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Dyadic Applied BioSolutions, Inc. (DYAI: NASDAQ)

DYAI: Layers of Commercialization Agreements

Our valuation approach employs a DCF model and a 15% discount rate. We assume a 22.5% probability of ultimate success for C1, based on historical drug approval rates and number of projects in the pipeline. The model assumes revenue contributions from sources worldwide.

Current Price (12/19/2025)	$1.00
Valuation	**$9.00**

OUTLOOK

Dyadic has developed C1, its proprietary fungal expression system that can produce a variety of recombinant proteins. C1 has been commercialized in industrial applications and is in development for production of pharmaceutical grade proteins. C1 exhibits potential to economically produce recombinant proteins, biologic vaccines, virus-like particles, antibodies, Fc-fusion, enzymes, AAVs and other biopharmaceuticals.

In 2015, the company sold its industrial business to DuPont for $75 million and retained the exclusive right to sublicense C1 for use in animal and human pharmaceutical applications. Proceeds from the DuPont sale provided cash for further development of the C1 platform for production of biologics. Additional R&D funding is provided by partners. Dyadic is working with several biopharmaceutical companies and government organizations to validate the technology and has completed a Phase I trial evaluating the effectiveness of its COVID vaccine in 2023.

In the near term, we expect growing R&D revenue as additional partners are added using C1 and Dapibus technology to manufacture their products.

SUMMARY DATA

52-Week High	**2.14**
52-Week Low	**0.71**
One-Year Return (%)	**-47.6**
Beta	**1.2**
Average Daily Volume (sh)	**245,847**
Shares Outstanding (mil)	**36.2**
Market Capitalization ($mil)	**36.2**
Short Interest Ratio (days)	**0.4**
Institutional Ownership (%)	**17.1**
Insider Ownership (%)	**25.2**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**16**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2025 Estimate	**N/A**
P/E using 2026 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**Above Average**
Type of Stock	**Small-Growth**
Industry	**Med-Biomed/Gene**

ZACKS ESTIMATES

Revenue

(In millions of USD)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2024	$0.3 A	$0.4 A	$2.0 A	$0.8 A	$3.5 A
2025	$0.4 A	$1.0 A	$1.2 A	$1.5 E	$4.0 E
2026					$5.5 E
2027					$7.0 E

Earnings per Share

	Q1	Q2	Q3	Q4	Year
2024	-$0.07 A	-$0.07 A	-$0.01 A	-$0.05 A	-$0.20 A
2025	-$0.07 A	-$0.06 A	-$0.06 A	-$0.03 E	-$0.21 E
2026					-$0.11 E
2027					-$0.07 E

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WHAT'S NEW

In the weeks following its third quarter 2025 results, Dyadic Applied BioSolutions, Inc. (NASDAQ: DYAI) announced several new partnerships and partnership expansions that build on its foundation of developing protein solutions for life sciences, food and nutrition and bioindustrial applications. The new arrangements were all announced in December and include a development and commercialization agreement signed with BRIG BIO, a commercial partnership with Opes Diagnostics and an expansion of the arrangement with Fermbox Bio to broaden the range of offered products.

BRIG BIO

On December 1st, Dyadic announced a development and commercialization agreement between it and BRIG BIO to commercialize recombinant bovine alpha-lactalbumin. BRIG is a precision fermentation biotechnology company located in the Netherlands developing and producing recombinant dairy proteins. The company is focused on next-generation recombinant dairy ingredients, with an emphasis on creating animal-free protein alternatives that replicate the functional and nutritional properties of traditional dairy products. The LinkedIn page for the company's founder highlights the company's mission as developing "the next generation of proteins for medical nutrition, produced through precision fermentation, with the goal of improving patient health and nutritional care worldwide."

The joint venture will have BRIG fund development of the alpha-lactalbumin program for which it will receive a global commercialization license to Dyadic's production strains. Dyadic will receive access and milestone payments and long-term shared revenue participation tied to commercial sales. It will also receive co-marketing and sales rights.

