



Jaguar Health, Inc.

Investor Presentation

January 2019

Forward-Looking Statements

This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding the Company's plan to file an IND in 2H 2019 for lechlemer for the possible indication of diarrhea caused by cholera, the Company's belief that lechlemer may offer a possible Priority Review Voucher opportunity, the Company's statements regarding planned next steps for clinical trials (including the Company's plan to submit documentation in 1H 2019 to the FDA for the planned formulation of crofelemer for feeding tube administration to support investigation of a pediatric liquid formulation of crofelemer for the possible indication of Congenital Diarrheal Disease (CDD), and the Company's plan to file an IND and initiate the CDD IIT in mid-2019), the Company's expectation that it will meet with FDA in Q1 2019 to discuss the pivotal protocol for cancer therapy-related diarrhea (CTD), the Company's expectation that it will file an IND for the CTD supplemental indication in H1 2019, the Company's expectations regarding the timing of filings with the SEC, the Company's expectation that filing of the Canalevia NADA for chemotherapy-induced diarrhea (CID) in dogs will be completed in Q2 2019, the Company's plans to pursue additional business development deals in H1 & H2 2019, and the timing of data results from planned proof of concept, field and other studies 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.

Our Story: From Tree to Bottle

Crofelemer was
discovered
through the
science of
ethnobotany



Jaguar Health: The Product Portfolio

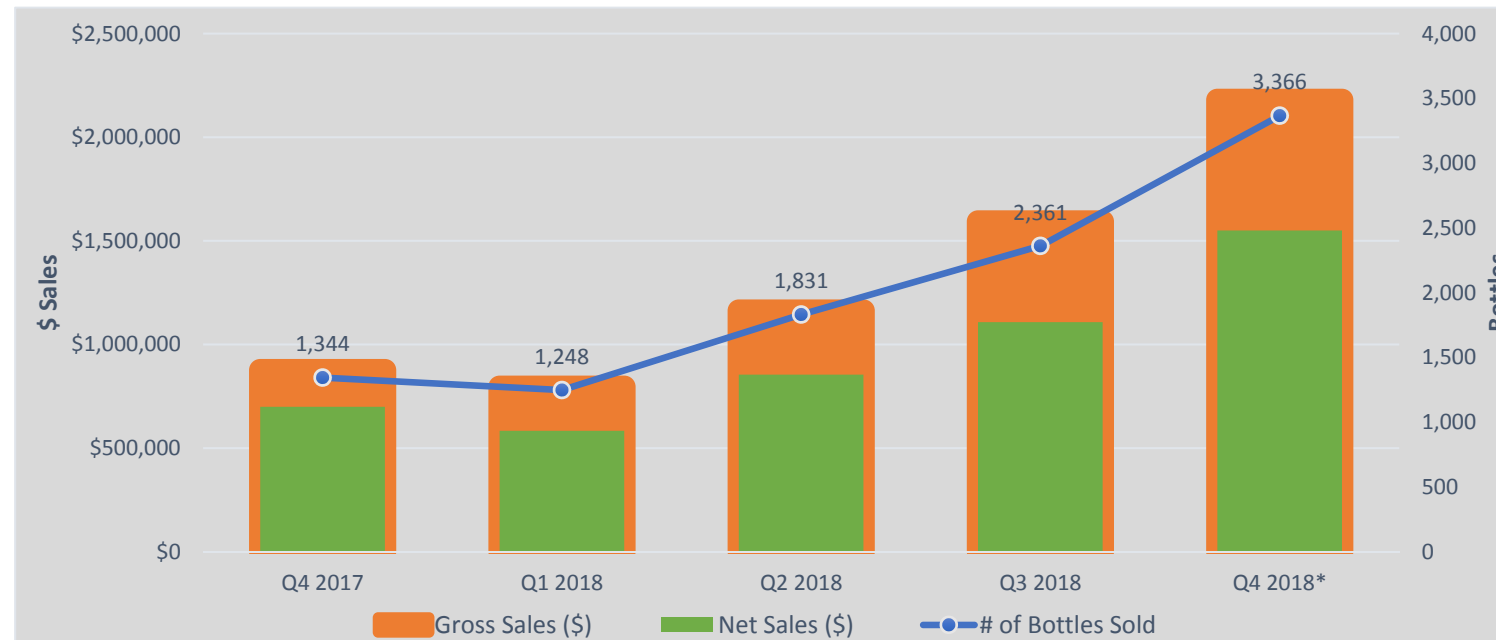


RELIEF, PURE AND SIMPLE

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

Mytesi Gross¹ & Net Sales Q4 2017 Through Q4 2018

Estimated Q4 2018 Gross & Net Sales: Approximately \$2.18 Million & \$1.55 Million Respectively
Estimated 2018 Annual Gross & Net Sales: Approximately \$5.726 million & \$4.0 million Respectively



A line-by-line reconciliation of gross sales to net sales is included in the appendix on page 36 of this presentation

