

**Jaguar Health, Inc.**  
**(NASDAQ: JAGX)**

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Overview – August 2024



# Forward-Looking Statements

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This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding plans by Jaguar Health, Inc. (“Jaguar” or the “Company”) and Napo Therapeutics (formerly known as “Napo EU”) to develop and commercialize crofelemer in Europe for HIV-related diarrhea, short bowel syndrome, congenital diarrheal disorders, and other indications, expectations related to the timing of the commercial launch of products in any market, the expectation that Magdalena Biosciences will leverage Jaguar’s proprietary medicinal plant library and Filament Health’s proprietary drug development technology, the expectation that US\$1,000,000 will be invested in Magdalena Biosciences by One Small Planet, the expectation that Magdalena Biosciences may develop a potential plant-based alternative drug for adult ADHD or other indications that is both safe and efficacious, Jaguar’s plans to pursue additional business development deals, plans to expand the geography for commercialization of crofelemer, statements related to the powder formulation of crofelemer, related to NP-300, the timing of the initiation, completion, results, and publication of Phase 2 studies, Phase 3 studies, proof-of-concept studies, field studies, investigator-initiated trials, sponsored studies, and other studies, statements about possible eligibility for, and possible participation in, revenue generating early access programs, statements about the planned submission of Investigational New Drug (IND) applications to FDA, statements about plans to pursue a Priority Review Voucher (PRV), statements about the possible future market size/potential of indications, and expected milestones appearing on the list of “Upcoming Milestones”, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “aim,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this presentation are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this presentation and are subject to a number of risks, uncertainties and assumptions, some of which cannot be predicted or quantified and some of which are beyond our control. Please see the risk factors identified in our Annual Report on Form 10-K and our other filings with the SEC. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Readers are also advised that our projected sales do not take into account the royalties and other payments we will need to make to our licensors and strategic partners. Moreover, we operate in a dynamic industry and economy. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties that we may face. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

# What We Do: Develop New Ways and Novel Plant-based Medicines to Treat Gastrointestinal Disorders

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## From Tree to Bottle

Crofelemer was discovered through the science of ethnobotany



Mytesi (crofelemer 125mg delayed-release tablets) is FDA-approved for symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy

# Jaguar/Napo Product Portfolio – Crofelemer Pipeline in a Product

PRODUCT	INDICATIONS EVALUATED	DEVELOPMENT STAGE					GEOGRAPHIC FOCUS OF CLINICAL STUDIES
		PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	APPROVED (US)	
Mytesi (crofelemer)	Noninfectious diarrhea in adults with HIV/AIDS antiretroviral therapy						US
Crofelemer	Cancer therapy-related diarrhea (CTD)					<i>Phase 3 OnTarget trial</i>	Global
Powder formulation of crofelemer for oral solution	Adult short bowel syndrome (SBS) with intestinal failure		<i>Clinical protocol under development; Crofelemer has orphan drug designation in the EU &amp; US</i>				US & EU
Crofelemer	IBS - Diarrhea Predominant (IBS-D)						US
Crofelemer	Chronic idiopathic diarrhea in non-HIV patients (investigator-initiated POC trial)						US
Powder formulation of crofelemer for oral solution	Pediatric microvillus inclusion disease (MVID), a congenital diarrheal disorder (CDD)		<i>US IND <u>activated</u> and clinical protocol developed; crofelemer has orphan drug designation in the EU &amp; US</i>				US & EU
NP-300*	Symptomatic relief of diarrhea from cholera		<i>See footnotes below</i>			<i>US IND in effect with FDA</i>	US

\*NP-300 and crofelemer have a similar physiological anti-secretory mechanism of action to reduce chloride ion secretion into the gut lumen and improve stool consistency. The Company has previously presented Phase 2 data on crofelemer for the treatment of devastating dehydration in cholera patients from the renowned International Centre for Diarrhoeal Disease Research (icddr,b) in Bangladesh.

\*Potential opportunity for Priority Review Voucher (PRV)

# Expected Upcoming Catalysts– Clinical and Commercial Robustness

- **End of September 2024:** Planned submission to San Antonio Breast Cancer Symposium (SABCS) of late-breaking abstract on clinically meaningful signals in breast cancer patients from the phase 3 OnTarget trial of crofelemer for prophylaxis of cancer therapy-related diarrhea (CTD)
- **October 2024:** Launch of Gelclair, FDA-approved product for mucositis
- **October 2024:** Poster presentations for two investigator-initiated responder analysis trials of crofelemer that show significant improvement of chronic refractory diarrhea in IBS-D patients at American College of Gastroenterology 2024 Annual Meeting
- **Rare/Orphan Diseases:** Proof-of-concept (POC) data **by end of 2024 and throughout 2025** in support of potential early patient access in specific EU countries
  - Investigator-initiated POC crofelemer studies for short bowel syndrome (SBS) with intestinal failure and microvillus inclusion disease (MVID), an ultrarare congenital diarrheal disorder
- **Q4 2024:** First Patient In (FPI) Phase 2, MVID: US, EU, UAE (US IND)
- **Q4 2024:** FPI Phase 2 SBS: EU, UAE (EU CTA)
- **1H 2025:** Meet with FDA to discuss plan to bring crofelemer to CTD population
- **2025:** Jaguar JV Magdalena Biosciences initiate clinical development for botanical drug candidate



# Initial Results of Unprecedented OnTarget Trial

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- **Clinically meaningful results were identified in patients with breast and lung cancer.**
- **Definition of Clinical Importance:** A >10 percentage points difference in the proportion of subjects with  $\leq 7$  loose watery stools per week compared to placebo, which was seen in breast and lung cancer patients in months 2 & 3 of the 3-month period.
  - When we combined all the **breast and lung cancer** patients receiving different targeted therapies that achieved the monthly responder status in months 2 & 3, it showed that 79% of the crofelemer group patients achieved the above threshold vs. 68% of the placebo group. The one-sided P-value was 0.027, which is not statistically significant, as the hurdle for the study design is  $< 0.025$ , but the difference was clinically important.
  - When we evaluated all the **breast cancer** patients receiving three different types of targeted therapies, the proportion of monthly responders for months 2 & 3 that achieved  $\leq 7$  loose/watery stools per week at least 50% of the time, the crofelemer group had 78% responders vs. 68% in the placebo group.
  - For **breast cancer** patients receiving abemaciclib, the monthly responders for patients having  $\leq 7$  loose/watery stools per week for months 2 & 3 were 69% for the crofelemer group vs. 58% for the placebo group, and the odds ratio is 1.796 over the 3-month treatment period.
  - **Breast cancer** patients receiving pertuzumab that were monthly responders in months 2 & 3 having  $\leq 7$  loose/watery stools per week were 87% in the crofelemer arm vs. 75% in the placebo group, and the odds ratio was determined to be 1.44.
  - Similarly, **lung cancer** patients receiving kinase inhibitors achieving a monthly responder status for months 2 & 3 with  $\leq 7$  loose/watery stools per week were 81% in the crofelemer arm vs. 64% in the placebo group.





