



## **PRESS RELEASE**

Stockholm, February 14, 2005

### **ELEKTA CHOSEN AS SUPPLIER OF MEG SYSTEMS TO LEADING INSTITUTIONS IN UNITED KINGDOM, JAPAN AND CHINA**

**Elekta Neuromag™, the world-leading equipment for non-invasive registration of nerve cell activity using magnetoencephalography (MEG) technology, receives further endorsement by recent orders from The University of Oxford in UK, Yamagata University Hospital in Japan and Wuhan University Hospital in China.**

Using Elekta Neuromag™, neurosurgeons, neurologists and psychiatrists at these renowned institutions, all with national leadership and international reputation, will now be able to non-invasively register nerve cell activity in the brain in real time, using the ability of the MEG technology to measure the intensity of very weak magnetic fields generated by electrical activity in the brain. This diagnostic tool increases the ability to understand and to improve treatment of functional disorders.

"We are pleased to be working with Elekta and the Elekta Neuromag™ system. We fully believe that this will lead to increased quality of patient informed consent, better physician care and follow up," says Professor Takamasa Kayama from Yamagata University Hospital in Japan.

These orders – with a total order value of around SEK 50 M booked in October through January – represent a further advancement of the previously announced establishment of an international network of Elekta Neuromag™ research centers.

#### **Ongoing development of clinical protocols**

Non-invasive, real-time brain mapping and monitoring is considered as one of the most exciting developments in neuroscience today and around the world researchers are developing clinical MEG protocols. The list of new applications is steadily growing and includes pre-surgical mapping for neurosurgery as well as MEG-MRI integration to enhance the accuracy of surgical navigation as well as planning of open surgery and radiation treatments.

"The brain is the most complex structure in the human body", explains Professor Anthony Bailey at The University of Oxford's Department of Psychiatry, located at the Park Children's Hospital, and continues "In investigation and treatment of brain disorders, whether it be tumors, neurodegenerative diseases or functional disorders, it is of utmost importance to gather as much information as possible about the individual patient's brain. For this we have a multitude of tools. Structural information comes from CT and MRI, metabolic information from PET, functional information from fMRI and we also have a number of cognitive tests at our disposal. But up until now, we have not had a good enough tool to combine information about temporal and spatial localization of relevant functional centers in



the brain. Using MEG technology, we can determine the function of different parts of the brain for each specific patient in the current stage of his or her development. This information can give us an important piece of the puzzle for diagnosing and plan treatment for patients with brain disorders or related diseases.”

“At The University of Oxford, our Elekta Neuromag™ will be used to record and analyze neuronal responses in humans of all ages and a variety of clinical conditions, with a special emphasis on neurodevelopmental disorders, dementia and rehabilitation,” says Professor Bailey. “We will employ a broad spectrum of experimental paradigms and we expect to carry out clinical studies of anaesthetized patients. We also plan to make the system available to collaborating scientists and clinicians for data acquisition, data analysis, and data sharing. And the data we obtain from this MEG system will be integrated with data from other modalities, specifically, MRI, fMRI, PET, and EEG.”

### **Unsurpassed technology**

Elekta Neuromag™ 306 MEG channels sensor array has higher density than any other system on the market and thus covers the brain better with a better representation of brain activity than any other MEG system. With the industry’s lowest noise to signal ratio, meaning that more useful information is acquired, and thus also the highest yield of information per sample.

### **Alternative for epilepsy patients**

Elekta is currently also focusing on research programs for non-invasively locating epileptogenic zones, since MEG is proven useful for locating these zones in relation to other functionally important areas of the brain. It is believed that MEG technology increasingly will be used to localize functional targets prior to non-invasive radiosurgery as well as conventional neurosurgery, which is an increasingly common alternative for patients with drug-resistant focal epilepsy.

Ongoing research and development in other areas include cerebrovascular disease and mild brain trauma; psychiatric disorders, such as schizophrenia and depression; learning disorders, such as dyslexia; as well as normal cognitive functions underlying memory and language.

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Elekta is a world-leading supplier of advanced and innovative radiation oncology and neurosurgery solutions and services for precise treatment of cancer and brain disorders. Elekta's solutions are clinically effective, cost efficient and gentle to the patient.

For additional information about Elekta, please visit [www.elekta.com](http://www.elekta.com)