

Curriculum Vitae

John H. Horne, Ph.D.

(Jack Horne)

Contact Information:

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Professional Experience:

Assistant Professor

August 2006 – Present

Department of Biology
Pace University
Pleasantville, New York

Research:

The goal of my research is to identify the genes that mediate the morphological differentiation of neurons in the developing nervous system. To this end, my students and I are developing an *in vivo* electroporation technique that can be used to deliver both GFP expression plasmids, which can be used to monitor the morphological differentiation of neurons in live embryos, and morpholino-based loss-of-function reagents, which will be used to knockdown the expression of specific target genes. The advantage of this electroporation-based technique is that it will allow us to induce loss-of-function at specific, and later, stages of development, enabling us to assess the function of genes that are used at multiple times during development.

Visiting Assistant Professor

2005 – 2006

Department of Biology
Hamilton College
Clinton, New York

Senior Editor

2003 – 2005

Nature Cell Biology
Boston, Massachusetts

Responsibilities:

My main responsibilities at *Nature Cell Biology* were the initial evaluation and screening of research manuscripts, making the first decision on whether manuscripts are peer reviewed, identifying appropriate reviewers, managing the review process, and deciding on publication. In addition, I edited news and views, review articles, and other formats, and wrote editorials, news and views, highlights for the website, and press releases.

Associate Editor

2000 – 2003

Nature Neuroscience
New York, New York

(Responsibilities were essentially the same as that for my position at *Nature Cell Biology*.)

Postdoctoral Fellow**1999 – 2000**

Laboratory of Dr. Scott Fraser
California Institute of Technology
Pasadena, California

Research:

My research in the Fraser lab focused on understanding the cell biology underlying development of the nervous system. Specifically, I was developing *in vivo* imaging techniques that I could use to determine the genes necessary for guidance and growth of axons during development of the visual system in *Xenopus laevis* tadpoles.

Postdoctoral Fellow**1997 – 1998**

Laboratory of Dr. David Ogden
Division of Neurophysiology
National Institute for Medical Research
Mill Hill, London, United Kingdom

Research:

During my one year postdoc with David Ogden, I was attempting to design, synthesize, and characterize a new calcium indicator that localized to specific membrane compartments in neurons. I also did some patch-clamp studies in dorsal root ganglion neurons comparing the kinetics of calcium increases and calmodulin activation.

Graduate Student**1991 – 1997**

Laboratory of Dr. Tobias Meyer
Department of Cell Biology
Duke University
Durham, North Carolina

Research:

My thesis research focused on understanding regulatory mechanisms that control the temporal and spatial patterns of calcium signals in mast cells. Specifically, I investigated the regulation of the IP₃ receptor calcium channel, and also developed a new membrane localized calcium indicator that allowed me to assess the spatial characteristics of IP₃-mediated calcium release from intracellular calcium stores.

Research Assistant**1989 – 1991**

Laboratory of Dr. Lubert Stryer
Department of Cell Biology
Stanford University
Stanford, California

Research Assistant**1988 – 1989**

Laboratory of Dr. Richard Sullivan
Department of Hematology
Boston University Medical School
Boston, Massachusetts

Education:

Ph.D. Cell Biology 1997
Duke University
Durham, North Carolina

B.S. Zoology 1986
University of Florida
Gainesville, Florida

Fellowship Awards:

Academic Research Enhancement Award (R15) 2008 – 2010
National Institutes of Health
National Institute of Mental Health
Pace University
Pleasantville, New York

Postdoctoral Fellowship 2000
American Cancer Society
California Institute of Technology
Pasadena, California

Postdoctoral Fellowship 2000
NRSA
National Institutes of Health
California Institute of Technology
Pasadena, California
(Note: declined due to acceptance of the ACS fellowship)

Postdoctoral Fellowship 1997 – 1998
Medical Research Council
National Institute for Medical Research
Mill Hill
London
United Kingdom

Research Publications:

Milikan JM, Carter TD, Horne JH, Tzortzopoulos A, Torok K, Bolsover SR. "Integration of calcium signals by calmodulin in rat sensory neurons." *Eur. J. Neurosci.* **4**, 661-670 (2002)

Horne, J.H. Invited review titled, "Regulatory and spatial aspects of inositol trisphosphate-mediated calcium signaling." *Cell Biochemistry and Biophysics* **30**, 267-286 (1999)

Horne, J.H. and Meyer, T. "Membrane attachment of a dextran based calcium indicator, CAAX green, using an isoprenoid lipid encoding peptide." *Cell Calcium* **25**, 1-7 (1999)

Horne, J.H., and Meyer, T. "Elementary calcium release units induced by inositol trisphosphate." *Science* **276**, 1690-1693 (1997).

Research Publications: (continued)

Horne, J.H., and Meyer, T. "Luminal calcium regulates the inositol trisphosphate receptor of rat basophilic leukemia cells at a cytosolic site." *Biochemistry* **34**:12738-1274. (1995)

Sullivan, R., Griffin, J.D., Wright, J., Melnick, D.A., Leavitt, J.L., Fredette, J.P., Horne, J.H. Jr., Lyman, C.A., Lazzari, K.G., and Simons, E.R. "Effect of recombinant human granulocyte-macrophage colony-stimulating factor on intracellular pH in mature granulocytes." *BLOOD* **72**:1665-1673 (1988)

Editorials:

"Creating controversy"

Nature Cell Biology **7**, 99-99 (February 2005)

"Speaking up"

Nature Cell Biology **6**, 171-171 (March 2004)

"The risks of exclusion"

Nature Neuroscience **6**, 203-203 (March 2003)

"Crossing the pond"

Nature Neuroscience **5**, 817-817 (September 2002)

News and Views:

"Huntingtin and the vicious circle"

Nature Cell Biology **7**, 650-650 (July 2005)

"On the bright side of microarrays"

Nature Cell Biology **7**, 550-550 (01 Jun 2005)

"New neurons?"

Nature Cell Biology **6**, 287-287 (April 2004)

"A filopodial synapse?"

Nature Cell Biology **5**, 1047-1047 (December 2003)

"Curling with kinesin"

Nature Cell Biology **5**, 696-696 (August 2003)

"How ephrins sculpt dendritic spines"

Nature Neuroscience **5**, 1113-1113 (November 2002)

"The short p75 neurotrophin receptor is long on function"

Nature Neuroscience **4**, 970-970 (October 2001)

"Keep your eye off the ball"

Nature Neuroscience **3**, 1236-1236 (December 2000)