



Kevzara® (sarilumab) Approved by FDA as First and Only Biologic Indicated for Patients with Polymyalgia Rheumatica

March 1, 2023

Three times more patients treated with Kevzara achieved sustained remission compared to placebo in Phase 3 trial

Kevzara now approved to treat two chronic inflammatory disorders

TARRYTOWN, N.Y. and CAMBRIDGE, Mass., Feb. 28, 2023 (GLOBE NEWSWIRE) -- Regeneron Pharmaceuticals, Inc. (NASDAQ: REGN) and Sanofi today announced that the U.S. Food and Drug Administration (FDA) has approved Kevzara® (sarilumab) for the treatment of polymyalgia rheumatica (PMR), an inflammatory rheumatic disease, in adult patients who have had an inadequate response to corticosteroids or who cannot tolerate corticosteroid taper.

"Polymyalgia rheumatica can be an incapacitating disease, causing painful disease flares in multiple parts of the body that leave people fatigued and unable to fully perform everyday activities. Corticosteroids have been the primary treatment to date, but many patients do not adequately respond to steroids or cannot be tapered off steroids, which puts such patients at risk of complications from long-term steroid therapy," said George D. Yancopoulos, M.D., Ph.D., President and Chief Scientific Officer at Regeneron. "With the approval of Kevzara for polymyalgia rheumatica, patients now have an FDA-approved treatment to help offer relief from the disabling symptoms of this disease and long-term dependence on steroids."

The FDA evaluated the Kevzara application for PMR under Priority Review, which is granted to therapies that have the potential to provide significant improvements in the treatment, diagnosis or prevention of serious conditions. Kevzara was previously approved for the treatment of moderately-to-severely active rheumatoid arthritis (RA) in adult patients who have had an inadequate response or intolerance to one or more disease-modifying antirheumatic drugs.

PMR often initially presents with pain and stiffness around the neck, shoulder and hip area and symptoms include fatigue, low-grade fever and weight loss. Patients often experience flares during tapering of, or relapse after discontinuation of corticosteroid (CS) treatment. Patients with PMR report difficulty in carrying out everyday functions such as getting out of bed, standing up from a chair, or lifting their arms. PMR generally affects people who are 50 years and older.

"Until now, people living with polymyalgia rheumatica have had limited treatment options for this serious rheumatic condition, which causes significant pain and discomfort," said Bill Sibold, Executive Vice President, Head, Specialty Care at Sanofi. "The approval of Kevzara as the first and only biologic for polymyalgia rheumatica is a new option for patients and the healthcare professionals who treat them."

The FDA approval for this additional indication for Kevzara is based on results from the SAPHYR Phase 3 randomized clinical trial in patients with steroid-resistant active PMR, who flared on ≥ 7.5 mg/day prednisone or equivalent during taper. In the trial, patients were randomized to receive either Kevzara 200 mg every two weeks along with a 14-week taper of CS (n=60; 1 patient randomized but not treated) or placebo every two weeks along with a 52-week CS taper (n=58). At 52 weeks, the trial met its primary endpoint with 28% of Kevzara-treated patients achieving sustained remission compared to 10% for placebo (p=0.0193). Sustained remission was defined as being in disease remission by week 12, absence of disease flare, C-reactive protein normalization from weeks 12 to 52, and adherence to the CS taper protocol from weeks 12 to 52.

A sensitivity analysis removing acute phase reactants (measures of ongoing inflammation) maintained significance (proportion difference for Kevzara vs. placebo: 18%; 95% confidence interval: 3.1 to 32.6) and confirmed the primary outcome. In addition, an analysis of a secondary endpoint showed that the median cumulative CS dose was 777 mg for Kevzara, compared to 2044 mg for placebo.

The common adverse reactions occurring in $\geq 5\%$ of patients treated with Kevzara (n=59) were neutropenia (15%), leukopenia (7%), constipation (7%), rash pruritic (5%), myalgia (7%), fatigue (5%), and injection site pruritus (5%). Serious adverse reaction of neutropenia occurred in 2 patients (3%) in the Kevzara group compared to none in the placebo group (n=58). In both cases of neutropenia, the participants had a neutrophil count less than 500 per mm^3 without any infections; neutropenia resolved following permanent discontinuation of study drug. The most common adverse reactions that resulted in permanent discontinuation of therapy with Kevzara were neutropenia occurring in 3 patients (5%) and infection in 3 separate patients (5%), including COVID-19 (n=1), intervertebral discitis (n=1), and pneumonia (n=1).

