Regeneron's Casirivimab and Imdevimab Antibody Cocktail for COVID-19 is First Combination Therapy to Receive FDA Emergency Use Authorization

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First treatment of any kind to have prospectively confirmed and statistically significant anti-viral activity against SARS-CoV-2

Authorized for recently diagnosed, mild to moderate COVID-19 in high-risk patients

Initial doses will be made available to approximately 300,000 patients, with no medication out-of-pocket costs, under U.S. government allocation program

TARRYTOWN, N.Y., November 21, 2020 – Regeneron Pharmaceuticals, Inc. (NASDAQ: REGN) today announced that the antibody cocktail casirivimab and imdevimab administered together (formerly known as REGN-COV2 or REGEN-COV2), a therapy currently being investigated for use in COVID-19, has received Emergency Use Authorization (EUA) from the U.S. Food and Drug Administration (FDA). Casirivimab and imdevimab administered together are authorized for the treatment of mild to moderate COVID-19 in adults, as well as in pediatric patients at least 12 years of age and weighing at least 40 kg, who have received positive results of direct SARS-CoV-2 viral testing and are at high risk for progressing to severe COVID-19 and/or hospitalization. The clinical evidence from Regeneron's outpatient trial suggests that monoclonal antibodies such as casirivimab and imdevimab have the greatest benefit when given early after diagnosis and in patients who have not yet mounted their own immune response or who have high viral load.

The criteria for 'high-risk' patients are described in the Fact Sheet for Health Care Providers. Casirivimab and imdevimab are not authorized for use in patients who are hospitalized or require oxygen therapy due to COVID-19, or for people currently using chronic oxygen therapy because of an underlying comorbidity who require an increase in baseline oxygen flow rate due to COVID-19.

"This FDA Emergency Use Authorization is an important step in the fight against COVID-19, as high-risk patients in the United States will have access to a promising therapy early in the course of their infection," said Leonard S. Schleifer, M.D., Ph.D., President and Chief Executive Officer of Regeneron. "The science and technology investments Regeneron has made over three decades positioned us to move rapidly to invent, study and maximize production of our antibody cocktail. Even with these incredible efforts, demand may exceed supply initially, making it even more critical that federal and state governments ensure the casirivimab and imdevimab antibody cocktail is distributed fairly and equitably to the patients most in need. In the first quarter of 2021, we expect to increase available global supply as we continue our collaboration with Roche."

"The casirivimab and imdevimab antibody cocktail is designed to mimic what a well-functioning immune system does by using very potent antibodies to neutralize the virus," said George D. Yancopoulos, M.D., Ph.D., President and Chief Scientific Officer of Regeneron. "Data from approximately 800 non-hospitalized patients showed significant reductions in virus levels within days of receiving the combination, which were associated with significantly fewer medical visits. This benefit was greatest in patients most at risk for poor outcomes due to high viral load, ineffective immune response at baseline or pre-existing risk factors. We are encouraged that no variants resistant to the cocktail were identified in the clinical trial analyses to date, which is consistent with our preclinical findings. We are also very encouraged by recently announced promising vaccine results; however, there remains a need to treat patients who develop COVID-19, especially as some may not have had access to or were not protected by vaccination. Importantly, we continue to advance our rigorous clinical trial program evaluating the safety and efficacy of the antibody cocktail for both the treatment and prevention of COVID-19, and we will share new results as available."

Production of monoclonal antibodies is a complex, time- and labor-intensive process that requires deep expertise. Utilizing production and manufacturing platforms developed over decades, Regeneron rapidly scaled up production of casirivimab and imdevimab, beginning in the early days of the pandemic with support from the Biomedical Advanced Research and Development Authority (BARDA), part of the Office of the Assistant Secretary for Preparedness and Response at the U.S. Department of Health and Human Services. Regeneron now expects to have treatment doses ready for approximately 80,000 patients by the end of November, approximately 200,000 patients by the first week of January, and approximately 300,000 patients in total by the end of January 2021.

As part of Operation Warp Speed, in July the U.S. government and Regeneron signed an agreement for this initial supply of the casirivimab and imdevimab antibody cocktail. The U.S. government will coordinate with state authorities to allocate the antibody cocktail on a weekly basis based on the number of COVID-19 cases in each state. The government has committed to providing these 300,000 doses at no cost to patients, although healthcare facilities may charge fees related to administration. Regeneron will immediately begin shipping doses to Amerisource Bergen, a national distributor, which will distribute the therapy as directed by the government.

Under the EUA, the recommended dose is 1,200 mg of casirivimab and 1,200 mg of imdevimab (2,400 mg total) administered as a single intravenous infusion. The authorization is based on positive Phase 2 data announced in September and October from the first 799 adults in an ongoing randomized, double-blind, placebo-controlled trial of non-hospitalized patients ("outpatients") with COVID-19.

