

CURRICULUM VITAE

SUZANNE R. PFEFFER

Emma Pfeiffer Merner Professor of Medical Sciences
Professor and Chairman of Biochemistry

Department of Biochemistry
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EDUCATION

Undergraduate: University of California, Berkeley
A.B. in Biochemistry (1977) Research Advisor: Dr. Michael Chamberlin

Graduate: University of California, San Francisco
Ph.D. in Biochemistry (1983) Research Advisor: Dr. Regis Kelly

Postdoctoral: University of California, San Francisco (7/83-7/84); Advisor: Dr. Regis Kelly
Stanford University (7/84-12/85) Advisor: Dr. James Rothman

POSITIONS HELD

Assistant Professor of Biochemistry, Stanford	1986-1992
Associate Professor of Biochemistry, Stanford	1993-1998
Associate Chairman of Biochemistry	1997- 1998
Chairman of the Department of Biochemistry	1998-2006; 2013-2015

HONORS

Fellow, American Academy of Arts and Sciences (2013)
Fellow, American Association for the Advancement of Science (1992)
NSF Presidential Young Investigator Award (1988-1993)
Basil O'Connor Scholar Award (1987-1989); Merck Development Award (1987)
William M. Hume Faculty Scholar (1986-88)
Helen Hay Whitney Foundation Postdoctoral Fellow (1984-85)
Merit Award, NIDDK (1999-2009)
Founding Board Member, Rosalind Franklin Society (2007-)

LEADERSHIP

Chairman, Stanford School of Medicine Department of Biochemistry (1998-2006)
President, American Society for Cell Biology (2003)
Elected Councilor, American Society for Cell Biology (ASCB; 1994-1996)
Elected Councilor, American Society for Biochemistry & Molecular Biology (2005-08)
Chairman, Committee on Scientific Programs, ASCB, 1989
Chairman, Gordon Conference on Molecular Membrane Biology 1997
Co-chair, EMBO/ASCB Joint Meeting, "Sorting in Eukaryotic Cells," 1988
Chairman, Human Frontiers of Science Program Fellowship Committee, 1997-2001
Co-Chair, Burroughs Wellcome Career Development Award Panel, 2002-2003
Chairman, NIH Advisory Cell Biology Study Section Boundaries Panel, 2005
Chairman, NIH Cell Structure and Function Study Section, 2007-2009
Co-Chair, ASBMB meeting on Membrane Traffic 2010
President, American Society for Biochemistry and Molecular Biology 2010-2012

ADDITIONAL SERVICE

American Cancer Society California Fellowship Committee, 1989-1992
NIH Cell Biology I Study Section, 1992-96
NIH Center for Scientific Review Advisory Board, 1997-1998

Scientific Advisory Board, Damon Runyon Cancer Research Fund, 1998-2002
 Burroughs Wellcome Hitchings-Elion Fellowship Advisory Board 1998-2000
 Burroughs Wellcome Career Development Award Panel 2001, 2004
 Harvard Board of Overseers Committee on Biomedical Sciences 2000-01, 2005-2006
 American Heart Association Review Panel for Medical and Premedical research 2005
 American Society for Cell Biology Women in Cell Biology Committee, 2005-2011
 Burroughs Wellcome Career Award at Scientific Interfaces Award Panel 2005-2010
 UCSF Tetrad Graduate Program Review Panel 1999; 2009
 NIH Special Emphasis Review Panel for NINDS, March 2009
 NIH Roadmap Nanomedicine Midcourse Review Panel, April 2009
 International Advisory Board, "Intracellular Logistics" Japan (2009-2014)
 Swiss National Science Foundation Advisor, Chemical Biology Program, Geneva (2011-)
 DFG (German Research Foundation) Excellence Initiative Board, 2012
 ASCB Search Committee for new Executive Director, 2012
 NIH Search Committee for new Director of NIGMS, 2012
 AAMC Distinguished Research Award Selection Committee 2013-2014
 NIH Fellowship F05-R Study Section, July 2013
 Science Foundation Ireland Review Panel, September 2013
 Membership Panel, American Academy of Arts and Sciences 2013, 2014
 NIH NCSD I Study Section, 6/2015