The press release notes that alpha-lactalbumin is a valuable whey protein used in infant, clinical and active nutrition. The market is growing at a 7 – 8% compound annual growth rate over the next 10 years based on citations provided in the press release. A further look finds that North America is the largest market for the product and the Asia Pacific is expected to be the fastest growing region. It also finds that alpha lactalbumin is used in premium products to provide an enhanced amino acid profile and functional benefits as well as production efficiency and supply expansion.

Opes Diagnostics Limited

Dyadic issued a press release on December 15th announcing its commercial partnership with Opes Diagnostics Limited. The partnership will support the commercial launch of Dyadic's recombinant human transferrin, bovine transferrin, human FGF and bovine FGF products for use in serum-free cell culture media applications in the life science, food and nutrition markets. Opes will use its existing commercial relationships to identify and engage prospects primarily in Europe, Israel and Asia. The Opes arrangement seeks to accelerate the penetration of Dyadic's microbial expression platforms in research, diagnostics, cultured meat and life sciences biomanufacturing. In anticipation of the announcement, Opes has provided samples to multiple customers that use serum-free cell culture media.

Founded in 2019, Opes is a UK-based supplier of medical goods with an established network of customer relationships. It has been a supplier to laboratory, genetics and molecular diagnostic markets in the UK and Ireland. Opes has provided diagnostic tools, reagents, consumables and related products. It has also provided commercialization support for third party technologies and products seeking to expand into new geographies.

Fermbox

Dyadic and Fermbox announced an expansion of their strategic collaboration on December 17th. The broadening of the agreement seeks to accelerate the commercialization of animal-free proteins and enzymes across life science, food and nutrition and bioindustrial markets. Initiated in 2023, the relationship between the two companies has leveraged the Dapibus platform to produce ethanol and cellulosic sugars for use in the energy industry. Earlier this year, Dyadic announced that the partnership has filled a purchase order for EN3ZYME which has now been completed.

The expansion of the agreement will offer key elements listed below:

- Manufacture of multiple Dyadic-origin products by Fermbox Bio, enabling efficient production and market expansion of sustainable, animal-free proteins and enzymes;
- Dual-Sourcing flexibility, allowing both companies to supply production strains and finished products, produced using C1, Dapibus or alternative microbial systems;
- Integration of Fermbox-developed products into the joint commercial portfolio, where mutually agreed;
- A jointly managed, continuously updated product pipeline, allowing the companies to add new commercial opportunities as markets and customer needs evolve.

The expansion of the relationship is expected to accelerate product development, shorten commercialization timelines, and strengthen Dyadic's reach into high-growth markets. The focus will be on recombinant proteins for life sciences and food and nutrition, where demand for sustainable, economically viable animal-free ingredients is increasing. It will combine Fermbox's manufacturing infrastructure with Dyadic's microbial expression systems to expand offerings into the market.

Fermbox Background
In mid-2025 Dyadic announced that its partner Fermbox Bio would fill a purchase order for a Dapibus-produced product called EN3ZYME. It is a cellulase enzyme cocktail designed for the cost-efficient conversion of pre-treated lignocellulosic biomass into fermentable sugars. It allows for conversion of pre-treated biomass to generate fermentable sugars that can be used as an energy source such as ethanol and cellulosic sugars. Feedstock appropriate to EN3ZYME includes bagasse, cotton stalks, straw, corn husks, cane residue and certain kinds of woods. The partnership with Fermbox was first announced in May 2023

Exhibit I – Growth Drivers

Platform Highlights	C1 Platform (1990's-Present)	Dapibus™ Platform (2021-Present)
Core Strength	High-yield, GMP-ready recombinant expression	GRAS, food-grade production at industrial scale
Applications	Biologics, intermediates, and ingredients for human & animal research, development & manufacturing	Proteins and enzymes for use food, beverage, nutrition, and industrial bioprocessing
Target Markets	Cell culture media, molecular biology reagents	Non-animal dairy; food/nutrition proteins; bio-industrial products
Expected Time to Market	Research-grade 2025, GMP in 2027	Research-grade active, food-grade 2026-27
Strategic Advantage	Higher yields and lower COGS vs. standard platforms - Higher productivity to address margin sensitivities	
Go-to-market strategy	Platform/strain licensing, strategic partnerships, and a hybrid sales model — combining direct-to-customer sales with 3rd-party distributors and OEM channels for scalability.	

