

## PUBLICATIONS OF RANDY SCHEKMAN

1. Ray, D. S., and Schekman, R. W. (1969) Replication of bacteriophage M13. I. Sedimentation analysis of crude lysates of M13-infected bacteria. *BBA* 179, 398.
2. Ray, D. S., and Schekman, R. W. (1969) Replication of bacteriophage M13. III. Identification of the intracellular single-stranded DNA. *J. Mol. Biol.* 43, 645.
3. Schekman, R. W., Owaya, M., Bromstrup, K., and Denhardt, D. T. (1971) The mechanism of replication of  $\phi$ X174 single-stranded DNA. III. An enzymic study of the structure of the replicative form II DNA. *J. Mol. Biol.* 57, 177.
4. Schekman, R. W., and Ray, D. S. (1971) Polynucleotide ligase and  $\phi$ X174 single-strand synthesis. *Nature New Biol.* 231, 170.
5. Brutlag, D., Schekman, R. W., and Kornberg, A. (1971) A possible role for RNA polymerase in the initiation of M13 DNA synthesis. *Proc. Natl. Acad. Sci. USA* 68, 2826.
6. Schekman, R., Wickner, W., Brutlag, D., Westergaard, O., Geider, K., Bertsch, L. L., and Kornberg, A. (1973) Initiation of DNA synthesis. In "DNA Synthesis *in vitro*", R. B. Inman and R. D. Wells, eds., University Park Press, Baltimore, p. 175.
7. Wickner, W., Brutlag, D., Schekman, R., and Kornberg, A. (1972) RNA synthesis initiates *in vitro* conversion of M13 DNA to its replicative form. *Proc. Natl. Acad. Sci. USA* 69, 965.
8. Schekman, R. W., Wickner, W., Westergaard, O., Brutlag, D., Geider, K., Bertsch, L. L., and Kornberg, A. (1972) Initiation of DNA synthesis: synthesis of  $\phi$ X174 replicative form requires RNA synthesis resistant to rifampicin. *Proc. Natl. Acad. Sci. USA* 69, 2691.
9. Wickner, W., Schekman, R., Geider, K., and Kornberg, A. (1973) A new form of DNA polymerase III and a copolymerase replicate a long, single-stranded primer-template. *Proc. Natl. Acad. Sci. USA* 70, 1764.
10. Wickner, W., Schekman, R., Geider, K., Weiner, J., and Kornberg, A. (1973) DNA replication of small bacteriophages. In "Virus Research", C. F. Fox and W. S. Robinson, eds., Academic Press, New York and London, p. 89.
11. Weiner, J. H., Brutlag, D., Geider, K., Schekman, R., Wickner, W., and Kornberg, A. (1974) A soluble-enzyme extract for the study of DNA replication. In "DNA Replication", R. B. Wickner, ed., Marcel Dekker, Inc., New York, Chapter 10, p. 187.
12. Schekman, R., Weiner, A., and Kornberg, A. (1974) Multienzyme systems of DNA replication. *Science* 186, 987.
13. Schekman, R., Weiner, J., Weiner, A., and Kornberg, A. (1975) Ten proteins required for conversion of  $\phi$ X174 single-stranded DNA to duplex form *in vitro*. *J. Biol. Chem.* 250, 5859.

14. Schekman, R., and Singer, S. J. (1976) Clustering and endocytosis of membrane receptors can be induced in mature erythrocytes of neonatal humans but not adults. *Proc. Natl. Acad. Sci. USA* 73, 4075.
15. Tokuyasu, K. T., Schekman, R., and Singer, S. J. (1979) Domains of receptor mobility and endocytosis in the membranes of neonatal human erythrocytes and reticulocytes are deficient in spectrin. *J. Cell Biol.* 80, 481.
16. Schekman, R., and Brawley, V. (1979) Localized deposition of chitin on the yeast cell surface in response to mating pheromone. *Proc. Natl. Acad. Sci. USA* 76, 645.
17. Novick, P., and Schekman, R. (1979) Secretion and cell surface growth are blocked in a temperature sensitive mutant of *Saccharomyces cerevisiae*. *Proc. Natl. Acad. Sci. USA* 76, 1858-1862.
18. Scott, J. H., and Schekman, R. (1980) Lyticase: Endoglucomanase and protease activities that act together in yeast cell lysis. *J. Bact.* 142, 414.
19. Field, C., and Schekman, R. (1980) Localized secretion of acid phosphatase reflects the pattern of cell surface growth in *Saccharomyces cerevisiae*. *J. Cell Biol.* 86, 123-128.
20. Novick, P., Field, C., and Schekman, R. (1980) The identification of 23 complementation groups required for post-translational events in the yeast secretory pathway. *Cell* 21, 205-215.
21. Esmon, B., Novick, P., and Schekman, R. (1981) Compartmentalized assembly of oligosaccharides on exported glycoproteins. *Cell* 25, 451-460.
22. Novick, P., Ferro, S., and Schekman, R. (1981) Order of events in the yeast secretory pathway. *Cell* 25, 461-469.
23. Schekman, R. (1982) The secretory pathway in yeast. *Trends in Biochemical Sciences* 7, 243-246.
24. Schekman, R., and Novick, P. (1982) The secretory process and yeast cell-surface assembly. In "Molecular Biology of the Yeast *Saccharomyces*: Metabolism and Gene Expression", a Cold Spring Harbor Monograph, J. Broach, J. Strathern, and E. W. Jones, eds., pgs. 361-393.
25. Stevens, T., Esmon, B., and Schekman, R. (1982) Early stages in the yeast secretory pathway are required for transport of carboxypeptidase Y to the vacuole. *Cell* 30, 439-448.
26. Greer, C., and Schekman, R. (1982) Actin from *Saccharomyces cerevisiae*. *Molec. Cell. Biol.* 2, 1270-1278.
27. Greer, C., and Schekman, R. (1982) Calcium control of yeast actin assembly. *Molec. Cell. Biol.* 2, 1279-1286.

