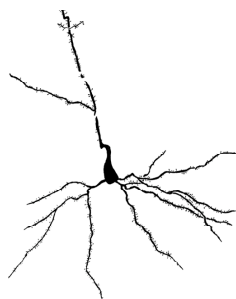
**Mark Zervas**

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July, 2006-Present	<p><b>Professional appointments</b>          Manning Assistant Professor of Biology, Brown University</p>
Oct., 2000-July, 2006	<p><b>Research Experience</b>          NIH Postdoctoral Fellow, Developmental Genetics Program, Skirball Institute of Biomolecular Medicine, NYU School of medicine.  <u>Advisor:</u> Dr. Alexandra L. Joyner          Current projects: 1. Genetic inducible fate mapping <i>in vivo</i> in mouse: Focus on genetic lineage and cell behaviors underpinning brain development. 2. <i>Wnt1</i> function and genetic requirements in midbrain dopaminergic neuron specification and maintenance. The findings elucidate mechanisms fundamental to brain development and function.</p>
March, 1996-Oct., 2000	<p>Graduate Student, Department of Neuroscience, Albert Einstein College of Medicine.  <u>Advisor:</u> Dr. S.U. Walkley          Ph.D. Thesis: Ganglioside Expression and Function in Development and Disease. The results provide insight into the differentiation of neocortical pyramidal neurons during development and the cellular pathology underlying Niemann-Pick Disease Type C (NPC). It also describes a therapeutic approach to ameliorate the neuropathology of NPC.</p>
Feb., 1993-Oct., 1995	<p>Graduate Student, Department of Pathology, Albert Einstein College of Medicine  <u>Advisors:</u> Dr. B. Wainer and Dr. P.K. Stanton          Project: Developmental, neurocytopathological and electrophysiological consequences of gene-targeted disruption of Microtubule-Associated Protein 1B.</p>
1996-2000 1993-1996 1989-1993	<p><b>Education</b>          Albert Einstein College of Medicine, Ph. D. Neuroscience          Albert Einstein College of Medicine, M.S. Neuroscience          University of Massachusetts at Boston, B.S. Chemistry</p>
2006 2003-present 2000 1995-1998 1997	<p><b>Awards, Fellowships</b>          Manning Assistant Professorship          NIH Ruth L. Kirschstein National Research Service Award (F32HD43533)          Thesis Departmental Honors          Pre-Doctoral Fellowship (NS07098)          Department of Neuroscience Travel Award</p>
	<p><b>Publications</b>          Zervas M, Joyner AJ (2006) Developmental neurogenetics of murine dopaminergic and serotonergic neurons <i>in vivo</i>. <i>Neuron</i> (manuscript in preparation).           Joyner AJ, Zervas M (2006) Genetic Inducible fate mapping in mouse: establishing genetic lineages and defining genetic neuroanatomy in the nervous system. <i>Dev. Dynamics</i> 235:2376-2385.</p>



### Publications (continued)

Zervas M, Blaess S, Joyner AJ (2005) Classical embryological studies and modern genetic analysis of midbrain and cerebellum development. *Curr. Topics Dev. Biol., (Neural Development)*, 69:101-138. Invited review, selected scientific image featured on cover.

Zervas M, Opitz T, Edelmann W, Wainer B, Kucherlapati R, Stanton P (2005) Impaired Hippocampal Long-Term Potentiation (LTP) in Microtubule-Associated Protein 1B-deficient Mice. *J. Neurosci. Res.* 82:83-92.

Zervas M, Millet S, Ahn S, Joyner AJ (2004) Cell behaviors and genetic lineages of the mesencephalon and rhombomere 1. *Neuron* 43:345-357.

Zervas M, Somers KL, Thrall MA, Walkley SU (2001) Critical role for glycosphingolipids in Niemann-Pick disease type C. *Curr. Biol.* 11(16):1283-1287.

Zervas M, Dobrenis K, Walkley SU (2001) Neurons in Niemann-Pick disease type C accumulate gangliosides as well as unesterified cholesterol and undergo dendritic and axonal alterations. *J. Neuropathol. Exp. Neurol.* 60(1):49-64.

Walkley SU, Zervas M, Wiseman S (2000) Gangliosides as modulators of dendritogenesis in normal and storage disease-affected pyramidal neurons. *Cereb. Cortex* 10(10):1028-1037.

Zervas M and Walkley SU (1999) Ferret pyramidal cell dendritogenesis: changes in morphology and ganglioside expression during cortical development. *J. Comp. Neurol.* 413(3):429-448.