CURRENT STANFORD SERVICE

School of Medicine Representative for the selection of Stanford University Nominees for
 External Grants and Fellowships
 Chair, Stanford Biochemistry Founders Award Committee
 Director of the McCormick Lectureship to honor distinguished women scientists
 Chair, Basic Science Chairs, Stanford School of Medicine

EDITORIAL WORK

Editorial Board, *Journal of Biological Chemistry*, 1992-1995
 Editorial Board, *Journal of Cell Biology*, 1992-1997
 Associate Editor, *Molecular Biology of the Cell*, 1995-2006
 Editorial Board, *Science*, 2000-2002
 Editorial Board, *Current Opinion in Cell Biology*, 2008-present
 Editorial Board, *Nature Reports*, 2011-2014
 Co-Section Head for Membranes and Sorting, Faculty of 1000, 2011-present
 Board of Reviewing Editors, *eLife*, 2012-

NAMED LECTURESHIPS and RECENT PLENARY SYMPOSIA

Director's Lecture, National Institutes of Health, April 2002
 E.C. Slater Lecture, International Congress of Biochemistry & Molecular Biology, Toronto, October 2003
 University Lecture, University of Texas Southwestern Medical School, Dallas, February 2005
 Annual Graduate Student Symposium Lecture, University of Louisville Medical School, May 2005
 International Symposium on Membrane Traffic, Awaji, Japan, November 2007
 American Society for Biochemistry and Molecular Biology Annual Meeting, April 2009
 Gordon Conference of Molecular Membrane Biology, 2007, 2009, 2011, 2013
 Distinguished Lecture, University of Guelph, Canada, April 2010
 Cologne Spring Meeting, plenary speaker, February 2010
 ESB Keynote Address, Prague, July 2010
 Sapporo International Symposium on Membrane Traffic and Cancer, June 2010
 American Society for Cell Biology Annual Meeting Mini-symposium Co-Chair, December 2010
 Quantitative Analysis of Dynamic Processes in Membrane Transport, Heidelberg, June 2011

University of Illinois at Chicago Visiting Scholar, May 2011
 University of Tennessee Biochem, Cell and Molec. Biol. Keynote Speaker, September 2011
 Distinguished Lecturer, Scripps Research Institute, Florida, December 2011
 Course Instructor, Natl. Center for Biological Sciences, Bangalore, India, February 2012
 Keynote Speaker, Postdoc Symposium, Center for Genomic Regulation, Barcelona, June 2012
 Biochemical Society Meeting on Rab GTPases, Cork, Ireland, June 2012
 Session Chair, Frontiers in Lipid Biology, Banff, Canada, September 2012
 Protein Trafficking in Health and Disease, University of Hamburg, September 2012
 FASEB Summer Research Conference on Arf and Rab GTPases, Aspen, August 2013
 Asia-Pacific Organization of Cell Biology Congress Plenary Speaker, Singapore, February 2014
 Max Planck Institute of Biochemistry Distinguished Lecture, Munich, March 2014
 FASEB Summer Research Conference on Lipid Droplets, Vermont, June 2014
 Membrane Transport as the Main Cell Organizer, Naples, March 2015
 Morris Kates Lecture, University of Ottawa, May 2015
 FEBS Advanced Course 'Lipid-protein interactions and organelle function', September 2016
 FASEB conference on GTPases in Trafficking, Autophagy & Disease, September 2016

MEMBERSHIPS

American Society for Biochemistry and Molecular Biology
 American Society for Cell Biology
 American Association for the Advancement of Science
 Association for Women in Science; Rosalind Franklin Society

