CODEXIS®

We engineer **enzymes**

Q4 & FY'2022 Results

February 23, 2023

Forward Looking Statements

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CODEXIS®

Experienced Management Team and Board of Directors

New management team is well-positioned to lead the Company as it pivots focus to high-value Life Sciences & Biotherapeutics verticals

Management Team

Stephen Dilly, MBBS, Ph.D.
President and Chief Executive Officer

SIERRA ONCOLOGY · aimmune THERAPEUTICS · Genentech · CHIRON · SmithKline Beecham

Sri Ryali, MBA
Chief Financial Officer

EIGER · aimmune THERAPEUTICS · Jazz Pharmaceuticals · ONYX PHARMACEUTICALS · AMGEN

Kevin Norrett, MBA
Chief Operating Officer

SIERRA ONCOLOGY · angion · aimmune THERAPEUTICS · ZS · EXELIXIS · Genentech

Meg Fitzgerald, JD
Chief Legal and Compliance Officer, General Counsel and Secretary

Allakos · aimmune THERAPEUTICS · ZS · Genentech

Board of Directors

Byron Dorgan, MBA, Chairman
Former Senator and Member of the House of Representatives for North Dakota

Jennifer Aaker, Ph.D.
General Atlantic Professor, Stanford Graduate School of Business

Stephen Dilly, MBBS, Ph.D.
President & CEO

Esther Martinborough, Ph.D.
SVP of Research, Escient Pharmaceuticals

Alison Moore, Ph.D.
CTO, Allogene Therapeutics

John Nicols
Former CEO, Current Strategic Advisor, Codexis

Stewart Parker, MBA
Principal, Parker BioConsulting

Rahul Singhvi
CEO, National Resilience

David V. Smith, MBA
CFO & EVP, Five Prime Therapeutics

Dennis Wolf, MBA
Former CFO, DataStax

Patrick Yang, Ph.D.
Former EVP and Global Head of Technical Operations, Hoffman-La Roche

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Codexis Snapshot: Core Business Pillars

3 focus areas based on CodeEvolver®, our proprietary platform leveraging machine learning to accelerate enzyme discovery & commercialization

Pharma Manufacturing

Enzymes for Small Molecule Production

- Heritage Business
- We sell enzymes to drug manufacturers at a markup
- Competitive, commoditized
- Modestly profitable but slow growth potential
- $3M to $7M opportunity per enzyme

Life Sciences

Enzymes for NGS Applications

- Partnered with Roche on DNA ligase
- Newly engineered DNA ligase available Feb 2023
- Early commercial traction in OEM kits including seqWell partnership
- $10M to $30M opportunity per enzyme

Enzymes for Nucleotide Synthesis

- Demonstrated DNA synthesis capability through Molecular Assemblies partnership
- mRNA platform launches in 2023; anchored by HiCap RNA polymerase
- World-beating opportunity in RNAi production at large scale
- Potential for hundreds of millions in market opportunity

Biotherapeutics

Enzymes as Oral Drugs and Transgenes in Gene Therapy

- Clinical Stage partnership with Nestlé Health Science: four enzymes in development with lead product CDX-7108 in EPI
- Four engineered transgene projects underway with Takeda. Fabry in IND prep; Pompe would be the next indication
- Wholly owned assets in oral enzymes and AAV targeting
- Multiple shots on goal for estimated billion-dollar markets

Actively prioritizing time and resources on areas where we have the strongest commercial opportunity and greatest probability of success

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Our Most Advanced Biotherapeutics Assets

CDX-7108 for EPI

- Most advanced clinical asset; being co-developed 50/50 with Nestlé Health Science (NHSc)
- The two leading products on the market today for Exocrine Pancreatic Insufficiency (EPI) have combined sales of ~$1.5B
- Planning for Phase 2 initiation late 2023 based on supportive Phase 1b data
- Commercialization agreement being finalized

CDX-6114 for PKU

- Phenylketonuria (PKU) is one of the most common inborn errors of metabolism (IEM)
- Fully out licensed to NHSc; milestones plus royalties
- NHSc expected to initiate a Phase 1 clinical trial in 2023
- Outcome will inform our decision to pursue oral enzymes for other IEMs

