Q4 2023 NASDAQ: FWBI



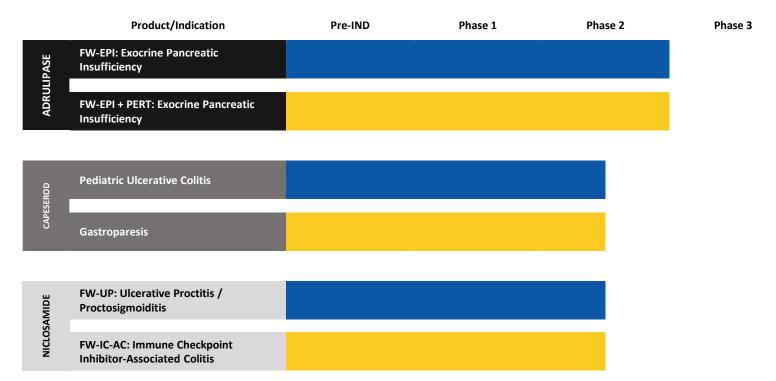
Targeted Therapies for Gastrointestinal Diseases

Corporate Overview

First Wave BioPharma, Inc. is a clinical stage biopharmaceutical company specializing in the development of targeted, non-systemic therapies for gastrointestinal (GI) diseases. The Company's pipeline is highlighted by two gut-restricted GI clinical programs.

The company is currently advancing a therapeutic development pipeline populated with multiple Phase 2 clinical stage programs built around its three proprietary technologies – adrulipase, a recombinant lipase enzyme biologic designed to enable the digestion of fats and other nutrients; capeserod, a selective 5-HT4 receptor partial agonist which First Wave is pursuing for gastrointestinal (GI) indications; and niclosamide, an oral small molecule with anti-inflammatory properties.

Clinical Pipeline



Technologies

Adrulipase

Recombinant lipase enzyme administered as an oral, nonsystemic biologic capsule for the treatment of EPI

- Non-porcine recombinant alternative
- Designed as a potential improvement over PERT
 - PERT can require upwards of 40 pills per day

Capeserod

Re-purposed selective 5-HT4 receptor partial agonist for gastrointestinal indications

- In-licensed from Sanofi in Sept.
 2023
- Unique mechanism of action applicable to several GI indications
 - · Pediatric Ulcerative Colitis
 - Gastroparesis
 - Constipation

Niclosamide

Oral small molecule with antiinflammatory properties

- Proprietary micronized formulation improves beneficial properties while maintaining safety profile
- Unique applications for mild-tomoderate IBD indications

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Targeted, Non-Systemic Therapies for Gastrointestinal Diseases

Therapeutic Indications

Exocrine Pancreatic Insufficiency (EPI) in Cystic Fibrosis

- EPI affects 40,000 cystic fibrosis patients and 95,000 chronic pancreatitis patients in the U.S.
- High daily PERT pill burden with CF patients currently taking 25 to 40 capsules daily to control symptoms; safety
 concerns with black box warnings for PERT therapy (risks of fibrosing colonopathy and transmission of animal
 pathogens)



Ulcerative Proctitis / Proctosigmoiditis (UP/UPS)

- UP and UPS are two types of ulcerative colitis. UPS causes inflammation in the colon and rectum, while UP is confined only to the rectum
- UP and UPS can occur at any point throughout life, with a high occurrence in young children and then again around 40-50 years of age



Immune Checkpoint Inhibitor-Associated Colitis (ICI-AC)

- Use of immune checkpoint inhibitors (ICIs), particularly higher dose and combinations of ICIs, can cause potentially life-threatening side-effects, including ICI-AC
- Patients who exhibit these issues can become severely debilitated and risk interrupting or stopping their cancer therapy



Pediatric Ulcerative Colitis (UC)

- UC is an inflammatory bowel disease (IBD) that causes irritation, inflammation, and ulcers in the lining of the colon. For children, inflammation often starts in the rectum and lower (sigmoid) intestine and spreads upward to the entire colon if it goes untreated.
- Pediatric UC usually presents with more severe symptoms than in adults and can often require surgery. Affecting around 2 in 100,000 children in the U.S., rates are on the rise



Gastroparesis

- Gastroparesis is the delayed movement of food from the stomach to the small intestine, not caused by blockage. Symptoms include feeling full soon after starting a meal or long after completing one, as well as nausea, and vomiting.
- Gastroparesis impacts approximately 50 in 100,000 people and is more common in women



Executive Management Team

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