Source: Dyadic July 2025 Presentation

Intralink Group Relationship

Dyadic has engaged Intralink Group to expand its commercial presence in Japan and South Korea. They will introduce Dyadic's DNase I (RNase-free) and human transferrin to prospects in these two Asian countries. A campaign will identify, prioritize and engage partners, distributors and contract development and manufacturing organizations (CDMOs). Initial areas of interest include biologics, cell and gene therapy and animal-free products.

Intralink is a specialist business development consultancy that helps companies in the medical technology, diagnostics, life sciences tools & services and digital health domains to expand internationally. They assist companies outside of Asia identify partners for distribution, licensing and sales inside the region. The firm also provides market intelligence and local regulatory insight.

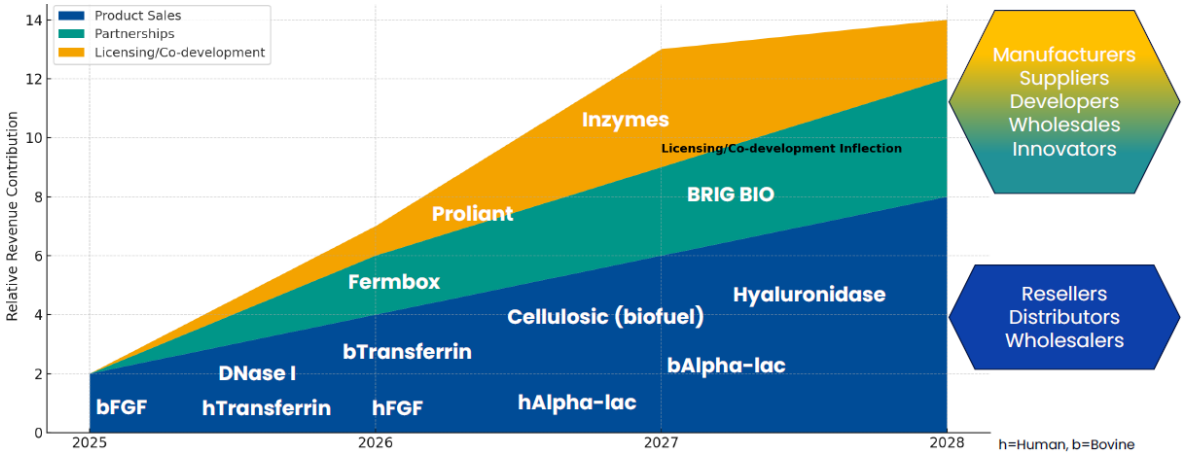
CRISPR/Cas9 License Agreement with ERS Genomics

Dyadic announced a CRISPR/Cas9[1,2] license agreement with ERS Genomics in November 2025. It will grant Dyadic access to ERS' CRISPR/Cas9 patent portfolio. ERS Genomics provides licenses to the CRISPR/Cas9 patent portfolio including numerous uses such as research tools, reagents/kits, cell lines, drug discovery, gene therapies, companion diagnostics among others. With this tool, Dyadic can accelerate strain engineering and pathway optimization to enhance productivity, product quality and innovation across its proprietary bioproduction platforms. The company expects that CRISPR/Cas9 will help accelerate and optimize strain development with its two expression platforms. This will support Dyadic's internal pipeline development and the production strains that it develops for partners.

