



Theravance Biopharma Announces First Patient Dosed in Phase 2b/3 Study of TD-1473 in Patients with Ulcerative Colitis

March 12, 2019

Induction and maintenance portions of study to evaluate gut-selective pan-JAK inhibitor in patients with moderately to severely active ulcerative colitis

DUBLIN, March 12, 2019 /PRNewswire/ -- Theravance Biopharma, Inc. (NASDAQ: TBPH) ("Theravance Biopharma" or the "Company") today announced dosing of the first patient in a Phase 2b/3 study of TD-1473 in patients with moderately to severely active ulcerative colitis. TD-1473 is a novel, orally administered and gut-selective pan-Janus kinase (JAK) inhibitor in clinical development as a treatment for multiple inflammatory intestinal diseases. In contrast to other oral JAK inhibitors under development or approved for inflammatory bowel disease, TD-1473 is specifically designed to act locally at the site of inflammation in the intestinal wall with minimal systemic exposure.



The Phase 2b/3 study will utilize a multi-center, randomized, double-blind, multi-dose, placebo-controlled, parallel-group design to evaluate the efficacy, safety and tolerability of induction and maintenance therapy with TD-1473 in patients with moderately to severely active ulcerative colitis. The Phase 2b dose-finding induction portion of the study will assess the effect of eight weeks of treatment with select once-daily doses of TD-1473 on change from baseline in total Mayo score as the primary endpoint and will also assess rates of clinical response and remission, endoscopic mucosal healing, safety and tolerability. Based on efficacy, safety and tolerability findings from the dose-finding portion of the study, one or more doses of TD-1473 will be selected and evaluated in the Phase 3 induction portion of the study, with the primary objectives of assessing clinical remission rates with TD-1473 compared to placebo at Week 8 and safety and tolerability of TD-1473.

Patients who achieve clinical responses during the induction stage of the study, either from the Phase 2b or Phase 3 portion of the study, will then be immediately enrolled in the Phase 3 maintenance portion of the study. Patients will be randomized to receive placebo or one of two doses of TD-1473 for 44 weeks. The primary objectives of the maintenance study are to assess the clinical remission rates for TD-1473 as compared to placebo after 44 weeks, as well as safety and tolerability of TD-1473.

"The initiation of our Phase 2b/3 study of TD-1473 in ulcerative colitis follows the previously-announced initiation of a Phase 2 study in patients with Crohn's disease. The breadth of our TD-1473 clinical development efforts reflects our confidence in the potential therapeutic benefit of our unique gut-selective JAK inhibitor," said Brett Haumann, MD, chief medical officer at Theravance Biopharma. "We have established an excellent working relationship with our partner Janssen, and we are advancing TD-1473 in inflammatory intestinal diseases with the precise goal of expanding the therapeutic index beyond that of conventional systemic therapies, which are known to carry dose limiting safety profiles."

About Theravance Biopharma and Janssen Strategic Collaboration

Theravance Biopharma and Janssen Biotech, Inc. have a global co-development and commercialization agreement for TD-1473 and related back-up compounds for inflammatory intestinal diseases, including ulcerative colitis and Crohn's disease. Under the terms of the agreement, Theravance Biopharma received an upfront payment of \$100 million and is eligible to receive up to an additional \$900 million in potential payments, if Janssen elects to remain in the collaboration following the completion of certain Phase 2 activities. Theravance Biopharma together with Janssen will jointly develop and commercialize TD-1473 in inflammatory intestinal diseases, with the two companies sharing profits in the US and expenses related to a potential Phase 3 program.

About Gut-Selective Pan-Janus (JAK) Kinase Inhibition

JAK inhibitors function by inhibiting the activity of one or more of the Janus kinase family of enzymes (JAK1, JAK2, JAK3, TYK2) that play a key role in cytokine signaling. Inhibiting these JAK enzymes interferes with the JAK/STAT signaling pathway and, in turn, modulates the activity of a wide range of pro-inflammatory cytokines. JAK inhibitors are currently approved for the treatment of diseases such as rheumatoid arthritis, myelofibrosis, and ulcerative colitis. However, these products are known to have side effects associated with their systemic exposure.

