

Editorial for International Neuroscience Journal

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During the last decades knowledge in neuroscience has tremendously increased. We are witnessing a massive transfer of basic neuroscience knowledge into applications and medicine. Molecular, cellular and developmental biology, biometrics and biostatistics, as well as functional analyses have influenced research and application of diagnostic routines and assessment, and made possible regeneration and bionic therapy research.

In neurosurgery, new technologies for surgical procedures have become established. Molecular analyses of tumor tissue have opened the understanding for subgroups of gliomas. New therapeutic strategies have been developed. The early detection of small lesions in the brain by magnetic resonance imaging (MRI) and the planning of safe approaches by use of intraoperative navigation have improved our results. In many departments intraoperative MRI and electrophysiological monitoring for a complete removal of tumors and the avoidance of neurological deficits are applied on a routine basis. Interventional occlusions of AVMs or aneurysms have changed the treatment of the vascular diseases. Radiotherapy and radiosurgery have high impact on the successful therapy of tumors. The technical explosion in the development of instrumentation has revolutionized the field of spine surgery. All these developments have improved surgical results for the sake of our patients.

The demand for innovations starts in the daily clinical work. Technical restrictions and therapeutic limitations are recognized by physicians. They ask for resolutions, look for collaborations with other disciplines e.g., with researchers in basic sciences, with engineers, physicists, biochemists etc. We talk about “from bench to bedside”, however, we should name it “from bedside to bench and back to bedside”.

The new International Neuroscience Journal has the goal to provide a platform for basic science, the development of technical advances in a preclinical stage, molecular investigations, new imaging technologies, in vitro investigations, animal work, all with clinical relevance or relating to clinical neuroscience problems, as well as for clinical studies and their implication and translation into clinical routine. The journal will encourage young neuroscientists to follow their ideas and continue their research work. Not all new ideas are primarily accepted by the scientific and clinical community. Critical discussions sharpen and optimize innovative strategies. The new journal will foster ambitious young scientists and clinicians in providing a platform even for preliminary results. We are aware of the numerous journals that are already available. But we still hope to open up a new portal for young clinical scientists in the field of neuroscience.