Press Release

Phase 2 results demonstrate rilzabrutinib rapidly reduced itch severity and significantly improved disease activity in adults with chronic spontaneous urticaria

- Late-breaking data at 2024 AAAAI showed rilzabrutinib, an oral BTK inhibitor, significantly reduced weekly itch severity score (ISS7) as early as the first week of treatment in adults with moderate to severe CSU
- Data form the basis for the Phase 3 CSU and prurigo nodularis programs to start in 2024
- Pivotal Phase 3 readout in immune thrombocytopenia and Phase 2 readouts in asthma, IgG4-related disease and warm autoimmune hemolytic anemia expected in 2024
- Rilzabrutinib is one of 12 potential blockbusters in Sanofi's leading immunology pipeline

Paris, February 24, 2024. Positive results from the Phase 2 study RILECSU showed that rilzabrutinib significantly improved itch, hives and urticaria in adults with moderate-to-severe chronic spontaneous urticaria (CSU), whose symptoms are not adequately controlled by H1 antihistamines. These results were presented today in a late-breaking poster at the 2024 American Academy of Allergy, Asthma and Immunology (AAAAI) Annual Meeting in Washington, DC and form the basis for the Phase 3 program which is on track to start in 2024.

Professor Marcus Maurer, M.D.
Professor of Dermatology and Allergy, Executive Director of the Institute of Allergology at the Charité Berlin
"People with CSU are living with debilitating symptoms such as intensely itchy recurrent hives, swelling, or both which can have a high impact on their day-to-day lives. These data are promising news for patients that cannot be controlled with standard-of-care antihistamines – the possibility of controlling itch rapidly with an oral medicine would offer an important advancement in the treatment of this disease."

Naimish Patel, M.D.
Head of Global Development, Immunology and Inflammation, Sanofi
"These data reinforce the potential of rilzabrutinib as a treatment option for patients with moderate-to-severe CSU and we believe that the rapid improvement of itch could make a meaningful difference in alleviating the physical and psychosocial burden these patients suffer from. Based on these data, later this year we will advance rilzabrutinib into Phase 3 development in both CSU and prurigo nodularis, another skin disorder characterized by relentless itching. We also look forward to data readouts for rilzabrutinib in 2024 with the opportunity to further demonstrate its potential impact across multiple immune-mediated diseases."

Key Results
In this dose-ranging study, different doses of rilzabrutinib were evaluated: 400 mg once every evening (QPM), 400 mg twice a day (BID), 400 mg three times a day (TID).

In the intent-to-treat (ITT) population which included either patients who were previously naïve or incomplete responders to omalizumab, Rilzabrutinib 400 mg TID demonstrated:

- Significant reduction from baseline in weekly itch severity score (ISS7) at Week 12, a key symptom of the disease, [least squares mean (LSM) -9.58 vs -6.31, respectively; p=0.0181]. Significant changes in ISS7 were seen as early as Week 1.
- Significant reduction from baseline to week 12 in weekly urticaria activity score (UAS7) [LSM -17.95 vs -11.20, respectively; p=0.0116].
- Significant reduction from baseline to week 12 in weekly hives severity score (HSS7) [LSM -8.31 vs -4.89; p<0.0100].

Rilzabrutinib was generally well-tolerated with no events of cytopenia, bleeding or atrial fibrillation seen with other BTK inhibitor. Treatment-emergent AEs occurring at a higher frequency with rilzabrutinib vs placebo were diarrhea (29.3% TID and BID, 7.9% QPM, 15% placebo), nausea (19.5% TID, 17.1% BID, 13.2% QPM, 5.0% placebo), headache (9.8% TID, 14.6% BID, 5.3% QPM, 0.0% placebo) and abdominal pain (0.0% TID, 12.2% BID, 2.6% QPM, 5.0% placebo).

Rilzabrutinib is currently under clinical investigation, and its safety and efficacy have not been evaluated by any regulatory authority.

About CSU

CSU is an inflammatory skin condition driven mainly by the activation of cutaneous mast cells, which causes itchy recurrent hives, swelling, or both. CSU is typically treated with H1 antihistamines and biologics; however, the disease remains uncontrolled in up to 50% of patients, who are left with limited alternative treatment options. These individuals continue to experience debilitating symptoms that can significantly impact quality of life.

About the RILECSU study

RILECSU is a 52-week Phase 2 study, comprising a 12-week randomized, double-blind, placebo-controlled, dose-ranging, efficacy and safety period, followed by a 40-week open-label extension period.

RILECSU is evaluating rilzabrutinib in adult patients with moderate-to-severe CSU who remain symptomatic despite use of H1 antihistamine treatment and are either naïve to or incomplete responders to omalizumab. The primary endpoint was change from baseline in weekly itch severity score ISS7 at 12 weeks. Secondary endpoints include change from baseline in weekly UAS7 at 12 weeks and change from baseline weekly HSS7 at 12 weeks.

Participants in the trial (n=160) were randomized 1:1:1:1 to rilzabrutinib 400mg once every evening (QPM), 400mg twice a day (BID), 400mg three times a day (TID), or matching placebo.

About Rilzabrutinib

Rilzabrutinib is an oral, reversible, covalent BTK inhibitor that has the potential to be a first- or best-in-class treatment of a number of immune-mediated diseases. BTK, expressed in B cells and mast cells, plays a critical role in multiple immune-mediated disease processes. With the application of Sanofi's TAILORED COVALENCY® technology, rilzabrutinib can selectively inhibit the BTK target while potentially reducing the risk of off-target side effects.

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.

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