



September 2025

Corporate
Presentation

Nasdaq:ARTL



Pioneering the Science of Lipid Signaling
Modulation to Develop Novel Therapeutics

Forward Looking Statements

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The Company’s SEC filings are available at artelobio.com

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**

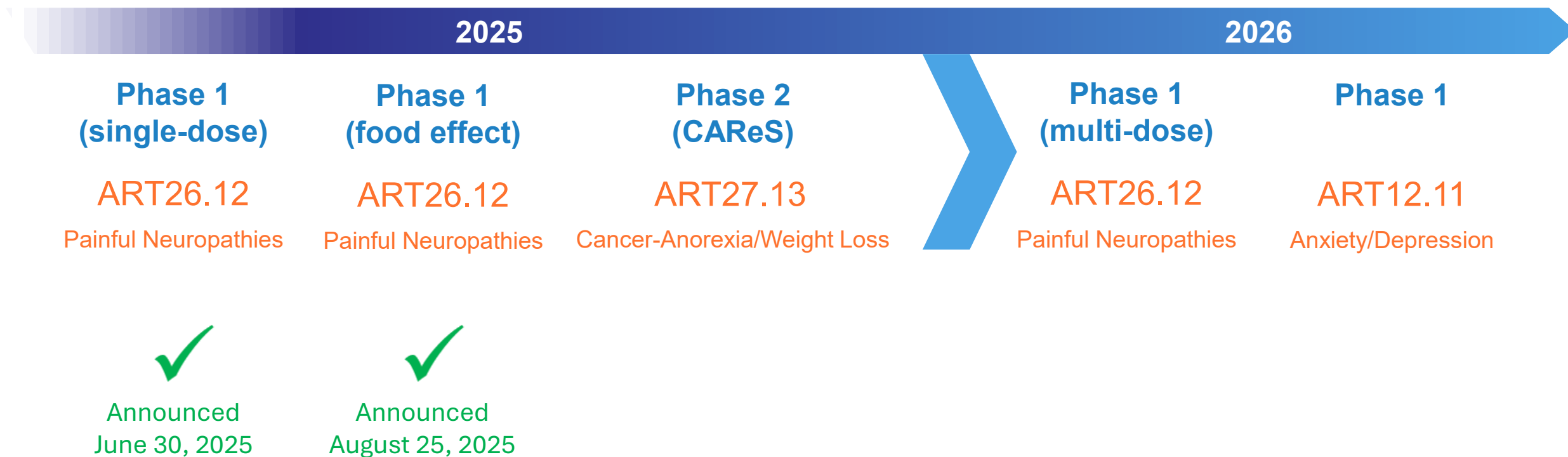
Lipid Signaling Modulation Pipeline

DEVELOPMENT PROGRAM	PRECLINICAL	Phase 1	Phase 2	Phase 3	ORIGINAL DEVELOPER
ART27.13 Benzimidazole Derivative					 AstraZeneca
Cancer-Related Anorexia (Weight Loss)					
Cancer-Related Cachexia (Muscle Wasting)					
ART26.12 FABP5 Inhibitor					 Stony Brook University
Chemotherapy-Induced Peripheral Neuropathy					
Various Cancers (Including Breast & Prostate)					
Generalized Anxiety Disorder					
Psoriasis					
ART12.11 CBD:TMP Cocrystal					 Artelo BIOSCIENCES
Anxiety / Depression					

