Media Release

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Roche's ocrelizumab significantly reduced both relapses and disability progression versus interferon beta-1a (Rebif®) in two Phase III studies in multiple sclerosis

- **Studies showed superiority on primary and major secondary endpoints in people with relapsing forms of multiple sclerosis**
- **Roche will submit data to regulatory authorities**
- **Phase III study in primary progressive multiple sclerosis ongoing**

Roche (SIX: RO, ROG; OTCQX: RHHBY) today announced positive results from two pivotal studies evaluating the investigational medicine ocrelizumab compared with interferon beta-1a (Rebif®), a standard-of-care therapy, in people with relapsing multiple sclerosis (MS), the most common form of the disease. The studies (called OPERA I and OPERA II) met their primary and major secondary endpoints.

Treatment with ocrelizumab significantly reduced the annualised relapse rate (ARR) over a two-year period compared with interferon beta-1a, the primary endpoint in both studies. Ocrelizumab also significantly reduced the progression of clinical disability compared with interferon beta-1a, as measured by the Expanded Disability Status Scale (EDSS). Additionally, treatment with ocrelizumab led to a significant reduction in the number of lesions in the brain (areas of disease activity) compared with interferon beta-1a, as measured by MRI.

Overall, the incidence of adverse events associated with ocrelizumab was similar to interferon beta-1a in both studies; the most common adverse events were mild-to-moderate infusion-related reactions. The incidence of serious adverse events associated with ocrelizumab, including serious infections, was also similar to interferon beta-1a.

"Ocrelizumab showed remarkable improvements over a standard-of-care medicine across clinical and imaging endpoints in two pivotal studies," said Sandra Horning, M.D., Roche's Chief Medical Officer and Head of Global Product Development. "Ocrelizumab has the potential to make a meaningful difference for people with MS, a

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chronic and debilitating disease. Based on these compelling results, we plan to submit the data for review to US and EU regulatory authorities in the first quarter of 2016."

Further analyses of the OPERA studies are ongoing and detailed data will be presented at an upcoming medical congress.

Results from a Phase III study of ocrelizumab in people with primary progressive MS (PPMS), a different form of MS, are expected later this year.

About the OPERA studies

OPERA I and OPERA II are Phase III, randomised, double-blind, double-dummy, global multi-centre studies evaluating the efficacy and safety of ocrelizumab (600 mg dose administered by intravenous infusion every 6 months) compared with interferon beta-1a (44 mcg dose administered by subcutaneous injection three times per week) in people with relapsing forms of MS.[1] The primary endpoint of the OPERA studies was annualised protocol-defined relapse rate (ARR) at two years (96 weeks). Secondary endpoints included time to onset of confirmed disability progression, the total number of T1 Gadolinium-enhancing lesions, and total number of new and/or enlarging T2 hyperintense lesions as detected by brain MRI.

The OPERA I and OPERA II studies enrolled a total of 1,656 people with relapsing forms of MS (i.e., relapsing-remitting MS and secondary-progressive MS with relapses) across 307 sites in 40 countries.

About ocrelizumab

Ocrelizumab is an investigational, humanised monoclonal antibody designed to selectively target CD20-positive B cells. CD20-positive B cells are a specific type of immune cell thought to be a key contributor to myelin (nerve cell insulation and support) and axonal (nerve cell) damage, which can result in disability in people with MS. Ocrelizumab binds to CD20 cell surface proteins expressed on certain B cells, but not on stem cells or plasma cells. Therefore the ability to make new B cells is preserved in people treated with ocrelizumab.

The Phase III clinical development programme for ocrelizumab includes the OPERA I and OPERA II studies in people with relapsing forms of MS, as well as ORATORIO, a randomised, double-blind, global multi-centre, placebo-controlled study in people with PPMS.[2]

About Roche in neuroscience

Neuroscience is a major focus of research and development at Roche. The company's goal is to develop treatment options based on the biology of the nervous system to help improve the lives of people with chronic and potentially devastating diseases. Roche has more than a dozen investigational medicines in clinical development for diseases that include multiple sclerosis, Alzheimer's disease, spinal muscular atrophy, Parkinson's disease, Down syndrome and autism.

About Roche

Headquartered in Basel, Switzerland, Roche is a leader in research-focused healthcare with combined strengths in pharmaceuticals and diagnostics. Roche is the world's largest biotech company, with truly differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and neuroscience. Roche is also the world leader in in vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management. Roche's personalised healthcare strategy aims at providing medicines and diagnostics that enable tangible improvements in the health, quality of life and survival of patients. Founded in 1896, Roche has been making important contributions to global health for more than a century. Twenty-nine medicines developed by Roche are included in the World Health Organization Model Lists of Essential Medicines, among them life-saving antibiotics, antimalarials and chemotherapy.

In 2014, the Roche Group employed 88,500 people worldwide, invested 8.9 billion Swiss francs in R&D and posted sales of 47.5 billion Swiss francs. 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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