



biotechne®

WHERE SCIENCE  
INTERSECTS  
INNOVATION™

Corporate Presentation  
November 2019

# BUSINESS OVERVIEW

PRESIDENT AND CEO  
**Chuck Kummeth**

HEADQUARTERS  
**Minneapolis, MN**

NUMBER OF EMPLOYEES  
**~2,235**

WORLDWIDE PRESENCE  
**35 Locations**

FY2019 REVENUES  
**\$714M**

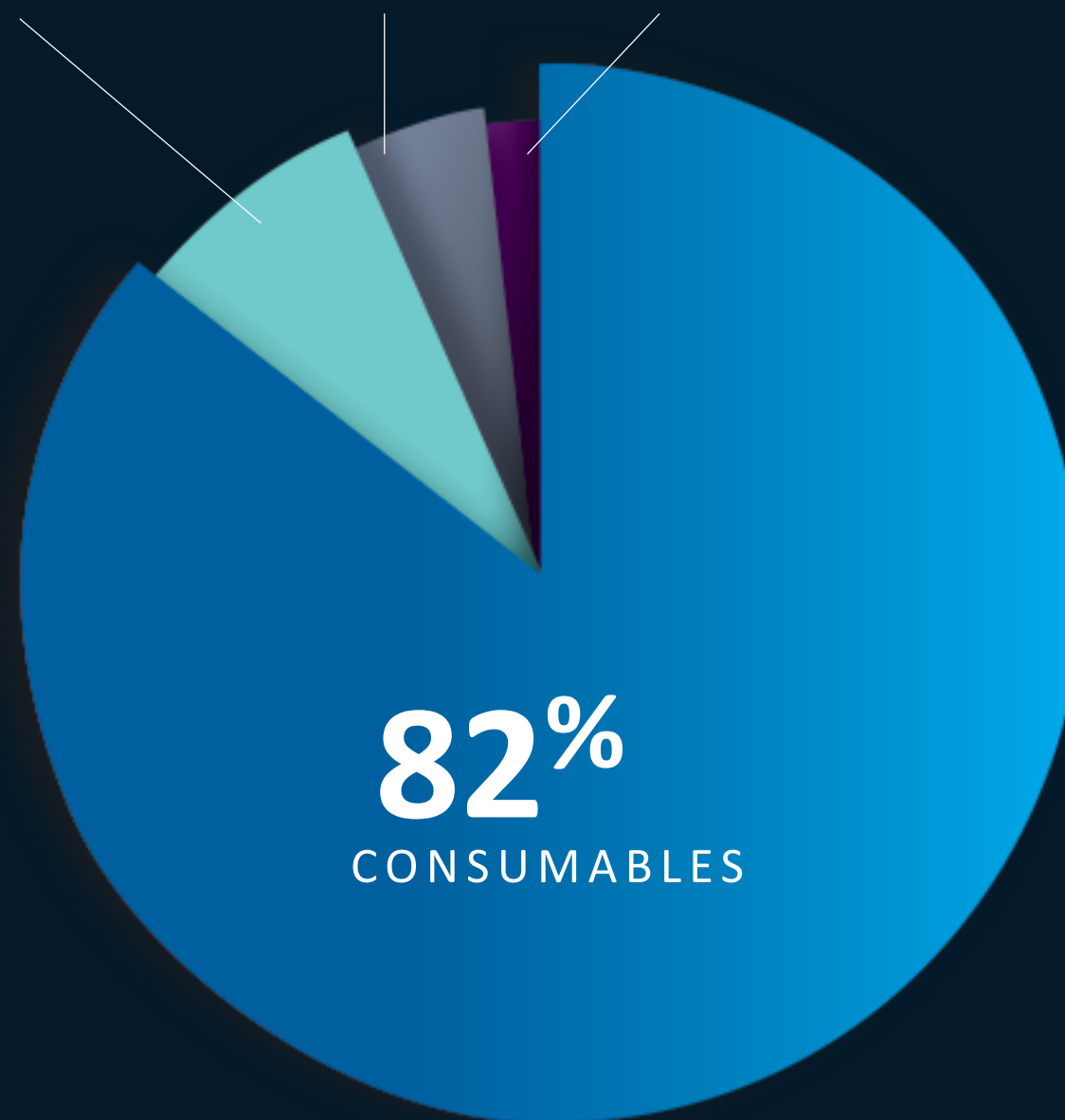