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



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

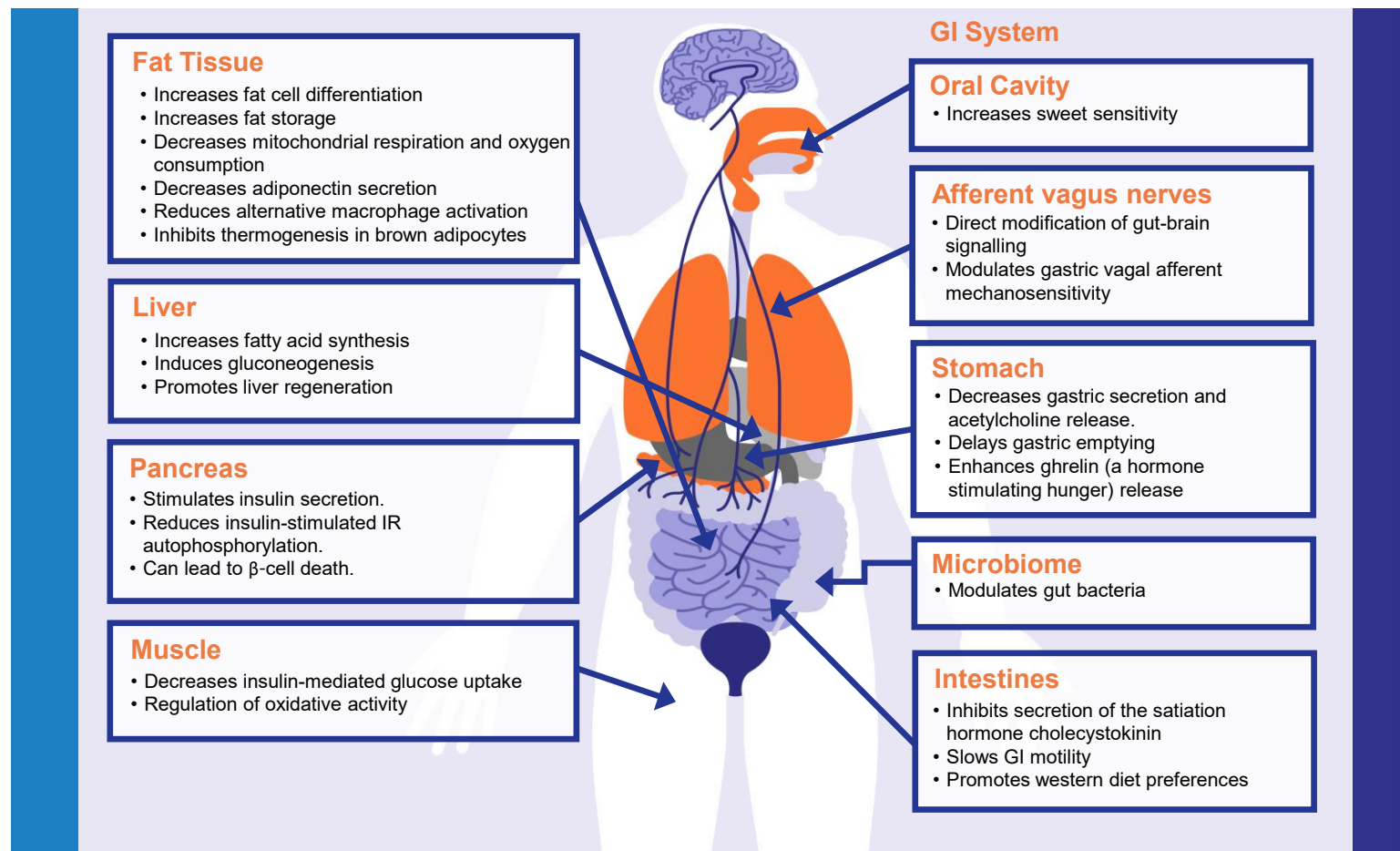
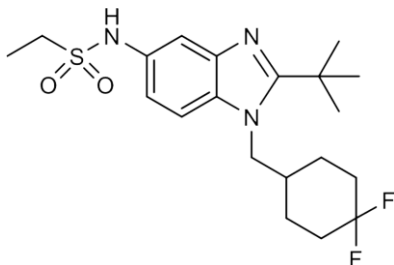
“ *When you pull a pair of trousers up and they just fall right back down again, it sort of hits home how quickly the weight dropped off. That was scary.* ”



