

## **Research supports Multitarget Approach to Alzheimer's**

### **Heel at Neuroscience 2011: Preclinical Studies indicate symptom and disease modifying effect of a natural complex medication**

**Washington DC (USA) / Baden-Baden (Germany) – The Neuroscience convention in Washington is the premier venue for neuroscientists from around the world to debate cutting-edge research on the nervous system. More than 36,000 attendees came together in Washington DC from November 12-16, 2011. Here, Heel presented latest studies on a multitarget medication based on low dose natural substances that has proven to positively influence both symptoms as well as disease-related mechanisms of Alzheimer's.**

Dementia describes the serious loss of neurons causing diminishing cognitive functions such as remembering, producing and understanding language, solving problems, and making decisions. The most common cause of dementia is Alzheimer's disease. As scientists from the John Hopkins University in Baltimore (USA) have estimated, there were 26.6 million cases of Alzheimer's disease worldwide in 2006. By 2050, they expect this number to quadruple. 1 in 85 persons will then be affected and in need of care, making Alzheimer's one of the most costly diseases for society.

However, no preventive or curative therapy is available today. The few drugs that have been approved by regulatory agencies offer only a small symptomatic benefit. "Alzheimer's is a multi-factorial disease. This calls for a change in the therapeutic paradigm towards a multitarget approach", says Dr. Bernd Seilheimer, Head of Bioregulatory Development at Biologische Heilmittel Heel GmbH in Baden-Baden (Germany).

#### **Alzheimer calls for multitarget medication**

The benefit of a multitarget approach has now been demonstrated in preclinical studies. Hereby a medication was tested that is based on a combination of several natural substances in low doses. Initial studies using the electroencephalogram (EEG) as an approved standard

method in medical diagnostics indicated strong effects on cognitive functions.

The gene clusters (in vivo) affected by the medication were identified at the St. Laurent Institute in Cambridge, MA (USA) using “Next Generation” genomics on the Helicos Genetic Analysis Platform. Based on these results, the effect on the processing of amyloid precursor protein (sAPP $\alpha$  and sAPP $\beta$ ), as well as neuronal growth and synaptic levels was determined at the University Hospital of Ulm (Germany) using molecular biological techniques.

„We are fascinated by the results“, says Dr. Bernd Seilheimer from Heel. “This homeopathically prepared medication leads to significant changes in the gene networks associated with synaptic function and plasticity. It significantly reduces the gene expression of APP and BACE, responsible for the formation of  $\beta$ -amyloid plaques which hallmark Alzheimer’s disease. Upon treatment, axons of neurons even grew faster and longer than under saline control conditions.”

#### **Studies in-vitro and in-vivo verify efficacy**

Independently from each other, additional murine in-vivo tests were conducted at two contract research organizations in France and in Finland. Through scopolamine pre-treatment, cognitive functions were attenuated. Administration of different dosages of the preparation in comparison to the “Gold Standard” donepezil revealed that the abilities to orient, to sensitively recognize objects and to remember improved. This could be observed in several behavioral tests.

„All studies have confirmed our earlier observations: this medication has proven to enhance the learning and memory performance significantly in a dose-dependent fashion“, says Dr. Bernd Seilheimer from Heel. “It showed at least as effective as the Gold Standard at all tested behavioral models. In addition, it is very well-tolerated. No negative side-effects could be documented with the natural preparation. Following the new paradigm, multitarget preparations could become a natural alternative to conventional preparations for treating complex diseases such as Alzheimer’s.”

*572 words, 4002 characters (incl. blanks)*

#### **Related presentations held during Neuroscience 2011:**

- **Dr. K. Roeska**, Heel: “A multicomponent medication exerts multiple beneficial effects related to cognitive function”,  
**Nanosymposium 532**: “Alzheimer’s Disease: In Vivo Therapeutics I”, Tuesday, Nov. 15, 2011, 8:00 AM, Walter E. Washington Convention Center, Room 140A
- **Dr. C. Schnack**, University of Ulm: “A multicomponent drug targets the mechanisms related to Alzheimer disease: An in vitro

assessment",

**Poster 667** "Synaptic Biology Related to Alzheimer's Disease II", Tuesday, Nov. 15, 2011, 01:00 PM, Walter E. Washington Convention Center, Hall A-C.