NASDAQ  
**TECH**

MARKET CAP  
**~\$8B**

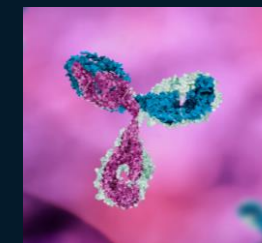
**10%**  
INSTRUMENTS

**5%**  
SERVICES

**3%**  
ROYALTIES



ANTIBODIES



PROTEINS



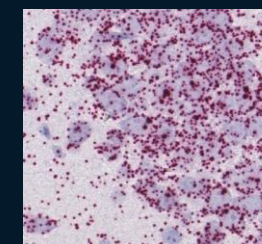
CLINICAL CONTROLS



IMMUNOASSAYS



TISSUE BIOPSY



LIQUID BIOPSY

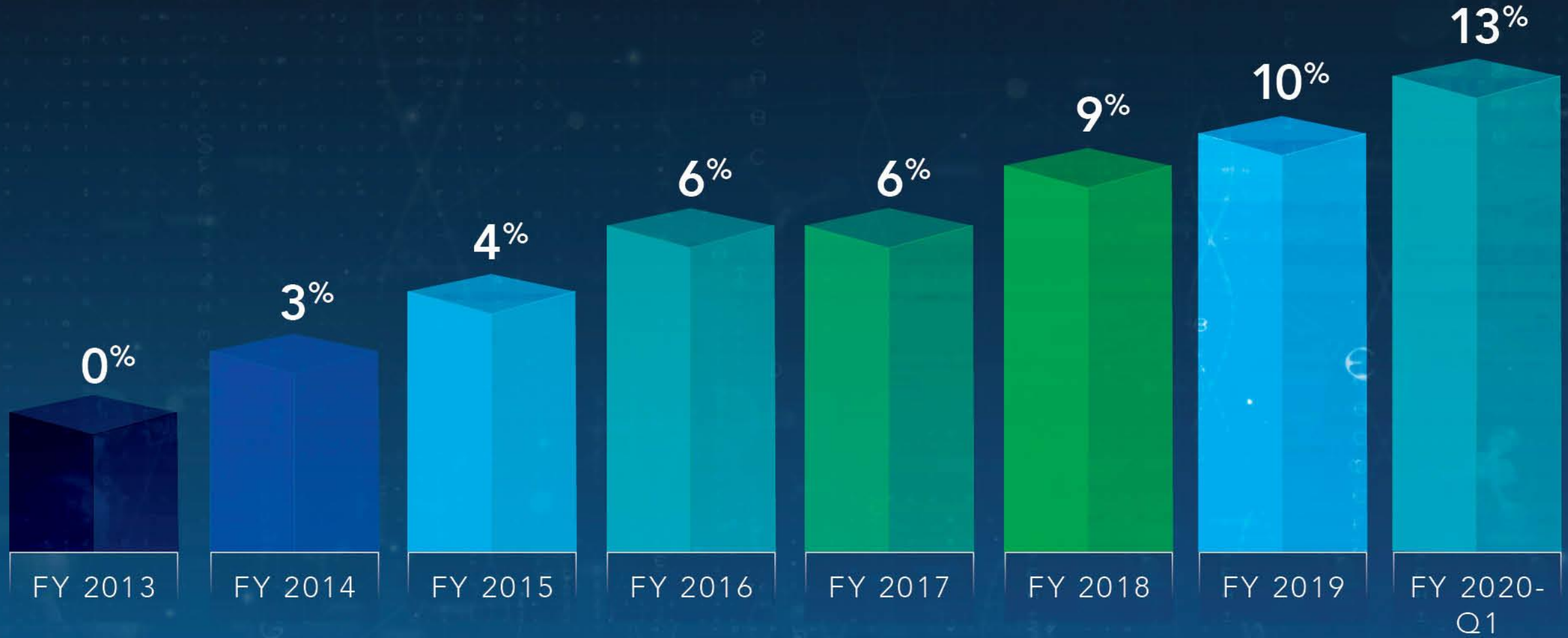


AUTOMATED PROTEIN ANALYSIS



biotechne®

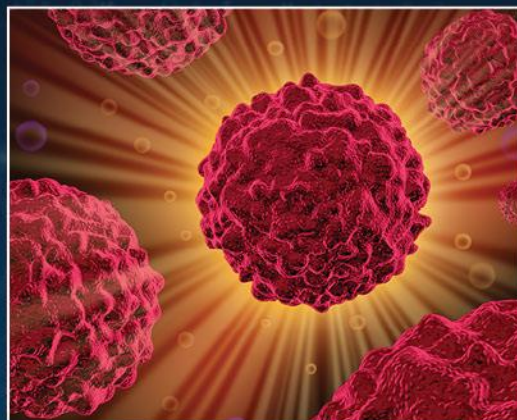
# HISTORICAL ORGANIC GROWTH



# TOP STRATEGIES



GEOGRAPHIC  
EXPANSION



CORE  
PRODUCT  
INNOVATION

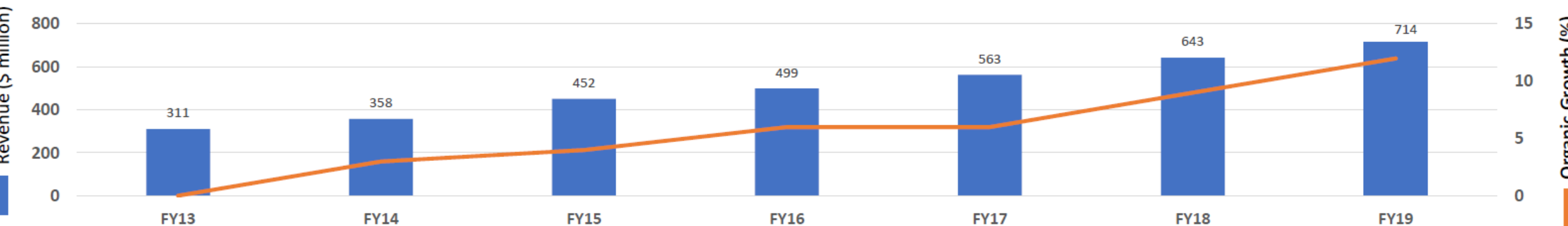
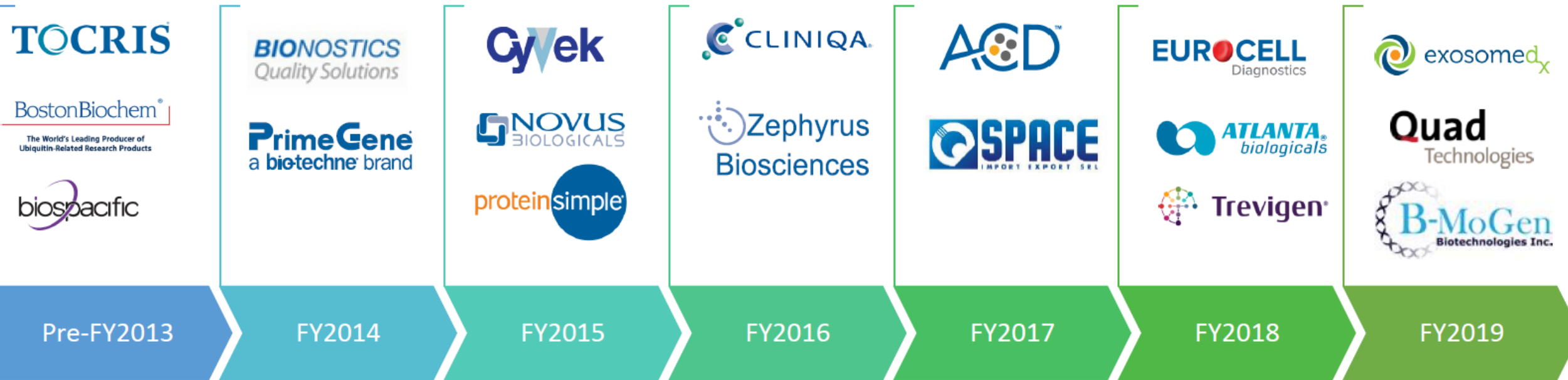


