



Engineering Proteins That **Power Progress**

“Scalable, animal-free protein solutions
powering **Life Sciences, Food & Nutrition,**
and **BioIndustrial** applications”

NASDAQ: DYAI

Investor Presentation - December 2025



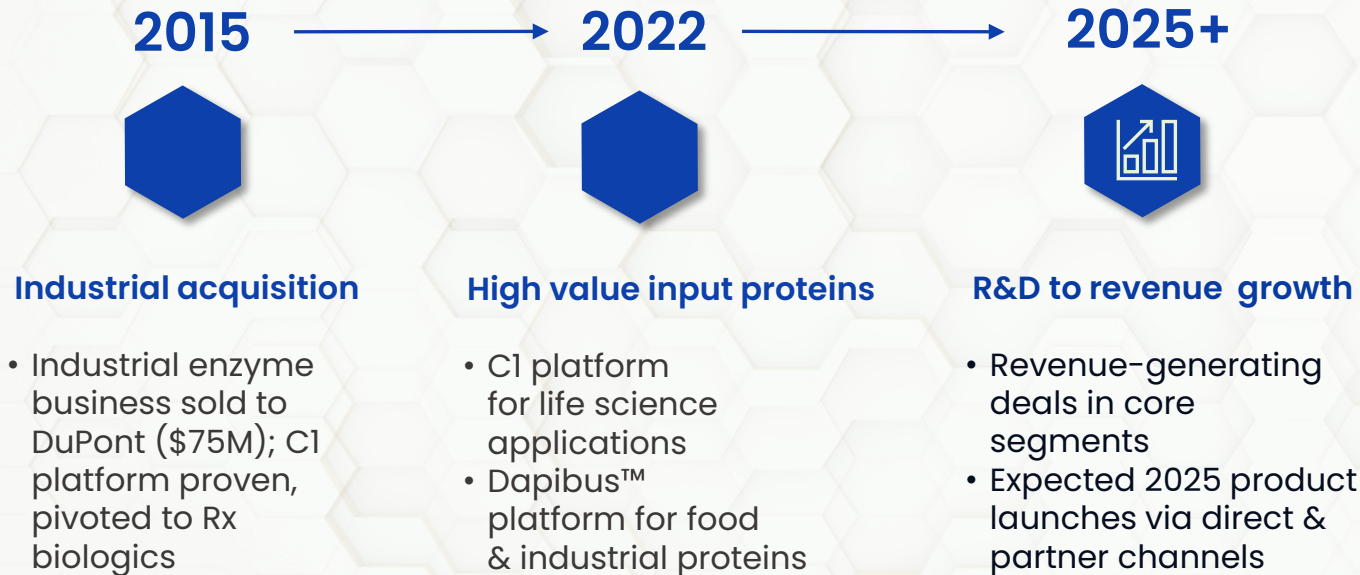
Safe harbor statement

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Decades of innovation driving scalable growth

A platform with proven market validation



- Global biotechnology company
- Proven platforms with industrial validation
- Long track record of products & partnerships
- Accelerating access to next-generation proteins



About Us

- C1 and Dapibus™ fungal microbial platforms
- Engineered for speed, productivity, and low-cost
- Produces standard proteins and complex biologics
- Validated lab, food, and GMP grade production



Technology

- Accelerating access to sustainable proteins
- Faster, affordable, & scalable biomanufacturing
- Unlocking new possibilities in:
 - Life Science, Food & Nutrition, and Industrial Biotech



Mission



Key investment highlights: Why Dyadic? Why now?

