

# **Novartis Study Showed ACZ885 Provided Substantial Symptom Relief in 84% of Patients With the Most Serious Form of Childhood Arthritis**

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- - ACZ885, which neutralizes key inflammatory driver interleukin-1 beta[1], provided significant symptom improvement vs. placebo in Phase III pivotal trial[2]
- - Systemic juvenile idiopathic arthritis is a rare, disabling and potentially fatal auto-inflammatory disease, with daily spiking fever and arthritic joint pain[3,4]
- - Second pivotal Phase III trial ongoing; worldwide regulatory submissions planned for 2012

EAST HANOVER, N.J., Sept. 16, 2011 /PRNewswire/ -- Novartis announced today positive results of the first pivotal Phase III trial of ACZ885 in patients with systemic juvenile idiopathic arthritis (SJIA), a rare and serious childhood auto-inflammatory disease[3]. The results, presented at the 2011 European Pediatric Rheumatology Congress in Bruges, Belgium, showed all primary and secondary endpoints of the study were met[2].

Most ACZ885 patients (83.7%) experienced at least a 30% improvement in symptoms vs. 9.8% for placebo ( $p < 0.0001$ ) and a third of ACZ885 patients (32.6%) achieved a 100% improvement vs. 0% for placebo ( $p = 0.0001$ )[2]. ACZ885 is an investigational, fully human monoclonal antibody that neutralizes interleukin-1 beta (IL-1 beta), which is a key driver of inflammation in SJIA[1].

"SJIA is the most severe form of juvenile arthritis. Many of my patients suffer terribly from this disease, resulting in a critical need for new treatment options," said Daniel Lovell, M.D., one of the study investigators and Professor of Pediatrics at the Cincinnati Children's Hospital Medical Center. "This study showed ACZ885 effectively relieved the systemic and arthritic disease components evaluated in the trial, demonstrating a much-needed benefit for this patient population."

SJIA affects less than one child per 100,000 worldwide[5]. It is called 'systemic' because the inflammation affects the whole body, as well as most of the joints. The condition is characterized by potentially life-long and recurrent arthritis flares, which can involve skin rash, daily spiking fever, joint pain and swelling[3,4].

In this study, patients were evaluated according to the adapted American College of Rheumatology (ACR) Pediatric criteria, which includes absence of fever. The ACR criteria are regularly used to assess the success of treatments in SJIA.

"These results are a positive development for patients suffering from this very severe auto-inflammatory condition," said David Epstein, Head of the Pharmaceuticals Division of Novartis. "We are committed to investigate ACZ885 in a range of inflammatory diseases where interleukin-1 beta plays a key role and high unmet medical needs exist."

The results of a second pivotal Phase III trial, aimed at determining whether ACZ885 can extend the time to next flare and reduce or eliminate corticosteroid use, will be presented later this year. Worldwide regulatory submissions for ACZ885 in SJIA are planned for 2012.

The study was a Phase III, 4-week, randomized, double-blind, placebo-controlled study involving 84 patients between the ages of 2 and 19 years, with active SJIA[2]. Patients were treated with either a single subcutaneous (s.c.) dose of ACZ885 (4 mg/kg, up to 300 mg) or placebo[2].

The primary endpoint was the proportion of patients achieving the adapted ACR Pediatric 30 criteria, demonstrating a 30% improvement from baseline at Day 15 in at least three of the six variables[2]. The six variables were physician's assessment of disease activity, parent's or patient's assessment of overall well-being, functional ability, number of joints with active arthritis, number of joints with limitation of motion and C-reactive protein, a laboratory measure of inflammation[2]. Body temperature also was measured[2].

Secondary endpoints included the proportion of patients achieving the adapted ACR Pediatric 50, 70, 90 or 100 criteria, demonstrating a 50%, 70%, 90% or 100% improvement in at least three variables from baseline at Day 15 or 29[2].

ACZ885 was generally well tolerated. During the study, 55.8% of patients experienced adverse events (AEs), including infections, with ACZ885 vs. 39% with placebo[2]. Serious adverse events (SAEs), including infections, were reported for two patients for ACZ885 vs. two for placebo[2]. These did not lead to discontinuation and were resolved without complications[2].

#### About ACZ885

ACZ885 is a fully human monoclonal antibody that inhibits IL-1 beta, which is an important part of the body's immune system defenses[1]. Excessive production of IL-1 beta plays a major role in many inflammatory diseases, including SJIA[6]. ACZ885 works by neutralizing IL-1 beta for a sustained period of time, therefore inhibiting inflammation[1].

ACZ885 is currently approved in the US and other countries for a different disease state.

#### Disclaimer

The foregoing release contains forward-looking statements that can be identified by terminology such as "planned," "potentially," "committed," "will," or similar expressions, or by express or implied discussions regarding potential new indications or labeling for ACZ885 or regarding potential future revenues from ACZ885. You should not place undue reliance on these statements. Such forward-looking statements reflect the current views of management regarding future events, and involve known and unknown risks, uncertainties and other factors that may cause actual results with ACZ885 to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantee that ACZ885 will be approved for any additional indications or labeling in any market. Nor can there be any guarantee that ACZ885 will achieve any particular levels of revenue in the future. In particular, management's expectations regarding ACZ885 could be affected by, among other things, unexpected clinical trial results, including unexpected new clinical data and unexpected additional analysis of existing clinical data; unexpected regulatory actions or delays or government regulation generally; competition in general; government, industry and general public pricing pressures; the company's ability to obtain or maintain patent or other proprietary intellectual property protection; the impact that the foregoing factors could have on the values attributed to the Novartis Group's assets and liabilities as recorded in the Group's consolidated balance sheet, and other risks and factors referred to in Novartis AG's current Form 20-F on file with the US Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. Novartis is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements contained in this press release as a result of new information, future

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## Novartis Media Relations

Tina Tuttle

Michael Billings

Novartis US Pharma Communications Novartis US Pharma Communications

+1 862 778 1625 (direct)

+1 862 778 86565 (direct)

+1 862 222 6092 (mobile)

+1 201 400 1854 (mobile)

[tina.tuttle@novartis.com](mailto:tina.tuttle@novartis.com)

[michael.billings@novartis.com](mailto:michael.billings@novartis.com)

Anna Frable

Novartis US Pharma Communications

+1 862 778 5388 (direct)

+1 732 673 5262 (mobile)

[anna.frable@novartis.com](mailto:anna.frable@novartis.com)

e-mail: [media.relations@novartis.com](mailto:media.relations@novartis.com)

Novartis Investor Relations

Central phone: +41 61 324 7944

Susanne Schaffert +41 61 324 7944 North America:

Pierre-Michel Bringer +41 61 324 1065 Richard Jarvis +1 212 830 2433

Thomas Hungerbuehler +41 61 324 8425 Jill Pozarek +1 212 830 2445

Isabella Zinck +41 61 324 7188 Edwin Valeriano +1 212 830 2456

e-mail: [investor.relations@novartis.com](mailto:investor.relations@novartis.com) e-mail: [investor.relations@novartis.com](mailto:investor.relations@novartis.com)

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