Imara Announces First Patient Dosed in Ardent Phase 2b Clinical Trial of IMR-687 in Sickle Cell Disease

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Highly selective, potent, small molecule inhibitor of PDE9 that is an oral, once-a-day, potentially disease-modifying treatment for sickle cell disease

BOSTON, Aug. 13, 2020 (GLOBE NEWSWIRE) -- Imara Inc. (Nasdaq: IMRA), a clinical-stage biopharmaceutical company dedicated to developing and commercializing novel therapeutics to treat patients suffering from rare inherited genetic disorders of hemoglobin, today announced dosing of the first patient in the company's Ardent Phase 2b clinical trial of IMR-687 for adult patients with sickle cell disease (SCD).

"There remains an unmet need for differentiated oral treatment options for patients with sickle cell disease," said Jo Howard, M.D., Consultant Haematologist and Honorary Professor in Haemoglobinopathies at Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom, and the national coordinating principal investigator for the Ardent trial. "IMR-687 has demonstrated the potential to directly and selectively inhibit PDE9 and may offer distinct advantages over other therapies, including fetal hemoglobin induction, a multimodal mechanism and a once daily oral dosing regimen. I look forward to leading Guy's and St Thomas' participation in this important clinical trial."

"Dosing of the first patient in the Ardent clinical trial represents a critical step forward as we advance IMR-687 into Phase 2b testing, a clinical trial that will test higher doses and longer durations of IMR-687," said Rahul Ballal, Ph.D., President and Chief Executive Officer of Imara. "Specifically, the 300 mg and potentially 400 mg dose levels to be administered in the Ardent trial are designed to provide meaningful exposure to IMR-687 that could be up to two-fold higher than administered in our ongoing Phase 2a clinical trial. We believe that this increased exposure could have a meaningful impact on the therapeutic effect of IMR-687 on patients enrolled in this trial."

Dr. Ballal continued, "I'd like to thank the sickle cell disease community, our clinical trial partners and investigators and the Imara team for their important efforts to support the initiation of this trial amidst the challenges of the global COVID-19 pandemic and the resulting pressures on healthcare systems and access to care."

Imara previously announced data from the second planned interim analysis of its ongoing Phase 2a clinical trial of IMR-687 in adult patients with SCD. Data from this interim analysis demonstrated that IMR-687 was well tolerated as a monotherapy and in combination with hydroxyurea (HU). In the higher dose 100/200 mg cohort, IMR-687 monotherapy showed a statistically significant ($p = 0.022$) increase in the number of F-cells, which are red blood cells containing fetal hemoglobin (HbF), as well as a dose-dependent increase in HbF levels in adult patients with SCD.

Imara expects to report top-line data from this Phase 2a clinical trial in the fourth quarter of 2020. In addition, the company has an ongoing open label extension (OLE) clinical trial, which allows patients from the Phase 2a clinical trial to continue into a long-term, four-year trial to evaluate safety and tolerability of IMR-687.

Ardent IMR-687 Phase 2b Clinical Trial Design

The global, randomized, double-blind, placebo-controlled, multicenter Ardent Phase 2b clinical trial will enroll approximately 99 adult patients with sickle cell disease (SCD). Patient randomization will be stratified by use of hydroxyurea (HU) as well as by region, and weight-based dosing will be employed to optimize drug exposure and tolerability. The planned primary efficacy objective is to evaluate the proportion of all patients with fetal hemoglobin (HbF) response, defined as an increase of 3% in HbF from baseline to week 24, compared to placebo, and the trial is powered for statistical significance with respect to this endpoint. Patients will continue on treatment through 52 weeks to provide data for planned secondary and additional exploratory endpoints including the evaluation of the effect of IMR-687 versus placebo on HbF-associated biomarkers, indices of red cell hemolysis, white blood cell adhesion, quality of life measures and to measure the incidence of VOCs over the course of a one-year period. In addition, Imara plans to conduct a prespecified interim analysis when 33 patients have reached 24 weeks of treatment. Following the completion of 52 weeks of treatment in the trial, patients will be eligible to enroll in an open-label extension study. For more information about the Ardent trial visit https://clinicaltrials.gov/ct2/show/NCT04474314?cond=Imr-687&draw=2&rank=3.

About IMR-687

IMR-687 is a highly selective and potent small molecule inhibitor of PDE9. PDE9 selectively degrades cyclic guanosine monophosphate (cGMP), an active signaling molecule that plays a role in vascular biology. Lower levels of cGMP are found in people with SCD and beta-thalassemia and are associated with reduced blood flow, increased inflammation, greater cell adhesion and reduced nitric oxide mediated vasodilation.

Blocking PDE9 acts to increase cGMP levels, which is associated with reactivation of fetal hemoglobin (HbF), a natural hemoglobin produced during fetal development. Increased levels of HbF in RBCs have been demonstrated to improve symptomology and substantially lower disease burden in both patients with SCD and patients with beta-thalassemia.

About Imara

Imara Inc. is a clinical-stage biotechnology company dedicated to developing and commercializing novel therapeutics to treat patients suffering from rare inherited genetic disorders of hemoglobin. Imara is currently advancing IMR-687, a highly selective, potent small molecule inhibitor of PDE9 that is an oral, once-a-day, potentially disease-modifying treatment for sickle cell disease and beta-thalassemia. IMR-687 is being designed to have a multimodal mechanism of action that acts on red blood cells, white blood cells, adhesion mediators and other cell types. For more information, please visit www.imaratx.com.

Cautionary Note Regarding Forward-Looking Statements

Statements in this press release about future expectations, plans and prospects, as well as any other statements regarding matters that are not historical facts, may constitute “forward-looking statements” within the meaning of The Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, the statements from Dr. Howard and Dr. Ballal in this press release and statements relating to the (i) expected timing for reporting of data from the ongoing Phase 2a clinical trial evaluating IMR-687 in patients with sickle cell disease and (iii) the Company’s beliefs regarding the strength of its clinical data, the therapeutic potential of IMR-687 and advancement of its clinical program, including with respect to the Phase 2b clinical trial evaluating IMR-687 in patients with sickle cell disease, the Phase 2a clinical trial evaluating IMR-687 in patients with sickle cell disease and the open label extension to the Phase 2a clinical trial. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the impact of extraordinary external events, such as the risks and uncertainties resulting from the impact of the COVID-19 pandemic on the Company’s business, operations, strategy, goals and anticipated milestones, including its ongoing and planned research activities and ability to conduct and readout data from its ongoing Phase 2a clinical trial of IMR-687 in sickle cell disease and the related open label extension trial and its ability to enroll, dose and readout data from its Phase 2b clinical trial of IMR-687 in sickle cell disease; the Company’s ability to advance the development of IMR-687 under the timelines it projects in current and future clinical trials, demonstrate in any current and future clinical trials the requisite safety and efficacy of IMR-687, replicate scientific and non-clinical data in clinical trials, obtain and maintain necessary regulatory approvals, obtain, maintain and enforce necessary patent and other intellectual property protection, identify, enter into and maintain collaboration agreements with third parties, manage competition, manage expenses, raise the substantial additional capital needed to achieve its business objectives, attract and retain qualified personnel, and successfully execute on its business strategies; and other factors discussed in the “Risk Factors” section of the Company’s most recent Quarterly Report on Form 10-Q, which is on file with the Securities and Exchange Commission and in other filings that the Company makes with the Securities and Exchange Commission in the future. Any forward-looking statements contained in this press release speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

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