- ✓ **Proven platforms with industry validation**
High-value dual platforms: C1 and Dapibus™
Robust genetic toolbox and CRISPR license
- ✓ **Transition from R&D to commercial execution**
Corporate rebrand to reflect commercial focus
Product/platform vs. grant/R&D revenues
- ✓ **Non-therapeutic focus = near-term revenue**
Faster timelines and lower regulatory threshold
POC to revenues in ~12-18 months
- ✓ **Inflection point: Commercial engines online**
First bulk purchase orders received
Expanding portfolio and commercial reach
- ✓ **Expanding product pipeline in growing markets**
Recombinant proteins launching 2025–2027
\$25B+ market opportunity in key segments
- ✓ **Strategic partnerships & revenue traction**
Active partners/revenue models across core verticals
 - Life Sciences: **Proliant**
 - Food/Nutrition: **Inzymes**
 - Bio Industrial: **Fermbox**

By the numbers

Market capitalization	\$34.0 M (as of 11/12/25)
Cash & Investment-grade securities (including accrued interest)	~ \$10.4M (as of 9/30/25)
Shares outstanding	~ 36.2M (as of 11/11/25)
Debt and warrants	\$5.1 M; No warrants
Insider ownership	~ 24.1%
Total revenue 2024	~ \$3.5M
Total Q3 YTD 2025	~ \$2.5M

NASDAQ: **DYAI**
Founded: **1979**
Headquarters: **Jupiter, Florida**

What we do: Platforms into Products

Develop, optimize and scale recombinant BioSolutions for Life Sciences

- › **From Platform to Product:** Turning engineered strains into scalable protein solutions
- › **Precision**-engineered recombinant protein production redefining performance, scalability, and economy



Design

- › Precision strain construction using advanced insertion methods
- › Licensed CRISPR technology for optimal expression and productivity



Engineer



Express

- › High-density fermentation drives rapid growth and high-yield protein secretion with low-cost media
- › Secreted bioburden free proteins enable streamlined purification tailored for yield, purity, efficiency, and low-cost



Purify



Scale

- › Processes scale from lab to >500,000 L while maintaining consistent yield and quality



C1 and Dapibus™ dual microbial platforms driving growth

Scalable eukaryotic platforms for recombinant, animal-free protein solutions

- › Engineered for speed, yield, scale, low-cost and sustainability
- › Dyadic's microbial platforms deliver industrial performance in animal-free protein production



C1

Production Proven Platform

- Proven production of complex proteins and enzymes
- Phase I–validated platform
- Optimized for high yield, low cost, and regulatory readiness

LIFE SCIENCES



Dapibus™

Yield and Cost Optimized

- High-yield, animal-free proteins and enzymes
- Enables sustainable, affordable large-scale manufacturing
- Low-carbon, efficient precision-fermentation process

FOOD / NUTRITION / BIOINDUSTRIAL

The Dyadic Revenue Engine: **simple, repeatable, scalable**

Three monetization channels



› **How:** Buy products direct from Dyadic

› **Who:** Suppliers, Distributors, End Users

- *Direct Bulk and OEM sales*



› **How:** License our strains and platforms

› **Who:** Suppliers and Manufacturers

- *In-House/CMO Manufacturing*



› **How:** Use Dyadic to build your targets

› **Who:** Manufacturers and Developers

- *Build proprietary assets*

Three strategic growth verticals

Selected for scale, growth, and alignment with Dyadic's high-yield, animal-free expression platforms



\$10 billion market¹

Life Sciences

- Growth in biologics, CGT, diagnostics
- Need for consistent, animal-free recombinant input
- **Examples**
 - Human transferrin, albumin, FGF
 - DNase I & nucleic acid enzymes

Why this market?

