New Lab Positions

Position 1 in Nanotechnology for Cancer Molecular Imaging

**Description of project:** A postdoctoral position is available immediately to focus on using pH-activatable fluorescent nanoprobes to amplify tumor contrast with significant background suppression for image-guided resection of head and neck tumors (HNCA). Prospective candidates will have the opportunity to work in a highly productive multi-disciplinary environment with a team of experts in basic and translational research. In particular, the candidate will have the opportunity to work with Baran D. Sumer, M.D., a head and neck surgeon who has vast expertise in robotic surgery of HNCA tumors. The proposed study will use state-of-the-art nanotechnology and molecular imaging techniques and tumor model systems (e.g. tumor chamber models) to investigate the imaging efficacy of novel nanoprobes that target tumor stroma and cancer cells *in vivo*, and eventually guide surgical resection of orthotopic HNCA tumors in animals. Funding will be provided by CPRIT grant support.

Applicants must hold a Ph.D. degree with extensive knowledge and experience in molecular imaging, cancer biology, tumor physiology, or related fields. Preferences will be given to candidates with a combination of the following skills: cell culture, confocal imaging, small animal NIR imaging, common tissue staining techniques, and animal study.

Position 2 in β-Lapachone Nanotherapeutics

**Description of project:** A postdoctoral position is available immediately to focus on the study of molecular mechanisms of β-lapachone and related quinone-based drugs for enzyme-bioactivatable therapy of cancer. New drug candidates and nano delivery systems will be developed to evaluate their safety and antitumor efficacy in preclinical animal models. Prospective candidates will have the opportunity to work in a highly productive and multi-disciplinary environment with a team of experts in basic and translational research. In particular, the candidate will have the opportunity to work with a renowned cancer biologist, Dr. David Boothman, who has great expertise in enzyme-targeted therapy of cancer. The proposed study will use molecular, cell biology and imaging techniques to investigate pharmaco-cores that induce unique cell death mechanisms, design novel nano delivery systems to improve pharmacokinetics, and evaluate antitumor efficacy in tumor-bearing mice *in vivo*. Funding will be provided by CPRIT grant support.

Applicants must hold a Ph.D. degree with extensive knowledge and experience in medicinal chemistry, pharmacology, cancer biology, or related fields. Preferences will be given to candidates with biochemistry or pharmaceutics background and familiar with drug metabolism and medicinal chemistry.

Please email curriculum vitae (CV), as well as names and contact information of three (3) references to: jinming.gao@utsouthwestern.edu