November 11, 2014

Regeneron and Sanofi Announce Positive Results from Phase 2b Study of Dupilumab in Patients with Moderate-to-Severe Asthma

Dupilumab Demonstrated Improvement in Lung Function, Reductions of Severe Exacerbations

TARRYTOWN, N.Y. and PARIS, Nov. 11, 2014 /PRNewswire/ -- Regeneron Pharmaceuticals, Inc. (NASDAQ: REGN) and Sanofi (EURONEXT: SAN and NYSE: SNY) today announced positive results from the interim analysis of a dose-ranging Phase 2b study of dupilumab in adult patients with uncontrolled moderate-to-severe asthma. Dupilumab is an investigational therapy blocking IL-4 and IL-13, two cytokines required for the Th2 immune response.

"Many have thought that targeting the Th2 pathway in asthma would limit benefit to a subset of asthmatics, such as those with high eosinophils. In this study, blocking IL-4/IL-13 signaling with dupilumab improved lung function and reduced severe exacerbations in the broader study population," said Elias Zerhouni, MD, President, Global R&D, Sanofi. "Based on these results, we plan to move dupilumab into Phase 3 clinical development in patients with moderate-to-severe uncontrolled asthma."

In the study, the three highest doses of dupilumab in combination with standard-of-care therapy met the primary endpoint of a statistically significant improvement from baseline in forced expiratory volume over one second (FEV1, a standard measure of lung function) at Week 12 in patients with high blood eosinophils (greater than or equal to 300 cells/microliter), as compared to placebo in combination with standard-of-care therapy. In addition, two doses of dupilumab (200 mg every other week and 300 mg every other week) showed a statistically significant improvement in mean percent change in FEV1, as well as a reduction in severe exacerbations, in both the high eosinophils and overall study population.

Key results included:

- **In the high eosinophils patient group:** Mean improvements from baseline in FEV1 (and mean percent change in FEV1) at 12 weeks, the primary (and a secondary) endpoint of the study were: 390ml (26 percent) dupilumab 300 mg every other week (Q2W); 430 ml (26 percent) dupilumab 200 mg Q2W; 180 ml (10 percent) placebo. (p less than 0.01)
- **In the overall population**: Mean improvements from baseline in FEV1 at 12 weeks (and mean percent change in FEV1) were: 280 ml (18 percent) dupilumab 300 mg Q2W; 310 ml (18 percent) dupilumab 200 mg Q2W; 120 ml (6 percent) placebo. (p less than 0.001)
- **In both the high eosinophils patient group and overall patient group**: Dupilumab showed a reduction in adjusted annualized rate of severe exacerbations compared to placebo (64 to 75 percent reduction, p less than 0.05 for high eosinophils group and p less than 0.01 for the overall population).
- These results were based on a pre-specified interim analysis, which occurred when all patients had reached Week 12 of the 24-week treatment period; the average treatment duration at the time of the analysis was 21.5 weeks. The final analyses on exacerbations and safety will occur at 24 weeks.

The most common adverse event was injection site reaction, which was more frequent in the four dupilumab dose groups (13 to 25 percent) compared to placebo (12 percent). Other common adverse events in the study included upper respiratory tract infection (10 to 13 percent dupilumab; 13 percent placebo), headache (5 to 10 percent dupilumab; 8 percent placebo), nasopharyngitis (3 to 10 percent dupilumab; 6 percent placebo) and bronchitis (5 to 8 percent dupilumab; 8 percent placebo). The incidence of infections was balanced across treatment groups (42 to 45 percent dupilumab; 46 percent placebo), as was the incidence of serious adverse events (3 to 7 percent dupilumab; 5 percent placebo).

"Patients with moderate-to-severe asthma have a high unmet medical need, often struggling with daily symptoms and recurring asthma attacks, despite the use of inhaled steroids, long-acting beta agonists and rescue medications," said George D. Yancopoulos, M.D., Ph. D., Chief Scientific Officer of Regeneron and President of Regeneron Laboratories. "This trial is encouraging given the positive results observed on the most clinically meaningful endpoints - FEV1, a key measure of lung function, and asthma exacerbations - were seen on top of ongoing background therapy. We look forward to continued investigation in further studies."

The double-blind, placebo-controlled, 24-week, dose-ranging study enrolled 776 adult patients with moderate-to-severe uncontrolled asthma, as defined by the Global Initiative for Asthma 2014 Guidelines. Trial participants were randomized to receive one of four doses of dupilumab (300 mg every other week, 200 mg every other week, 300 mg monthly, 200 mg monthly) or placebo. Approximately 40 percent of patients had high eosinophils across the dose groups. During the treatment period, patients continue their stable medium- or high-dose inhaled corticosteroid and long-acting beta agonist (ICS/LABA) combination product. Patients can administer inhaled rescue medication as needed during the study. A severe exacerbation event during

the study is defined as a deterioration of asthma requiring the use of systemic corticosteroids for three or more days, or hospitalization or an emergency room visit. Approximately 77 percent of randomized patients have a history of atopic disease, which includes atopic dermatitis, allergic conjunctivitis, allergic rhinitis, chronic rhinosinusitis, nasal polypsis, food allergy and/or hives history.

The 24-week treatment period of the study is ongoing, and patients will be followed for 16 weeks after treatment. Full results of the trial will be presented at an upcoming scientific meeting.