PUBLICATIONS

1. Pfeffer, S.R., Stahl, S.J. and Chamberlin, M.J. (1977). Binding of E. coli RNA Polymerase to T7 DNA: Displacement of Holoenzyme from Promoter Complexes by Heparin. *J. Biol. Chem.* 252, 5403-5407
2. Pfeffer, S.R. and Kelly, R.B. (1981). Identification of Minor Components of Coated Vesicles by Use of Permeation Chromatography. *J. Cell Biol.* 91, 385-391
3. Kelly, R.B., Miljanich, G.M. and Pfeffer, S.R. (1983). Presynaptic Mechanisms of Neuromuscular Transmission in Myasthenia Gravis. (Albuquerque, E.X. & Eldefraawi, A.T., eds.), Chapman and Hall, London
4. Pfeffer, S.R., Drubin, D.G. and Kelly, R.B. (1983). Identification of Three Coated Vesicle Components as Alpha and Beta Tubulin Linked to a Phosphorylated 50,000 Dalton Polypeptide. *J. Cell Biol.* 97, 40-47
5. Kelly, R.B., Buckley, K., Burgess, T., Carlson, S., Caroni, P., Hooper, J., Katzen, A., Moore, H.-P., Pfeffer, S.R., and Schroer, T. (1983). Membrane Traffic in Neurons and Peptide Secreting Cells Cold Spring Harbor Symp. Quant. Biol. 38, 697-705
6. Pfeffer, S. and Ullrich, A. (1985). Epidermal Growth Factor: Is the Precursor a Receptor? *Nature* 313, 184
7. Pfeffer, S.R. and Kelly, R.B. (1985). The Subpopulation of Brain Coated Vesicles that Carries Synaptic Vesicle Proteins Contains Two Unique Polypeptides. *Cell* 40, 949-957
8. Dunphy, W.G., Pfeffer, S.R., Clary, D.O., Wattenberg, B.W., Glick, B.S. and Rothman, J.E. (1986). Yeast and Mammals Utilize Similar Cytosolic Components to Drive Protein Transport Through the Golgi Complex. *Proc. Natl. Acad. Sci. USA* 83, 1622-1626

9. Paquet, M., Pfeffer, S.R., Burczak, J.D., Glick, B.S. and Rothman, J.E. (1986). Components Responsible for Transport Between Successive Golgi Cisternae are Highly Conserved in Evolution. *J. Biol. Chem.* 261, 4367-4370
10. Pfeffer, S.R. and Ullrich, A. (1986). Structural Relationships Between Growth Factor Precursors and Cell Surface Receptors in Oncogenes and Growth Control (Kahn, P. & Graf, T., (eds.), pp. 70-76, Springer-Verlag, Heidelberg
11. Pfeffer, S.R. and Rothman, J.E. (1987). Biosynthetic Protein Transport and Sorting by the Endoplasmic Reticulum and Golgi. *Ann. Rev. Biochem.* 56, 829-852
12. Pfeffer, S.R. (1987). The Endosomal Concentration of a Mannose-6-Phosphate Receptor is Unchanged in the Absence of Ligand Synthesis. *J. Cell Biol.* 105, 229-234
13. MacDonald, R.G., Pfeffer, S.R., Coussens, L., Tepper, M.A., Brocklebank, C.M., Mole, J.E., Anderson, J.K., Chen, E., Czech, M.P., Ullrich, A. (1988). A Single Receptor Binds Both Insulin-Like Growth Factor II and Mannose-6-Phosphate. *Science* 239, 1134-1137
14. Pfeffer, S.R., Goda, Y., and Chege, N.W. (1988). Intracellular Transport of the Mannose-6-Phosphate Receptor in Cell-Free Analysis of Membrane Traffic, (Morré, D.J., Howell, K.E., Cook, G.M.W., Evans, H.W., eds.) Alan R. Liss, N.Y., pps. 365-375.
15. Pfeffer, S.R., Nolan, C. and Stevens, T.H. (1988). Discussion Summary: Lysosomal Targeting, in Molecular Biology of Intracellular Protein Sorting and Organelle Assembly, Bradshaw, R.A., McAlister-Henn, L. and Douglas, M.G., eds., Alan R. Liss, N.Y., pp. 117-121.
16. Pfeffer, S.R. (1988). Mannose 6-Phosphate Receptors and Their Role in Targeting Proteins to Lysosomes *J. Membrane Biol.* 103, 7-16.
17. Goda, Y. and Pfeffer, S.R. (1988). Selective Recycling of the Mannose 6-Phosphate Receptor to the Trans Golgi Network *In Vitro*. *Cell* 55, 309-320.
18. Goda, Y. and Pfeffer, S.R. (1989). Cell-free systems to study vesicular transport along the secretory and endocytic pathways. *FASEB J.* 3, 2488-2495
19. Dintzis, S.M. and Pfeffer, S.R. (1990). The Mannose 6-Phosphate Receptor Cytoplasmic Domain is Not Sufficient to Alter the Cellular Distribution of a Chimeric EGF Receptor. *EMBO J.* 9, 77-84.
20. Draper, R.K., Goda, Y., Brodsky, F.M. and Pfeffer, S.R. (1990). Anti-Clathrin Antibodies Inhibit Endocytosis But Not Receptor Recycling to the *trans* Golgi Network *In Vitro*. *Science*, 248, 1539-1541.
21. Chege, N.W. and Pfeffer, S.R. (1990). Compartmentation of the Golgi Complex: Brefeldin A Distinguishes *trans* Golgi Cisternae from the *trans* Golgi Network. *J. Cell Biol.* 111, 893-899.
22. Pfeffer, S.R. (1990). A Budding and Fusing Journey Through the Secretory Pathway. *The New Biologist*, 2, 430-434 .
23. Goda, Y. and Pfeffer, S.R. (1991). Identification of a Novel, NEM-Sensitive Cytosolic Factor Required for Vesicular Transport from Endosomes to the *trans* Golgi Network *in vitro*. *J. Cell Biol.* 112, 823-831.