CRISPR is a family of DNA sequences found in the genomes of prokaryotic organisms. It evolved as a means for bacteria to protect themselves from invading viruses and bacteriophages by inserting pieces of the invading viral DNA into the host genome as a way to remember them. This allowed the adaptive immune system to respond accordingly to a subsequent infection. If the same virus invades again, bacteria transcribe these stored sequences into short RNAs, which guide specialized CRISPR-associated (Cas) proteins to seek out and destroy the matching viral DNA, providing adaptive immunity.

In the laboratory, CRISPR enables scientists to selectively modify the DNA of living organisms with high precision. This has the potential to fix errors in the human genome and treat human disease. The technology can also be used to modify expression systems to refine glycosylation, control transgene expression and optimize protein yields. Dyadic expects that the technology will help accelerate product development.

Exhibit II – Dyadic Revenue Layering Strategy



Source: Dyadic December 2025 Presentation

[1] CRISPR: Clustered regularly interspaced palindromic repeats
[2] CAS9: CRISPR-associated protein 9

Competitive Advantage of C1 Produced Proteins

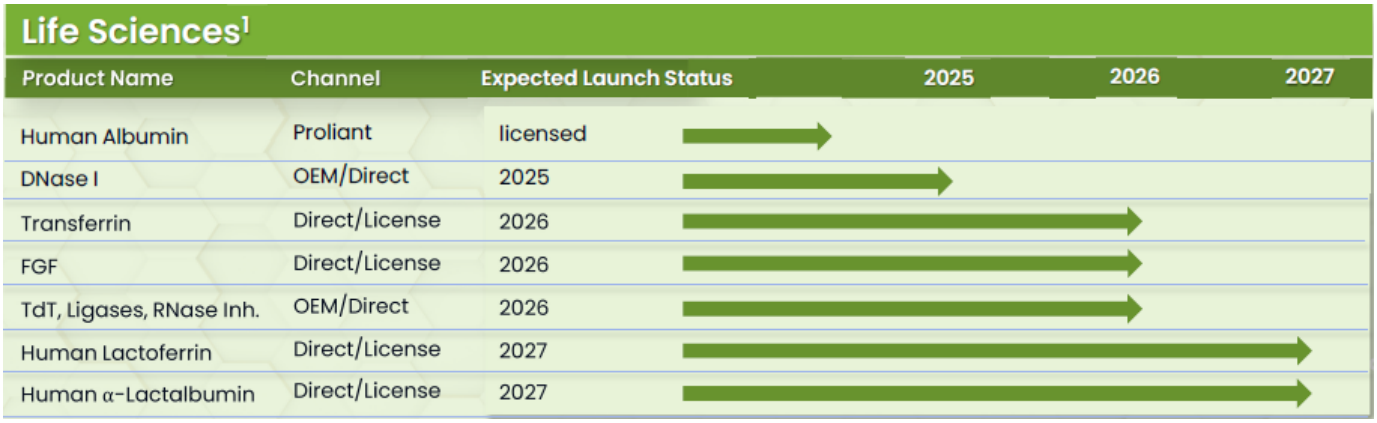
Consumers in the life sciences industry prefer recombinant proteins over animal derived product for their consistency, lack of impurities and sustainability. However, the barrier to wider use has been cost. With C1's efficient production ability, Dyadic asserts that recombinant bovine serum albumin can be manufactured at expense levels competitive with animal-based product. This has the potential of attracting market share from traditional sources as customers of these products recognize the value. There are additional C1-produced proteins[3] that have received Certificates of Analysis[4] and are exposed to attractive markets.

Deoxyribonuclease I (DNase I) is a critical and expensive input into manufacturing messenger RNA, producing proteins and enzymes, removing genomic DNA contamination and cell isolation procedures. In mRNA manufacturing, it helps ensure the purity and quality of the final mRNA product. Dyadic's C1 produced DNase I holds a certificate of analysis and the product is ready for non-GMP production and cGMP process development. Dyadic is seeking a partner to manufacture and commercialize DNase I. It is working with a contract development and manufacturing organization (CDMO) to produce it and sell into small markets. The announced relationship with Intralink is expected to advance DNase I in Asia. DNase I is estimated to be a $300 to $500 million total addressable market.

