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## **ACTEMRA Improves Signs and Symptoms in Children with Systemic Onset Juvenile Idiopathic Arthritis (sJIA)**

### ***Impressive phase III data advances treatment options in sJIA***

Roche (SIX: RO, ROG; OTCQX: RHHBY) announced today that ACTEMRA (tocilizumab, known as RoACTEMRA within the EU) successfully met its primary endpoint in a paediatric study of systemic onset Juvenile Idiopathic Arthritis (sJIA), by significantly improving disease signs and symptoms, a critical effectiveness measure of a sJIA treatment.

The outcome of the so-called TENDER study is good news for children with this particularly aggressive type of juvenile arthritis. At the moment there are no approved therapies for sJIA, a disease which leads to significant illness with high-spiking fevers, arthritis, rashes, infections, and anaemia. sJIA also accounts for almost two-thirds of all deaths among children with arthritis with an overall mortality rate estimated to be between two to four percent.<sup>1</sup>

Results from the TENDER study showed that a greater proportion of patients treated with ACTEMRA benefited from a significant reduction in signs and symptoms (JIA ACR30 and the absence of fever) after 12 weeks of therapy, compared to patients treated with placebo. In the TENDER study, ACTEMRA was generally well tolerated and the overall safety profile after 12 weeks of treatment was consistent with previously reported data from other studies.

“The TENDER data show the potential of ACTEMRA as a highly effective and well-tolerated treatment for children suffering from sJIA” said William M Burns, CEO of Roche’s Pharmaceuticals Division. “This is a particularly debilitating disease affecting the entire body in which morbidity is high and there is much need for new treatment options in this area. These results are encouraging and should bring hope to those children affected by this difficult to treat disease.”

The TENDER study is the first global phase III trial on ACTEMRA, and it confirms earlier data from two Japanese studies.<sup>2,3</sup> Data from this trial will be submitted for presentation at upcoming international scientific meetings and full data and safety follow-up will be used to support future global regulatory filings for a label in a sJIA indication.

ACTEMRA is the first of a new class of drug with a novel mechanism of action. It is a humanized interleukin-6 (IL-6) receptor-inhibiting monoclonal antibody which works by suppressing the activity of IL-6, an important trigger of the inflammatory process. This novel mode of action reduces inflammation of the joints and relieves complications which can affect internal organs in the body (heart, liver, spleen and lymph nodes) known as systemic effects.

### **Systemic Onset Juvenile Idiopathic Arthritis (sJIA) - A High Unmet Medical Need**

sJIA is a subset of juvenile idiopathic arthritis that describes patients with intermittent fever, rash, and arthritis symptoms. Children with sJIA comprise 10 - 20 percent of all cases of juvenile arthritis. This form of the disease is difficult to diagnose as arthritis, and although this is necessary to establish a definitive diagnosis, it may not be evident early in the course of the disease. The children often appear ill with high-spiking fevers, rashes, infections, and anaemia. Rapid joint destruction is also evident in these children often despite aggressive treatment. Joint damage has been found in at least one third of children within two years of diagnosis. Children with sJIA require close supervision and careful monitoring due to their systemic complications.

### **About the TENDER study**

The TENDER study is an international study, including approximately 70 centres in 20 countries. The study aimed to assess efficacy for signs and symptoms and short term safety of tocilizumab vs. placebo in 108 patients with active sJIA. Additional aims were efficacy for the common systemic features of sJIA, steroid reduction, other concomitant drug reductions, safety with chronic administration and biomarkers.

In this randomised study, patients received ACTEMRA 8 mg/kg (if weight  $\geq$  30 kg) and 12 mg/kg (if weight < 30 kg), every 2 weeks versus placebo infusions for 12 weeks. Patients were also given the option to enroll for long-term, open label follow-up. The study was performed in close collaboration with the PRINTO (Paediatric Rheumatology International Trials Organisation) and PRCSG (Paediatric Rheumatology Collaborative Study) groups.

### **About ACTEMRA**

ACTEMRA is the result of research collaboration by Chugai and is being co-developed globally with Chugai. ACTEMRA is the first humanised interleukin-6 (IL-6) receptor-inhibiting monoclonal antibody. An extensive clinical development programme of five Phase III trials was designed to evaluate clinical findings of ACTEMRA, all of which met their primary endpoints. 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 RA, juvenile idiopathic arthritis and systemic-onset juvenile idiopathic arthritis were also approved in Japan. ACTEMRA 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 TNF inhibitors. It is also approved for use in several other countries, including India, Brazil, Switzerland and Australia.

The overall safety profile of ACTEMRA is consistent across all global clinical studies. The serious adverse reactions reported in ACTEMRA clinical studies include serious infections, gastrointestinal perforations and hypersensitivity reactions including anaphylaxis. The most common adverse reactions 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, with no evidence of hepatic injuries or any observed impact on liver function. Laboratory changes, including increases in lipids (total cholesterol, LDL, HDL, triglycerides) and decreases in neutrophils and platelets, were seen in some patients without association with clinical outcomes. Treatments that suppress the immune system, such as ACTEMRA, 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 2008, Roche had over 80,000 employees worldwide and invested almost 9 billion Swiss francs in R&D. The Group posted sales of 45.6 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](http://www.roche.com).

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- Chugai: [www.chugai-pharm.co.jp](http://www.chugai-pharm.co.jp)

### **References**

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3. Yokota, S. *et al.* Therapeutic efficacy of humanized recombinant anti-interleukin-6 receptor antibody in children with systemic-onset juvenile idiopathic arthritis. *Arthritis & Rheumatism* 2005; 52: 818-825