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Roche's RoACTEMRA Improved Rheumatoid Arthritis Signs and Symptoms Significantly More than Adalimumab as Single-Agent Therapy

Roche today announced data from the ADACTA study which showed that adult rheumatoid arthritis (RA) patients who received RoACTEMRA (tocilizumab) as single-agent therapy (without other DMARDs) experienced a significantly greater improvement in disease activity (DAS28 score reduction¹) after 24 weeks compared to patients who received adalimumab as single-agent therapy. The results of ADACTA will be presented on Friday at the annual European League Against Rheumatism (EULAR) conference in Berlin.

RA patients are often treated with a number of medicines, combining protein-based biologic therapies with methotrexate (MTX). However, about 1 in 3 patients on a biologic treatment such as RoACTEMRA or adalimumab receive it as a single agent, also known as biologic monotherapy, largely due to intolerance to MTX^{1,2,3,4}.

"Since there are a number of therapies approved for patients with RA, it is important for them and their healthcare provider to have the information they need to choose the best individual treatment option," said Hal Barron, M.D., Head of Global Product Development and Chief Medical Officer at Roche. "This study showed that for patients requiring biologic monotherapy RoACTEMRA was more effective than adalimumab, meaning that patients were more likely to experience DAS28 remission, greater improvement in joint pain and swelling, and an improved quality of life."

Results from ADACTA showed that after 24 weeks of treatment patients with severe active RA and intolerance or inadequate response to MTX:

- achieved a mean improvement in disease activity (DAS28 score reduction) of 3.3 with RoACTEMRA versus 1.8 with adalimumab
- had a DAS28 remission rate of 40% with RoACTEMRA versus 11% with adalimumab (DAS28 <2.6)
- achieved ACR20, 50 and 70² responses of 65%, 47% and 33% with RoACTEMRA versus 49%, 28% and 18% with adalimumab

Differences on all of these endpoints were statistically significant. Adverse event profiles in the two treatment groups were comparable and RoACTEMRA safety data in ADACTA was consistent with previous RoACTEMRA RA clinical trials.

RA is an autoimmune disease estimated to affect up to 70 million people worldwide, including children. Joints become chronically inflamed, painful and swollen, and patients can become increasingly disabled as cartilage and bone is damaged.

About DAS28

DAS28 is a measure of disease activity in RA. The score is calculated by a complex mathematical formula, which includes the number of tender and swollen joints (out of a total of 28), the erythrocyte sedimentation rate (a marker of systemic inflammation), and the patient's 'global assessment of global health' (indicated by marking a 10 cm line between 'very good' and 'very bad'). A DAS28 score greater than 5.1 indicates severe active disease, less than 3.2 low disease activity, and less than 2.6 DAS28 remission.

About ACR 20, 50, 70

American College of Rheumatology (ACR) scores represent the percentage of reduction (20%, 50%, 70%) in tender and swollen joint counts, in addition to a corresponding improvement in three of the following five parameters:

- acute phase reactant (such as erythrocyte sedimentation rate)
- Patients Global Assessment of Disease Activity
- Physicians Global Assessment of Disease Activity
- pain scale
- Health Assessment Questionnaire (HAQ)

About ADACTA

ADACTA is a phase IV multicentre, randomised, double blinded, parallel group study designed to compare the reduction in signs and symptoms during monotherapy (single-agent) treatment with RoACTEMRA versus adalimumab in adult patients with severe active RA who either have intolerance to MTX or in whom continued MTX treatment is inappropriate. Also, patients participating in the trial had not previously received a biologic medicine for RA.

326 patients were randomised (1:1) to receive RoACTEMRA 8 mg/kg IV every 4 weeks (plus placebo adalimumab) or adalimumab 40 mg subcutaneously (SC) every 2 weeks (plus placebo RoACTEMRA) for 24 weeks. The study met its primary endpoint of a significantly greater reduction in the mean change from baseline in the DAS28 score at 24 weeks in patients receiving RoACTEMRA monotherapy compared to those receiving adalimumab monotherapy. Adverse event profiles in the two treatment groups were comparable and the safety profile of RoACTEMRA in ADACTA was consistent with previous RoACTEMRA RA clinical trials.

