

Chavela M. Carr, Ph.D.

Department of Biochemistry & Biophysics
Texas A&M University, Rm. 242A
300 Olsen Blvd., Mailstop 2128 TAMU
College Station, TX 77843
(979) 845-7686 phone
(732) 845-9274 fax
chave@tamu.edu

EDUCATION

Vanderbilt University, Nashville, TN	B.S.	1984-1988	Molecular Biology
MIT, Cambridge, MA	Ph.D.	1988-1995	Biology
Yale University School of Medicine, New Haven, CT	Postdoc.	1995-2000	Cell Biology

EMPLOYMENT

2000-2009	Assistant Professor, Department of Pathology & Laboratory Medicine University of Medicine and Dentistry of NJ, Robert Wood Johnson Medical School
2009-2014	Research Scientist, Department of Biochemistry & Biophysics, Texas A&M University
2014-present	Instructor, BICH 410/411, Department of Biochemistry & Biophysics, Texas A&M University

EXPERIENCE

1987-88	Undergraduate Research Assistant with Douglas R. Cavener, Ph.D, Vanderbilt University
1989-95	Graduate Research Assistant with Peter S. Kim, Ph.D., Whitehead Institute, MIT
1995-00	Postdoctoral Fellow with Peter J. Novick, Ph.D., Yale University School of Medicine

HONORS

1988	Phi Beta Kappa
1988	Magna cum laude with Honors, Vanderbilt University
1988	Outstanding Research in Molecular Biology Award, Vanderbilt University
1988	Genetics Society of America Undergraduate Research Award
1994	Sigma Xi
1995-98	Damon Runyon Walter Winchell Postdoctoral Fellowship
2002-06	Pew Scholars Award

FUNDING

2001-02	UMD Foundation Award P.I. Chavela M. Carr, Ph.D. "Controlling Membrane Fusion: A Role for Sec1 Proteins"
2002-06	Pew Scholars Award P.I. Chavela M. Carr, Ph.D. "Molecular Mechanism of Sec1p-Regulated Membrane Fusion"
2002-08	National Institutes of Health 1 R01 GM 66291 P.I. Chavela M. Carr, Ph.D. "Molecular Mechanism of Sec1p-Regulated Membrane Fusion"

INVITED TALKS

7/6/99	Molecular Membrane Biology Gordon Research Conference
1/7/00	Whitehead Institute, MIT
1/9/01	Dean's Lunch, UMDNJ-Robert Wood Johnson Medical School
7/29/04	NYU Pathology Department
10/5/04	Medical College of Wisconsin, Milwaukee, Department of Microbiology & Molecular Genetics
2/3/05	UMDNJ Newark, Department of Biochemistry and Molecular Biology
02/08/08	Rutgers University, Department of Cell Biology and Neuroscience
03/12/08	UMass Medical School, Worcester, Department of Biochemistry and Molecular Pharmacology
05/15/08	UConn Health Center, West Hartford, Department of Molecular, Microbial & Structural Biology

TEACHING EXPERIENCE

1989	TA and recitation instructor, General Biochemistry 7.05, MIT
1991	TA, laboratory and recitation instructor, Biochemistry 7.011, MIT
1992	Instructor for High-School teachers, Whitehead Education Program
02/22/93	Lecturer, Structure/Function Seminar series, MIT
11/12/93	Lecturer, Topics in Computational Molecular Biology, MIT
1/9/95	Lecturer, IAP Biology Department Lecture Series, MIT
2001	Seminar Instructor, Molecular Biosciences 501/502, Rutgers/RWJMS
2002	Instructor, Molecular Biosciences, Biochemistry 501, Rutgers/ RWJMS
2003, 08	Instructor, App. Fungal Systems to Mol. & Cell Biol. MICR 5683, Rutgers/ RWJMS
2004-08	Instructor, Molecular Biosciences, Biochemistry 501, Rutgers/ RWJMS
2010-14	Instructor, Graduate Biochemistry 603, Texas A&M University
2014	Instructor, Comprehensive Biochemistry BICH 411, Texas A&M University
2015	Instructor, Comprehensive Biochemistry BICH 410, Texas A&M University

