



## NEWS RELEASE

### IMEC, VIB and K.U.Leuven launch pioneering brain research

Leuven, Belgium – June 3, 2009 – IMEC, Europe's leading independent nanoelectronics research center, VIB, Flanders' leading life science institute, and the Leuven University, K.U.Leuven, set up a joint basic research initiative to unravel the neuronal circuitry of the human brain: Neuroelectronics Research Flanders (NERF). Supported by the Flemish Government, NERF will look into fundamental neuroscientific questions through collaborative, interdisciplinary research combining nanoelectronics with neurobiology. It intends to push the boundaries of science, by zooming in on the working of neurons at an unprecedented level of detail. In the long run, NERF will generate new insights in the functional mapping of the brain, as well as research methodologies and technologies for medical applications, i.e. diagnostics and treatment of disorders of the central and peripheral nervous system.

NERF will be housed on the IMEC campus where researchers will work in cross-disciplinary teams, benefitting from IMEC's state-of-the-art clean room infrastructure and a new 1,000m<sup>2</sup> neurolab. NERF will be organized around teams of top-notch researchers doing world-class basic research. They will be able to work closely together with a wide range of experts from the 3 founding fathers, providing a unique leverage. By 2014, NERF aims to expand its team to about 50 international top-researchers. NERF starts off with a 3 million euro research grant from the Flemish Government for the first 3 years. IMEC, VIB and K.U.Leuven will equally invest in NERF.

"NERF fully leverages and complements IMEC's semiconductor research and infrastructure and that makes it unique in comparison to other neuroscience centers. Today, both neurobiology and nanoelectronics work at the same dimensions. Therefore, it becomes possible to develop nanoscale structures that "listen in" to neural circuits, learn their "language", actively communicate with them and thus detect pathology at an earlier stage than currently possible," said Kris Verstreken, director Human++/BioNanoElectronics at IMEC. "NERF researchers will unravel the



## **NEWS RELEASE**

functioning of the brain and the peripheral nervous system through intensive application of these new tools. This will yield vital knowledge for the pharmaceutical and medical industry and is crucial for the study of pathology such as Parkinson's disease, Alzheimer's disease or even for psychiatric disorders. Advanced therapies are often a serendipitous result of such fundamental research."

"NERF will focus on basic neurobiological questions, best addressed through an interdisciplinary approach using cell biology, genetics, nanoelectronics and nanoscale engineering. Combining these approaches in one new grassroots initiative is for the time being unique in the world – and quite exciting, as can be seen from the very enthusiastic response of the research community involved worldwide", says Jo Bury, Managing Director of VIB. "We capitalize on the tremendous opportunity of having the background technologies and approaches available at high excellence level in the research labs of the 3 founding partners of NERF."

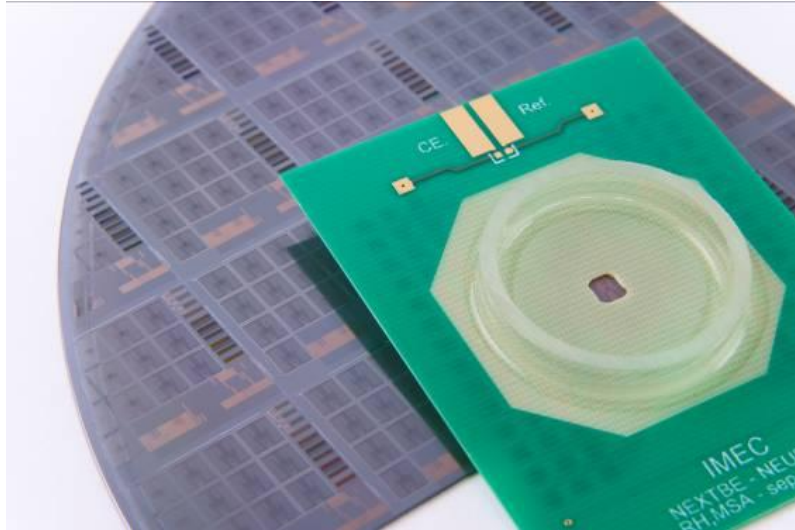
"The link of neurobiology and nanoelectronics with the imaging, data-mining and translational medicine competencies available at K.U.Leuven, makes our partnership unique and highly promising. We are convinced that NERF will become the cornerstone of a vibrant, path breaking community of scientists and engineers. We all look forward to this unique research journey;" says Koenraad Debackere, Managing Director of K.U.Leuven R&D.

NERF will officially take off on October 29, 2009 with a first assembly of the scientific advisory board. On this occasion the founding partners organize a unique nanoelectronics workshop to discuss the research roadmap of NERF with some 50 top world experts in different disciplines of importance to the success of NERF.

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## NEWS RELEASE



Packaged chip for in-vitro measurement of neuron activity

### **About IMEC**

IMEC is a world-leading independent research center in nanoelectronics and nanotechnology. IMEC vzw is headquartered in Leuven, Belgium, has a sister company in the Netherlands, IMEC-NL, offices in the US, China and Taiwan, and representatives in Japan. Its staff of more than 1650 people includes about 550 industrial residents and guest researchers. In 2008, its revenue (P&L) was EUR 270 million.

IMEC's More Moore research aims at semiconductor scaling towards sub-32nm nodes. With its More than Moore research, IMEC looks into technologies for nomadic embedded systems, wireless autonomous transducer solutions, biomedical electronics, photovoltaics, organic electronics and GaN power electronics.

IMEC's research bridges the gap between fundamental research at universities and technology development in industry. Its unique balance of processing and system know-how, intellectual property portfolio, state-of-the-art infrastructure and its strong network worldwide position IMEC as a key partner for shaping technologies for future systems.

Further information on IMEC can be found at [www.imec.be](http://www.imec.be).

### **About VIB**

VIB, the Flanders Institute for Biotechnology, is a non-profit research institute in



## **NEWS RELEASE**

the life sciences. Some 1100 scientists and technicians conduct strategic basic research on the molecular mechanisms that control the functioning of the human body, plants, and micro-organisms. Through a close partnership with four Flemish universities – Ghent University, the Katholieke Universiteit Leuven, the University of Antwerp, and the Vrije Universiteit Brussel – and a solid investment program, VIB unites the forces of 65 research groups in a single institute. Their research aims at fundamentally extending the frontiers of our knowledge. Through its technology transfer activities, VIB strives to convert the research results into products for the benefit of consumers and patients. VIB also develops and distributes a broad range of scientifically substantiated information about all aspects of biotechnology. More info at: [www.vib.be](http://www.vib.be).

### **About K.U.Leuven**

The K.U.Leuven (Katholieke Universiteit Leuven) was founded in 1425. Currently, the K.U.Leuven has an annual research budget of about 300 million Euro, over 3000 Ph D students (of which more than 25% international), over 470 doctoral degrees per year (of which more than 25% international), over 5100 researchers (measured in full-time equivalent), over 3600 publications in international peer-reviewed academic and scientific journals per year. The K.U.Leuven is ranked the 4th university in FP6 and the 6th in the Leiden ranking on publication output. The university has a long-standing tradition in top-level research in life sciences, engineering, exact sciences and humanities. By the creation of multidisciplinary centres of excellence and by supporting strong links with UZ Leuven, one of the largest European university hospitals, it actively supports cross-border innovations. Via its technology transfer office K.U.Leuven Research & Development, the transfer of knowledge and technology between the university and the industry is promoted and supported. It provides an integrated approach to technology transfer covering contract & collaborative research, patenting & licensing and spin-off creation. More info at: [www.kuleuven.be](http://www.kuleuven.be)

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