

Biography Timo L.M. ten Hagen

Timo ten Hagen is an associate professor of Surgical Oncology and head of the Laboratory Experimental Surgical Oncology (LECO) since 2005. After an MSc in biology from the university of Utrecht, research at the Centers for Disease Control and Emory University in Atlanta, he did a PhD at the Erasmus MC in Rotterdam. In 1995 he joined the department of Surgery and established LECO.

Initially Dr. ten Hagen and his team studied application of local chemotherapy. He discovered that TNF increases local drug accumulation and therefore response to therapy. He extended these observations to systemic treatment with nano-carrier-based chemotherapy in combination with hyperthermia. Improvement of local accumulation of a chemotherapeutic is achieved by alteration of compound pharmacokinetics by encapsulation in a nano-carriers, and by alteration of tumor pathophysiology by hyperthermia.

Secondly, Dr. ten Hagen and his team are interested in understanding what drives tumor progression at the micro-environmental and cellular level. In specific he focusses on the individual capacities a tumor cell might have and how these relate to progression.

To better study drug delivery and to be able to observe tumor cell behavior Dr. ten Hagen established a high resolution intravital microscopy platform, enabling in vivo examination of processes in the living mouse at the sub-cellular level.