Gene Therapies

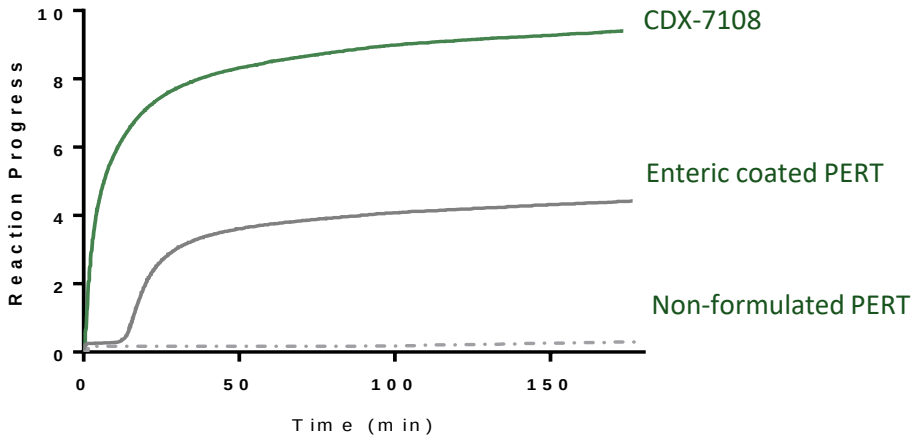
- CodeEvolver®-engineered proteins optimized for improved targeting and expression when administered as transgenes in gene therapies
- Takeda's Fabry program is in IND preparation
- Pompe on track and expected to be the next IND

CDX-7108 Case Study: Oral Enzyme Therapy for Treatment of EPI

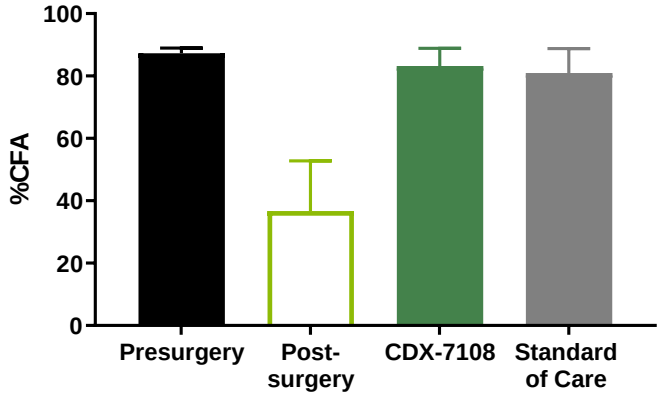
CDX-7108 is co-owned (50 / 50 split) with Nestlé HealthScience

- Exocrine Pancreatic Insufficiency (EPI) - impaired pancreatic function due to pancreatitis, pancreatic cancer, Crohn's disease, cystic fibrosis
- Pancreatic Enzyme Replacement Therapies (PERTs) – current standard of care (SOC) with high pill burden and efficacy limitation due to lipase GI instability
- CDX-7108 - orally administered, GI-active lipase
- Ten-day course of CDX-7108 in EPI mini-pig model showed equivalent coefficient of fat absorption (CFS) recovery at a **10-fold lower dose** than standard of care PERT

Superior in vitro GI performance



Equivalent in vivo efficacy @ 10-fold lower dose



In pancreatic duct ligated mini-pigs, a ten-day course of daily CDX-7108 leads to recovery of CFA at a 10-fold lower dose than SOC