28. Schekman, R., Novick, P., Ferro-Novick, S., Esmon, B., Hansen, W., Etcheverry, T., and Stevens, T. (1982) Protein secretion and organelle assembly in yeast. "Berkeley Workshop on Recent Advances in Yeast Molecular Biology: Recombinant DNA" (L.B.L. Press, Vol. I), pp. 143-155.
29. Novick, P., and Schekman, R. (1983) Export of major cell surface proteins is blocked in yeast secretory mutants. *J. Cell Biol.* 96, 541-547.
30. Schekman, R., Esmon, B., Ferro-Novick, S., Field, C., and Novick, P. (1983) Yeast secretory mutants. "In Biomembranes, Membrane Biogenesis, Assembly and Targeting", *Methods in Enzymol.* 96, Part J, pgs. 802-815.
31. Tschopp, J., and Schekman, R. (1983) Two distinct subfractions in isolated yeast plasma membranes. *J. Bacteriol.* 156, 222-229.
32. Emr, S., Schekman, R., Flessel, M., and Thorner, J. (1983) An *MFαI-SUC2* ( $\alpha$ -factor-invertase) gene fusion for study of protein localization in yeast. *Proc. Natl. Acad. Sci. USA* 80, 7080-7084.
33. Ferro-Novick, S., Novick, P., Field, C., and Schekman, R. (1984) Yeast secretory mutants that block the formation of active cell surface enzymes. *J. Cell Biol.* 98, 35-43.
34. Ferro-Novick, S., Hansen, W., Schauer, I., and Schekman, R. (1984) Genes required for completion of import of proteins into the endoplasmic reticulum in yeast. *J. Cell Biol.* 98, 44-53.
35. Julius, D., Schekman, R., and Thorner, J. (1984) Glycosylation and processing of prepro- $\alpha$ -factor through the yeast secretory pathway. *Cell* 36, 309-318.
36. Esmon, B., Esmon, P. C., and Schekman, R. (1984) Early steps in processing of yeast glycoproteins. *J. Biol. Chem.* 259, 10322-10327.
37. Emr, S. D., Schauer, I., Hansen, W., Esmon, P., and Schekman, R. (1984) Invertase  $\beta$ -galactosidase hybrid proteins fail to be transported from the endoplasmic reticulum in yeast. *Molec. Cell Biol.* 4, 2347-2356.
38. Tschopp, J., Esmon, P. C., and Schekman, R. (1984) Defective plasma membrane assembly in yeast secretory mutants. *J. Bacteriol.* 160, 966-970.
39. Tsai, P. K., Ballou, L., Esmon, B., Schekman, R., and Ballou, C. E. (1984) Isolation of glucose-containing high-mannose glycoprotein core oligosaccharides. *Proc. Natl. Acad. Sci. USA* 81, 6340-6343.
40. Schekman, R., Schauer, I., and Haselbeck, A. (1985) Genetic and biochemical dissection of the secretory pathway in *Saccharomyces cerevisiae*. In "Microbiology", 459-464, American Society for Microbiology.

41. Schauer, I., Emr, S., Gross, C., and Schekman, R. (1985) Invertase signal and mature sequence substitutions that delay intercompartmental transport of active enzyme. *J. Cell Biol.*, 100, 1664-1675.
42. Schekman, R. (1985) Protein transport -- It's what's up front that counts. *Trends in Biochemical Sciences* 10, 177.
43. Schekman, R. (1985) Protein localization and membrane traffic in yeast. *Ann. Rev. Cell Biol.* 1, 115-143.
44. Payne, G. S., and Schekman, R. (1985) A test of clathrin function in protein secretion and cell growth. *Science* 230, 1009-1014.
45. Bernstein, M., Hoffmann, W., Ammerer, G., and Schekman, R. (1985) Characterization of a gene product (Sec53p) required for protein assembly in the yeast endoplasmic reticulum. *J. Cell Biol.* 101, 2374-2382.
46. Stevens, T. H., Rothman, J. H., Payne, G. S., and Schekman, R. (1986) Gene dosage-dependent secretion of yeast vacuolar carboxypeptidase Y. *J. Cell Biol.* 102, 1551-1557.
47. Haselbeck, A. and Schekman, R. (1986) Interorganelle transfer and glycosylation of yeast invertase *in vitro*. *Proc. Natl. Acad. Sci. USA* 83, 2017-2021.
48. Tschopp, J. F., Emr, S. D., Field, C., and Schekman, R. (1986) *GAL2* codes for a membrane-bound subunit of the galactose permease in *Saccharomyces cerevisiae*. *J. Bacteriol.* 166, 313-318.
49. Esmon, P. C., Esmon, B. E., and Schekman, R. (1986) Invertase forms octamers during secretion. In "Microbiology", 1986, pgs. 315-317.
50. Payne, G. S., and Schekman, R. (1986) The role of clathrin in yeast cell growth and protein transport. In "Yeast Cell Biology", James Hicks, ed., UCLA Symposia on Molecular and Cellular Biology, vol. 33, pgs. 429-441, A. R. Liss, Inc., New York.
51. Sosinsky, G., Schekman, R., and Glaeser, R. M. (1986) Morphological observations on the formation and stability of the crystalline arrays in the plasma membrane of *Saccharomyces cerevisiae*. *J. Ultrastructure and Molec. Structure Research* 94, 37-51.
52. Esmon, P. C., Esmon, B. E., Schauer, I. E., Taylor, A., and Schekman, R. (1987) Structure, assembly and secretion of octameric invertase. *J. Biol. Chem.* 262, 4387-4394.
53. Feldman, R., Bernstein, M., and Schekman, R. (1987) Product of *SEC53* is required for folding and glycosylation of secretory proteins in the lumen of the yeast endoplasmic reticulum.. *J. Biol. Chem.* 262, 9332-9339.
54. Böhni, P. C., Schauer, I., Tekamp-Olson, P., and Schekman, R. (1987) Signal peptide cleavage mutants of yeast invertase. In "Proteases and Biological Control", UCLA Symposia on

Molecular and Cellular Biology, pp. 255-264.

55. Deshaies, R., and Schekman, R. (1987) A yeast mutant defective at an early stage in import of secretory protein precursors into the endoplasmic reticulum. *J. Cell Biol.* 105, 633-645.
56. Payne, G. S., Hasson, T. B., Hasson, M. S., and Schekman, R. (1987) Genetic and biochemical characterization of clathrin-deficient *Saccharomyces cerevisiae*. *J. Mol. Cell. Biol.* 7, 3888-3898.
57. Holcomb, C., Etcheverry, T., and Schekman, R. (1987) Isolation of secretory vesicles from *Saccharomyces cerevisiae*. *Analyt. Biochem.* 166, 328-334.
58. Holcomb, C., Hansen, W., Etcheverry, T., and Schekman, R. (1987) Plasma membrane protein intermediates are present in the secretory vesicles of yeast. In "Interorganelle Protein Sorting and Organelle Assembly", UCLA Symposia on Molecular and Cellular Biology, 153-160.
59. Holcomb, C., Hansen, W., Etcheverry, T., and Schekman, R. (1988) Secretory vesicles externalize the major plasma membrane ATPase in yeast. *J. Cell Biol.* 106, 641-648.
60. Schekman, R. (1988) Clathrin: A matter of life or death? A response by: Sandra K. Lemmon and Elizabeth W. Jones. *Science* 239, 919.
61. Böhni, P. C., Deshaies, R. J., and Schekman, R. W. (1988) *SEC11* is required for signal peptide processing and yeast cell growth. *J. Cell Biol.* 106, 1035-1042.
62. Deshaies, R. J., Koch, B. D., Werner-Washburne, M., Craig, E. A., and Schekman, R. (1988) A subfamily of stress proteins facilitates translocation of secretory and mitochondrial precursor polypeptides. *Nature* 332, 800-805.
63. Payne, G. S., Baker, D., van Tuinen, R., and Schekman, R. (1988) Protein transport to the vacuole and receptor-mediated endocytosis by clathrin heavy chain-deficient yeast. *J. Cell Biol.* 106, 1453-1461.
64. Brada, D., and Schekman, R. (1988) Coincident localization of secretory and plasma membrane proteins in organelles of the yeast secretory pathway. *J. Bacteriol.* 170, 2775-2783.
65. Kepes, F., and Schekman, R. (1988) The yeast *SEC53* gene encodes phosphomannomutase. *J. Biol. Chem.* 263, 9155-9161.
66. Achstetter, T., Franzusoff, A., Field, C., and Schekman, R. (1988) *SEC7* encodes an unusual, high-molecular-weight protein required for membrane traffic from the yeast Golgi apparatus. *J. Biol. Chem.* 263, 11711-11717.
67. Baker, D., Hicke, L., Rexach, M., Schleyer, M., and Schekman, R. (1988) Reconstitution of *Sec* gene product-dependent intercompartmental protein transport. *Cell* 54, 335-344.

