

## **Dyadic Introduces Novel Method to Produce Synthetic Cannabinoids and Precursors Utilizing C1 Cell Line Production Platform and Patent Pending Process**

JUPITER, Fla., Jan. 20, 2022 (GLOBE NEWSWIRE) — Dyadic International, Inc. (“Dyadic”, “we”, “us”, “our”, or the “Company”) (NASDAQ: DYAI), a global biotechnology company focused on further improving, applying and deploying its proprietary C1-cell protein production platform to accelerate development, lower production costs, while enhancing commercial scales to improve access to biologic products in animal and human health, today announced its industrially proven C1-cells have been engineered to demonstrate the potential to manufacture therapeutically viable and commercially useful cannabis compounds including cannabidiol (CBD) and its precursors using synthetic biology. C1-cells have the potential to be an easy way to produce pure synthetic cannabinoids for commercial use cheaper and more effectively as compared to conventional extraction methods utilizing hemp and the marijuana plant, *Cannabis sativa*.

“For the consumer, the potential benefits are high-quality, low-cost CBD, other forms of cannabinoids and THC. You can get exactly what you want from the C1-cells,” said Dr. Ronen Tchelet, Dyadic’s Chief Scientific Officer. Dr. Tchelet continued, “Filamentous fungal cell factories are expected to be more environmentally friendly and less energy intensive than growing the plant and separating out the psychoactive and non-psychoactive ingredients. They may also yield cannabinoid derivatives with unexpected medical uses. Interest in CBD and other forms of cannabinoids has widened as earlier studies have demonstrated the bioactive effects of CBD in animals and humans through numerous CBD receptor pathways. In particular, in the immune system which has demonstrated mediating therapeutic effects related to inflammation in animal models. Cannabinoids and preparations of Cannabis material have recently found application as therapeutics for chronic pain, multiple sclerosis, cancer-associated nausea and vomiting, weight loss, appetite loss, spasticity, and other conditions. It has recently been reported that two cannabinoid acids, CBGA and CBDA, commonly found in hemp varieties of cannabis can bind to the spike protein of coronavirus which may help to prevent infection of human cells. The study also reported that cannabigerolic acid and cannabidiolic acid were equally effective against the SARS-CoV-2 alpha variant B.1.1.7 and the beta variant B.1.351. The study from which these findings were derived was conducted in collaboration with scientists at the Oregon Health & Science University and recently published by the ‘Journal of Natural Products.’”

While synthetic cannabinoid compounds have been approved by the FDA, the chemical synthesis is relatively costly, and can involve the use of chemicals that are not environmentally friendly, and, most importantly, various chemically synthesized cannabinoids have been classified as less pharmacologically active as those extracted from plants such as the sativa strain of cannabis.

Dyadic's synthetic biology cannabinoid C1 production process has the potential to develop commercially viable biological methods of producing CBD, such as cannabigerolic acid (CBGA), cannabigerovarinic acid (CBGVA), tetrahydrocannabinolic acid (THCA), cannabidiolic acid (CBDA), and cannabidivarinic acid (CBDVA) and uses thereof for producing said precursors and cannabinoids.

"We are excited to introduce a novel synthetic production method of producing CBD and precursor molecules from filamentous fungi. As with other commercially proven applications which have been improved using Dyadic's C1 production platform, there are potential distinct advantages over naturally extracting CBD and other cannabinoids from plants. We believe the Company's C1 production platform can be used to produce a purer, regulatory compliant end product that is not only economical, but more environmentally friendly as compared to conventional plant derived cannabinoid production processes. We also believe that by using synthetic biology to further engineer and optimize the production of C1-cells to produce CBD, other cannabinoids and THC will generate great interest in light of the burgeoning potential uses for CBD and other cannabinoids in animal and human health, including medical and recreational marijuana and cannabinoid products, such as CBD," said Mr. Emalfarb, Dyadic's Chief Executive Officer.

"Our decision to engineer C1-cells for the production of CBD and other cannabinoids is part of the Company's synthetic biology programs, and as part of Dyadic's 2022 strategic operating plan, we are focused across three core business verticals: (i) human health with a focus on infectious disease, including COVID-19, (ii) noninfectious diseases in human and animal health, and (iii) other biological products including enzymes and metabolites," said Joe Hazelton, Dyadic's Chief Business Officer. "Additionally, as we look at the year ahead, Dyadic intends to further advance and develop our pipeline of assets, both internally and through joint ventures, licensing, partnerships, and other collaborations," concluded Mr. Hazelton.

### **About Dyadic International, Inc.**

Dyadic International, Inc. is a global biotechnology company that is developing what it believes will be a potentially significant biopharmaceutical gene expression platform based on the fungus *Thermothelomyces heterothallica* (formerly *Myceliophthora thermophila*), named C1. The C1 microorganism, which enables the development and large-scale manufacture of low-cost proteins, has the potential to be further developed into a safe and efficient expression system that may help speed up the development, lower production costs and improve the performance of biologic vaccines and drugs at flexible commercial scales. Dyadic is using the C1 technology and other technologies to conduct research, development and commercial activities for the development and manufacturing of human and animal vaccines and drugs, such as virus like particles (VLPs) and antigens, monoclonal antibodies, Fab antibody fragments, Fc-Fusion proteins, biosimilars and/or biobetters, and other therapeutic proteins. Certain other research activities are ongoing, which include the

exploration of using C1 to develop and produce certain metabolites and other biologic products. Dyadic pursues research and development collaborations, licensing arrangements and other commercial opportunities with its partners and collaborators to leverage the value and benefits of these technologies in development and manufacture of biopharmaceuticals. As the aging population grows in developed and undeveloped countries, Dyadic believes the C1 technology may help bring biologic vaccines, drugs, and other biologic products to market faster, in greater volumes, at lower cost, and with new properties to drug developers and manufacturers, and improve access and cost to patients and the healthcare system, but most importantly save lives.

Please visit Dyadic's website at <http://www.dyadic.com> for additional information, including details regarding Dyadic's plans for its biopharmaceutical business.

### **Safe Harbor Regarding Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements other than statements of historical fact are forward-looking. Examples of forward-looking statements include, but are not limited to, statements regarding Dyadic's expectations, intentions, strategies, and beliefs pertaining to future events or future financial performance. Forward-looking statements generally can be identified by use of the words "expect," "should," "intend," "aim," "anticipate," "believe," "will," "project," "may," "might," "potential," "pursue," or "continue" and other similar terms or variations of them or similar terminology. However, not all forward-looking statements contain these words. Actual events or results may differ materially from those in the forward-looking statements because of various important factors, including (1) general economic, political and market conditions; (2) our ability to generate the required productivity, stability, purity, performance, cost, safety and other data necessary to carry out and implement our biopharmaceutical research and business plans and strategic initiatives; (3) our ability to implement and successfully carry out Dyadic's and third parties' research and development efforts; (4) the pharmaceutical and biotech industry, governmental regulatory and other agencies' willingness to adopt, utilize and approve the use of the C1 gene expression platform; and (5) other factors described in the Company's most recent filings with the SEC. Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. The forward-looking statements contained in this press release are made only as of the date hereof, and Dyadic does not intend, and except as required by law assumes no obligation to update publicly any such forward-looking statements, whether because of new information, future events or otherwise. 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 Securities and Exchange Commission (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 [www.dyadic.com](http://www.dyadic.com).

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