Artelo BIOSCIENCES®

September 2025

# Corporate Presentation

Nasdaq:ARTL

Pioneering the Science of Lipid Signaling Modulation to Develop Novel Therapeutics

# Forward Looking Statements

**Artelo Biosciences, Inc**. (the "Company") cautions you that statements contained in this presentation regarding matters that are not historical facts are forward-looking statements. These statements are based on the Company's current beliefs and expectations. Such forward-looking statements include, but are not limited to, statements regarding: 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, ESG performance, 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. The inclusion of forward-looking statements should not be regarded as a representation by the Company that any of its plans will be achieved. Actual results may differ from those set forth in this presentation due to the risks and uncertainties inherent in the Company's business, including, without limitation: potential delays in the commencement, enrollment and completion of clinical trials; disruption to the Company's operations, including clinical trial delays; the success of any of the Company's clinical trials and preclinical studies for its product candidates; regulatory developments in the United States and foreign countries; unexpected adverse side effects or inadequate efficacy of our product candidates that may limit their development, regulatory approval and/or future commercialization; the Company's ability to obtain and maintain intellectual property protection for its product candidates; the Company may use its capital resources sooner than it expects; and other risks described in the Company's prior communications and the Company's filings with the Securities and Exchange Commission (the "SEC"). You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and the Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement, which is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. This presentation includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties as well as our own estimates of potential market opportunities. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Our estimates of the potential market opportunities for our products include several key assumptions based on our industry knowledge, industry publications, third-party research and other surveys, which may be based on a small sample size and may fail to accurately reflect market opportunities. While we believe that our internal assumptions are reliable, such assumptions have not been verified by any third party. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors that could cause results to differ materially from those expressed in the estimates made by third parties and by us. Trademarks in this presentation are the property of their respective owners and used for informational and education purposes only. Pipeline programs are under investigation and have not been proven to be safe or effective. There is no guarantee any product will be approved or meet any developmental milestones indicated above.

**The Company's SEC filings are available at artelobio.com**

# Corporate Highlights

**Artelo Biosciences is a clinical-stage biopharmaceutical company advancing a broad platform of lipid signaling modulation drug candidates to treat pain, cancer, anxiety, depression, and other conditions**