Participant in Phase 1 Artelo-sponsored study

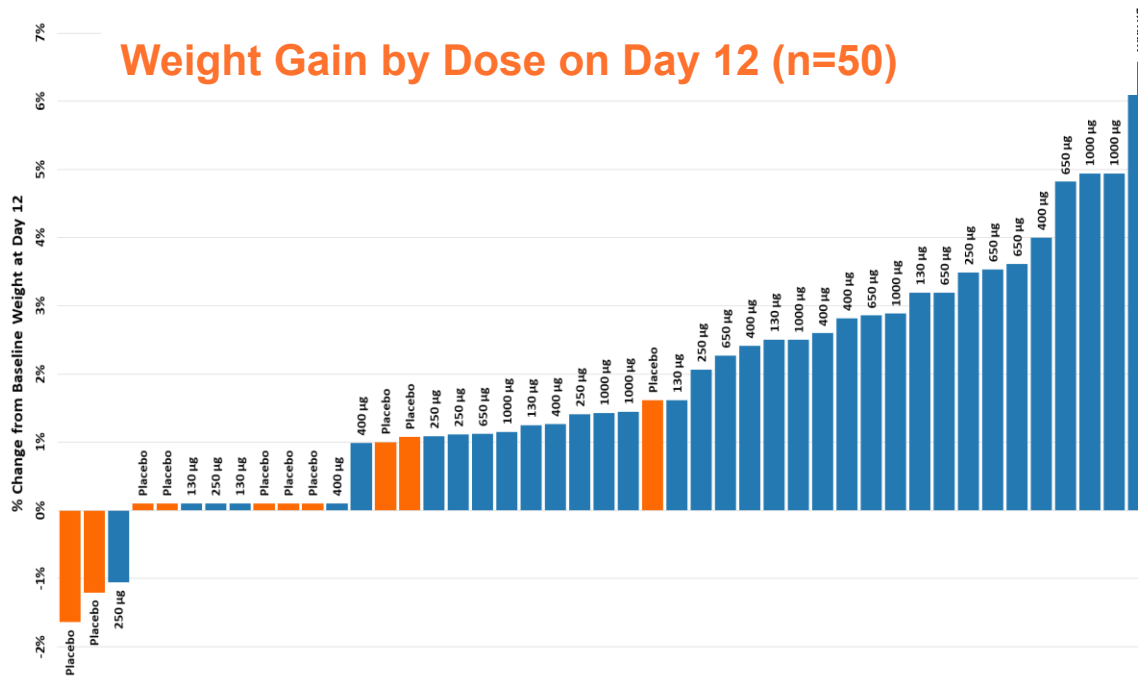
The many effects of peripheral CB₁ activation in promoting appetite, food storage and weight gain

- Synthetic, dual CB₁/CB₂ 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



ART27.13 Phase 1 Safety Study in Healthy Subjects

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



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%

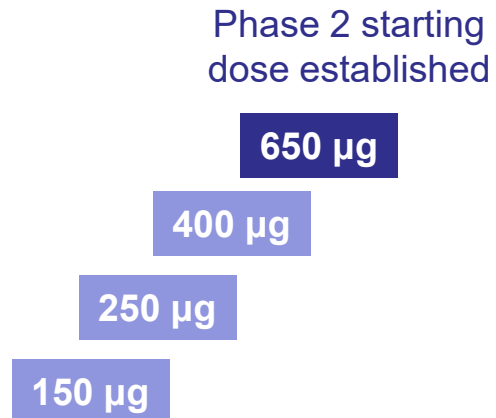
Adverse event frequency and grade corresponded
to dose in study with healthy volunteers

