

Phase III data show Roche's Port Delivery System with ranibizumab enabled over 98% of patients to go six months between treatments for neovascular age-related macular degeneration

- **In the Archway study, Port Delivery System with ranibizumab (PDS) demonstrated non-inferior and equivalent visual acuity outcomes compared with monthly ranibizumab eye injections, and a favourable benefit-risk profile**
- **PDS is a permanent refillable eye implant that continuously delivers a customised formulation of ranibizumab over a period of months, potentially reducing the treatment burden associated with frequent eye injections**
- **Data from the study will be discussed at the upcoming 38th Annual Meeting of the American Society of Retina Specialists**

Basel, 22 July 2020 - Roche (SIX: RO, ROG; OTCQX: RHHBY) today announced detailed results from the phase III Archway study evaluating its investigational Port Delivery System with ranibizumab (PDS) for the treatment of neovascular or “wet” age-related macular degeneration (nAMD), a leading cause of blindness globally.¹ In Archway, 98.4% of PDS patients were able to go six months without needing additional treatment and achieved vision outcomes equivalent to patients receiving monthly ranibizumab eye injections, a current standard of care. In the study, PDS was generally well-tolerated, with a favourable benefit-risk profile.² PDS is a permanent refillable eye implant, approximately the size of a grain of rice, which continuously delivers a customised formulation of ranibizumab over a period of months. PDS is the first nAMD therapy to achieve positive phase III results for this extended length of time between treatments.³ These new data will be discussed virtually during the 38th Annual Meeting of the American Society of Retina Specialists (ASRS) on Sunday, 26 July 2020. A recorded presentation of these data is now available to ASRS attendees through the meeting web portal.

“Based on the Archway results, PDS could potentially reduce the number of treatments from as many as 12 per year to two per year for neovascular AMD patients, without sacrificing efficacy,” said Carl Regillo, M.D., Chief of Retina Service at Wills Eye Hospital in Philadelphia and an Archway study investigator. “While effective therapies exist for this condition, I know from clinical experience that it can be difficult for patients and caregivers to commit to frequent treatments, and patients who are not treated frequently enough may be at risk of losing vision.”

The current standard of care for nAMD requires patients to visit their ophthalmologist as often as monthly for eye injections of anti-vascular endothelial growth factor (VEGF) therapy to help maintain vision gains or prevent vision loss.⁴ This high treatment burden with anti-VEGF therapy can lead to under-treatment of nAMD and, potentially, less than optimal vision outcomes.^{4,5,6}

“For over a decade, we have been working to develop new treatments that better address the unmet needs of people living with neovascular AMD,” said Levi Garraway, M.D., Ph.D., Roche’s Chief Medical Officer and Head of Global Product Development. “Based on these data, we believe that the continuous delivery mechanism enabled by PDS may offer effective, reliable results while also alleviating the treatment burden. We are excited to share the data with regulatory authorities with the aim of bringing this new treatment option to patients as soon as possible.”

Patients in Archway received either PDS refilled every six months with a customised formulation of ranibizumab or monthly ranibizumab 0.5 mg eye injections. Patients in the study had received prior treatment with anti-VEGF therapy and were confirmed anti-VEGF responders. The primary endpoint of the study measured the change from baseline in best-corrected visual acuity averaged over Week 36 and Week 40. In the PDS arm, patients gained an average of 0.2 eye chart letters in visual acuity from baseline, with 98.4% (n=244/248) of patients maintaining the fixed six-month refill schedule within the first refill period. Patients treated monthly with ranibizumab injections gained an average of 0.5 letters in visual acuity from baseline. According to pre-specified study criteria, PDS was shown to be non-inferior and equivalent to monthly ranibizumab injections. In addition, PDS controlled retinal thickness as effectively as monthly ranibizumab, with patients in both arms achieving a mean change in center point thickness within 10 µm from baseline. Safety data from the study support a favourable benefit-risk profile for PDS. The PDS implant insertion surgery and refill-exchange procedures were generally well-tolerated by patients and the systemic safety of PDS was comparable to monthly ranibizumab injections.²

In addition to Archway, the Portal long-term extension study is investigating the long-term safety and tolerability of PDS for the treatment of nAMD.⁷ PDS is also being studied in the phase III Pagoda trial for the treatment of diabetic macular edema, a vision-threatening complication of diabetes.⁸ The Pagoda trial is actively recruiting patients.⁸

Results from the Archway study will be submitted to health authorities around the world, including the U.S. Food and Drug Administration and the European Medicines Agency, for consideration of regulatory approval for the treatment of nAMD.