**NOVEL SCIENCE PORTFOLIO**

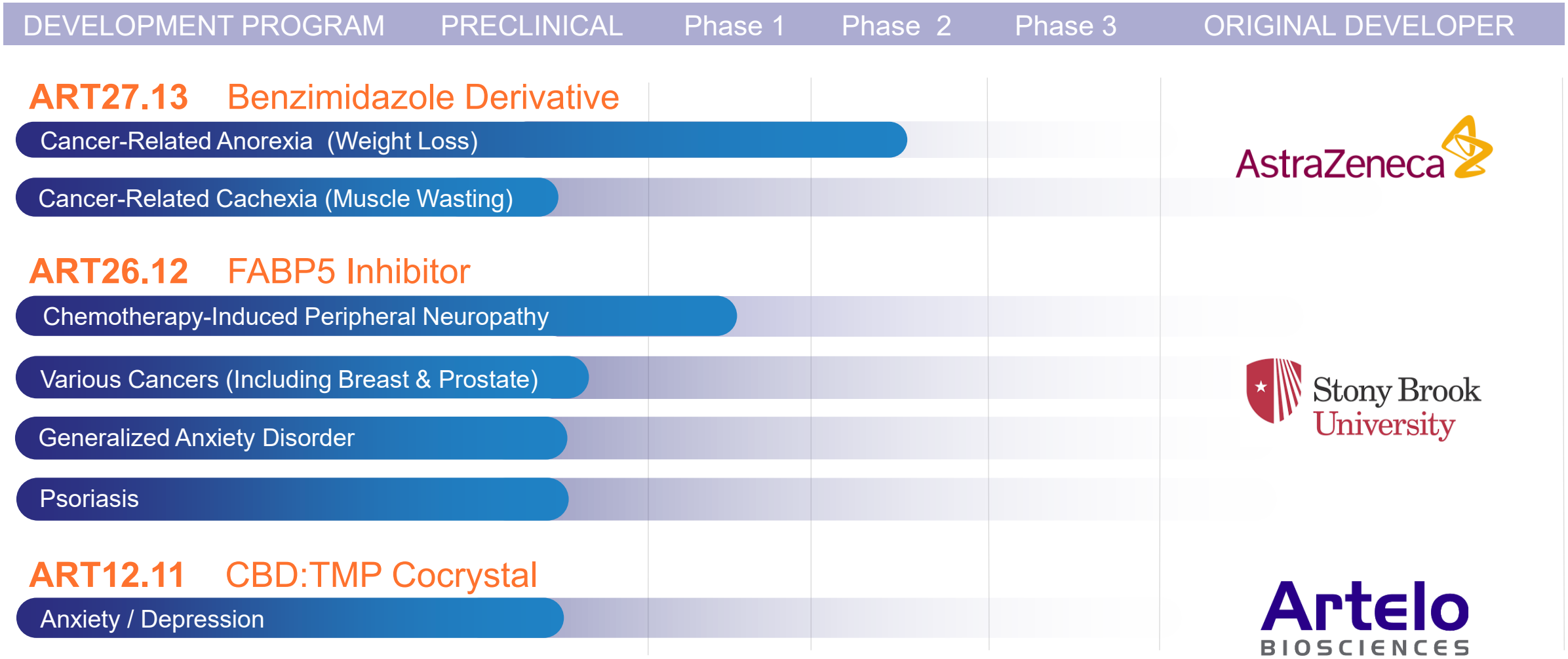
**NEAR-TERM CATALYSTS**


**BILLION DOLLAR MARKETS**

**ROBUST PATENT ESTATE**

**PROVEN LEADERSHIP**

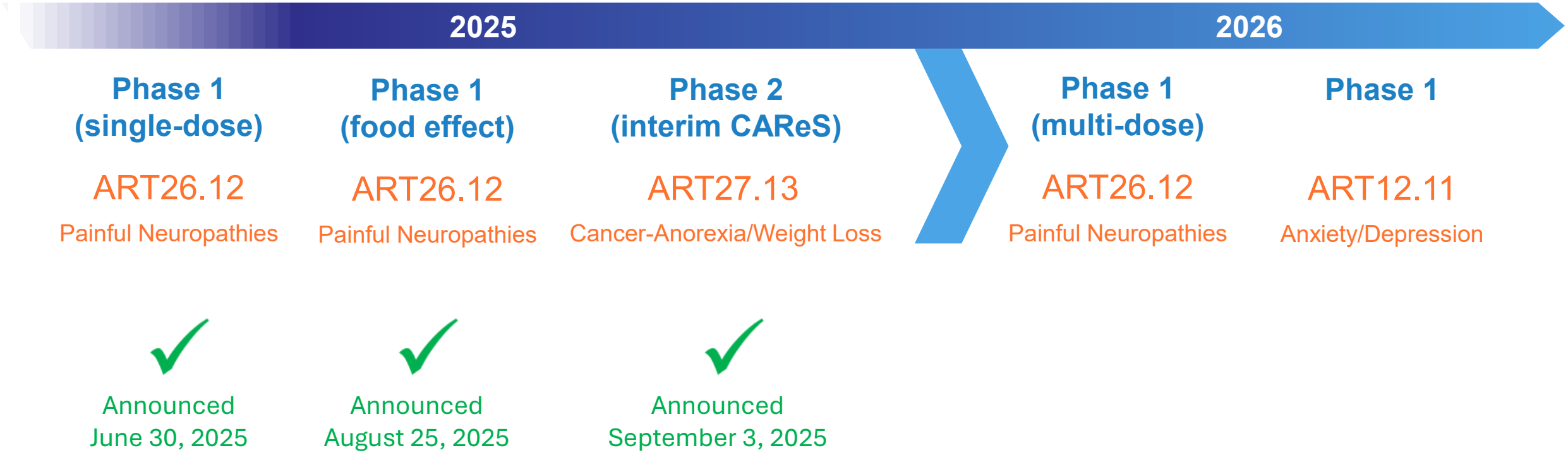
# Lipid Signaling Modulation Pipeline




FABP5=Fatty Acid Binding Protein 5; CBD=Cannabidiol; TMP=Tetramethylpyrazine

# Near-term Clinical Catalysts

Multiple value-driving milestones expected over the next 12-18 months



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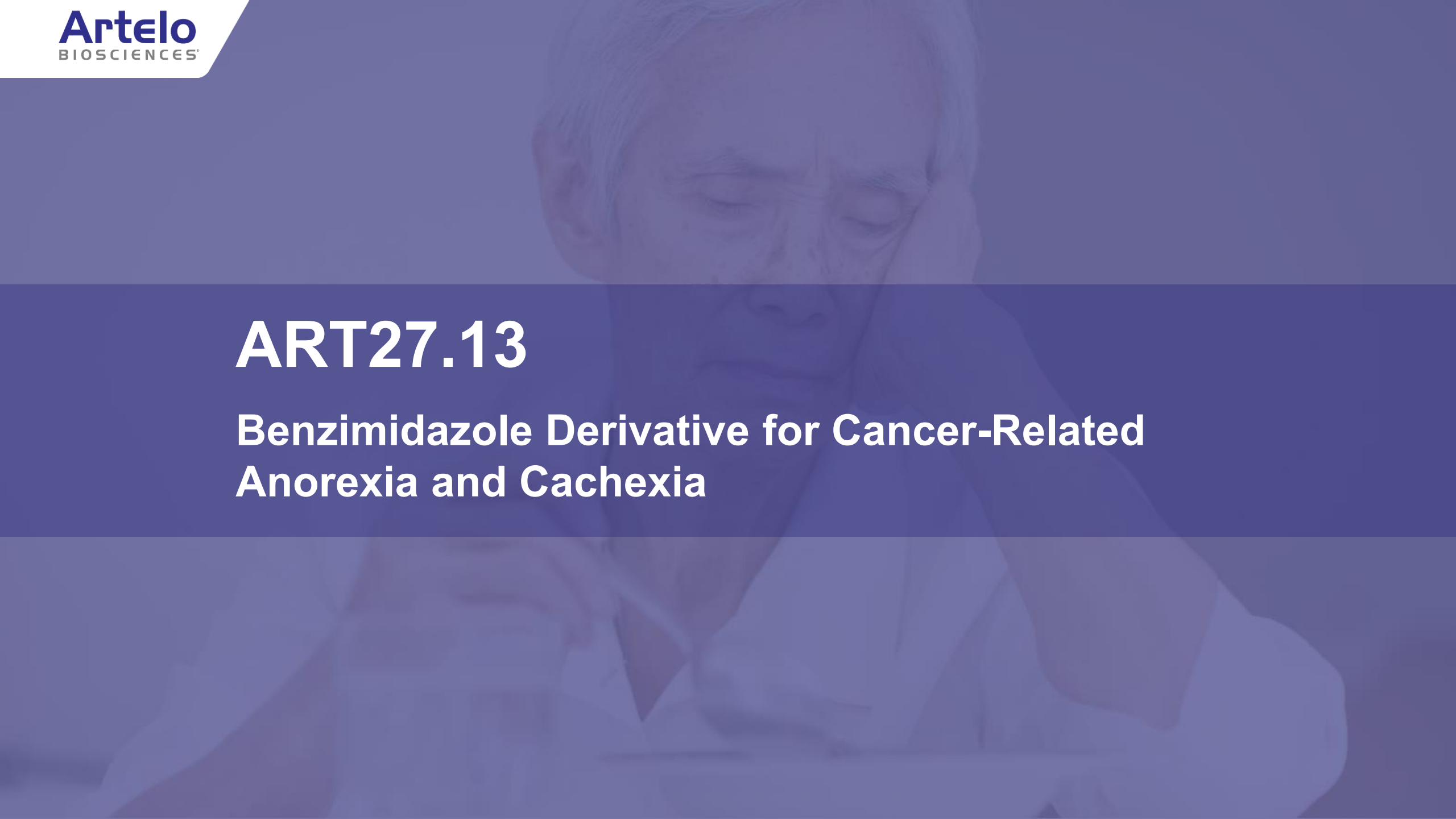
# ART27.13