68. Nakano, A., Brada, D., and Schekman, R. (1988) A membrane glycoprotein, Sec12p, required for protein transport from the endoplasmic reticulum to the Golgi apparatus in yeast. *J. Cell Biol.* 107, 851-863.
69. Deshaies, R., Koch, B., and Schekman, R. (1988) The role of stress proteins in membrane biogenesis. *Trends in Biochem. Sci.* 13, 384-388.
70. Deshaies, R., Rothblatt, J., Sanders, S., Werner-Washburne, M., Craig, E., and Schekman, R. (1988) Molecular requirements for protein translocation into the endoplasmic reticulum. In "Gene Expression and Regulation: The Legacy of Luigi Gorini" (eds., Bissel, Deho, Sironi and Torriani) Elsevier Science Publishers, p. 187-198.
71. Baker, D., Hicke, L., Rexach, M., Schleyer, M., and Schekman, R. (1988) Intercompartmental transport of yeast alpha-factor precursor *in vitro*. In "8th International Biotechnology Symposium, Proceedings", Paris 1988 (eds., Durand, Bobichon, and Florent) Société Française de Microbiologie, p. 113-122.
72. Deshaies, R. J., Kepes, F. and Böhni, P. C. (1989) Genetic dissection of the early stages of protein secretion in yeast. *Trends in Genetics* 5, 87-93.
73. Bernstein, M., Kepes, F., and Schekman, R. (1989) SEC59 encodes a membrane protein required for core glycosylation in yeast. *Mol. Cell. Biol.* 9, 1191-1199.
74. Hicke, L., and Schekman, R. (1989) Yeast Sec23p acts in the cytoplasm to promote protein transport from the ER to the Golgi complex *in vivo* and *in vitro*. *EMBO J.* 8, 1677-1684.
75. Franzusoff, A., and Schekman, R. (1989) Functional compartments of the yeast Golgi apparatus are defined by the sec7 mutation. *EMBO J.* 8, 2695-2702.
76. Payne, G. S., and Schekman, R. (1989) Clathrin: A role in the intracellular retention of a Golgi membrane protein. *Science* 245, 1358-1365.
77. Rothblatt, J. A., Deshaies, R. J., Sanders, S., Daum, G., and Schekman, R. (1989) Multiple genes are required for proper insertion of secretory proteins into the endoplasmic reticulum in yeast. *J. Cell Biol.* 109, 2641-2652.
78. Deshaies, R. J. and Schekman, R. (1989) SEC62 encodes a putative membrane protein required for protein translocation into the yeast endoplasmic reticulum. *J. Cell Biol.* 109, 2653-2664.
79. Baker, D., and Schekman, R. (1989) Reconstitution of protein transport using broken yeast spheroplasts. In *Methods in Cell Biology*, Part A (A. M. Tartakoff, ed.), Academic Press, vol. 31, 127-141.
80. Rothblatt, J., and Schekman, R. (1989) A hitchhiker's guide to analysis of the secretory pathway in yeast. In *Methods in Cell Biology*, Part B (A. M. Tartakoff, ed.), Academic Press,

vol. 32, 3-36.

81. Baker, D., Wuestehube, L., Schekman, R., Botstein, D., and Segev, N. (1990) The GTP-binding Ypt1 protein and Ca<sup>2+</sup> function independently in a cell-free protein transport reaction. *Proc. Natl. Acad. Sci. USA* 87, 355-359.
82. Sengstag, C., Stirling, C., Schekman, R., and Rine, J. (1990) Genetic and biochemical evaluation of eucaryotic membrane protein topology: Multiple transmembrane domains of *Saccharomyces cerevisiae* 3-hydroxy-3-methylglutaryl coenzyme reductase. *Mol. Cell. Biol.* 10, 672-680.
83. Hicke, L., and Schekman, R. (1990) Molecular machinery required for protein transport from the endoplasmic reticulum to the Golgi complex. *BioEssays* 12, 253-258.
84. Kaiser, C. A., and Schekman, R. (1990) Distinct sets of SEC genes govern transport vesicle formation and fusion early in the secretory pathway. *Cell* 61, 723-733.
85. Silveira, L., Wong, D. H., Masiarz, F. R., and Schekman, R. (1990) Yeast clathrin has a distinctive light chain that is important for cell growth. *J. Cell Biol.* 111, 1437-1449.
86. Schekman, R., Deshaies, R., Rothblatt, J., and Stirling, C. (1990) Proteins that mediate membrane assembly in the endoplasmic reticulum. In "Protein Engineering" (Protein Design in Basic Research, Medicine, and Industry), edited by Morio Ikehara, Japan Scientific Societies Press, Springer-Verlag, Tokyo and Heidelberg, pgs. 339-346.
87. Deshaies, R. J., and Schekman, R. (1990) Structural and functional dissection of Sec62p, a membrane-bound component of the yeast endoplasmic reticulum protein import machinery. *Mol. Cell. Biol.* 10, 6024-6035.
88. Franzusoff, A., Rothblatt, J., and Schekman, R. (1990) Analysis of polypeptide transit through yeast secretory pathway. *Meth. Enzymol.* 194, 662-674.
89. Franzusoff, A., Redding, K., Crosby, J., Fuller, R. S., and Schekman, R. (1991) Localization of components involved in protein transport and processing through the yeast Golgi apparatus. *J. Cell Biol.* 112, 27-37.
90. Kaiser, C. A., and Schekman, R. (1990) Molecular genetic analysis of vesicle formation and fusion in protein transport from the endoplasmic reticulum. In "Molecular Biology of Atherosclerosis", Proceedings of the Twentieth Steenbock Symposium, (A. D. Attie, ed.), Elsevier, N.Y., pgs. 47-54.
91. Deshaies, R. J., Sanders, S. L., Feldheim, D. A., and Schekman, R. (1991) Assembly of yeast Sec proteins involved in translocation into the endoplasmic reticulum into a membrane-bound multisubunit complex. *Nature* 349, 806-808.

