News Releases

First patient outside U.S. treated in global Kevzara® (sarilumab) clinical trial program for patients with severe COVID-19

- Canada one of the participating countries in the Phase 2/3 trial with patient enrollment starting shortly
- Kevzara inhibits IL-6, which may play a role in driving the inflammatory immune response that causes acute respiratory distress syndrome observed in patients with severe COVID-19 infection.
- Sanofi is leading trials outside the U.S., while Regeneron is leading U.S. trials

LAVAL, QC – April 2, 2020 – The first patient outside of the U.S. has been treated as part of a global clinical program evaluating Kevzara® (sarilumab) in patients hospitalized with severe COVID-19. The global clinical program has now been initiated in Canada, Italy, Spain, Germany, France, Russia and the United States – all countries that have been impacted by COVID-19.

This is the second multi-centre, double-blind, Phase 2/3 trial as part of the Kevzara COVID-19 program, and the companies are continuing to work with health authorities around the world to secure initiation at additional sites. This follows Sanofi and Regeneron's announcement earlier this month of the initiation of the first trial, which is U.S.-based.

> *"Sanofi and Regeneron are relentlessly working to rapidly initiate trials around the world that will help determine whether Kevzara has the potential to play a role in addressing the COVID-19 global health crisis. These trials will provide important data to determine whether Kevzara ameliorates the life-threatening complications of COVID-19 infections by counteracting the overactive inflammatory responses in the lungs when damaged by the virus. In these unprecedented times, we are deeply grateful for the daily collaboration with health authorities that are enabling us to conduct this clinical work so quickly,"* said John Reed, M.D., Ph.D., Sanofi's Global Head of Research and Development. *"In addition to this clinical trial aiming to help critically ill COVID-19 patients, our work continues to bring forth a vaccine for disease prevention, along with efforts to provide other important Sanofi medicines that may help patients impacted by COVID-19."*

Kevzara is a fully-human monoclonal antibody that inhibits the interleukin-6 (IL-6) pathway by binding and blocking the IL-6 receptor. IL-6 may play a role in driving the overactive inflammatory response in the lungs of patients who are severely or critically ill with COVID-19 infection. The role of IL-6 is supported by preliminary data from a single-arm study in China using another IL-6 receptor inhibitor.

> *"Preliminary data suggests that the interleukin-6 pathway may play an important role in the overactive inflammatory response in the lungs of patients with COVID-19. It's now important for us to better understand the true impact of Kevzara through a robust, well-designed, randomized clinical trial," said Mary Tzortzis, Head, Clinical Study Unit, Sanofi Canada. "We appreciate the collaboration with Health Canada and our healthcare community to bring this study to Canada so quickly."*

The trial outside of the U.S. will assess the safety and efficacy of adding a single intravenous dose of Kevzara to usual supportive care, compared to supportive care plus placebo. The trial has an adaptive design with two parts and is anticipated to enroll approximately 300 patients. The trial will recruit hospitalized patients from several countries who are severely or critically ill with COVID-19 infection.

Scientists have preliminary evidence that IL-6 may play a key role in driving the inflammatory immune response that causes acute respiratory distress syndrome (ARDS) in patients critically ill from COVID-19. In an initial, non-peer-reviewed case series from China, a 21-patient cohort of COVID-19 patients experienced rapidly reduced fevers and 75% of patients (15 out of 20) reduced their need for supplemental oxygen within days of receiving another IL-6 receptor antibody (tocilizumab). Based on these results, China updated its COVID-19 treatment guidelines and approved the use of that IL-6 inhibitor to treat patients with severe or critical disease.

The safety and efficacy of Kevzara to treat the symptoms of COVID-19 is still under investigation and the market authorization has not been obtained.

About the Trial

This Phase 2/3, randomized, double-blind, placebo-controlled trial uses an adaptive design to evaluate the safety and efficacy of Kevzara in adults hospitalized with serious complications from COVID-19. To enter the trial, patients must have pneumonia and be hospitalized with laboratory-confirmed COVID-19 that is classified as severe or critical, or who are suffering from multi-organ dysfunction. After receiving the study dose, patients will be assessed for 60 days, or until hospital discharge or death.

In the Phase 2 part of the trial, patients will be randomized 2:2:1 into three groups: Kevzara higher dose, Kevzara lower dose and placebo.

The Phase 2 findings will be utilized in an adaptive manner to determine transition into Phase 3, helping to determine the endpoints, patient numbers and doses.

If the trial continues with all three treatment arms to the end, it is expected to enroll approximately 300 patients, depending on the status of the COVID-19 outbreak and the proportion of patients with severe COVID-19.

About Kevzara® (sarilumab) Injection

Kevzara (sarilumab) is indicated in the treatment of adult patients with moderately to severely active rheumatoid arthritis (RA) who have had an inadequate response or intolerance to one or more biologic or non-biologic Disease-Modifying Anti-Rheumatic Drugs (DMARDs).

Kevzara should be used in combination with methotrexate (MTX) or other traditional DMARDs. Kevzara may be given as monotherapy in cases of intolerance or contraindication to methotrexate or DMARDs.

The Canadian product monograph is available here.

Kevzara was jointly developed by Sanofi and Regeneron under a global collaboration agreement. Kevzara is a fully-human monoclonal antibody. Kevzara binds specifically to the IL-6 receptor, and has been shown to inhibit IL-6-mediated signaling. IL-6 is an immune system protein produced in increased quantities in patients with rheumatoid arthritis and has been associated with disease activity, joint destruction and other systemic problems. Kevzara is being investigated for its ability to reduce the overactive inflammatory immune response associated with COVID-19 based on evidence of markedly elevated levels of IL-6 in severely ill patients infected with coronaviruses.

About Regeneron

Regeneron (NASDAQ: REGN) is a leading biotechnology company that invents life-transforming medicines for people with serious diseases. Founded and led for over 30 years by physician-scientists, our unique ability to repeatedly and consistently translate science into medicine has led to seven FDA-approved treatments and numerous product candidates in development, all of which were homegrown in our laboratories. Our medicines and pipeline are designed to help patients with eye diseases, allergic and inflammatory diseases, cancer, cardiovascular and metabolic diseases, pain, infectious diseases and rare diseases.

Regeneron is accelerating and improving the traditional drug development process through our proprietary VelociSuite® technologies, such as VelocImmune® which uses unique genetically-humanized mice to produce optimized fully-human antibodies and bispecific antibodies, and through ambitious research initiatives such as the Regeneron Genetics Center, which is conducting one of the largest genetics sequencing efforts in the world.

For additional information about the company, please visit www.regeneron.com or follow @Regeneron on Twitter.

About Sanofi

Sanofi is dedicated to supporting people through their health challenges. We are a global biopharmaceutical company focused on human health. We prevent illness with vaccines, provide innovative treatments to fight pain and ease suffering. We stand by the few who suffer from rare diseases and the millions with long-term chronic conditions.

With more than 100,000 people in 100 countries, Sanofi is transforming scientific innovation into healthcare solutions around the globe.

Sanofi entities in Canada employ approximately 2,000 people. In 2018, we invested more than $127 million in R&D in Canada, creating jobs, business and opportunity throughout the country.

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