

ECTRIMS: Sanofi showcases patient focus across multiple sclerosis

- 14 abstracts across new potential medicines to be presented, including three oral presentations
- Data support potential for brain-penetrant tolebrutinib to address significant unmet need of disability accumulation by targeting smoldering neuroinflammation in MS

Paris, September 10, 2025. New data from 14 abstracts, including three oral presentations, will be presented at the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) 2025 congress in Barcelona, Spain from September 24 to 26, 2025, reinforcing Sanofi's leadership in multiple sclerosis (MS). The breadth of data, including biomarker innovation, symptom tracking, and additional efficacy and safety data from tolebrutinib and frexalimab, emphasize Sanofi's commitment to testing the bounds of clinical possibility and defying disability across the spectrum of disease.

*"Our comprehensive approach to multiple sclerosis research demonstrates how we are advancing science across the entire disease spectrum, from novel biomarkers to symptom management and treatment outcomes," said **Erik Wallström**, MD, PhD, Global Head, Neurology and Ophthalmology Development at Sanofi. "By applying our deep understanding of the immune system, our innovative portfolio focuses on addressing the complex challenges of neuroinflammation and targeting the underlying causes of disease progression in multiple sclerosis to help people live for the moment, not the disease."*

Focusing on areas of high unmet need, including in tolebrutinib subgroup analyses

New subgroup analyses from the HERCULES phase 3 study (clinical study identifier: [NCT04411641](#)) will be presented regarding tolebrutinib's impact on disability accumulation in people living with non-relapsing secondary progressive multiple sclerosis (nrSPMS). Additional data from the GEMINI 1 and 2 phase 3 studies (clinical study identifier: [NCT04410978](#) and [NCT04410991](#), respectively) will detail the effect of tolebrutinib on progression independent of relapse activity in relapsing multiple sclerosis (RMS).

New data from the phase 2 open-label extension (clinical study identifier: [NCT04879628](#)) evaluating frexalimab in RMS reaffirm its potential to be a novel high-efficacy, non-depleting medicine to impact acute and chronic neuroinflammation by promoting immune regulation via its novel mechanism of action. Frexalimab is currently being evaluated in the FREXALT (clinical study identifier: [NCT06141473](#)) and FREVIVA (clinical study identifier: [NCT06141486](#)) phase 3 studies to assess the efficacy and safety in participants with RMS and nrSPMS, respectively.

Understanding the larger burden of disease

Data to assess the clinical and economic burden in patients with SPMS in the US will be presented, in addition to thorough qualitative patient assessment data underpinning the smoldering-associated worsening (SAW) index aimed at identifying subtle disability early. Additionally, findings from the MS-DETECT study (clinical study identifier: [NCT05816122](#)) will be presented, focused on the performance of MSCopilot® digital biomarkers obtained during the study in a real-world setting to capture clinically meaningful functional dimensions.

Complete list of ECTRIMS 2025 presentations:

Presenting author	Abstract title	Presentation details
Tolebrutinib		

Oh	Effects of tolebrutinib on progression independent of relapse activity in the phase 3 GEMINI relapsing MS trials	Poster #P794 Poster Presentation 25 September 2025 16:30 pm – 18:30 pm CEST
Fox	Subgroup analyses of the phase 3 tolebrutinib in nrSPMS HERCULES trial	Poster #P796 Poster Presentation 25 September 2025 16:30 pm – 18:30 pm CEST
Wiendl	Blood immunoglobulin levels and immune cell populations in the phase 3 GEMINI trials of tolebrutinib in relapsing multiple sclerosis	Poster #P800 Poster Presentation 25 September 2025 16:30 pm – 18:30 pm CEST
Bar-Or	Blood immunoglobulin levels and immune cell populations in the phase 3 HERCULES trial of tolebrutinib in non-relapsing secondary progressive multiple sclerosis	Poster #P297 Poster Presentation 25 September 2025 16:30 pm – 18:30 pm CEST
Nicholas	tolebrutinib plasma exposure and efficacy response in the phase 3 HERCULES trial in nrSPMS	Poster #P292 Poster Presentation 24 September 2025 16:30 pm – 18:30 pm CEST
Vermersch	Effects of tolebrutinib on MSQoL-54 in the HERCULES phase 3 trial in nrSPMS	Poster #P810 Poster Presentation 25 September 2025 16:30 pm – 18:30 pm CEST
Schulte-Mecklenbeck	Tolebrutinib treatment induces complex alterations of the peripheral immune-regulatory network in the blood of patients with non-relapsing secondary progressive MS – results from the TOLEDYNAMIC study	Poster #P315 Poster Presentation 24 September 2025 16:30 pm – 18:30 pm CEST
<i>Frexalimab</i>		
Giovannoni	Safety and efficacy of frexalimab in participants with relapsing multiple sclerosis: 2.5-year results from the phase 2 open-label extension	Oral Presentation Scientific Session 13: Emergent therapies in MS and related conditions 26 September 2025 9:19 am – 9:26 am CEST
Bar-Or	Long-term treatment effect of frexalimab on NfL and plasma biomarkers of adaptive and innate immunity	Oral Presentation Free Communication 2: Therapeutic interventions - from trials to real-world evidence 24 September 2025 15:35 pm – 15:45 pm CEST
Kebir	CD40L-mediated responses drive compartmentalized neuroinflammation and disease development in a progressive model of MS	Poster #P144 Poster Presentation 24 September 2025 16:30 pm – 18:30 pm CEST
<i>SAR443820</i>		
Montalban	Efficacy and safety of SAR443820 (RIPK1 Inhibitor) in adults with MS: results from the K2 trial	Oral Presentation Scientific Session 13: Emergent therapies in MS and related conditions 26 September 2025 9:12 am – 9:19 am CEST
<i>MS Disease State</i>		
Greene	A retrospective matched-cohort study to assess the clinical and economic burden in people with secondary progressive multiple sclerosis in the United States	Poster #P606 Poster Presentation 25 September 2025 16:30 pm – 18:30 pm CEST

