



FDA Approves First-in-class Evkeeza® (evinacumab-dgnb) for Young Children with Ultra-rare Form of High Cholesterol

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Approval extends Evkeeza to children aged 5 to 11 with homozygous familial hypercholesterolemia (HoFH), an inherited condition characterized by extremely high low-density lipoprotein cholesterol (LDL-C)

48% reduction in LDL-C from baseline at week 24 when Evkeeza was added to other lipid-lowering therapies in the pivotal trial

TARRYTOWN, N.Y., March 22, 2023 (GLOBE NEWSWIRE) -- Regeneron Pharmaceuticals, Inc. (NASDAQ: REGN) today announced the U.S. Food and Drug Administration (FDA) has extended the approval of Evkeeza® (evinacumab-dgnb) as an adjunct to other lipid-lowering therapies to treat children aged 5 to 11 with homozygous familial hypercholesterolemia (HoFH). Evkeeza is the first angiopoietin-like 3 (ANGPTL3) inhibitor treatment indicated for children as young as 5 years old to control dangerously high levels of low-density lipoprotein cholesterol (LDL-C) caused by HoFH. Evkeeza was initially [approved](#) as an adjunct to other lipid-lowering therapies in those aged 12 years and older with HoFH in February 2021.

"At the Family Heart Foundation, we know that children with homozygous familial hypercholesterolemia, and those caring for them, often live in fear of what the future holds as they contend with the dangerously high levels of bad cholesterol, or LDL-C, caused by this genetic disorder," said Mary McGowan, M.D., Chief Medical Officer of the Family Heart Foundation. "Only 5% of rare diseases actually have an FDA-approved treatment. With this FDA approval, the HoFH community now has a much-needed treatment for young children, potentially making it possible for many to achieve recommended LDL-C levels much earlier in the course of this rare disease. This is a hopeful development for those living with HoFH."

HoFH is an ultra-rare inherited condition that affects approximately 1,300 people in the U.S. and is the most severe form of familial hypercholesterolemia (FH). HoFH occurs when two copies of the FH-causing genes are inherited, one from each parent, resulting in dangerously high levels (usually >400 mg/dL) of LDL-C. Those living with HoFH are at risk for premature atherosclerotic disease and cardiac events even in their teenage years. Many patients are not diagnosed or are only diagnosed later in life.

"Guidelines recommend screening all children at high risk for homozygous familial hypercholesterolemia starting at age 2. However, until now, a positive diagnosis was often met with the frustration of having limited treatment options to help these children," said Carissa M. Baker-Smith, M.D., MPH, Co-Director of Nemours Cardiac Center Cardiovascular Research and Innovation Program, Director of Nemours Cardiac Center Pediatric Preventive Cardiology, pediatric cardiologist, and a trial investigator. "By adding Evkeeza to standard lipid-lowering therapies in this pivotal trial, children were able to reduce their LDL-C, with the vast majority able to achieve declines of nearly 50%. These are clinically meaningful results that physicians should consider when developing a treatment approach for these young patients."

Despite treatment with other lipid-lowering therapies, children entered the Phase 3 trial with an average LDL-C level of 264 mg/dL, more than twice the target (<110 mg/dL) for pediatric patients with HoFH. With the addition of Evkeeza, children were able to reduce their LDL-C by 48% at week 24 on average, meeting the trial's primary endpoint. Significant reductions were also observed in other key secondary endpoints including levels of apolipoprotein B (ApoB), non-high-density lipoprotein cholesterol (non-HDL-C) and total cholesterol.

The safety profile of Evkeeza observed in these patients (n=20) was consistent with the safety profile observed in adults and pediatric patients aged 12 years and older, with the additional adverse reaction of fatigue. Fatigue was reported in 3 (15%) patients. The most common adverse events (AEs) occurring in >15% of patients were COVID-19 (n=15), pyrexia (n=5), headache (n=4), throat pain (oropharyngeal pain, n=4) as well as upper abdominal pain, diarrhea, vomiting, fatigue, nasopharyngitis, rhinitis and cough (all n=3). Most reported AEs were mild or moderate, and none led to study discontinuation.

"Since it was first approved, Evkeeza has become the standard of care for homozygous familial hypercholesterolemia in those aged 12 years or older. We're gratified that now children as young as 5 years old have the potential to benefit from this treatment," said George D. Yancopoulos, M.D., Ph.D., President and Chief Scientific Officer at Regeneron. "As a first-in-class medicine for this relentless disease, Evkeeza exemplifies the promise of genetics-based research to transform treatment paradigms. Evkeeza's journey from target discovery to treatment innovation was only made possible due to our long-term investment in genetics research and monoclonal antibody technologies, and this remains a central tenet of our science-first approach to this day."

Regeneron is committed to helping patients who have been prescribed Evkeeza access their medication. Regeneron's myRARE™ patient support program offers financial assistance to eligible patients who need help with the out-of-pocket cost of Evkeeza. Under the program, eligible patients with commercial insurance may pay as little as \$0 in out-of-pocket costs for Evkeeza. In

addition, myRARE™ offers resources to help patients and healthcare providers get started with Evkeeza including product information, insurance benefit verification, community resources and appointment reminders. For more information, call 1-833-EVKEEZA (833-385-3392) or visit www.EVKEEZA.com.