Dyadic platform advantages

- C1 = high yield, lower COGS, scalable RUO → GMP
- Phase I data
- Complex proteins

Market applications

- Cell & gene therapy media
- Diagnostics & reagents
- Antigens, antibodies, therapeutic proteins



\$11 billion market¹

Food & Nutrition

- Precision fermentation adoption accelerating
- Large consumer demand for animal-free proteins
- **Examples**
 - Bovine α -Lactalbumin
 - Bovine transferrin

- Dapibus™ → high-yield, low-cost food-grade production
- GRAS

- Functional nutritional proteins
- Enzyme-assisted processing
- Alternative dairy & infant nutrition



\$6 billion market¹

Bio-Industrial

- Need for renewable, bio-based industrial inputs
- Cost and sustainability pressures on manufacturers
- **Examples**
 - Cellulosic enzyme cocktail
 - Industrial enzymes & biocatalysts

- Dapibus™ industrial-scale fungal fermentation
- Competitive cost structure for high-volume enzymes

- Biomass conversion
- Pulp & paper, textiles, detergents
- Green chemistry catalysts

¹ Estimated Total Addressable Market



Key segments(2025-26)

Cell Culture Media

- **Market size¹:** ~\$5B+ (growing with CGT & biologics)
- **Target customers:** CDMOs, CGT manufacturers, media suppliers
- **Key Partner:** Received \$1M in license and milestones fees from Proliant with profit sharing (Albumin)
- **Products:** Albumin, transferrin, growth factors (FGF)

DNA/RNA Technologies

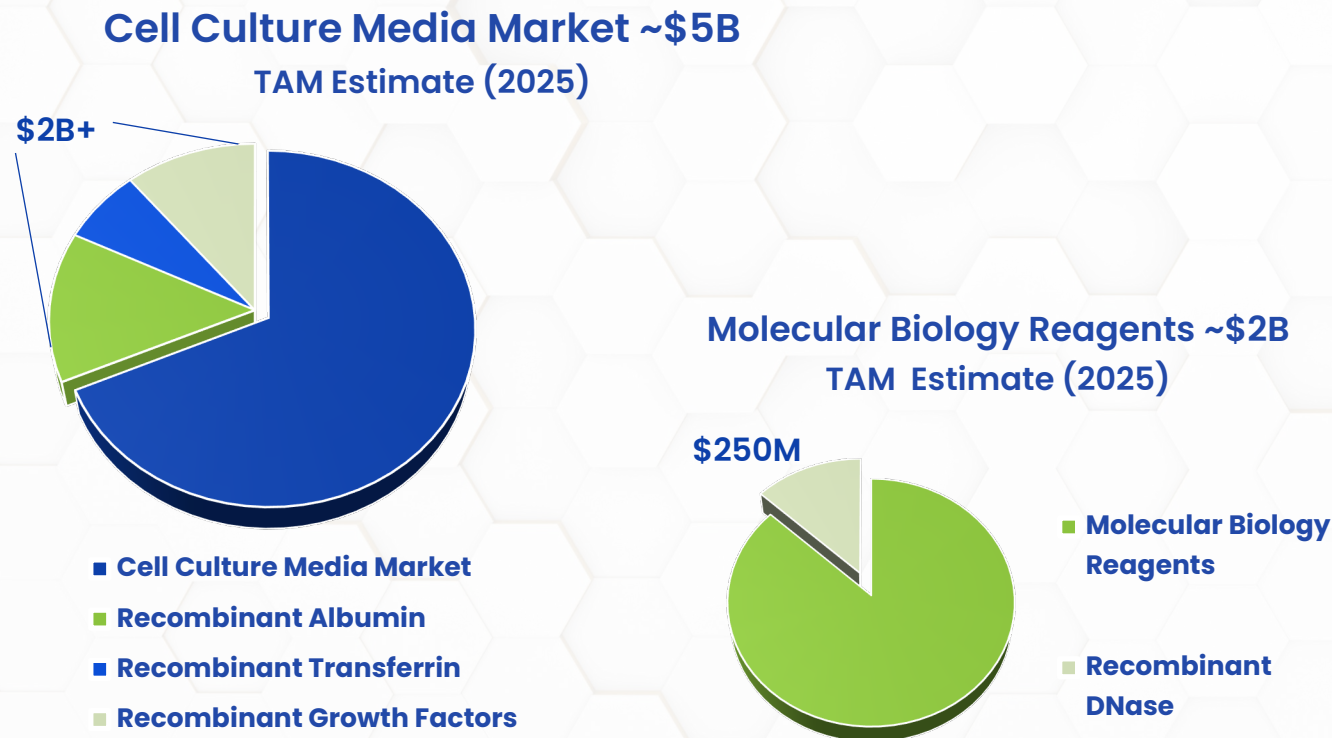
- **Market size²:** ~\$2B+ (growing with diagnostics & therapeutics)
- **Target customers:** CGT & biologic manufacturers, mRNA therapy developers
- **Products:** Dnase I, RNA Inhibitors, DNA Ligases

