Media Release

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Roche's OCREVUS (ocrelizumab) approved for relapsing and primary progressive multiple sclerosis in Australia

- **Second approval after the US for OCREVUS as the first and only approved treatment for people with primary progressive multiple sclerosis, a highly disabling form of MS**
- **Australia has among the highest prevalence of MS in the Southern Hemisphere[1]**

Roche (SIX: RO, ROG; OTCQX: RHHBY) announced today that OCREVUS® (ocrelizumab) has been approved by the Australian Therapeutic Goods Administration (TGA) for the treatment of relapsing forms of multiple sclerosis (RMS) and primary progressive multiple sclerosis (PPMS), marking the second approval of OCREVUS for both indications following the FDA decision in the US in March 2017. Marketing applications for OCREVUS are currently under review in over 50 countries across the world, including in Europe, Latin America and the Middle East.

"We are pleased that another regulatory body recognised for its rigorous review process has approved OCREVUS with a broad label as a new treatment option for people with relapsing or primary progressive MS in Australia," said Sandra Horning, MD, Roche's Chief Medical Officer and Head of Global Product Development. "Approval in Australia is significant because of the high prevalence of MS in the country, with over 23,000 people in the prime of their lives affected, making it the leading cause of non-traumatic disability in young adults. Moreover, people with PPMS, who often experience faster and more severe disability, have not had any approved treatment until OCREVUS. We continue to work closely with regulatory authorities across the world to bring OCREVUS to people with multiple sclerosis as soon as possible."

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Disability accumulates twice as fast in PPMS as in RMS, meaning that people with PPMS may have to rely on mobility aids or become wheelchair bound, are unable to work, and need carers to look after them sooner. Additionally, a recent article in *Multiple Sclerosis Journal* noted that the quality of life for a person with MS with severe disability (Expanded Disability Status Scale >7), as measured by EQ-5D mean utility scores, ranks among the worst for chronic conditions.[2] Although treatments are available for RMS, the most common form of MS at diagnosis, people with PPMS in Australia have not had an approved disease-modifying treatment until now. OCREVUS is the first and only approved treatment for this type of MS in the US and in Australia.

About the OPERA I and OPERA II studies in relapsing forms of MS

OPERA I and OPERA II are Phase III, randomised, double-blind, double-dummy, global multi-center studies evaluating the efficacy and safety of OCREVUS (600 mg administered by intravenous infusion every six months) compared with interferon beta-1a (44 mcg administered by subcutaneous injection three times per week) in 1,656 people with relapsing forms of MS. In these studies, relapsing MS (RMS) was defined as relapsing-remitting MS (RRMS) and secondary progressive MS (SPMS) with relapses. A similar proportion of patients in the OCREVUS group experienced serious adverse events and serious infections compared with patients in the high-dose interferon beta-1a group in the RMS studies.

About the ORATORIO study in primary progressive MS

ORATORIO is a Phase III, randomised, double-blind, global multi-centre study evaluating the efficacy and safety of OCREVUS (600 mg administered by intravenous infusion every six months; given as two 300 mg infusions two weeks apart) compared with placebo in 732 people with primary progressive MS (PPMS). The blinded treatment period of the ORATORIO study continued until all patients had received at least 120 weeks of either OCREVUS or placebo and a predefined number of confirmed disability progression (CDP) events was reached overall in the study. A similar proportion of patients in the OCREVUS group experienced adverse events and serious adverse events compared with patients in the placebo group in the PPMS study.

About multiple sclerosis

Multiple sclerosis (MS) is a chronic disease that affects an estimated 2.3 million people around the world, for which there is currently no cure.[3,4] MS occurs when the immune system abnormally attacks the insulation and support around nerve cells (myelin sheath) in the brain, spinal cord and optic nerves, causing inflammation and consequent damage. This damage can cause a wide range of symptoms, including muscle weakness, fatigue and difficulty seeing, and may eventually lead to disability.[5, 6, 7]

Most people with MS experience their first symptom between 20 and 40 years of age, making the disease the leading cause of non-traumatic disability in younger adults.[8]

Relapsing-remitting MS (RRMS) is the most common form of the disease and is characterised by episodes of new or worsening signs or symptoms (relapses) followed by periods of recovery.[9,10] Approximately 85 percent of people with MS are initially diagnosed with RRMS.[11]The majority of people who are diagnosed with RRMS will eventually transition to secondary progressive MS (SPMS), in which they experience steadily worsening disability over time.[10] Relapsing forms of MS (RMS) include people with RRMS and people with SPMS who continue to experience relapses. Primary progressive MS (PPMS) is a debilitating form of the disease marked by steadily worsening symptoms but typically without distinct relapses or periods of remission. Approximately 15 percent of people with MS are diagnosed with the primary progressive form of the disease.[10]

People with all forms of MS experience disease activity – inflammation in the nervous system and permanent loss of nerve cells in the brain – even when their clinical symptoms aren't apparent or don't appear to be getting worse.[12] An important goal of treating MS is to reduce disease activity as soon as possible to slow how quickly a person's disability progresses.[13] Despite available disease-modifying treatments (DMTs), some people with RMS continue to experience disease activity and disability progression.

About OCREVUS (ocrelizumab)

OCREVUS is a humanised monoclonal antibody designed to target CD20-positive B cells, a specific type of immune cell thought to be a key contributor to myelin (nerve cell insulation and support) and axonal (nerve cell) damage. This nerve cell damage can lead to disability in people with multiple sclerosis (MS). Based on preclinical studies, OCREVUS binds to CD20 cell surface proteins expressed on certain B cells, but not on stem cells or plasma cells, and therefore important functions of the immune system may be preserved. OCREVUS is administered by intravenous infusion every six months. The initial dose is given as two 300 mg infusions given two weeks apart. Subsequent doses are given as single 600 mg infusions.

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 and autism.

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. 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. Roche has been recognised as the Group Leader in sustainability within the Pharmaceuticals, Biotechnology & Life Sciences Industry eight years in a row by the Dow Jones Sustainability Indices (DJSI).

The Roche Group, headquartered in Basel, Switzerland, is active in over 100 countries and in 2016 employed more than 94,000 people worldwide. In 2016, Roche invested CHF 9.9 billion in R&D and posted sales of CHF 50.6 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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