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Artelo Biosciences Announces ART27.13 Achieved Weight Loss Comparable to Semaglutide as a Monotherapy and Doubled Weight Loss in Combination with Semaglutide in a Nonclinical Model of Obesity

Once-daily, oral ART27.13 reduced body weight by approximately 20% in obese mice, matching the weight loss achieved with semaglutide, the active ingredient in Ozempic® and Wegovy®

Combining ART27.13 with semaglutide produced approximately 40% weight loss – double that of semaglutide alone

Results indicate that ART27.13 may possess the profile of a "metabolic regulator" capable of differentially modifying body weight and other parameters depending on the metabolic phenotype being treated

SOLANA BEACH, Calif., Sept. 16, 2026 (GLOBE NEWSWIRE) -- Artelo Biosciences, Inc. **(Nasdaq: ARTL)** ("Artelo" or the "Company"), a clinical-stage pharmaceutical company focused on modulating lipid-signalling pathways to develop treatments for people living with cancer, obesity, pain, dermatologic, or neurological conditions, today announced remarkable results from a nonclinical study of ART27.13, its oral, once-daily, peripherally selective dual cannabinoid receptor agonist, in the diet-induced obesity model widely used to evaluate GLP-1 and other weight-loss medicines. In the study, ART27.13 administered alone produced weight loss comparable to semaglutide, and ART27.13 in combination with semaglutide approximately doubled the weight loss achieved with either agent alone.

Key Findings

- **Weight loss comparable to semaglutide:** In obese mice fed a high-fat diet, ART27.13 as a monotherapy reduced body weight from baseline by approximately 20% over four weeks – essentially mirroring the weight-loss curve of semaglutide.
- **Doubling of weight loss in combination:** Obese mice treated with both ART27.13 and semaglutide lost approximately 40% of their baseline body weight – twice the weight loss of either agent alone – bringing them to the body weight of lean, normal-weight animals.

- **Weight lost was predominantly fat:** Fat loss was greater in the ART27.13 treated groups (~80 % of the total weight loss was fat for both ART27.13 monotherapy or combination with semaglutide and ~70% with semaglutide monotherapy).
- **Lean body mass and body fat were normalized to lean control animals by ART27.13 or semaglutide to similar extents**, and the greatest effects were observed in the combination group of ART27.13 and semaglutide.
- **No effect in lean control animals:** ART27.13 had no effect on body weight, fat mass or lean mass in lean mice fed a standard diet. The weight-loss effect of ART27.13 appears to be specific to the obese state.
- **Weight loss maintained as appetite recovered:** Food consumption in treated obese animals declined initially and then recovered over the course of the study, while body weight remained at its reduced level.
- **Metabolic parameters were favorable for ART27.13:** Other markers of metabolic dysregulation (e.g. liver hypertrophy, cholesterol and glucose handling) were favourable for ART27.13 monotherapy, with the greatest effects shown in the combination with semaglutide.

The findings challenge a long-held assumption in obesity research. For more than two decades, the pharmaceutical industry's approach to cannabinoid receptors in obesity has focused on blocking the CB_1 receptor with antagonists or inverse agonists. Full agonists such as ART27.13 which activate the receptors have largely been avoided. ART27.13 is a highly potent agonist of both the CB_1 and CB_2 receptors that is designed to act in the body's peripheral tissues while minimizing effects in the brain. Its ability to produce weight and fat loss in obese animals therefore represents a new and differentiated pharmacology in the field.

"The prevailing dogma has been that CB_1 antagonism is required for weight loss, so observing semaglutide-like weight loss with a cannabinoid receptor agonist is striking," observed Andrew Yates, Ph.D., Senior Vice President and Chief Scientific Officer of Artelo. "What makes these data especially compelling is the selectivity. In obese animals, ART27.13 drove substantial fat loss and improved body composition, while in lean animals there was no observed effect on weight, appetite or body composition. That is precisely the profile one would want in an obesity therapeutic."

The results are consistent with independent, peer-reviewed research showing that both THC and synthetic cannabinoid receptor agonists can reduce body weight and fat in obese animals while having no effect on body weight or metabolic parameters in lean animals[1,2]. The Artelo data extend those observations to a clinical-stage, orally administered small molecule, with an effect size comparable to the leading GLP-1 medicine.