Regeneron and Sanofi are committed to helping patients in the U.S. who are prescribed Kevzara gain access to the medicine and receive the support they may need. KevzaraConnect®, a comprehensive and specialized program that provides support services to patients throughout every step of the treatment process, can help eligible patients who are uninsured, lack coverage, or need copay assistance. Additionally, KevzaraConnect offers support from registered nurses and other specialists who are available 24/7 to speak with patients and help them navigate the complex insurance process. For more information, please call 1-844-KevzaraCall: 1-844-Kevzara (1-844-538-9272) or visit www.Kevzara.com.

About Kevzara

In addition to PMR, Kevzara is approved in multiple countries to treat adults with moderately to severely active rheumatoid arthritis who have not responded to or tolerated previous therapy. Kevzara, which was invented using Regeneron's proprietary *VelocImmune*® technology, 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.

Sarilumab is being jointly developed by Regeneron and Sanofi under a global collaboration agreement.

About Regeneron's *VelocImmune* Technology

Regeneron's *VelocImmune* technology utilizes a proprietary genetically engineered mouse platform endowed with a genetically humanized immune system to produce optimized fully human antibodies. When Regeneron's co-Founder, President and Chief Scientific Officer George D. Yancopoulos was a graduate student with his mentor Frederick W. Alt in 1985, they were the first to [envision](#) making such a genetically humanized mouse, and Regeneron has spent decades inventing and developing *VelocImmune* and related *VelociSuite*® technologies. Dr. Yancopoulos and his team have used *VelocImmune* technology to create a substantial proportion of all original, FDA-approved or authorized fully human monoclonal antibodies. This includes REGEN-COV® (casirivimab and imdevimab), Dupixent, Libtayo® (cemiplimab-rwlc), Praluent® (alirocumab), Kevzara® (sarilumab), Evkeeza® (evinacumab-dgnb) and Inmazeb® (atoltivimab, maftivimab and odesivimab-ebgn).

U.S. Indications and Important Safety Information

KEVZARA® (sarilumab) is an injectable prescription medicine called an interleukin-6 (IL-6) receptor blocker. KEVZARA is used to treat adult patients with:

- moderately to severely active rheumatoid arthritis (RA) after at least one other medicine called a disease-modifying antirheumatic drug (DMARD) has been used and did not work well or could not be tolerated.
- polymyalgia rheumatica (PMR) after corticosteroids have been used and did not work well or when a slow decrease in the dose of corticosteroids (taper) cannot be tolerated.

IMPORTANT SAFETY INFORMATION

KEVZARA can cause serious side effects including:

- **SERIOUS INFECTIONS: KEVZARA is a medicine that affects your immune system. KEVZARA can lower the ability of your immune system to fight infections. Some people have had serious infections while using KEVZARA, including tuberculosis (TB), and infections caused by bacteria, fungi, or viruses that can spread throughout the body. Some people have died from these infections. Your healthcare provider should test you for TB before starting KEVZARA. Your healthcare provider should monitor you closely for signs and symptoms of TB during treatment with KEVZARA.**
- Before starting KEVZARA, tell your healthcare provider if you
 - think you have an infection or have symptoms of an infection, with or without a fever. Symptoms may include sweats or chills, muscle aches, a cough, shortness of breath, blood in your phlegm, weight loss, warm, red, or painful skin or sores on your body, diarrhea or stomach pain, burning when you urinate or urinating more often than normal, if you feel very tired, or if you are being treated for an infection, get a lot of infections or have repeated infections
 - have diabetes, HIV, or a weakened immune system
 - have TB, or have been in close contact with someone with TB
 - live or have lived, or have traveled to certain parts of the country (such as the Ohio and Mississippi River valleys and the Southwest) where there is an increased chance of getting certain fungal infections (histoplasmosis, coccidioidomycosis, or blastomycosis)
 - have or have had hepatitis
- After starting KEVZARA, call your healthcare provider right away if you have any symptoms of an infection.
- **CHANGES IN CERTAIN LABORATORY TEST RESULTS:** Your healthcare provider should do blood tests before and after starting KEVZARA to check for low neutrophil (white blood cells that help the body fight off bacterial infections) counts, low platelet (blood cells that help with blood clotting and stop bleeding) counts, and an increase in certain liver function tests. Changes in test results are common with KEVZARA and can be severe. You may also have changes in other laboratory tests, such as your blood cholesterol levels. Your healthcare provider should do blood tests 4 to 8 weeks after starting KEVZARA and then every 6 months during treatment to check for an increase in blood cholesterol levels.
- **TEARS (PERFORATION) OF THE STOMACH OR INTESTINES:** Tell your healthcare provider if you have had a condition known as diverticulitis (inflammation in parts of the large intestine) or ulcers in your stomach or intestines. Some people using KEVZARA get tears in their stomach or intestine. This happens most often in people who also take nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, or methotrexate. Call your healthcare provider right away if you have fever and stomach (abdominal) pain that does not go away.
- **CANCER:** KEVZARA may increase your risk of certain cancers by changing the way your immune system works. Tell your healthcare provider if you have ever had any type of cancer.
- **SERIOUS ALLERGIC REACTIONS:** Serious allergic reactions can happen with KEVZARA. Get medical attention right away if you have any of the following signs: shortness of breath or trouble breathing; feeling dizzy or faint; swelling of your lips, tongue, or face; moderate or severe stomach (abdominal) pain or vomiting; or chest pain.
- Do not use KEVZARA if you are allergic to sarilumab or any of the ingredients of KEVZARA.
- Before using KEVZARA, tell your healthcare provider if you
 - have an infection
 - have liver problems
 - have had stomach (abdominal) pain or a condition known as diverticulitis (inflammation in parts of the large

