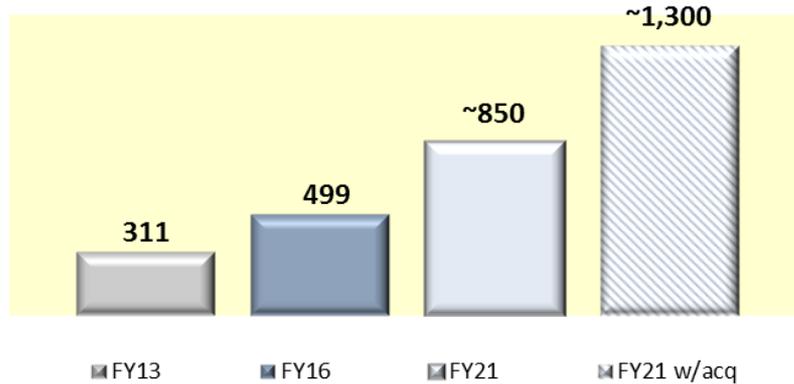
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Over the next five years

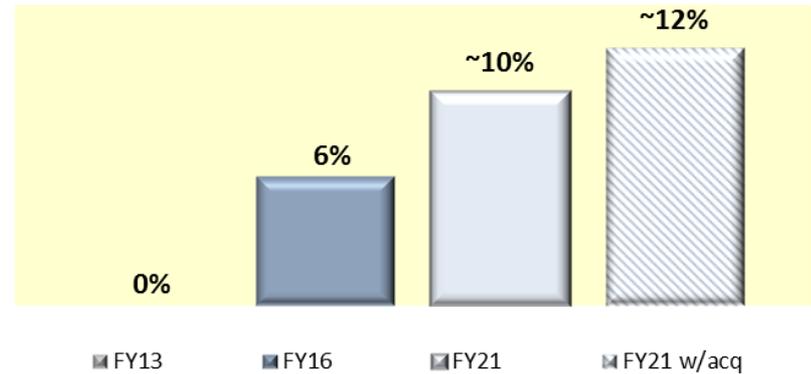
*Assumes maximize leverage of 3.5x EBITDA over next five years,
with free cash flow after paying dividend also allocated to acquisitions*

Bio-Techne in 5 Years if the “Stars Align”

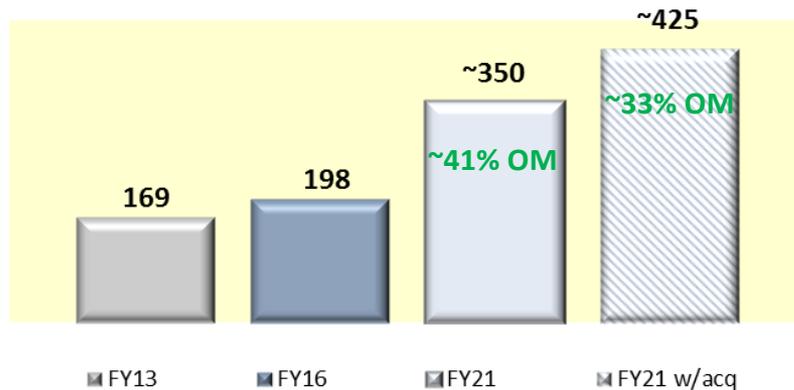
Revenue (\$mm)



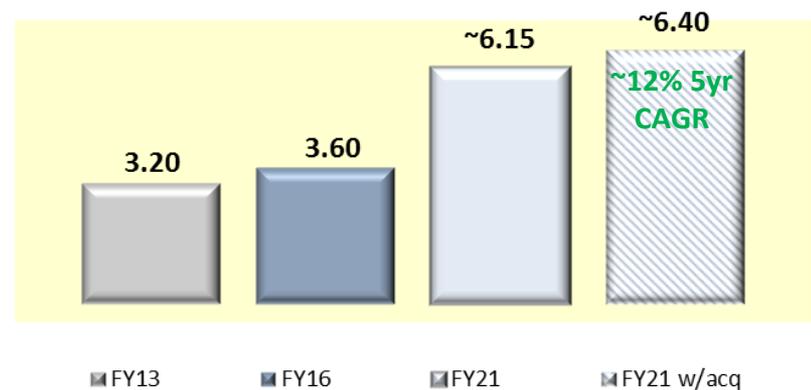
Organic Growth



Adj. Operating Income (\$mm)



Adj. EPS (\$mm)



Assuming we acquire targets with similar financial trajectories as past acquisitions, we should continue to increase our organic growth rate and contribution to the bottom-line

Q&A

Panel