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Artelo Biosciences Presents Comparative Data from Key Preclinical Studies on ART12.11 at the 34th Annual International Cannabinoid Research Society Symposium

Multiple studies confirm ART12.11's superior advantages as a product candidate for the treatment of anxiety related disorders

SOLANA BEACH, Calif., July 03, 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 several presentations about ART12.11, Artelo's proprietary cocrystal combination drug candidate, were delivered at the [34th Annual International Cannabinoid Research Society \(ICRS\) Symposium](#) held June 30 through July 5, 2024 in Salamanca, Spain.

Andrew Yates, Ph.D., Chief Scientific Officer at Artelo, presented results from two studies entitled, "ART12.11, a Novel Cannabidiol: Tetramethylpyrazine Cocrystal, Demonstrates a Unique Pharmacokinetic Profile," and "ART12.11, a Novel Cannabidiol: Tetramethylpyrazine Cocrystal, Demonstrates a Pharmacokinetic Profile Comparable with Epidiolex[®] in Rats," respectively. Matthew Jones, a member of the laboratory of Dr. Steven Laviolette at the University of Western Ontario, Canada, delivered the oral presentation "A Novel Cannabidiol: Tetramethylpyrazine (ART12.11, CBD:TMP) Cocrystal Improves the Efficacy and Bioavailability of Cannabidiol to Induce Anxiolytic and Anti-Depressant Effects."

Rodent pharmacokinetic data demonstrated that oral administration of an aqueous suspension of ART12.11 leads to increased plasma levels of CBD and its metabolites compared to CBD in the same formulation. This pharmacokinetic profile could not be replicated with coadministration of CBD and TMP. Furthermore, orally administered ART12.11 demonstrated similar plasma levels of CBD and its metabolites as an Epidiolex-like formulation in fed rodents. These results were obtained with an unoptimized aqueous suspension of ART12.11. Artelo is currently conducting drug formulation studies in order to optimize the oral solid delivery of ART12.11.

In the pharmacodynamic study performed at the laboratory of Dr. Laviolette, oral administration of ART12.11 significantly reduced a range of anxiety and depressive symptoms in chronically stressed rats. These effects were not significantly observed with

either Cannabidiol (CBD) or Tetramethylpyrazine (TMP) administered alone, or with a co-administration of CBD and TMP, despite CBD dosed alone with three times the amount of CBD used contained in ART12.11.

Dr. Yates commented, "The improved pharmacokinetic and pharmacodynamic properties of ART12.11 are unique to our cocrystal composition and cannot be matched by either compound alone or co-administration of CBD and TMP and we were able to obtain similar exposure as Epidiolex without formulation optimization. Together with our strong and expanding patent position we believe these data support our ongoing development of ART12.11 as a promising treatment for anxiety and depressive disorders."

About ART12.11

ART12.11 is Artelo's wholly owned, proprietary cocrystal composition of cannabidiol (CBD) and tetramethylpyrazine (TMP). Isolated as a single crystalline form, ART12.11 has exhibited better pharmacokinetics and improved efficacy compared to other forms of CBD in nonclinical studies. Superior pharmaceutical properties, including physicochemical, pharmacokinetic, and pharmacodynamic advantages have been observed with ART12.11. Artelo believes a more consistent and improved bioavailability profile may ultimately lead to increased safety and efficacy in humans, thus making ART12.11 a preferred CBD pharmaceutical composition. The US issued composition of matter patent for ART12.11 is enforceable until December 10, 2038 and has now been granted in six additional countries.

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. More information is available, including poster presentations, at www.artelobio.com or follow the Company's progress on Twitter: [@ArteloBio](https://twitter.com/ArteloBio).

About the International Cannabinoid Research Society

[The International Cannabinoid Research Society](http://www.icrsociety.org) (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. Interested parties may follow [@ICRS_Society](https://twitter.com/ICRS_Society) on X.

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.

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