

European Commission grants first approval worldwide of Beyfortus® (nirsevimab) for prevention of RSV disease in infants

- Beyfortus is the first and only broadly protective option against RSV for newborns and infants
- Results from the clinical development program reinforce Beyfortus' consistency in reducing RSV infections requiring medical care, including hospitalizations

Paris, November 4, 2022. The European Commission has approved Beyfortus® (nirsevimab) for the prevention of respiratory syncytial virus (RSV) lower respiratory tract disease in newborns and infants during their first RSV season. RSV is a common and highly contagious seasonal virus, infecting nearly all children by the age of two.^{1,2} Beyfortus is the first and only single-dose RSV protective option for the broad infant population, including those born healthy, at term or preterm, or with specific health conditions. Beyfortus is being developed jointly by Sanofi and AstraZeneca.

Thomas Triomphe

Executive Vice President, Vaccines, Sanofi

"Today is a landmark day for RSV prevention, as decades of research and development come together in the world's first approval of a broadly protective option against RSV disease. Once launched, Beyfortus will offer parents the ability to help protect their babies during their first RSV season."

Iskra Reic

Vaccines and Immune Therapies Unit, AstraZeneca

"Beyfortus is the first single-dose passive immunization against respiratory syncytial virus to gain approval in Europe and is also the first and only preventative option approved for a broad infant population. Today's marketing authorization of Beyfortus marks a significant achievement for the scientific community and addresses a persistent, global unmet need in RSV prevention."

Silke Mader

Chairwoman of the Executive Board and Co-Founder of the European Foundation for the Care of Newborn Infants (EFCNI)

"Respiratory syncytial virus represents a health threat among infants, and each year we see the impact it can have on families, healthcare providers and the healthcare system. At EFCNI, we are excited about the opportunity to expand prevention efforts to all infants, as we believe this can help ease the current emotional, physical and financial burdens of RSV."

The European Commission is the first regulatory body to grant approval to Beyfortus. The approval was based on results from the Beyfortus clinical development program, including the Phase 3 MELODY, Phase 2/3 MEDLEY and Phase 2b trials and follows the recommendation by The Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency in September 2022.³⁻¹¹ In the MELODY and Phase 2b trials, Beyfortus met its primary endpoint of reducing the incidence of medically attended lower respiratory tract infections (LRTI) caused by RSV during the RSV season vs. placebo with a single dose.³⁻⁸ The safety profile of Beyfortus was similar to placebo. Beyfortus also demonstrated a comparable safety and tolerability profile to palivizumab in the Phase 2/3 MEDLEY trial.^{9-10,12}

RSV is the most common cause of LRTI, including bronchiolitis and pneumonia, in infants.¹³ It is also a leading cause of hospitalization in all infants, with most hospitalizations for RSV occurring in healthy infants born at term.¹⁴⁻¹⁷ Globally, in 2019, there were approximately 33 million cases

of acute lower respiratory infections leading to more than three million hospitalizations, and it was estimated that there were 26,300 in-hospital deaths of children younger than five years.¹⁸ RSV-related direct medical costs, globally —including hospital, outpatient and follow-up care — were estimated at €4.82 billion in 2017.¹⁹

About Beyfortus

Beyfortus®, a long-acting antibody designed for all infants for protection against RSV disease from birth through their first RSV season with a single dose, is developed jointly by Sanofi and AstraZeneca.

Beyfortus has been developed to offer newborns and infants direct RSV protection via an antibody to help prevent LRTI caused by RSV. Monoclonal antibodies do not require the activation of the immune system to help offer timely, rapid and direct protection against the disease.²⁰

Beyfortus has been granted marketing authorization in the European Union for the prevention of RSV lower respiratory tract disease in newborns and infants from birth during their first RSV season.

In March 2017, Sanofi and AstraZeneca announced an [agreement](#) to develop and commercialize Beyfortus. Under the terms of the agreement, AstraZeneca leads all development and manufacturing activities and Sanofi leads commercialization activities and records revenue. Under the terms of the global agreement, Sanofi made an upfront payment of €120m, has paid a development milestone of €30m and will pay up to a further €465m upon achievement of certain development and sales-related milestones. The two companies share all costs and profits.

