Cancer treatment with magnetic nanoparticles
(Keynote lecture, Session B3)

Andreas Jordan

Dr. Andreas Jordan, who was born in 1959, is the CSO and founder of MagForce Nanotechnologies AG. He began his career with studies in biology at the Freie Universität (FU) Berlin (= Free University of Berlin) and additional studies in biochemistry at the Fakultät für Chemie der Technischen Universität Berlin (= Faculty for Chemistry at the Technical University of Berlin). His doctorate, which was evaluated as 'very good' and completed in 1993, addressed the production of nanoparticles and their use in cancer therapy. The work was based on research projects which were started in 1987 – long before the subject of nanotechnology had achieved international significance. This was followed by work in scientific project management for the Virchow-Klinikum der FU (= Virchow Clinic at the FU) (now the Charité) as well as for the Schering subsidiary 'Institut für Diagnostikforschung GmbH'.

Parallel to the biological work, Jordan also worked - on the basis of the many experimental structures for the animal tests - on developing an alternating magnetic field therapy system, which would later be used to treat patients. In order to finance the entire enterprise, in 1997 Jordan founded "MFH Hyperthermiesysteme GmbH" with venture capital. While the research on basic principles was largely funded by the Deutsche Forschungsgemeinschaft (German Research Association) as part of a special project, MFH Hyperthermiesysteme was involved specifically in product development. To bring the second component of the new cancer therapy procedure into a state of product readiness, Jordan founded MagForce Applications GmbH in 2000 for the production of specific nanoparticles for the new cancer therapy. In 2004 both companies were merged and renamed in MagForce Nanotechnologies.

Andreas Jordan has already given more than 500 scientific lectures about nano-cancer therapy. He authored more than 40 articles for peer-reviewed scientific journals, and cleared the way for a total of twelve international patent families (some licensed). The contacts to NASA, the National Cancer Institute (NCI), the Institute of Nanotechnology (IoN), the American drug licensing authority FDA, and some famous US hospitals, such as the University of California, San Francisco (UCSF), the Cleveland Clinic Foundation (CCF), Duke University, as well as to Asia provided a further foundation for his worldwide engagement.