BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
湯學成 Shiue-Cheng (Tony) Tang, Ph.D. Born: Nov-20-1969	Associate Professor / National Tsing Hua University, Taiwan Department of Chemical Engineering / Bioengineering Program

EDUCATION/TRAINING (*Begin with bachelor education and include all higher education and postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
National Cheng Kung University, Taiwan	B.S. & M.S.	1992 & 1994	Chemical Engineering
Georgia Institute of Technology, Atlanta, GA	Ph.D.	2003	Chemical & Biomolecular Engineering
Stanford University School of Medicine, CA	Postdoctoral Fellow	2004	Pediatric Gastroenterology

A. Positions and Honors

Positions and Employment

2008-present Associate Professor, National Tsing Hua University, Taiwan, Dept. of Chemical Engineering / Bioengineering Program

2005-2008 Assistant Professor, National Tsing Hua University, Taiwan, Dept. of Chemical Engineering

2005 Jan-Jul Assistant Professor, Nanyang Technological University, Singapore, Div. of Chemical & Biomolecular Engineering, School of Chemical & Biomedical Engineering

2004 Postdoctoral Training, Div. of Pediatric Gastroenterology, Stanford Univ. School of Medicine, Eric Sibley, M.D., Ph.D., advisor

1998-2003 PhD Training, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology, Athanassios Sambanis, Ph.D., advisor

Honor, Award, Society

- Phi Tau Phi Scholastic Honor Society
- American Gastroenterological Association, Trainee Member, 2004
- American Gastroenterological Association, International Affiliate Member, 2005-present
- Young Investigator Award, National Science Council, 2009 國科會 吳大猷先生紀念獎
- Optical Society of America, Member, 2010-present
- Academic Sinica Junior Research Investigator Award (category: life sciences), 2011 中央研究院 年輕學者研究著作獎（生命科學組）
- Scientific Paper Award by Far Eastern Y. Z. Hsu Science and Technology Memorial Foundation, Taiwan (category: biomedical technology), 2011 有庠科技論文獎（生技醫藥）

B. Journal publications (* indicates corresponding author)

3-D Gastrointestinal Histology (ongoing research focus)

Best Papers

1. Fu YY and **Tang SC***. At the movies: 3-dimensional technology and gastrointestinal histology. ***Gastroenterology***, 139(4): p1100-1105, 2010. (IF: 12.032)
2. Fu YY, Lin CW, Enikolopov G, Sibley E, Chiang AS, and **Tang SC***. Microtome-free 3-dimensional confocal imaging method for visualization of mouse intestine with subcellular-level resolution. ***Gastroenterology***. 137(2): p453-465, 2009. ***Gastroenterology*** *invited us to present a video abstract of this article at the American Gastroenterological Association (AGA)/YouTube website at http://www.youtube.com/watch?v=PaZ_9oWeGb0.*

Others:

3. **Tang SC**, Fu YY, Lo WF, Hua TE, and Tuan HY*. Vascular labeling of luminescent gold nanorods enables 3-D microscopy of mouse intestinal capillaries. ***ACS Nano***, 4(10):6278-84, 2010. (IF: 9.855; a Tsing Hua collaboration between my colleague Prof. Tuan and my labs)
4. Fu YY and **Tang SC***. Optical clearing facilitates integrated 3D visualization of mouse ileal microstructure and vascular network with high definition. ***Microvascular Research***, 80(3):512-21, 2010. (IF: 2.390)
5. Fu YY, Lu CH, Lin CW, Juang JH, Enikolopov G, Sibley E, Chiang AS, **Tang SC***. Three-dimensional optical method for integrated visualization of mouse islet microstructure and vascular network with subcellular-level resolution. ***Journal of Biomedical Optics***. 15(4), Article Number: 046018 (9 pages), 2010. (IF: 3.188; 8/78 in Optics) *This article was selected for the August 15, 2010 issue of Virtual Journal of Biological Physics Research at http://www.vjbio.org.*
6. Tseng SJ, Lee YH, Chen ZH, Lin HH, Lin CY, and **Tang SC***. Integration of optical clearing and optical sectioning microscopy for three dimensional imaging of natural biomaterial scaffolds in thin sections. ***Journal of Biomedical Optics***. 14(4), Article Number: 044004 (9 pages), 2009. *This article was selected for the July 15, 2009 issue of Virtual Journal of Biological Physics Research at http://www.vjbio.org.*
7. Liu YA, Chen Y, Chiang AS, Peng JS, Pasricha PJ*, and **Tang SC***. Optical clearing improves the imaging depth and signal-to-noise ratio for digital analysis and 3-dimensional projection of the human enteric nervous system. ***Neurogastroenterology & Motility***. 23:e446-457, 2011. (*****Co-corresponding; IF: 3.349)