ART27.13 The CAReS Trial

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

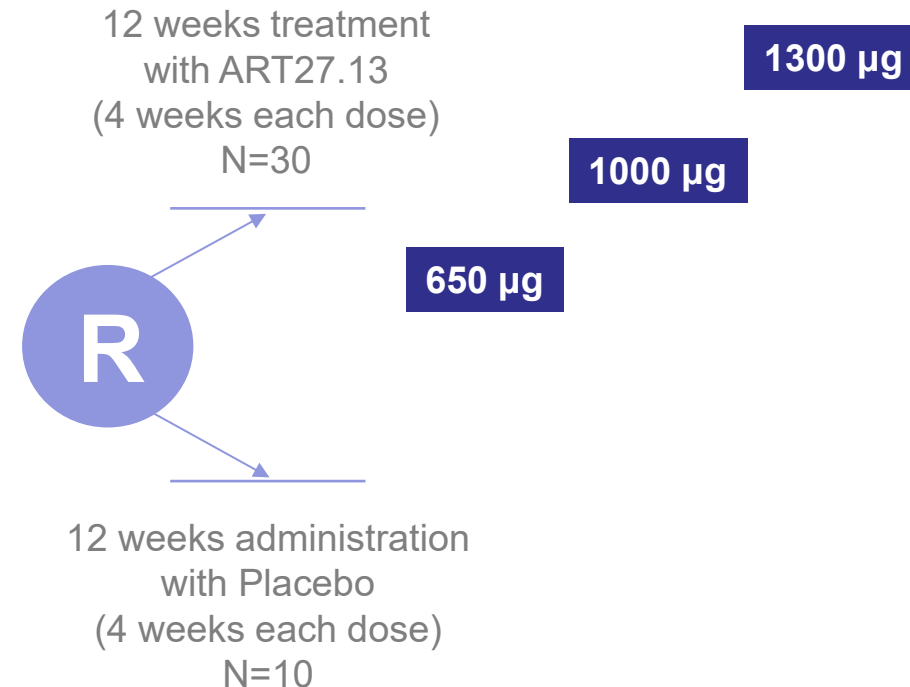
Phase 1 (Completed)

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



Phase 2 (Enrolling in five countries)

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



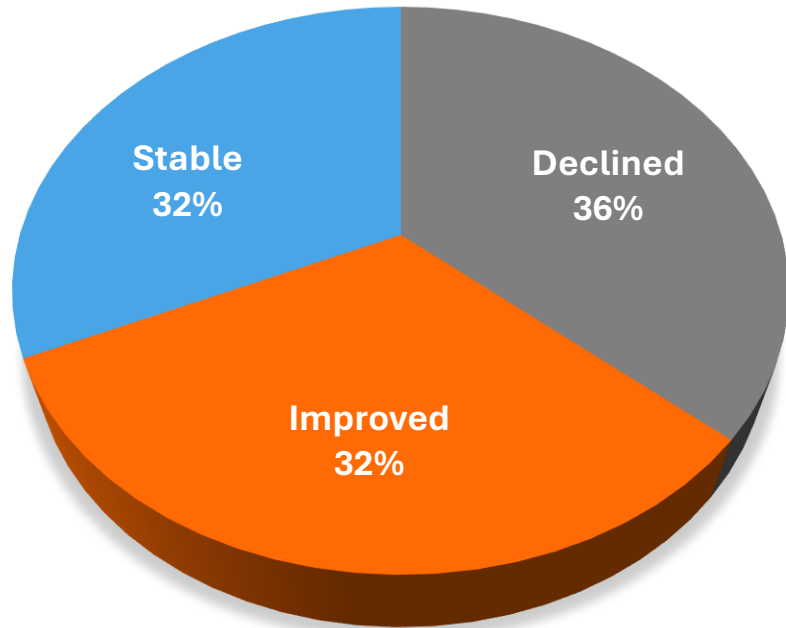
Evaluating

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

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

CAReS = Cancer Appetite Recovery Study

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)