*Q4 2018 gross and net figures are estimates

Jaguar Health By The Numbers

Revenue-Generating Biopharma With an FDA-Approved Drug

37%

*Anticipated Mytesi Gross
Sales Growth in Q4'18 Versus Q3'18*

36%

*Mytesi Gross Sales Growth in
Q3'18 Versus Q2'18¹*

136%

*Anticipated Mytesi Gross Sales
Growth in Q4'18 Versus Q4'17*

103%

*Growth in Total Mytesi Prescriptions
in Q4'18 Versus Q4'17²*



40%

*Anticipated Mytesi Net
Sales Growth in Q4'18 Versus Q3'18*

28%

*Mytesi Net Sales Growth in
Q3'18 Versus Q2'18¹*

123%

*Anticipated Mytesi Net Sales
Growth in Q4'18 Versus Q4'17*

19%

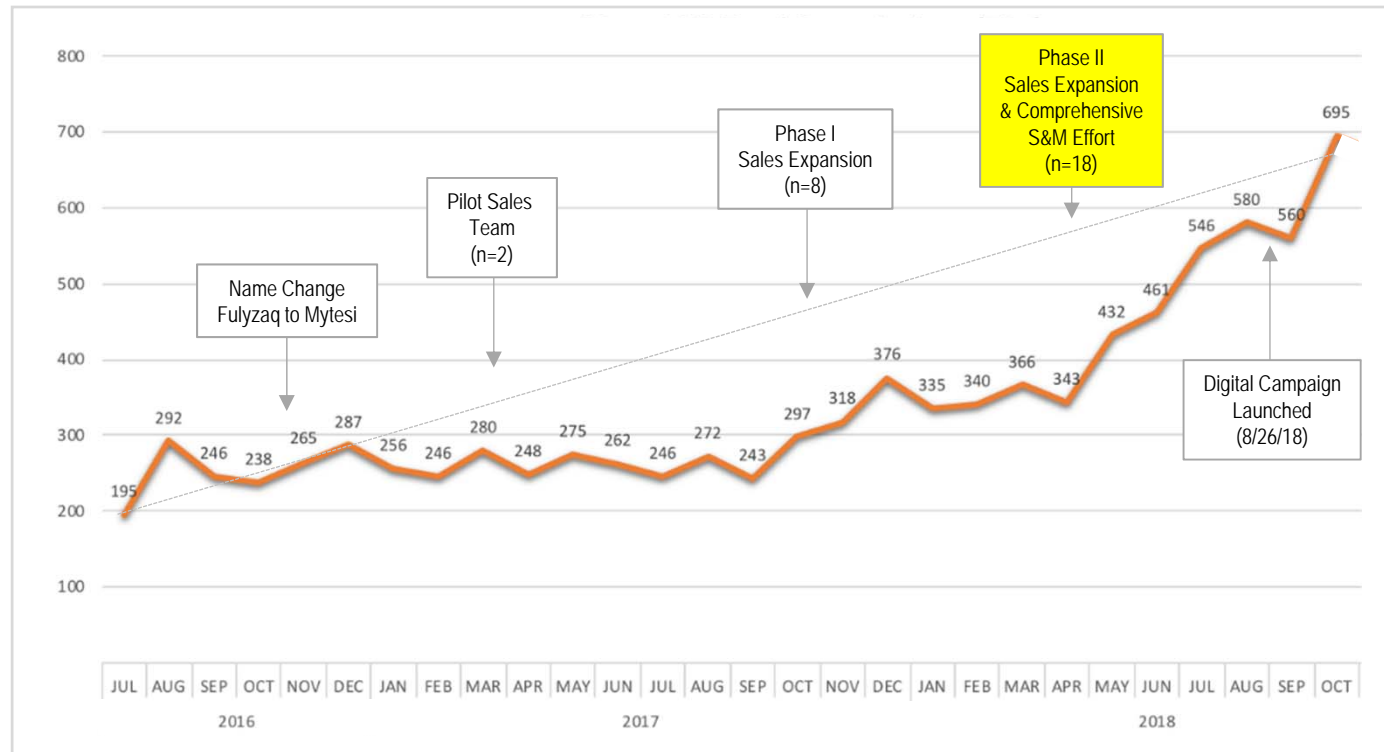
*Growth in Total Mytesi Prescriptions
in Q4'18 Versus Q3'18²*

¹Data on file in Jaguar Health General Ledger

²Source: IQVIA Monthly NPA Prescription Data

Key Market Events and Prescription Trends

Mytesi US Total Prescriptions (TRx)

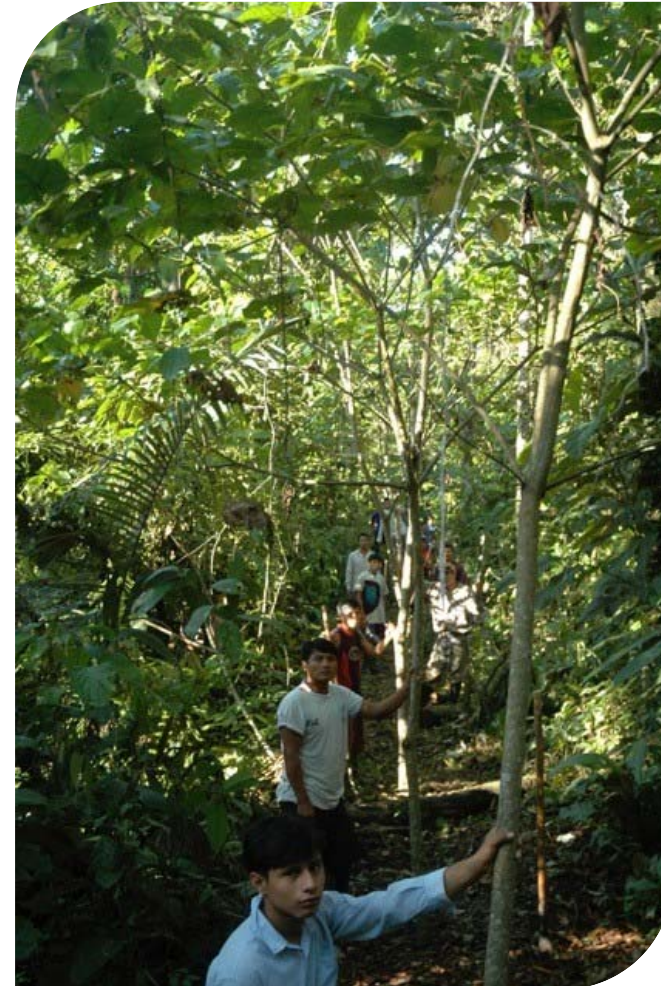


Data Source: IQVIA NPA (National Prescription Audit 12/18)

Napo, a Wholly-owned Subsidiary of Jaguar Health (JAGX)

Our Dual Mission

- Develop and commercialize proprietary novel GI products for the global marketplace
- Build value recognition in the company by all stakeholders
 - Break even from Mytesi HIV sales
 - Non-dilutive funding to progress pipeline



Pipeline Within the Brand for Diarrheal Disorders

Portfolio of current and potential diarrheal indications; Lechlemer offers potential Priority Review Voucher



Knight Therapeutics: License for Canadian and Israeli Markets

- On September 24, 2018, Jaguar signed a **Distribution, License and Supply Agreement** with Knight Therapeutics Inc.
- Agreement provides Knight Therapeutics with an exclusive right to commercialize current and future Jaguar human health products in **Canada and Israel**. In accordance with the agreement, the covered territory may be expanded at a later time to include specified countries in **Latin America**.
 - ❖ The Canadian and Israeli markets accounted for an estimated combined total of 2.18% of global pharmaceutical sales in 2014¹
 - ❖ The markets in the specified countries in Latin America accounted for an estimated combined total of 6.60% of global pharmaceutical sales in 2014¹
- Upon achievement of certain **regulatory and sales milestones**, Jaguar may receive payments from Knight Therapeutics in an aggregate amount of up to **USD \$18,019,743** (based on September 23, 2018 USD-CAD exchange rates) payable throughout the initial 15-year term of the agreement. Knight invested **US \$900k** in Jaguar equity.