92. Chiang, H-L., and Schekman, R. (1991) Regulated import and degradation of a cytosolic protein in the yeast vacuole. *Nature* 350, 313-318.
93. Rexach, M., and Schekman, R. (1991) Distinct biochemical requirements for the budding, targeting, and fusion of ER-derived transport vesicles. *J. Cell Biology* 114, 219-229.
94. d'Enfert, C., Wuestehube, L. J., Lila, T., and Schekman, R. (1991) Sec12p-dependent membrane binding of the small GTP-binding protein Sar1p promotes formation of transport vesicles from the ER. *J. Cell Biol.* 114, 663-670.
95. Orci, L., Ravazzola, M., Meda, P., Holcomb, C., Moore, H-P., Hicke, L., and Schekman, R. (1991) Mammalian Sec23p homologue is restricted to the endoplasmic reticulum transitional cytoplasm. *Proc. Natl. Acad. Sci. USA* 88, 8611-8615.
96. d'Enfert, C., Barlowe, C., Nishikawa, S-I., Nakano, A., and Schekman, R. (1991) Structural and functional dissection of a membrane glycoprotein required for vesicle budding from the endoplasmic reticulum. *Mol. Cell. Biol.* 11, 5727-5734.
97. Stirling, C. A., Rothblatt, J., Hosobuchi, M., Deshaies, R., and Schekman, R. (1992) Protein translocation mutants defective in the insertion of integral membrane proteins into the endoplasmic reticulum. *Mol. Biol. Cell* 3, 129-142.
98. Sanders, S. L., Whitfield, K. M., Vogel, J. P., Rose, M. D., and Schekman, R. W. (1992) Sec61p and BiP directly facilitate polypeptide translocation into the ER. *Cell* 69, 353-365.
99. Feldheim, D., Rothblatt, J., and Schekman, R. (1992) Topology and functional domains of Sec63p, an ER membrane protein required for secretory protein translocation. *Mol. Cell. Biol.* 12, 3288-3296.
100. Hicke, L., Yoshihisa, T., and Schekman, R. (1992) Sec23p and a novel 105 kD protein function as a multimeric complex to promote vesicle budding and protein transport from the ER. *Mol. Biol. Cell* 3, 667-676.
101. Römisch, K., and Schekman, R. (1992) Distinct processes mediate glycoprotein and glycopeptide export from the endoplasmic reticulum in *S. cerevisiae*. *Proc. Natl. Acad. Sci.* 89, 7227-7231.
102. Griff, I. C., Schekman, R., Rothman, J. E., and Kaiser, C. A. (1992) The yeast *SEC17* gene product is functionally equivalent to mammalian  $\alpha$ -SNAP protein. *J. Biol. Chem.* 267, 12106-12115.
103. Sanders, S. L., and Schekman, R. (1992) Polypeptide translocation across the endoplasmic reticulum membrane. *J. Biol. Chem.* 267, 13791-13794.
104. Pryer, N. K., Wuestehube, L. J., and Schekman, R. (1992) Vesicle-mediated protein sorting. *Annu. Rev. Biochem.* 61, 471-516.

105. Schekman, R. (1992) Genetic and biochemical analysis of vesicular traffic in yeast. *Curr. Opin. Cell Biol.* 4, 587-592.
106. Wuestehube, L. J., and Schekman, R. (1992) Reconstitution of transport from endoplasmic reticulum to Golgi complex using endoplasmic reticulum-enriched membrane fraction from yeast. In "Reconstitution of Intracellular Transport" (J. E. Rothman, ed.), Academic Press, San Diego, CA, *Meth. Enzymol.* 219, 124-136.
107. Rexach, M. F., and Schekman, R. W. (1992) Use of *sec* mutants to define intermediates in protein transport from endoplasmic reticulum. In "Reconstitution of Intracellular Transport" (J. E. Rothman, ed.), Academic Press, San Diego, CA, *Meth. Enzymol.* 219, 267-286.
108. Hicke, L., Yoshihisa, T., and Schekman, R. W. (1992) Purification of the yeast Sec23 protein by complementation of mutant cell lysates deficient in endoplasmic reticulum-to-Golgi transport. In "Reconstitution of Intracellular Transport" (J. E. Rothman, ed.), Academic Press, San Diego, CA, *Meth. Enzymol.* 219, 338-352.
109. Chiang, H-L., and Schekman, R. (1992) Mechanism and regulation of import and degradation of cytosolic proteins in the lysosome/vacuole. In "Memb. Biogen. & Prot. Targett.", (W. Neupert and R. Lill, eds.), Elsevier Science Publishers B.V., Chapter 13, pgs. 149-164.
110. Hosobuchi, M., Kreis, T., and Schekman, R. (1992) *SEC21* is a gene required for ER to Golgi protein transport that encodes a subunit of a yeast coatomer. *Nature* 360, 603-605.
111. Brodsky, J., Hamamoto, S., Feldheim, D., and Schekman, R. (1993) Reconstitution of protein translocation from solubilized yeast membranes reveals topologically distinct roles for BiP and cytosolic hsc70. *J. Cell Biol.* 120, 95-102.
112. Barlowe, C., d'Enfert, C., and Schekman, R. (1993) Purification and characterization of SAR1p, a small GTP-binding protein required for transport vesicle formation from the endoplasmic reticulum. *J. Biol. Chem.* 268, 873-879.
113. Pryer, N. K., Salama, N. R., Schekman, R., and Kaiser, C. A. (1993) Cytosolic Sec13p complex is required for vesicle formation from the endoplasmic reticulum *in vitro*. *J. Cell Biol.* 120, 865-875.
114. Yoshihisa, T., Barlowe, C., and Schekman, R. (1993) Requirement for a GTPase-activating protein in vesicle budding from the endoplasmic reticulum. *Science* 259, 1466-1468.
115. Salama, N. R., Yeung, T., and Schekman, R. (1993) The Sec13p complex and reconstitution of vesicle budding from the ER with purified cytosolic proteins. *EMBO J.* 12, 4073-4082.
116. Barlowe, C., and Schekman, R. (1993) *SEC12* encodes a guanine nucleotide exchange factor essential for transport vesicle formation from the ER. *Nature* 365, 347-349.