## Benzimidazole Derivative for Cancer-Related Anorexia and Cachexia



# ART27.13 Addressing a Significant Need

Target Indication: Cancer Anorexia Cachexia Syndrome (CACS)

**CACS** is marked by a loss of appetite and weight loss, along with a reduction in muscle mass and fatty tissues affecting up to 80% of advanced cancer patients* with no FDA-approved treatment

> *"When you pull a pair of trousers up and they just fall right back down again, it sort of hits home how quickly the weight dropped off. That was scary."*

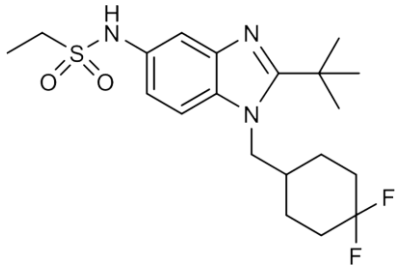
Participant in Phase 1 Artelo-sponsored study



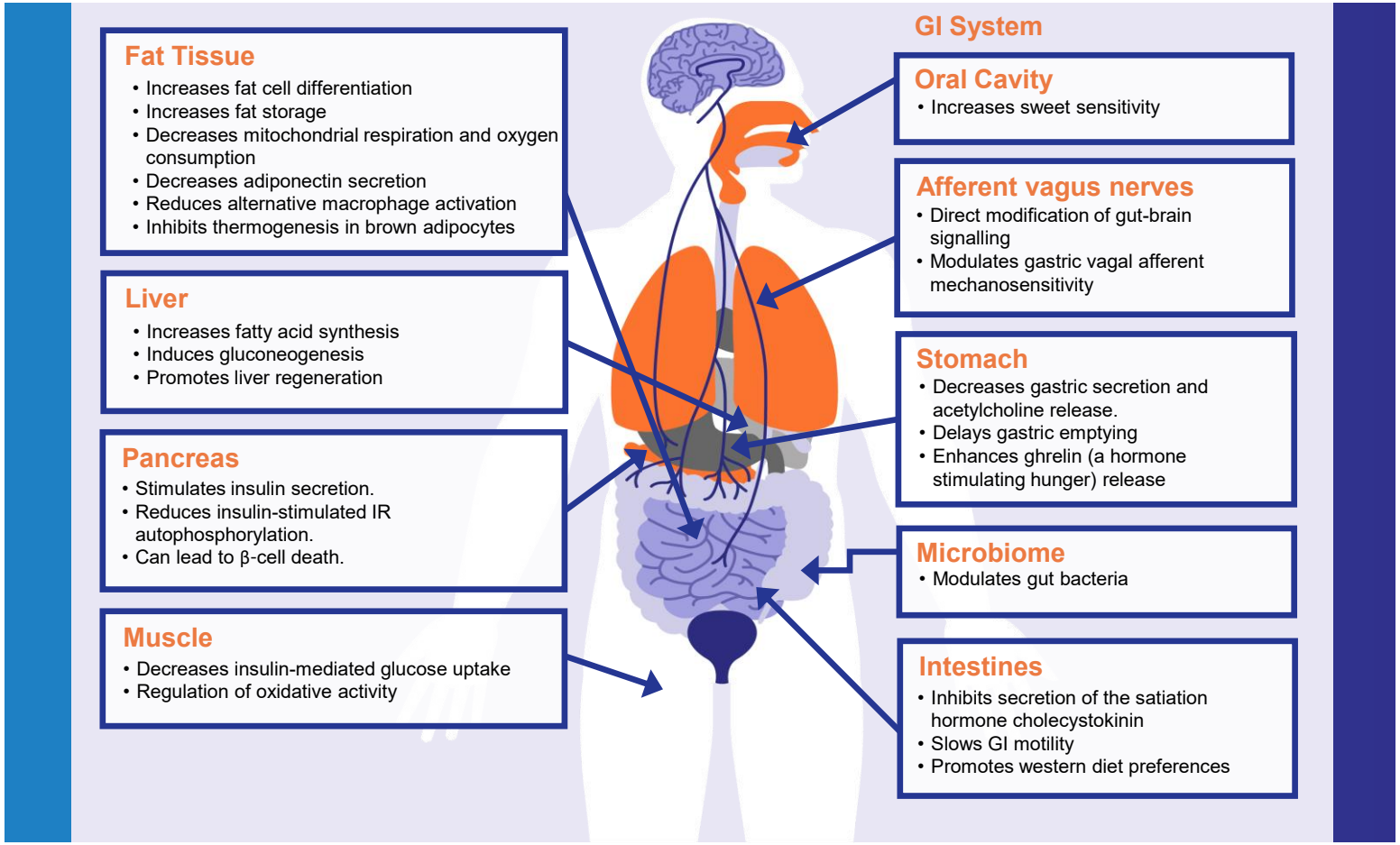
*https://www.cancer.gov/about-cancer/treatment/research/cachexia