Beyfortus has been granted designations to facilitate expedited development by several regulatory agencies around the world. These include Breakthrough Therapy Designation by The China Center for Drug Evaluation under the National Medical Products Administration; [Breakthrough Therapy Designation](#) from the US Food and Drug Administration; access granted to the European Medicines Agency (EMA) [PRIority MEDicines](#) scheme; Promising Innovative Medicine designation by the UK Medicines and Healthcare products Regulatory Agency; and has been named “a medicine for prioritized development” under the Project for Drug Selection to Promote New Drug Development in Pediatrics by the Japan Agency for Medical Research and Development (AMED). The safety and efficacy of Beyfortus was evaluated under an accelerated assessment procedure by the EMA.

About the clinical trials

The Phase 2b trial was a randomized, placebo-controlled trial designed to measure the efficacy of Beyfortus®(nirsevimab) against medically attended LRTI through 150 days post-dose. Healthy preterm infants of 29–35 weeks’ gestation were randomized (2:1) to receive a single 50mg intramuscular injection of Beyfortus or placebo. The primary endpoint was met, reducing the incidence of medically attended LRTI, caused by RSV by 70.1% (95% CI: 52.3, 81.2) compared to placebo. Between November 2016 and December 2017, 1,453 infants were randomized (Beyfortus, n=969; placebo, n=484) at the RSV season start. Studies were conducted in both hemispheres, at 164 sites in 23 countries.^{5,6} Data was published in the *New England Journal of Medicine (NEJM)* in July 2020. The dosing regimen was recommended based on further exploration of the phase 2b data.⁵ The subsequent Phase 3 study, MELODY, applied the recommended dosing regimen.^{3,4}

The Phase 3 MELODY trial was a randomized, placebo-controlled trial conducted across 21 countries designed to determine efficacy of Beyfortus against medically attended LRTI due to RSV confirmed by reverse transcriptase polymerase chain reaction testing through 150 days after dosing, versus placebo, in healthy late preterm and term infants (35 weeks gestational age or greater) entering their first RSV season.^{3,4} The primary endpoint was met, reducing the incidence of medically attended LRTI, such as bronchiolitis or pneumonia, caused by RSV by 74.5% (95% CI 49.6, 87.1; P<0.001) compared to placebo. Infants were randomized (2:1) to receive a single 50mg (in infants weighing <5kg) or 100mg (in infants weighing ≥5kg)

intramuscular injection of Beyfortus or placebo. Between July 2019 and March 2020, 1,490 infants were randomized to either Beyfortus or placebo at the RSV season start.^{3,4} Data was published on the primary analysis in *NEJM* in March 2022.

Findings from Beyfortus' clinical trial program include a pre-specified pooled analysis of the Phase 3 MELODY trial and the recommended dose from the Phase 2b trial, in which an efficacy (relative risk reduction versus placebo) of 79.5% (95% CI 65.9, 87.7; P<0.0001) was seen against medically attended LRTI, such as bronchiolitis or pneumonia, caused by RSV in infants born at term or preterm entering their first RSV season.⁷ The pooled analysis studied healthy preterm and term infants who received the recommended dose of Beyfortus based on weight compared to placebo through Day 151 and showed an efficacy of 77.3% (95% CI 50.3, 89.7; P<0.001) against RSV LRTI hospitalizations, as published in *NEJM* in March 2022.^{3,7}

MEDLEY was a Phase 2/3, randomized, double-blind, palivizumab-controlled trial with the primary objective of assessing safety and tolerability for Beyfortus in preterm infants and infants with congenital heart disease (CHD) and/or chronic lung disease of prematurity (CLD) eligible to receive palivizumab.^{9,10} Between July 2019 and May 2021, approximately 918 infants entering their first RSV season were randomized to receive a single 50mg (in infants weighing <5kg) or 100mg (in infants weighing ≥5kg) intramuscular injection of Beyfortus or palivizumab. Safety was assessed by monitoring the occurrence of treatment emergent adverse events (TEAEs) and treatment emergent serious adverse events (TESAEs) through 360 days post-dose.^{9,10} Serum levels of Beyfortus following dosing (on day 151) in this trial were comparable with those observed in the Phase 3 MELODY trial, indicating similar protection in this population to that in the healthy term and late preterm infants is likely.⁹ Data was published in *NEJM* in March 2022.

The results of MELODY, Phase 2/3 MEDLEY and the Phase 2b trials illustrate that Beyfortus helps protect infants during their first RSV season against RSV disease with a single dose.³⁻¹⁰ This all-infant population includes preterm, healthy late preterm and term infants, as well as infants with specific conditions.

These trials form the basis of regulatory submissions that began in 2022.

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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