- intestine) or ulcers in your stomach or intestines
- recently received or are scheduled to receive a vaccine. People who take KEVZARA should not receive live vaccines
- plan to have surgery or a medical procedure
- are pregnant or plan to become pregnant. It is not known if KEVZARA will harm your unborn baby
- are breastfeeding or plan to breastfeed. Talk to your healthcare provider about the best way to feed your baby if you use KEVZARA. It is not known if KEVZARA passes into your breast milk.
- take prescription or nonprescription medicines, vitamins, or herbal supplements. It is especially important to tell your healthcare provider if you use
 - any other medicines to treat your RA or PMR. Using KEVZARA with these medicines may increase your risk of infection.
 - medicines that affect the way certain liver enzymes work. Ask your healthcare provider if you are not sure if your medicine is one of these.
- The most common side effects include:
 - injection site redness
 - injection site itching
 - upper respiratory tract infection
 - urinary tract infection
 - nasal congestion, sore throat, and runny nose

These are not all of the possible side effects of KEVZARA. Tell your doctor about any side effect that bothers you or does not go away. You are encouraged to report side effects of prescription drugs to the FDA at www.fda.gov/medwatch or call 1-800-FDA-1088.

To learn more, talk about KEVZARA with your healthcare provider or pharmacist. The FDA-approved [Medication Guide](#) and [Prescribing Information](#) can be found at www.KEVZARA.com or by calling 1-844- KEVZARA.

Please click here to see full [Prescribing Information](#) including risk of SERIOUS SIDE EFFECTS and [Medication Guide](#).

About Regeneron

Regeneron (NASDAQ: REGN) is a leading biotechnology company that invents, develops and commercializes life-transforming medicines for people with serious diseases. Founded and led for 35 years by physician-scientists, our unique ability to repeatedly and consistently translate science into medicine has led to nine FDA-approved treatments and numerous product candidates in development, almost 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, hematologic conditions, 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 more information, please visit www.Regeneron.com or follow @Regeneron on Twitter.

About Sanofi

We are an innovative global healthcare company, driven by one purpose: we chase the miracles of science to improve people's lives. Our team, across some 100 countries, is dedicated to transforming the practice of medicine by working to turn the impossible into the possible. We provide potentially life-changing treatment options and life-saving vaccine protection to millions of people globally, while putting sustainability and social responsibility at the center of our ambitions.

Sanofi is listed on EURONEXT: SAN and NASDAQ: SNY

Regeneron Forward-Looking Statements and Use of Digital Media

This press release includes forward-looking statements that involve risks and uncertainties relating to future events and the future performance of Regeneron Pharmaceuticals, Inc. ("Regeneron" or the "Company"), and actual events or results may differ materially from these forward-looking statements. Words such as "anticipate," "expect," "intend," "plan," "believe," "seek," "estimate," variations of such words, and similar expressions are intended to identify such forward-looking statements, although not all forward-looking statements contain these identifying words. These statements concern, and these risks and uncertainties include, among others, the impact of SARS-CoV-2 (the virus that has caused the COVID-19 pandemic) on Regeneron's business and its employees, collaborators, and suppliers and other third parties on which Regeneron relies, Regeneron's and its collaborators' ability to continue to conduct research and clinical programs, Regeneron's ability to manage its supply chain, net product sales of products marketed or otherwise commercialized by Regeneron and/or its collaborators or licensees (collectively, "Regeneron's Products"), and the global economy; the nature, timing, and possible success and therapeutic applications of Regeneron's Products and product candidates being developed by Regeneron and/or its collaborators or licensees (collectively, "Regeneron's Product Candidates") and research and clinical programs now underway or planned, including without limitation Kevzara[®] (sarilumab) for the treatment of polymyalgia rheumatica; uncertainty of the utilization, market acceptance, and commercial success of Regeneron's Products and Regeneron's Product Candidates and the impact of studies (whether conducted by Regeneron or others and whether mandated or voluntary), including the studies discussed or referenced in this press release, on any of the foregoing; the likelihood, timing, and scope of possible regulatory approval and commercial launch of Regeneron's Product Candidates and new indications for Regeneron's Products; the extent to which the results from the research and development programs conducted by Regeneron and/or its collaborators or licensees may be replicated in other studies and/or lead to advancement of product candidates to clinical trials, therapeutic applications, or regulatory approval; the ability of Regeneron's collaborators, licensees, suppliers, or other third parties (as applicable) to perform manufacturing, filling, finishing, packaging, labeling, distribution, and other steps related to Regeneron's Products and Regeneron's Product