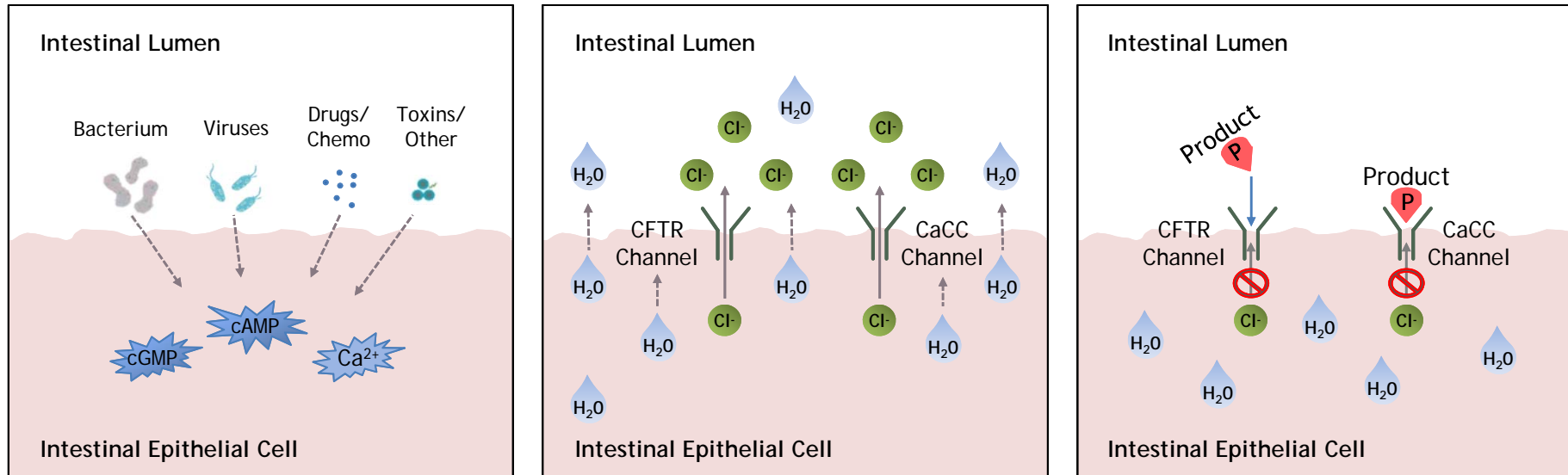


Montreal, Canada-based Knight Therapeutics Inc. is a specialty pharmaceutical company focused on acquiring or in-licensing and commercializing innovative pharmaceutical products for the Canadian and select international markets.

¹The International Federation of Pharmaceutical Manufacturers & Associations
"Pharmaceutical Industry and Global Health - Facts and Figures 2017" report

Unique Anti-Secretory Mechanism of Action in Mammals

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

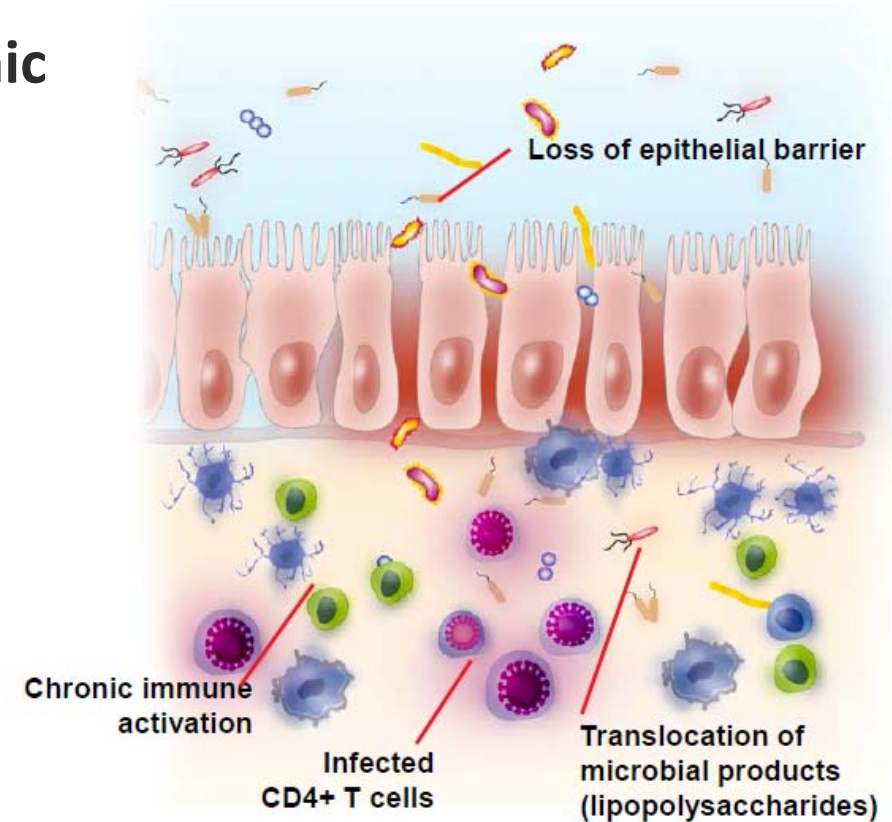


Acts locally in the gut and is minimally absorbed systemically

Mytesi Addresses HIV-Associated Diarrhea

HIV Enteropathy– a growing demographic

- GI tract is profoundly affected by HIV infection
- HIV enteropathy is due to direct and indirect effects of HIV on the intestinal mucosa
- Gut inflammation and depletion of T cells continues even after viral load levels are managed
- Chronic diarrhea remains a significant complaint of people living with HIV/AIDS, particularly those who are older and have lived with the virus for 10+ years