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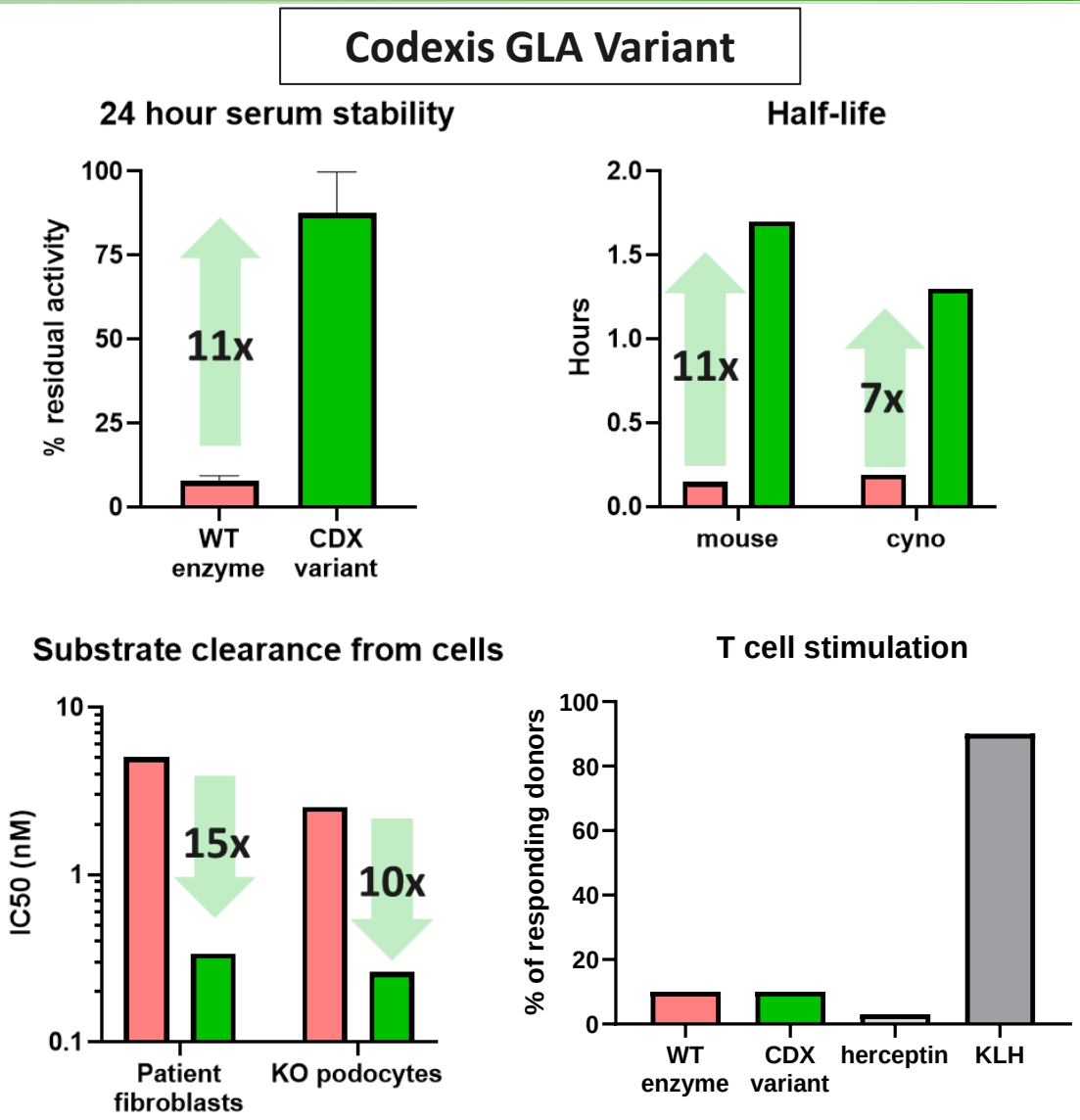
CDX-7108: Phase 1 Part A & B Complete; Part C POC Ongoing

- Preliminary data from 48 healthy volunteers and 5 subjects with EPI dosed with CDX-7108
  - Study examined lipid absorption as measured b $^{13}CO_2$ excretion
  - No safety issues were noted
    - *No Serious Adverse Events observed and no treatment discontinuations*
- Every participant with EPI in the proof-of-concept portion of the study showed improved lipid absorption when administered CDX-7108 versus placebo
- Combining the data from each participant, a significant increase in the cumulative excretion rate of $^{13}CO_2$ was observed for CDX-7108

Codexis and Nestlé Health Science expect to file an Investigational New Drug application for the Phase 2 study by the end of 2023; trial expected to initiate in early 2024

Gene Therapy Transgene Case Study: Treatment of Fabry Disease

- Codexis has delivered transgenes that encode for enzymes to Takeda for Fabry disease, Pompe disease, and an undisclosed blood factor disorder; a fourth program is in progress
- As illustrated by the data shown here for a Codexis alpha-galactosidase A (GLA) enzyme variant for Fabry disease, we can simultaneously optimize multiple parameters
- Early-stage variant after multiple rounds of evolution and multiple mutations demonstrated improved stability, half-life, potency, while maintaining low immunogenicity risk
- To date, Codexis has optimized five transgenes coding for lysosomal enzymes in the context of the Takeda partnership and its own pipeline



Commercial Stage Pharmaceutical Manufacturing with a Robust Pipeline

Market Segment	# of programs	Research	Development	Commercial	Example Partner(s)
Platform Licenses	3				gsk, Novartis, Merck
Commercial APIs	18				Allergan, Pfizer
Phase II/III APIs	18				Multiple Partners
Research & Early Clinical	>50				Multiple Partners

