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Artelo Biosciences Announces Data Supporting Broad Potential Utility of its FABP Inhibitor Platform

Inhibition of FABP5 Demonstrates Activity in Cancer, Psoriasis, and Anxiety Disorders

Results from Several Research Studies Presented at the Annual ICRS Symposium

SOLANA BEACH, Calif., July 02, 2024 (GLOBE NEWSWIRE) -- [Artelo Biosciences, Inc. \(Nasdaq: ARTL\)](#), a clinical-stage pharmaceutical company focused on modulating lipid-signaling pathways to develop treatments for people living with cancer, pain, dermatologic and neurological conditions, today announced that George Warren, Ph.D., Principal Scientist at Artelo, Myles Osborn, Medicinal Chemist at Artelo, and Matthew Jones, Ph.D. candidate from the Laviolette laboratory at the University of Western Ontario, Canada, each presented results from research studies demonstrating the broad therapeutic potential of Fatty Acid Binding Protein 5 (FABP5) inhibition at the [34th Annual International Cannabinoid Research Society \(ICRS\) Symposium](#). The ICRS Symposium is being held June 30 – July 5, 2024 in Salamanca, Spain.

Targeting FABP5, a promising new approach to treat cancer, was featured in the presentation “Efficacy of ART26.12, a Novel Fatty Acid Binding Protein 5 Inhibitor, in an Orthotopic HCT-116-LUC Human Colon Cancer Model.” Myles Osborn discussed novel preclinical data showing a direct anti-tumoral effect of oral treatment with ART26.12. These data are also supportive of Artelo’s planned development of ART26.12 in chemotherapy-induced peripheral neuropathy, where ART26.12 may be able to aid in treatment of the underlying cancer, in addition to the debilitating effects of painful neuropathies.

Beyond development for pain and cancer, ART26.12 has also shown the potential for therapeutic activity in dermatologic conditions. FABP5 was first identified in psoriatic lesions and there is evidence to suggest that upregulation of FABP5 contributes to the pathology of psoriasis. Regarding the data in his presentation, “A Novel Fatty Acid-binding Protein 5 Inhibitor Shows Efficacy in Preclinical Models of Psoriasis,” George Warren, Ph.D. commented, “We are pleased to share novel data showing that our lead FABP5 inhibitor, ART26.12, demonstrated compelling data in preclinical models of psoriasis. In this study, ART26.12 reduced the severity of histopathological markers of skin damage and reduced markers of oxidative stress, chemokines, cytokines, and keratinocyte proliferation, and increased antimicrobial peptides. Results were obtained using a standard imiquimod mouse model, which demonstrated ART26.12 had similar levels of activity as Sotyktu (deucravacitinib), an oral tyrosine kinase 2 inhibitor approved by the U.S. Food and Drug Administration in 2022 to treat psoriasis. Sales of Sotyktu may reach \$4 billion by the end of the decade, according to Bristol Myers Squibb.”

In addition to ART26.12, another one of Artelo's FABP5 inhibitors was featured in a presentation entitled, "Inhibition of Fatty Acid Binding Protein 5 Prevents Stress-induced Anxiety and Depressive-Like Behavioral Symptoms and Reverses Stress-induced Inhibition of Hippocampal Neurogenesis" where Matthew Jones discussed new results from ongoing studies being conducted at the laboratory of Dr. Steven Laviolette. The data showed that Artelo's FABP5 inhibitor SBF1103 improved depressive-like behaviors in rats after chronic unpredictable stress, associated with increases in markers of neurogenesis, a critical process in which newly formed neural cells are added to the existing neural network. "This new data supports our laboratory's earlier work showing SBF1103 reduces anxiety and increased fear memory extinction. These studies implicate a role for the cannabinoid receptor 2 mediating the effects of FABP5 inhibition in the brain," concluded Jones.

"We are pleased to share the expanding evidence for the potential utility of inhibiting FABP5," stated Gregory D. Gorgas, President and Chief Executive Officer of Artelo. "These important scientific advances show that lipid modulation is a promising therapeutic strategy across multiple diseases where overactivity of the lipidome contributes to the pathology of the disease or where modulation of the lipidome leads to increased levels of analgesic and anxiolytic lipids. We are grateful for the opportunity to share our data and why we believe development of FABP5 inhibitors from our extensive library could have significant impact for a wide range of diseases. We expect to report on first-in-human trials with ART26.12 next year."

About ART26.12

Fatty Acid Binding Proteins (FABPs) are a family of intracellular proteins that chaperone lipids including endocannabinoids and fatty acids. FABP is overexpressed and associated with abnormal lipid signaling in a number of pathologies. ART26.12, Artelo's lead FABP inhibitor, is a potent and selective inhibitor of FABP5 being developed as a novel, peripherally acting, non-opioid, non-steroidal analgesic, with an initial clinical study planned for chemotherapy-induced peripheral neuropathy (CIPN). Beyond ART26.12, Artelo's extensive library of small molecule inhibitors of FABPs have shown therapeutic promise for the treatment of certain cancers, neuropathic and nociceptive pain, and anxiety disorders.

About the International Cannabinoid Research Society

[The International Cannabinoid Research Society](#) (ICRS) is the premier global scientific association with more than 650 international members from 40 countries, all active researchers in the field of endogenous, plant-derived, and synthetic cannabinoids and related bioactive lipids. In addition to acting as a source for impartial information on cannabis and the cannabinoids, the main role of the ICRS is to provide an open forum for researchers to meet and discuss their research. The ICRS Symposium is being held June 30 – July 5, 2024 in Salamanca, Spain.

About Artelo Biosciences

Artelo Biosciences, Inc. is a clinical stage pharmaceutical company dedicated to the development and commercialization of proprietary therapeutics that modulate lipid-signaling pathways including the endocannabinoid system. Artelo is advancing a portfolio of broadly applicable product candidates designed to address significant unmet needs in multiple diseases and conditions, including anorexia, cancer, anxiety, pain, and inflammation. Led by proven biopharmaceutical executives collaborating with highly respected researchers and technology experts, the company applies leading edge scientific, regulatory, and commercial

discipline to develop high-impact therapies. For more information and to view available publications, please visit <https://artelobio.com/science/>.

Forward Looking Statements

This press release contains certain 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 and Private Securities Litigation Reform Act, as amended, including those relating to the Company's product development, clinical and regulatory timelines, market opportunity, competitive position, possible or assumed future results of operations, business strategies, potential growth opportunities and other statement that are predictive in nature. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industry and markets in which we operate and management's current beliefs and assumptions. These statements may be identified by the use of forward-looking expressions, including, but not limited to, "expect," "anticipate," "intend," "plan," "believe," "estimate," "potential," "predict," "project," "should," "would" and similar expressions and the negatives of those terms. These statements relate to future events or our financial performance and involve known and unknown risks, uncertainties, and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include those set forth in the Company's filings with the Securities and Exchange Commission, including our ability to raise additional capital in the future. Prospective investors are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date of this press release. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise, except to the extent required by applicable securities laws.

Investor Relations Contact:

Crescendo Communications, LLC

Tel: 212-671-1020

Email: ARTL@crescendo-ir.com



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