24. Pfeffer, S.R. (1991). Targeting of Proteins to the Lysosome. *In* Protein Sorting in Eukaryotic Cells. Current Topics in Microbiology and Immunology 170, 43-65. R.W. Compans, ed., Springer-Verlag, Berlin.
25. Pfeffer, S.R. (1991). Mannose 6-phosphate receptors and their role in protein sorting along the pathway to lysosomes. *Cell Biophysics* 19, 131-140.
26. Corthésy-Theulaz, I. and Pfeffer, S.R. (1992). Microtubule-mediated Golgi Capture by Semi-intact CHO cells. *Methods in Enzymology* 219, 159-165.
27. Goda, Y., Soldati, T. and Pfeffer, S.R. (1992). Transport from late endosomes to the trans Golgi network in semi intact cell extracts. *Methods in Enzymology* 219, 153-159.
28. Pfeffer, S.R. (1992). GTP binding proteins in intracellular transport. *Trends in Cell Biology* 2, 41-46.
29. Corthésy-Theulaz, I., Pauloin, A. and Pfeffer, S.R. (1992). Cytoplasmic dynein participates in the centrosomal localization of the Golgi complex. *J. Cell Biol.* 118, 1333-1345.
30. Pfeffer, S.R. (1993). GTP binding proteins in transport between late endosomes and the trans Golgi network. *In* GTPases in Biology. Handbook of Experimental Pharmacology 108, 447-459.
31. Lombardi, D., Soldati, T., Riederer, M.A., Goda, Y., Zerial, M. and Pfeffer, S.R. (1993). Rab9 functions in transport between late endosomes and the trans Golgi network in vitro. *EMBO J.* 12, 677-682.
32. Shapiro, A.D., Riederer, M.A. and Pfeffer, S.R. (1993). Biochemical analysis of rab9, a ras-like GTPase involved in transport from late endosomes to the trans Golgi network. *J. Biol. Chem.* 268, 6925-6931.
33. Soldati, T., Riederer, M.A. and Pfeffer, S.R. (1993). Rab GDI: a solubilizing and recycling factor for rab9 protein. *Mol. Biol. Cell* 4, 425-434.
34. Pfeffer, S.R. (1994). Clues to brain function from baker's yeast. *Proc. Natl. Acad. Sci. USA* 91, 1987-1988.
35. Dintzis, S.M., Velculescu, V.E. and Pfeffer, S.R. (1994). Receptor extracellular domains may contain trafficking information: studies of the 300kD mannose 6-phosphate receptor. *J. Biol. Chem.* 269, 12159-12166.
36. Riederer, M.A., Soldati, T., Shapiro, A.D., Lin, J. and Pfeffer, S.R. (1994). Lysosome Biogenesis requires Mannose 6-Phosphate Receptor Recycling from Endosomes to the trans Golgi network. *J. Cell Biol.* 125, 573-582.
37. Soldati, T., Shapiro, A.D., Dirac-Svejstrup, A.B.D. and Pfeffer, S.R. (1994). Membrane targeting of the small GTPase Rab9 is accompanied by nucleotide exchange. *Nature* 369, 76-78.
38. Dirac-Svejstrup, A.B., Soldati, T., Shapiro, A.D., and Pfeffer, S.R. (1994) Rab-GDI presents functional rab9 to the intracellular transport machinery and contributes selectivity to rab9 membrane recruitment. *J. Biol. Chem.* 269, 15427-15430