About Roche at EULAR

In addition to the ADACTA study, Roche will present long-term data on RoACTEMRA in a variety of monotherapy settings at EULAR. 52-week results from the **ACT-RAY** study will be presented, following 24-week data at EULAR 2011 which showed that in RA patients RoACTEMRA alone had comparable clinical efficacy to RoACTEMRA plus MTX based on the primary endpoint, DAS28 remission at week 24, and other secondary endpoints. The safety data of ACTEMRA was consistent with previous ACTEMRA RA clinical trials. Data from the 'close-to-real-life' **ACT-SURE** study of RoACTEMRA monotherapy in patients who have had an inadequate response to anti-TNF therapy (TNF-IR) will also be presented, along with 2 year data from the **TENDER** study assessing the use of RoACTEMRA in children with systemic juvenile idiopathic arthritis (SJIA).

Results from the **BUILDER** study of RoACTEMRA for the treatment of Ankylosing Spondylitis (AS) will also be presented.

About RoACTEMRA / ACTEMRA

RoACTEMRA (tocilizumab, known as ACTEMRA outside Europe) is the result of research collaboration by Chugai and is also being co-developed globally with Chugai. RoACTEMRA is the first humanised interleukin-6 (IL-6) receptor-inhibiting monoclonal antibody. ACTEMRA was first approved in Japan and launched by Chugai in June 2005 as a therapy for Castleman's disease; in April 2008, additional indications for rheumatoid arthritis (RA), polyarticular juvenile idiopathic arthritis (pJIA) and systemic-onset juvenile idiopathic arthritis (sJIA) were approved in Japan. RoACTEMRA was approved in the European Union in January 2009 for the treatment of RA in patients who have either responded inadequately to, or who were intolerant to, previous therapy with one or more disease modifying anti-rheumatic drugs (DMARDs) or tumour necrosis factor (TNF) inhibitors. It is also approved for use in over 90 other countries, including India, Brazil, Switzerland, and Australia. ACTEMRA was approved in the United States in January 2010 for the treatment of adult patients with moderately to severely active RA who have had an inadequate response to one or more TNF inhibitors. In addition, ACTEMRA is now approved in the EU, United States and Mexico for the treatment of active SJIA in patients two years of age and older.

The safety and efficacy of RoACTEMRA in RA has been characterised in an extensive clinical development programme including five Phase III clinical studies that enrolled more than 4,000 people with RA in 41 countries, including the United States. The overall safety profile of RoACTEMRA is consistent across all global clinical studies. The serious adverse events reported in RoACTEMRA clinical studies include serious infections, gastrointestinal perforations and serious hypersensitivity reactions including anaphylaxis. The most common adverse events reported in clinical studies were upper respiratory tract infection, nasopharyngitis, headache, hypertension and increased ALT. Increases in liver enzymes (ALT and AST) were seen in some patients; these increases were generally mild and reversible. Laboratory changes, including increases in lipids (total cholesterol, LDL, HDL, triglycerides) and decreases in neutrophils and platelets, were seen in some patients. Treatments that suppress the immune system, such as RoACTEMRA, may cause an increase in the risk of malignancies.

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, virology, inflammation, metabolism and CNS. Roche is also the world leader in in-vitro diagnostics, tissue-based cancer diagnostics and a pioneer in diabetes management. Roche's personalised healthcare strategy aims at providing medicines and diagnostic tools that enable tangible improvements in the health, quality of life and survival of patients. In 2011, Roche had over 80,000 employees worldwide and invested over 8 billion Swiss francs in R&D. The Group posted sales of 42.5 billion Swiss francs. Genentech, United States, is a wholly owned member of the Roche Group. Roche has a majority stake in Chugai Pharmaceutical, Japan. For more information: www.roche.com.

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¹ Yazici Y, et al. Bulletin of the NYU Hospital for Joint Diseases 2008;66(2):77-85

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³ Listing J, et al. Arthritis Research & Therapy 2006, 8:R66

⁴ Askling J, et al. Ann Rheum Dis 2007;**66**:1339–1344