

press release

Mim8 demonstrated superior reductions in annualised bleeding rate (ABR) compared to on-demand and prior prophylaxis treatment in people with haemophilia A

FRONTIER2 data presented at ISTH 2024 showed that up to 95% of people, who had no prior prophylaxis treatment, experienced zero treated bleeds while on Mim8

Bagsværd, Denmark, 23 June 2024 – Novo Nordisk announced results from the phase 3 FRONTIER2 trial of 254 adults and adolescents aged 12 years and over with haemophilia A, with and without inhibitors. The trial assessed both once-weekly and once-monthly prophylactic treatment (regular treatment to prevent prolonged and spontaneous bleeding) with the investigational treatment Mim8. The data were presented at the International Society of Thrombosis and Haemostasis Annual Congress (ISTH 2024) in Bangkok, Thailand.

In the trial population with no prior prophylaxis treatment:

- Mim8 demonstrated a superior reduction in the estimated mean annualised bleeding rate (ABR) of treated bleeds by 97.1% with once-weekly and 98.7% with once-monthly Mim8.
- Once-weekly and once-monthly Mim8 prophylaxis demonstrated a superior reduction in treated bleeds, as evidenced by an estimated mean ABR of 0.45 and 0.20 bleeds per patient-year, respectively, compared to an estimated mean ABR of 15.75 for those who received no prior prophylaxis treatment.
- Zero bleeds were observed in 85.7% of people treated with once-weekly Mim8 and 95.0% of those treated with once-monthly Mim8.

In the trial population with prior coagulation factor prophylaxis:

- Mim8 demonstrated a superior reduction in the estimated mean ABR by 48% for once-weekly and 42.6% for once-monthly treatment.
- Once-weekly and once-monthly Mim8 demonstrated a superior reduction in treated bleeds compared to prior coagulation factor prophylaxis. Estimated mean ABRs for treated bleeds were 2.51 bleeds per patient-year for once-weekly Mim8 (versus 4.83 on prior clotting factor prophylaxis) and 1.78 bleeds per patient-year for once-monthly Mim8 (versus 3.10 on prior clotting factor prophylaxis).
- Zero bleeds were observed in 66.3% of participants treated with once-weekly Mim8 and 65.3% treated with once-monthly Mim8.

“Despite treatment advances, there are still many unmet needs for people living with haemophilia A,” said FRONTIER2 lead investigator Dr Maria Elisa Mancuso, Senior Consultant in Haematology, Centre for Thrombosis and Haemorrhagic Diseases, IRCCS Humanitas Research Hospital, Milan, Italy. “The FRONTIER2 data demonstrated superiority of Mim8 prophylaxis over both on demand treatment and prior clotting factor prophylaxis with respect to the number of treated bleeding episodes in people living with haemophilia A, regardless of their inhibitor status. It is also encouraging to see that in some subgroups in the study, up to 95% of people treated with Mim8 experienced zero bleeds.”

Mim8 is a next-generation Factor VIIIa (FVIIIa) mimetic bispecific antibody designed with the potential to deliver sustained haemostasis. It is currently in development for once-weekly or once-monthly prophylaxis treatment for people living with haemophilia A, with and without inhibitors. Administered subcutaneously, Mim8 bridges Factor IXa/X (FIXa/FX), thereby replacing missing FVIII. This restores the body's thrombin generation capacity, helping blood to clot.¹ In this trial, Mim8 was well-tolerated, and no safety concerns (thromboembolic events or related serious adverse events) were observed, in line with previous findings.

“The FRONTIER2 efficacy and safety data is very encouraging,” said Martin Holst Lange, Executive Vice President of Development at Novo Nordisk. “With Mim8, we have the potential of offering a substantial proportion of patients the prospect of zero bleeds and convenient dosing flexibility to fit their lifestyles and needs. We look forward to discussing these data with regulatory authorities.”

Contingent on regulatory interactions, Novo Nordisk aims to submit Mim8 for the first regulatory approval towards the end of 2024. Data from the ongoing phase 3 FRONTIER programme will continue to be disclosed at upcoming congresses and in publications in 2024 and 2025.

About Haemophilia

Haemophilia is a rare inherited bleeding disorder that impairs the body's ability to make blood clots, a process needed to stop bleeding. It is estimated to affect approximately 1,125,000 people worldwide, and haemophilia A is estimated to account for 80-85% of all haemophilia cases.² Due to the nature of haemophilia being a rare x-linked recessive disorder, it often presents differently in males compared to females, with ~ 88% of people diagnosed with haemophilia worldwide being male.^{3,4} There are different types of haemophilia, which are characterised by the type of clotting factor protein that is defective or missing. Haemophilia A is caused by a missing or defective clotting Factor VIII (FVIII). Some people with haemophilia may also develop inhibitors, which are an immune system response to the clotting factors in replacement therapy that cause treatment to stop working. Currently, it is estimated that up to 30% of people living with severe haemophilia A have inhibitors.⁵

About the FRONTIER2 clinical trial

The FRONTIER phase 3 clinical development programme investigates Mim8 as a prophylactic

treatment for people with haemophilia A, with or without inhibitors. The phase 3 programme includes FRONTIER2⁶, FRONTIER3⁷, FRONTIER4⁸, and FRONTIER5⁹.