TD-1473 is an internally-discovered JAK inhibitor that has demonstrated a high affinity for each of the JAK family of enzymes. Importantly, TD-1473 is a gut-selective treatment specifically designed to distribute adequately and predominantly to the tissues of the intestinal tract, treating inflammation in those tissues while minimizing its systemic exposure. Theravance Biopharma is focused on utilizing targeted JAK inhibitors for potential treatment of a range of inflammatory intestinal diseases including ulcerative colitis and Crohn's disease, which affect roughly 900,000 and 700,000 patients in the United States, respectively.

About Theravance Biopharma

Theravance Biopharma, Inc. ("Theravance Biopharma") is a diversified biopharmaceutical company primarily focused on the discovery, development and commercialization of organ-selective medicines. Our purpose is to create transformational medicines to improve the lives of patients suffering

from serious illnesses. Our research is focused in the areas of inflammation and immunology.

In pursuit of our purpose, we apply insights and innovation at each stage of our business and utilize our internal capabilities and those of partners around the world. We apply organ-selective expertise to biologically compelling targets to discover and develop medicines designed to treat underserved localized diseases and to limit systemic exposure, in order to maximize patient benefit and minimize risk. These efforts leverage years of experience in developing lung-selective medicines to treat respiratory disease, including FDA-approved YUPELRI™ (revefenacin) inhalation solution indicated for the maintenance treatment of patients with chronic obstructive pulmonary disease (COPD). Our pipeline of internally discovered programs is targeted to address significant patient needs.

We have an economic interest in potential future payments from Glaxo Group or one of its affiliates (GSK) pursuant to its agreements with Innoviva, Inc. relating to certain programs, including TRELEGY ELLIPTA.

For more information, please visit www.theravance.com.

THERAVANCE® and the Cross/Star logo are registered trademarks of the Theravance Biopharma group of companies. Trademarks, trade names or service marks of other companies appearing on this press release are the property of their respective owners.

This press release contains certain "forward-looking" statements as that term is defined in the Private Securities Litigation Reform Act of 1995 regarding, among other things, statements relating to goals, plans, objectives, expectations and future events. Theravance Biopharma intends such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. Examples of such statements include statements relating to: the Company's strategies, plans and objectives, the Company's regulatory strategies and timing of clinical studies (including the data therefrom), the potential characteristics, benefits and mechanisms of action of the Company's product and product candidates, and the Company's expectations for product candidates through development and potential regulatory approval and commercialization (including their potential as components of combination therapies and their differentiation from other products or potential products). These statements are based on the current estimates and assumptions of the management of Theravance Biopharma as of the date of the press release and are subject to risks, uncertainties, changes in circumstances, assumptions and other factors that may cause the actual results of Theravance Biopharma to be materially different from those reflected in the forward-looking statements. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, among others, risks related to: delays or difficulties in commencing, enrolling or completing clinical studies, the potential that results from clinical or non-clinical studies indicate the Company's product candidates are unsafe or ineffective (including when our product candidates are studied in combination with other compounds), risks that product candidates do not obtain approval from regulatory authorities, the feasibility of undertaking future clinical trials for our product candidates based on policies and feedback from regulatory authorities, dependence on third parties to conduct clinical studies, delays or failure to achieve and maintain regulatory approvals for product candidates, risks of collaborating with or relying on third parties to discover, develop, manufacture and commercialize products, and risks associated with establishing and maintaining sales, marketing and distribution capabilities with appropriate technical expertise and supporting infrastructure. Other risks affecting Theravance Biopharma are described under the heading "Risk Factors" contained in Theravance Biopharma's Form 10-K filed with the Securities and Exchange Commission (SEC) on February 28, 2019 and Theravance Biopharma's other filings with the SEC. In addition to the risks described above and in Theravance Biopharma's filings with the SEC, other unknown or unpredictable factors also could affect Theravance Biopharma's results. No forward-looking statements can be guaranteed and actual results may differ materially from such statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Theravance Biopharma assumes no obligation to update its forward-looking statements on account of new information, future events or otherwise, except as required by law.

Contact Information:

Theravance Biopharma
Alexander Dobbin
650-808-4045
investor_relations@theravance.com

Vida Strategic Partners (media)
Tim Brons
646-319-8981
tbrons@vidasp.com

 View original content to download multimedia: <http://www.prnewswire.com/news-releases/theravance-biopharma-announces-first-patient-dosed-in-phase-2b3-study-of-td-1473-in-patients-with-ulcerative-colitis-300810557.html>

SOURCE Theravance Biopharma, Inc.