Transferrin is next in line after DNase I and recent work has shown reliable performance metrics for withstanding temperature extremes in applications. Dyadic is reviewing scale up options and is producing small amounts of the glycoprotein for the research market. Before sales start in earnest, the company must complete the commercial manufacturing process.

Other raw material inputs to the mRNA enzyme market include another $825 million in total addressable market such as TdT terminal transferase, T4 DNA ligase, RNase Inhibitor and T7 RNA polymerase. These markets are served by high-cost *e. coli* expression systems or natural sources, each of which has purity and cost limitations that are largely solved using the C1 expression system. Dyadic has enumerated many of the key products in human health where it can contribute significant benefits.

Exhibit III – Near-Term C1 Product Pipeline

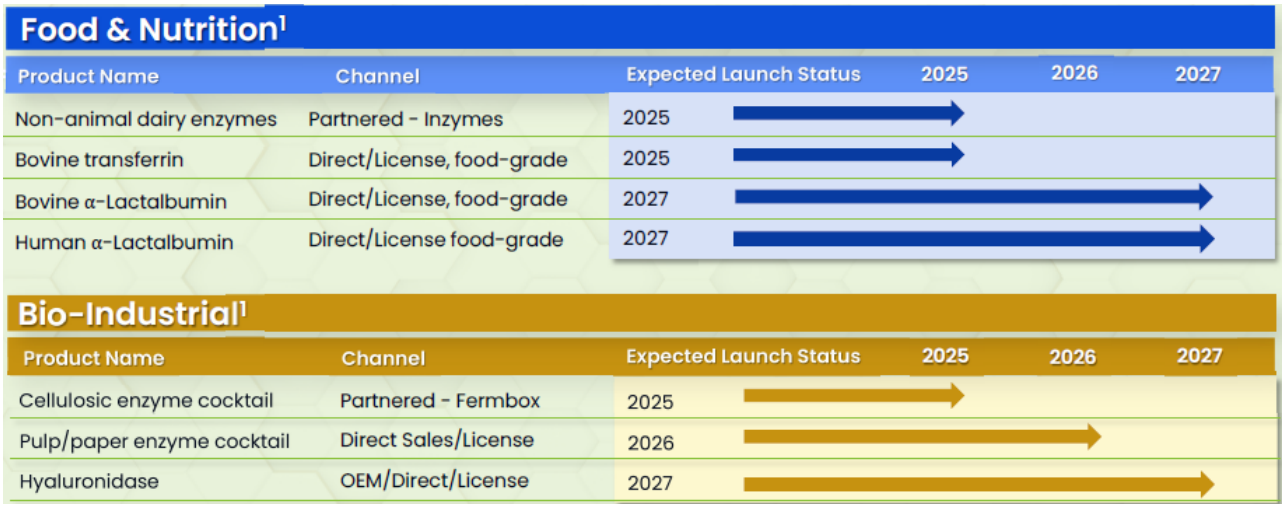


Source: Dyadic July 2025 Presentation

[3] As of the latest update, Dyadic has received a certificate of analysis for DNase I, bovine albumin, bovine transferrin and bovine alpha-lactalbumin

[4] A Certificate of Analysis is a document that verifies that a product meets specified quality and consistency standards. When ensuring that expressed proteins are equivalent to another product (such as a reference protein or biosimilar), the CoA typically includes analytical test results and key quality attributes.