Candidates; the ability of Regeneron to manage supply chains for multiple products and product candidates; safety issues resulting from the administration of Regeneron's Products and Regeneron's Product Candidates in patients, including serious complications or side effects in connection with the use of Regeneron's Products and Regeneron's Product Candidates in clinical trials; determinations by regulatory and administrative governmental authorities which may delay or restrict Regeneron's ability to continue to develop or commercialize Regeneron's Products and Regeneron's Product Candidates; ongoing regulatory obligations and oversight impacting Regeneron's Products, research and clinical programs, and business, including those relating to patient privacy; the availability and extent of reimbursement of Regeneron's Products from third-party payers, including private payer healthcare and insurance programs, health maintenance organizations, pharmacy benefit management companies, and government programs such as Medicare and Medicaid; coverage and reimbursement determinations by such payers and new policies and procedures adopted by such payers; competing drugs and product candidates that may be superior to, or more cost effective than, Regeneron's Products and Regeneron's Product Candidates; unanticipated expenses; the costs of developing, producing, and selling products; the ability of Regeneron to meet any of its financial projections or guidance and changes to the assumptions underlying those projections or guidance; the potential for any license or collaboration agreement, including Regeneron's agreements with Sanofi and Bayer (or their respective affiliated companies, as applicable), to be cancelled or terminated; and risks associated with intellectual property of other parties and pending or future litigation relating thereto (including without limitation the patent litigation and other related proceedings relating to EYLEA[®] (afibercept) Injection, Praluent[®] (alirocumab), and REGEN-COV[®] (casirivimab and imdevimab)), other litigation and other proceedings and government investigations relating to the Company and/or its operations, the ultimate outcome of any such proceedings and investigations, and the impact any of the foregoing may have on Regeneron's business, prospects, operating results, and financial condition. A more complete description of these and other material risks can be found in Regeneron's filings with the U.S. Securities and Exchange Commission, including its Form 10-K for the year ended December 31, 2022. Any forward-looking statements are made based on management's current beliefs and judgment, and the reader is cautioned not to rely on any forward-looking statements made by Regeneron. Regeneron does not undertake any obligation to update (publicly or otherwise) any forward-looking statement, including without limitation any financial projection or guidance, whether as a result of new information, future events, or otherwise.

Regeneron uses its media and investor relations website and social media outlets to publish important information about the Company, including information that may be deemed material to investors. Financial and other information about Regeneron is routinely posted and is accessible on Regeneron's media and investor relations website (<http://newsroom.regeneron.com>) and its Twitter feed (<http://twitter.com/regeneron>).

Sanofi Disclaimers or Forward-Looking Statements

This press release contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts. These statements include projections and estimates regarding the marketing and other potential of the product, or regarding potential future revenues from the product. Forward-looking statements are generally identified by the words "expects", "anticipates", "believes", "intends", "estimates", "plans" and similar expressions. Although Sanofi's management believes that the expectations reflected in such forward-looking statements are reasonable, investors are cautioned that forward-looking information and statements are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of Sanofi, that could cause actual results and developments to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include among other things, unexpected regulatory actions or delays, or government regulation generally, that could affect the availability or commercial potential of the product, the fact that product may not be commercially successful, the uncertainties inherent in research and development, including future clinical data and analysis of existing clinical data relating to the product, including post marketing, unexpected safety, quality or manufacturing issues, competition in general, risks associated with intellectual property and any related future litigation and the ultimate outcome of such litigation, and volatile economic and market conditions, and the impact that COVID-19 will have on us, our customers, suppliers, vendors, and other business partners, and the financial condition of any one of them, as well as on our employees and on the global economy as a whole. The risks and uncertainties also include the uncertainties discussed or identified in the public filings with the SEC and the AMF made by Sanofi, including those listed under "Risk Factors" and "Cautionary Statement Regarding Forward-Looking Statements" in Sanofi's annual report on Form 20-F for the year ended December 31, 2022. Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise any forward-looking information or statements.

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