Dyadic Reports 2023 Full Year Results and Recent Company Progress

- *Closed a $6.0 million convertible note in a private placement, with a conversion price of $1.79 and no warrants*
- *Reported positive topline data from First-In-Human Phase 1 trial demonstrated clinical safety and antibody response for DYAI-100 a recombinant protein receptor binding domain (RBD) booster vaccine candidate for protection against COVID-19 infection*
    - *Entered into several fully funded vaccine and antibody projects covering more than twelve targets since announcing topline clinical safety data from First-In-Human Phase 1 trial*
- *Executed a term sheet to utilize our microbial protein production platforms to develop production strains for the production of recombinant serum albumin initially for diagnostic and cell culture applications*
- *Announced strategic partnership to develop affordable rabies prophylactics and vaccines using C1-cell protein production platform*
- *Advanced collaboration with Israel Institute for Biological Research (IIBR) targeting bio-threats and emerging disease solutions*
- *Announced a partnership with Cygnus Technologies to develop and supply a C1 Host Cell Protein ELISA Assay Kit to support batch release testing for C1-based products*
- *Reported multiple new research and license agreements with Massachusetts General Hospital, bYoRNA (for mRNA), and others*
- *Expanded collaboration with Phibro/Abic to develop vaccines and treatments for companion and livestock animal diseases*
- *Published manuscript of preclinical studies on C1 produced monoclonal antibody in non-human primate and hamsters in prestigious peer-reviewed journal Nature Communications*
- *Cash and investment grade securities of $13.3m, including the $6.0 million convertible note financing*
- *Changes in board and management leadership roles have been reported in a separate press release this morning*
- *Financial results and business update conference call scheduled for 5:00 pm ET today*

JUPITER, Fla., March 28, 2024 (GLOBE NEWSWIRE) — Dyadic International, Inc. (“Dyadic”, “we”, “us”, “our”, or the “Company”) (NASDAQ: DYAI), a biotechnology company focused on the efficient large-scale manufacture of proteins for use in human and animal vaccines and therapeutics and for use in non-pharmaceutical applications including food, nutrition, and wellness, today announced its financial results for the year end 2023 and highlighted recent Company progress.

“In 2023, Dyadic achieved significant milestones in unlocking the potential of its microbial platforms. One of the highlights was the successful completion of a Phase 1 clinical trial, with positive topline data affirming the safety of Dyadic’s C1 platform in humans,” said Mark

Emalfarb, Dyadic's President and Chief Executive Officer. "We believe this milestone not only establishes the safety of our platform but also lays a solid foundation for C1 technology's future applications in human and animal vaccines and therapeutics. Additionally, our progress made across pharmaceutical and non-pharmaceutical market segments, including human health, animal health, and alternative proteins, underscores Dyadic's commitment to innovation and its ability to address diverse areas of need within the biotechnology and food industries. We are grateful for the collaborative efforts of our partners and the dedication of our management team and staff providing invaluable contributions to Dyadic's success. Dyadic's achievements in 2023 reflect our commitment to advancing our microbial platforms for various applications and its dedication to improving human and animal health while also addressing the challenges of sustainable food production."

Mr. Emalfarb continued, "As we move forward into 2024, our company remains committed to advancing the Dapibus™ platform, specifically tailored for non- pharmaceutical applications in sectors including food, nutrition, health, and wellness. To achieve this objective, we have refined our business development strategies, concentrating on core areas where our technologies can make the most significant impact in the shortest amount of time. This approach involves targeting multiple core verticals simultaneously and exploring new opportunities that align with our overall strategy."

"In addition to operational advancements, we also strengthened our financial position with the issuance of $6.0 million in convertible notes which will be used to accelerate and exploit our strategic objective of near-term revenue generating products and opportunities for pharmaceutical and non-pharmaceutical applications. We believe that we are well-positioned, both financially and scientifically, to execute our strategic plan with enhanced capabilities and resources. We are excited about the prospects ahead and remain dedicated to delivering value to our customers and stakeholders," Mr. Emalfarb concluded.