# Increasing Market Value: Progression from Supportive Care to Impact on Outcome/Cost of Care to Treatment Modifying

Global market for gastrointestinal agents (Rx & OTC) projected to reach \$21 billion by 2025<sup>1</sup>

Indication	# of Competitors	Market Size/Potential
HIV-related diarrhea	0	Jaguar estimates the U.S. market revenue potential for Mytesi® to be ~\$50 million in gross annual sales
Cancer therapy-related diarrhea (CTD)	0	Projected to be 2.0 million new cancer cases in US in 2024 <sup>2</sup> >1 million cancer patients receive chemo or radiation in a US outpatient clinic annually <sup>3</sup> Comparable supportive care (CINV) global market projected to reach <b>\$4.3 billion by 2031</b> <sup>4</sup>
Short bowel syndrome (SBS) with intestinal failure / Microvillus inclusion disease (MVID), a congenital diarrheal disorder (CDD)	0	~10,000 to 20,000 people in US have SBS and approximately the same number in Europe. Orphan-drug designation supports potential accelerated approval. Estimated annual US revenue for Takeda's SBS drug Gattex: ~\$555 million. Global SBS market projected to reach <b>\$4.6 billion by 2027</b> with a CAGR of 26% from 2020 to 2027 <sup>5</sup> (doesn't include potential contribution from crofelemer's novel mechanism of action)
IBS - diarrhea predominant (IBS-D)	3	~15% of adult population Most IBS products have estimated revenue potential >\$1.0 billion <sup>6</sup>
Symptomatic relief and treatment of diarrhea from cholera and other pathogens	0	*Potential opportunity for Priority Review Voucher (PRV) PRVs are transferable, and in past transactions by other companies have sold for values ranging from \$67 million to \$350 million <sup>7</sup>

<sup>1</sup> Research and Markets 2017 report: "Global Gastrointestinal agents Market Size, Market Share, Application Analysis, Regional Outlook, Growth Trends, Key Players, Competitive Strategies and Forecasts, 2017 to 2025"

<sup>2</sup> American Cancer Society. Cancer Facts & Figures 2024. Atlanta: American Cancer Society; 2024

<sup>3</sup> <https://www.cdc.gov/cancer/preventinfections/providers.htm#print>

<sup>4</sup> <https://www.ihealthcareanalyst.com/global-chemotherapy-induced-nausea-vomiting-drugs-market/>

<sup>5</sup> <https://www.mynewsdesk.com/us/medical-technology-news/pressreleases/short-bowel-syndrome-market-global-industry-analysis-size-share-trends-revenue-forecast-2020-to-2027-3069433>

<sup>6</sup> <http://247wallst.com/healthcare-business/2015/04/27/key-analyst-sees-nearly-30-upside-in-ironwood> & <https://www.benzinga.com/analyst-ratings/analyst-color/17/03/9224181/analyst-synergy-pharma-could-achieve-sustainable-profit>

<sup>7</sup> <https://www.raps.org/regulatory-focus/news-articles/2017/12/regulatory-explainer-everything-you-need-to-know-about-fdas-priority-review-vouchers>

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# **Our crofelemer clinical development programs**



# July 23, 2024: Jaguar Reported Phase 3 OnTarget Trial Results for its Cancer Supportive Care Drug Crofelemer

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- Unprecedented trial included patients with 10 different tumor types & 24 different targeted agents, with and without multiple standard cytotoxic chemotherapies.
- Study did not meet prespecified analysis of primary endpoint for all tumor types.
- Analysis did reveal clinically relevant signals for patients in prespecified subgroups of breast and respiratory cancers, including lung cancer, who received targeted therapies. These patient subgroups comprised > 75% of patients in trial.
- Breast and lung cancers are two of the three most common cancers, with patients often remaining on targeted therapy over prolonged periods.
- A growing and urgent unmet medical need exists for novel non-opioid chronic agents to treat CTD.
- Results indicate positive signals improved over the initial 12-week phase of study; data for additional 12-week extension phase yet to be analyzed.
- Company expects to engage with FDA after full review of data.



# Cancer Therapy-related Diarrhea OnTarget Phase 3 Trial: *Impact on Outcome*

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## ➤ Impact on outcome

- ❖ Roeland, et al<sup>1</sup>: Patients with cancer-related diarrhea (CRD) nearly 2.9 x higher cost than patients without CRD
- ❖ Okhuysen, et al<sup>1</sup>: **Patients with CTD 40% more likely to discontinue chemotherapy or targeted therapy than those without CTD**

## ➤ According to the World Health Organization, in 2022 breast cancer was the most common cancer in women in 157 countries out of 185, with 2.3 million women diagnosed with breast cancer globally<sup>2</sup>

- ❖ Breast cancer is the most common cancer in women in the U.S., except for skin cancers, accounting for about 30% of all new female cancers each year<sup>3</sup>
- ❖ The American Cancer Society estimates that, in 2024, 310,720 cases of invasive breast cancer will be diagnosed in women in the U.S. as well as 56,500 new cases of ductal carcinoma in situ<sup>3</sup>
- ❖ There are > 4 million breast cancer survivors in the U.S., including women still being treated and those who have completed treatment<sup>4</sup>

## ➤ Lung cancer is the most common cancer worldwide, with 2,480,675 new cases of lung cancer in 2022. It is the most common cancer in men and the 2nd most common in women.<sup>5</sup>

- ❖ Lung cancer (both small cell and non-small cell) is the second most common cancer in both men and women in the U.S. (not counting skin cancer)<sup>6</sup>
- ❖ The American Cancer Society estimates that there will be about 234,580 new cases of lung cancer (116,310 in men and 118,270 in women) in the U.S. in 2024<sup>6</sup>
- ❖ 654,620 people in the U.S. today have been diagnosed with lung cancer at some point in their lives<sup>7</sup>

<sup>1</sup> Source: Okhuysen PC, et al. Abstract 12111. Presented at: ASCO Annual Meeting (virtual meeting); June 4-8, 2021

<sup>2</sup> Source: <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>

<sup>3</sup> Source: <https://www.cancer.org/cancer/types/breast-cancer/about/how-common-is-breast-cancer.html>

<sup>4</sup> Source: <https://www.bcrf.org/breast-cancer-statistics-and-resources/>

<sup>5</sup> Source: <https://www.wcrf.org/cancer-trends/lung-cancer-statistics/>

<sup>6</sup> Source: <https://www.cancer.org/cancer/types/lung-cancer/about/key-statistics.html>

<sup>7</sup> Source: <https://www.lungcancerresearchfoundation.org/lung-cancer-facts/>

# Cancer Patients Are Unicorns

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Company to complete analysis of full data for first and second 12-week periods of pivotal phase 3 OnTarget trial of crofelemer for CTD in support of FDA discussion; Jaguar to explore possible approval pathway for crofelemer in breast and lung cancer based on phase 3 results



# Importance of the Patient Voice in Managing Cancer Care Effectively

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## *Paradigm shifting treatment with crofelemer*

- Strength of that voice as patients continue targeted therapies for months and years rising, important, and playing a role in what type of cancer treatment fits with the goals and the life of the patient (QoL)
- Patient dignity and comfort paramount
- Cancer patients = everyday people—parents, children, at school, in the workforce





# Napo Pharmaceuticals' *Make Cancer Less Shitty* Patient Engagement Program





“ If you ask me what’s your worst side effect, I’m going to ask you what day of the week is this? Because tomorrow is different, the next day is different, tonight is different. This morning is different. ”

— Person Living With Metastatic Breast Cancer

## A NEGLECTED PROBLEM

People with cancer experience numerous challenges – including **treatment-related side effects** – that can impact their quality of life (QoL). Supportive care is critical to addressing these challenges.