Estimated $3M to $7M market opportunity per product

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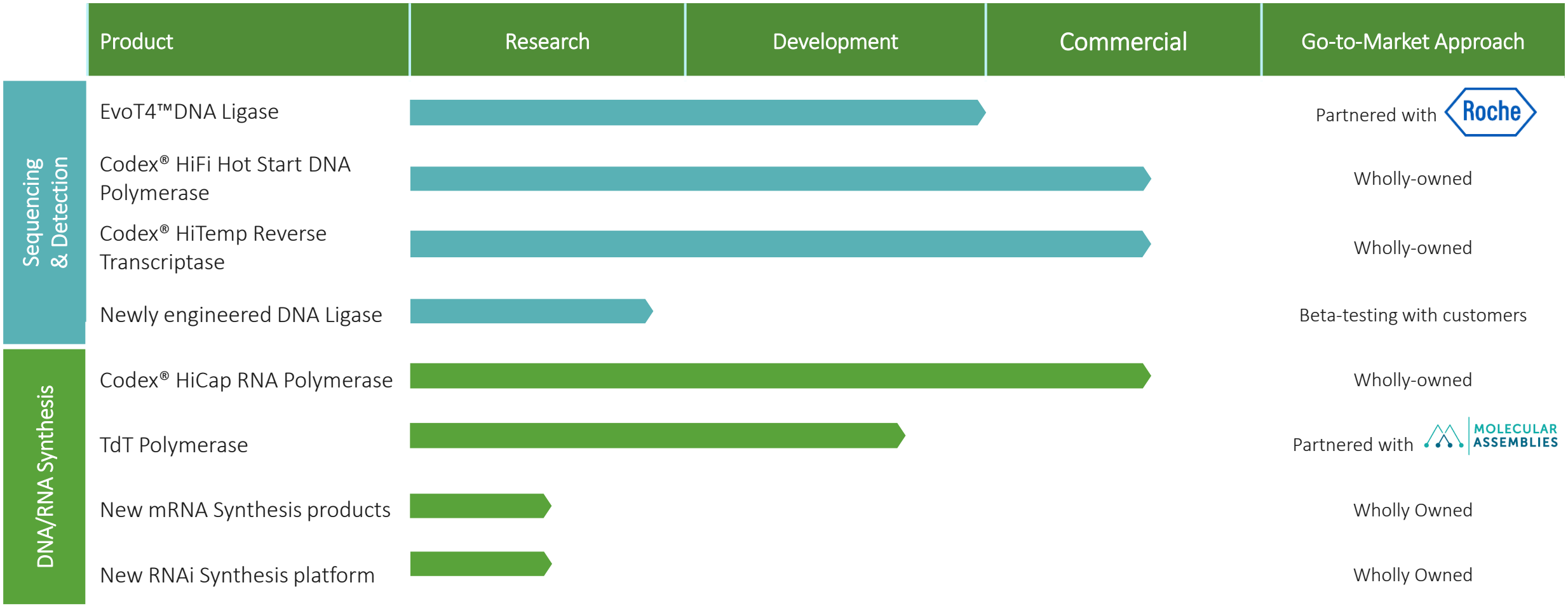
Commercial Stage Life Sciences Product Portfolio with a Robust Product Pipeline