ART26.12

Fatty Acid Binding Protein 5 (FABP5) Inhibitor

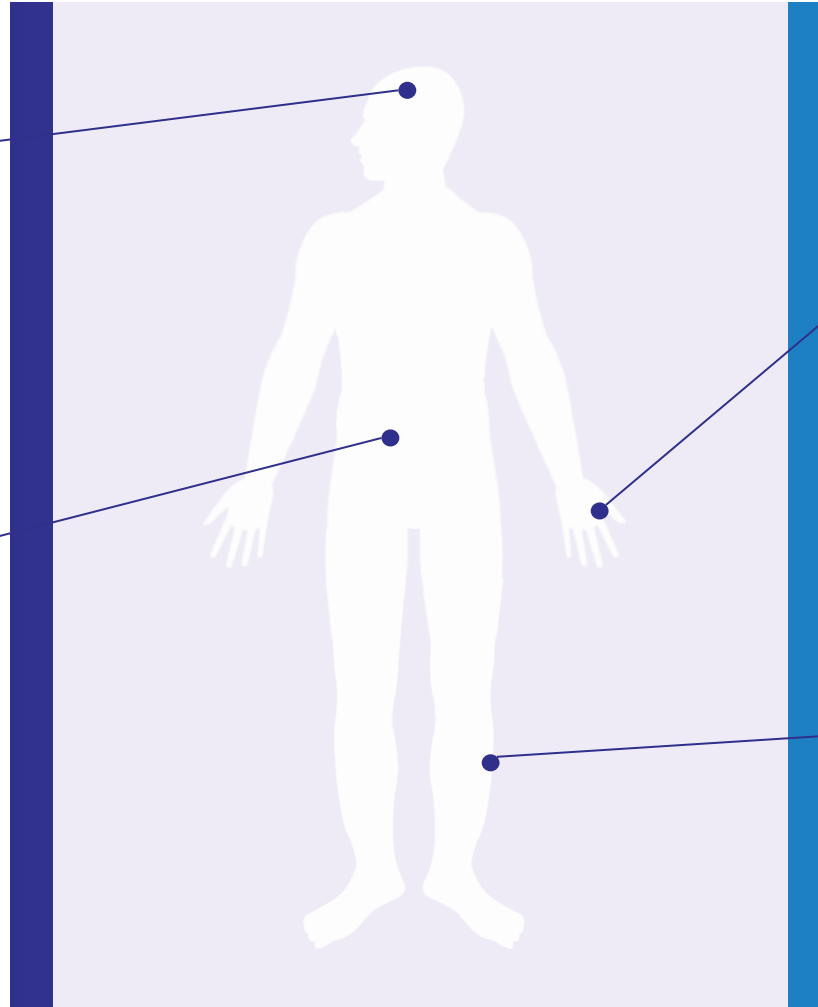
Fatty Acid Binding Proteins are a validated target with potential in multiple therapeutic areas. Artelo has a worldwide exclusive license from Stony Brook University, NY for multiple generations of FABP inhibitors.