In a study of patient-reported chemotherapy side effects,  **6 in 10** participants reported having at least one debilitating side effect.<sup>1</sup>

 **81%** of cancer survivors reported they had unmet supportive care needs and reported dissatisfaction with current supportive care services.<sup>2</sup>

In a survey of oncology community stakeholders (researchers, nurses, medical oncologists, administrators, surgical and radiation oncologists, patient advocates, and nonphysician providers), patient QoL was ranked the most important metric over survival, access to care, and cost.<sup>3</sup>

There remains an **urgent need** to enhance supportive care as part of overall cancer care to best protect the dignity and QoL of those living with cancer.

REFERENCES  
1. Pearce A, Hsiao M, Viney R, et al. Incidence and severity of self-reported chemotherapy side effects in routine care: A prospective cohort study. *PLoS ONE*. 2017;12(10):e0184200.  
2. Moore TM, Kinyo AJ, Escoria M, Sharp D, Pineda R, Hurley AL. Supportive care for men with prostate cancer: why are the trials not working? A systematic review and recommendations for future trials. *Cancer Med*. 2015;4(8):1240-1251.  
3. Aljan C, Snyder RA, Horn DM, et al. Defining Priorities in Value-Based Cancer Care: Insights From the Alliance for Clinical Trials in Oncology National Cooperative Group Survey. *JCO Oncol Pract*. 2023;19(10):932-938.

# COMING SOON: A Protective Gel for Oral Mucositis Management



gelclair®



"I felt like I had shards of glass in my mouth," said one sufferer. As a result, patients don't drink/eat and lose weight at a critical time of cancer treatment.

## SOOTHING PAIN RELIEF WITHOUT NUMBING

Gelclair is a prescription gel that is clinically proven to rapidly soothe the pain from oral lesions, including those from oral mucositis. It works by forming a protective layer over the oral mucosa, and by lubricating, hydrating, and coating the damaged tissues.

## BENEFITS:

- Forms a protective layer over oral mucosa
- Rapid pain relief lasting for several hours
- No stinging, drying, or numbing
- Improves ability to eat, drink, swallow, speak, and sleep
- Convenient and easy to use

LEARN MORE

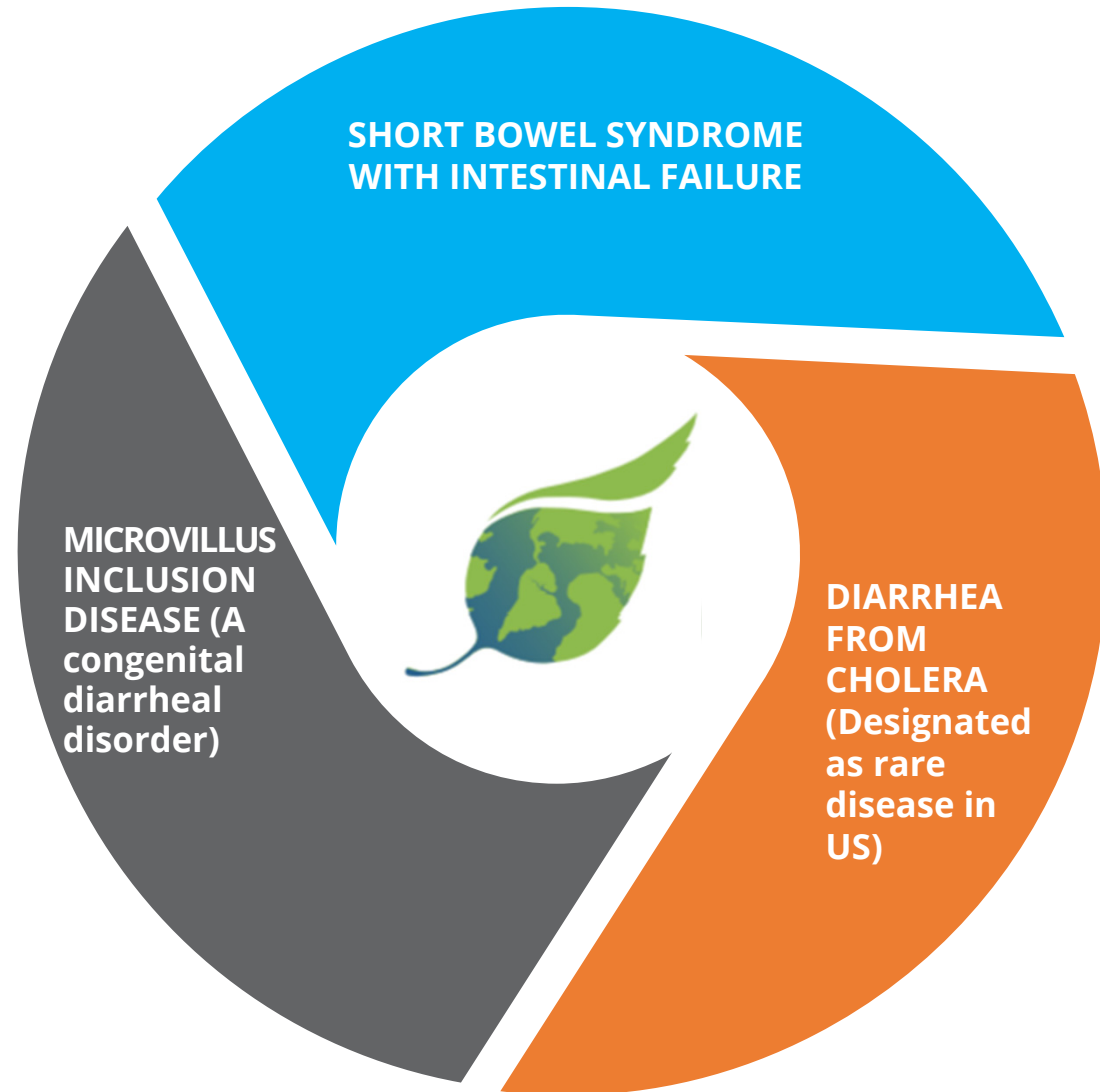


GELCLAIR.COM



- Who suffers from oral mucositis?
  - 100% of patients receiving head and neck radiotherapy
  - Up to 100% of patients undergoing high dose chemotherapy with hematopoietic stem cell transplantation
  - 30-75% patients receiving chemotherapy