FRONTIER2 is a 52-week efficacy and safety phase 3 trial, comparing once-weekly and once-monthly Mim8 versus no prophylaxis and versus prior coagulation factor prophylaxis (26-52-week run-in period) in people aged 12 years and over with haemophilia A, with or without inhibitors. The 26-week main phase of the trial is completed, a 26-week extension phase is ongoing.

Participants were randomised into five treatment arms:

Those who had received on-demand treatment prior to trial enrolment:

- Those in treatment arm 1 were randomised to continue no prophylaxis treatment and did not receive Mim8 in the main phase of the study
- Those in treatment arm 2a were randomised to receive once-weekly Mim8 prophylaxis
- Those in treatment arm 2b were randomised to receive once-monthly Mim8 prophylaxis

Those who had received prophylaxis treatment prior to trial enrolment:

- Patients standard-of-care coagulation factor prophylaxis was documented in a 26-52 week run in, after which:
- Those in treatment arm 3 were randomised into the main part of the study to receive once-weekly Mim8 prophylaxis
- Those in treatment arm 4 were randomised into the main part of the study to receive once-monthly Mim8 prophylaxis

About Novo Nordisk

Novo Nordisk is a leading global healthcare company, founded in 1923 and headquartered in Denmark. Our purpose is to drive change to defeat serious chronic diseases, built upon our heritage in diabetes. We do so by pioneering scientific breakthroughs, expanding access to our medicines, and working to prevent and ultimately cure disease. Novo Nordisk employs about 66,000 people in 80 countries and markets its products in around 170 countries. Novo Nordisk's B shares are listed on Nasdaq Copenhagen (Novo-B). Its ADRs are listed on the New York Stock Exchange (NVO). For more information, visit [novonordisk.com](https://www.novonordisk.com), [Facebook](#), [Instagram](#), [X](#), [LinkedIn](#) and [YouTube](#).

Contact for further information

Media:

Ambre James-Brown

+45 3079 9289

abmo@novonordisk.com

Liz Skrbkova (US)

+1 609 917 0632

lzsk@novonordisk.com

Investors:

Jacob Martin Wiborg Rode

+45 3075 5956

jrde@novonordisk.com

David Heiberg Landsted

+45 3077 6915

dhel@novonordisk.com

Sina Meyer

+45 3079 6656

azey@novonordisk.com

Frederik Taylor Pitter

+45 3075 8259

fptr@novonordisk.com

Ida Melvold Gjørund

+45 3077 5649

idmg@novonordisk.com

Mark Joseph Root (US)

+1 848 213 3219

mjhr@novonordisk.com

References

- ¹ Østergaard H, Lund J, Greisen PJ, et al. A factor VIIIA-mimetic bispecific antibody, Mim8, ameliorates bleeding upon severe vascular challenge in hemophilia A mice. *Blood*. 2021;138(14):1258-1268. doi:10.1182/blood.2020010331
- ² Iorio A, Stonebraker JS, Chambost H, Makris M, Coffin D, Herr C, Germini F; Data and Demographics Committee of the World Federation of Hemophilia. Establishing the Prevalence and Prevalence at Birth of Hemophilia in Males: A Meta-analytic Approach Using National Registries. *Ann Intern Med*. 2019 Oct 15;171(8):540-546. doi: 10.7326/M19-1208.
- ³ Centers for Disease Control and Prevention. What is Hemophilia? Available at: <https://www.cdc.gov/ncbddd/hemophilia/facts.html> Accessed: June 2024
- ⁴ Statista. Distribution of people with bleeding disorders worldwide in 2020, by gender. Available at: <https://www.statista.com/statistics/495675/percentager-of-people-with-bleeding-disorders-in-worldwide-bygender/#:~:text=This%20statistic%20displays%20the%20percentage,with%20hemophilia%20A%20were%20males> Accessed: June 2024
- ⁵ Kim JY, You CW. The prevalence and risk factors of inhibitor development of FVIII in previously treated patients with hemophilia A. *Blood Res*. 2019 Sep;54(3):204-209. doi: 10.5045/br.2019.54.3.204.
- ⁶ ClinicalTrials.gov. A Research Study Investigating Mim8 in Adults and Adolescents With Haemophilia A With or Without Inhibitors. Available at: <https://clinicaltrials.gov/study/NCT05053139> Last accessed: June 2024.

⁷ ClinicalTrials.gov. A Research Study Looking at Mim8 in Children With Haemophilia A With or Without Inhibitors. Available at: <https://clinicaltrials.gov/study/NCT05306418> Last accessed: June 2024.

⁸ ClinicalTrials.gov. A Research Study Looking at Long-term Treatment With Mim8 in People With Haemophilia A (FRONTIER 4) (FRONTIER4). Available at: <https://classic.clinicaltrials.gov/ct2/show/NCT05685238?term=NCT05685238&rank=1> Last accessed: June 2024.

⁹ ClinicalTrials.gov. A Research Study Looking at How Safe it is to Switch From Emicizumab to Mim8 in People With Haemophilia A (FRONTIER 5) (FRONTIER 5). Available at: https://clinicaltrials.gov/study/NCT05878938#xd_co_f=ZDM2YmY4ZmMtMmRhNi00YTI1LWI4YmItNTBjOWE4Yjg4NGI1~ Last accessed: June 2024.