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

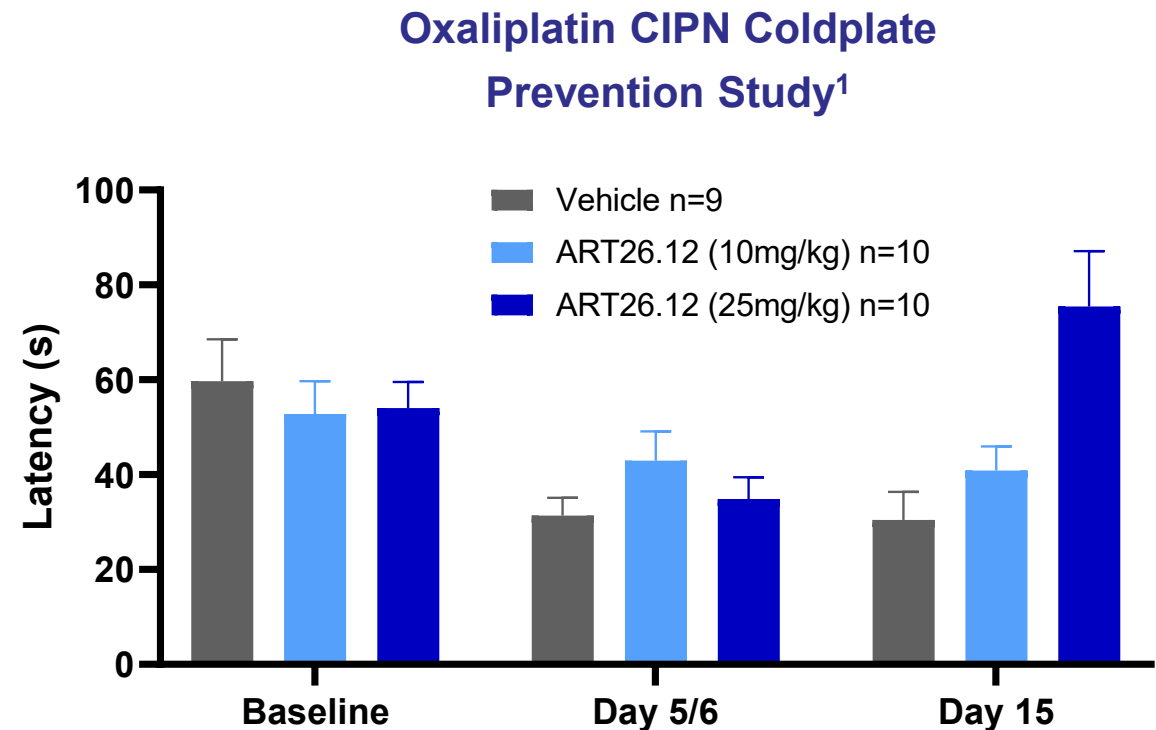


ART26.12 Strong Pre-Clinical Evidence from Multiple Studies

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 15¹
- **Reduced mechanical and cold allodynia** associated with paclitaxel induced CIPN by day 15²



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

¹ [https://www.jpain.org/article/S1526-5900\(24\)00345-6/fulltext](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

ART26.12 Phase 1 Study Results

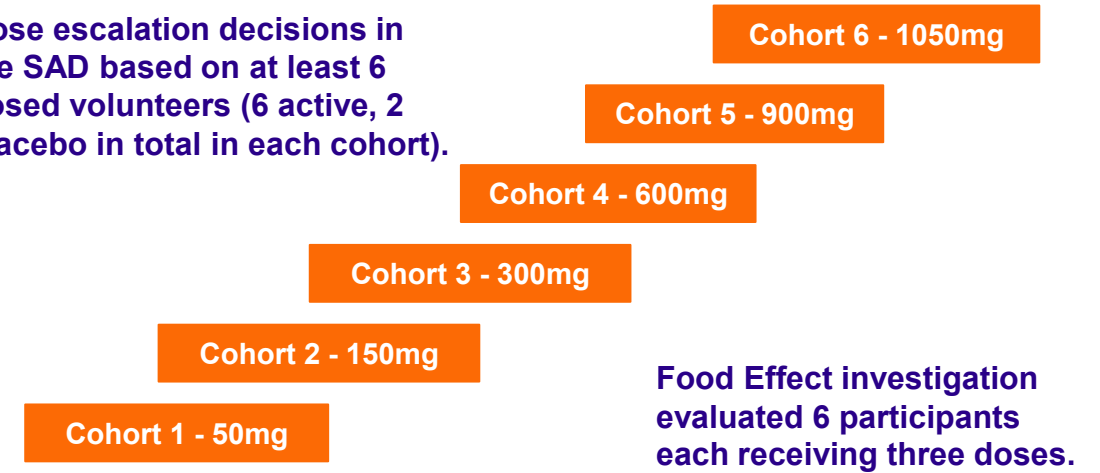
The Phase 1 Single Ascending Dose (SAD) & Food Effect (FE) study was designed to assess the safety, tolerability, and pharmacokinetics of ART26.12 in healthy volunteers. The SAD/FE study enrolled 55 subjects.

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).



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

ART12.11

CBD:TMP Cocystal

ART12.11 CBD:TMP Cocystal

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 Cocystal is a combination drug candidate with improved physical properties, pharmacokinetics, and pharmacology



CBD=cannabidiol ; TMP=tetramethylpyrazine

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

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	 Anxiolytic	 No effect	 Positive Effect
	Light-dark chamber			
	Open field test			
Depression	Sucrose preference	 Anti-depressive (reversed stress effect)	 No effect	 No Effect
	Forced swim test			
Sociability	Social motivation	 Pro-social (reversed stress effect)	 No effect	 Negative Effect
	Social discrimination			
Cognition	Novel-object recognition	 Protected memory (reversed stress effect)	 No effect or impaired spatial memory	
	Spontaneous alternation			

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

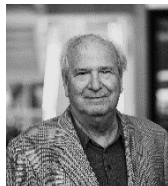
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Visgenx

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 6/30/2025)

Common Shares Outstanding	704,425
Shares to be issued upon conversion of convertible note	123,256
Warrants (WAEP \$7.68)	1,053,076
Options (WAEP \$11.03)	228,142
Total	2,108,899

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: 7% Officers/Directors

WAEP = Weighted Average Exercise Price

Artelo Investment Opportunity Summary



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-inc



@ArteloBio

INVESTOR RELATIONS

(212) 671-1020

ARTL@crescendo-ir.com

Nasdaq:ARTL

artelobio.com