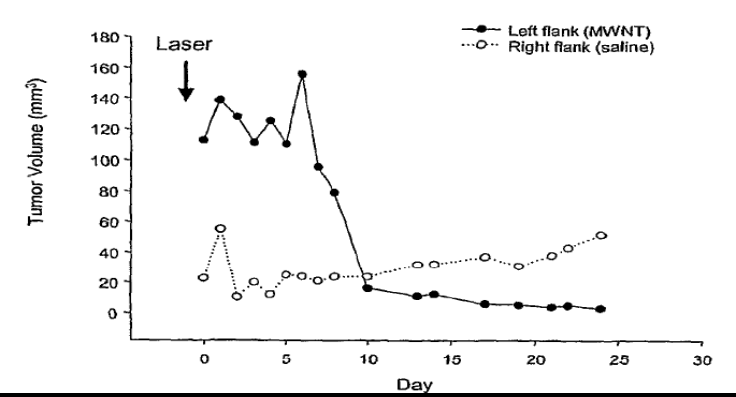
Hyperthermic Nanotechnologies for Cancer Therapy

Dr. Steven Akman, Department of Cancer Biology
Dr. David Carroll, Center for Nanotechnology and Molecular Materials
Dr. Frank Torti, Department of Cancer Biology
Dr. Suzy Torti, Department of Biochemistry
Dr. Omkaram Nalamasu, Rennselaer Polytechnic Institute
Dr. Pulickel Ajayan, Rennselaer Polytechnic Institute

Technology Description

Wake Forest University researchers in Cancer Biology and the Center for Nanotechnology and Molecular Materials have collaborated with researchers at Rennselaer Polytechnic Institute to develop a highly-effective nanoparticle-based cancer therapy. This unique chemotherapeutic-free technology was highlighted in an International Journal of Nanomedicine manuscript that showed that **96% of kidney cancer cells can be killed** after a single 4 minute treatment. The *in vitro* data presented in that manuscript has been followed up with extraordinary *in vivo* data published in PNAS that resulted in a **100% reduction** of a tumor on the flank of a nude mouse in ten days **after one 30-second treatment**! Even more remarkable, the reduction in tumor size remained constant up to the end of the experiment **(30 days later)!**



Additional Information

- Patent Cooperation Treaty (PCT) Application no. 2007/139936
- "Thermal Ablation Therapeutics Based on CNx Multi-walled Nanotubes" International Journal of Nanomedicine (2007) Vol. 2, Issue 4
- "Long-term Survival Following a Single Treatment of Kidney Tumors with Multiwalled Carbon Nanotubes and Near-Infrared Radiation" PNAS (2009) Vol. 106, No. 31

Licensing Contact Information

Stephen J. Susalka, Ph.D.

Assistant Director

Email: ssusalka@wfubmc.edu

Phone: (336) 716-3729

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