GAP FILLING  
M&A &  
MARKET  
EXPANSION



CULTURE  
CREATION  
& TALENT

# DISCIPLINED M&A AND INVESTMENT STRATEGY



# IMMUNE CELL THERAPY OPPORTUNITIES

CAR T cells are transfused back into the patient and Ella is used to monitor Cytokine Release Syndrome (CRS)

Ella Technology

8



Patient receives lymphodepleting chemotherapy prior to T cell treatment

7

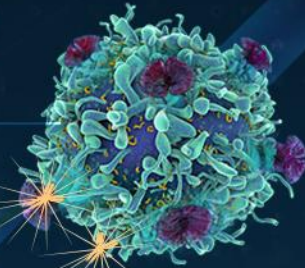


Expanded T cells are tested for CAR expression

6

Flow Cytometry

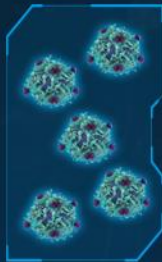
Immunocytochemistry



CARs expressing T cells are expanded ex vivo

GMP Proteins

5



White blood cells obtained from patient through leukapheresis

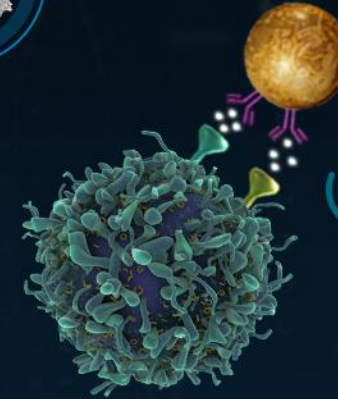
1



Antibody-coated beads used to activate the T cells

2

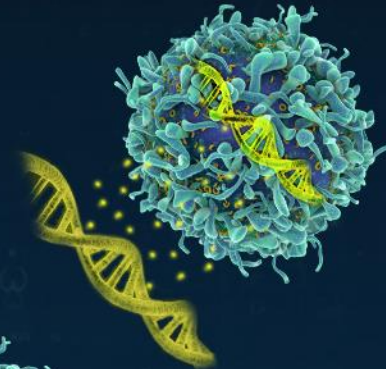
QUAD Technology



Activated T cells are reprogrammed to express Chimeric Antigen Receptors (CARs)

3

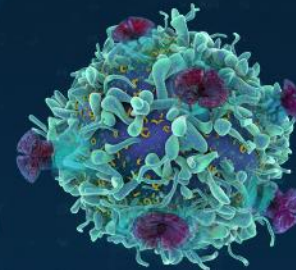
B-MoGen Biotechnologies



Reprogrammed T cells are screened for CAR gene expression

4

ACD Technology



LIQUID BIOPSIES:  
CTCS, CFDNA & **EXOSOMES**

KEY PROPERTIES:	CTCs	cfDNA	Exosomes
FREQUENCY	Infrequent in early stages of disease	Difficult to find within "noise" of contaminating DNA	<b>ABUNDANT</b>
ABILITY TO ENRICH OR SELECT	<b>YES</b>	NO	<b>YES</b>
QUALITY OF ISOLATED NUCLEIC ACIDS	<b>GOOD</b>	Poor due to enzymes exposure	<b>HIGH-QUALITY-SHIELDED</b>