# Jaguar Health's Strategic Focus on Rare Diseases



## Rare diseases, when taken together, are not that rare at all

- **30 million Americans<sup>1</sup>**, or 10 percent of the population, have one of the approximately **7,000 known rare diseases<sup>2</sup>**
- An estimated **30 to 40 million people in the EU<sup>3</sup>** and **400 million worldwide<sup>4</sup>** have a rare disease
- Definition of a rare or orphan disease by region:
  - **US:** When a disease affects **<200,000 people<sup>5</sup>**
  - **EU:** When a disease affects **<1 in 2,000 people<sup>6</sup>**
    - **EU: “Ultra-rare disease”:** When a disease affects **no more than 1 in 50,000 people<sup>7</sup>**
- Reimbursement coverage is often available due the rare disease’s high morbidity and mortality rates, and as a result of support from patient activist groups

<sup>1</sup> & <sup>2</sup> Source: <https://phrma.org/Scientific-Innovation/Progress-in-Fighting-Rare-Diseases>

<sup>3</sup> Source: Harari S. Why We Should Care About Ultra-Rare Disease. Eur Respir Rev. 2016 Jun;25(140):101-3. doi: 10.1183/16000617.0017-2016

<sup>4</sup> Source: <https://rarediseases.org/rare-disease-day-2022-advancing-the-conversation-around-health-equity/>

<sup>5</sup> Source: <https://www.fda.gov/patients/rare-diseases-fda#>

<sup>6</sup> Source: <https://www.eurordis.org/information-support/what-is-a-rare-disease/>

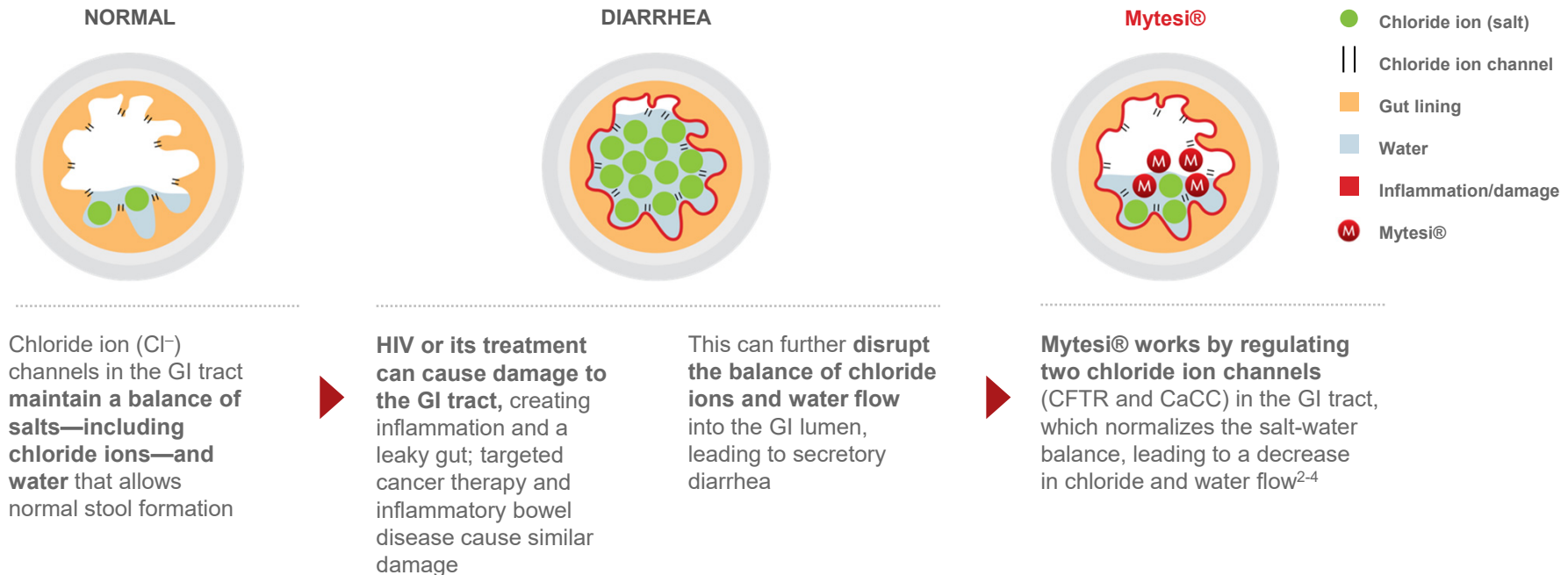
<sup>7</sup> Source: European Commission Regulation (EU) No.536/2014 of the European Parliament and of the Council of April 16, 2014 on clinical trials on medicinal products for human use, and repealing Directive 2001/20/EC. 2014. Available from: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0536&qid=1421232837997&from=EN>



# Crofelemer is a First-in-Class Intestinal Chloride Channel Modulator

*Mytesi® (crofelemer) acts at the **common** last step in a physiological pathway, regardless of cause, thereby **normalizing** defective secretion, **specifically mitigating dehydration***

Crofelemer does not cause constipation or alter motility



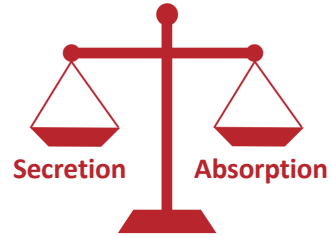
**Acts locally** in the gut via allosteric modulation of chloride channels

References: 1. Brenchley JM, Douek DC. *Mucosal Immunol.* 2008;1(1):23-30. 2. Mytesi® [package insert]. San Francisco, CA: Napo Pharmaceuticals, Inc; 2020. 3. Tradtrantip L, Namkung W, Verkman AS. *Mol Pharmacol.* 2010;77(1):69-78. 4. Holodniy M, Koch J, Mistal M, et al. *Am J Gastroenterol.* 1999;94(11):3267-3273.

# How Crofelemer Works

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- **Crofelemer is a non-opioid that works differently from other treatments for GI dysfunction**



## **With crofelemer, it's about waterflow**

Crofelemer normalizes waterflow in the GI tract  
Less water flowing into your GI tract = less watery diarrhea = greater nutrient absorption opportunity

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## **Crofelemer acts locally in the GI tract**

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**Opioid medicines (i.e., Imodium, loperamide) work by slowing down your GI tract, i.e., opioid constipation risk**