"The consistency of these results across the initial pilot study and the follow-on study and in every measure we examined – body weight, food consumption, body composition and other metabolic parameters – is what gives us confidence in the signal," said Professor Saoirse O'Sullivan, Ph.D., Vice President of Translational Science at Artelo. "In this nonclinical model, the doubling of weight loss in combination with semaglutide suggests that ART27.13 may work through a mechanism that is complementary to, rather than overlapping with,

GLP-1 receptor agonism. Taken together, we believe the clinical and nonclinical data suggest ART27.13 may act as a peripheral metabolic regulator, promoting weight gain in a wasting state and weight loss in an obese state."

"Based upon prior published research demonstrating ART27.13 ability to protect against cancer-induced skeletal muscle cachexia, we set out to answer a narrow question – whether ART27.13 could help protect muscle in patients taking GLP-1 medicines – and the study provided insight for a much bigger one," added Gregory Gorgas, President and Chief Executive Officer of Artelo. "ART27.13 appears to have a profile that may fill a gap in weight-loss strategies. In the context of a global GLP-1 market that J.P. Morgan has projected could reach $200 billion by 2030, and an industry racing toward oral options and combination regimens, we believe these results warrant further investigation as to the role ART27.13 may play within one of the most important therapeutic categories in medicine. In addition to our ongoing partnering initiatives, this new data with ART27.13 is expected to open up new partnering conversations with pharmaceutical companies active in metabolic disease."

About ART27.13

Initially developed by AstraZeneca plc, ART27.13 is a dual cannabinoid agonist that has been in over seven clinical studies with nearly 300 participants. It is being developed as a once-daily, orally administered agent selectively targeting peripheral CB_1 and CB_2 receptors, enabling systemic metabolic effects while minimizing central nervous system-mediated toxicity. Artelo is conducting a Phase 2 trial named the Cancer Appetite Recovery Study (CAReS) evaluating ART27.13 as a supportive care therapy for cancer patients suffering from anorexia and weight loss. Interim Phase 2 data revealed patients who had lost at least 5% of body weight to be included in CAReS and titrated to the highest ART27.13 dose (1300 µg) achieved an average +6% weight gain over 12 weeks, while patients on placebo lost an additional ~5%. Currently, there is no FDA approved treatment for cancer anorexia cachexia syndrome. In addition to CAReS, ART27.13 is also being evaluated in a Phase 2 study in people with glaucoma, called the DREAM study, investigating whether oral daily treatment can lower intraocular pressure.

About the Diet-Induced Obesity (DIO) Model

The DIO-2 study evaluated ART27.13 in mice with diet-induced obesity, the standard nonclinical model used across the industry to evaluate GLP-1 receptor agonists and other anti-obesity therapies. Obese mice maintained on a high-fat diet were treated with vehicle, semaglutide (20 nmol/kg) s.c., ART27.13 (2.5 µmol/kg) orally, or semaglutide in combination with ART27.13 under three dosing regimens. Lean mice maintained on standard chow were treated with vehicle or ART27.13 to assess effects in non-obese animals. Body weight and food consumption were measured throughout the four-week treatment period, and body composition was assessed by DEXA and MRI imaging. The findings replicate and extend the results of an initial pilot study (DIO-1) in the same model, in which co-treatment with ART27.13 was observed to improve the weight-loss efficacy when used in combination with semaglutide.

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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, with a diversified pipeline addressing significant unmet needs in obesity, anorexia, cancer, anxiety, dermatologic conditions, pain, and inflammation. Led by an experienced executive team collaborating with world-class researchers and technology partners, Artelo applies rigorous scientific, regulatory, and commercial expertise to maximize stakeholder value. More information is available at www.artelobio.com and X: @ArteloBio.

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 statements 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 but not limited to: our ability to raise additional capital in the future; the inherent uncertainties of preclinical and clinical research, including the possibility that results observed in nonclinical animal models may not be predictive of, or replicated in, human clinical trials; the preliminary nature of the study results described in this press release, which remain subject to completion of the full analysis; the early stage of our obesity research program; the uncertainty of patent protection and the potential for intellectual property challenges; the highly competitive nature of the pharmaceutical industry, including the GLP-1, obesity and combination therapy markets; the risk that third-party market projections may not materialize or that the Company may not be able to participate in projected market opportunities; and our ability to enter into partnering or licensing arrangements on acceptable terms, or at all. 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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Source: Artelo Biosciences