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## Promising research results with EndoS published in PNAS

**Hansa Medical research partners Dr Kutty Selva Nandakumar and professor Rikard Holmdahl at Karolinska Institute, and associate professor Mattias Collin at Lund University have published unique and commercially interesting findings regarding the enzyme EndoS in the distinguished scientific journal PNAS (Proceedings of the National Academy of Sciences).**

EndoS, Endoglycosidase from *Streptococcus pyogenes*, is an enzyme that modifies the glycan structure present on antibodies. Nandakumar and collaborators show that antibodies modified by EndoS gains unique anti-inflammatory properties and can potentially be used for the development of novel biopharmaceuticals for the treatment of autoimmune diseases. The study entitled "*Dominant suppression of inflammation by glycan-hydrolyzed IgG*" will be published in the May 2013 edition of PNAS and is available at [www.pnas.org](http://www.pnas.org).

The discovery has been patented by Hansa Medical and the company primarily works with the possibility to enhance the anti-inflammatory properties of IVIG-products.

IVIG (*Intravenous immunoglobulin*) is a biopharmaceutical product in which the active pharmaceutical ingredient is human antibodies (IgG) purified from blood plasma of thousands of blood donors. IVIG is used as intravenous treatment of immunodeficiency as well as anti-inflammatory treatment of numerous autoimmune diseases and transplant rejection. In 2009 the market for IVIG-products was 5,6 billion USD. IVIG doses being used today for anti-inflammatory treatment are very high (up to 2 grams per kilogram body weight). The Hansa Medical vision for EndoS, in collaboration with major IVIG-producers or on its own, is to create EndoS-processed IVIG-products with enhanced anti-inflammatory effect and reduced dose, which has the potential to significantly lower production costs of IVIG-products per dose.

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### ABOUT HANSA MEDICAL

Hansa Medical pursues clinical development and commercialization of innovative pharmaceuticals and diagnostic methods for the benefit of patients with serious and rare inflammatory diseases. The portfolio includes a marketed diagnostic product, a drug candidate in Phase I trial, and a preclinical research project. Major shareholders are Bo Håkansson via Farstorps Gärd AB, and Bengt Ågerup via Nexttobe AB. Hansa Medical is listed on NASDAQ OMX First North (HMED) and Remium Nordic AB is the company's Certified Adviser.

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