117. Feldheim, D., Yoshimura, K., Admon, A., and Schekman, R. (1993) Structural and functional characterization of Sec66p, a new subunit of the polypeptide translocation apparatus in the yeast ER. *Mol. Biol. of the Cell* 4, 931-939.
118. Orci, L., Perrelet, A., Ravazzola, M., Wieland, F. T., Schekman, R., and Rothman, J. E. (1993) BFA bodies: A subcompartment of the endoplasmic reticulum. *Proc. Natl. Acad. Sci. USA* 90, 11089-11093.
119. Esnault, Y., Blondel, M-O., Deshaies, R. J., Schekman, R., and Kepes, F. (1993) The yeast *SSS1* gene is essential for secretory protein translocation, and encodes a highly conserved protein of the endoplasmic reticulum. *EMBO J.* 12, 4083-4093.
120. Brodsky, J. L., and Schekman, R. (1993) A Sec63p-BiP complex from yeast is required for protein translocation in a reconstituted proteoliposome. *J. Cell Biol.* 123, 1355-1363.
121. Barlowe, C., and Schekman, R. (1993) GTPases and interacting elements in vesicle budding and targeting in yeast. In "Handbook of Experimental Pharmacology, GTPases in Biology" (edited by B. F. Dickey/L. Birnbaumer), Springer-Verlag Berlin Heidelberg, Vol. 108/I, pgs. 397-407.
122. Brodsky, J. L., and Schekman, R. (1994) Heat shock cognate proteins and polypeptide translocation across the endoplasmic reticulum membrane. In "The Biology of Heat Shock Proteins and Molecular Chaperones", CSH Press, Cold Spring Harbor, NY, pgs. 85-109.
123. Wuestehube, L. J., and Schekman, R. (1994) Selection and screening for yeast secretory mutants. *Methods in Mol. Gen.*, Vol. 3, Chapter 5, pgs. 88-106.
124. Barlowe, C., Orci, L., Yeung, T., Hosobuchi, M., Hamamoto, S., Salama, N., Rexach, M. F., Ravazzola, M., Amherdt, M., and Schekman, R. (1994) COPII: A membrane coat formed by Sec proteins that drive vesicle budding from the endoplasmic reticulum. *Cell* 77, 895-907.
125. Latterich, M., and Schekman, R. (1994) The karyogamy gene *KAR2* and novel proteins are required for ER membrane fusion. *Cell* 78, 87-98.
126. Kurihara, L., Beh, C., Latterich, M., Schekman, R., and Rose, M. (1994) Nuclear congression and membrane fusion: Two distinct events in the yeast karyogamy pathway. *J. Cell Biol.* 126, 911-923.
127. Feldheim, D., and Schekman, R. (1994) Sec72p contributes to the selective recognition of signal peptides by the secretory polypeptide translocation complex. *J. Cell Biol.* 126, 935-943.
128. Rexach, M. F., Latterich, M., and Schekman, R. W. (1994) Characteristics of endoplasmic reticulum-derived transport vesicles. *J. Cell Biol.* 126, 1133-1148.
129. Orci, L., Perrelet, A., Ravazzola, M., Amherdt, M., Rothman, J., and Schekman, R. (1994) Coatomer-rich endoplasmic reticulum. *Proc. Natl. Acad. Sci. USA* 91, 11924-11928.

130. Duden, R., Hosobuchi, M., Hamamoto, S., Winey, M., Byers, B., and Schekman, R. (1994) Yeast  $\beta$ - and  $\beta'$ -coat proteins (COP). *J. Biol. Chem.* 269, 24486-24495.
131. Esnault, Y., Feldheim, D., Blondel, M-O., Schekman, R., and Kepes, F. (1994) *SSS1* encodes a stabilizing component of the Sec61 subcomplex of the yeast protein translocation apparatus. *J. Biol. Chem.* 269, 27478-27485.
132. Schekman, R. (1994) Translocation gets a push. *Cell* 78, 911-913.
133. Salama, N. R. and Schekman, R.W. (1995) The role of coat proteins in the biosynthesis of secretory proteins. *Curr. Opin. in Cell Biol.* 7, 536-543.
134. Latterich, M., Froelich, K., and Schekman, R. (1995) Membrane fusion and the cell cycle: Cdc48p participates in the fusion of ER membranes. *Cell* 82, 885-895.
135. Barlowe, C. and Schekman, R. (1995) Expression, purification, and assay of Sec12p: A Sar1p-specific GDP dissociation stimulator. *Meth. in Enzymol.* 257, Part C (Balch, W. E., Der, C. J., Hall, A., eds.) 97-106.
136. Yeung, T., Yoshihisa, T., and Schekman, R. (1995) Purification of Sec23p-Sec24p complex. *Meth. in Enzymol.* 257, Part C (Balch, W. E., Der, C. J., Hall, A., eds.) 145-151.
137. Brodsky, J. L., Goeckeler, J., and Schekman, R. (1995) BiP and Sec63p are required for both co- and posttranslational protein translocation into the yeast endoplasmic reticulum. *Proc. Natl. Acad. Sci. USA* 92, 9643-9646.
138. Lyman, S. K. and Schekman, R. (1995) Interaction between BiP and Sec63p is required for the completion of protein translocation into the ER of *Saccharomyces cerevisiae*. *J. Cell Biol.* 131, 1163-1171.
139. Yeung, T., Barlowe, C., and Schekman, R. (1995) Uncoupled packaging of targeting and cargo molecules during transport vesicle budding from the endoplasmic reticulum. *J. Biol. Chem.* 270, 30567-30570.
140. Bednarek, S. Y., Ravazzola, M., Hosobuchi, M., Amherdt, M., Perrelet, A., Schekman, R., and Orci, L. (1995) COPI- and COPII-coated vesicles bud directly from the endoplasmic reticulum in yeast. *Cell* 83, 1183-1196.
141. Schekman, Randy W. (1996) Regulation of membrane traffic in the secretory pathway. *Harvey Lectures, Series 90*, Wiley-Liss, Inc., pp. 41-57.
142. Doering, T. L. and Schekman, R. (1996) GPI-anchor attachment is required for Gas1p transport from the endoplasmic reticulum in COPII vesicles. *EMBO J.* 15, 182-191.
143. Wuestehube, L. J., Duden, R., Eun, A., Hamamoto, S., Korn, P., Ram, R., and Schekman, R. (1996) New mutants of *Saccharomyces cerevisiae* affected in the transport of proteins from the endoplasmic reticulum to the Golgi complex. *Genetics* 142, 393-406.

144. Lupashin, V. V., Hamamoto, S., and Schekman, R. (1996) Biochemical requirements for the targeting and fusion of ER-derived transport vesicles with purified yeast Golgi membranes. *J. Cell Biol.* 132, 277-289.
145. Schekman, R. and Orci, L. (1996) Coat proteins and vesicle budding. *Science* 271, 1526-1533.
146. Schekman, R., Barlowe, C., Bednarek, S., Campbell, J., Doering, T., Duden, R., Kuehn, M., Rexach, M., Yeung, T., and Orci, L. (1996) Coat proteins and selective protein packaging into transport vesicles. In "The Dynamics of Protein Trafficking and Stability" (B. Stillman, ed.), Symposium LX, Cold Spring Harbor Press, Cold Spring Harbor, NY, pgs. 11-21.
147. Chiang, H-L., Schekman, R., and Hamamoto, S. (1996) Selective uptake of cytosolic, peroxisomal, and plasma membrane proteins into the yeast lysosome for degradation. *J. Biol. Chem.* 271, 9934-9941.
148. Campbell, J. L. and Schekman, R. (1996) The sorting of membrane proteins during the formation of ER-derived transport vesicles. In "Molecular Dynamics of Biomembranes" (edited by J. A. F. Op den Kamp), *NATO ASI Series H: Cell Biology*, Vol. 96, Springer-Verlag Berlin Heidelberg, pgs. 209-217.
149. Orci, L., Schekman, R., and Perrelet, A. (1996) Interleaflet clear space is reduced in the membrane of COPI and COPII-coated buds/vesicles. *Proc. Natl. Acad. Sci. USA* 93, 8968.
150. Paccaud, J-P., Reith, W., Carpentier, J-L., Rassola, M., Amherdt, M. Schekman, R. and Orci, L. (1996) Cloning and functional characterization of mammalian homologues of the COPII components Sec23. *Mol. Biol. Cell* 7, 1535-1546.
151. Kuehn, M., Schekman, R. and Ljungdahl, P. (1996) Amino acid permeases require COPII components and the ER resident membrane protein Shr3p for packaging into transport vesicles *in vitro*. *J. Cell Biol.* 135, 585-595.
152. Chuang, J. and Schekman, R. (1996) Differential trafficking and timed localization of two chitin synthase proteins, Chs 2p and Chs3p. *J. Cell Biol.* 135, 597-610.
153. Bednarek, S., Orci, L., and Schekman, R. (1996) Traffic COPs and the formation of vesicle coats. *Trends in Cell Biol.* 6, 468-473.
154. Schekman, R. (1996) Polypeptide translocation: A pretty picture is worth a thousand words. *Cell* 87, 593-595.
155. Corsi, A. K., and Schekman, R. (1996) Mechanism of polypeptide translocation into the endoplasmic reticulum. *J. Biol. Chem.* 271, 30299-30302.