- **Dr. T. Heikkinen**, Cerebricon: "Beneficial effect of a multicomponent medication (HE-300) on scopolamine-induced social transmission of food preference in mice and passive avoidance deficits in rats", **Poster 878** "Alzheimer's Disease and Other Dementias: Cognitive Function", Wednesday, Nov. 16, 2011, 04:00 PM, Walter E. Washington Convention Center, Hall A-C.
- **Dr. E. Andriambeloston**, Neurofit: „A multicomponent medication enhances cognitive function in vivo“, **Poster 933** "Animal Cognition and Behaviour II", Wednesday, Nov. 16, 2011, 02:00 PM, Walter E. Washington Convention Center, Hall A-C

*Heel is a pharmaceutical company that develops, manufactures and distributes medications based on natural substances. Being the global leader in homeopathic combination preparations, the company is also a pioneer in the field of scientific research in natural healthcare. In cooperation with academic institutions, Heel actively fosters the concept of Integrative Medicine and is striving to build the bridge between homeopathy and conventional medicine to improve patient care and health.*

*The 'Biologische Heilmittel Heel GmbH' with its corporate headquarters located in Baden-Baden/Germany and a staff of 1,300, achieved an annual turnover of 184 million Euros in 2010 – more than 70 percent of it outside of Germany. Heel medications are available through subsidiaries and distribution partners in over 50 countries around the world. [www.heel.com](http://www.heel.com)*

***Dr. Bernd Seilheimer** is the Head of Bioregulatory Development at Biologische Heilmittel Heel GmbH in Baden-Baden (Germany). In this role he is responsible for the broadening of the pre clinical scientific knowledge base related to Heel's product portfolio. He makes sure that state-of-the-art technology platforms are applied and cooperations with centers of excellence are established. Dr. Seilheimer gained his Ph.D. at the University of Heidelberg and was awarded a research fellowship at the Harvard Medical School (HMS). As an expert for the Central Nervous System (CNS) and Alzheimer's, he worked at Roche and headed the CNS Research at Schering where he later became the Head of Global R&D Risk Management. From 2002-2010 he was a board member of the European Neuroscience Institute (ENI) in Goettingen. From 2006 on, he has been a member of the Council of Scientific and Business Advisors of the Johnnie B. Byrd Institute, Florida, USA. [www.heel.com](http://www.heel.com)*



Photo caption: Dr. Bernd Seilheimer, Head of Bioregulatory Development at Biologische Heilmittel Heel GmbH in Baden-Baden (Germany): Preclinical studies demonstrate symptom and disease modifying effect of a natural complex medication on Alzheimer's. Source: Biologische Heilmittel Heel GmbH

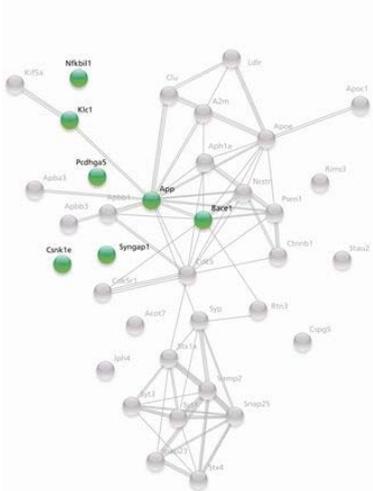


Image caption: „Next Generation“ genomics was used to visualize the changes of gene expression levels. The image shows the network of genes which play a role in cognitive function. The gene dots highlighted in green show the genes affected by the natural complex medication. It significantly reduces the gene expression of APP and BACE, responsible for the generation of  $\beta$ -amyloid, leading to plaque formation which hallmarks Alzheimer's disease. Source: Biologische Heilmittel Heel GmbH

Picture in printable quality: <http://www.oha-communication.com/heel>

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