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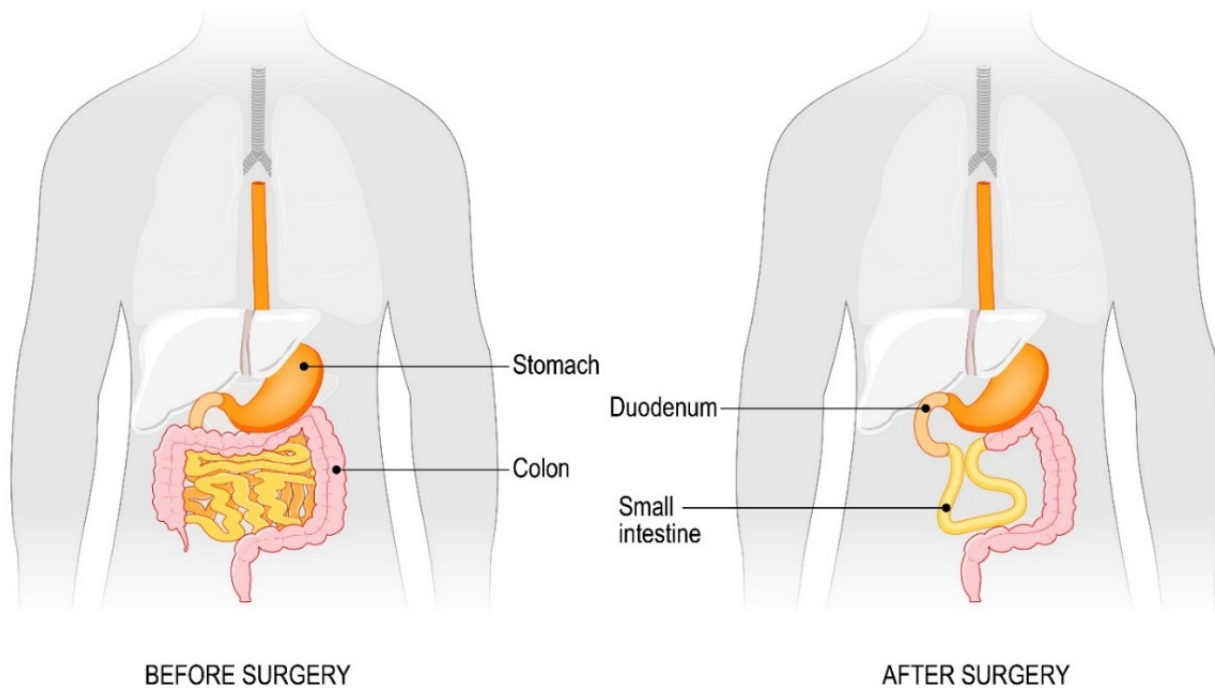


**Crofelemer is a non-opioid, non-antibiotic, non-addictive drug approved in the US for a chronic use**

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# Short Bowel Syndrome – Loss of Bowel with Quality-of-Life Changes

- **SBS:** Catastrophic loss of bowel often due to surgical resection of diseased or necrotic bowel (normal 15-25 feet to 5 or less feet) in adults/children (also may be congenital in children).
- **SBS with Intestinal Failure (SBS-IF):** A condition in which your body is unable to absorb enough nutrients from the foods you eat because you do not have enough small intestine. Patients suffer from malnutrition, dehydration, imbalances of fluids and salts, excessive intestinal fluid output, and risk of organ failure.
  - Life-long parenteral nutrition (PN) may be required
  - No “standard of care” drug intervention



Parenteral nutrition backpack for patients with intestinal failure

# A Global Opportunity

- SBS Patient Population:
  - ~10,000 to 20,000 in US
  - ~10,000 to 20,000 in Europe
- Despite limited treatment options, the global SBS market exceeded \$568 million in 2019 and is expected to reach **\$4.6 billion by 2027<sup>1</sup>**
  - Gattex (teduglutide):
    - Estimated share of US market: ~1-2%<sup>3</sup>
    - Annual cost in US: ~\$485,400<sup>4</sup>
    - Multiple biosimilars in development by other companies
    - **“Gattex can make abnormal cells that are already in your body grow faster. There is an increased risk that abnormal cells could become cancer.”**
  - Non-hospitalized parenteral nutrition in the US is approximately \$150,000 per year<sup>5</sup>
  - Frequent hospitalizations for infections



<sup>1</sup> <https://www.mynewsdesk.com/us/medical-technology-news/pressreleases/short-bowel-syndrome-market-global-industry-analysis-size-share-trends-revenue-forecast-2020-to-2027-3069433>

<sup>2</sup> Jaguar estimate based on projected Gattex 2020 revenue of 554.9M USD (based on Takeda financial reports) divided by annual per-patient expenditure for Gattex of \$376.2K in 2016 (figure sourced from <https://www.ahip.org/documents/HighPriceDrugsReport.pdf>)

<sup>3</sup> Jaguar estimate based on an estimated US SBS population of 10,000-20,000 people

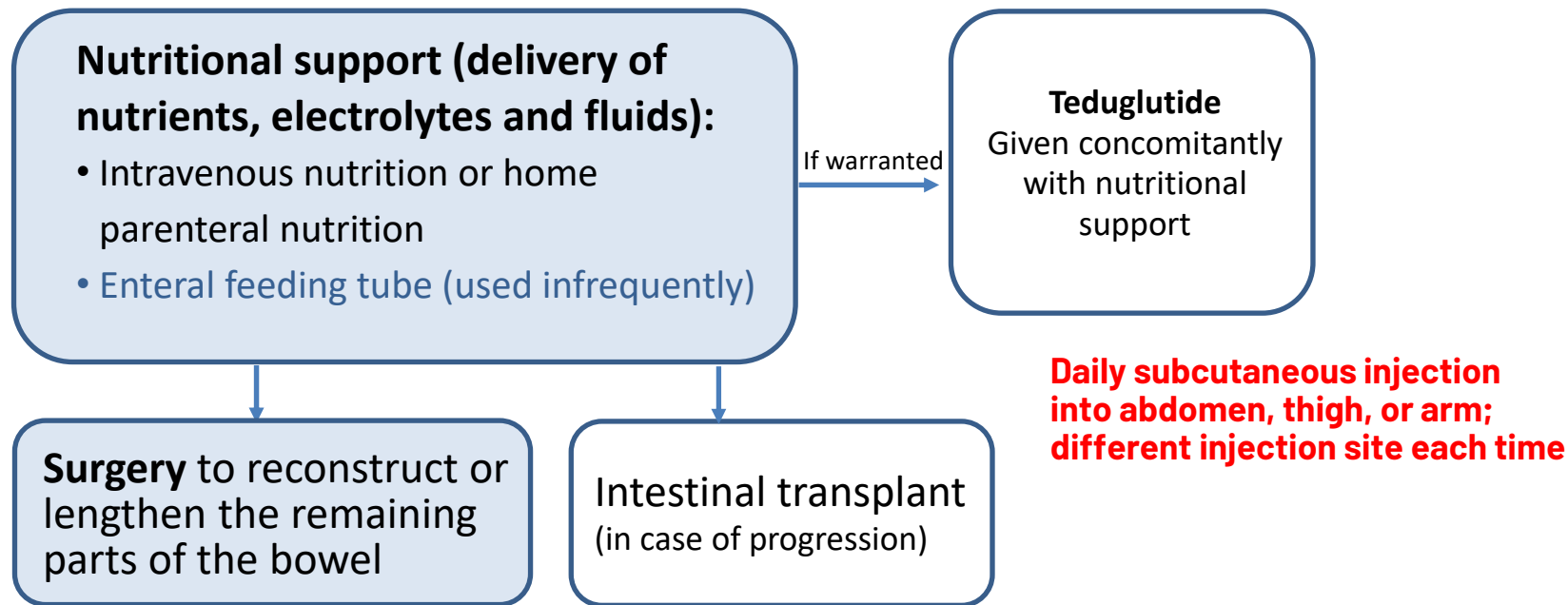
([www.crohnscolitisfoundation.org/sites/default/files/legacy/assets/pdfs/short-bowel-disease-crohns.pdf](http://www.crohnscolitisfoundation.org/sites/default/files/legacy/assets/pdfs/short-bowel-disease-crohns.pdf))

