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MEDIA RELEASE · COMMUNIQUE AUX MEDIAS · MEDIENMITTEILUNG

New study shows Zelmac® is effective and well tolerated for chronic constipation

Basel, 20 May 2003 – New data from a large pivotal US trial demonstrates Zelmac®* (tegaserod) was significantly more effective than placebo in providing rapid and sustained relief from chronic constipation based on a trial of more than 1,300 patients. Furthermore, Zelmac provided relief of several chronic constipation symptoms including bowel movement frequency, straining, stool consistency, abdominal discomfort or pain, bloating or distension.

These new data, including findings that further support the safety and tolerability profile of Zelmac, were presented at the 34th Annual Digestive Disease Week Meeting. A supplemental submission to the US Food and Drug Administration (FDA) for the drug's use in patients with chronic constipation is planned for the fourth quarter of 2003.

"If approved for use in chronic constipation, tegaserod would be the first treatment not only to improve bowel frequency but also to provide relief of multiple symptoms to patients," said John Johanson, MD, MSC, lead investigator and Clinical Associate Professor of Medicine at the University of Illinois College of Medicine in Rockford. "This advance would be welcomed by the medical community because there is a need for additional therapies that are effective and well tolerated."

Zelmac provides rapid and sustained response over three months

The study found that the response rate for Zelmac (2 mg b.i.d. "twice a day" or 6 mg b.i.d.) was superior to placebo ($p<0.0001$) in increasing the number of complete spontaneous bowel movements (CSBM). After four weeks, the 2 mg treated group had a 41.4 percent response rate, similar to the 6 mg treated group (43.2%), both of which were significantly better than the placebo group (24.9%) at four weeks. At 12 weeks the response rate for the 2 mg treated group was 40.3%, while 44.8% of those receiving 6 mg responded, again both treatments were significantly better than the placebo group (26.9%). In addition, satisfaction with bowel habits improved and overall bothersomeness of symptoms decreased in patients receiving Zelmac. Once the 12-week treatment period with Zelmac was over, patients' symptoms returned within two weeks.

The study also showed that Zelmac was well tolerated in female and male patients over the duration of the study. While the most frequent adverse events reported during the study were headache and cold-like symptoms (nasopharyngitis), they occurred more often in placebo-treated patients. Diarrhea was also reported as an adverse event and was generally mild or moderate in severity, of short duration (median <2 days), occurred only once in the majority of patients, and had a low discontinuation rate (<1%). No clinically significant ECG changes were noted, including QTc interval (duration). Clinical and laboratory parameters examined showed no alterations in electrolytes or vitamin absorption. Overall, this study with more than 1300 patients supports the safety and tolerability profile of this potential new therapeutic option for patients with chronic constipation.

* In the US, Canada, Philippines and South Africa: Zelnorm® (tegaserod maleate), all other countries: Zelmac® (tegaserod)

About the study
This US multicenter, double-blind, placebo-controlled study included patients randomly assigned to 2 mg b.i.d. (n=450) or 6 mg b.i.d. (n=451) doses of Zelmac taken orally or placebo (n=447) for a period of 12 weeks. Successful response was defined as a an increase of at least one CSBM per week compared to baseline and a minimum of seven days of treatment. Stool frequency and bowel habits for all participants were established during the two-week baseline period. The primary efficacy variable was the response during the first month of treatment. Secondary endpoints included response over three months and intensity of specific symptoms (bloating/distention, abdominal discomfort/pain, straining, stool consistency). Satisfaction with bowel habits and bothersomeness of overall symptoms were also assessed.

This study defined chronic constipation as symptoms for at least six months duration with less than three CSBMs per week and straining, incomplete evacuation and/or hard stools. Ninety percent of the patients in the study were women who had constipation symptoms for an average of 19 years.

About constipation
There are approximately 2.5 million constipation related visits to physicians each year in the United States. It is estimated that patients spend approximately $350-400 million annually on over-the-counter laxatives to help alleviate their constipation. Chronic constipation is a prevalent and bothersome disorder that can negatively impact patient's lives. Women are affected two to three times more often than men, and there are approximately four million people in the United States with chronic constipation.

About Zelmac
Zelmac is the first in a new class of medicines, known as 5HT4 agonists (serotonin type 4 agonists) developed especially for the treatment of the multiple symptoms associated with Irritable Bowel Syndrome (IBS) with constipation. By activating $5HT_4$ receptors in the gastrointestinal tract, Zelmac normalizes impaired motility and reduces sensitivity of the intestinal tract. In clinical studies, significantly more patients experienced a general relief of symptoms when treated with Zelmac, such as a decrease in abdominal pain, bloating and constipation. In most patients who responded to Zelmac, the onset of relief occurred within just one week. The medicine was well tolerated and showed a profile of side effects similar to that of placebo.

Zelmac was discovered and developed by Novartis. Zelmac, known in the United States, Canada, Philippines and South Africa as Zelnorm®, is approved in more than 45 countries including Australia, Switzerland, Canada, the United State, Mexico and Brazil. In the Asian Pacific region, Zelmac is also approved for use in Thailand, Singapore, Vietnam and Indonesia.

About DDW
Digestive Disease Week (DDW) is the largest international gathering of physicians, researchers and academics in the fields of gastroenterology, hepatology, endoscopy and gastrointestinal surgery. Jointly sponsored by the American Association for the Study of Liver Diseases (AASLD), the American Gastroenterological Association (AGA), the American Society for Gastrointestinal Endoscopy (ASGE) and the Society for Surgery of the Alimentary Tract (SSAT), DDW takes place May 17-22, 2003 in Orlando, Florida. The meeting showcases approximately 5,000 abstracts and hundreds of lectures on the latest advances in GI research, medicine and technology.

This release contains certain forward-looking statements relating to the Company's business, which can be identified by the use of forward-looking terminology such as

“planned,” “if approved,” “would be,” or similar expressions, or by express or implied discussions regarding potential new indications for Zelmac, or potential future sales of Zelmac. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results with Zelmac to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantees that the data described above will result in any new indications for Zelmac, or that Zelmac will reach any particular sales levels. Any such success can be affected by, among other things, uncertainties relating to product development, future clinical trial results, adverse regulatory actions or delays, government regulation generally, the ability to obtain or maintain patent or other proprietary intellectual property protection, competition in general and other risks and factors referred to in the Company's current Form 20-F on file with the Securities and Exchange Commission of the United States.

Novartis AG (NYSE: NVS) is a world leader in pharmaceuticals and consumer health. In 2002, the Group's businesses achieved sales of USD 20.9 billion and a net income of USD 4.7 billion. The Group invested approximately USD 2.8 billion in R&D. Headquartered in Basel, Switzerland, Novartis Group companies employ about 77 200 people and operate in over 140 countries around the world. For further information please consult http://www.novartis.com.

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