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Gefurulimab dual-binding nanobody demonstrated statistically significant and clinically meaningful improvement in functional activities of daily living in adults with generalised myasthenia gravis in PREVAIL Phase III trial

Once-weekly self-administered subcutaneous C5 inhibitor showed statistically significant and clinically meaningful reduction in disease severity at week 26

Positive high-level results from a global, randomised, double-blind, placebo-controlled Phase III trial in adults with anti-acetylcholine receptor (AChR) antibody-positive (Ab+) generalised myasthenia gravis (gMG) showed that gefurulimab met its primary and all secondary endpoints. Data demonstrated a statistically significant and clinically meaningful improvement from baseline in Myasthenia Gravis Activities of Daily Living (MG-ADL) total score at week 26 compared to placebo.

gMG is a rare, debilitating, chronic, autoimmune neuromuscular disease that leads to a loss of muscle function and severe weakness.[1] Those living with gMG may initially experience slurred speech, double vision, droopy eyelids and weakness, with symptoms becoming more severe as the disease progresses, including extreme fatigue, difficulty swallowing, choking and respiratory failure.[2,3]

Kelly Gwathmey, MD, Associate Professor of Neurology, Chief of Neuromuscular Division, Virginia Commonwealth University, Richmond, VA, Vice Chair of the MGFA Medical & Scientific Advisory Council and principal investigator in the trial, said: "Rapidly fluctuating symptoms and the unpredictable disability associated with gMG can affect nearly every aspect of a patient's life, making early intervention and sustained disease control a critical treatment goal. A once-weekly, self-administered C5 treatment option would offer patients greater convenience and independence in managing their condition, empowering them to have more control over their therapy."

Marc Dunoyer, Chief Executive Officer, Alexion, AstraZeneca Rare Disease, said: "Building on Alexion's pioneering leadership in gMG, these positive results from the PREVAIL Phase III trial demonstrate the potential for gefurulimab to offer rapid and sustained disease control for this patient community. These data, reflecting patient participation across 20 countries, reinforce the established safety profile and efficacy of C5 inhibition and show the potential for gefurulimab as a first line biologic, with the convenience of a self-administered option."

Gefurulimab was well-tolerated, and the safety profile was consistent with previous trials of C5 inhibitors in gMG with no new safety signals observed. These data will be presented at a forthcoming medical meeting and shared with global regulatory authorities.

Notes

gMG
gMG is a rare autoimmune disorder characterised by loss of muscle function and severe muscle weakness.[1]

Eighty-five percent of people with gMG are AChR antibody-positive meaning they produce specific antibodies (anti-AChR) that bind to signal receptors at the neuromuscular junction (NMJ), the connection point between nerve cells and the muscles they control.[4] This binding activates the complement system, causing the immune system to attack the NMJ, leading to inflammation and a breakdown in communication between the brain and the muscles.[5]

gMG can occur at any age, but it most commonly begins for women before the age of 40 and for men after the age of 60.[6] Initial symptoms may include slurred speech, double vision, droopy eyelids and lack of balance; these can often lead to more severe symptoms as the disease progresses such as, impaired swallowing, choking, extreme fatigue and respiratory failure.[2,3]

Gefurulimab
Gefurulimab, an investigational complement C5 inhibitor, is a novel dual-binding nanobody optimised for subcutaneous self-administration in development as a treatment for AChR-Ab+ gMG. The investigational medication works by binding to the C5 protein in the terminal complement cascade, a part of the body's immune system. When activated in an uncontrolled manner, the complement cascade over-responds, leading the body to attack its own healthy cells. Gefurulimab's concurrent binding to serum albumin provides an extended half-life, enabling once-weekly dosing. Gefurulimab has been granted Orphan Drug Designation in the US for the treatment of myasthenia gravis.

PREVAIL (ALXN1720-MG-301)
PREVAIL (ALXN1720-MG-301) is a global, Phase III, randomised, double-blind, placebo-controlled, parallel, multicentre study evaluating the safety and efficacy of gefurulimab in adults with generalised myasthenia gravis (gMG). The trial enrolled 260 patients from 20 countries across North America, Europe, Asia and the Pacific region. Participants were required to have a confirmed myasthenia gravis diagnosis at least three months prior to the screening visit with a positive serological test for autoantibodies against AChR and Myasthenia Gravis Foundation of America Clinical Classification Class II to IV at screening.[7]

Patients were randomised 1:1 to receive gefurulimab or placebo for a total of 26 weeks in the randomised controlled treatment period. Patients received a single weight-based loading dose on Day 1, followed by regular weight-based maintenance dosing beginning on Day 8 and once every week thereafter. The primary endpoint of the change from baseline in the Myasthenia Gravis Activities of Daily Living (MG-ADL) total score, a patient-reported scale that assesses patients' abilities to perform daily activities, was assessed at week 26 along with multiple secondary endpoints evaluating improvement in disease-related measures.[7]

Patients who completed the randomised controlled treatment period were eligible to continue into an open-label extension period evaluating the safety and efficacy of gefurulimab, which is ongoing.[7]

Alexion
Alexion, AstraZeneca Rare Disease, is focused on serving patients and families affected by rare diseases and devastating conditions through the discovery, development and delivery of life-changing medicines. A pioneering leader in rare disease for more than three decades, Alexion was the first to translate the complex biology of the complement system into transformative medicines, and today it continues to build a diversified pipeline across disease areas with significant unmet need, using an array of innovative modalities. As part of AstraZeneca, Alexion is continually expanding its global geographic footprint to serve more rare disease patients around the world. It is headquartered in Boston, US.

AstraZeneca
AstraZeneca (LSE/STO/Nasdaq: AZN) is a global, science-led biopharmaceutical company that focuses on the discovery, development, and commercialisation of prescription medicines in Oncology, Rare Diseases, and BioPharmaceuticals, including Cardiovascular, Renal & Metabolism, and Respiratory & Immunology. Based in Cambridge, UK, AstraZeneca's innovative medicines are sold in more than 125 countries and used by millions of patients worldwide. Please visit astrazeneca.com and follow the Company on social media @AstraZeneca.

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References

1. Jung-Plath W, et al. Assessment of myasthenia gravis patients' quality of life. *The Journal of Neurological and Neurosurgical Nursing*. 2023;12(2):74-83.
2. Catalin J, et al. Clinical presentation of myasthenia gravis. *Thymus*. 2019.
3. Farid ZR, et al. Factors affecting generalization of ocular myasthenia gravis. *Sriwijaya Journal of Ophthalmology*. 2020;3(2):48-54.
4. Lazaridis K, et al. Myasthenia gravis: autoantibody specificities and their role in MG management. *Front Neurol.* 2020;11:596981.
5. Huang YF, et al. Visualization and characterization of complement activation in acetylcholine receptor antibody seropositive myasthenia gravis. *Muscle Nerve*. 2024.
6. Cavanagh N, et al. Exploring the impairments and allied health professional utilization in people with myasthenia gravis: a cross-sectional study. *J Clin Neurosci*. 2023;114:9-16.
7. ClinicalTrials.gov. Safety and efficacy of ALXN1720 in adults with generalized myasthenia gravis. NCT Identifier: NCT05556096. Available here. Accessed July 2025.

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