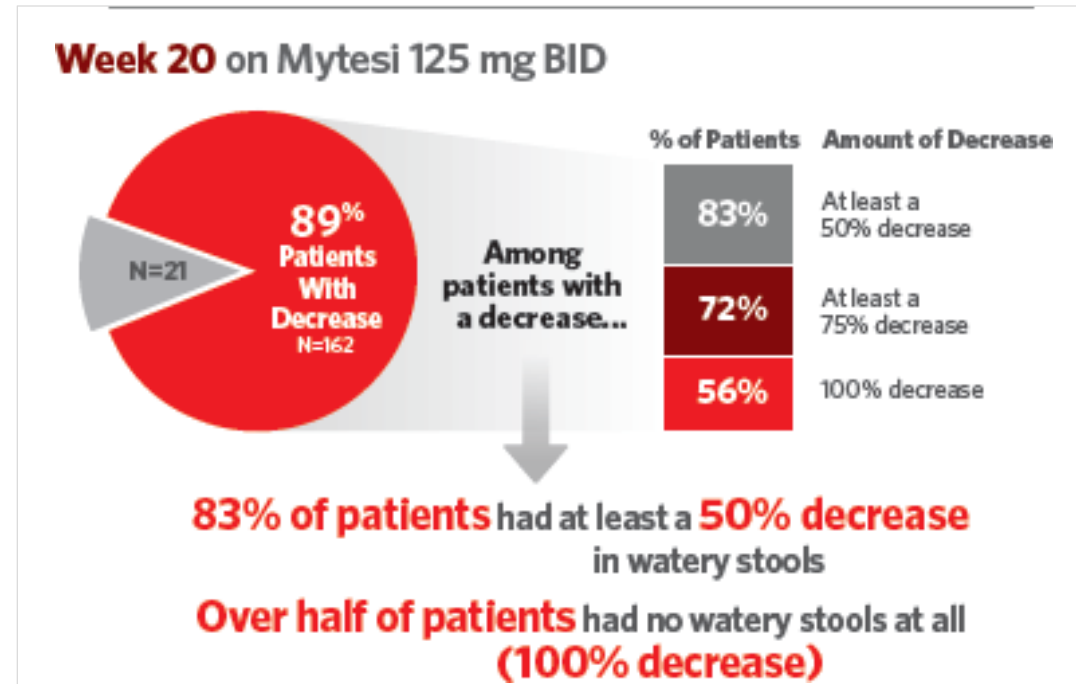


According to data from the U.S. Centers for Disease Control and Prevention, currently more than 50% of people living with HIV are over age 50¹

¹HIV Among People Aged 50 and Older, <https://www.cdc.gov/hiv/group/age/olderamericans/index.html>

Results Over Time With Mytesi

Poster Presentation at the
2017 International Aids
Society Conference on HIV
Science



¹Based on a supplemental analysis of data from Napo's ADVENT trial

Mytesi Growth Strategy

- Bob Griffing, Chief Commercial Officer, started June 2018
- Targeting high-potential HIV prescribers and GIs that actively treat HIV patients
- 17 strategically positioned reps target major urban areas and the highest-volume prescribers of antiretrovirals and antidiarrheals, such as internal medicine physicians, infectious disease doctors and mid-level practitioners such as nurse practitioners

**Urban Areas Where
We Have or Plan to
Place Reps and
Conduct Engagement
& Education Activities**

✖ Territory to add (for a total of 17 reps)



The Three 'E's' of Patient Focus:

- Engage
- Empower
- Educate

In adult HIV patients on ART who have noninfectious diarrhea



Enough is Enough NORMALIZE with MYTESI

HIV+ Patients Talk About Diarrhea



"It's interrupting my daily routine...I'm becoming afraid of it. It seems like I'm changing my life because of my diarrhea."

Male, age 62, HIV+ for 3 years

Photo not of actual patient. Quote is from an actual HIV patient.

Important Safety Information About Mytesi

Mytesi (crofelemer) is an antidiarrheal indicated for symptomatic relief of noninfectious diarrhea in adult patients with HIV/AIDS who are on antiretroviral therapy (ART). Mytesi is not indicated for the treatment of infectious diarrhea. Rule out infectious etiologies of diarrhea before starting Mytesi. If infectious etiologies are not considered, there is a risk that patients with infectious etiologies will not receive the appropriate therapy and their disease may worsen. In clinical studies, the most common adverse reactions occurring at a rate greater than placebo were upper respiratory tract infection (5.7%), bronchitis (3.9%), cough (3.5%), flatulence (3.1%), and increased bilirubin (3.1%).

Please see Full Prescribing Information on pages 4-7.

Mytesi
(crofelemer) 125 mg
delayed-release tablets

Recent Mytesi Media Coverage

healthline



Specialty Pharmacy Times

Pharmacy Times

OncologyNurseAdvisor



SAN DIEGO
LGBT weekly
America's First Cable News Affiliated LGBT Media Company
ONOWIRE

StreetInsider.com
if you're not inside...you're outside

WASHINGTON
blade
America's LGBT News Source

dsn.DRUG STORE NEWS

GO GUIDE

watermark ONLINE
YOUR LGBT LIFE DAILY.

MPR

AMERICAN PHARMACY NEWS

Healio

Gastroenterology

OutTV Jersey
Your NJ LGBT Community Portal

SeekingAlpha

BIOWORLD™ TODAY
THE DAILY BIOPHARMACEUTICAL NEWS SOURCE

Qsaltlake
MAGAZINE

my CME

Vital VOICE

Seneca Globe

MDLinx

9&10 NEWS
Northern Michigan's News Leader

What Your Patients Are Reading...



