

Positive topline phase III results show Roche's Vabysmo improved vision for people living with retinal vein occlusion (RVO)

- **Vabysmo achieved its primary endpoint of non-inferiority to aflibercept in RVO in the BALATON and COMINO clinical trials**
- **Vabysmo was generally well tolerated, with a safety profile consistent with previous trials**
- **Vabysmo is the first and only treatment that targets and inhibits two disease pathways involving Ang-2 and VEGF-A, linked to a number of vision-threatening retinal conditions**
- **Detailed results will be presented at an upcoming medical meeting and submitted to regulatory authorities around the world**

Basel, 27 October 2022 - Roche (SIX: RO, ROG; OTCQX: RHHBY) today announced positive topline results from two global phase III studies, BALATON and COMINO, evaluating the first and only bispecific antibody for the eye, Vabysmo® (faricimab), in macular edema due to branch and central retinal vein occlusion (BRVO and CRVO).^{1,2,3} RVO is a vision-threatening condition that impacts 28 million people globally.⁴

Both studies met their primary endpoints, showing that people with macular edema due to BRVO and CRVO receiving Vabysmo injections every four weeks, for up to 24 weeks, achieved non-inferior visual acuity gains compared to those receiving aflibercept injections every four weeks.

“These encouraging data demonstrate that Vabysmo could potentially provide a new treatment option for people living with retinal vein occlusion, a serious retinal vascular condition that can lead to irreversible vision impairment or vision loss,” said Levi Garraway, M.D., Ph.D., Roche’s Chief Medical Officer and Head of Global Product Development. “Today’s results add to the extensive evidence supporting Vabysmo’s efficacy in treating multiple types of retinal conditions. We look forward to submitting these data to regulatory authorities.”

Vabysmo also showed rapid drying of retinal fluid from baseline through week 24, as measured by reduction in central subfield thickness.

In both studies, Vabysmo was generally well tolerated. The safety profile was consistent with previous trials.

Detailed results will be presented at an upcoming medical meeting and submitted to regulatory authorities around the world.

Vabysmo is uniquely engineered to target and inhibit two disease pathways, which are linked to a number of vision-threatening retinal conditions, by neutralising angiopoietin-2 (Ang-2) and vascular endothelial growth factor-A (VEGF-A) to restore vascular stability.^{3,5} The level of Ang-2 is elevated in RVO and it is thought that increased Ang-2 expression drives disease progression.^{6,7}

To date, Vabysmo is approved in more than 40 countries around the world, including the United States, Japan, the United Kingdom and the European Union, for people living with neovascular or ‘wet’ age-related macular degeneration (nAMD) and diabetic macular edema (DME).^{8,9,10,11,12} Vabysmo’s long-term efficacy and safety in nAMD and DME has been demonstrated by two-year data from four large, global studies involving more than 3,000 participants.^{3,5,13,14} Vabysmo is the only injectable eye medicine approved with phase III studies supporting treatment intervals of up to four months for people living with nAMD and DME.¹² Globally, more than 165,000 Vabysmo doses have been distributed for treatment of these conditions to date.⁸ RVO, nAMD and DME together affect around 70 million people worldwide and are among the leading causes of vision loss.^{3,4,15,16,17}

About retinal vein occlusion (RVO)

RVO is the second most common cause of vision loss due to retinal vascular diseases.⁴ It affects an estimated 28 million adults globally, mainly those aged 60 or older, and can lead to severe and sudden vision loss.^{4,18} The level of angiopoietin-2 (Ang-2) is elevated in RVO and it is thought that increased Ang-2 expression drives disease progression.^{6,7} RVO typically results in sudden, painless vision loss in the affected eye because the vein blockage restricts normal blood flow in the affected retina, resulting in ischemia, bleeding, fluid leakage and retinal swelling called macular edema.^{18,19,20} Currently, macular edema due to RVO is typically treated with repeated intravitreal injections of anti-vascular endothelial growth factor therapies.²⁰ There are two main types of RVO: branch retinal vein occlusion, which affects more than 23 million people globally and occurs when one of the four smaller ‘branches’ of the main central retinal vein becomes blocked; and central retinal vein occlusion, which is less common, affecting more than four million people worldwide, and occurs when the eye’s central retinal vein becomes blocked.^{4,20}

About the BALATON and COMINO studies^{1,2}

BALATON (NCT04740905) and COMINO (NCT04740931) are two randomised, multicentre, double-masked, global phase III studies evaluating the efficacy and safety of Vabysmo® (faricimab) compared to aflibercept. For the first 20 weeks, patients are randomised 1:1 to receive six monthly injections of either Vabysmo (6.0 mg) or aflibercept (2.0 mg). From weeks 24-72, all patients receive Vabysmo (6.0 mg) up to every four months – according to a personalised treatment interval dosing regimen – using a treat-and-extend approach.