About Dupilumab and IL-4/IL-13 Signaling
Dupilumab, a fully-human monoclonal antibody, is directed against the shared IL-4 receptor alpha subunit, which blocks signaling from both IL-4 and IL-13. IL-4 and IL-13 are key cytokines that are required for the initiation and maintenance of the Th2 (Type 2 helper T-cell) immune response, which is believed to be a critical pathway in allergic inflammation.

Dupilumab was created using Regeneron's pioneering VelocImmune® technology and is being co-developed with Sanofi in asthma, atopic dermatitis and chronic sinusitis with nasal polyposis. Dupilumab is an investigational agent under clinical development and its safety and efficacy have not been fully evaluated by any regulatory authority.

About Asthma
Asthma is a chronic inflammatory disease of the airways characterized by airway sensitivity to environmental and biologic factors such as dust, chemicals, smoke, allergens and viral infections leading to an acute and chronic narrowing of the airway and increased mucus production. Patients with asthma can experience wheezing, shortness of breath, cough and chest tightness, and in severe cases, these symptoms can be life-threatening. An estimated 10 to 20 percent of asthmatic patients are less than optimally controlled despite existing therapies. Moderate-to-severe asthma can negatively impact the lives of patients and is associated with a high burden to society both in terms of direct costs of medical care and prescription drugs, as well as loss of productivity.

It is estimated that approximately 25 million people in the United States are known to have asthma. The worldwide estimates are between 235-300 million people, with 180,000 deaths annually.

About Sanofi
Sanofi, a global healthcare leader, discovers, develops and distributes therapeutic solutions focused on patients' needs. Sanofi has core strengths in the field of healthcare with seven growth platforms: diabetes solutions, human vaccines, innovative drugs, consumer healthcare, emerging markets, animal health and the new Genzyme. Sanofi is listed in Paris (EURONEXT: SAN) and in New York (NYSE: SNY).

About Regeneron Pharmaceuticals, Inc.
Regeneron is a leading science-based biopharmaceutical company based in Tarrytown, New York that discovers, invents, develops, manufactures, and commercializes medicines for the treatment of serious medical conditions. Regeneron commercializes medicines for eye diseases, colorectal cancer, and a rare inflammatory condition and has product candidates in development in other areas of high unmet medical need, including hypercholesterolemia, oncology, rheumatoid arthritis, asthma, and atopic dermatitis. Several Regeneron programs are based on human genetics findings. For additional information about the company, please visit www.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 and their underlying assumptions, statements regarding plans, objectives, intentions and expectations with respect to future financial results, events, operations, services, product development and potential, and statements regarding future performance. 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, the uncertainties inherent in research and development, future clinical data and analysis, including post marketing, decisions by regulatory authorities, such as the FDA or the EMA, regarding whether and when to approve any drug, device or biological application that may be filed for any such product candidates as well as their decisions regarding labelling and other matters that could affect the availability or commercial potential of such product candidates, the absence of guarantee that the product candidates if approved will be commercially successful, the future approval and commercial success of therapeutic alternatives, the Group's ability to benefit from external growth opportunities, trends in exchange rates and prevailing interest rates, the impact of cost containment policies and subsequent changes thereto, the average number of shares outstanding as well as those 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, 2013. Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise

any forward-looking information or statements.

Regeneron Forward-Looking Statements

This news release includes forward-looking statements that involve risks and uncertainties relating to future events and the future performance of Regeneron Pharmaceuticals, Inc. ("Regeneron"), 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 Regeneron's products, product candidates, and research and clinical programs now underway or planned, including without limitation dupilumab; unforeseen safety issues resulting from the administration of products and product candidates in patients, including serious complications or side effects in connection with the use of Regeneron's product candidates in clinical trials, such as the current and contemplated future clinical trials evaluating dupilumab; the likelihood and timing of possible regulatory approval and commercial launch of Regeneron's late-stage product candidates, including without limitation dupilumab for the treatment of moderate-to-severe asthma; ongoing regulatory obligations and oversight impacting Regeneron's research and clinical programs and business, including those relating to patient privacy; 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; competing drugs and product candidates that may be superior to Regeneron's products and product candidates; uncertainty of market acceptance and commercial success of Regeneron's products and product candidates; the ability of Regeneron to manufacture and manage supply chains for multiple products and product candidates; coverage and reimbursement determinations by third-party payers, including Medicare and Medicaid; unanticipated expenses; the costs of developing, producing, and selling products; the ability of Regeneron to meet any of its sales or other 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 HealthCare LLC, to be cancelled or terminated without any further product success; and risks associated with intellectual property of other parties and pending or future litigation relating thereto. A more complete description of these and other material risks can be found in Regeneron's filings with the United States Securities and Exchange Commission, including its Form 10-K for the year ended December 31, 2013 and its Form 10-Q for the quarter ended September 30, 2014. The reader is cautioned not to rely on any forward-looking statements made by Regeneron. Regeneron does not undertake any obligation to update publicly any forward-looking statement, including without limitation any financial projection or guidance, whether as a result of new information, future events, or otherwise.

Sanofi Contacts:

Media Relations
Jack Cox
Tel:+33 (0)1 53 77 94 74
jack.cox@sanofi.com

Investor Relations
Sebastien Martel
Tel.: +33 (0)1 53 77 45 45
ir@sanofi.com

Regeneron Contacts:

Media Relations
Alexandra Bowie
Tel: 1 (914) 847-3407
alexandra.bowie@regeneron.com

Investor Relations
Michael Aberman
Tel: 1 (914) 847-7799
michael.aberman@regeneron.com

SOURCE Regeneron Pharmaceuticals, Inc.