156. Ziman, M., Chuang, J. S., and Schekman, R. W. (1996) Chs1p and Chs3p, two proteins involved in chitin synthesis, populate a compartment of the *Saccharomyces cerevisiae* endocytic pathway. *Mol. Biol. Cell* 7, 1909-1919.
157. Lyman, S., and Schekman, R. (1996) Polypeptide translocation machinery of the yeast endoplasmic reticulum. *Experientia-Cell and Mol. Life Sci.* 52, 1042-1049.
158. Lyman, S. K., and Schekman, R. (1997) Binding of secretory precursor polypeptides to a translocon subcomplex is regulated by BiP. *Cell* 88, 85-96.
159. Salama, N.R., Chuang, J. S.,and Schekman, R. W. (1997) *SEC31* encodes an essential component of the COPII coat required for transport vesicle budding from the endoplasmic reticulum. *Mol. Biol. Cell* 8, 205-217.
160. Campbell, J. L., and Schekman, R. (1997) Selective packaging of cargo molecules into endoplasmic reticulum-derived COPII vesicles. *Proc. Natl. Acad. Sci. USA* 94, 837-842.
161. Corsi, A., and Schekman, R. (1997) The luminal domain of Sec63p stimulates the ATPase of BiP and mediates BiP recruitment to the translocon in *Saccharomyces cerevisiae*. *J. Cell Biol.* 137, 1483-1493.
162. Kuehn, M. J., and Schekman, R. (1997) COPII and secretory cargo capture into transport vesicles. *Curr. Opin. Cell Biol.* 9, 477-483.
163. Schekman, R., and Mellman, I. (1997) Does COPI Go Both Ways? *Cell* 90, 197-200.
164. Pilon, M., Schekman, R., and Römisch, K. (1997) Sec61p mediates export of a misfolded secretory protein from the endoplasmic reticulum to the cytosol for degradation. *EMBO J.* 16, 4540-4548.
165. Duden, R., and Schekman, R. (1997) Insights into Golgi function through mutants in yeast and animal cells. In "The Golgi Apparatus", E. G. Berger & J. Roth (eds.), pgs. 219-246, Birkhäuser Verlag, Basel, Switzerland.
166. Doering, T. L., and Schekman, R. (1997) Glycosyl-phosphatidylinositol anchor attachment in a yeast *in vitro* system. *Biochem. J.* 328, 669-675.
167. Lyman, S. K., and Schekman, R. (1997) Protein translocation into the endoplasmic reticulum. In "Guidebook to Molecular Chaperones and Protein-Folding Catalysts", a Sambrook & Tooze Publication, M.-J. Gething (ed.), pgs. 506-514, Oxford University Press, London, U.K.
168. Kuehn, M. T., Herrmann, J. M., and Schekman, R. (1998) COPII-cargo interactions direct protein sorting into ER-derived transport vesicles. *Nature* 391, 187-190.
169. Duden, R., Kajikawa, L., Wuestehube, L., and Schekman, R. (1998)  $\epsilon$ -COP is a structural component of coatomer that functions to stabilize  $\alpha$ -COP. *EMBO J.* 17, 985-995.

170. Matsuoka, K., Orci, L., Amherdt, M., Bednarek, S.Y., Hamamoto, S., Schekman, R. and Yeung, T. (1998) COPII-Coated vesicle formation reconstituted with purified coat proteins and chemically defined liposomes. *CELL* 93, 263-275.
171. Ziman, M., Chuang, J.S., Tsung, M., Hamamoto, S., and Schekman, R. (1998) Chs6p-dependent anterograde transport of Chs3p from the chitosome to the plasma membrane in *Saccharomyces cerevisiae*. *Mol. Biol. Cell* 9, 1565-1576.
172. Springer, S., and Schekman, R. (1998) Nucleation of COPII vesicular coat complex by ER to Golgi v-SNAREs. *Science* 281, 698-700.
173. Spang, A., Matsuoka, K., Hamamoto, S., Schekman, R. and Orci, L. (1998) Coatomer, Arf1p, and nucleotide are required to bud COPI-coated vesicles from large synthetic liposomes. *Proc. Natl. Acad. Sci. USA* 95, 11199-11204.
174. Matsuoka, K., Morimitsu, Y., Uchida, K., and Schekman, R. (1998) Coat assembly directs v-SNARE concentration into synthetic COPII vesicles. *Mol. Cell* 2, 703-708.
175. Spang, A., and Schekman, R. (1998) Reconstitution of retrograde transport from the Golgi to the ER *in vitro*. *J. Cell Biol.* 143, 589-599.
176. Pilon, M., Römisch, K., Quach, D., and Schekman, R. (1998) Sec61p serves multiple roles in secretory precursor binding and translocation into the endoplasmic reticulum membrane. *Mol. Biol. Cell* 9, 3455-3473.
177. Schekman, R. (1998) Membrane fusion: Ready...aim...fire! *Nature* 396, 514-515.
178. Herrmann, J. M., Malkus, P., and Schekman, R. (1999) Out of the ER -- outfitters, escorts and guides. *Trends Cell Biol.* 9, 5-7.
179. Springer, S., Spang, A., and Schekman, R. (1999) A primer on vesicle budding. *Cell* 97, 145-148.
180. Pilon, M., and Schekman, R. (1999) Protein translocation: How Hsp70 pulls it off. *Cell* 97, 679-682.
181. Zhou, M., and Schekman, R. (1999) The engagement of Sec61p in the ER dislocation process. *Mol. Cell* 4, 925-934.
182. Lau, W.-T. W., Howson, R. W., Malkus, P., Schekman, R., and O'Shea, E. K. (2000) Pho86p, an ER resident protein in *Saccharomyces cerevisiae*, is required for ER exit of the high affinity phosphate transporter Pho84p. *Proc. Natl. Acad. Sci. USA* 97, 1107-1112.
183. Matsuoka, K., and Schekman, R. (2000) The use of liposomes to study COPII and COPI coated vesicle formation and membrane protein sorting. *Meth. Enzymol.* 20, 417-428.