Current Highlights

- CRISPR licensing via ERS Genomics
- \$500K milestone from Proliant
- Transferrin and FGF manufacturing and launch in 4Q
- DNase I validation and launch in 4Q
- Expanded commercial reach in Asia region via Intralink partnership

Life Sciences

Advancing high-margin inputs in cell culture and molecular reagents



¹Management assumption based on recombinant protein share in bioproduction and CGT markets
<https://www.marketsandmarkets.com/Market-Reports/recombinant-albumin-market-170146653.html>; <https://www.bccresearch.com/partners/ys/iron-supplements-market.html>; <https://www.grandviewresearch.com/industry-analysis/cell-growth-factors-market>

²Management assumption from recombinant adoption trends and reagent segment estimates
<https://www.marketsandmarkets.com/Market-Reports/molecular-biology-enzymes-kits-reagents-market-164131709.html>
<https://www.synbiobeta.com/news/synthetic-biology-market-update-2024>

Near-term product pipeline:

High-value launches by segment

C1 Platform



Life Sciences¹

Product Name	Channel	Expected Launch Status	2025	2026	2027
Human Albumin	Proliant	licensed	→		
DNase I	OEM/Direct	2025	→		
Transferrin	Direct/License	2026	→	→	
FGF	Direct/License	2026	→	→	
TdT, Ligases, RNase Inh.	OEM/Direct	2026	→	→	
Human Lactoferrin	Direct/License	2027	→	→	→
Human α-Lactalbumin	Direct/License	2027	→	→	→

¹Based on management estimates as of July 23, 2025 for biologics, intermediates, and ingredients for human & animal research, development & manufacturing

Food and Nutrition

Positioned to capture value in the recombinant food & nutrition revolution



Key Segments 2025-26

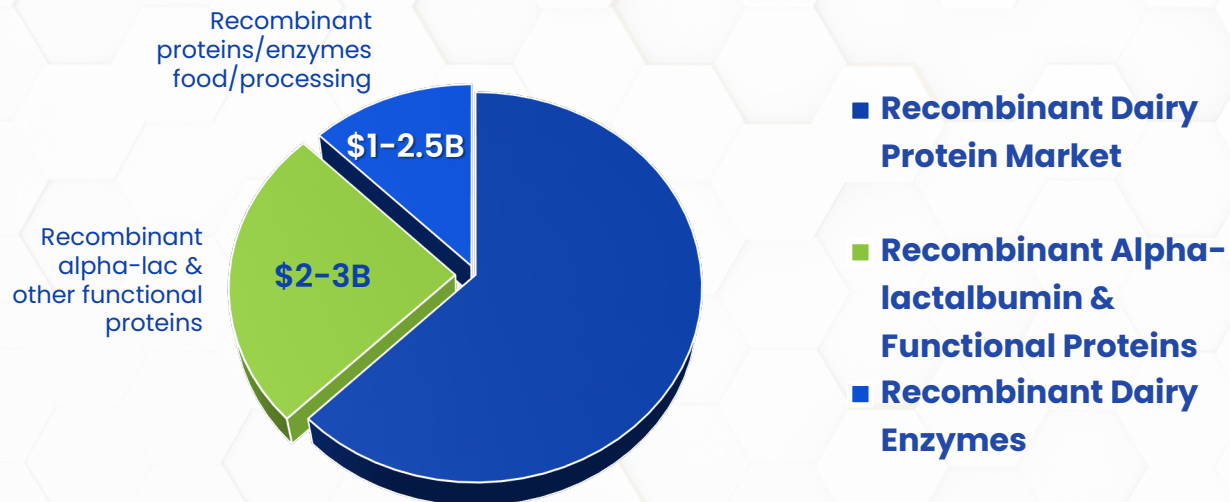
Non-Animal Proteins & Functional Ingredients