About the Archway study⁹

Archway (NCT03677934) is a randomised, multicentre, open-label phase III study evaluating the efficacy and safety of Port Delivery System with ranibizumab, refilled every six months at fixed intervals, compared to monthly intravitreal injections of ranibizumab 0.5 mg, in 418 people living with neovascular age-related macular degeneration. Patients enrolled in Archway were responders to prior treatment with anti-vascular endothelial growth factor (VEGF) therapy. In both study arms, patients were treated with at least three anti-VEGF injections within the six months prior to their Archway screening visit. The primary endpoint of the study is the change in best-corrected visual acuity (BCVA) score (the best distance vision a person can achieve – including with correction such as glasses – when reading letters on an eye chart) from baseline at the average of Week 36 and Week 40. Secondary endpoints include: safety; overall change in BCVA from baseline; and change from baseline in center point thickness at Week 36 and over time.

About neovascular age-related macular degeneration

Age-related macular degeneration (AMD) is a condition that affects the part of the eye that provides sharp, central vision needed for activities like reading. Neovascular or “wet” AMD (nAMD) is an advanced form of the disease that can cause rapid and severe vision loss. It develops when new and abnormal blood vessels grow uncontrolled under the macula, causing swelling, bleeding and/or fibrosis.¹⁰ Worldwide, around 17 million people are living with nAMD – the leading cause of vision loss in people over the age of 60 – and the disease will affect even more people around the world as the global population ages.^{1,11,12}

About Port Delivery System with ranibizumab

Port Delivery System with ranibizumab (PDS) is a permanent refillable eye implant, approximately the size of a grain of rice, which is designed to continuously release a customised formulation of ranibizumab into the eye over time. Ranibizumab is a vascular endothelial growth factor (VEGF) inhibitor designed to bind to and inhibit VEGF-A, a protein that plays a critical role in the formation of new blood vessels and the leakiness of the vessels.¹³

PDS contains a customised formulation of ranibizumab not approved by regulatory authorities. It is different from the ranibizumab intravitreal injection, a medicine marketed as Lucentis^{®*} (ranibizumab injection) which is approved to treat neovascular age-related macular degeneration (nAMD) and other retinal diseases.¹⁴

By maintaining therapeutic drug concentration levels of ranibizumab with two refills per year, PDS may offer greater outcomes certainty in terms of vision gains and maintaining those gains for people living with nAMD. Additionally, by decreasing the need for frequent injections and physician visits, PDS may reduce the burden of treatment associated with standard anti-VEGF treatments.⁴ The Archway study of PDS in nAMD is evaluating a regimen of PDS implantation followed by twice-yearly refills.

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.

Applying our extensive experience, we have already brought breakthrough ophthalmic treatments to people living with vision loss through Lucentis^{®*} (ranibizumab injection) in 2006, the first treatment approved to improve vision in people with certain retinal diseases, including neovascular age-related macular degeneration (nAMD), diabetic macular edema (DME), diabetic retinopathy (DR), retinal vein occlusion (RVO) and myopic choroidal neovascularisation.¹⁴

*Lucentis[®] (ranibizumab injection) was developed by Genentech, a member of the Roche Group. Genentech

With a robust pipeline, led by science and informed by insights from people with eye diseases, Roche has the broadest late stage retina pipeline, including treatments for nAMD, DME, DR and RVO. Our early stage pipeline also includes gene therapies and treatments for geographic atrophy and other vision-threatening diseases, including rare and inherited conditions.³

About Roche

Roche is a global pioneer in pharmaceuticals and diagnostics focused on advancing science to improve people's lives. The combined strengths of pharmaceuticals and diagnostics under one roof have made Roche the leader in personalised healthcare – a strategy that aims to fit the right treatment to each patient in the best way possible.

Roche is the world's largest biotech company, with truly differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and diseases of the central nervous system. Roche is also the world leader in in vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management.

Founded in 1896, Roche continues to search for better ways to prevent, diagnose and treat diseases and make a sustainable contribution to society. The company also aims to improve patient access to medical innovations by working with all relevant stakeholders. More than thirty medicines developed by Roche are included in the World Health Organization Model Lists of Essential Medicines, among them life-saving antibiotics, antimalarials and cancer medicines. Moreover, for the eleventh consecutive year, Roche has been recognised as one of the most sustainable companies in the Pharmaceuticals Industry by the Dow Jones Sustainability Indices (DJSI).

The Roche Group, headquartered in Basel, Switzerland, is active in over 100 countries and in 2019 employed about 98,000 people worldwide. In 2019, Roche invested CHF 11.7 billion in R&D and posted sales of CHF 61.5 billion. 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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