EDGE MEDIANETWORK
Diarrhea Troublesome Side Effect Among HIV+; Mytesi Could Help
by Michelle McCreary
12.18.16 News
Published Dec 18, 2016



POZ

For more information, please visit Mytesi.com

Mytesi Coverage and Reimbursement

- Signed agreement with **AIDS Drug Assistance Program (ADAP)** in April 2018
 - ❖ Mytesi access available to greater than 90% of ADAP lives nationally
- Covered by all top 10 commercial insurers (>245 million lives)
- Covered by all top 10 Managed **Medicare** plans (>2.4 million lives)
- Covered by **Medicaid** in all 50 states
- **Copay coupon program** to remove cost as a barrier to filling their prescription
- **Patient Assistance Program** to assist patients with benefit verification, prior authorization, and claims appeals



Global Growth Potential

Hold global rights to FDA-approved product with:

- Chronic safety profile
- Commercial manufacturing in place
- Multiple potential follow-on indications addressing large patient populations in need
- Phase 2 and/or proof-of-concept data for most target indications

“If approved for all indications in all countries, crofelemer could be the most utilized product in the world.”

- **Former Head of Global Health at Gates Foundation**



Jaguar Health: A Pipeline in a Product

	Current Phase of Development	Completed Milestones	Anticipated Near-Term Milestones	Market Size/Potential
HIV-D <i>Diarrhea in HIV/AIDS patients on antiretrovirals</i>	FDA-approved		<ul style="list-style-type: none"> Continued US commercial growth 	Jaguar estimates the U.S. market revenue potential for Mytesi® to be ~\$100mm in gross annual sales; Jaguar is seeking partnerships to bring Mytesi to emerging markets and rest of world
CTD <i>Cancer therapy-related diarrhea</i>	Phase 2	<ul style="list-style-type: none"> Two investigator-initiated clinical trials funded by Genentech, Roche and Puma 	<ul style="list-style-type: none"> SAB protocol design/FDA pivotal trial design discussion 	~650,000 U.S. cancer patients receive chemotherapy in an outpatient oncology clinic ¹ Comparable supportive care (i.e. CINV) product sales ~\$620 mm, 2013; projected \$1.0 bn 2020 ²
IBD <i>Inflammatory bowel disease supportive care</i>	Phase 2	<ul style="list-style-type: none"> Safety Multiple Phase 2 studies completed in various secretory diarrhea (not IBD) 	<ul style="list-style-type: none"> SAB protocol design 	Estimated 1,171,000 Americans have IBD ³
IBS-D <i>Irritable Bowel Syndrome - diarrhea predominant</i>	Phase 2	<ul style="list-style-type: none"> Phase 1 study Two Phase 2 studies completed 	<ul style="list-style-type: none"> Clinical data publication 	Most IBS products have estimated revenue potential >\$1.0 bn ⁴
CDD/SBS-Orphan <i>Congenital Diarrheal Disorders and Short Bowel Syndrome</i>	Phase 2	<ul style="list-style-type: none"> Phase 1 study Orphan-drug designation for SBS 	<ul style="list-style-type: none"> Formulation / POC Abu Dhabi / SAB protocol design 	Financial benefits of Orphan-Drug Designation
Cholera (hydration maintenance) PRV* (lechlemer) <i>Potential long-term pipeline opportunity for anti-secretory novel mechanism of action</i>	Pre-IND	<ul style="list-style-type: none"> Animal and human studies in secretory diarrhea Successful cholera trial design for anti-secretory mechanism of action with API 	<ul style="list-style-type: none"> Formulation / POC 	We believe lechlemer may support efforts to receive a priority review voucher (PRV) from the U.S. FDA for a cholera indication.*
Idiopathic/Functional Diarrhea	Phase 2	<ul style="list-style-type: none"> Safety Multiple Phase 2 studies completed in various secretory diarrhea IIT request accepted 	<ul style="list-style-type: none"> Initiation of IIT 	

Clinical trials are dependent on funding

***Priority Review Vouchers are transferable. In recent transactions by other companies, Priority Review Vouchers have sold for \$67M-\$350M**

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

¹Centers for Disease Control and Prevention. Preventing Infections in Cancer Patients: Information for Health Care Providers (cdc.gov/cancer/prevent-infections/providers.htm)

²Heron Therapeutics, Inc. Form 10-K for the fiscal year ended December 31, 2016

³Kappelman, M. et al. Recent Trends in the Prevalence of Crohn's Disease and Ulcerative Colitis in a Commercially Insured US Population. Dig Dis Sci. 2013 Feb; 58(2): 519-525

⁴Merrill Lynch forecasts peak US sales of roughly \$1.5 bn for Ironwood's Linzess (<http://247wallst.com/healthcare-business/2015/04/27/key-analyst-sees-nearly-30-upside-in-ironwood/>); Rodman & Renshaw estimate peak annual sales of Synergy Pharmaceuticals' Trulance at \$2.3 bn in 2021 (Source: <https://www.benzinga.com/analyst-ratings/analyst-color/17/03/9224181/analyst-synergy-pharma-couldachieve-sustainable-profits>)

Our “Heroes” of Clinical Success

A product that is
safe and effective,
and a trial design
that supports this to
the statistical
satisfaction of FDA

Mytesi[®]
(crofelemer) 125 mg
delayed-release tablets



Napo Scientific Advisory Board (SAB) Members & Key Opinion Leader (KOL) Advisors to Napo

Pravin Chaturvedi, PhD: Chair of Napo's SABs. Pravin brings 25+ years drug development experience in pharmaceutical/biotech field; Successfully developed crofelemer (Mytesi) (first pivotal adaptive design)

Cancer Therapy-Related Diarrhea SAB

- **Lee Schwartzberg, MD, FACP:** Executive Director of the West Cancer Center, a multispecialty oncology practice affiliated with the University of Tennessee; Chief, Division of Hematology/Oncology, the University of Tennessee Health Science Center
- **Eric Roeland, MD:** Attending Physician, Center for Palliative Care, Harvard Medical School
- **Hope Rugo, MD:** Clinical Professor of Medicine, Director Breast Oncology and Clinical Trials Education, Division of Hematology and Oncology, University of California San Francisco

IBD SAB

- **Corey Siegel, MD, MS:** Associate Professor of Medicine; Associate Professor of The Dartmouth Institute; Director of the Inflammatory Bowel Disease Center at the Dartmouth-Hitchcock Medical Center