Cellular/Tissue Gene Delivery

1. Yue TW, Chien WC, Tseng SJ and **Tang SC***. EDC/NHS-mediated heparinization of small intestinal submucosa for recombinant adeno-associated virus serotype 2 binding and transduction. ***Biomaterials***. 28(14): p2350-2357, 2007. (IF: 7.882)
2. Tseng SJ and **Tang SC***. Development of poly(amino ester glycol urethane)/siRNA polyplexes for gene silencing. ***Bioconjugate Chemistry***. 18(5): p1383-1390, 2007. (IF: 5.002)
3. Tseng SJ and **Tang SC***. Synthesis and characterization of a novel transfection reagent poly(amino ester glycol urethane). ***Biomacromolecules***. 8(1): p50-58, 2007. (IF: 5.325)
4. Wang ZH, Chien WC, Yue TW and **Tang SC***. Application of heparinized cellulose affinity membranes in recombinant adeno-associated virus serotype 2 binding and delivery. ***Journal of Membrane Science***. 310: p141-148, 2008. (IF: 3.673; 8/134 in Chemical Engineering)
5. Chen CA, Lo CK, Lin BL, Sibley E, and **Tang SC***. Application of doxorubicin-induced rAAV2-p53 gene delivery in combined chemotherapy and gene therapy for hepatocellular carcinoma. ***Cancer Biology & Therapy***. 7(2): p303-309, 2008. (IF: 2.907)
6. Tseng SJ, Chuang CJ and **Tang SC***. Electrostatic immobilization of DNA polyplexes on small intestinal submucosa for tissue substrate-mediated transfection. ***Acta Biomaterialia***. 4: p799-807, 2008. (IF: 4.822; 3/69 in Biomedical Engineering)
7. Fu YY, Sibley E, and **Tang SC***. Transient cytochalasin-D treatment induces apically administrated rAAV2 across tight junctions for transduction of enterocytes. ***Journal of General Virology***. 89: p3304-3308, 2008. (IF: 3.568)
8. Tseng SJ, Chen ZH, and **Tang SC***. Application of heparinized cellulose matrices for substrate-mediated bFGF peptide and transgene delivery to stimulate cellular proliferation. ***Cellulose***. 18: p95-104, 2011. (IF: 2.817; 1/21 in Materials Science, Textiles)

Other Joint Research

1. Li H*****, Shih WH, Shih WY, Chen L, Tseng SJ and **Tang SC**. Transfection of aqueous CdS quantum dots using polyethylenimine. ***Nanotechnology***. 19, Article Number: 475101 (8 pages), 2008. (IF: 3.644)

2. Feng Z, Chen B, **Tang SC**, Liao K, Chen WN and Chan V*****. Effect of cytoskeletoninhibitors on deadhesion kinetics of HepG2 cells on biomimetic surface. ***Colloids and Surfaces B: Biointerfaces***. 75(1): p67-74, 2010. (IF: 2.780)

Doctoral and Postdoctoral Training (artificial pancreas and enteric gene delivery)

1. **Tang SC*** and Sibley E. [Editorial] Genetic modification of somatic gut mucosa: An adeno-associated virus approach. ***Journal of Pediatric Gastroenterology and Nutrition***. 43(2): p158-159, 2006
2. **Tang SC**, Sambanis A, Sibley E*****. Proteasome modulating agents induce rAAV2-mediated transgene expression in human intestinal epithelial cells. ***Biochemical and Biophysical Research Communications***. 331(4):p1392-1400, 2005.
3. **Tang SC**, Sambanis A*****. Differential rAAV2 transduction efficiencies and insulin secretion profiles in pure and co-culture models of human enteroendocrine L-cells and enterocytes. ***Journal of Gene Medicine***. 6(9): p1003-1013, 2004.
4. **Tang SC**, Sambanis A*****. Development of genetically engineered human intestinal cells for regulated insulin secretion using rAAV-mediated gene transfer. ***Biochemical and Biophysical Research Communications***. 303(2): p645-652, 2003.
5. **Tang SC**, Sambanis A*****. Preproinsulin mRNA engineering and its application to the regulation of insulin secretion from human hepatomas. ***FEBS Letters***. 537(1-3): p193-197, 2003.

Patents

1. **Tang SC**, Sambanis A. **USA Patent No: US7250406-B2.** Compositions and methods for the acceleration of protein secretion dynamics.
2. Liu YA, Chiang AS, **Tang SC**. Method for 3-dimensional microscopic visualization of thick biological tissues. Pending.

C. Research Support

Ongoing Research Support

Title: 3D Microscopy of Islets of Langerhans: A Panorama of the Networks of Vasculature and Innervation
Agency: National Health Research Institutes, Taiwan (Integrated Research Grants in Heath and Medical Sciences, NHRI-EX100-10044EI)
Period: 01/01/2011-12/31/2013
Role: Principal Investigator
Amount: $1,850,000 NTD (first year); $1,700,000 NTD (second year); $1,300,000 NTD (third year)

Title: Luminescent nanoparticles for 3-D labeling and microscopy of gastrointestinal vasculature and innervation
Agency: National Science Council, Taiwan (Research Grant, NSC 100-2628-E-007-021-MY2)
Period: 08/01/2011-07/31/2012
Role: Principal Investigator
Amount: $1,666,000 NTD (first year); $1,051,000 NTD (second year)