Ok-Ho Shin

Cellular phone: 832-807-1862

okhoshin@gmail.com

Home address

8631 Fairhaven St, Apt#103-13

San Antonio, TX 78229

Work experience

04/2018 - 9/12/18:	Rural Carrier Associate (RCA), Cedar Elm Post Office, San Antonio
09/2008 - 08/2016:	Assistant Professor, Dept of Neuroscience & Cell Biology, UTMB
10/2000 - 08/2008:	Assistant Instructor/Postdoctoral Researcher, Laboratory of Thomas C. Südhof, MD. Dept of Neuroscience, UT Southwestern Medical Center
09/1996 - 07/2000:	Postdoctoral Fellow, Laboratory of John H. Exton, MD, PhD. Dept of Molecular Physiology & Biophysics, Vanderbilt University
03/1990 - 04/2008:	Army Reserve - Republic of Korea.
03/1990 - 07/1992:	Research Assistant, Laboratory of Hyun-Kyung Shin, PhD. Korea Food Research Institute and Hallym University, Korea

Education

08/1992 - 12/1996: PhD in Nutritional Biochemistry, University of North Carolina at Chapel Hill

09/1989 - 02/1990: Second lieutenant, Korean Army Academy at Yeongcheon

03/1987 - 02/1989: MA in Intestinal Microbiology, Seoul National University, Korea

03/1983 - 02/1987: BA in Food Science & Technology, Seoul National University, Korea

Honors

1. New Investigator Award, American College of Nutrition, 1995
2. Young Investigator Award, American Society for Clinical Nutrition, 1996

Teaching

1. Teaching Assistant, Nutritional Biochemistry - Nutrients and Disease Process.
   University of North Carolina at Chapel Hill
2. Mentor, Summer Undergraduate Research

1) University of North Carolina at Chapel Hill, 1994

2) Vanderbilt University, 1998

3) University of Texas Medical Branch, 2015

3. Facilitator, UTMB School of Medicine

1) Gastrointestinal Nutrition

2) Neuroscience and Human Behavior

3) Cardiovascular and Pulmonary

4. Teaching, UTMB Graduate School

1) Neurobiology of Disease V

2) Integrative Neuroscience

3) Synapses and Degeneration

Journal reviewer experience

1. *Biochimica et Biophysica Acta - Proteins and Proteomics*, *Ad hoc* reviewer
2. *Journal of Histochemistry & Cytochemistry, Ad hoc* reviewer
3. *ACS Chemical Neuroscience, Ad hoc* reviewer
4. *Journal of Neural Transmission*, *Ad hoc* reviewer
5. *Journal of Biochemistry and Molecular Biology Research,* Editorial board

Grants & Fellowships

1. Cancer Education Program, University of North Carolina, Cancer Education Summer Fellowship (1993).
2. The Institute of Nutrition, University of North Carolina, Graduate Student Nutrition Research Fellowship (1995 – 1996).
3. The Welch Foundation, Research Grant (H-1771): Kinetics and equilibria of the SNARE complex assembly. $170,000/3yrs (6/1/2011 – 5/31/2014).

Publications

1. Park JH, Yoo JY, Shin OH, Shin HK, Lee SJ, Park KH. Growth effect of branched oligosaccharides on priciple intestinal bacteria. *Kor J Appl Microbiol Biotechnol* 20: 237-242, 1992.
2. Shin HK, Shin OH, Koo YJ. Effects of potato protein on the growth of *Clostridium perfringens* and other intestinal microorganisms. *Kor J Appl Microbiol Biotechnol* 20: 249-256, 1992.
3. Shin OH, Yoo SS, Lee WK, Shin HK. Effects of the water-extract of Sinomeniiacuti Radix (*Sinomenium acutum*) on the growth of some intestinal microoraganisms. *Kor J Appl Microbiol Biotechnol* 20: 491-497, 1992.

4. Zeisel SH, da Costa KA, Albright CD, Shin OH. Choline and hepatocarcinogenesis in the rat. *Adv Exp Med Biol* 375: 65-74, 1995.