Pediatric Indications (SBS and CDD) SAB

- **Mohammed Miqdady, MD:** Chief of Pediatric Gastroenterology, Hepatology & Nutrition at Sheikh Khalifa Medical City in Abu Dhabi
- **Martin Martin, MD:** Professor, Department of Pediatrics, David Geffen School of Medicine at UCLA
- **Sue Rhee, MD:** Division Chief, Pediatric Gastroenterology, Hepatology and Nutrition Pediatric gastroenterologist and liver specialist, UCSF Benioff Children's Hospital

KOLs: Diarrhea Related to HIV and Other Infectious Diseases

- **Patrick Clay, PharmD:** Consultant
- **Herbert DuPont, MD:** Professor and Director, Center for Infectious Diseases, University of Texas Houston School of Public Health
- **Pradip Bardhan, MBBS, MD:** Chief Physician at ICDDR,B, Bangladesh
- **Paulo Pacheco, MD:** Clinical Assistant Professor, Department of Medicine, New York University Langone Health
- **Elie Schochet, MD, FACS:** Colorectal surgeon, Holy Cross Medical Group

KOLs: Cancer Therapy-Related Diarrhea

- **Herbert DuPont, MD:** Professor and Director, Center for Infectious Diseases, University of Texas Houston School of Public Health
- **Pablo C. Okhuysen, M.D.:** Department of Infectious Diseases, Infection Control, and Employee Health, Division of Internal Medicine, MD Anderson

KOLs: Diarrhea Related to IBS

- **Anthony Lembo, MD:** Director of the GI Motility and Functional Bowel Disorders Program at Beth Israel Deaconess Medical Center and Associate Professor of Medicine at Harvard Medical School
- **Doug Drossman, MD:** Co-Director Emeritus, UNC Center for Functional GI and Motility Disorders Adjunct Professor of Medicine and Psychiatry, University of North Carolina School of Medicine
- **William Chey, MD:** Professor of Internal Medicine and Professor of Nutritional Sciences, University of Michigan School of Public Health

KOLs: Diarrhea Related to IBD

- **Brooks D. Cash, MD, AGAF, FACP, FASGE:** Division Director, Gastroenterology, Hepatology, and Nutrition Visiting Professor of Medicine, The University of Texas McGovern Medical School
- **David Rubin, MD:** Joseph B. Kirsner Professor of Medicine Section Chief, Gastroenterology, Hepatology and Nutrition Co-Director, Digestive Diseases Center, University of Chicago Medicine
- **Charles Bernstein, MD:** Distinguished Professor of Medicine and Bingham Chair in Gastroenterology Research, University of Manitoba
- **William Sandborn, MD:** Director, Inflammatory Bowel Disease Center Chief, Division of Gastroenterology Professor of Medicine, US San Diego Health
- **Scott Lee, MD:** Associate Professor of Medicine, Digestive Health Center, University of Washington Medical Center
- **Edward Loftus, Jr., MD:** Consultant, Division of Gastroenterology and Hepatology, Department of Internal Medicine, Mayo Clinic
- **Douglas Wolf, MD:** Medical Director of IBD Research at Atlanta Gastroenterology Associates. Clinical Assistant Professor of Medicine, Emory University School of Medicine

KOLs: Pediatric Indications (SBS and CDD)

- **Jay Thiagarajah, MD, PhD:** Attending Physician, Division of Gastroenterology, Hepatology and Nutrition, Boston Children's Hospital. Instructor of Pediatrics, Harvard Medical School
- **James Goldenring, M.D., PhD:** Professor of Surgery, Vanderbilt University School of Medicine. Paul W. Sanger Chair in Experimental Surgery. Professor of Cell and Developmental Biology

Jaguar Health: A Pipeline in a Product

Cancer Therapy-related Diarrhea (CTD)

- Diarrhea is a common adverse event reported with cancer treatments
- “All-grade” diarrhea rates are often 50-80%
 - ❖ Dose-limiting toxicity for tyrosine kinase inhibitors (e.g., Neratinib) and EGFR mAbs (e.g., Herceptin)

Puma Biotechnology (NASDAQ: PBII) Neratinib (Nerlynx™):

- Diarrhea has been reported as the most common side effect of the recently approved CDK 4/6 inhibitor abemaciclib and the pan-HER TKI neratinib, with occurrence ranging from 86% to >95% and grade 3 in over 40% of patients.



Supportive care precedent in the Cancer-Therapy Market

- Approved drugs for chemotherapy-induced nausea and vomiting (CINV) include Sustol, Aloxi, Akynzeo and Sancuso. Allied Market Research estimates that sales of CINV drugs may reach \$2.7 billion by 2022 growing ~7.1% per annum.¹



¹<https://www.prnewswire.com/news-releases/chemotherapy-induced-nausea-and-vomiting-cinv-market-expected-to-reach-2659-million-by-2022-611755395.html>

Jaguar Health: A Pipeline in a Product

Two Ongoing Investigator Initiated Studies in CTD



Georgetown
University

Primary objective: Characterize incidence and severity of diarrhea in patients receiving investigational therapy in prophylactic anti-diarrheal management.



JAGX completed CID pilot safety study in dogs: 25% of dogs entering study with unformed feces were resolved.

Funded By: Genentech/Roche



University of California
San Francisco

Crofelemer as salvage anti-diarrheal therapy with investigational breast cancer agent, neratinib

Title: Open label study to characterize the incidence and severity of diarrhea in patients with early stage HER2+ breast cancer treated with adjuvant trastuzumab and neratinib followed by neratinib monotherapy, and intensive anti-diarrhea prophylaxis.

Primary Objective: Characterize the incidence and severity of diarrhea in patients with early stage breast cancer receiving adjuvant trastuzumab and neratinib followed by 1 year of neratinib monotherapy in the setting of prophylactic anti-diarrheal management.

