

## CURRICULUM VITAE

**Name:** Haohua Qian **Degree** Ph.D.

**Current Position Title:**

Associate Professor of Neuroscience

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**Education:**

1978-1982: B.S., Biology, Nanjing University, Nanjing, People's Republic of China.  
1982-1985: M.S., Neurobiology, Shanghai Institute of Physiology, Shanghai, People's Republic of China.  
1986-1991: Ph.D., Anatomy and Cell Biology, University of Illinois at Chicago, Chicago, Illinois.  
1990: Summer Course of Neurobiology at MBL, Woods Hole, Massachusetts.  
1992-1996: Post-Doctoral Fellow, Molecular and Cellular Biology, Harvard University, Cambridge, Massachusetts.  
1993: Grass Fellow in Neurophysiology, Marine Biological Laboratory, Woods Hole, Massachusetts.

**Employment History:**

11/1996 – 8/2003: Assistant Professor Neuroscience, Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago.  
5/1999 – 8/2003: Affiliated Assistant Professor, Department of Biological Sciences, University of Illinois at Chicago.  
5/2003 – present: Affiliated Assistant Professor, Department of Physiology and Biophysics, University of Illinois at Chicago.  
8/2003 – present: Associate Professor Neuroscience, Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago.  
8/2003 – present: Affiliated Associate Professor, Department of Biological Sciences, University of Illinois at Chicago.

**Teaching and Service Activities:**

- Course organizer: BioS587, Fundamental Issues in Visual Sciences.
- Co-instructor: Bios286, The Biology of the Brain.
- Member, MD/PhD Selection Committee, College of Medicine.
- Organizer: Visual Science Workshop, Department of Ophthalmology and Visual Sciences

## Honors and Awards:

- Dean's Scholar Award of Graduate College, University of Illinois at Chicago, 1990-1991.  
Fellowship from Fight For Sight, Research Division of the National Society to Prevent Blindness, 1992-1993.  
Bernard Davis Fellowship and Erik B. Fries Endowed Fellowship, Marine Biological Laboratory, Woods Hole, Massachusetts, 1994, 1996.  
National Research Service Award from National Eye Institute, 1994-1996.  
Invited Speaker, First International Workshop of Müller Cells: Metabolism, Membrane Transport and Cellular Interactions. Leipzig, Germany, 1995.  
Invited Speaker, FASEB summer conference on "Retinal Neurobiology and Visual Processing", 1996.  
Invited Speaker, XIII International Congress of Eye Research. Paris, France, 1998.  
Campus Research Board Funding Award, University of Illinois at Chicago, 1997-1999.  
Invited Speaker, "Inhibitory Process in the Visual System - minisymposium", ARVO 1999.

## Publications:

### Articles:

1. **Qian, H.**, Dong, C.-J. and Liu, Y.-M. (1986) Preparation of the isolated retina of *Rana nigromaculata* and determination of the photosensitivity of rhodopsin *in situ*. *Acta Physiologica Sinica* **38**: 139-148.
2. Dong, C.-J., **Qian, H.** Liu, Y.-M. and Yang, X.-L. (1986) An investigation on the suppression of cone by rod in the isolated frog retina. *Acta Physiologica Sinica* **38**: 555-564.
3. Dong, C.-J., **Qian, H.**, McReynolds, J. S., Yang, X.-L. and Liu, Y.-M. (1988) Suppression of cone-driven responses by rods in the isolated frog retina. *Visual Neurosci.* **1**: 331-338.
4. Malchow, R. P., **Qian, H.** and Ripps, H. (1989)  $\gamma$ -Aminobutyric acid (GABA)-induced currents of skate Müller (glial) cells are mediated by neuronal-like GABA<sub>A</sub> receptors. *Proc. Natl. Acad. Sci. U.S.A.* **86**: 4326-4330.
5. Malchow, R. P., **Qian, H.**, Ripps, H. and Dowling, J. E. (1990) Structural and functional properties of two types of horizontal cell in the skate retina. *J. Gen. Physiol.* **95**: 177-198.
6. Dong, C.-J. McReynolds, J. S. and **Qian, H.** (1990) Time-dependent differential effects of cobalt ions on rod- and cone-driven responses in the isolated frog retina. *Visual Neurosci.* **4**: 359-365.
7. **Qian, H.** and Ripps, H. (1992) Receptive field properties of rod-driven horizontal cells in the skate retina. *J. Gen. Physiol.* **100**: 457-478.
8. **Qian, H.** and Dowling, J. E. (1993) Novel GABA responses from rod-driven retinal horizontal cells. *Nature* **361**: 162-164.
9. **Qian, H.**, Malchow, R. P. and Ripps, H. (1993) Gap-junctional properties of electrically-coupled skate horizontal cells in culture. *Visual Neurosci.* **10**: 278-295.
10. **Qian, H.**, Malchow, R. P. and Ripps, H. (1993) The effects of lowered extracellular sodium on  $\gamma$ -aminobutyric acid (GABA)-induced currents of Müller (glial) cells in the skate retina. *Cell. Mol. Neurobiol.* **13**: 147-158.
11. Malchow, R. P., **Qian, H.** and Ripps. (1993) Evidence for hemi-gap junctional channels in isolated horizontal cells of the skate retina. *J. Neurosci. Res.* **35**: 237-245.
12. **Qian, H.** and Dowling, J. E. (1993) GABA responses on retinal bipolar cells. *Biol. Bull.* **185**: 312.
13. **Qian, H.** and Dowling, J. E. (1994) Pharmacology of novel GABA receptors found on rod horizontal cells of the white perch retina. *J. Neurosci.* **14**: 4299-4307.