5. Shin OH, Mar MH, Albright CD, Citarella MT, da Costa KA, Zeisel SH. Methyl-group donors cannot prevent apoptotic death of rat hepatocytes induced by choline-deficiency. *J Cell Biochem* 64: 196-208, 1997.

6. Shin OH, da Costa KA, Mar MH, Zeisel SH. Hepatic protein kinase C is not activated despite high intracellular 1,2-*sn*-diacylglycerol in obese Zucker rats. *Biochim Biophys Acta* 1358: 72-78, 1997.

7. Zeisel SH, Albright CD, Shin OH, Mar MH, Salganik RI, da Costa KA. Choline deficiency selects for resistance to p53-independent apoptosis and causes tumorigenic transformation of rat hepatocytes. *Carcinogenesis* 18: 731-738, 1997.

8. Albright CD, Liu R, Mar MH, Shin OH, Vrablic AS, Salganik RI, Zeisel SH. Diet, apoptosis, and carcinogenesis. *Adv Exp Med Biol* 422: 97-107, 1997.

9. Zeisel SH, Shin OH. Choline. *Encyclopedia of Neuroscience*, 2nd enlarged and revised edition. Adelman G and Smith BH eds., Amsterdam, Elsevier Science. Vol I: 379-380, 1999.

10. Shin OH, Ross AH, Mihai I, Exton JH. Identification of arfophilin, a target protein for GTP-bound class II ADP-ribosylation factors. *J Biol Chem* 274: 36609-36615, 1999.

11. Shin OH, Exton JH. Differential binding of arfaptin 2/POR1 to ADP-ribosylation factors and Rac1. *Biochem Biophys Res Commun* 285: 1267-1273, 2001.

12. Shin OH, Couvillon AD, Exton JH. Arfophilin is a common target of both class II and class III ADP-ribosylation factors. *Biochemistry* 40: 10846-10852, 2001.

13. Fernandez I, Arac D, Ubach J, Gerber SH, Shin OH, Gao Y, Anderson RGW, Südhof TC, Rizo J. Three-dimensional structure of the synaptotagmin 1 C_2B-domain: synaptotagmin 1 as a phospholipid binding machine. *Neuron* 32: 1057-1069, 2001.

14. Sugita S, Shin OH, Han W, Lao Y, Südhof TC. Synaptotagmins form a hierarchy of exocytotic Ca^{2+}-sensors with distinct Ca^{2+}-affinities. *EMBO J* 21: 270-280, 2002.

15. Shin OH, Rizo J, Südhof TC. Synaptotagmin function in dense core vesicle exocytosis studied in cracked PC12 cells. *Nat Neurosci* 5: 649-656, 2002.

16. Fernandez-Chacon R, Shin OH, Konigstorfer A, Matos MF, Meyer AC, Garcia J, Gerber SH, Rizo J, Südhof TC, Rosenmund C. Structure/function analysis of Ca^{2+}-binding to the C_2A-domain of synaptotagmin 1. *J Neurosci* 22: 8438-8446, 2002.

17. Shin OH, Rhee JS, Tang J, Sugita S, Rosenmund C, Südhof TC. Sr^{2+} binding to the Ca^{2+} binding site of the synaptotagmin 1 C_2B domain triggers fast exocytosis without stimulating SNARE interactions. *Neuron* 37: 99-108, 2003.

18. Shin OH, Maximov A, Lim BK, Rizo J, Südhof TC. Unexpected Ca^{2+}-binding properties of synaptotagmin 9. *Proc Natl Acad Sci USA* 101: 2554-2559, 2004.

19. Dai H, Shin OH, Machius M, Tomchick DR, Südhof TC, Rizo J. Structural basis for the evolutionary inactivation of Ca^{2+} binding to synaptotagmin 4. *Nat Struct Mol Biol* 11: 844-849, 2004.

20. Shin OH, Han W, Wang Y, Südhof TC. Evolutionarily conserved multiple C_2-domain proteins with two transmembrane region (MCTPs) and unusual Ca^{2+}-binding properties. *J Biol Chem* 280: 1641-1651, 2005.

21. Rhee JS, Li LY, Shin OH, Rah JC, Rizo J, Südhof TC, Rosenmund C. Augmenting neurotransmitter release by enhancing the apparent Ca^{2+}-affinity of synaptotagmin 1. *Proc Natl Acad Sci USA* 102: 18664-18669, 2005.