Dyadic is committed to empowering its partners and collaborators in the development of effective antigens, antibodies and other therapeutic proteins for the prevention, diagnosis, and treatments worldwide. Through an enhanced global outreach strategy, Dyadic is actively advancing its proprietary microbial platform technology to develop products such as recombinant human and bovine albumin, alongside biologic vaccines, antibodies, and other biopharmaceutical solutions. By building a robust pipeline of opportunities, Dyadic believes it can significantly impact global health, fostering a brighter and healthier future through innovation and strategic collaboration.

Recent Company Progress

Corporate Events

- On March 8, 2024, the Company issued an aggregate principal amount of $6.0 million of its 8.0% Senior Secured Convertible Promissory Notes due March 8, 2027 (the

"Convertible Notes") in a private placement in reliance on the exemption from registration provided by Section 4(a)(2) of the Securities Act of 1933, as amended. The purchasers of the Convertible Notes include immediate family members and family trusts related to Mark Emalfarb, our President and Chief Executive Officer and a member of our Board of Directors, including The Francisco Trust, an existing holder of more than 5% of the Company's outstanding common stock.
- The Company announced changes in the leadership roles of the Board and senior management team. Details of these changes are included in a separate press release issued this morning, March 28, 2024.

DYAI-100 Phase 1 Clinical Trial

DYAI-100, a C1-SARS-CoV-2 recombinant protein RBD vaccine candidate, is the first C1-expressed protein tested in humans. The Phase 1 randomized, double-blind, placebo-controlled trial was designed as a first-in-human trial to assess the clinical safety and antibody response of DYAI-100, produced using the C1 platform and administered as a booster vaccine at two single dose levels in healthy volunteers. Following the regulatory clearance from the South African Health Products Regulatory Authority (SAHPRA), the trial was initiated in 1Q 2023 with the last patient visit occurring in 3Q 2023. On November 29, 2023, the Company announced the top-line safety results, indicating that the study has met its primary endpoint that both the low and high dose levels of the vaccine are safe and well tolerated among participants. Additionally, the vaccine has been shown to induce immune responses at both dose levels, suggesting its potential efficacy in generating protective immunity against the target virus.

Biopharmaceutical Programs

- On March 25, 2024, the Company entered into a funded research collaboration with a top ten pharmaceutical company to develop a vaccine antigen and a monoclonal antibody produced from the C1 technology.
- On March 15, 2024, the Company expanded its collaboration with Phibro Animal Health/Abic Biological Laboratories Ltd to develop vaccines and treatments for companion and livestock animal diseases.
- In March 2024, a manuscript of preclinical studies on C1 produced monoclonal antibody in non-human primates and hamsters was published in prestigious peer-reviewed journal Nature Communications. A non-human primate challenge study completed dosing of a C1 produced COVID-19 monoclonal antibody (mAb) that had previously demonstrated broad neutralization and protection against Omicron (BA.1 and BA.2) and the other earlier variants of concern in hamsters. Preliminary results obtained from the challenge study with the SARS-CoV-2 Delta virus on non-human primates demonstrated potential high protection. This was the first time a C1-produced monoclonal antibody was used in a non-human primate study validating the safety and efficacy of a C1

produced antibody for infectious diseases.