Funded By: Puma Biotechnology

Next Steps:

- Interim data IIT Georgetown– Q1, 2019
- Pivotal protocol discussion with FDA Q1, 2019

Mytesi Pediatric Orphan-Drug Indications

Congenital Diarrheal Disease (CDD)

- Rare, congenital chronic intestinal channel diseases, occurring exclusively in early infancy
- Characterized by severe, lifelong diarrhea and a lifelong need for nutritional intake either parenterally or with a feeding tube
- Incidence much more prevalent in regions where consanguineous marriage is part of the culture, such as in the Gulf Cooperation Council (GCC) and MENA regions

Short Bowel Syndrome (SBS)

- Complex condition characterized by malabsorption of fluids and nutrients due to congenital deficiencies or surgical resection of small bowel segments
- Patients suffer from symptoms such as debilitating diarrhea, malnutrition, dehydration and imbalances of fluids and salts
- Can stem from genetic disorder or premature birth
- Incidence also much more prevalent in GCC and MENA regions



Planned Investigator-Initiated Clinical Trial on CDD at Sheikh Khalifa Medical City, Abu Dhabi, UAE

- Filed for orphan-drug status in US
 - ❖ Received orphan status for SBS
- Principal investigator: Dr. Mohamad Miqdady, Chief of Pediatric Gastroenterology, Hepatology & Nutrition at Sheikh Khalifa Medical City in Abu Dhabi
- Jaguar has agreed to support investigator-initiated trial
- Napo intends to submit documentation in 1H 2019 to the FDA for the planned formulation of crofelemer for feeding tube administration to support this investigation
- **NEXT STEP:**
 - ❖ Initiation of IIT



“With the early and extreme morbidity and mortality suffered by CDD patients, we welcome the opportunity to participate in the investigation of a novel drug to address the devastating diarrhea and dehydration caused by this lifelong disease for which there is currently no available treatment except parenteral nutrition, and help limit the suffering of patients and their family members.”

-Dr. Mohamad Miqdady

Crofelemer for Diarrhea Caused by Cholera

- Study evaluating crofelemer versus placebo 1 hour after Azithromycin in cholera¹
 - ❖ Reducing amount of watery stool, 25-30%, 0-6 hour time periods ($p=0.025$)
- Indian patient study in adults with severe watery diarrhea²
 - ❖ Statistically significant benefits seen in seven prospectively defined clinical endpoints. Crofelemer superior for overall clinical success, 79% vs. 28%
- **NEXT STEPS:**
 - ❖ Develop dispersible tablet of lechlemer (an equally effective formulation that is more economically feasible for marketing in resource-constrained regions)
 - ❖ File IND in 2H 2019



¹Bardhan, et.al., '08 US-Japan Cholera Conf.

²Bardhan PK EID, '09

Jaguar Health: Lechlemer (Second-Generation Anti-secretory Agent)

PRV Potential Value

Priority Review Vouchers (PRVs) created by US FDA to incentivize development of treatments for neglected or rare pediatric diseases. PRVs may be sold to another developer.

Average Market Value of PRV:
~\$144 Million
(Range: \$67 - \$350 Million)

\$67 Million

July 2014: Sanofi(SNY) purchased PRV from BioMarin (BMRN)

\$245 Million

May 2015: Sanofi (SNY) purchased a PRV from Retrophin (RTRX)

\$80 Million

November 2018: Eli Lilly (LLY) purchased PRV from Siga Technologies (SIGA)

\$125 Million

February 2017: Gilead Sciences (GILD) purchased a PRV from Sarepta Therapeutics (SRPT)

\$110 Million

April 2018: Jazz Pharmaceuticals (JAZZ) purchased PRV from Spark Therapeutics (ONCE)

\$125 Million

November 2014: Gilead Sciences (GILD) purchased a PRV from Knight Therapeutics

\$350 Million

August 2015: AbbVie (ABBV) purchased a PRV from United Therapeutics (UTHR)

\$130 Million

December 2017: Novartis (NVS) purchased a PRV from Ultragenyx (RARE)

\$125 Million

November 2017: BioMarin (BMRN) sold PRV to undisclosed party

\$81 Million

July 2018: Ultragenyx (RARE) sold to undisclosed party

Global Partnering Driving Pipeline

Global partnering for an expanding pipeline provides opportunity for non-dilutive funding and global access to Mytesi and novel anti-secretory agents



- Multiple indications
- Multiple geographies
- Second-generation anti-secretory (lechlemer)
- Strategically sequence indication development priorities, second-generation product pipeline development, and partnering goals on a global basis

Upcoming Milestones

- **Q1 2019:** Interim IIT results for CTD
- **Q1 2019:** First shipment of Equilevia
- **Q1 2019:** Meet FDA for CTD pivotal protocol agreement
- **April 2019:** File Q4 2018 earnings report as part of 2018 10-K on or before April 1 deadline
- **Q2 2019:** Complete filing of Canalevia NADA for CID in dogs
- **Mid-May 2019:** File Q1 2019 earnings report
- **Mid-2019:** File IND and initiate CDD IIT in Abu Dhabi
- **H1 2019:** File IND for CTD supplemental indication
- **Mid-August 2019:** File Q2 2019 earnings report
- **H1 & H2 2019:** Additional business development deals (non dilutive financing)
- **H2 2019:** File IND for lechlemer/cholera (subject to funding)
- **Mid-November 2019:** File Q3 2019 earnings report



Management Team

Name / Title	Experience
Lisa Conte <i>Founder & CEO</i>	<ul style="list-style-type: none"> • 28+ years of industry experience • Obtained first anti-secretory human product FDA approval • Board of directors of Healing Forest Conservancy, Dickey Center for International Understanding (Dartmouth College)
Karen Wright <i>CFO & Treasurer</i>	<ul style="list-style-type: none"> • 30+ years of financial experience with biotech companies • Former Head of Finance for Clene Nanomedicine
Steven King, PhD <i>EVP, Sustainable Supply, Ethnobotanical Research & IP</i>	<ul style="list-style-type: none"> • Served as SVP of Sustainable Supply, Ethnobotanical Research & IP: 1989-2017 • Board of Directors of Healing Forest Conservancy
Pravin Chaturvedi, PhD <i>Chief Scientific Officer</i> <i>Chair of Scientific Advisory Board</i>	<ul style="list-style-type: none"> • 25+ years drug development experience • Co-Founded Scion, IndUS and Oceanyx Pharmaceuticals • Successfully developed Mytesi® (first pivotal adaptive design)
Robert J. Griffing <i>Chief Commercialization Officer</i>	<ul style="list-style-type: none"> • 22+ years at Merck, including Global Brand Leader within Oncology Franchise and, HIV sales and market share strategy
David Sestin, PhD <i>Chief Manufacturing Officer</i>	<ul style="list-style-type: none"> • Pharmaceutical scientist with experience from drug discovery through manufacturing • Developed crofelemer manufacturing process
Jonathan Wolin, JD, MBA, CPA <i>Chief Compliance Officer & Corporate Counsel</i>	<ul style="list-style-type: none"> • Extensive experience providing legal advice and guidance to public and private companies in the healthcare and biotechnology industries
Pete Riojas <i>National Sales Director</i>	<ul style="list-style-type: none"> • 29 years of pharmaceutical industry experience • Former Sanofi regional sales director and UCB Pharma national sales director