# ART27.13 Benzimidazole Derivative

- Synthetic, dual $CB_1/CB_2$ full agonist
- Oral dosing once daily
- Peripherally selective to avoid CNS side effects
- Leverages a well-established appetite pathway
- Evidence from Phase 1 study suggests a dose-dependent increase in body weight
- New chemical entity originally developed by AstraZeneca




## The many effects of peripheral $CB_1$ activation in promoting appetite, food storage and weight gain



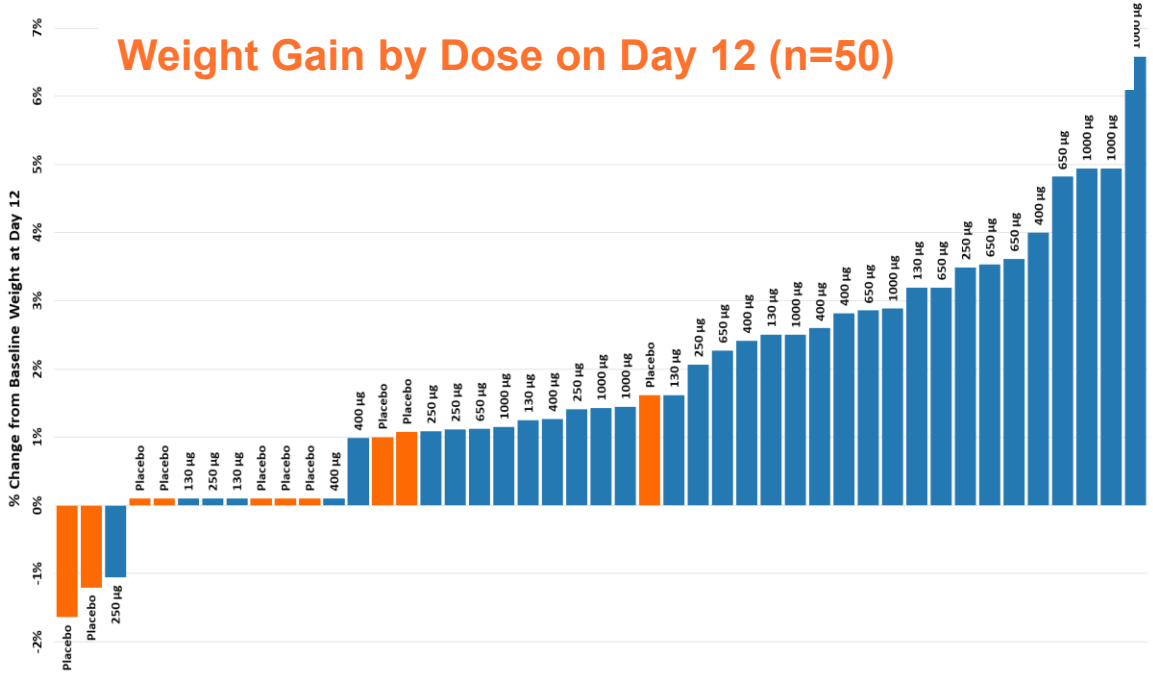



Source: https://www.ncbi.nlm.nih.gov/pubmed/22249824; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6027162/

# ART27.13 Phase 1 Safety Study in Healthy Subjects

Compelling dose responsive weight gain with an attractive and differentiated side-effect profile

## Weight Gain by Dose on Day 12 (n=50)




**Multiple ascending dose (MAD) clinical study observed weight gain versus ART27.13. (P=0.0001)**

## Adverse Events by Dose and Grade

| Subjects with AEs | Placebo N = 10 | 130 µg N = 8 | 250 µg N = 8 | 400 µg N = 8 | 650 µg N = 8 | 1000 µg N = 8 |
|---|---|---|---|---|---|---|
| Mild | 40% | 50% | - | 12.5% | 62.5% | 12.5% |
| Moderate | 40% | 25% | 62.5% | 25% | 25% | 50% |
| Severe | - | 12.5% | 12.5% | 62.5% | 12.5% | 37.5% |
| Subjects with any AE | 80% | 87.5% | 75.0% | 100% | 100% | 100% |

**Adverse event frequency and grade corresponded to dose in study with healthy volunteers**



Source: Multiple Ascending Dose (MAD) Phase 1 Study, AstraZeneca, adMare. Data on file.

# ART27.13 The CAReS Trial

Establishing safety, optimal dose, and proof-of-concept in cancer patients with anorexia

## Phase 1 (Completed)

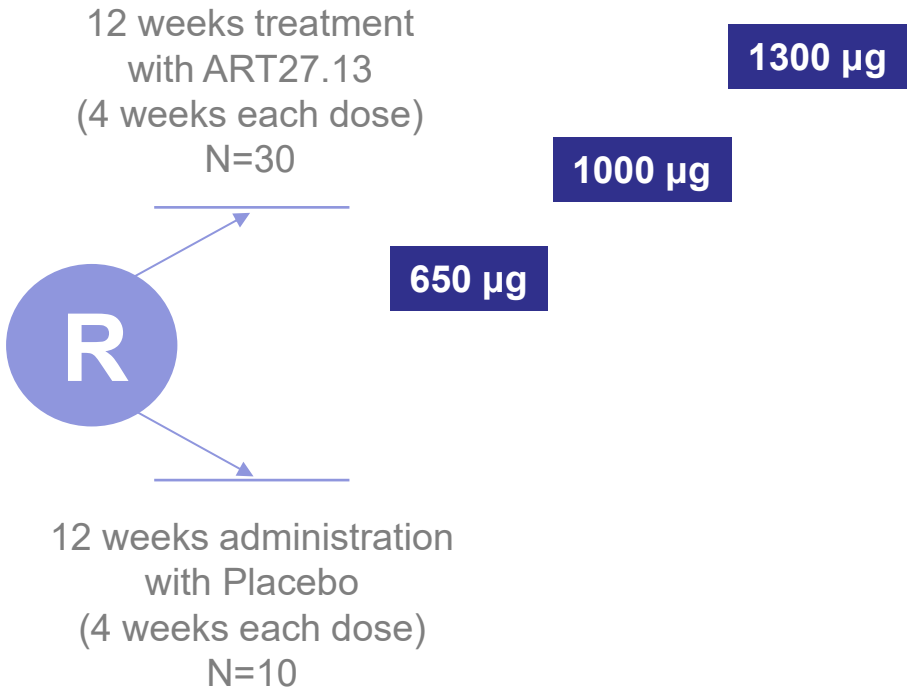
**Cancer patients with anorexia**
**N=24 (6 per dose level)**

