

# Synthetic tumor stem cells and co-clinical organoid platform for the individualization of cancer therapeutics



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### Biosketch

Dr. Kahlert's work exploits stem cell technologies for the development of precision medicine. His efforts are focused on the clinical translational aspects of stem cell biology in a global growing clinical need: oncology. His work bridges developmental biology, stem cell sciences, chemistry and surgical oncology, requiring the development and exploitation of structured networks incorporating basic science, biotechnology, data science and conservative and surgery. In Magdeburg, his translational, application-oriented research focuses on the following clinical relevant areas: a) personalized in vitro patient avatar platform for colon, pancreas and hepatocellular cancer patients to develop improved therapy such as selecting optimal neoadjuvant care or diminish residual tumor cells to metastatic spread of the disease. b) Intraoperative molecular diagnostics to allow intraoperative targeted therapy application to improve robotic surgery performance. He utilizes nanotechnology to optimize therapeutic potential of drug and drug candidates. On the basic research side, he investigates the relevance of peripheral nerve - to-pancreas/colon tumor cell interaction for tumorigenesis and emergence of therapy resistance. He serves as an accredited member in international standardization committees such as ISO or D.I.N. e.V..