Walkley SU, Siegel DA, Dobrenis K, Zervas M. (1998) GM2 ganglioside as a regulator of pyramidal neuron dendritogenesis. *Annals of the NY Academy of Science* 845:188-199.

Edelmann W, Zervas M, Costello P, Roback L, Fischer I, Hammarback JA, Cowan N, Davies P, Wainer B, Kucherlapati R (1996) Neuronal abnormalities in microtubule-associated protein 1B mutant mice. *Proc. Natl. Acad. Sci. USA* 93:1270-1275.

### Invited Presentations

"Inhibition of Ganglioside Synthesis in Murine and Feline Models of Niemann-Pick Disease type C Ameliorates Neurological Disease". *The Niemann-Pick C Lesion & The Role of Intracellular Lipid Sorting in Human Disease (1<sup>st</sup> International Meeting)*, National Institutes of Health, October 14-16, 1999.

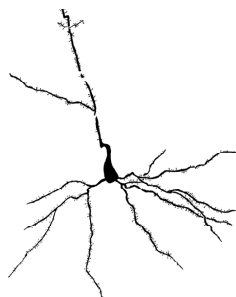
"Genetic Lineage and Stem Cells: Linking Development, Disease and Physiology of the Brain" Instructor at Stem Cells CSHL Course, August 3-16, 2006.

### Abstracts

Zervas M and Joyner AL (2005) The role of *Wnt1* in dopaminergic and serotonergic neuron development. *The 6th EMBL Mouse Molecular Genetics Meeting*. September 28 – October 2.

Zervas M, Millet S, Ahn S, Joyner AL (2004) Cell behaviors and genetic lineage during mid/hindbrain ontogenesis. *Keystone symposium: Signaling in vertebrate organogenesis*, Feb. 26-March 2.

Zervas M and Joyner AL (2003) Novel lineage restriction boundaries partition the midbrain and cerebellum into distinct developmental units. *EMBO workshop. Boundaries in development: 30 years of progress*, June 14-17.



### Abstracts (continued)

Zervas M and Joyner AL (2002) Lineage restriction and development of the midbrain and hindbrain. *Gordon Research Conference: Neural Development*, August 18-23.

Zervas M, Millet S, Joyner A (2001) Formation of the mesencephalic/metencephalic boundary. *Soc. Dev. Biol.* 235:221.

Zervas M, Dobrenis K, Walsley SU (2000) GM2 ganglioside and pyramidal neuron dendritogenesis in cultures from ferret cerebral cortex. *Soc. Neurosci.*

Zervas M and Walkley SU (1999) Species differences in the degree of ectopic dendritogenesis on cortical pyramidal neurons in neuronal storage diseases. *Soc. Neurosci.* 25:1117.

Zervas M, Walkley SU, Dobrenis K (1998) Dendritogenesis in cultures from ferret cerebral cortex. *Soc. Neurosci.* 24: 787.

Zervas M and Walkley SU (1997) Ganglioside expression and distribution during ferret cortical development. *International Society for Neurochemistry*. J. Neurochem. S24C.

Zervas M and Walkley SU (1997) Dendritic differentiation and ganglioside expression during ferret cortical development. *Soc. Neurosci.* 23:79.

### Teaching, Mentoring

Instructor for CSHL Course on Stem Cells

Lecturer & discussion leader for Boundaries and Compartments lecture, Foundations in Developmental Genetics Course, Skirball Graduate Curriculum

Lecturer for Mouse Genetics lecture, Eukaryotic Genetics Course, Skirball Graduate Curriculum

Mentor to 3 graduate students in three month-long rotations, Developmental Genetics Graduate Program

Mentor to undergraduate student in NYU/Sackler Institute Summer Undergraduate Research Program

### Techniques

\*Genetic *in vivo* fate mapping

\*Neuroanatomy

\*Molecular biology

\**in situ* hybridization

\*Morphometric analysis

\*Immunocytochemistry

\*mouse, feline, ferret models

\*Pharmacological intervention/disease treatment

\*Embryonic brain tissue explants

\*Primary dissociated neuronal cultures

\*Glycosphingolipid biochemistry

\*High Performance thin layer chromatography

\*Electron, light, and immunofluorescent microscopy

\*animal disease models of metabolic diseases

### Computer Skills

Computer graphics & design: Adobe Photoshop, Adobe Illustrator

Professional presentations: Microsoft PowerPoint & Apple Keynote

Data analysis: NIH Image J, MacVector, OsiriX, Metamorph

### Professional Organizations

Member, Society for Developmental Biology

Member, American Association of Anatomists

Member, Society for Neuroscience

Member, The Cajal Club