The BALATON study is being conducted in 553 people with branch retinal vein occlusion. The COMINO study is being conducted in 729 people with central retinal or hemiretinal vein occlusion.

The primary endpoint of each study is the change in best-corrected visual acuity from baseline at 24 weeks. Secondary endpoints include change in central subfield thickness and drying of retinal fluid from baseline over time up to week 24.

About the Vabysmo® (faricimab) clinical development programme

Roche has a robust phase III clinical development programme for Vabysmo. The programme includes AVONELLE-X, an extension study of TENAYA and LUCERNE, evaluating the long-term safety and tolerability of Vabysmo in neovascular or ‘wet’ age-related macular degeneration, and RHONE-X, an extension study of YOSEMITE and RHINE evaluating the long-term safety and tolerability of Vabysmo in diabetic macular edema (DME).^{21,22} Roche has also initiated the phase IV ELEVATUM study of Vabysmo in underrepresented patient populations with DME and supports several other independent studies to further understand retinal conditions with a high unmet need.²³

About Vabysmo® (faricimab)

Vabysmo is the first bispecific antibody approved for the eye.^{9,11} It targets and inhibits two disease pathways linked to a number of vision-threatening retinal conditions by neutralising angiopoietin-2 (Ang-2) and vascular endothelial growth factor-A (VEGF-A). Ang-2 and VEGF-A contribute to vision loss by destabilising blood vessels, causing new leaky blood vessels to form and increasing inflammation.^{3,5} By blocking pathways involving Ang-2 and VEGF-A, Vabysmo is designed to stabilise blood vessels.^{3,5} Vabysmo is approved in more than 40 countries around the world, including the United States, Japan, the United Kingdom and the European Union for people living with neovascular or ‘wet’ age-related macular degeneration and diabetic macular edema. Review by other regulatory authorities is ongoing.^{8,9,10,11,12}

About Roche in ophthalmology

Roche is focused on saving people’s eyesight from the leading causes of vision loss through pioneering therapies. Through our innovation in the scientific discovery of new potential drug targets, personalised healthcare, molecular engineering, biomarkers and continuous drug delivery, we strive to design the right therapies for the right patients.

We have the broadest retina pipeline in ophthalmology, which is led by science and informed by insights from people with eye diseases. Our pipeline includes gene therapies and treatments for geographic atrophy and other vision-threatening diseases, including rare and inherited conditions.

Applying our extensive experience, we have already brought breakthrough ophthalmic treatments to people living with vision loss. Susvimo™ (previously called Port Delivery System

with ranibizumab) 100 mg/mL for intravitreal use via ocular implant is the first United States Food and Drug Administration-approved refillable eye implant for neovascular or ‘wet’ age-related macular degeneration that continuously delivers a customised formulation of ranibizumab over a period of months.²⁴ Vabysmo® (faricimab) is the first bispecific antibody approved for the eye, which targets two disease pathways that drive retinal conditions.^{3,5,9,11} Lucentis® (ranibizumab injection) is the first treatment approved to improve vision in people with certain retinal conditions.²⁵

About Roche

Founded in 1896 in Basel, Switzerland, as one of the first industrial manufacturers of branded medicines, Roche has grown into the world’s largest biotechnology company and the global leader in in-vitro diagnostics. The company pursues scientific excellence to discover and develop medicines and diagnostics for improving and saving the lives of people around the world. We are a pioneer in personalised healthcare and want to further transform how healthcare is delivered to have an even greater impact. To provide the best care for each person we partner with many stakeholders and combine our strengths in Diagnostics and Pharma with data insights from the clinical practice.

In recognising our endeavor to pursue a long-term perspective in all we do, Roche has been named one of the most sustainable companies in the pharmaceuticals industry by the Dow Jones Sustainability Indices for the thirteenth consecutive year. This distinction also reflects our efforts to improve access to healthcare together with local partners in every country we work.

Genentech, in the United States, is a wholly owned member of the Roche Group. Roche is the majority shareholder in Chugai Pharmaceutical, Japan.

For more information, please visit www.roche.com.

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References

- [1] Clinical Trials.gov. A study to evaluate the efficacy and safety of faricimab in participants with macular edema secondary to branch retinal vein occlusion (BALATON) [Internet; cited October 2022]. Available from: <https://clinicaltrials.gov/ct2/show/NCT04740905>
- [2] Clinical Trials.gov. A study to evaluate the efficacy and safety of faricimab in participants with macular edema secondary to central retinal or hemiretinal vein occlusion (COMINO) [Internet; cited October 2022]. Available from: <https://clinicaltrials.gov/ct2/show/NCT04740931>
- [3] Heier JS, et al. Efficacy, durability, and safety of intravitreal faricimab up to every 16 weeks for neovascular age-related macular degeneration (nAMD) (TENAYA and LUCERNE): two randomised, double-masked, phase III, non-inferiority trials. *The Lancet*. 2022; 399:729-740.
- [4] Song P, et al. Global epidemiology of retinal vein occlusion (RVO): a systematic review and meta-analysis of prevalence, incidence and risk factors. *J Glob Health*. 2019;9:010427.