Exhibit IV – Near-Term Dapibus Product Pipeline



Food & Nutrition[1]

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-Industrial[1]

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	→	→	→

Source: Dyadic July 2025 Presentation

Milestones

- Proliant customer outreach for bovine/human albumin – 4Q:24 & 1H:25
- Proliant conducting scale up activities – 1Q:25
- Proliant takes orders for C1 produced product – 1H:25
- Presentation at World Vaccine Congress – April 2025
- Fibroblast growth factors sampling – 2Q:25
- Corporate name change to Dyadic Applied BioSolutions – August 1st, 2025
- Presentations at HC Wainwright, BioProcess International & Sidoti Small Cap Event – September 2025
- Proliant $500,000 productivity milestone paid – September 2025
- VTT Research Contract extended to January 2026 – September 2025
- Proliant ships albumin orders – 2H:25
- Human lactoferrin research & pharmaceutical applications sampling – 2H:25
- License agreement with ERS Genomics - November 2025
- BRIG BIO commercialization agreement – December 2025
- Opes Diagnostics commercial partnership – December 2025
- Fermbox expansion of strategic collaboration – December 2025
- Expanded enzymes (RNase inhibitors/T7 RNA polymerase) development & optimization results – late 2025
- Fermbox enzyme delivery – late 2025
- Launch of recombinant dairy enzyme (Inzymes) – late 2025

Summary

Dyadic has entered into a number of arrangements that allow for the development, commercialization and sale of C1 and Dapibus-produced products. We think that additional agreements will be executed in the near future in a strategy that will stack revenues. The agreements provide Dyadic with numerous partners that can manufacture and distribute these high value proteins around the globe. Fermbox will take on the manufacture and inventory of existing and new products powered by Dyadic's expression systems. Dyadic can also sell directly to customers as part of its arrangements. As the company increases its financial strength, we think Dyadic can attract sufficient financial capital to fund production runs and obtain better economics. We are eager to see the magnitude of product revenues generated when full year 2025 results are shared and are eager to hear guidance on what 2026 holds in store. We maintain our valuation of $9 per share.

PROJECTED FINANCIALS

Dyadic Applied BioSolutions, Inc. - Income Statement

Dyadic International, Inc.	2024 A	Q1 A	Q2 A	Q3 A	Q4 E	2025 E	2026 E	2027 E
Total Revenues	**$3.5**	**$0.4**	**$1.0**	**$1.2**	**$1.5**	**$4.0**	**$5.5**	**$7.0**
YOY Growth	21%	18%	150%	-41%	84%	15%	37%	27%
Cost of Revenue	$1.2	$0.3	$0.6	$1.0	$0.6	$2.5	$2.8	$0.0
R&D	$2.0	$0.5	$0.6	$0.6	$0.6	$2.3	$2.5	$5.5
G&A	$6.1	$1.6	$1.4	$1.5	$1.4	$5.9	$4.8	$4.8
Foreign Currency Exchange	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Income from operations	($5.9)	($2.0)	($1.7)	($1.9)	($1.1)	($6.7)	($4.6)	($3.3)
Operating Margin	*-169%*	*-509%*	*-179%*	*-165%*	*-73%*	*-167%*	*-84%*	*-47%*
Interest Income	$0.5	$0.1	$0.0	$0.1	$0.1	$0.3	$0.5	$0.5
Other	($0.4)	($0.1)	($0.1)	($0.1)	$0.0	($0.3)	$0.0	$0.0
Pre-Tax Income	($5.8)	($2.0)	($1.8)	($2.0)	($1.0)	($6.8)	($4.1)	($2.8)
Provision for Income Tax	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Tax Rate	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Net Income	**($5.8)**	**($2.0)**	**($1.8)**	**($2.0)**	**($1.0)**	**($6.8)**	**($4.1)**	**($2.8)**
Net Margin	*-166%*	*-515%*	*-186%*	*-170%*	*-67%*	*-168%*	*-75%*	*-40%*
Reported EPS	**($0.20)**	**($0.07)**	**($0.06)**	**($0.06)**	**($0.03)**	**($0.21)**	**($0.11)**	**($0.07)**
Shares Outstanding	29.32	29.89	30.10	34.51	36.50	32.75	37.00	38.00