39. Pfeffer, S.R. (1994). Rab GTPases: Master regulators of membrane trafficking. *Curr Biol.* 6, 522-526.
40. Pfeffer, S.R. (1995) Regulation of Receptor Trafficking by Ras-like GTPases. in Alzheimer's Disease: Lessons from Cell Biology. Fondation IPSEN, Kosik, K.S., Christen, Y. and Selkoe, D.J., eds., pp 27-36.
41. Shapiro, A.D. and Pfeffer, S.R. (1995). Quantitative Analysis of the interactions between prenylated rab9, GDI, and guanine nucleotides. *J. Biol. Chem.* 270, 11085-11090.
42. Pfeffer, S.R., Dirac-Svejstrup, A.B., and Soldati, T. (1995) Rab GDP Dissociation Inhibitor: Putting rab GTPases in the right place. *J. Biol. Chem.* 270, 17057-17059.
43. Riederer, M.A., Soldati, T. and Pfeffer, S.R. (1995) Expression, purification and in vitro isoprenylation of rab9 protein produced in *E. coli*. *Meth. Enzymol.* 257, 15-21.
44. Soldati, T., Shapiro, A.D. and Pfeffer, S.R. (1995) Reconstitution of the endosomal targeting of rab9 protein using purified, prenylated rab9 protein as a complex with GDI. *Meth. Enzymol.* 257, 253-259.
45. Soldati, T., Rancaño, C., Geissler, H., and Pfeffer, S.R. (1995). Rab7 and Rab9 are recruited onto late endosomes by biochemically distinguishable processes. *J. Biol. Chem.* 270, 25541-25548.
46. Pfeffer, S.R., Soldati, T., Geissler, H., Rancaño, C. and Dirac-Svejstrup, A.B. (1995) Selective Membrane Recruitment of Rab GTPases. *Cold Spring Harbor Symposium on Quantitative Biology LX*, 221-227.
47. Pfeffer, S.R. (1996) Vesicle docking and the SNARE hypothesis. *Ann. Rev. Cell Develop. Biol.* 12, 441-461.
48. Dirac-Svejstrup, A.B., Sumizawa, D. and Pfeffer, S.R. (1997) Identification of an endosomal GDI displacement factor that displaces prenylated Rab GTPases from Rab-GDI. *EMBO J.* 16, 465-472.
49. Nakajima, Y. and Pfeffer, S.R. (1997) Phosphatidylinositol 3-kinase is not required for recycling of mannose 6-phosphate receptors from late endosomes to the trans Golgi network. *Mol. Biol. Cell*, 8, 577-582.
50. Ulitzur, N., Humbert, M. and Pfeffer, S.R. (1997) Mapmodulin: a possible modulator of the interaction of MAPs with microtubules. *Proc. Natl. Acad. Sci USA* 94, 5084-5089.
51. Schimmöller, F., Itin, C. and Pfeffer, S.R. (1997) Vesicle Traffic: Get Your coat! *Curr. Biol.* 7, R-235-R237.
52. Diaz, E., Schimmöller, F. and Pfeffer, S.R. (1997) A novel Rab9 effector required for transport from endosomes to the TGN. *J. Cell Biol.* 138, 283-290.
53. Itin, C., Rancaño, C., Nakajima, Y., and Pfeffer, S.R. (1997) A novel assay reveals a role for alpha-SNAP in mannose 6-phosphate receptor transport from endosomes to the TGN. *J. Biol. Chem.* 272, 27737-37744 .
54. Ulitzur, N., Rancaño, C. and Pfeffer, S.R. (1997) Biochemical Characterization of mapmodulin--a protein that binds microtubule-associated proteins. *J. Biol. Chem.* 272, 30577-30582.