The FDA evaluated the supplemental biologics license for Evkeeza in this indication under Priority Review, which is reserved for medicines that represent potentially significant improvements in efficacy or safety in treating serious conditions.

The safety and effectiveness of Evkeeza have not been established in patients with other causes of hypercholesterolemia, including those with heterozygous familial hypercholesterolemia (HeFH). The effect of Evkeeza on cardiovascular morbidity and mortality has not been determined.

About the Pivotal Pediatric Trial

The three-part, single-arm, open-label trial evaluated Evkeeza added to other lipid-lowering therapies in pediatric patients with HoFH aged 5 to 11 years. Part A (n=6) was a Phase 1b trial designed to assess the pharmacokinetics (PK), safety and tolerability of Evkeeza. Part B (n=14) evaluated the efficacy of Evkeeza during a 24-week treatment period and enrolled patients with an average age of 9 years. Among them, 86% were on statins, 93% were on ezetimibe, 50% were on LDL apheresis and 14% were on lomitapide. Patients received Evkeeza 15 mg/kg every four weeks delivered intravenously alongside their lipid-lowering treatment regimen. The primary endpoint was change in LDL-C at week 24. Secondary endpoints included the effect of Evkeeza on other lipid parameters (i.e., apolipoprotein B, non-high-density lipoprotein cholesterol, lipoprotein[a] and total cholesterol), efficacy by mutation status, safety and tolerability, immunogenicity and PK.

Patients who completed Part A or B were allowed to continue treatment in Part C (n=20), an ongoing Phase 3 extension trial. Parts A, B and C were not designed to evaluate the effect of Evkeeza on cardiovascular events.

About Evkeeza® (evinacumab)

Evkeeza was invented using Regeneron's *VelocImmune*® technology and is a fully human monoclonal antibody that binds to and blocks the function of angiotensin-like 3 (ANGPTL3), a protein that inhibits lipoprotein lipase (LPL) and endothelial lipase (EL) and regulates circulating lipids, including LDL-C.

Regeneron scientists discovered the angiotensin gene family more than two decades ago. Human genetics research [published](#) in *New England Journal of Medicine* in 2017 by scientists from the Regeneron Genetics Center® found that patients whose ANGPTL3 gene did not function properly (called a "loss-of function mutation") have significantly lower levels of key blood lipids, including LDL-C, and that this is associated with a significantly lower risk of coronary artery disease.

The generic name for Evkeeza in its approved U.S. indications is evinacumab-dgnb, with dgnb the suffix designated in accordance with Nonproprietary Naming of Biological Products Guidance for Industry issued by the U.S. FDA.

Regeneron is responsible for the development and distribution of Evkeeza in the U.S. and is [collaborating](#) with Ultragenyx to clinically develop, commercialize and distribute Evkeeza outside of the U.S.

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 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 fully human monoclonal antibodies currently available. This includes Evkeeza® (evinacumab-dgnb), REGEN-COV® (casirivimab and imdevimab), Dupixent® (dupilumab), Libtayo® (cemiplimab-rwlc), Praluent® (alirocumab), Kevzara® (sarilumab) and Inmazeb® (atoltivimab, maftivimab and odesivimab-ebgn).

IMPORTANT SAFETY INFORMATION FOR EVKEEZA® (evinacumab-dgnb) INJECTION

Do not use EVKEEZA if you are allergic to evinacumab-dgnb or to any of the ingredients in EVKEEZA.

Before receiving EVKEEZA, tell your healthcare provider about all of your medical conditions, including if you:

- Are pregnant or plan to become pregnant. EVKEEZA may harm your unborn baby. Tell your healthcare provider if you become pregnant while using EVKEEZA. **People who are able to become pregnant:**
 - Your healthcare provider may do a pregnancy test before you start treatment with EVKEEZA
 - You should use an effective method of birth control during treatment and for at least 5 months after the last dose of EVKEEZA. Talk with your healthcare provider about birth control methods that you can use during this time.
- Are breastfeeding or plan to breastfeed. It is not known if EVKEEZA passes into your breast milk. You and your healthcare provider should decide if you will receive EVKEEZA or breastfeed.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

EVKEEZA can cause serious side effects, including:

Allergic reactions (hypersensitivity), including a severe reaction known as anaphylaxis. Tell your healthcare provider right away if you get any of the following symptoms: swelling (mainly of the lips, tongue or throat which makes it difficult to swallow or breathe), breathing problems or wheezing, feeling dizzy or fainting, rash, hives, and itching.

The most common side effects of EVKEEZA include symptoms of the common cold, flu-like symptoms, dizziness, pain in legs or arms, nausea, decreased energy and feeling tired or weak.

Tell your healthcare provider if you have any side effect that bothers you or does not go away. These are not all the possible side effects of EVKEEZA. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Please see full [Prescribing Information](#), including [Patient Information](#).

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.

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 Evkeeza[®] (evinacumab-dgnb) for the treatment of children aged 5 to 11 with homozygous familial hypercholesterolemia; uncertainty of the utilization, market acceptance, and commercial success of Regeneron's Products (such as Evkeeza) 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), as well as Regeneron's collaboration with Ultragenyx referenced in this press release, 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>).

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