- **Market size**¹: ~\$11B+ alternative dairy, functional food, wellness
- **Target customers**: Ingredient suppliers, food & beverage companies, alt-dairy brands
- **Key Partner(s)**: Inzymes, received \$1.275M in license and milestone fees w/product royalties; BRIG BIO development & commercialization of bovine α -lactalbumin, access, milestone, royalties and co-marketing
- **Products**: α -lactalbumin, transferrin, growth factors, lactoferrin, non-animal dairy enzymes

Current Highlights

- **First bulk purchase order in cultured meat**
- CRISPR licensing via ERS Genomics
- \$250K milestone from Inzymes
- Term sheet signed for α -lactalbumin
- Several end-stage negotiations in process

Recombinant Food & Nutrition - ~\$11B (2025 TAM Estimate)

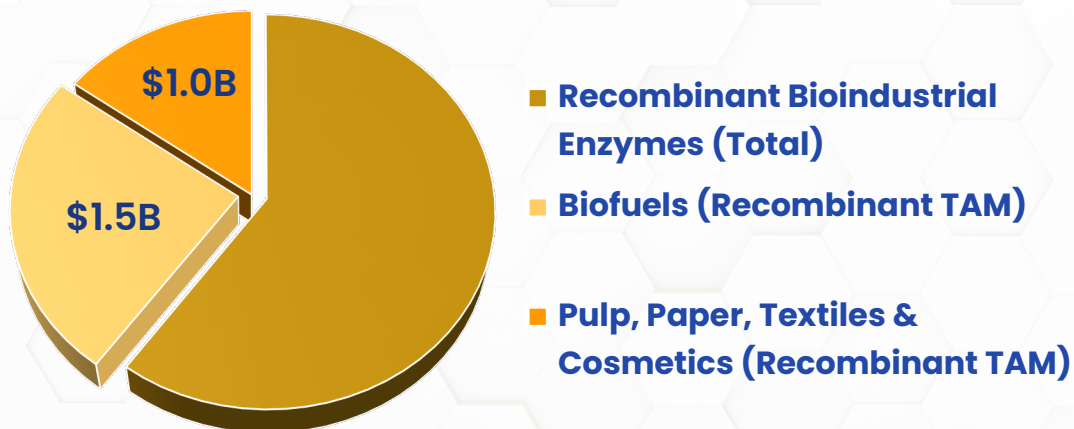


¹ Management assumption based from the food enzyme/protein segment totals
<https://www.alliedmarketresearch.com/functional-protein-market>; BCC Research; lactoferrin and alpha-lactalbumin pricing x estimated global volume
[Verified Market Research, Microbial Chymosin Market, 2024](#), [Coherent Market Insights, Precision Fermentation Market, 2024](#), [Grand View Research, Precision Fermentation Market Report, 2024](#), and [GlobeNewswire via Precedence Research, Precision Fermentation Market Size, Dec 2024](#).

