BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
Michael Z. Lin	Assistant Professor Departments of Pediatrics and Bioengineering Stanford University
eRA COMMONS USER NAME Lin.Michael	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Harvard College, Cambridge, Massachusetts	A.B. (summa cum laude)	1990-1994	Biochemistry
Harvard Medical School, Boston, Massachusetts	Ph.D.	1996-2002	Biological and Biomedical Sciences
UCLA School of Medicine, Los Angeles, California	M.D.	1994-1996, 2002-2004	Medicine
UCSD School of Medicine, La Jolla, California		2004-2009	Pharmacology and Neuroscience

A. Positions and Honors

Positions
- 1992-1994: Undergraduate research assistant, Laboratory of Dr. Fotis Kafatos, Dept. of Molecular and Cellular Biology, Harvard University, Cambridge, Massachusetts
- 1996-2002: Graduate research associate, Laboratory of Dr. Michael E. Greenberg, Division of Neuroscience, Children's Hospital, Boston, Massachusetts
- 1994-1996, 2002-2004: Medical student, UCLA School of Medicine, Los Angeles, California
- 2004-2009: Postdoctoral research fellow, Laboratory of Dr. Roger Y. Tsien, Dept. of Pharmacology and Howard Hughes Medical Institute, University of California at San Diego, La Jolla, California
- 2009-current: Assistant Professor, Departments of Pediatrics and Radiology, Programs in Molecular Imaging and Neuroscience, Stanford University School of Medicine, Palo Alto, California

Honors
- Burroughs Wellcome Career Award for Medical Scientists, 2007
- University of Illinois at Urbana Champagne Young Excellence in Engineering Seminar, 2006
- Jane Coffin Childs Memorial Fund for Medical Research Fellowship, 2005
- Western Student Medical Research Forum Award, 2004
- United States Department of Defense Graduate Fellowship, 1996
- NIH Medical Scholars Training Program Scholarship, 1994
- Harvard University Phi Beta Kappa, 1994
- John Harvard Scholarship, 1992, 1993, 1994
- Harvard Public Service Abroad Fellowship, 1993
- Ford Undergraduate Research Scholarship, 1992-1993

Professional Memberships and Certifications
- Member, Society for Neuroscience
- Member, American Society for Cell Biology
- Member, Biophysical Society
- USMLE Step I and II certified

B. Selected peer-reviewed publications

Lin MZ, McKeown MR, Aguilera T, Shaner NC, Campbell RE, Adams SR, Tsien RY. Fluorescent proteins with excitation in the optical window for intravital imaging in mammals. *Chemistry and Biology* in press.

Shu X, Royant A, Lin MZ, Aguilera T, Levram-Ellisman V, Steinbach PA, Tsien RY. 2009. Mammalian expression of infrared fluorescent proteins engineered from a bacterial phytochrome. *Science* 324:804-807.

Lin JY, Lin MZ, Steinbach P, Tsien RY. 2009. Characterization of engineered channelrhodopsin variants with improved properties and kinetics. *Biophysical Journal* 96: 1803-1814.
Lin MZ, Wang L. 2008. Selective labeling of proteins with chemical probes in living cells. *Physiology* 23: 131-141.
Lin MZ, Glenn JS, Tsien RY. 2008. A drug-controllable tag for specific labeling of newly synthesized proteins in cells and whole animals. *PNAS* 105: 7744-7749.
Shaner NC, Lin MZ, McKeown MR, Steinbach PA, Hazelwood KL, Davidson MW, Tsien RY. 2008. Identification of bright monomeric orange and red fluorescent proteins with superior photostability. *Nature Methods* 5: 545-551
Sahin M*, Greer PL*, Lin MZ*, Poucher H, O'Connell S, Schmidt S, Wright TM, Shamah SM, Eberhart J, Cowan CW, Hu L, Goldberg JL, Debant A, Corfas G, Krull CE, Greenberg ME. 2005. Eph-dependent tyrosine phosphorylation of ephexin1 modulates growth cone collapse. *Neuron* 46: 191-204. *equal authorship.
Cowan CW, Shao YR, Sahin M, Shamah SM, Lin MZ, Greer PL, Gao S, Griffith EC, Brugge JS, Greenberg ME. 2005. Vav family GEFs link activated Ephs to endocytosis and axon guidance. *Neuron* 46: 205-217.
Lin MZ, Teitell M, Schiller G. 2005. The evolution of antibodies into versatile tumor targeting agents. *Clinical Cancer Research* 11: 129-38.
Datta SR, Ranger AM, Lin MZ, Sturgill JF, Ma YC, Cowan CW, Dikkes P, Korsmeyer SJ, Greenberg ME. 2002. Survival factor-mediated BAD phosphorylation raises the mitochondrial threshold for apoptosis. *Developmental Cell* 3: 631-643.
Watson FL, Heerssen HM, Bhattacharyya A, Klesse L, Lin MZ, Segal RA. 2001. Neurotrophins use the Erk5 pathway to mediate a retrograde survival response. *Nature Neuroscience* 4: 981-988.
Shamah SM*, Lin MZ*, Goldberg JL, Estrach S, Sahin M, Hu L, Bazalakova M, Neve RL, Corfas G, Debant A, Greenberg ME. 2001. EphA receptors regulate growth cone dynamics through the novel guanine nucleotide exchange factor ephexin. *Cell* 105:233-244. *equal authorship.
Sun Y, Nadal-Vicens M, Misono S, Lin MZ, Zubiaga A, Hua X, Fan G, Greenberg ME. 2001. Neurogenin promotes neurogenesis and inhibits glial differentiation by independent mechanisms. *Cell* 104: 365-376.
Dalva MB, Takasu MA, Lin MZ, Shamah SM, Hu L, Gale NW, Greenberg ME. 2000. EphB receptors interact with NMDA receptors and regulate excitatory synapse formation. *Cell* 103:945-56
Lin MZ, Greenberg ME. 2000. Orchestral maneuvers in the axon: Trio and the control of axon guidance. *Cell* 101:239-42.
Brunet A, Bonni A, Zigmond MJ, Lin MZ, Juo P, Hu LS, Anderson MJ, Arden KC, Blenis J, Greenberg ME. 1999. Akt promotes cell survival by phosphorylating and inhibiting a Forkhead transcription factor. *Cell* 96:857-68.
Watson FL, Heerssen HM, Moheban DB, Lin MZ, Sauvageot CM, Bhattacharyya A, Pomeroy SL, Segal RA. 1999. Rapid nuclear responses to target-derived neurotrophins require retrograde transport of ligand-receptor complex. *J Neuroscience* 19:7889-900.
Dong X, Tsuda L, Zavitz KH, Lin M, Li S, Carthew RW, Zipursky SL. 1999. ebi regulates epidermal growth factor receptor signaling pathways in Drosophila. *Genes & Development* 13:954-65.
Dong X, Zavitz KH, Thomas BJ, Lin M, Campbell S, Zipursky SL. 1997. Control of G1 in the developing *Drosophila* eye: *rca1* regulates Cyclin A. *Genes & Development* 11:94-105.

C. Research Support

Burroughs Wellcome Career Award 2008-current
Major goal: to develop and apply tools for drug-controllable real-time visualization of new protein synthesis in living animals during learning and memory
Responsibility: Primary investigator

Jane Coffin Childs Postdoctoral Fellowship 2005-2008
Major goal: to develop tools for the visualization of synaptic proteins in an age-dependent manner
Responsibility: Primary investigator