55. Diaz, E. and Pfeffer, S.R. (1998) TIP47: a cargo selection device for mannose 6-phosphate receptor trafficking. *Cell* 93, 433-443.
56. Schimmöller, F., Simon, I. and S. R. Pfeffer (1998) Rab GTPases: Directors of Vesicle Docking. *J. Biol. Chem.* 273, 22161-22164.
57. Schimmöller, F., Diaz, E.. and Pfeffer, S.R. (1998) Characterization of a 76kDa endosomal, multispinning membrane protein that is highly conserved in evolution. *Gene* 216, 311-318.
58. Pfeffer, S.R. (1999) Transport-vesicle targeting: Tethers before SNAREs. *Nature Cell Biol.* 1, E17-E22.
59. Waters, M.G. and Pfeffer, S.R. (1999) Membrane Tethering in Intracellular Transport. *Curr. Opin. Cell Biol.* 11, 453-459.
60. Itin, C., Ullitzur, N. and Pfeffer, S.R. (1999) Mapmodulin, cytoplasmic dynein and microtubules enhance the transport of mannose 6-phosphate receptors from endosomes to the trans Golgi network. *Mol. Biol. Cell* 10, 2191-2197.
61. Pfeffer, S.R. (1999) Motivating endosome motility. *Nature Cell Biol.* 1, E145-E147.
62. Krise, J.P., Sincock, P.M., Orsel, J.G., and Pfeffer, S.R. (2000) Quantitative Analysis of TIP47 (Tail-interacting protein of 47kD)-receptor cytoplasmic domain interactions: implications for endosome-to-trans Golgi network trafficking. *J. Biol. Chem* 275, 25188-25193.
63. Orsel, J.G., Sincock, P.M., Krise, J.P., and Pfeffer, S.R. (2000) Recognition of the 300K mannose 6-phosphate receptor cytoplasmic domain by TIP47. *Proc. Natl. Acad. Sci. USA* 97, 9047-9051.
64. Pfeffer, S.R. (2001) Membrane Transport: Retromer to the Rescue. *Curr. Biol.* 11, R109-R111.
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*News and Views: Segev, N. (2001) A TIP About Rabs. *Science* 292, 1313-1314.
66. Pfeffer, S.R. (2001) Caveolae on the move. *Nature Cell Biol.* 3, E108-E110.
67. Barbero, P., Buell, E., Zully, S. and Pfeffer, S.R. (2001) TIP47 is not a component of lipid droplets. *J. Biol. Chem.* 276, 24348-24351
68. Pfeffer, S.R. (2001) Rab GTPases: specifying and deciphering organelle identity and function. *Trends in Cell Biology* 11, 487-491.
69. Pfeffer, S.R. (2001) Constructing a Golgi Complex. *J. Cell Biol.* 155, 873-875.
70. Pfeffer, S.R. (2001) Tethering complexes united. *Mol. Cell* 8, 729-730.
71. *Barbero, P., Bittova, L. and Pfeffer, S.R. (2002) Visualization of Rab9-mediated vesicle transport from endosomes to the trans Golgi in living cells. *J. Cell Biol.* 156, 511-518. *News and Views: Wells, W. (2002) Visualizing Vesicles. *J. Cell Biol.* 156, 410
72. Hanna, J., Carroll, K. and Pfeffer, S.R. (2002) Identification of residues in TIP47 essential for Rab9 binding. *Proc. Natl. Acad. Sci. USA* 99:7450-7454