<sup>4</sup> 10 priciest drugs in America (<https://www.benefitspro.com/2020/08/24/10-priciest-drugs-in-america/?slreturn=20221021163553>)

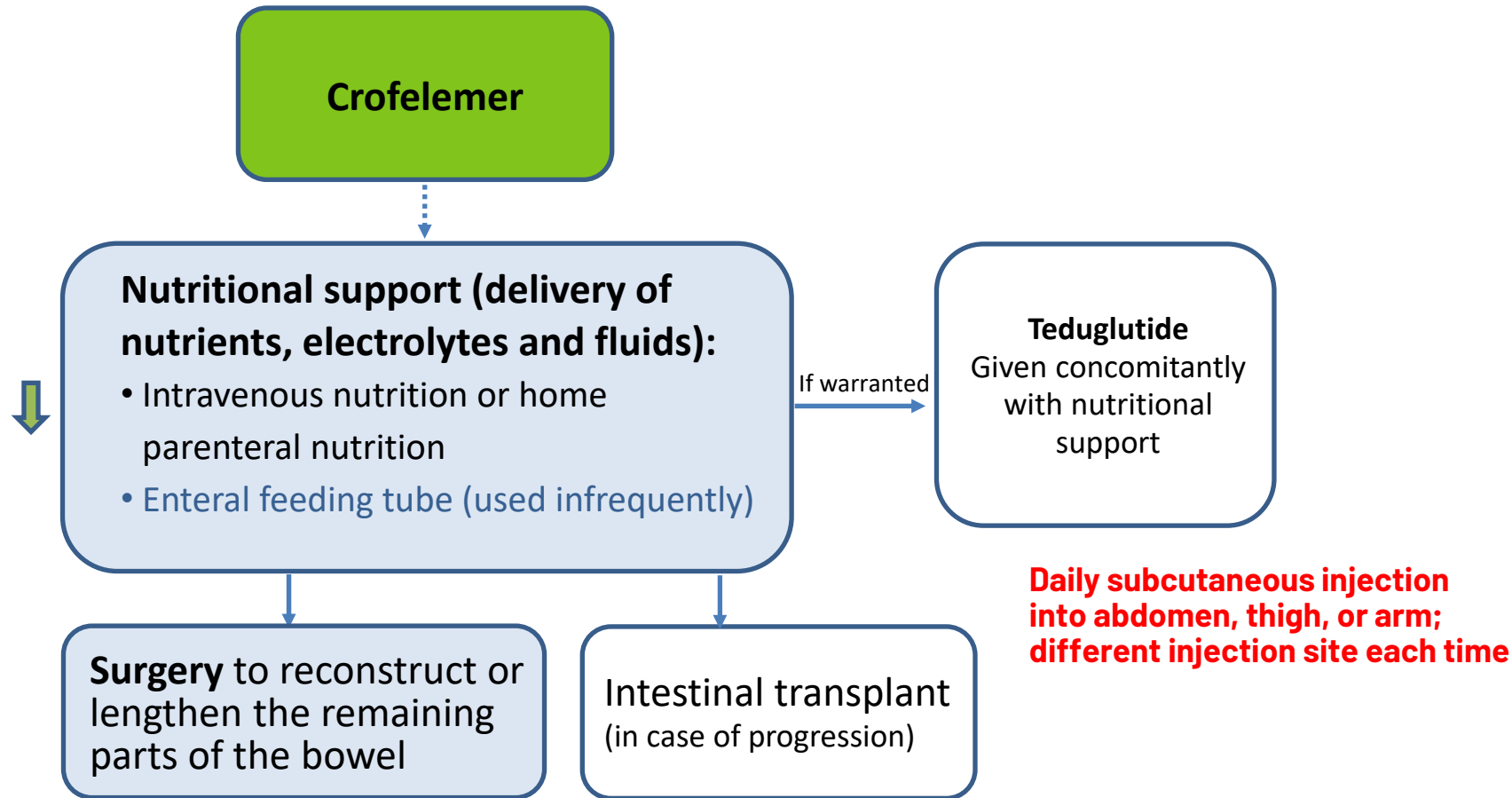
<sup>5</sup> <https://nutritionequity.org/wp-content/uploads/2018/05/mnea-factsheet-sbs.pdf>

# Current Treatment Pathway for SBS-IF Patients

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# Proposed Treatment Pathway: Crofelemer May Reduce Need for Parenteral Nutrition in SBS-IF Patients



**Reduction of parenteral nutrition would lead to improvement of patients' quality of life**



# Microvillus Inclusion Disease (MVID): An Ultra Rare CDD

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MVID is an ultra rare congenital diarrheal disorder (CDD) that affects newborns and children and leads to significant morbidity and mortality from **severe secretory diarrhea, intestinal failure**

## Key Milestones:

- **Investigational New Drug (IND) application for crofelemer for MVID activated by FDA in August 2023**
- Single digit number of patients treated to receive approval?



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\* Adverse events could negatively affect the timeliness of submitting the Investigational New Drug (IND) application. There is a probability that the FDA may not approve Company's IND application.



# NP-300 Drug Candidate for the Symptomatic Relief of Diarrhea from Cholera and Other Pathogens

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**Cholera is designated as a rare disease in the United States, where nearly all reported cases are acquired during international travel**

## **Our NP-300 Drug Candidate:**

- Second-generation anti-secretory drug
- Same source plant as crofelemer
- Clinical proof-of-concept for the CFTR ion channel MOA of NP-300 demonstrated by crofelemer for the reduction of diarrhea-associated dehydration in cholera patients: International Centre for Diarrhoeal Disease Research (icddr,b) in Bangladesh
- IND activated
- Plan to pursue Priority Review Voucher (PRV) (in past transactions by other companies PRVs have sold for values ranging from \$67M - \$350M)



# Canalevia®-CA1 (Crofelemer): A New Standard of Care For Treatment of Chemotherapy-induced Diarrhea (CID) in Dogs Launched April 2022

Canalevia-CA1 received conditional approval in December 2021—the first and only product indicated for CID in dogs to receive any type of approval from FDA

Approximately 1 in 4 dogs will, at some stage in their life, develop neoplasia. Almost half of dogs over the age of 10 will develop cancer. ~6 million new cancer diagnoses are made in dogs each year in the U.S.

Pet owners' willingness to pay for life saving treatments and procedures increases with patient comfort.