# LIQUID BIOPSIES: THE EPI TEST



## THE WORKFLOW:

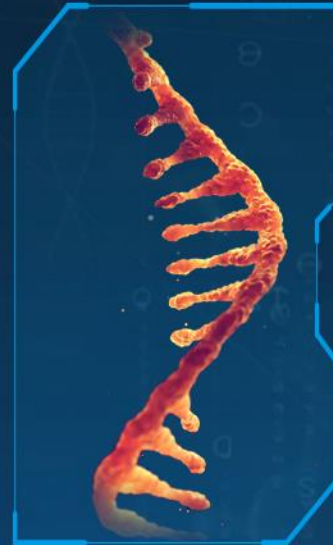
URINE  
SAMPLE



PATENTED  
EXOSOMAL RNA  
EXTRACTION



QRT-PCR  
ANALYSIS



PCA3

SPDEF

ERG

MULTIVARIATE  
ALGORITHMIC  
ANALYSIS

ExoDx<sup>®</sup>  
*Prostate(IntelliScore)*  
Algorithm

RESULT:

An increasing EPI score correlates with greater risk of high-grade prostate cancer (HGPCa) on biopsy

## INTENDED USE:

The EPI™ risk score is used to risk stratify likelihood of high grade (GS > 7) prostate cancer on initial biopsy in men 50 years and older, with a PSA 2–10 ng/mL.