Phase 2 starting dose established

- 650 µg
- 400 µg
- 250 µg
- 150 µg

## Phase 2 (Enrolling in five countries)

**Cancer patients with anorexia**
**N=40 (3:1 randomization)**




Cancer Appetite Recovery Study

**Evaluating**

- Lean body mass
- Weight gain
- Activity
- Anorexia
- QOL
- Safety

CAReS = **C**ancer **A**ppetite **Re**covery **S**tudy

R = Randomization; QOL = Quality of Life

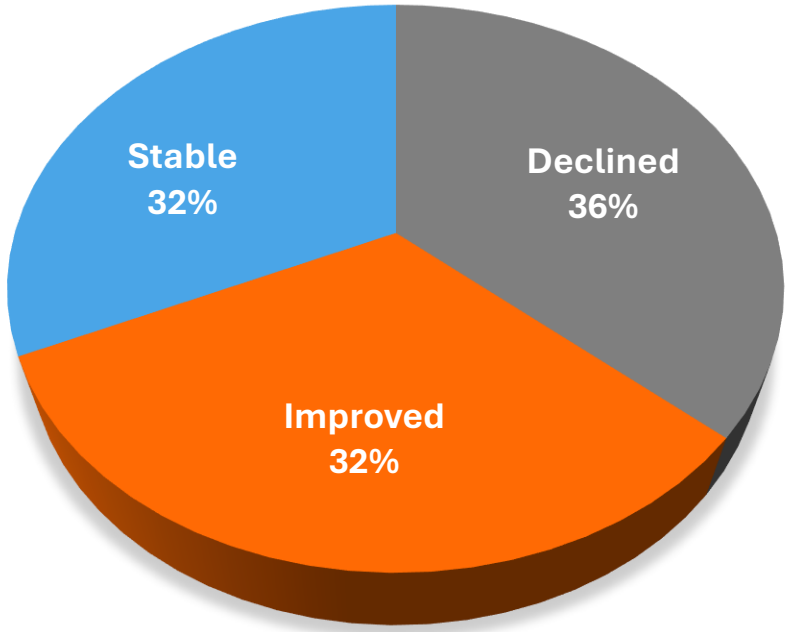


https://www.isrctn.com/ISRCTN15607817

# ART27.13 CAReS Phase 1 Results

Well-tolerated with sustained weight loss reversed or arrested in 64% of treated patients

## Changes in Weight (n=22)




**14/22 (64%) of patients reported weight stabilization or weight gain observed at day 28**

## Adverse Events

| | 150 µg | 250 µg | 400 µg | 650 µg |
|---|---|---|---|---|
| Somnolence | 0 | 1 | 1 | 1 |
| Dysaesthesia | 0 | 2 | 0 | 0 |
| Disturbance in attention | 0 | 1 | 0 | 0 |
| Memory Impairment | 0 | 0 | 1 | 0 |
| Dry mouth | 0 | 0 | 2 | 1 |
| Diarrhea | 0 | 1 | 0 | 0 |
| Dyspepsia | 0 | 1 | 0 | 0 |
| Fatigue | 0 | 0 | 0 | 1 |
| Overdose | 0 | 1 | 0 | 0 |

**No events considered dose limiting toxicities and no fatal adverse events related to trial treatment were observed (up to 12-week dosing)**

CAReS = **C**ancer **A**ppetite **Re**covery **S**tudy



Data presented by Professor Barry J. A. Laird, Edinburgh Cancer Centre, at the 17th International Conference on Sarcopenia, Cachexia, & Wasting Disorders, December 6-8, 2024

