



Ironwood and AstraZeneca Initiate Linaclotide Phase III Trial in China for Adults with IBS-C

CAMBRIDGE, Mass. & SHANGHAI--(BUSINESS WIRE)-- [Ironwood Pharmaceuticals, Inc.](#) (NASDAQ: IRWD) and AstraZeneca Pharmaceuticals Co., Ltd. today announced the initiation in China of a Phase III clinical trial of linaclotide for the treatment of adults with irritable bowel syndrome with constipation (IBS-C). Linaclotide is currently approved in the United States for adults with IBS-C or chronic idiopathic constipation (CIC) and in the European Union for adults with moderate to severe IBS-C.

"IBS-C is estimated to affect at least 13 million adults in China, causing hallmark symptoms such as abdominal pain and constipation," said David Snow, President of AstraZeneca China. "If approved in China, linaclotide could be the first prescription treatment specifically for IBS-C and could then help address an unmet need for millions of suffering patients."

The double-blind, randomized, placebo-controlled Phase III clinical trial is expected to enroll approximately 800 adults with IBS-C in China, Australia and New Zealand. The design of the trial is similar to the 12-week Phase III IBS-C trial that supported linaclotide regulatory approval in the United States and European Union. Patients will be randomized 1:1 to receive either 290mcg of linaclotide or placebo for 12 weeks. The co-primary endpoints of the trial are (i) Abdominal Pain/Discomfort Responder at 12 weeks, which is defined in the study protocol as a patient who has at least a 30 percent improvement in his/her abdominal pain/discomfort level for at least half of the treatment period, and (ii) IBS Degree of Relief Responder at 12 weeks, which is defined in the study protocol as a patient who is considerably or completely relieved of symptoms for at least half of the treatment period.

Ironwood and AstraZeneca anticipate the availability of top-line data in the first half of 2015 and, if approved by the China Food and Drug Administration (CFDA), anticipate that linaclotide could be commercialized in China in 2017.

"Linaclotide is approved in the U.S. and in the European Union, and the initiation of this Phase III trial is a critical step along the regulatory pathway to support approval in China. We continue to make strides toward our goal of bringing linaclotide to appropriate adult patients around the world, and we look forward to continuing to collaborate with AstraZeneca to serve the unmet needs of patients in China," said Mark Currie, Ph.D., senior vice president, chief scientific officer, and president of research and development at Ironwood.

Based on a collaboration announced in October 2012, Ironwood and AstraZeneca are jointly responsible for the development and commercialization of linaclotide in China, with AstraZeneca primarily responsible for local operational execution. Under the terms of the collaboration, AstraZeneca made an upfront payment of \$25 million to Ironwood, and the two companies will share the net profits and losses associated with linaclotide in China, with AstraZeneca carrying 55 percent of each until a certain specified milestone is achieved, moving to a 50/50 split thereafter. Ironwood is also eligible for \$125 million in additional commercial milestone payments contingent on the achievement of certain sales targets.

About linaclotide

Linaclotide is a guanylate cyclase-C (GC-C) agonist that is thought to work in two ways based on nonclinical models. Linaclotide binds to guanylate cyclase-C locally in the intestine, resulting in an increase in both intracellular and extracellular concentrations of cyclic guanosine monophosphate (cGMP). Elevation in intracellular cGMP is believed to stimulate secretion of intestinal fluid and accelerate gastrointestinal transit. Elevation in extracellular cGMP is believed to decrease the activity of pain-sensing nerves, which is thought to be responsible for a reduction in intestinal pain. The clinical relevance of the effect on pain fibers in nonclinical models has not been established.

About Ironwood Pharmaceuticals

Ironwood Pharmaceuticals (NASDAQ: IRWD) is committed to the art and science of making medicines, from discovery through commercialization. We're focused on three goals: transforming knowledge into medicines that make a difference for patients, creating value that will inspire the continued support of our fellow shareholders, and building a team that passionately pursues excellence. Our first product, linaclotide, is approved in the United States and Europe. Our pipeline priorities include exploring further opportunities for linaclotide, leveraging our deep expertise in functional gastrointestinal disorders, and advancing programs in other areas such as allergic conditions, cardiovascular disease, central nervous system disorders and other conditions defined by patient symptoms. Ironwood was founded in 1998 and is headquartered in Cambridge, Mass. Connect with us at www.ironwoodpharma.com or on Twitter at www.twitter.com/ironwoodpharma to learn more about Ironwood.

Information that may be important to investors will be routinely posted in both these locations.

About AstraZeneca Pharmaceuticals Co. Ltd.

AstraZeneca is a global, innovation-driven biopharmaceutical business that focuses on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of cardiovascular, metabolic, respiratory, inflammation, autoimmune, oncology, infection and neuroscience diseases. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide.

For more information please visit: www.astrazeneca.com

This press release contains forward looking statements. Investors are cautioned not to place undue reliance on these forward - looking statements, which include, among other things, statements about the development plans for linaclotide in China, including the Phase III clinical trial and expectations regarding its protocol, patient enrollment, and timeline, as well as the timing of the availability of the data from such trial; the potential for, and timing of, approval of linaclotide for marketing by the CFDA; the timing of the potential commercialization of linaclotide in China and the availability of competitive products; the estimated number of adults in China affected by IBS-C; and the potential for Ironwood to receive commercial milestones and other payments from AstraZeneca under the collaboration. Each forward - looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement. Applicable risks and uncertainties include the risks that advancements in the linaclotide development program in China do not proceed as expected, Ironwood and AstraZeneca are unable to successfully enroll or complete the Phase III clinical trial or to demonstrate the efficacy of linaclotide in patients in China in order to obtain marketing authorization, serious adverse events arise in patients that are deemed to be related to linaclotide treatment, the incidence or severity of diarrhea in patients treated with linaclotide is higher than expected, Ironwood and AstraZeneca are unable to effectively commercialize linaclotide in China, Ironwood or AstraZeneca terminates all or part of the collaboration arrangement, as well as risks related to the difficulty of predicting regulatory approvals and the acceptance of and demand for new pharmaceutical products. Applicable risks also include those that are listed in Ironwood's Quarterly Report on Form 10 - Q for the quarter ended June 30, 2013, in addition to the risk factors that are listed from time to time in Ironwood's Annual Reports on Form 10 - K, Quarterly Reports on Form 10 - Q and any subsequent SEC filings. Ironwood undertakes no obligation to update these forward - looking statements to reflect events or circumstances occurring after this press release. These forward - looking statements speak only as of the date of this press release. All forward - looking statements are qualified in their entirety by this cautionary statement.

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