CODEXIS®

Engineered RNA Polymerase for Improved mRNA Synthesis

Codex® HiCap RNA Polymerase

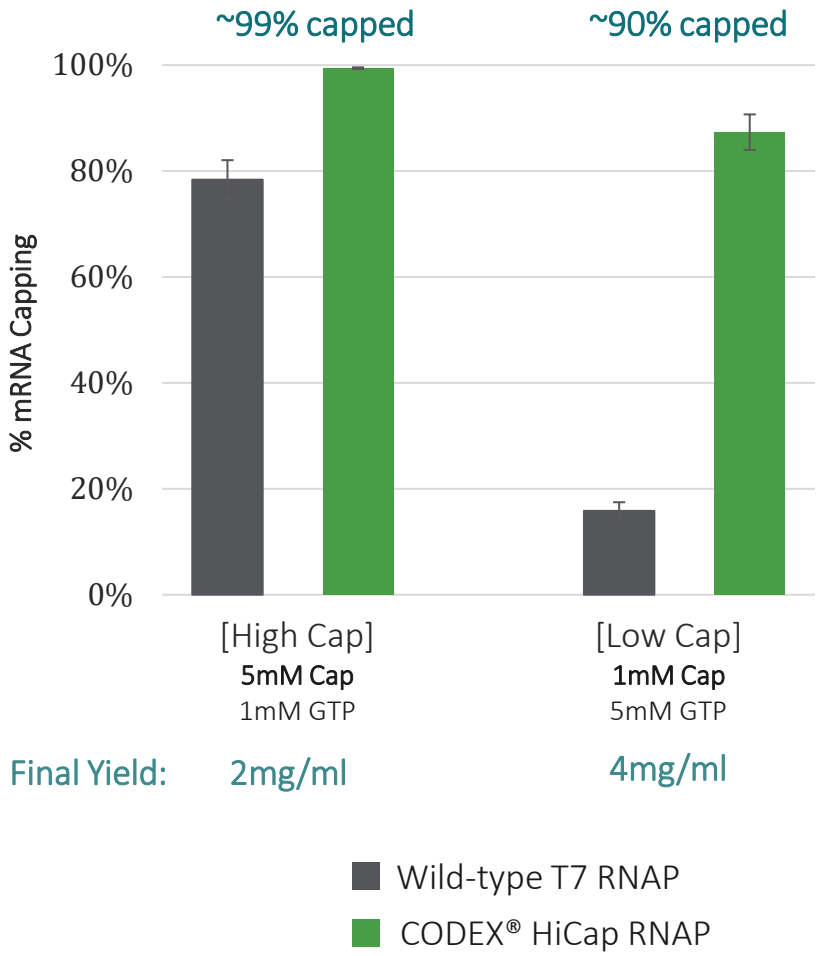
Engineered for improved mRNA capping efficiency

Key features & benefits

- Higher capping efficiency with lower 5’ cap concentration
  - Increased yields of fully capped mRNA product (2x observed)
  - Decreased use of expensive capping reagents (5x observed)
- Decreased unwanted double-stranded RNA synthesis
  - Reduced negative immune responses with less dsRNA
  - Reduced cost in purification to remove dsRNA product
- Highly effective with many commercially available and custom 5’ Caps including market leading trinucleotide caps
- Effectively incorporates uracil analogs for lower immunogenicity

Current Status

- First commercial sales made to multiple customers in 2021
- Customer trials underway with several other mRNA manufacturers



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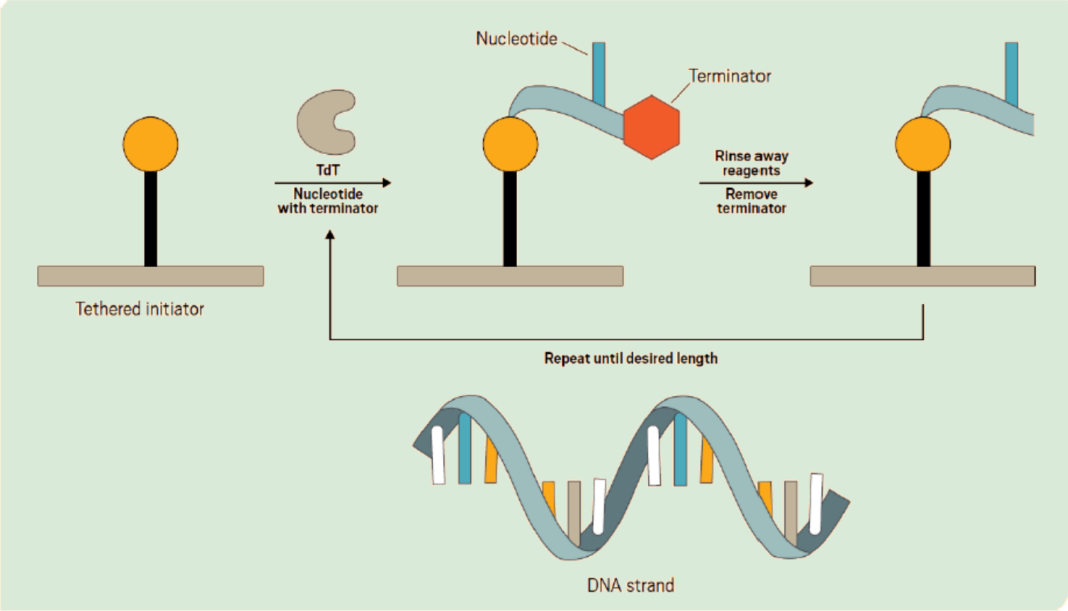
Case Study: TdT Polymerase for Enzymatic DNA Synthesis

Terminal deoxynucleotidyl transferase (TdT)