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# ART26.12

## Fatty Acid Binding Protein 5 (FABP5) Inhibitor

# FABP Inhibitor Platform

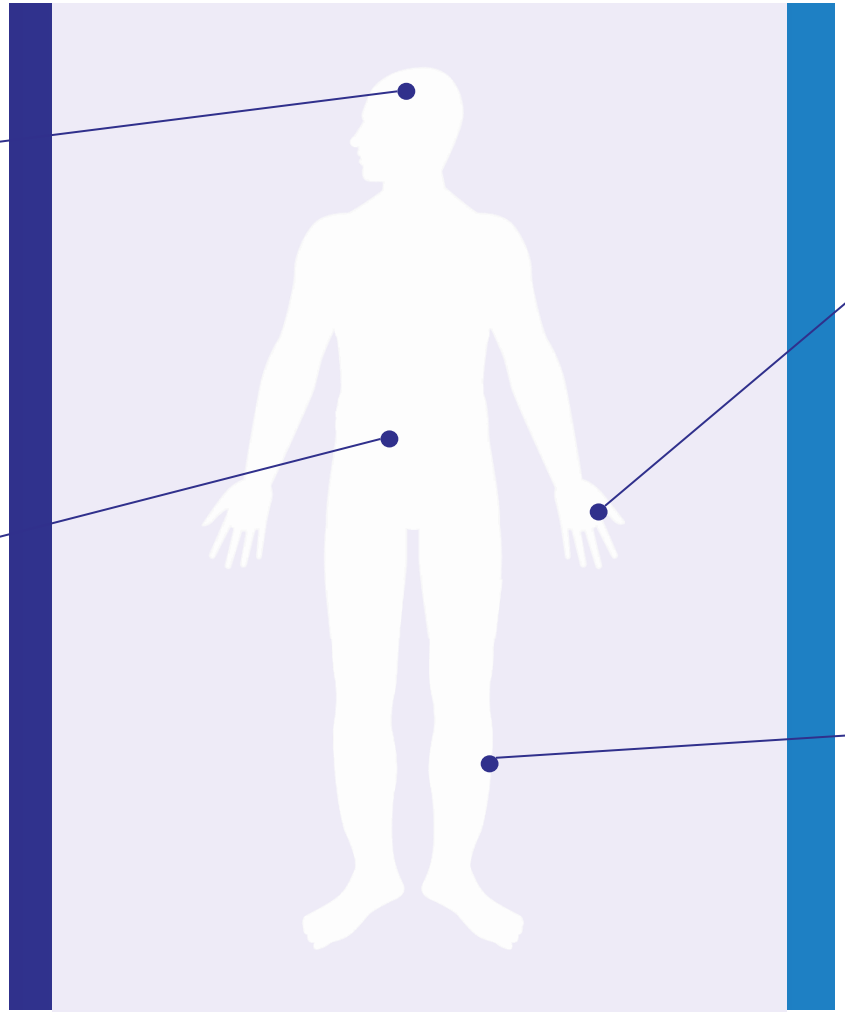
Fatty Acid Binding Proteins are a validated target with potential in multiple therapeutic areas. Artelo has a worldwide exclusive license from Stony Brook University, NY for multiple generations of FABP inhibitors.

## Anxiety Disorders

- Generalized Anxiety Disorder
- Depression
- PTSD

## Cancer

- Prostate cancer
- Breast cancer
- Colon cancer
- Various other cancers



## Pain and Inflammation

- Osteoarthritis
- Chemotherapy Induced Peripheral Neuropathy (CIPN)
- Diabetic neuropathy
- Cancer bone pain

## Dermatology

- Psoriasis

# ART26.12 Our Lead FABP5 Inhibitor

Target Indication: Chemotherapy-Induced Peripheral Neuropathy (CIPN)

**CIPN** affects up to 40% of all treated cancer patients* and is marked by extreme nerve pain causing delays, disruption or discontinuation of essential cancer treatment with no currently available FDA approved therapy

**Fatty Acid Binding Protein 5 (FABP5) Inhibitor** offers potential as a first-in-class, non-opioid, non-psychoactive approach to pain and inflammation



*Staff NP, et. al., Chemotherapy-induced peripheral neuropathy: A current review. Ann Neurol. 2017;81(6):772-781

# ART26.12 Strong Pre-Clinical Evidence from Multiple Studies

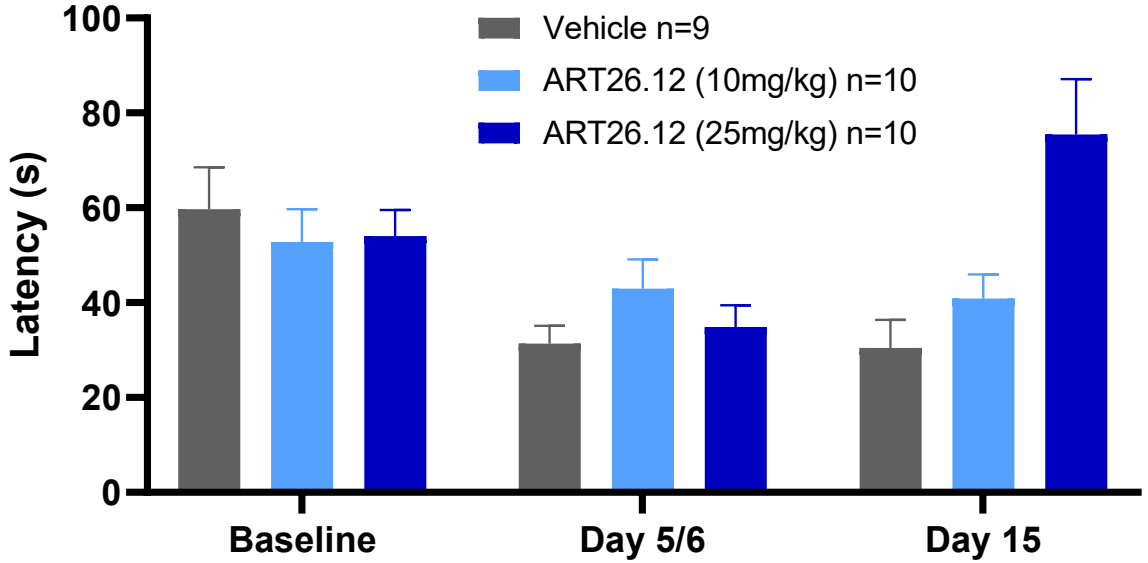
Evidence from five animal studies in peripheral neuropathy with ART26.12 supports Artelo's development strategy for the FABP5 inhibitor as a potential preventative therapeutic for CIPN

ART26.12 administered as a prophylactic dose of 25 mg/kg orally twice daily in multiple CIPN animal studies

- **Significantly reversed cold allodynia** latencies in oxaliplatin induced CIPN by day 15[1]
- **Reduced mechanical and cold allodynia** associated with paclitaxel induced CIPN by day 15[2]

[1] https://www.jpain.org/article/S1526-5900(24)00345-6/fulltext
[2] The Effects of the FABP5 Inhibitor ART26.12 in Paclitaxel-Induced Neuropathy S.E. O'Sullivan, A. Pereira, M. Kaczocha, I. Ojima and A. Yates presented at International Cannabinoid Research Society annual meeting 2023

**Oxaliplatin CIPN Coldplate Prevention Study[1]**




Values are presented as mean ± s.e.m. (n=9-11).
Study was performed in male Sprague Dawley Rats.