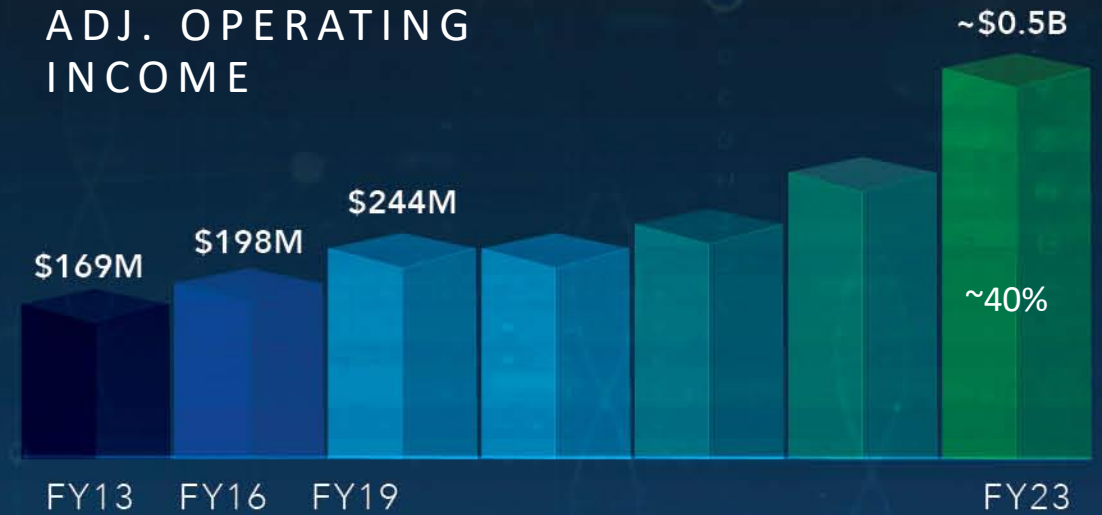


# AS WE LOOK FORWARD, OUR FINANCIAL GOALS GET LARGER

## REVENUE



## ADJ. OPERATING INCOME



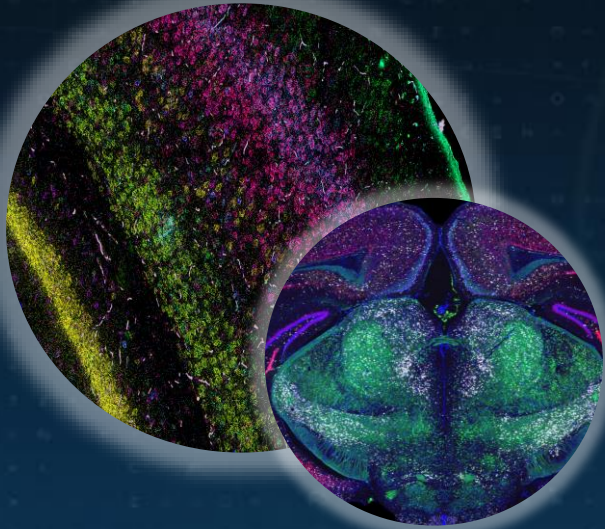
	Rev CAGR
• Analytical Solutions	+15–20%
• Reagent Solutions	+5–7%
<b>Protein Sciences</b>	<b>+8–11%</b>
• Diagnostics	+4–6%
• Genomics — ACD	+20–30%
• Genomics — Exo Dx	~\$150
<b>Diagnostics &amp; Genomics</b>	<b>~+20%</b>

	OM% in 5 yrs
• Analytical Solutions	~30%
• Reagent Solutions	+50%
<b>Protein Sciences</b>	<b>Mid 40s%</b>
• Diagnostics	~30%
• Genomics — ACD	mid 30s%
• Genomics — Exo Dx	~30%
<b>Diagnostics &amp; Genomics</b>	<b>Low 30s%</b>

\* All figures are expressed in millions.

\*\* Assumes no further unannounced acquisitions

# TISSUE BIOPSY

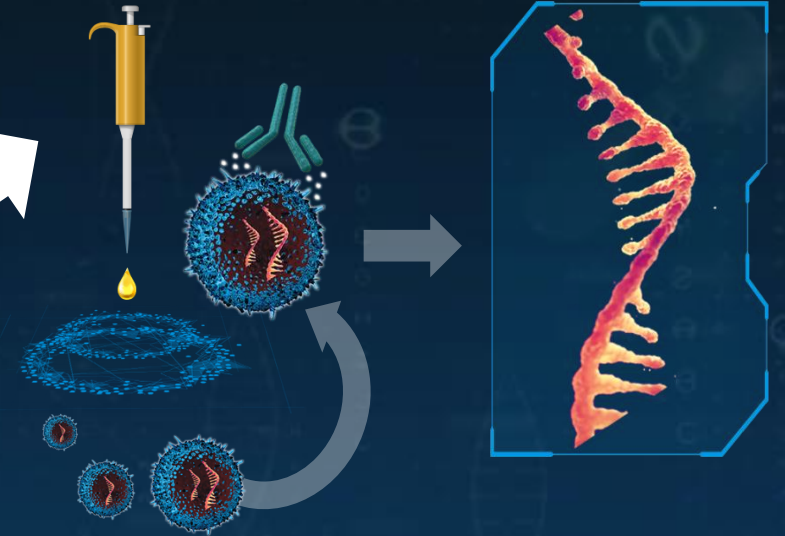


# SYNERGIES

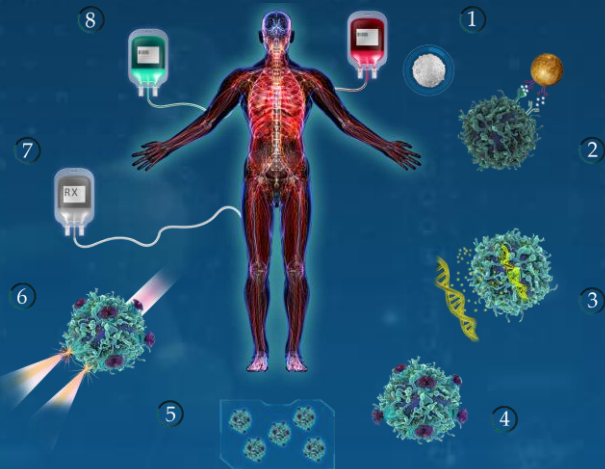
## CORE PRODUCTS:

- ANTIBODIES
- PROTEINS
- IMMUNOASSAY
- CALIBRATIONS & CONTROLS
- SMALL MOLECULES

# LIQUID BIOPSY



# CELL CULTURE & GENE THERAPY



# INSTRUMENTS – PROTEIN ANALYSIS



# SYNERGIES