- At the NIIMBL conference in February 2024, the Company showcased our project data and research results generated from the NIIMBL Grant received by the Company under the previously announced White House's American Rescue Plan.
- On February 28, 2024, the Company's Dutch subsidiary, Dyadic Nederland BV, entered into a strategic partnership agreement and collaboration with Rabian BV ("Rabian"), a Dutch innovative SME founded by experienced entrepreneurs and vaccine scientists. Awarded by Eurostars for the AVATAR project, a part of the European Partnership on Innovative SMEs, and co-funded by the European Union through Horizon Europe. Rabian will use the total funding of approximately €1.7 million leveraging its expertise in virology to develop a rabies vaccine using Dyadic's C1 protein production platform to tackle the challenges posed by rabies, particularly in lower- and middle-income countries. Dyadic is expected to receive an equity stake in Rabian, fully funded research and development costs, and specified product milestones and royalties upon commercialization.
- On February 21, 2024, the Company announced it has advanced its collaboration with the Israel Institute for Biological Research (IIBR) and its commercial arm Life Science Research Israel (LSRI), to target emerging disease solutions. This partnership aims to leverage Dyadic's expertise in microbial platforms for flexible scale protein bioproduction and the IIBR's antibodies and antigens discovery capabilities to develop and manufacture innovative solutions for addressing emerging diseases and potential bio-threats. Through this collaboration, both parties are working towards the development of effective treatments and vaccines to combat global health challenges with the intention of future commercialization (to date, the framework is non-binding and subject to the execution of a binding agreement to be negotiated by the parties) through collaborative out-licensing initiatives.
- On February 13, 2024, the Company announced a strategic partnership with Cygnus Technologies®, part of Maravai LifeSciences® (Nasdaq: MRVI), which has developed the C1 Host Cell Protein ELISA Kit for the quality release of products produced using Dyadic's protein expression platforms.
- On February 6, 2024, the Company announced it has signed a fully funded evaluation agreement including a commercial option with an undisclosed leading global biopharmaceutical company to design and produce recombinant proteins using Dyadic's C1 microbial protein production platform.
- On October 25, 2023, the Company announced that it has entered into a new research collaboration with the Vaccine and Immunotherapy Center ("VIC") at Massachusetts General Hospital to express vaccine antigens for influenza A and other infectious diseases, as part of a US $5.88 million award from the Department of Defense ("DoD").
- On September 26, 2023, the Company entered into a development and commercialization agreement with bYoRNA combining bYoRNA's novel eukaryotic "bio" RNA platform with Dyadic's industrially proven C1 protein production platform to

provide the pharmaceutical industry with a potentially more cost- efficient platform for manufacturing large quantities of lower cost mRNA, enabling access to mRNA vaccines and drugs to a broader global population.

Non-pharmaceutical Programs

Dyadic is advancing a pipeline of differentiated product candidates that leverage its microbial protein production platforms, including Dapibus™ which have demonstrated the ability and efficiency to enable the rapid development and large-scale manufacture of proteins at low cost in a wide range of non-pharmaceutical applications and commercial use.

- **Cell Culture Media Products**
  - Recombinant Serum Albumin: In March 2024, the Company executed a term sheet with a large global albumin manufacturer and distributor to develop and license Dyadic's recombinant serum albumin initially for diagnostic and research-grade purposes. The Company's animal-free recombinant serum albumin projects were initiated in late 2022 using Dyadic pharmaceutical cell lines for use in potential therapeutic, product development, research, and/or diagnostic human and animal pharmaceutical applications. Animal-free recombinant serum albumin projects were initiated for use in potential non-pharmaceutical applications such as a component of cell culture media in nutrition, health, and food. The Company has completed the initial analysis of its recombinant albumin products and has Certificates of Analysis for recombinant human and bovine albumin that demonstrate comparability to reference standards used in the testing.
  - In March 2024, the Company entered into a co-promotion agreement with Biftek Co. for the promotion of growth media supplement for cell culture.
  - The Company is undergoing a project to produce recombinant transferrin for use in cell culture media for the alternative protein industry, and initial expression in our microbial platform was successful.
  - The Company is currently sampling recombinant bovine albumin for application testing as growth media for the cultured meat industry.
- **Non-animal Dairy Products**
  - In September 2023, the Company entered into a development and exclusive license agreement to commercialize certain non-animal dairy enzymes used in the production of food products using Dapibus™ and received an upfront payment of $0.6 million in October 2023. The Company believes it has achieved the specified target yield level required for a milestone payment.
  - The Company has developed a highly productive strain and is actively sampling recombinant alpha-lactalbumin, a whey protein, with interested collaborators.
  - The Company has initiated a beta-lactoglobulin animal-free recombinant whey protein project in early 2024.
  - The Company is undergoing a recombinant lactoferrin project, expected to begin

sampling the product in the late second or early third quarter of 2024.
    - The Company has expressed 4 casein proteins and is in active discussions with potential interested collaborators.
- **Bio Industrial Products**
    - The Company has developed a number of enzymes that have the potential for use in multiple industries, such as nutrition, biofuels and biorefining.

Financial Highlights

Cash Position: As of December 31, 2023, cash, cash equivalents, and the carrying value of investment-grade securities, including accrued interest, were approximately $7.3 million compared to $12.7 million on December 31, 2022. For the year ended December 31, 2023, the Company received a total of approximately $1.3 million in connection with the sale of Alphazyme LLC. On March 8, 2024, the Company raised $6.0 million in a private placement of convertible notes from existing shareholders.