The FDA grants Emergency Use Authorization to medicines that may help diagnose, treat or prevent a life-threatening disease when adequate and approved alternatives are not available. The EUA is temporary and does not take the place of a formal biologics license application (BLA) submission review and approval process. This use is authorized only for the duration of the declaration that circumstances exist justifying the authorization of the emergency use, unless terminated or revoked sooner. Casirivimab and imdevimab have not been approved by FDA and remain investigational. Evaluation of its safety and efficacy is ongoing in multiple clinical trials. Data from these trials will be used to support a future BLA submission. Health care providers should review the Fact Sheet for detailed information on the authorized use and requirements of the EUA and may call 844-734-6643 for more information. Please see the Fact Sheet and FDA Letter of Authorization at http://www.RegeneronEUA.com

The casirivimab and imdevimab combination therapy continues to be evaluated in Phase 2/3 clinical trials for the treatment of COVID-19 in certain hospitalized and non-hospitalized patients, the Phase 3 open-label RECOVERY trial of hospitalized patients in the UK, and a Phase 3 trial for the prevention of COVID-19 in household contacts of infected individuals. To date, more than 7,000 people have participated in casirivimab and imdevimab clinical trials.

About Regeneron Antibody Cocktail
Casirivimab and imdevimab injection is a cocktail of two monoclonal antibodies (also known as REGN10933 and REGN10987, respectively) and was designed specifically to block infectivity of SARS-CoV-2, the virus that causes COVID-19.

To develop this novel medicine, Regeneron scientists evaluated thousands of fully-human antibodies produced by the company's *VelocImmune*® mice, which have been genetically modified to have a human immune system, as well as antibodies identified from humans who have recovered from COVID-19. The two potent, virus-neutralizing antibodies that form the cocktail bind non-competitively to the critical receptor binding domain of the virus's spike protein, which diminishes the ability of mutant viruses to escape treatment and protects against spike variants that have arisen in the human population, as detailed in *Science*.

The development and manufacturing of the antibody cocktail has been funded in part with federal funds from BARDA under OT number: HHSO100201700020C. Regeneron continues to increase in-house production of casirivimab and imdevimab, and the company has partnered with Roche to increase the global supply beginning in 2021. If the therapy proves safe and effective in clinical trials and regulatory approvals are granted, Regeneron will manufacture and distribute it in the U.S. and Roche will develop, manufacture and distribute it outside the U.S. Once both companies are at full manufacturing capacity in 2021, there are expected to be at least 2 million treatment doses available annually.

AUTHORIZED USE AND IMPORTANT SAFETY INFORMATION

Authorized Emergency Use

Casirivimab and imdevimab injection is an investigational combination therapy and has been authorized by FDA for the emergency use described above. Casirivimab and imdevimab injection is not FDA approved for any use. Safety and effectiveness of casirivimab and imdevimab injection have not yet been established for the treatment of COVID-19.

This authorized use is only for the duration of the declaration that circumstances exist justifying the authorization of the emergency use under section 564 (b)(1) of the Act, 21 U.S.C. § 360bbb-3(b) (1), unless the authorization is terminated or revoked sooner.

Limitations of Authorized Use

- Casirivimab and imdevimab injection is not authorized for use in patients:
  - who are hospitalized due to COVID-19, OR
  - who require oxygen therapy due to COVID-19, OR
  - who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.
- Benefit of treatment with casirivimab and imdevimab injection has not been observed in patients hospitalized due to COVID-19. Monoclonal antibodies, such as casirivimab and imdevimab, may be associated with worse clinical outcomes when administered to hospitalized patients requiring high flow oxygen or mechanical ventilation with COVID-19.

Definition of High-Risk Patients

High-risk is defined as patients who meet at least one of the following criteria:

- Have a body mass index (BMI) ≥35
- Have chronic kidney disease
- Have diabetes
- Have immunosuppressive disease
- Are currently receiving immunosuppressive treatment
- Are ≥65 years of age
- Are ≥55 years of age AND have
- cardiovascular disease, OR
- hypertension, OR
- chronic obstructive pulmonary disease/other chronic respiratory disease.
- Are 12 – 17 years of age AND have
- BMI ≥85th percentile for their age and gender based on CDC growth

charts, OR

- sickle cell disease, OR
- congenital or acquired heart disease, OR
- neurodevelopmental disorders, for example, cerebral palsy, OR
- a medical-related technological dependence, for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID-19),

OR

- asthma, reactive airway or other chronic respiratory disease that requires daily medication for control.