Board of Directors

Name / Title	Experience
James Bochnowski <i>Chairman</i>	<ul style="list-style-type: none">• Founder of Delphi Ventures, one of the first VC firms to focus exclusively on investing in life sciences companies• Co-founded Technology Venture Investors
Lisa Conte <i>Founder, CEO & President</i>	<ul style="list-style-type: none">• 28+ years of industry experience• Obtained first anti-secretory human product FDA approval
Jiahao Qiu <i>Director</i>	<ul style="list-style-type: none">• Principal of BioVeda China Fund, a life science investment firm• Extensive experience evaluating, managing & investing in life science firms
John Micek III <i>Director</i>	<ul style="list-style-type: none">• Managing Partner of Verdant Ventures• Former Managing Director of Silicon Prairie Partners, LP
Jonathan B. Siegel <i>Director</i>	<ul style="list-style-type: none">• Founded JBS Healthcare Ventures with a focus on public and private healthcare investments• 18+ years of investment experience
Jeff Johnson <i>Director</i>	<ul style="list-style-type: none">• Partner at Sagard Holdings• Former portfolio manager at Evercore Asset Management and Citigroup Asset Management
Greg Divis <i>Director</i>	<ul style="list-style-type: none">• Chief Operating Officer of Avadel Pharmaceuticals• 28+ years of direct operating and global leadership experience in specialty pharmaceuticals
David MacNaughtan <i>Director</i>	<ul style="list-style-type: none">• 25+ years of biopharmaceutical industry experience, with roles spanning financing, venture capital, royalty investing, business development, and process development

Capitalization Table – As of January 17, 2019

<u>Common shares outstanding:</u>	27,478,072
Non-voting common shares outstanding (as converted to voting common basis):	2,686,749
<u>Preferred stock (as converted to common basis):</u>	<u>3,314,956</u>
Total common and preferred stock:	33,479,777
<u>Warrants:</u>	
119,994 warrants, expiration 5/2022; average exercise price of \$11.25;	1,160,682
731,704 warrants, expiration 1/2019-8/2023; average exercise price of \$4.85;	
308,984 warrants, expiration 12/2018-12/2025; average exercise price of \$1.00	
<u>Options (reserved and issued) and RSU's:</u>	3,708,809
Includes 2,722,445 options priced <\$3.00; and 986,364 > \$3.00/share	
<u>Fully diluted common shares:</u>	38,349,268
<u>Convertible notes:</u>	<u>759,396</u>
Proforma fully diluted common shares including potential conversion of notes:	<u>39,108,664</u>

Investment Highlights

Mytesi: FDA-Approved Human Drug

- Only FDA-approved diarrhea treatment that's been studied specifically in adults with HIV / AIDS
- Extensive global rights
- Commercial manufacturing in place
- Approved with chronic safety/locally acting in gut

Broad Human Product Pipeline

- Potential multiple follow-on human indications of Mytesi with potential blockbuster market and patient opportunity
- Clinical trials include Phase 1 and Phase 2 data

Priority Review Voucher

- Potential opportunities for non-dilutive funding
- Current market values of PRVs may exceed the current market value of JAGX

Risk-Mitigated Product Development

- Safety to support approved chronic administration
- Already FDA approved commercial manufacturing facility for crofelemer
- KOL, protocol generation and possible SPA approach to help mitigate regulatory risk
- Safe and well tolerated with no SAEs reported through present

Strong Management Team

- Key management has been with the company for >15 years
- Chairman of board and key investors have invested for >25 years
- Original discoverer and developer of successful FDA-approved first-in-class anti-secretory agent, crofelemer – only oral product approved under botanical guidance

Proprietary Position

- Company patents issued through present: About 140 (majority do not expire until 2027 - 2031)
- Patent applications pending: About 40 (human health)
- Botanical guidance protection. Unique botanical sourcing infrastructure
- Orphan-drug designation

It's a marathon, not a sprint

Break the big problem up into little pieces to solve

Walk before you run

Plan solve recalculate refocus

Don't look at the rocks, find the way through

Don't just do your best, just do it

Setting goals is the first step in turning the invisible into the visible





Jaguar Health, Inc.

Investor Relations Contact

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Appendix A – GAAP and Non-GAAP Basis

	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Mytesi Gross Sales	\$ (368,389)	\$ (461,267)	\$ (556,526)	\$ (923,507)
Mytesi allowance for sales discounts	\$ 10,001	\$ 53,351	\$ 36,014	\$ 73,767
Mytesi allowance for sales returns	\$ (159,746)	\$ 4,204	\$ 3,151	\$ 96,986
Mytesi wholesaler fee				\$ 53,962
Mytesi Net Sales	\$ (518,134)	\$ (403,712)	\$ (517,361)	\$ (698,792)

	Q1 2018	Q2 2018	Q3 2018	Q4 2018*
Mytesi Gross Sales	\$ (795,303)	\$ (1,162,890)	\$ (1,592,801)	\$ (2,180,000)
Mytesi allowance for sales discounts	\$ 106,609	\$ 211,747	\$ 343,118	\$ 282,423
Mytesi allowance for sales returns	\$ 30,020	\$ 15,629	\$ 42,403	\$ 67,616
Mytesi wholesaler fee	\$ 75,405	\$ 81,344	\$ 99,842	\$ 24,658
Mytesi Net Sales	\$ (583,269)	\$ (854,170)	\$ (1,107,438)	\$ (1,550,000)

*Q4 2018 figures are estimates