Source: Company Filing // Zacks Investment Research, Inc. Estimates

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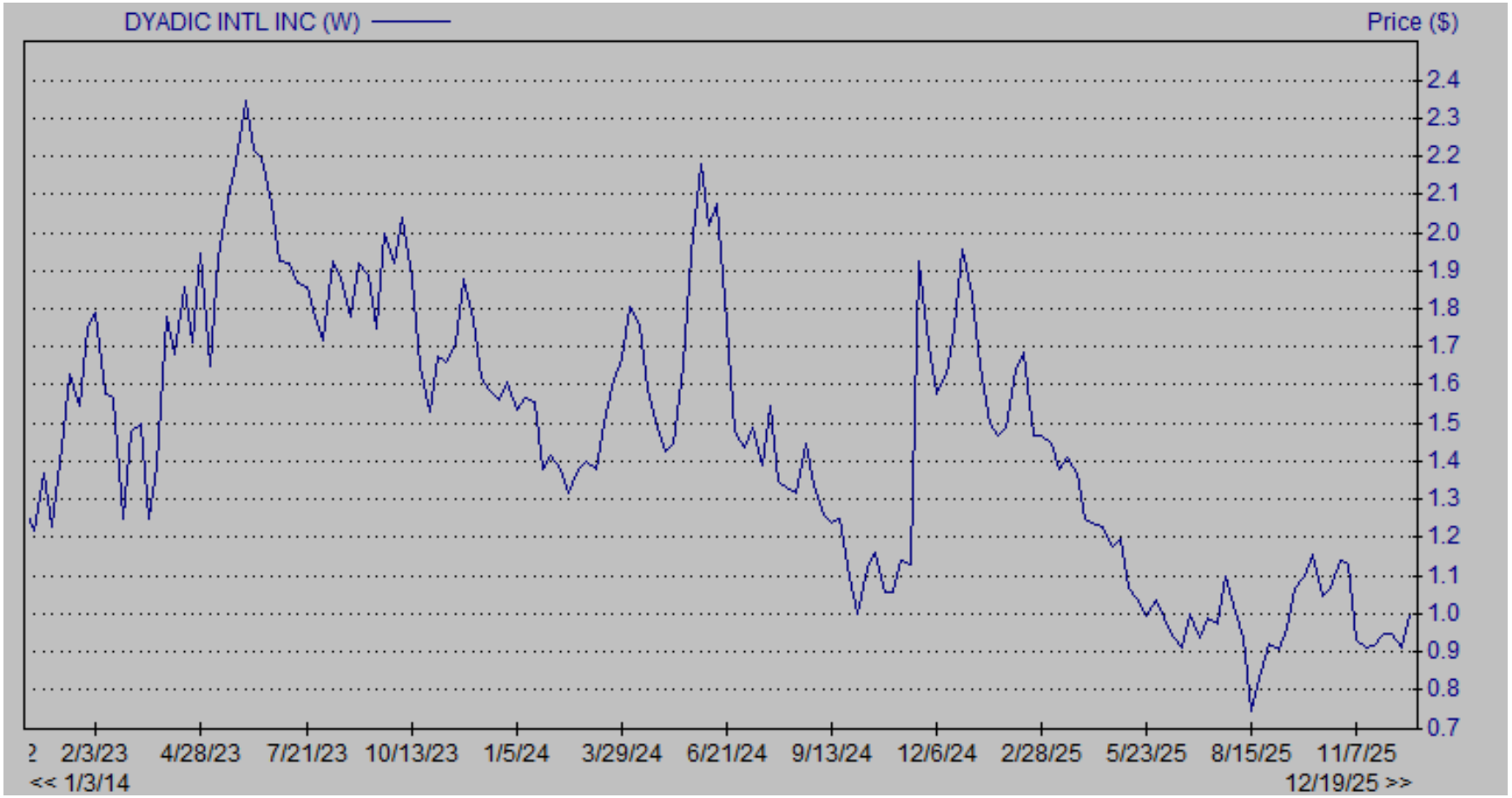
HISTORICAL STOCK PRICE

Dyadic Applied BioSolutions, Inc. – Share Price Chart[5]



[5] Source: Courtesy of barchart.com

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