184. Kurihara, T., Hamamoto, S., Gimeno, R. E., Kaiser, C. A., Schekman, R., and Yoshihisa, T. (2000) Sec24p and Iss1p function interchangeably in transport vesicle formation from the endoplasmic reticulum in *Saccharomyces cerevisiae*. *Mol. Biol. Cell* 11, 983-998.
185. Springer, S., Chen, E., Duden, R., Marzioch, M., Rowley, A., Hamamoto, S., Merchant, S., and Schekman, R. (2000) The p24 proteins are not essential for vesicular transport in *Saccharomyces cerevisiae*. *Proc. Natl. Acad. Sci., USA* 97, 4034-4039.
186. Shimonini, Y., Kurihara, T., Ravazzola, M., Amherdt, M., Orci, L., and Schekman, R. (2000) Lst1p and Sec24p cooperate in sorting of the plasma membrane ATPase into COPII vesicles in *Saccharomyces cerevisiae*. *J. Cell Biol.* 151, 973-984.
187. Todorow, Z., Spang, A., Carmack, E., Yates, J., and Schekman, R. (2000) Active recycling of yeast Golgi mannosyltransferase complexes through the endoplasmic reticulum. *Proc. Natl. Acad. Sci. USA* 97, 13643-13648.
188. Deloche, O., Yeung, B. G., Payne, G. S., and Schekman, R. (2001) Vps10p transport from the *trans*-Golgi network to the endosome is mediated by clathrin-coated vesicles. *Mol. Biol. Cell* 12, 475-485.
189. Spang, A., Herrmann, J. M., Hamamoto, S., and Schekman, R. (2001) The ADP ribosylation factor-nucleotide exchange factors Gea1p and Gea2p have overlapping, but not redundant functions in retrograde transport from the Golgi to the endoplasmic reticulum. *Mol. Biol. Cell* 12, 1035-1045.
190. Antonny, B., Madden, D., Hamamoto, S., Orci, L., and Schekman, R. (2001) Dynamics of the COPII coat with GTP and stable analogues. *Nature Cell Biol.* 3, 531-537.
191. Antonny, B., and Schekman, R. (2001) ER export: Public transportation by the COPII coach. *Curr. Opin. Cell Biol.* 13, 438-443.
192. Lederkremer, G. Z., Cheng, Y., Petre, B. V., Vogan, E., Springer, S., Schekman, R., Walz, T., and Kirchhausen, T. (2001) Structure of the Sec23p/24p and Sec13p/31p complexes of COPII. *Proc. Natl. Acad. Sci. USA*, 98, 10704-10709.
193. Matsuoka, K., Schekman, R., Orci, L., and Heuser, J. (2001) Surface structure of the COPII-coated vesicle. *Proc. Natl. Acad. Sci. USA*. 98, 13705-13709.
194. Harsay, E., and Schekman, R. (2002). A subset of yeast vacuolar protein sorting mutants are blocked in one branch of the exocytic pathway. *J. Cell Biol.* 156, 271-286.
195. Valdivia, R. H., Baggott, D., Chuang, J. S., and Schekman, R. W. (2002). The yeast clathrin adaptor protein complex-1 is required for the efficient retention of a subset of late-Golgi membrane proteins. *Dev. Cell* 2, 283-294.

196. Lee, M. C. S., Hamamoto, S., and Schekman, R. (2002) Ceramide biosynthesis is required for the formation of oligomeric H<sup>+</sup>-ATPase, Pma1p, in the yeast endoplasmic reticulum. *J. Biol. Chem.* 277, 22395-22401.
197. Shiloni, Y., and Schekman, R. (2002) Vesicle budding from the ER. *Meth. Enzymol.* 351, 258-278.
198. Supek, F., Madden, D. T., Hamamoto, S., Orci, L., and Schekman, R. (2002) Sec16p potentiates the action of COPII proteins to bud transport vesicles. *J. Cell Biol.* 158, 1029-1038.
199. Miller, E., Antonny, B., Hamamoto, S., and Schekman, R. (2002) Cargo selection into COPII vesicles is driven by the Sec24p subunit. *EMBO J.* 21, 6105-6113.
200. Schekman, R. (2002) SEC mutants and the secretory apparatus. *Nature Medicine* 8, 1055-1058.
201. Deloche, O., and Schekman, R. W. (2002) Vps10p cycles between the TGN and the late endosome via the plasma membrane in clathrin mutants. *Mol. Biol. Cell* 13, 4296-4307.
202. Malkus, P., Jiang, F., and Schekman, R. (2002) Concentrative sorting of secretory cargo proteins into COPII-coated vesicles. *J. Cell Biol.* 159, 915-921.
203. Antonny, B., Gounon, P., Schekman, R., and Orci, L. (2003) Self-assembly of minimal COPII cages. *EMBO Reports* 4, 419-424.
204. Valdivia, R., and Schekman, R. (2003) The yeasts Rho1p and Pkc1p regulate the transport of chitin synthase III (Chs3p) from internal stores to the plasma membrane. *Proc. Natl. Acad. Sci. USA* 100, 10287-10292.
205. Miller, E., Beilharz, T. H., Malkus, P. N., Lee, M.C.S., Hamamoto, S., Orci, L., and Schekman, R. (2003) Multiple cargo binding sites on the COPII subunit Sec24p ensure capture of diverse membrane proteins into transport vesicles. *Cell* 114, 1-20.
206. Lee, Marcus C. S., and Schekman, R. (2004) BAR domains go on a bender. *Science* 303, 479-480.
207. Schekman, Randy, and Novick, Peter. (2004) 23 genes, 23 years later. *Cell* S116, S13-S15.
208. Kim, Jinoh, and Schekman, Randy. (2004) The ins and outs of presenilin 1 membrane topology. *PNAS* 101, 905-906.
209. Lee, Marcus C. S., Miller, E. A., Goldberg, J., Orci, L., and Schekman, Randy. (2004) Bi-directional protein transport between the ER and Golgi. *Annu. Rev. Cell Dev. Biol.* 20, 87-123.
210. Schekman, Randy. (2004) Merging cultures in the study of membrane traffic. *Nature Cell Biol.* 6, 483-486.

211. Schekman, Randy. (2004) A channel for protein waste. *Nature* 429, 817-818.
212. Futai, Eugene, Hamamoto, Susan, Orci, Lelio and Schekman, Randy. (2004) GTP/GDP exchange by Sec12p enables COPII vesicle bud formation on synthetic liposomes. *EMBO J.*, 4146-4155.
213. Malkus, Per, Graham, L. A., Stevens, T. H., and Schekman, Randy. (2004) Role of Vma21p in assembly and transport of the yeast vacuolar ATPase. *Mol. Biol. Cell* 15, 5075-5091.
214. Sun, Yidi, Kaksonen, Marko, Madden, David T., Schekman, Randy, and Drubin, David G. (2004) Interaction of Sla2p's ANTH domain with PtdIns(4,5)P<sub>2</sub> is important for actin-dependent endocytic internalization. *Mol. Biol. Cell* published online, December 1, 2004, 10.1091.
215. Kim, Jinoh, Hamamoto, Susan, Ravazzola, Mariella, Orci, Lelio, and Schekman, Randy. (2004) Uncoupled packaging of amyloid precursor protein and presenilin 1 into COPII vesicles. *J. Biol. Chem.*, published online, December 2004, 10.1074.
216. Miller, Elizabeth A., Liu, Y., Barlowe C., and Schekman, Randy. (2005) ER-Golgi transport defects are associated with mutations in the Sed5p-binding domain of the COPII coat subunit, Sec24p. *Mol. Biol. Cell* 16, 3719-3726.
217. Fromme, J. C., and Schekman, Randy. COPII-coated vesicles: flexible enough for large cargo? (2005) *Curr Opin Cell Biol.* Aug;17(4):345-52.
218. Schekman, Randy. Peroxisomes: another branch of the secretory pathway? (2005) *Cell*. Jul 15;122(1):1-2. Review.
219. Lee, M. C, Orci, L., Hamamoto, S., Futai, E, Ravazzola, M, and Schekman, Randy. (2005) Sar1p N-terminal helix initiates membrane curvature and completes the fission of a COPII vesicle. *Cell*. Aug 26;122(4):605-17.
220. Schekman, R. (2005) Membrane traffic in landmark papers in yeast biology, a chapter *In* Landmark Papers. Cold Spring Harbor Press (Eds. P. Linder, D. Shore and M. Hall) pgs. 243-252.
221. Futai, E., and Schekman, R. (2005) Purification and functional properties of Sec12 GEF. *Meth Enzymol.* 404, 74-82.
222. Wickner, William and Schekman, Randy. (2005) Protein translocation across biological membranes. *Science* 310, 1452-1456.
223. Wang, C-W., Hamamoto, S., Orci, L., and Schekman, R. (2006) Exomer: a coat complex for transport of select membrane proteins from the trans-Golgi network to the plasma membrane in yeast. *J. Cell Biol.* 174, 973-983.