22. Shin OH, Exton JH. Assays and properties of arfaptin 2 binding to Rac1 and ADP-ribosylation factors (Arfs). *Methods Enzymol* 404: 359-367, 2005.

23. Li LY, Shin OH, Rhee JS, Arac D, Rah JC, Rizo J, Südhof TC, Rosenmund C. Phosphatidylinositolphosphates as coactivators of Ca^{2+}-binding to C_2-domains of synaptotagmin 1. *J Biol Chem* 281: 15845-15852, 2006.

24. Deak F, Shin OH, Tang J, Hanson P, Ubach J, Jahn R, Rizo J, Kavalali ET, Südhof TC. Rabphilin regulates SNARE-dependent re-priming of synaptic vesicles for fusion. *EMBO J* 25: 2856-2866, 2006.

25. Deak F, Shin OH, Kavalali ET, Südhof TC. Structural determinants of synaptobrevin 2 function in synaptic vesicle fusion. *J Neurosci* 26: 6668-6676, 2006.

26. Tang J, Maximov A, Shin OH, Dai H, Rizo J, Südhof TC. A complexin/synaptotagmin-1 switch controls fast synaptic vesicle exocytosis. *Cell* 126: 1175-1187, 2006.

27. Pang ZP, Shin OH, Meyer AC, Rosenmund C, Südhof TC. A gain-of-function mutation in synaptotagmin-1 reveals a critical role of Ca^{2+}-dependent soluble N-ethylmaleimide-sensitive factor attachment protein receptor complex binding in synaptic exocytosis. *J Neurosci* 26: 12556-12565, 2006.

28. Maximov A, Shin OH, Lui X, Südhof TC. Synaptotagmin-12, a synaptic vesicle phosphoprotein that modulates spontaneous neurotransmitter release. *J Cell Biol* 176: 113-124, 2007.

29. Xu J, Pang ZP, Shin OH, Südhof TC. Synaptotagmin-1 functions as a Ca^{2+}-sensor for spontaneous release. *Nat Neurosci* 12: 759-766, 2009.

30. Shin OH, Xu J, Rizo J, Südhof TC. Differential but convergent functions of Ca^{2+}-binding to synaptotagmin-1 C_2-domains mediate neurotransmitter release. *Proc Natl Acad Sci USA* 106: 16469-16474, 2009.

31. Shin OH, Lu J, Rhee JS, Tomchick DR, Pang ZP, Wojcik S, Camacho-Perez M, Brose N, Machius M, Rizo J, Rosenmund C, Südhof TC. Munc13 C_2B domain is an activity-dependent Ca^{2+} regulator of synaptic exocytosis. *Nat Struct Mol Biol* 17: 280-288, 2010.

32. Xue M, Craig TK, Shin OH, Yi L, Brautigam CA Tomchick DR, Südhof TC, Rosenmund C, Rizo J. Structural and mutational analysis of functional differentiation between synaptotagmins-1 and -7. *PLoS One* 5: e12544, 2010.

33. Shih AM, Shin OH. Interactions among the SNARE proteins and complexin analyzed by a yeast four-hybrid assay. *Anal Biochem* 416: 107-111, 2011.

34. Yang SN, Shi Y, Yang G, Li Y, Yu L, Shin OH, Bacaj T, Südhof TC, Yu J, Berggren PO. Inositol hexakisphosphate suppresses excitatory neurotransmission via synaptotagmin-1 C2B domain in the hippocampal neuron. *Proc Natl Acad Sci USA* 109: 12183-12188, 2012.

35. Shin OH. Exocytosis and synaptic vesicle function. *Compr Physiol* 4: 149-175, 2014.

36. Shin OH. Regulation of exocytosis by Complexin. *J Biochem Mol Biol Res* 1: 25-29, 2015.

37. Shih AM, Varghese L, Bittar A, Park SH, Chung JM, Shin OH. Dysregulation of norepinephrine release in the absence of functional Synaptotagmin 7. *J Cell Biochem* 117: 1446-1453, 2016.