

NEWS RELEASE

Press Release: Dupixent phase 3 study confirms significant improvements in itch and hives for patients with CSU

2024-09-11

Dupixent phase 3 study confirms significant improvements in itch and hives for patients with CSU

- Confirming the results of CUPID-A, this second pivotal study in biologic-naïve patients met primary and key secondary endpoints, showing treatment with Dupixent resulted in a nearly 50% reduction in itch and urticaria activity scores compared to placebo
- More than 300,000 people in the US suffer from chronic spontaneous urticaria (CSU) that is inadequately controlled by antihistamines
- Data will support regulatory resubmission in the US by year-end; if approved, Dupixent would be the first targeted therapy for CSU in a decade

Paris and Tarrytown, NY, September 11, 2024. A Dupixent (dupilumab) confirmatory phase 3 study (LIBERTY-CUPID Study C) met the primary and key secondary endpoints for the investigational treatment of patients with uncontrolled, biologic-naïve CSU receiving background therapy with antihistamines. CSU is a chronic skin condition that causes sudden and debilitating hives and persistent itch, which can impact quality of life. This positive study confirms **results** from Study A, the first phase 3 study of Dupixent in this setting. Earlier this year, Japan was the first country in the world to **approve** and launch Dupixent for adult and adolescent CSU patients based on the results from Study A.

Dietmar Berger, M.D., Ph.D.

Chief Medical Officer, Global Head of Development at Sanofi

"The positive pivotal data from this study reinforce the potential of Dupixent to offer a new treatment option for the many people suffering from chronic spontaneous urticaria who do not respond to standard-of-care antihistamines. With clinically meaningful reductions in itch and hives for patients receiving Dupixent, we look forward to sharing these data with the FDA to bring Dupixent to patients with CSU in the US as soon as possible. With Dupixent now treating 1 million patients across seven approved indications, these new results underscore there are still many more patients that Dupixent can potentially benefit."

Study C enrolled 151 children and adults randomized to receive Dupixent (n=74) or placebo (n=77) added to standard-of-care histamine-1 (H1) antihistamines. At 24 weeks, efficacy among patients receiving Dupixent compared to placebo was as follows:

- 8.64-point reduction in itch severity from baseline with Dupixent versus a 6.10-point reduction with placebo (p=0.02)
- 15.86-point reduction in urticaria activity (itch and hive) severity from baseline with Dupixent versus an 11.21-point reduction with placebo (p=0.02)

Notably, 30% of Dupixent-treated patients reported no urticaria (complete response), compared to 18% of those on placebo (p=0.02).

The safety results were generally consistent with the known safety profile of Dupixent in its approved dermatological indications. Overall rates of treatment emergent adverse events (AE) were 53% for Dupixent and 53% for placebo. AEs more commonly observed with Dupixent ($\geq 5\%$) compared to placebo included injection site reactions (12% vs. 4%), accidental overdose (7% vs. 3%), and COVID-19 infection (8% vs. 5%).

Detailed results from this study will be provided to the US Food and Drug Administration in response to the **additional data requested** for inclusion in the supplemental biologics application for Dupixent in CSU. These data are also planned for presentation at a forthcoming medical meeting.

George D. Yancopoulos, M.D., Ph.D.

Board Co-Chair, President, and Chief Scientific Officer at Regeneron

"Patients with uncontrolled chronic spontaneous urticaria experience debilitating itch and hives that appear without warning and disrupt their lives. With a nearly 50% reduction in itch and urticaria activity scores compared to placebo, these positive phase 3 results reaffirm the potential of Dupixent to bring relief and its well-established safety profile to those living with this chronic inflammatory skin disease."

Outside of Japan, the safety and efficacy of Dupixent for CSU has not been fully evaluated by any regulatory authority.

About CSU

CSU is a chronic inflammatory skin disease driven in part by type-2 inflammation, which causes sudden and debilitating hives and persistent itch. CSU is typically treated with H1 antihistamines, medicines that target H1 receptors on cells to control symptoms of urticaria. However, the disease remains uncontrolled despite antihistamine treatment in many patients, some of whom are left with limited alternative treatment options. These individuals continue to experience symptoms that can be debilitating and significantly impact their quality of life.

About the Dupixent phase 3 CSU program (LIBERTY-CUPID)

The LIBERTY-CUPID Phase 3 study program evaluating Dupixent in CSU consists of Study A, **Study B**, and Study C.

Study C was a randomized, double-blind, placebo-controlled clinical study that evaluated the efficacy and safety of Dupixent as an add-on to standard-of-care antihistamines compared to antihistamines alone in 151 patients aged six years and older with CSU who remained symptomatic despite antihistamine use and were not previously treated with omalizumab (i.e., biologic-naïve). The primary endpoint assessed the change from baseline in itch at 24 weeks (measured by the weekly itch severity score [ISS7], 0-21 scale). A key secondary endpoint was the change from baseline in itch and hives at 24 weeks (measured by the weekly urticaria activity score [UAS7], 0-42 scale).

Study A supported the **approval** of Dupixent in Japan for the treatment of CSU in people aged 12 years and older whose disease is not adequately controlled with existing therapy.

Results from Study A and Study B, which assessed Dupixent in patients aged 12 years and older who were uncontrolled on standard-of-care H1 antihistamines and refractory to omalizumab, were **published** in The Journal of Allergy and Clinical Immunology.