Bio-Industrial

Driving sustainable growth in bio-industrial inputs through proven enzyme solutions

Recombinant Bio-industrial Enzymes – ~\$6B (2025 TAM Estimate)



¹ Management assumption based on data across major industrial sectors
<https://www.grandviewresearch.com/industry-analysis/industrial-enzymes-market>
<https://www.researchandmarkets.com/reports/5139731/industrial-enzymes-market-growth-trends>



Key Segments 2025–26

Biomass processing, biofuels, industrial uses

- **Market size¹:** ~\$6B+ enzyme and biomass processing input market
- **Target customers:** Pulp & paper, renewable fuels, biogas
- **Key Partner:** Fermbox 50/50 profit sharing
- **Products:** Cellulosic enzymes, hyaluronidase

Current Highlights

- Fermbox partnership revenues in 2026
- Expanded sampling in biofuels
- Collaboration for exploring regenerative medicine applications for cellulosic enzymes

Near-term product pipeline:

High-value launches by segment

Dapibus™ Platform



Food & Nutrition¹

Product Name	Channel	Expected Launch Status	2025	2026	2027
Non-animal dairy enzymes	Partnered - Inzymes	2025	→		
Bovine transferrin	Direct/License, food-grade	2025	→		
Bovine α-Lactalbumin	Direct/License, food-grade	2027		→	
Human α-Lactalbumin	Direct/License food-grade	2027		→	



Bio-Industrial¹

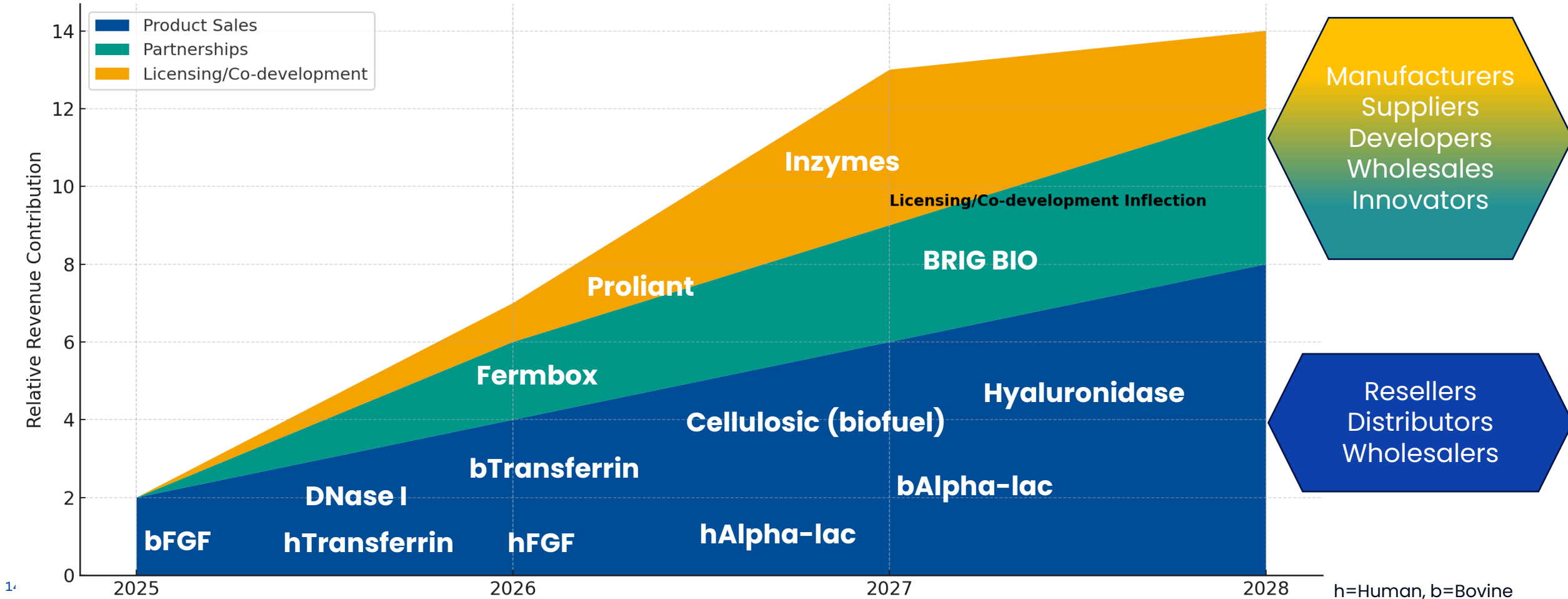
Product Name	Channel	Expected Launch Status	2025	2026	2027
Cellulosic enzyme cocktail	Partnered - Fermbox	2025	→		
Pulp/paper enzyme cocktail	Direct Sales/License	2026		→	
Hyaluronidase	OEM/Direct/License	2027		→	