# ART26.12 Phase 1 Study Results

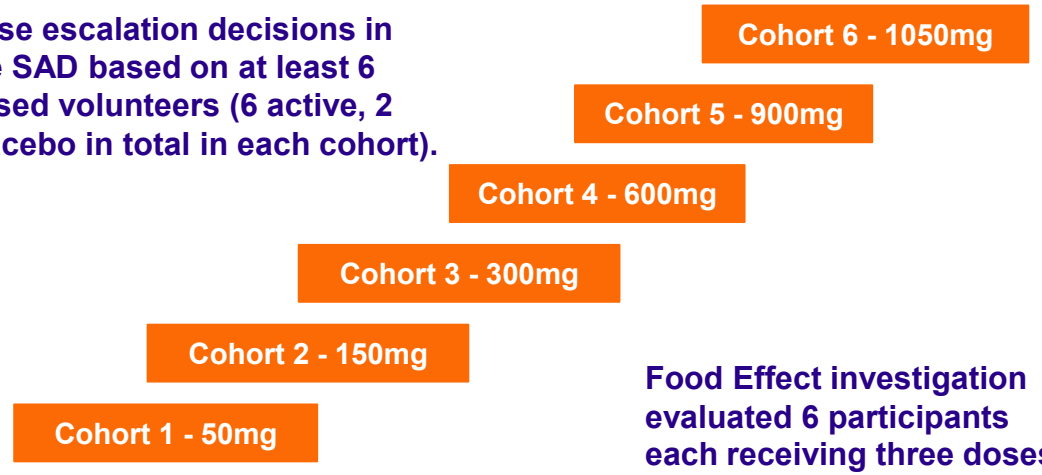
The Phase 1 Single Ascending Dose (SAD) & Food Effect (FE) study was designed to assess the safety, tolerability, and pharmacokinetics of ART26.12 in healthy volunteers. The SAD/FE study enrolled 55 subjects.

## Clinical data from completed SAD and preliminary Food Effect study demonstrated:

- **Excellent Safety Profile:** All adverse events (AEs) were mild, transient, and self-resolving and believed by medical staff not related to study drug
- **Predictable Pharmacokinetics:** Plasma analysis confirmed dose-dependent linear absorption
- **Therapeutic Window:** A wide safety margin was observed between estimated therapeutic plasma concentrations and the highest exposure levels achieved.
- **Potential for fed or fasted dosing**

## Study Design

**Dose escalation decisions in the SAD based on at least 6 dosed volunteers (6 active, 2 placebo in total in each cohort).**




**Food Effect investigation evaluated 6 participants each receiving three doses.**

### SAD Study Endpoints

- To evaluate the safety and tolerability of QD ascending oral doses of ART26.12 versus placebo in fasted healthy adult volunteers
  - ART26.12 safety profile understood on single dosing
  - DLT defined on single dosing
- To evaluate the PK and PD profile of oral doses of ART26.12
  - Plasma and urine PK
  - Lipidomic and proteomic biomarkers

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# ART12.11

## CBD:TMP Cocrystal

# ART12.11 CBD:TMP Cocrystal

Target indication: Anxiety/Depression

**Anxiety and depression** affects about 20% of adults in the US* and is often characterized by feelings of sadness, hopelessness, worry, or dread

**Proprietary CBD:TMP Cocrystal** is a combination drug candidate with improved physical properties, pharmacokinetics, and pharmacology

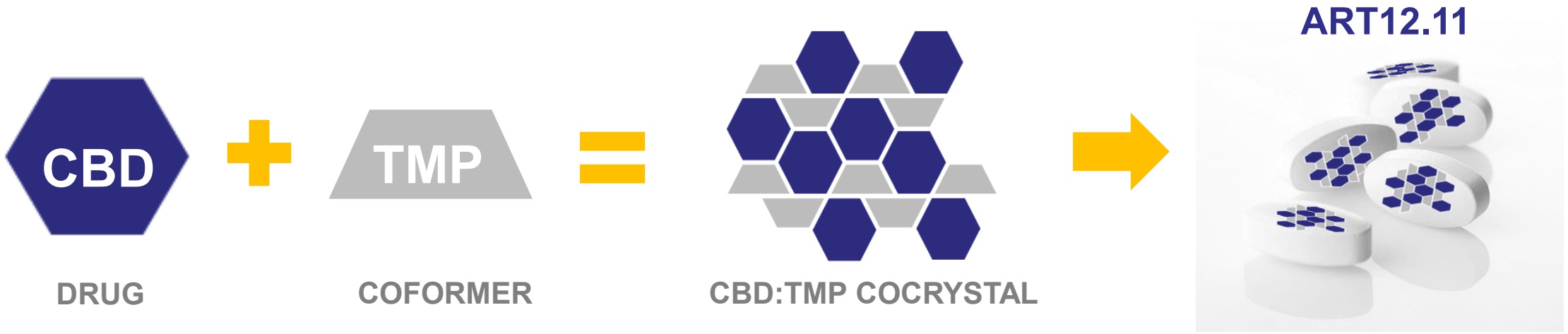
CBD=cannabidiol ; TMP=tetramethylpyrazine



* National Center for Health Statistics. (2024). Report No. 213. Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/data/nhsr/nhsr213.pdf

# ART12.11 Multiple Competitive Advantages

CBD:TMP cocrystal solved inherent challenges with CBD in accordance with FDA Guidance




## Physical Properties

Developed as an oral solid with improved melting point, solubility, and dissolution compared to CBD alone

## Pharmacokinetics

Delivers higher plasma levels of CBD and its major metabolite CBD-7COOH compared to CBD alone and less impact of food effect than CBD alone