Revenue: Total revenue for the year ended December 31, 2023, decreased to approximately $2,899,000 compared to $2,930,000 for the year ended December 31, 2022. The decrease in revenue was due to higher individual contract amounts on certain research funding during 2022.

Cost of Revenue: Cost of research and development revenue for the year ended December 31, 2023, decreased to approximately $1,976,000 compared to $2,123,000 for the year ended December 31, 2022. The decrease in cost of revenue was due to higher individual contract amounts on certain research funding during 2022.

R&D Expenses: Research and development expenses for the year ended December 31, 2023, decreased to approximately $3,297,000 compared to $4,501,000 for the year ended December 31, 2022. The decrease primarily reflected the winding down of activities related to the Company’s Phase 1 clinical trial of DYAI-100 COVID-19 vaccine candidate.

G&A Expenses: General and administrative expenses for the year ended December 31, 2023, decreased to approximately $5,817,000 compared to $6,422,000 for the year ended December 31, 2022. The decrease principally reflected a decrease in management incentives of $466,000, business development and investor relations costs of
$219,000, and legal expenses of $39,000, partially offset by increases in insurance premiums of $96,000, and other increases of $24,000.

Interest Income: Interest income for the year ended December 31, 2023, increased to approximately $417,000 compared to $180,000 for the year ended December 31, 2022. The increase was primarily due to an increase in interest rates and yield on the Company’s investment-grade securities, which are classified as held-to-maturity.

Other Income: For the year ended December 31, 2023, the Company had a gain of approximately $1,018,000 from the sale of the Company's equity interest in Alphazyme, LLC. For the year ended December 31, 2022, the Company received a settlement payment of $250,000 from the termination of a proposed license and collaboration.

Net Loss: Net loss for the year ended December 31, 2023, was approximately $6.8 million, or $(0.24) per share, compared to a net loss of $9.7 million, or $(0.34) per share, for the year ended December 31, 2022.

Conference Call Information

Date: Thursday, March 28, 2024 Time: 5:00 p.m. Eastern Time
Dial-in numbers: Toll Free: 877-407-0784
International: 201-689-8560
Conference ID: 13743567

Webcast Link: https://viavid.webcasts.com/starthere.jsp?ei=1650830&tp_key=065a3e040c

An archive of the webcast will be available within 24 hours after completion of the live event and will be accessible on the Investor Relations section of the Company's website at www.dyadic.com. To access the replay of the webcast, please follow the webcast link above.

About Dyadic International, Inc.

Dyadic International, Inc. is a biotechnology company focused on the efficient large-scale manufacture of proteins for use in human and animal vaccines and therapeutics and for use in non-pharmaceutical applications including food, nutrition, and wellness.

Dyadic's gene expression and protein production platforms are based on the highly productive and scalable fungus *Thermothelomyces heterothallica* (*formerly Myceliophthora thermophila).* Our lead technology, C1-cell protein production platform, is based on an industrially proven microorganism (named C1), which is currently used to speed development, lower production costs, and improve performance of biologic vaccines and drugs at flexible commercial scales for the human and animal health markets. Dyadic has also developed the Dapibus™ filamentous fungal based microbial protein production platform to enable the rapid development and large-scale manufacture of low-cost proteins, metabolites, and other biologic products for use in non-pharmaceutical applications, such as food, nutrition, and wellness.

With a passion to enable our partners and collaborators to develop effective preventative and therapeutic treatments in both developed and emerging countries, Dyadic is building an active pipeline by advancing its proprietary microbial platform technologies, including our lead asset DYAI-100 COVID-19 vaccine candidate, as well as other biologic vaccines, antibodies, and other biological products.

To learn more about Dyadic, please visit http://www.dyadic.com.

Safe Harbor Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, including those regarding Dyadic International's expectations, intentions, strategies, and beliefs pertaining to future events or future financial performance, such as the success of our clinical trial and interest in our protein production platforms, our research projects and third-party collaborations, as well as the availability of necessary funding.

