

Dr. Serge Marbacher is a cerebrovascular neurosurgeon. His main translational and clinical research is focused on intracranial aneurysm (IA) and subarachnoid haemorrhage (SAH). In 2003 he helped to establish and develop the first cerebrovascular research laboratory in Switzerland. Since that time this research group has published more than 40 publications and book chapters and provided significant contributions to the fields of IA and SAH research.

His postgraduate studies, completed at the Queen Square Institute of Neurology, University College London, UK in 2007, concerned standard parameters in SAH animal models. Based on this knowledge he and his team successfully introduced and established a novel examiner-independent SAH model at the University of Bern, Switzerland in 2008. The organization of the workshop session "Animal Models for the Study of Delayed Cerebral Vasospasm and Early Brain Injury after SAH" held during Vasospasm 2013, Lucerne, Switzerland was a starting point for discussions on more standardized and transparent performance of in-vivo SAH experiments.

A personal grant from the Swiss National Science Foundation allowed Dr. Marbacher to perform basic research at the Biomedicum Research Institute, University of Helsinki, Finland and to gain extensive expertise in IA wall biology. The new aneurysm model, which was developed during his PhD thesis, features different wall conditions and allows studying wall degeneration, aneurysm growth and rupture. This model serves as basis for ongoing research on aneurysm wall biology and healing responses after endovascular therapy. Current research efforts focus on treatment options to prevent aneurysm rupture and restoration of the affected parent artery using bioresorbable materials.