- [5] Wykoff C, et al. Efficacy, durability and safety of intravitreal faricimab with extended dosing up to every 16 weeks in patients with diabetic macular edema (DME) (YOSEMITE and RHINE): two randomised, double-masked, phase III trials. *The Lancet*. 2022; 399:741-755.
- [6] Regula JT, et al. Targeting key angiogenic pathways with a bispecific CrossMab optimised for neovascular eye diseases. *EMBO Molecular Medicine*. 2016;8:1265-88.
- [7] Jousseaume AM, et al. Angiopoietin/Tie2 signalling and its role in retinal and choroidal vascular diseases: a review of preclinical data. *Eye*. 2021;35:1305-1316.
- [8] Roche data on file.
- [9] United States Food and Drug Administration (U.S. FDA). Highlights of prescribing information, Vabysmo. 2022 [Internet; cited October 2022]. Available from: https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/761235s000lbl.pdf
- [10] Chugai Pharmaceutical Co. Ltd. Chugai obtains regulatory approval for Vabysmo, the first bispecific antibody in ophthalmology, for nAMD and DME [Internet; cited October 2022]. Available from: https://www.chugai-pharm.co.jp/english/news/detail/20220328160002_909.html
- [11] Medicines and Healthcare products Regulatory Agency (MHRA). MHRA approves faricimab through international work-sharing initiative [Internet; cited October 2022]. Available from: <https://www.gov.uk/government/news/mhra-approves-faricimab-through-international-work-sharing-initiative>
- [12] European Medicines Agency. Summary of Product Characteristics, Vabysmo, 2022 [Internet; cited October 2022]. Available from: https://www.ema.europa.eu/en/documents/product-information/vabysmo-epar-product-information_en.pdf
- [13] Wells JA, et al. Faricimab in DME: two-year results from the phase III YOSEMITE and RHINE trials. Presented at: Angiogenesis, Exudation and Degeneration 2022; 11-12 February 2022; virtual.
- [14] Khanani A, et al. Faricimab in nAMD: year 2 efficacy, safety and durability results from the phase III TENAYA and LUCERNE trials. Presented at: 2022 American Society of Retina Specialists Annual Scientific Meeting; 13-16 July 2022; New York City, NY, USA.
- [15] Yau JWY, et al. Global prevalence and major risk factors of diabetic retinopathy. *Diabetes Care*. 2012;35:556-64.
- [16] Connolly E, et al. Prevalence of age-related macular degeneration associated genetic risk factors and four-year progression data in the Irish population. *Br J Ophthalmol*. 2018;102:1691-95.
- [17] Bright Focus Foundation. Age-related macular degeneration: facts and figures [Internet; cited October 2022]. Available from: <https://www.brightfocus.org/macular/article/age-related-macular-facts-figures>
- [18] Moorfields Eye Hospital, United Kingdom National Health Service Foundation Trust. RVO [Internet; cited October 2022]. Available from: <https://www.moorfields.nhs.uk/condition/retinal-vein-occlusion>
- [19] Schmidt-Erfurth U, et al. Guidelines for the Management of Retinal Vein Occlusion by the European Society of Retina Specialists (EURETINA). *Ophthalmologica*. 2019;242:123-162.
- [20] Campochiaro P. Molecular pathogenesis of retinal and choroidal vascular diseases. *Prog Retin Eye Res*. 2015;49:67-81.
- [21] Clinical Trials.gov. A study to evaluate the long-term safety and tolerability of Vabysmo in participants with nAMD (AVONELLE-X) [Internet; cited October 2022]. Available from: <https://clinicaltrials.gov/ct2/show/NCT04777201>
- [22] Clinical Trials.gov. A study to evaluate the long-term safety and tolerability of Vabysmo in participants with DME (Rhone-X) [Internet; cited October 2022]. Available from: <https://clinicaltrials.gov/ct2/show/NCT04432831>
- [23] Clinical Trials.gov. A study to investigate faricimab treatment response in treatment-naïve, underrepresented patients with DME (ELEVATUM). [Internet; cited October 2022]. Available from: <https://clinicaltrials.gov/ct2/show/NCT05224102>
- [24] U.S. FDA. Highlights of prescribing information, Susvimo. 2006 [Internet; cited October 2022]. Available from: https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/761197s000lbl.pdf
- [25] U.S. FDA. Highlights of prescribing information, Lucentis. 2006 [Internet; cited October 2022]. Available from: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/125156s114lbl.pdf

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