Forward-looking statements generally can be identified by use of the words "expect," "should," "intend," "anticipate," "will," "project," "may," "might," "potential," or "continue" and other similar terms or variations of them or similar terminology. Forward-looking statements involve many risks, uncertainties or other factors beyond Dyadic's control. These factors include, but are not limited to, the following: (i) our history of net losses; (ii) market and regulatory acceptance of our microbial protein production platforms and other technologies; (iii) competition, including from alternative technologies; (iv) the results of nonclinical studies and clinical trials; (v) our capital needs; (vi) changes in global economic and financial conditions; (vii) our reliance on information technology; (viii) our dependence on third parties; (ix) government regulations and environmental, social and governance issues; and (x) intellectual property risks.

For a more complete description of the risks that could cause our actual results to differ from our current expectations, please see the section entitled "Risk Factors" in Dyadic's annual reports on Form 10-K and quarterly reports on Form 10-Q filed with the SEC, as such factors may be updated from time to time in Dyadic's periodic filings with the SEC, which are accessible on the SEC's website and at www.dyadic.com. All forward-looking statements speak only as of the date made, and except as required by applicable law, Dyadic assumes no obligation to publicly update any such forward-looking statements for any reason after the date of this press release to conform these statements to actual results or to changes in our expectations.

Contact:

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DYADIC INTERNATIONAL, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF OPERATIONS

Years Ended December 31,

	2023	2022
Revenues:		
Research and development revenue	$ 2,545,865	$ 2,683,244
License revenue	352,941	247,059
Total revenue	2,898,806	2,930,303
Costs and expenses:		
Costs of research and development revenue	1,975,849	2,123,193
Research and development	3,297,266	4,501,365
General and administrative	5,817,013	6,421,505
Foreign currency exchange loss	38,417	49,918
Total costs and expenses	11,128,545	13,095,981
Loss from operations	(8,229,739)	(10,165,678)
Other income:		
Interest income	416,686	180,420
Gain on sale of Alphazyme	1,017,592	–
Other income	–	250,000
Total other income	1,434,278	430,420
Net loss	$ (6,795,461)	$ (9,735,258)
Basic and diluted net loss per common share	$ (0.24)	$ (0.34)
Basic and diluted weighted-average common shares outstanding	28,798,833	28,364,482

See Notes to Consolidated Financial Statements in Dyadic's Annual Report on Form 10-K filed with Securities and Exchange Commission on March 28, 2024.

DYADIC INTERNATIONAL, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

Assets	December 31,	
Current assets:	**2023**	**2022**
Cash and cash equivalents	$ 6,515,028	$ 5,794,272
Short-term investment securities	748,290	6,847,270
Interest receivable	10,083	58,285
Accounts receivable	466,159	330,001
Prepaid expenses and other current assets	327,775	392,236
Total current assets	8,067,335	13,422,064
Non-current assets:		
Operating lease right-of-use asset, net	141,439	–
Investment in Alphazyme	–	284,709
Other assets	10,462	6,045
Total assets	$ 8,219,236	$ 13,712,818
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 656,445	$ 1,276,313

Accrued expenses	1,057,164	955,081
Deferred research and development obligations	490,113	40,743
Deferred license revenue, current portion	–	176,471
Operating lease liability, current portion	48,059	–
Total current liabilities	2,251,781	2,448,608
Deferred license revenue, net of current portion	–	176,471
Operating lease liability, net of current portion	88,870	–
Total liabilities	2,340,651	2,625,079
Commitments and contingencies (Note 5)		
Stockholders' equity:		
Preferred stock, $.0001 par value:		
Authorized shares – 5,000,000; none issued and outstanding	–	–
Common stock, $.001 par value:		
Authorized shares – 100,000,000; issued shares – 41,064,563 and 40,816,602, outstanding shares – 28,811,061 and 28,563,100 as of December 31, 2023 and 2022, respectively	41,065	40,817
Additional paid-in capital	105,044,756	103,458,697
Treasury stock, shares held at cost – 12,253,502	(18,929,915)	(18,929,915)
Accumulated deficit	(80,277,321)	(73,481,860)
Total stockholders' equity	5,878,585	11,087,739
Total liabilities and stockholders' equity	$ 8,219,236	$ 13,712,818

See Notes to Consolidated Financial Statements in Dyadic's Annual Report on Form 10-K filed with Securities and Exchange Commission on March 28, 2024.