

# NanoScience and Emerging Technology in Cancer Research



UNIVERSITY of CALIFORNIA  
SAN DIEGO  
MEDICAL CENTER  
MOORES CANCER CENTER

Dates: Dec 10, 2011: 12 noon to 7:30PM and Dec 11, 8AM to 2PM

Location: UCSD Moores Cancer Center; La Jolla, CA

## SATURDAY: Otterson Boardroom (2<sup>nd</sup> floor)

### Targeted and untargeted nanoparticles for drug delivery and enhanced radiation therapy

- 12-1230 "Precisely size controlled drug-silica nanoconjugate for cancer therapy" (INVITED) [L. Tang](#), M. Fan, and J. Cheng. [U. III, Champaign Urbana](#)
- 1230-1250 "Focused Ultrasound Induced Fluorescence Modulation of Contrast Agents for Optical Cancer Detection" [C. Schutt](#), M. Benchimol, M. Hsu, D. Hall, R. Mattrey, S. Esener [UCSD](#)
- 1250-110 "Biomimetic Long-Circulating Nanoparticles for Combinatorial Drug Delivery" [C.-M. J. Hu](#), R. H. Fang, S. Aryal, and L. Zhang [UCSD](#)
- 110-130 "Improved Therapeutic Potential and Cytotoxicity of Mithramycin Analogues through Nanoparticulate Formulations" [D. Scott](#), J. R., Y. Bae. [U Kentucky](#)

### Break 130-150

- 150-220PM "Multifunctional iron platinum stealth immunomicelles for the targeted imaging and therapy of prostate cancer." (INVITED) [R. M. Taylor](#), D. L. Huber, T. C. Monson, M. Bisoffi, and L. O. Sillerud. [U New Mexico](#)
- 220-240 "Encapsulation of staurosporine using a novel intraliposomal stabilization strategy: Therapeutic efficacy in glioma." [R. Mukthavaram](#), R. Saklacha, P. Jiang, Y. Chao, M. Makale, S. Pastorino, V. Fogal, W. Wasrillo, S. Kesari [UCSD](#)
- 240-300 "Targeting of Ovarian Cancer Cells using Folate Functionalized SiO<sub>2</sub> hollow nanoparticles" [S. Sandoval](#), J. Yang, J. Alfaro, A. Liberman, S. Aschemeyer, A. C. Kummel, W. Troglor [UCSD](#)

### Break 300-320

#### Imaging and targeting agents and technology

- 320-350 "Sub-micron Ultrasound Contrast Agents for Multimodal Mesenchymal Stem Cell Imaging" (INVITED) [J. V. Jokerst](#), C. Khademi, and S. S. Gambhir [Stanford](#)
- 350-410 "Automating Tumor Classification with Contrast-Enhanced Ultrasound Perfusion Kinetics" [C. Ta](#), Y. Kono, C. Dietrich, R. Mattrey, A. C. Kummel [UCSD](#)
- 430-450 "Externally triggered On-demand drug release" [S. D. Kong](#), W. Zhang, J. H. Lee, Mi. Karin, and S. Jin [UCSD](#)

### Break 510-510

- 510-540 "DNA-Polymer-Lipid Shelled Microbubbles with Tunable Ultrasound Contrast Properties." (INVITED) [A. P. Goodwin](#), M. A. Nakatsuka, M. J. Hsu, J. N. Cha, and S. C. Esener. [UCSD](#)
- 540-600 "Triple modality reporter with a far-red fluorescent protein for tumor imaging" [C. Felsen](#), M. Whitney, J. Yang, and R. Tsiens. [UCSD](#)
- 600-620 "Towards hydrogen-peroxide activable cell-penetrating peptides - targeting oxidative stress-related diseases" [R. Weinstein](#), R. Tsiens. [UCSD](#)
- 620-700 **Panel Discussion of Most Promising Technology: Sadik Esener, Robert Mattrey MD, Sarah Blair MD, Andrew Kummel, Robert Chin MD**
- 7-730 **NCI Alliance for Nanotechnology in Cancer - A Successful Model to Multi-disciplinary Research and Training - Piotr Grodzinski (NIH/NCI)**