14. Malchow, R. P., **Qian, H.** and Ripps, H. (1994) A novel action of quinine and quinidine on the membrane conductance of neurons from the vertebrate retina. *J. Gen. Physiol.* **104**:1039-1055.
15. **Qian, H.**, Malchow, R. P. Chappell, R. L. and Ripps, H. (1994) The GABA<sub>A</sub> receptors of Müller (glial) cells in skate retina. *Biol. Bull.* **187**: 263-265.
16. Malchow, R. P., **Qian, H.**, Haugh-Scheidt, L. M. and Ripps, H. (1994) The effects of quinine and quinidine on isolated horizontal cells of the skate retina. *Biol. Bull.* **187**: 262-263.
17. **Qian, H.** and Dowling, J. E. (1995) GABA<sub>A</sub> and GABA<sub>C</sub> receptors on hybrid bass retinal bipolar cells. *J. Neurophysiol.* **75**: 1920-1928.
18. **Qian, H.** and Dowling, J. E. (1996) Selective agonists for GABA<sub>C</sub> receptors. *TINS* **19**:190.
19. **Qian, H.**, Malchow, R. P. Chappell, R. L. and Ripps, H. (1996) GABA receptors on skate Müller cells. *J. Brain Res.* **36**:222-223.
20. **Qian, H.**, Malchow, R. P., Chappell, R. L. and Ripps, H. (1996) Zinc enhances ionic currents induced in skate Müller (glial) cells by the inhibitory neurotransmitter GABA. *Proc. R. Soc. Series B.* **263**:791-796.
21. **Qian, H.**, Hyatt, G., Schanzer, A., Hazra, R., Hackam, A. S., Cutting, G. R. and Dowling, J. E. (1997) A comparison of GABA<sub>C</sub> and  $\rho$  subunit receptors from the white perch retina. *Vis. Neurosci.* **14**:843-851.
22. **Qian, H.**, Li, L., Chappell, R. L. and Ripps, H. (1997) The GABA receptors of bipolar cells from the skate retina: The actions of zinc on GABA-mediated membrane currents. *J. Neurophysiol.* **78**:2402-2412.
23. **Qian, H.**, Dowling, J. E. and Ripps, H. (1998) Molecular and pharmacological properties of GABA  $\rho$  subunits from white perch retina. *J. Neurobiol.* **37**:305-320.
24. **Qian, H.**, Dowling, J. E. and Ripps, H. (1999) A Single Amino Acid in the Second Transmembrane Domain of GABA  $\rho$  Subunits is a determinant of the response kinetics of GABA<sub>C</sub> receptors. *J. Neurobiol.* **40**:67-76.
25. **Qian, H.** and Ripps, H. (1999) Response kinetics and pharmacological properties of heteromeric receptors formed by coassembly of GABA  $\rho$ - and  $\gamma_2$ -subunits. *Proc. R. Soc. Series B.* **266**:2419-2425.
26. **Qian, H.**, Ripps, H., Schutte, E. and Chappell, R. L. (2001) Responses of small- and large-field bipolar cells to GABA and glycine. *Brain Res.* **893**:273-277.
27. Ripps, H. and Qian, H. Zakevicius, J. (2002) Blockade of an inward sodium current facilitates pharmacological study of hemi-gap-junctional currents in *Xenopus* oocytes. *Biol. Bull.* **203**:192-194.
28. Qian, H. and Pan. Y. (2002) Co-assembly of GABA  $\rho$  subunits with the GABA<sub>A</sub> receptor  $\gamma_2$  subunit cloned from white perch retina. *Mol. Brain Res.* **103**: 62-70.
29. Ripps, H. and Qian, H. Zakevicius, J. (2002) Pharmacological enhancement of hemi-gap-junctional currents in *Xenopus* oocytes. *J. Neurosci. Meth.* **121**:81-92.
30. Saifuddin, U., Vu, T. Q., Rezac, M., Qian, H., Pepperberg, D. R. and Desai, T. A. (2003) Assembly and characterization of biofunctional neurotransmitter-immobilized surfaces for interaction with post-synaptic membrane receptors. *J. Biomed. Materials Res.* **66A**:184-191.

### **Book Chapters:**

1. **Qian, H.** (2000) The GABA<sub>C</sub> receptors. In Webvision: the organization of the vertebrate retina. (Eds. H. Kolb, E. Fernandez and R. Nelson). <http://webvision.med.utah.edu/GABA-C.htm>
2. **Qian, H.** and Ripps, H. (2001). The GABA<sub>C</sub> receptors of retinal neurons. In: *Progress in Brain Research* (Eds. H. Kolb, S. Wu and H. Ripps), Elsevier Science BV, 295-308.