PUBLICATIONS

1. Krasney, P.A., **Carr, C.M.** and Cavener, D.R. (1990) Evolution of the glucose dehydrogenase gene in *Drosophila*. *Mol. Biol. Evol.* 7, 155-177.
2. **Carr, C.M.** and Kim, P.S. (1993) A spring-loaded mechanism for the conformational change of influenza hemagglutinin. *Cell* 73, 823-832. *
*Selected as a "classic" for *Focus on Membrane Fusion* edition (2008) *Nat. Struct. Mol. Biol.* 15.
<http://www.nature.com/nsmb/focus/fusion/index.html>
3. Lumb, K.J., **Carr, C.M.** and Kim, P.S. (1994) Subdomain folding of the coiled coil leucine zipper from the bZIP transcriptional activator GCN4. *Biochemistry* 33, 7361-7367.
4. **Carr, C.M.**, Chaudhry, C. and Kim, P.S. (1997) Influenza hemagglutinin is spring-loaded by a metastable native conformation. *Proc. Natl. Acad. Sci. USA* 94, 14306-14313.
5. Stone, S., Sacher, M., Mao, Y., **Carr, C.**, Lyons, P., Quinn, A.M. and Ferro-Novick, S. (1997) Bet1p activates the v-SNARE Bos1p. *Mol. Biol. Cell* 8, 1175-1181.
6. **Carr, C.M.**, Grote, E., Munson, M., Hughson, F.M. and Novick, P.J. (1999) Sec1p binds to SNARE complexes and concentrates at sites of secretion. *J. Cell Biol.* 146, 333-344. *
*Selected as a "classic" for *Focus on Membrane Fusion* edition (2008) *Nat. Struct. Mol. Biol.* 15.
<http://www.nature.com/nsmb/focus/fusion/index.html>
7. Grote, E., **Carr, C.M.** and Novick, P.J. (2000) Ordering the Final Events in Yeast Exocytosis. *J. Cell Biol.* 151, 439-451.
8. Togneri, J., Cheng, Y.-S., Munson, M., Hughson, F.M. and **Carr, C.M.** (2006) Specific SNARE complex binding mode of the Sec1/Munc-18 protein, Sec1p. *Proc. Natl. Acad. Sci. USA* 103, 17730-17735.
9. Hashizume, K., Cheng, Y.-S., Hutton, J., Chiu, C. and **Carr, C.M.** (2009) Yeast Sec1p functions before and after SNARE complex assembly. *Mol. Biol. Cell* 20, 4673-4685. *
*Selected for *InCytes, ASCB Newsletter, November issue, 2009.*
10. Pant, S., Sharma, M., Patel, K., Caplan, S., **Carr, C.M.** and Grant, B.D. (2009) AMPH-1/Amphiphysin/Bin1 functions with RME-1/Ehd1 in endocytic recycling. *Nat. Cell Biol.* 11, 1399-1410.
11. Morgera, F., Sallah, M., Dubuke, M., Gandhi, P., Brewer, D.N., **Carr, C.**, and Munson, M. (2012)

- Regulation of exocytosis by the exocyst subunit Sec6 and the SM protein Sec1. *Mol. Biol. Cell* 23, 337-46.
12. Krantz, K., Puchalla, J., Thapa, R., Kobayashi, C., Bisher, M., Viehweg, J., **Carr, C.M.** and Rye, H. S. (2013) Clathrin Coat Disassembly by the Yeast Hsc70/Ssa1p and Auxilin/Swa2p Proteins Observed by Single-particle Burst Analysis Spectroscopy. *J. Biol. Chem.* 288, 22721-26730.
 13. Brooks, A., Shoup, D., Kustigian, L., Puchalla, J., **Carr, C. M.**, and Rye, H. S. (2015) Single particle fluorescence burst analysis of Epsin induced membrane fission. *PloS One*. (in press).

REVIEWS

1. **Carr, C.M.** and Kim, P.S. (1994) Flu virus invasion: halfway there. *Science* 266, 234-236.
2. **Carr, C.M.** and Novick, P.J. (2000) Membrane fusion: Changing partners. *Nature* 404, 347-349.
3. **Carr, C.M.** (2001) The taming of the SNARE. *Nature Struct. Biol.* 8, 186-188.
4. **Carr, C.M.** and Munson, M. (2007) Tag team action at the synapse. *EMBO Rep.* 8, 834-838. Cover art.
5. **Carr, C.M.** and Rizo, J. (2010) At the junction of SNARE and SM protein function. *Curr. Opin. Cell Biol.* 22, 488-495.