## Pharmacodynamics

Strong anxiolytic, anti-depressive, and pro-social effects while protecting spatial and short-term memory

## Patent Estate

Composition of Matter & Methods of Use issued in US through December 2038 and National Phase approvals ongoing worldwide

# ART12.11 Promising Anxiety and Depression Data

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Superior preclinical efficacy observed in stress-induced anxiety model compared to CBD-alone

| Clinical Behavior | Behavioral Test | ART12.11 (3.5 mg/kg CBD + 1.5 mg/kg TMP orally dosed) | CBD-alone (10 mg/kg orally dosed) |
|---|---|---|---|
| **Anxiety** | Elevated plus maze<br>Light-dark chamber<br>Open field test | ✓ Anxiolytic | X No effect |
| **Depression** | Sucrose preference<br>Forced swim test | ✓ Anti-depressive (reversed stress effect) | X No effect |
| **Sociability** | Social motivation<br>Social discrimination | ✓ Pro-social (reversed stress effect) | X No effect |
| **Cognition** | Novel-object recognition<br>Spontaneous alternation | ✓ Protected memory (reversed stress effect) | X No effect or impaired spatial memory |

✓ **Positive Effect**

X **No Effect**

X **Negative Effect**

Data presented at Society for Neuroscience (SfN) 2023 and available on Artelo's website (artelobio.com).

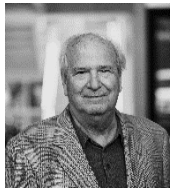
# Leadership

## Proven track record of value creation for shareholders

### MANAGEMENT TEAM

**Gregory Gorgas**
**President & CEO, Director**
Biogen IDEC, Chiron, Cetus, Upjohn, MAST

**Mark Spring, CPA**
**Chief Financial Officer**
LENZ, Hyperion, Prometheus, Caremark, Baxter



**Steven D. Reich, MD**
**Chief Medical Officer**
Pfizer, Ligand, Biogen, PAREXEL

**Andrew Yates, PhD**
**Chief Scientific Officer**
UK Pharmacist, AstraZeneca, Bristol Myers

**Saoirse O'Sullivan, PhD**
**VP, Translational Science**
Prof., University of Nottingham, UK

### BOARD OF DIRECTORS

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**Chair of the Board**
Wells Fargo, Biogen IDEC, Sutro Biopharma, Halozyme

**Steven Kelly**
**Compensation Committee Chair**
Carisma, Theracrine, Amgen, IDEC, Sanofi

**Douglas Blayney, MD**
**Nominating & Governance Committee Chair**
ASCO President, Stanford Cancer Center, University of Michigan, NCI

**Tamara A. Favorito**
**Audit Committee Chair**
Immunic, HemaQuest, Favrille, Agouron, Deloitte & Touche, PricewaterhouseCoopers

**Greg Reyes, MD, PhD**
Celgene, Biogen IDEC, Pfizer, Schering-Plough Research Institute

**R. Martin Emanuele, PhD**
DuPont, Avanir, DaVita, MAST, Visgenx

### SCIENTIFIC COLLABORATORS

**Iwoa Ojima, PhD**
Distinguished Professor, Chemistry, and Director, Institute of Chemical Biology and Drug Discovery, Stony Brook University, New York, US

**Steven Laviolette, PhD**
Professor, University of Western Ontario, Canada

**Martin Kaczocha, PhD**
Assistant Professor of Anesthesiology and Biochemistry and Cell Biology, Stony Brook University, New York, US

**Richard K. Porter, PhD**
Associate Professor, Biochemistry & Immunology, Trinity Biomedical Sciences Institute, Trinity College Dublin, Ireland

# Company Capitalization

| Capitalization (as of 9/16/2025) | |
|---|---|
| **Common Shares Outstanding** | **1,555,493** |
| Shares issuable upon conversion of convertible notes | **123,256** |
| Warrants (WAEP $6.04) | **747,086** |
| Options (WAEP $11.03) | **227,842** |
| Over-allotment remaining from September 2025 public offering | **44,358** |
| **Total** | **2,698,035** |

**Cash, Cash Equivalents, and Marketable Securities** (as of 6/30/2025): **$2.1M**

**Convertible Debt** (as of 6/30/2025; maturity 10/28/2025): **$0.9M**

**Fully diluted ownership of Officers/Directors** (as of 9/16/2025)**:** **6%**

*WAEP = Weighted Average Exercise Price*

# Artelo Investment Opportunity Summary

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## NOVEL SCIENCE PORTFOLIO

- **ART27.13** Benzimidazole derivative in Phase 2
- **ART26.12** FABP5 inhibitor in Phase 1
- **ART12.11** CBD:TMP cocrystal in late preclinical

## NEAR-TERM MILESTONES

- **1H25** ART26.12 SAD/FE (single ascending dose & food effect)
- **2H25** ART27.13 Interim Phase 2 CAReS Data
- **1H26** ART26.12 MAD (multiple ascending dose)
- **2H26** ART12.11 Phase 1


## BILLION DOLLAR MARKETS

- CIPN **$2B**
- Cancer anorexia **$3B+**
- Prostate cancer **$13B**
- Breast cancer **$33B**
- Psoriasis **$31B**
- Anxiety **$13B**
- PTSD **$13B**

## ROBUST PATENT ESTATE

**38** patents issued

**51** patents pending (includes owned, licensed, and partnered)

Composition of matter and broad method claims ensure strong prospects for meaningful worldwide market exclusivity

## PROVEN LEADERSHIP

Experienced team of biopharmaceutical executives, drug developers, and top tier researchers

Proven track records in developing and commercializing high-impact federally regulated therapeutics

Artelo BIOSCIENCES®

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## INVESTOR RELATIONS

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