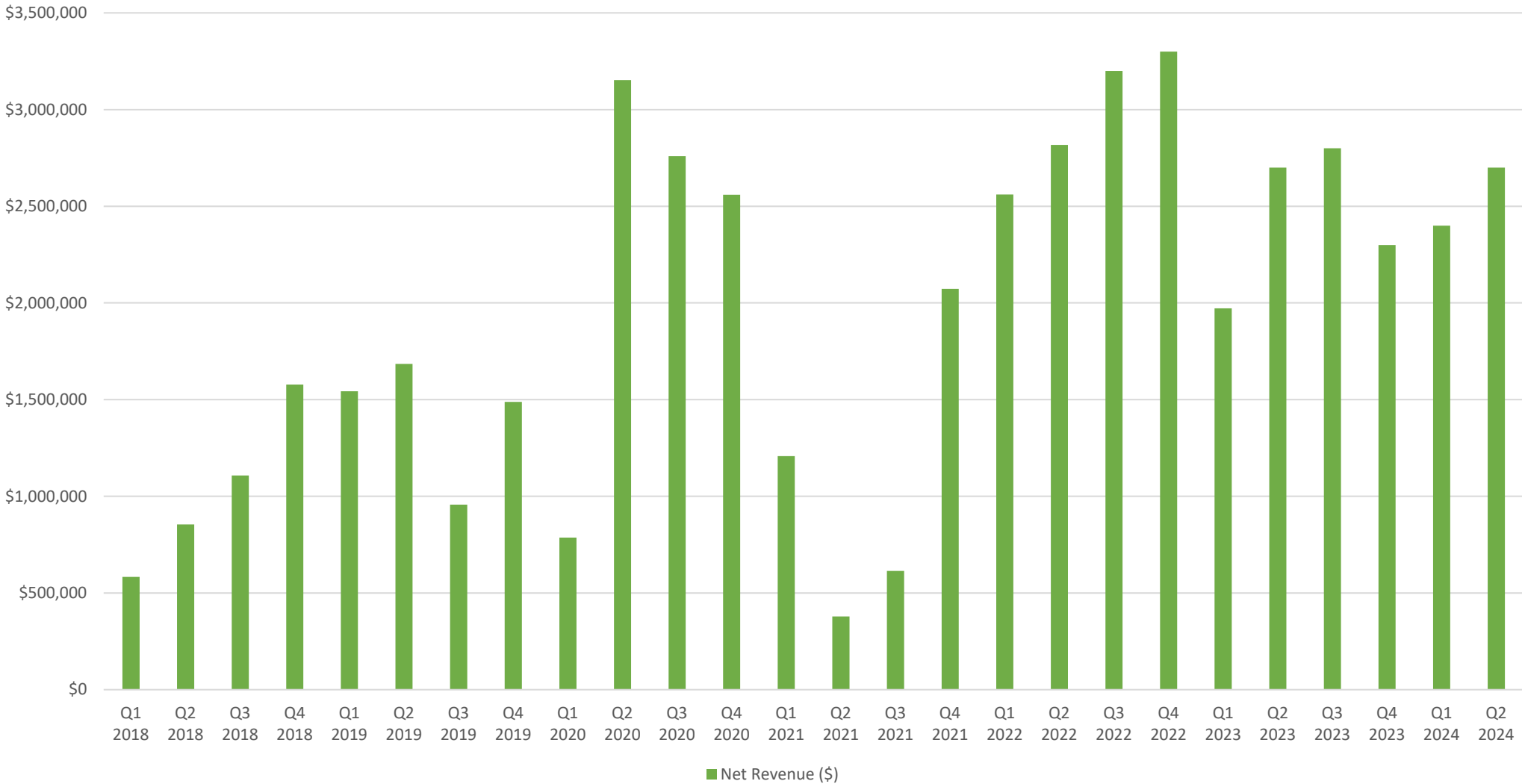
For the most part, dogs receive human chemotherapeutic agents during treatment and suffer the same side effects as humans, which means ~40% of treated dogs may have their chemotherapy reduced, changed, or discontinued due to diarrhea—which can compromise the full benefit of the chemotherapy agent.

Similar dynamics to human specialty market, but with greater correlation between gross and net revenue with pet owner paying out of pocket.

Conditional approval in dogs is similar to orphan drug designation in humans.



# Net Revenue: Q2 2024 revenue increased approximately 16% versus net Q1 2024 revenue



# Jaguar and Filament Health, with Funding from One Small Planet, Form Joint Venture *Magdalena Biosciences* to Develop Botanical Pharmaceutical Drug Candidates for Mental Health Illnesses

***Magdalena currently valued at US\$5.0 million based on initial funding of US\$1.0 million from One Small Planet***

- Magdalena Biosciences leverages Jaguar's proprietary 2300 medicinal plant library
- Jaguar owns ~40% of Magdalena
- **Goal of Collaboration:** To extend the botanical drug development capabilities of Jaguar to:
  - Develop pharmaceutical-grade, standardized drug candidates for mental health disorders **including attention-deficit/hyperactivity disorder (ADHD) in adults**
  - **Partner with a potential future licensee** to develop and commercialize these novel plant-based drugs



**License specific IP for schizophrenia from Jaguar to Magdalena for license fees and royalty**

# Magdalena Biosciences

Program to support the discovery and development of **novel psychoactive medicines derived from plants** for mental health and CNS disorders

- Leverage Company's proprietary library of ~2,300 plants and ~3,500 plant extracts with ethnomedicinal investigation
- Seeking next generation first-in-class agents, novel mechanisms of action, disease modifying agents

## **Eight key agents being pursued by psychedelic-focused companies:**

- LSD and derivatives
- Psilocybin and derivatives (mushrooms in the genus *Psilocybe*)
- Iboga and derivatives
- Toad sections from *Bufo Alvarius* 5-MeO-DMT
- MDMA (referred to as ecstasy or Molly)
- Ketamine
- Mescaline and derivatives (peyote is most well-known source but not only source)
- DMT and derivatives (most well-known source is the *Banisteriopsis* and *Psychotria viridis* mixture known as Ayahuasca)