Engineered for improved stability and speed of conversion



TdT catalyzes the addition of nucleotides to the 3' terminus of a DNA without the need for a template strand

Game changing approach to disrupt high-growth DNA synthesis market

Codexis engineered TdT Polymerase outperforms current non-enzymatic DNA synthesis processes

- Improved stability, activity, promiscuity, and reaction speed all in tandem
  - Thermostability: 37°C → 65+°C
  - Nucleotide coupling time: 16 hrs → <90sec
  - Conversion: ~0.5% → >99.6%
- TdT polymerase enzyme engineering program completed in Feb 2022:
  - 40 rounds of evolution; one of the most extensive in company history
  - >90 amino acid modifications (~25% of coding sequence)

Partnership with MOLECULAR ASSEMBLIES (MAI)

- Codexis is second largest shareholder
- Codexis TdT enzyme and its advantages enables MAI's synthesis process
- MAI expected to commercialize custom gene and oligo synthesis in 2023

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The Codexis RNAi Synthesis Platform…

Our Goal

- ❑ Leverage CodeEvolver® to create an enzymatic solution for large-scale synthesis of RNAi
- ❑ An end-to-end enzymatic process that begins with relatively inexpensive raw materials
- ❑ A first for Codexis – a complete platform that consists of proprietary enzymes and processes

Why We Win

- ✓ An enzymatic solution can meet the scale required for large indications while phosphoramidite chemistry may not
- ✓ Economic & societal incentives for change are strong:
  - Scalability through immobilization of enzymes (not product)
  - Elimination of $Ms of hazardous waste
  - Sustainable, economic source for nucleotide raw materials
- ✓ Codexis is uniquely positioned with the enzyme engineering required to build this platform
- ✓ The commercial and manufacturing scale required for success is right-sized for Codexis

CODEXIS®

Enhanced Commercial Focus

Pharmaceutical Manufacturing

- Maintain strong relationships with top global pharmaceutical manufacturers
- Identify adjacent customers and markets to quickly leverage our expertise and drive commercial engagement
- Increase reach to mid-sized drug manufacturers

Life Sciences

- Continue to design and manufacture enzymes “plug and play” solutions for multiple customers
- Explore avenues to provide customers with more complete solutions
- Drive a shift to product revenues (vs. service-oriented, R&D revenue today)

Biotherapeutics

- Prioritize pipeline assets
  - How much to invest
  - When to partner
  - When to end investment
- Leverage partners with critical expertise to create long-term value

Prioritizing time and resources on areas where we believe we have the strongest commercial opportunity and greatest probability of success

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FY 2022 Results

Revenue

$138.6M
FY'22 Total Revenue (+32% YOY)

- **$126.6M** Performance Enzymes
- **$12.0M** Biotherapeutics

$116.7M
FY'22 Product Revenue (+65% YOY)

67%
Gross Product Margin vs. 69% in FY'21

Revenue Excluding Sales Related to PAXLOVID™

$63.2M
FY'22 Revenue Excl. Sales Related to PAXLOVID™ (-10% YOY)

- **$51.2M** Performance Enzymes
- **$12.0M** Biotherapeutics

$41.3M
Product Revenue Excl. Sales Related to PAXLOVID™ (+14% YOY)

$114.0M
Cash as of 12/3/2022. No Debt

$80.1M
R&D Expense

$52.2M
SG&A Expense

$3.2M
Restructuring Costs[1]

$33.6M
Net Loss

[1] Costs related to workforce reduction plan implemented in Q4 2022

FY 2022 Segment Financials

Performance Enzymes

$126.6M

FY'22 Revenue

$46.4M

FY'22 Income from Operations[1]

Biotherapeutics

$12.0M

FY'22 Revenue

($41.2M)

FY'22 Loss from Operations[1]

Supported by **$38.5M** of corporate overhead expense

(not allocated to either business segment)

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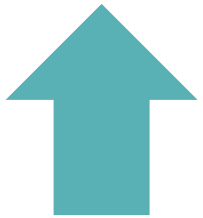
[1] Represents total revenues by segment less COGS, R&D and SG&A expenses (excluding depreciation) that are directly related to the operations of each segment.

2023 Guidance

$63M–$68M

Total Revenue

Excluding Sales Related to PAXLOVID™



$35M–$40M

Product Revenue

Excluding Sales Related to PAXLOVID™

68%–73%

Product Gross Margin

Cash Runway Through End of 2024

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Nasdaq: **CDXS**

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