Warnings and Precautions:

- **Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions:** There is a potential for serious hypersensitivity reaction, including anaphylaxis, with administration of casirivimab and imdevimab injection. If signs or symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration and initiate appropriate medications and/or supportive therapy. Infusion-related reactions have been observed with administration of casirivimab and imdevimab injection. Signs and symptoms of infusion related reactions may include fever, chills, nausea, headache, bronchospasm, hypotension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, and/or dizziness. If an infusion-related reaction occurs, consider slowing or stopping the infusion and administer appropriate medications and/or supportive care.
- **Limitations of Benefit and Potential for Risk in Patients with Severe COVID-19:** Benefit of treatment with casirivimab and imdevimab injection has not been observed in patients hospitalized due to COVID-19. Monoclonal antibodies, such as casirivimab and imdevimab, may be associated with worse clinical outcomes when administered to hospitalized patients requiring high flow oxygen or mechanical ventilation with COVID-19. Therefore, casirivimab and imdevimab injection is not authorized for use in who are hospitalized due to COVID-19, OR who require oxygen therapy due to COVID-19, OR who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.

Adverse Reactions:

- Serious adverse events (SAEs) were reported in 4 (1.6%) patients in the casirivimab and imdevimab injection 2,400 mg group, 2 (0.8%) patients in casirivimab and imdevimab injection 8,000 mg group and 6 (2.3%) patients in the placebo group. None of the SAEs were considered to be related to study drug. SAEs that were reported as Grade 3 or 4 adverse events were pneumonia, hyperglycemia, nausea and vomiting (2,400 mg casirivimab and imdevimab injection), intestinal obstruction and dyspnea (8,000 mg casirivimab and imdevimab injection) and COVID-19, pneumonia and hypoxia (placebo). Casirivimab and imdevimab injection are not authorized at the 8,000 mg dose (4,000 mg casirivimab and 4,000 mg imdevimab).

Patient Monitoring Recommendations: Clinically monitor patients during infusion and observe patients for at least 1 hour after infusion is complete.

Use in Specific Populations:

- **Pregnancy:** There is currently limited clinical experience in the use of casirivimab and imdevimab injection in COVID-19 patients who are pregnant. Casirivimab and imdevimab injection therapy should be used during pregnancy only if the potential benefit justifies the potential risk for the mother and the fetus.
- **Nursing Mothers:** There is currently no clinical experience in use of casirivimab and imdevimab injection in COVID-19 patients who are breastfeeding. The development and health benefits of breastfeeding should be considered along with the mother's clinical need for casirivimab and imdevimab injection and any potential adverse effects on the breastfed child from casirivimab and imdevimab injection or from the underlying maternal condition.

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 eight 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.

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 (including those discussed in this press release), Regeneron's ability to manage its supply chain, net product sales of products marketed or otherwise commercialized by Regeneron and/or its collaborators (collectively, "Regeneron's Products"), and the global economy; the nature, timing, and possible success and therapeutic applications of Regeneron's Products and

product candidates and research and clinical programs now underway or planned, including without limitation the development program relating to casirivimab and imdevimab (Regeneron's investigational multi-antibody therapy for the treatment and prevention of COVID-19); how long the Emergency Use Authorization ("EUA") granted by the U.S. Food and Drug Administration (the "FDA") for casirivimab and imdevimab will remain in effect and whether the EUA is revoked by the FDA based on its determination that the underlying health emergency no longer exists or warrants such authorization or other reasons; the likelihood, timing, and scope of possible regulatory approval and commercial launch of Regeneron's product candidates (such as casirivimab and imdevimab) and new indications for Regeneron's Products; safety issues resulting from the administration of Regeneron's Products and product candidates (such as casirivimab and imdevimab) in patients, including serious complications or side effects in connection with the use of Regeneron's Products and product candidates in clinical trials (including those discussed in this press release); the ability of Regeneron to manufacture in anticipated quantities Regeneron's Products and product candidates, including casirivimab and imdevimab; the ability of Regeneron to manage supply chains for multiple products and product candidates; the ability of Regeneron's collaborators, suppliers, or other third parties (as applicable) to perform manufacturing, filling, finishing, packaging, labeling, distribution, and other steps related to Regeneron's Products and product candidates; uncertainty of market acceptance and commercial success of Regeneron's Products and product candidates and the impact of studies (whether conducted by Regeneron or others and whether mandated or voluntary), including the trials discussed in this press release, on any potential regulatory approval (including with respect to casirivimab and imdevimab) and/or the commercial success of Regeneron's Products and product candidates; 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 product candidates, including without limitation casirivimab and imdevimab; 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 product candidates; the extent to which the results from the research and development programs conducted by Regeneron and/or its collaborators may be replicated in other studies and/or lead to advancement of product candidates to clinical trials, therapeutic applications, or regulatory approval; 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, collaboration, or supply agreement, including Regeneron's agreements with Sanofi, Bayer, and Teva Pharmaceutical Industries Ltd. (or their respective affiliated companies, as applicable), as well as Regeneron's collaboration with Roche relating to casirivimab and imdevimab, 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® (aflibercept) Injection, Dupixent® (dupilumab), and Praluent® (alirocumab)), 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, 2019 and its Form 10-Q for the quarterly period ended September 30, 2020. 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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