## SUNDAY: Comer Commons (2<sup>nd</sup> floor)

### Externally or environmentally triggered and guided nanoparticles for local delivery of therapeutics

- 800-830 "Ultrasound Ruptured Liposomes for Local Delivery of Biomolecules and Nucleic Acids" (INVITED) [M. Benchimol](#), R. Weinstein, G. Yong, S. Ibsen, Z. Wu, D. Simberg, R. Mattrey, T. Reid, R. Tsiens, S. Esener [UCSD](#)
- 830-850 "Novel Inhalable Magnetic Microparticles for Site-specific Drug Delivery: an Application to Lung Cancer" [A. A. McBride](#), L. R. Lamoureux, D. N. Price, P. Mutil [U New Mexico](#)
- 850-910 "Characterizing pH-Responsive Expansile Nanoparticles for Treating Mesothelioma Malignancies" [A. H. Colby](#), K. A. V. Zubris, M. D. Schulz, Y. L. Colson, and M. W. Grinstaff, [Boston U](#)
- 910-930 "Perfluoropentane Filled Boron Doped Hollow Silica Microspheres for Ultrasound Guided Surgery" [A. Liberman](#), H. P. Martinez, Z. Wu, S. L. Blair, Y. Kono, R. F. Mattrey, A. C. Kummel, W. C. Troglor [UCSD](#)
- 930-950 "Enzyme Responsive Micellar Nanoparticles from Novel Peptide-Polymer Amphiphiles" [M. E. Hahn](#), M.-P. Chien, Ti.-H. Ku, M. P. Thompson, L. Randolph, and N. C. Gianneschi [UCSD](#)
- 950-1010 "High Resolution Quantitative MRI-Guided Nano-Embolization Enhances Drug Delivery to Liver Tumors" (INVITED) [S. Mouli](#), P. Tyler; J. L. McDevitt; A. Eifler; Y. Guo; J. Nicolai; R. A. Klein; W. Li; D. Prociassi; R. J. Lewandowski; R. Ryu; R. Salem; A. C. Larson; R. Omary [Northwestern U.](#)

### 1010-1030

#### Break

### Nanoscience based novel radiology, pathology, and surgical tools

- 1030-1100 "Development of Hydrogel Microfibers to Study Angiogenesis" (INVITED) [S. Barreto Ortiz](#), S. Zhang, H.Q. Mao, and S. Gerecht. [Johns Hopkins](#)
- 1100-1120 "Enhancing Monoclonal Antibody Drug Detection by Developing a Microparticle-based Immunoassay", [N. Mendez](#), M. E. Ruidiaz, A. B. Sanchez, B. T. Messmer, A. C. Kummel [UCSD](#)
- 1120-1140 "Cellular and Biomolecular Isolation Using Synthetic Nanomachines" [D. Kagan](#), W. Gao, J. Wang [UCSD](#)
- 1140-1200 "Lab-on-a-Chip: Clinical Application in Thyroid Cancer" [S. Huang](#), M. Mahalanabis, C. M. Klapperich, J. E. Rossen, [Boston U](#)
- 1200-1220 "High Throughput cell phenotyping for cancer staging" P.-H. Wu, [J. M. Phillip](#), S. Khatau, W.-C. Chen, S. Gupta, A. Maitra, and D. Wirtz [Johns Hopkins](#)
- 1220-1240 "Understanding Molecular Crosstalk During Breast Cancer Progression using 3D Cell Culture Models and Optimally Designed Nanoprobes" [S. Holton](#), A. K. Kodali, A. Nardulli, and R. Bhargava [U. III, Champaign Urbana](#)

### 1240-120

#### Lunch

- 120-200 **Panel Discussion of Most Promising Technology: Sadik Esener, Mike Bouvet MD, Jessica Wang-Rodriguez MD, Steve Howell MD, Nathan Gianneschi**



NCI Alliance for  
**Nanotechnology**  
in Cancer

Developing Small Tools  
with a Big Impact on Cancer