¹ Based on management estimates as of July 23, 2025

Pathway to revenue:

Layering Product, Partner Licensing, and Co-Development Revenues

Dyadic Revenue Layering Strategy (2025-2028)



Legacy R&D programs expected to fuel strategic momentum

Advancing Dyadic's platform while reinforcing its commercial credibility

**Gates
Foundation**

European
Vaccines Hub
for Pandemic
Preparedness

CEPI



RUBIC
ONE HEALTH

FBS
Fondazione
Biotechnopolo
di Siena

Legacy programs aid platform innovation

- **Non-dilutive funding, strategic validation, global visibility**
- **Global health collaborations drive strategic value**
 - Gates Foundation: \$3M grant → \$1.5M milestone in 2025
 - Coalition for Epidemic Preparedness Innovations (CEPI) – \$4.5M grant¹ – C1 Platform
 - Fondazione Biotechnopolo di Siena (FBS) (Rappuoli-led)
 - European Vaccine Hub (EVH): €170M¹ initiative
 - Dyadic contributing to Discovery pillar (Rappuoli-led)
 - Additional fully funded partners: CEPI, FBS, Rubic, Israel Institute for Biological Research
- **Partner-funded advancements accelerate platform value**
 - All legacy R&D fully externally funded
 - Enhancing C1 for advanced biologics: mAbs, VLPs, ferritin nanoparticles, antigens
 - Boosting visibility and credibility in global health and vaccine innovation

¹ Total initial funding, not all available to Dyadic





Veteran leadership with diverse pharma and industrial experience



Mark Emalfarb, Founder/CEO

Entrepreneur, inventor 25+ U.S. and foreign biotechnology patents, filamentous fungal enzyme product commercialization



Joe Hazelton, President/COO

25 Years in pharmaceutical Industry, commercialization, regulatory, business and clinical development



Deloitte.

Ping Rawson, CFO

20+ years of finance, accounting & international trade and business development experience



Ronen Tchelet, CSO

20+ years in biopharmaceutical industry & recombinant product commercialization

Board Chairman



Patrick Lucy, Chairman of the Board

20 years of bioprocess biotech and business development experience



Why invest now?

Dyadic's inflection point

Transition from R&D to commercial revenues

- Commercial transition complete; operating as **Dyadic Applied BioSolutions**
- **New branding, website, and IR/BD materials** aligned with commercial strategy
- Infrastructure, technology, and team in place to scale product sales

Commercial engines now active

- **CI and Dapibus™ validated** across life sciences, food & nutrition, and industrial markets
- CRISPR integration accelerating strain optimization and product yield
- **First bulk order received** in 4Q25; additional orders and OEM partners expected

Near-Term Revenue Driven by Non-Therapeutic Focus

- Shorter timelines and lower regulatory burden than therapeutic biologics
- Multiple **high-value protein launches** expected over next 12–36 months
- Commercial expansion supported by Intralink in Asia
- Partnered **production already underway** (Proliant, Inzymes, Fermbox)

Legacy wins provide momentum

- Externally **funded programs** (**Gates, CEPI**, others) advance platform with no capital drain
- **Non-dilutive** partnerships strengthen technology and global visibility

Revenue Inflection Coming

- Strong setup for step-change in **commercial revenue beginning late 2025**
- **Product launches** across Life Sciences, Food & Nutrition, and Bio-Industrial fueling growth

“The heavy lifting is complete”
– positioned to scale revenue rapidly





Thank you!