Hobart	Robust, longitudinal, qualitative patient assessment underpins valid clinical measurement: The Smouldering Associated Worsening (SAW) Index Study	Poster #P1273 ePoster 24 September 2025 8:30 am CEST
Vermersch	MSCopilot® digital biomarkers obtained in a real-world setting correlated with their clinical counterparts in the MS-DETECT study	Poster #P1583 ePoster

About tolebrutinib

Tolebrutinib is an oral, brain-penetrant and bioactive Bruton's tyrosine kinase (BTK) inhibitor specifically designed to target smoldering neuroinflammation, a key driver of disability progression in multiple sclerosis. Unlike conventional MS medicines that primarily address peripheral inflammation, tolebrutinib crosses the blood-brain barrier to achieve therapeutic cerebrospinal fluid concentrations, allowing it to modulate both B-cells and disease-associated microglia within the central nervous system (CNS). This mechanism is thought to directly address the underlying pathology of disability in MS by targeting the inflammatory processes that contribute to neurodegeneration and disability accumulation.

Tolebrutinib was previously granted [breakthrough therapy designation](#) by the FDA, based on positive results from the HERCULES phase 3 study in adults with nrSPMS. Tolebrutinib is also being evaluated in a phase 3 clinical study for the treatment of primary progressive multiple sclerosis.

The regulatory submission for tolebrutinib to treat nrSPMS and to slow disability accumulation independent of relapse activity in adult patients is being evaluated under [priority review](#) by the US Food and Drug Administration. Additional regulatory applications are also under review around the world, including in the EU.

For more information on tolebrutinib clinical studies, please visit www.clinicaltrials.gov.

Tolebrutinib represents Sanofi's commitment to developing innovative treatments that address the underlying causes of neurological diseases and potentially transform the treatment landscape. Standing at the intersection of neurology and immunoscience, Sanofi is focused on improving the lives of those living with serious neuro-inflammatory and neuro-degenerative conditions including MS, chronic inflammatory demyelinating polyneuropathy, Alzheimer's disease, Parkinson's disease, age-related macular degeneration, and other neurological diseases. The neurology pipeline currently has several projects in phase 3 studies across multiple indications.

About frexalimab

Frexalimab (SAR441344) is an investigational, novel, high efficacy anti-CD40L, with the potential to impact both acute and chronic neuroinflammation in MS, by promoting immune regulation through peripheral and CNS immune recalibration, without causing lymphocyte depletion.

Frexalimab is being evaluated in studies across multiple disease states, including two phase 3 studies in RMS and nrSPMS, and phase 2 studies in systemic lupus erythematosus, Type 1 diabetes and focal segmental glomerulosclerosis. Frexalimab is currently under clinical investigation, and its safety and efficacy have not been evaluated by any regulatory authority.

Sanofi is developing frexalimab under an exclusive license from ImmuNext Inc. For more information on frexalimab clinical studies, please visit www.ClinicalTrials.gov.

About Sanofi

Sanofi is an R&D driven, AI-powered biopharma company committed to improving people's lives and delivering compelling growth. We apply our deep understanding of the immune system to invent medicines and vaccines that treat and protect millions of people around the world, with an innovative pipeline that could benefit millions more. Our team is guided by one purpose: we chase the miracles of science to improve people's lives; this inspires us to drive progress and

deliver positive impact for our people and the communities we serve, by addressing the most urgent healthcare, environmental, and societal challenges of our time.
Sanofi is listed on Euronext: SAN and NASDAQ: SNY

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Sanofi forward-looking statements

This media update 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 fact that product candidates if approved may not be commercially successful, the future approval and commercial success of therapeutic alternatives, Sanofi's ability to benefit from external growth opportunities, to complete related transactions and/or obtain regulatory clearances, risks associated with intellectual property and any related pending or future litigation and the ultimate outcome of such litigation, trends in exchange rates and prevailing interest rates, volatile economic and market conditions, cost containment initiatives and subsequent changes thereto, and the impact that 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, 2024. Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise any forward-looking information or statements.

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