73. Sincock, P.M., Ganley, I.G., Krise, J., Diederichs, S., Sivars, U., O'Connor, B., Ding, L. and Pfeffer, S.R. (2003) Self-assembly is important for TIP47 function in mannose 6-phosphate receptor transport. *Traffic* 4, 18-25.
74. Pfeffer, S. (2003) Membrane Domains in the Secretory and Endocytic Pathways. *Cell* 112, 1-20.
75. *Sivars, U., Aivazian, D.A. and Pfeffer, S.R. (2003) Yip3 catalyses the dissociation of endosomal Rab-GDI complexes. *Nature* 425, 856-859
76. *Two News & Views: Barrowman J, Novick P. (2003) Three Yips for Rab recruitment. *Nat Cell Biol.* 5:955-6; Collins, R. (2003) Getting it on: GDI displacement and small GTPase recruitment. *Dev. Cell* 12, 1064-1066; *Faculty of 1000 Biology: <http://www.f1000biology.com/article/id/1015946/evaluation>
77. *Burguete, A.S., Harbury, P. B., and Pfeffer, S.R. (2004) In vitro selection and prediction of TIP47 protein-interaction interfaces. *Nature Methods* 1, 55-60.
*Nature Signaling Gateway Research library: G-protein/GPCR signaling
78. Ganley, I., Carroll, K., Bittova, L. and Pfeffer, S.R. (2004) Rab9 regulates late endosome size and requires effector interaction for stability. *Mol. Biol. Cell*, 15, 5420-30.
79. Pfeffer, S.R. and Aivazian, D. (2004) Targeting Rab GTPases to distinct membrane compartments. *Nature Reviews Molecular Cell Biology* 5, 1-12.
80. Pfeffer, S.R. (2005) Structural clues to Rab GTPase Functional Diversity. *J. Biol. Chem.*, 285, 15485-15488.
81. Pfeffer, S. (2005) A model for Rab Localization. *Biochem. Soc. Trans.* 33, 627-630.
82. Burguete, A.S., Harbury, P. B., and Pfeffer, S.R. (2005) Misincorporation Proton-Alkyl Exchange (MPAX): Engineering Cysteine Probes into Proteins. *Current Protocols in Protein Science*, 26.1.1-26.1.23.
83. Sivars, U., Aivazian, D. and Pfeffer, S. (2005) Purification and properties of Yip3/PRA1 as a Rab GDI displacement factor. *Meth. Enzymol.* 403, 348-356
84. Burguete, A.S., Sivars, U. and Pfeffer, S. (2005) Purification and analysis of TIP47 function in Rab9-dependent mannose 6-phosphate receptor trafficking. *Meth. Enzymol.* 403, 357-366.
85. Pfeffer, S. (2005) Filling the Rab GAP. *Nature Cell Biology* 7, 856-857.
86. Ganley, I.G. and Pfeffer, S.R. (2006) Cholesterol accumulation sequesters Rab9 and Disrupts late endosome function in NPC1-deficient cells. *J. Biol. Chem.* 281, 17890-17899.
87. *Aivazian, D., Serrano, R.L. and Pfeffer, S.R. (2006) TIP47 is a key effector for Rab9 Localization. *J. Cell Biol.* 173, 917-926 *Faculty of 1000 Biology: <http://www.f1000biology.com/article/id/1015180/evaluation>
88. Reddy, J., Schweizer Burguete, A., Sridevi, K., Ganley, I., Nottingham, R.M. and Pfeffer, S.R. (2006) A role for GCC185 in mannose 6-phosphate receptor recycling. *Mol. Biol. Cell* 17, 4353-63.

89. Reddy, J.V., Ganley, I.G., and Pfeffer, S.R. (2006) Clues to neuro-degeneration in Niemann-Pick Type C disease from global gene expression profiling. *PLoS ONE*, 1:e19.
90. Pfeffer, S.R. (2007) Unsolved mysteries in Membrane Traffic. *Ann. Rev. Biochem.* 76:629-45.
91. Pfeffer, S. (2007) Pathogen drop-kick. *Nature* 450, 361-362.
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95. Nottingham, R.M. and Pfeffer, S.R. (2008) Team effort by TRAPP forces a nucleotide fumble. *Cell* 133, 9-11.
96. Hayes, G.L. and Pfeffer, S.R. (2008) Whamming into the Golgi. *Dev. Cell* 15, 171-172.
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99. Lee, P.L., Kohler, J.J. and Pfeffer, S.R. (2009) Association of β -1,3-N acetylglucosaminyl-transferase 1 and β -1,4-galactosyltransferase 1, trans Golgi enzymes involved in coupled poly-N-acetyl-lactosamine synthesis. *Glycobiology* 19, 655-64.
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