

# New Cannabinoid-Based Drug Candidates from Artelo Biosciences Show Promise as Cancer and Mental Health Treatments; Key Data Due Before Year End

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San Diego-based **Artelo Biosciences** [ARTL 1.98%](#) is on a mission to develop new, better therapeutic drugs for cancer anorexia, post-traumatic stress disorder (PTSD), and other conditions that currently lack safe and effective cannabinoid-based treatments. To that end, the clinical-stage biopharmaceutical company has been working on a slew of new treatments that target the endocannabinoid system.

Cannabinoid-based drugs like the ones Artelo Biosciences is developing have recently become the focus of many investors who see the new market as a promising revenue stream. Just this past May, for example, **Jazz Pharmaceuticals** [JAZZ 0.12%](#) completed its [\\$7 billion acquisition of GW Pharmaceuticals](#) (OTCMKTS: GWPRF), the developer behind Epidiolex®, the first FDA-approved CBD-based drug. The move signals a growing interest in cannabinoid-based therapies.

In an interview, [Artelo Biosciences](#) CEO Gregory Gorgas spoke about the company's pioneering research and exciting preliminary results.

Here's what's on the horizon for the Artelo's drug candidates in 2021 and beyond:

## **Appetite-Inducing Treatments for Cancer Anorexia**

Over 60% of advanced cancer patients suffer from a debilitating condition known as cancer anorexia. A severe lack of appetite due to the illness and the effects of chemotherapy leads to dangerously rapid weight loss. It's estimated that as many as half of cancer patients die as a result of this rapid loss of fat and lean body mass, rather than the cancer itself.

There is currently no FDA-approved drug or standard of care for treating cancer anorexia. ART27.13, Artelo's drug candidate for weight loss, aims to fill that urgent, unmet need. The company expects to report topline results before year end from the first segment of the current Phase 1b/2a clinical trial in anorexic cancer patients. Complete efficacy data will follow shortly, expected during the first half of next year.

Prior to Artelo's licensing of ART27.13, the compound's inventor, AstraZeneca [AZN 1.57%](#), had studied it as a pain relief agent in five clinical trials. AZN decided it didn't produce the desired pain relief, but it did produce weight gain – in a timespan and quantity that caught Artelo's eye and led to its decision to acquire the rights to the compound and repurpose it for treating anorexia.

“In a Phase 1 study at AstraZeneca, the top 25% of treated participants experienced a gain of 3% of their baseline body weight in under two weeks,” Gorgas reported.

Closer analysis of that weight gain found that it was real weight gain and not due to fluid retention, so Artelo is optimistic that ART27.13 could be a first standard of care in this devastating consequence of cancer.

Once the most safe and effective dose of the drug is determined in the Phase 1b portion of study, it will move into Phase 2a to evaluate efficacy compared to placebo. If all goes well, Artelo could be on its way to offering the first FDA approved pharmacological cancer anorexia treatment, tapping into an estimated \$2 billion market.

As could be expected, Artelo is also studying the drug candidate for the treatment of cancer cachexia, which is the wasting away of muscle. It is often a sequela to anorexia. The indication is of interest to Pfizer [PFE 0.34%](#) as well, which has initiated a Phase 1 program in cancer cachexia.

## **Full-Spectrum Approach to Regulating the Endocannabinoid System**

Now three decades after the discovery of the endocannabinoid system (ECS), the physiological system the human body uses to heal itself through cannabinoid signaling, researchers are aiming to uncover a broad range of potential treatments that work on this system. That [treatment potential exists for almost all diseases and disorders that affect humans](#), including obesity, diabetes, psychiatric disorders, cancer and more.

To date, however, the full potential of cannabinoid-based drugs has not been explored due to regulatory issues and the psychoactive properties that many patients find undesirable. Artelo seeks to change that with its full-spectrum approach to ECS modulation.

This approach includes both synthetic and naturally occurring cannabinoids and tone regulation. [Endocannabinoid tone](#) refers to the balance in the body’s ECS. When the ECS tone is low, sensations of pain become more intense, psychiatric disorders like PTSD or Bipolar can worsen, and digestive problems like IBS can flare up. When the ECS tone is high, metabolic disorders like diabetes or obesity can occur.

Artelo’s drug candidates that regulate ECS tone in patients who suffer from any of the conditions that can occur when their ECS is dysregulated will be able to alleviate painful symptoms and restore balance.

For psychiatric disorders like PTSD, Artelo’s cannabinoid-based drugs could help alleviate the anxiety and insomnia that come with the condition and can aggravate it.

For cancer patients, Artelo is working in partnership with Stoney Brook University on endocannabinoid modulating medicines designed to starve solid tumors of the nutrition they require to grow and spread. The NIH and NCI together committed more \$8 million to fund the program, which is taking advantage of recent discoveries about the endocannabinoid system’s role in activating production of VEGF, which stimulates the growth of new blood vessels in tumors. Shutting down VEGF could lead to a major breakthrough for treating certain solid tumors.

## **Cannabinoid-Based Treatments Without the Psychoactive Side Effects**

Mental impairment, anxiety and other psychoactive side effects that can come with cannabinoid-based drugs made it historically difficult to use them in treatments. Artelo has made major strides in engineering potential treatments that minimize or eliminate those undesired effects.

According to Gorgas, this success is possible because the company's clinical team and collaborators have developed cannabinoid-based drugs that "optimize and fine-tune properties within the molecule, such as predictable oral dosing, high potency and low penetration into the brain."

Artelo's potential treatment for anorexia offers more precise dosing and has been formulated to avoid penetrating the brain, meaning patients can get the relief they need without the undesirable sensation of "feeling high."

While Artelo's potential treatments are in preclinical or early phases of development, preliminary results have made researchers optimistic that these drug candidates will become significant, breakthrough treatments in multiple indications. The biopharmaceutical company is poised to become a leader in the \$7 billion PTSD market, the \$2 billion cancer anorexia market, as well as other multi-billion-dollar markets in cancer therapeutics.