# New Survey Ranks Diarrhea as Number One Gastrointestinal Complaint of HIV/AIDS Patients

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SAN FRANCISCO--(BUSINESS WIRE)--Sep. 12, 2017-- Napo Pharmaceuticals, Inc. (Napo), a human health company developing and commercializing novel gastrointestinal prescription products from plants used traditionally in rainforest areas, and a wholly-owned subsidiary of Jaguar Health, Inc. (NASDAQ: JAGX) (Jaguar), announced today the results of a survey of 271 U.S. board certified gastroenterologists, which indicate that the number one gastrointestinal (GI) complaint for people living with HIV/AIDS is diarrhea. The study was conducted for Napo by Schlesinger Associates, a leading global data collection provider specializing in online surveys.

“While it’s typically not the main reason patients come to see me, frequently my patients with HIV inform me that they suffer from chronic diarrhea. Worth noting, diarrhea appears to be more common in patients who have been HIV-positive for several years; this is most likely due to HIV enteropathy, which is the effect of the virus on the lining of the intestine,” noted Dr. Maurizio Bonacini, Associate Professor of Clinical Medicine at the University of California, San Francisco. “Diarrhea is a significant problem in many HIV patients, and unfortunately, they think there is nothing they can do and that they just have to live with it.”

Highlights of the survey of U.S. board certified gastroenterologists include:

- 93 percent of U.S. gastroenterologists see patients with HIV/AIDS in their practice
- 84 percent rank diarrhea in the top three complaints of HIV/AIDS patients
- 53 percent indicated diarrhea is the number one complaint in HIV/AIDS patients
- 65 percent of diarrhea in HIV/AIDS patients is chronic

Only 53 percent of gastroenterologists were aware of Mytesi® (crofelemer), the only drug that has been specifically studied in and FDA-approved for use in managing diarrhea in people living with HIV.

“Chronic diarrhea remains a significant, under-reported complaint of HIV/AIDS patients, and it is a problem that will increase significantly as the HIV+ population gets older. According to data from the U.S. Centers for Disease Control and Prevention, by 2020 more than 70 percent of Americans with HIV are expected to be 50 or older,” stated Lisa Conte, Jaguar’s president and CEO. “We are launching educational awareness campaigns to healthcare professionals, people living with HIV, and patient advocates. At the 2017 United States Conference on AIDS this past week, where Napo hosted a group of 20 healthcare activists and advocates, we heard patients discuss issues with diarrhea ranging from the impact on their quality of life, to embarrassment, to the concern over health implications when one has lost control of an important body function. Moreover, diarrhea is known to affect adherence to ART regimens. Lack of adherence to ART regimens raises concern over the potential for development of resistant viral strains. Treatment of diarrhea in this population remains an area of high need, and we are working to make sure both people living with HIV and their healthcare providers are aware of and have access to Mytesi®.”

To view an infographic of the study results click here: http://enoughdiarrhea.com/infographic/

Launched by Napo in October 2016, Mytesi® is the only antidiarrheal studied in and U.S. FDA-approved for the symptomatic relief of noninfectious diarrhea in adults living with HIV/AIDS on antiretroviral therapy (ART). Mytesi® is a prescription treatment for diarrhea that works differently, by acting locally in the GI tract to normalize the flow of water. Mytesi® does not have drug-drug interactions with ART and has side effects that are similar to placebo.

To learn more about what you can do about HIV/AIDS-related diarrhea, visit www.mytesi.com.

**Methodology:**

Napo sponsored the survey of 271 U.S. board certified gastroenterologists with Schlesinger Associates in July 2017.

**About Mytesi®**

Mytesi® (crofelemer) is an antidiarrheal indicated for the symptomatic relief of noninfectious diarrhea in adult patients with HIV/AIDS 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%).

More information and complete Prescribing Information are available at Mytesi.com. Crofelemer, the active ingredient in Mytesi®, is a botanical (plant-based) drug extracted and purified from the red bark sap of the medicinal *Croton lechleri* tree in the Amazon rainforest. Napo has established a sustainable harvesting program for crofelemer to ensure a high degree of quality and ecological integrity.

As previously announced, the merger of Jaguar Animal Health, Inc. and Napo became effective July 31, 2017, at which point Jaguar Animal Health's name changed to Jaguar Health, Inc. and Napo began operating as a wholly-owned subsidiary of Jaguar focused on human health and the ongoing commercialization of Mytesi®.

**About Jaguar Health, Inc.**

Jaguar Health, Inc. is a natural-products pharmaceuticals company focused on developing and commercializing novel, sustainably derived gastrointestinal products for both human prescription use and animals on a global basis. Our wholly-owned subsidiary, Napo Pharmaceuticals, Inc., focuses on developing and commercializing proprietary human gastrointestinal pharmaceuticals for the global marketplace from plants used traditionally in rainforest areas. Our Mytesi® (crofelemer) product is approved by the U.S. FDA for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. Mytesi® is in development for multiple possible follow-on indications, including chemotherapy-induced diarrhea; orphan-drug indications for infants and children with congenital diarrheal disorders and short bowel syndrome; supportive care for inflammatory bowel disease (IBD); irritable bowel syndrome (IBS); and as a second-generation anti-secretory agent for use in cholera patients. Canalevia ™is our lead animal prescription drug candidate, intended for treatment of various forms of diarrhea in dogs. Equilevia ™is Jaguar's non-prescription product for total gut health in equine athletes. Canalevia ™and Equilevia ™contain ingredients isolated and purified from the *Croton lechleri* tree, which is sustainably harvested. Neonorm ™Calf and Neonorm ™Foal are Jaguar's lead non-prescription animal products. Mytesi ®, Canalevia ™, Equilevia ™and Neonorm ™are distinct products that act at the same last step in a physiological pathway generally present in mammals.

For more information about Jaguar, please visit jaguar.health. For more information about Napo, visit napopharma.com.

**Forward-Looking Statements**

Certain statements in this press release constitute "forward-looking statements." These include statements regarding possible follow-on indications for Mytesi®. 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 release are only predictions. Jaguar has based these forward-looking statements largely on its current expectations and projections about future events. These forward-looking statements speak only as of the date of this release 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 Jaguar's control. Except as required by applicable law, Jaguar does 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.

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