About Dupixent

Dupixent (dupilumab) is a fully human monoclonal antibody that inhibits the signaling of the interleukin-4 (IL4) and interleukin-13 (IL13) pathways and is not an immunosuppressant. The Dupixent development program has shown significant clinical benefit and a decrease in type-2 inflammation in phase 3 studies, establishing that IL4 and IL13 are key and central drivers of the type-2 inflammation that plays a major role in multiple related and often co-morbid diseases.

Dupixent has received regulatory approvals in more than 60 countries in one or more indications including certain patients with atopic dermatitis, asthma, chronic rhinosinusitis with nasal polyposis, eosinophilic esophagitis, prurigo nodularis, CSU, and chronic obstructive pulmonary disease in different age populations. More than

1,000,000 patients are being treated with Dupixent globally.

Dupilumab development program

Dupilumab is being jointly developed by Sanofi and Regeneron under a global collaboration agreement. To date, dupilumab has been studied across more than 60 clinical studies involving more than 10,000 patients with various chronic diseases driven in part by type-2 inflammation.

In addition to the currently approved indications, Sanofi and Regeneron are studying dupilumab in a broad range of diseases driven by type-2 inflammation or other allergic processes in phase 3 studies, including chronic pruritus of unknown origin and bullous pemphigoid. These potential uses of dupilumab are currently under clinical investigation, and the safety and efficacy in these conditions have not been fully evaluated by any regulatory authority.

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 by physician-scientists, our unique ability to repeatedly and consistently translate science into medicine has led to numerous approved treatments and product candidates in development, most 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, neurological diseases, hematologic conditions, infectious diseases, and rare diseases.

Regeneron pushes the boundaries of scientific discovery and accelerates drug development using our proprietary technologies, such as VelociSuite®, which produces optimized fully human antibodies and new classes of bispecific antibodies. We are shaping the next frontier of medicine with data-powered insights from the Regeneron Genetics Center® and pioneering genetic medicine platforms, enabling us to identify innovative targets and complementary approaches to potentially treat or cure diseases.

For more information, please visit www.Regeneron.com or follow Regeneron on [LinkedIn](#), [Instagram](#), [Facebook](#) or [X](#).

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 the world, 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

Sanofi Media Relations

Sandrine Guendoul | + 33 6 25 09 14 25 | sandrine.guendoul@sanofi.com

Evan Berland | + 1 215 432 0234 | evan.berland@sanofi.com

Victor Rouault | + 33 6 70 93 71 40 | victor.rouault@sanofi.com

Timothy Gilbert | + 1 516 521 2929 | timothy.gilbert@sanofi.com

Sanofi Investor Relations

Thomas Kudsk Larsen | + 44 7545 513 693 | thomas.larsen@sanofi.com

Alizé Kaisserian | + 33 6 47 04 12 11 | alize.kaisserian@sanofi.com

Arnaud Delépine | + 33 6 73 69 36 93 | arnaud.delepine@sanofi.com

Felix Lauscher | + 1 908 612 7239 | felix.lauscher@sanofi.com

Keita Browne | + 1 781 249 1766 | keita.browne@sanofi.com

Nathalie Pham | + 33 7 85 93 30 17 | nathalie.pham@sanofi.com

Tarik Elgoutni | + 1 617 710 3587 | tarik.elgoutni@sanofi.com

Thibaud Châtelet | + 33 6 80 80 89 90 | thibaud.chatelet@sanofi.com

Regeneron Media Relations

Ilana Yellen | +1 914-330-9618 | ilana.yellen@regeneron.com

Regeneron Investor Relations

Vesna Tasic | + 914-847-5443 | vesna.tasic@regeneron.com

Sanofi 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 pandemics or other global crises may 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, 2023. Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise any forward-looking information or statements.

All trademarks mentioned in this press release are the property of the Sanofi group apart from VelociSuite and Regeneron Genetics Center.

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 nature, timing, and possible success and therapeutic applications of products marketed or otherwise commercialized by Regeneron and/or its collaborators or licensees (collectively, "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 Dupixent® (dupilumab); the likelihood, timing, and scope of possible regulatory approval and commercial launch of Regeneron's Product Candidates and new indications for Regeneron's Products, such as Dupixent for the treatment of chronic spontaneous urticaria ("CSU") as discussed in this press release as well as other potential indications; 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 or any potential regulatory approval of Regeneron's Products (such as Dupixent for the treatment of CSU) and Regeneron's Product Candidates; whether the results from the confirmatory Phase 3 trial discussed in this press release will be sufficient for purposes of the request from the U.S. Food and Drug Administration for additional data to include in the supplemental biologics application for Dupixent in CSU; 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 (such as Dupixent) 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; 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; 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 and Bayer (or their respective affiliated companies, as applicable) to be cancelled or terminated; the impact of public health outbreaks, epidemics, or pandemics (such as the COVID-19 pandemic) on Regeneron's business; 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), other litigation and other proceedings and government investigations relating to the Company and/or its operations (including the pending civil proceedings initiated or joined by the U.S. Department of Justice and the U.S. Attorney's Office for the District of Massachusetts), 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, 2023 and its Form 10-Q for the quarterly period ended June 30, 2024. 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 (<https://investor.regeneron.com>) and its LinkedIn page (<https://www.linkedin.com/company/regeneron-pharmaceuticals>).

Attachment

- **Press Release**

Source: Sanofi - Aventis Groupe