*Picralima nitida* plant, the source of the active ingredient alstonine



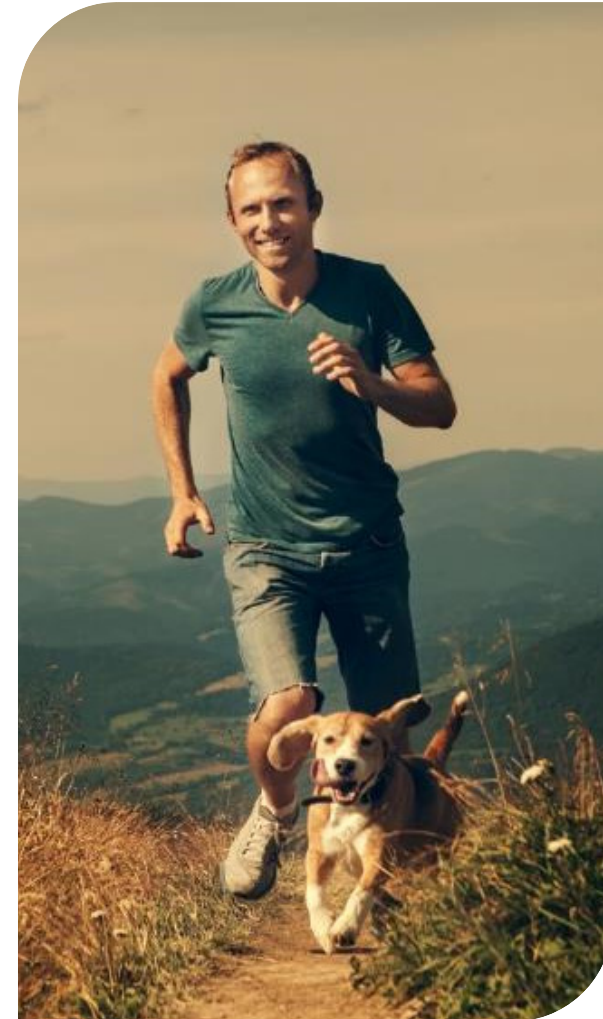
Peyote (*Lophophora williamsii*), a source of mescaline



# Key Milestones

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- **Q4 2024:** Initiate commercial launch for Gelclair®
- **2H 2024:** Additional rare disease initiatives, real world PRO
- **2H 2024:** Targeting: Publication/presentation of OnTarget results
- **2024:** Investigator-initiated proof-of-concept (POC) studies of crofelemer for SBS and MVID
- **2024 / 2025:** Publication of POC data for SBS and MVID, supporting the potential for expanded patient access through early access programs in specific EU countries for these diseases
- **1H 2025:** Meet with FDA to discuss plan to bring crofelemer to CTD population
- **Ongoing:** Business development partnership(s) related to pipeline & global commercialization



\* Key milestones are based on management estimates. Adverse events could negatively affect Company's business and the timeliness of achieving key milestones.

# Jaguar/Napo Pharmaceuticals Executive Management Team

Name / Title	Experience
<b>Lisa Conte</b> Founder & CEO	<ul style="list-style-type: none"> <li>• 30+ years of industry experience</li> <li>• Obtained first anti-secretory human product FDA approval</li> <li>• Board of Directors of Healing Forest Conservancy</li> <li>• Raised over \$400 mm</li> </ul>
<b>Carol Lizak, MBA</b> Chief Financial Officer	<ul style="list-style-type: none"> <li>• 20 years corporate controllership and financial planning and analysis experience under U.S. GAAP &amp; IFRS</li> <li>• 10+ years with public companies including foreign subs (5 years in biopharma)</li> </ul>
<b>Steven King, PhD</b> Chief Sustainable Supply, Ethnobotanical Research & IP Officer	<ul style="list-style-type: none"> <li>• Served as head of sustainable supply, ethnobotanical research &amp; IP: 1989-2020</li> <li>• Board of Directors of Healing Forest Conservancy</li> </ul>
<b>Pravin Chaturvedi, PhD</b> Chief Scientific Officer Chair of Scientific Advisory Board	<ul style="list-style-type: none"> <li>• 25+ years drug development experience</li> <li>• Co-Founded Scion, IndUS and Oceanyx Pharmaceuticals</li> <li>• Successfully developed Mytesi® (first pivotal adaptive design) and 7 pharmaceutical products</li> </ul>
<b>Karen J. Brunke, PhD</b> Executive VP, Corporate & Business Development	<ul style="list-style-type: none"> <li>• 30+ years experience in research, operations and BD in pharma/biotech</li> <li>• Primary responsibility in deals with MedImmune, Astellas; closed GSK deal</li> <li>• Successfully developed GMOs at Sandoz while Research Director</li> </ul>
<b>Darlene Horton, M.D.</b> Chief Medical Officer	<ul style="list-style-type: none"> <li>• Biopharmaceutical veteran and leading clinical development expert</li> <li>• 25 years experience in development of investigational and commercialized biopharmaceutical and drug-device combination products; experienced in design of SBS clinical programs</li> </ul>
<b>David Sesin, PhD</b> Chief Manufacturing Officer	<ul style="list-style-type: none"> <li>• Pharmaceutical scientist with experience from drug discovery through manufacturing</li> <li>• Developed crofelemer manufacturing process</li> </ul>
<b>Jonathan Wolin, JD, MBA</b> Chief of Staff, Chief Compliance Officer & General Counsel	<ul style="list-style-type: none"> <li>• Extensive experience providing legal advice and guidance to public and private companies in the healthcare and biotechnology industries</li> </ul>
<b>Ian H. Wendt, MBA</b> Chief Commercial Officer	<ul style="list-style-type: none"> <li>• Has held commercial leadership roles across sales, marketing and operations at some of the largest brands in the pharmaceutical industry over past 25 years</li> </ul>
<b>Allison A. Shrier, M.D.</b> Napo Pharmaceuticals VP, Clinical Research & Medical Affairs	<ul style="list-style-type: none"> <li>• Physician-scientist-entrepreneur with expertise in oncology &amp; metabolism</li> <li>• Expertise in end-to-end drug discovery &amp; development including population identification, target product profiles development, hit design, selection &amp; optimization, preclinical &amp; clinical study planning</li> </ul>



# Investment Highlights

## Mytesi (Crofelemer): FDA-Approved Human Drug

- Only FDA-approved diarrhea treatment that's been studied specifically in adults with HIV / AIDS
- Supply chain in place

## Planned Crofelemer Expansion

- **Progression from supportive care to impact on outcome/cost of care to treatment modifying**
- Napo's CTD - Phase 3 OnTarget study: Company to complete analysis of full data for first and second 12-week periods of trial in support of FDA discussion
- SBS with intestinal failure - treatment modifying
- 3 IITs (functional diarrhea, IBS, IBD)

## Strategic Focus on Rare Diseases

- SBS with intestinal failure
- Initial CDD target indication: microvillus inclusion disease (MVID)
- Other rare diseases, real world PRO

## Canalevia-CA1 for chemotherapy-induced diarrhea (CID) in dogs

- Canalevia-CA1 FDA conditionally approved December 2021
- Estimated 6 million new cancer diagnoses in dogs each year in US; 25-40% experience diarrhea
- Management of CID in dogs is a comfort issue for dogs and may also help dogs better tolerate chemo and improve the home/living environment for owners

## Strategic Partnerships

- Unencumbered global commercial rights to Mytesi/crofelemer pipeline
- License deals completed in Europe, Canada, Middle East; ongoing discussions for Asia, LATAM
- Magdalena Biosciences leveraging proprietary 2,300-plant ethnobotanical database

## Strong Management Team

- Key management has been with the team for >20 years
- Chairman of board and key investors have invested for >30 years

## Proprietary Position

- ~153 patents (majority do not expire until 2027 - 2031) and ~42 patents pending
- Sustainable supply of commercial scale of raw material sourcing
- Botanical guidance protection – no practical generic pathway





## Jaguar Health, Inc. (NASDAQ: JAGX)

**Contact:**

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