224. Sanchatjate, S. and Schekman, Randy. (2006) Chs5/6 Complex: A multiprotein complex that interacts with and conveys chitin synthase III from the trans-Golgi network to the cell surface. *Mol. Biol. Cell* 17, 4157-4166.
225. Boyadjiev, S. A., Fromme, J. C., Ben, J., Chong, S. S., Nauta, C., Hur, D. J., Zhang, G., Hamamoto, S., Schekman, R., Ravazzola, M., Orci, L., and Eyaid, W. (2006) Cranio-lenticulo-sutural dysplasia is caused by a SEC23A mutation leading to abnormal endoplasmic-reticulum-to-Golgi trafficking. *Nature Gen.* 38, 1192-1197.
226. Harsay, E. and Schekman, Randy. (2007) Avl9p, a member of a novel protein superfamily, functions in the late secretory pathway. *Mol Biol Cell* 18, 1203-1219.
227. Copic, A., Starr, T., and Schekman, R. (2007) Ent3p and Ent5p exhibit cargo-specific functions in trafficking proteins between the trans-Golgi network and the endosomes in yeast 3. *Mol. Biol. Cell* 18, 1803-1815.
228. Schekman, R. (2007) How sterols regulate protein sorting and traffic. *Proc. Natl. Acad. Sci. USA* 104, 6496-6497.
229. Kim, J., Thanabalanur, A., Chaworth-Musters, T., Fromme, J. C., Frey, E. A., Lario, P. I., Metalnikov, P., Rizg, K., Thomas, N. A., Lee, S. F., Hartland, E. L., Hardwidge, P. R., Pawson, T., Strynadka, N. C., Finley, B. B., Schekman, R., and Gruenheid, S. (2007) The bacterial virulence factor NleA binds and disrupts function of mammalian COPII. *Cell Host and Microbe* 2, 160-171.
230. Kim, J., Kleizen, B., Choy, R., Thinakaran, G., Sisodia, S. S., and Schekman, R. W. (2007) Biogenesis of gamma-secretase early in the secretory pathway. *J. Cell Biol.* 179, 951-963.
231. Fromme, J. C., Ravazzola, M., Hamamoto, S., Al-Balwi, M., Eyaid, W., Boyadjiev, S. A., Cosson, R., Schekman, R., and Orci, L. (2007) The genetic basis of a craniofacial disease provides insight into COPII coat assembly. *Developmental Cell*, 13, 623-634.
232. Schekman, R. (2007) The nine lives of Daniel E. Koshland, Jr. (1920-2007). *PNAS* 104, 14551-14552. Correction issued in *PNAS* 104 (November 6, 2007 issue).
233. Schekman, Randy (2007) Arthur Kornberg 1918-2007. *Cell* 131, 637-639.
234. Scott, Daniel C., and Schekman, Randy (2008) Role of Sec61p in the ER-associated degradation of short-lived transmembrane proteins. *J. Cell Biol.* 181, 1095-1105.
235. Wickner, William, and Schekman, Randy (2008) Membrane fusion. *Nature Struc. & Mol. Biol.* 15, 658-664.
236. Fromme, J. C., Orci, L., and Schekman, R. (2008) Coordination of COPII vesicle trafficking by Sec23. *Trends Cell Biol.* 18, 330-337.
237. Schekman, Randy W. (2008) George E. Palade (1912-2008). *Science* 322, 695.

238. Saito, K., Chen, M., Bard, F., Chen, S., Zhou, H., Woodley, D., Polischuk, R., Schekman, R. and Malhotra, V. (2009) TANGO1 facilitates cargo loading at endoplasmic reticulum exit sites. *Cell* 136, 891-902.
239. Tran, J. H., Ching-Jen, C., Emr, S. and Schekman, R. (2009) Cargo sorting into multivesicular bodies *in vitro*. *Proc. Natl. Acad. Sci. USA* 106, 17395-400.
240. Schindler, A. and Schekman, R. (2009) *In vitro* reconstitution of ER-stress induced ATF6 transport in COPII vesicles. *Proc. Natl. Acad. Sci. USA* 106, 17775-80.
241. Barfield, R. M., Fromme, J. C., and Schekman, R. (2009) The exomer coat complex transports Fus1p to the plasma membrane via a novel plasma membrane sorting signal in yeast. *Mol. Biol. Cell* 20, 4985-4996.
242. Schekman, R. (2009) Change is good: life outside the nucleus. *Nat. Cell Biol.* 11, 1274.
243. Merte, J., Jensen, D., Wright, K., Sarsfield, S., Wang, Y., Schekman, R. and Ginty, D. D. (2009) Sec24b selectively sorts Vang12 to regulate planar cell polarity during neural tube closure. *Nature Cell Biol.* (published online December 6, 2009).
244. Schekman, R. (2010) Charting the secretory pathway in a simple eukaryote. *Mol. Biol. Cell* 21, 3781-3784.
245. Lam, S. K., Yoda, N. and Schekman, R. (2010) A vesicle carrier that mediates peroxisome protein traffic from the endoplasmic reticulum. *PNAS* 107, 21523-21528.
246. Jensen, D. and Schekman, R. (2011) COPII-mediated vesicle formation at a glance. *J. Cell Sci.* 124, 1-4.
247. Bacia, K., Kutai, E., Prinz, D., Meister, A., Daum, S., Glatte, D., Briggs, J.A.G. and Schekman, R. (2011) Multibudded tubules formed by COPII on artificial liposomes. *Scientific Reports*, 1, 17.
248. Boyadjiev, S. A., Kim, S-D., Hata, A., Haldeman-Englert, C., Zachai, E. H., Naydenov, C., Hamamoto, S., Schekman, R. W., and Kim, J. (2011) Cranio-lenticulo-sutural dysplasia associated with defects in collagen secretion. *Clin. Genet.* 80, 169-176
249. Zhang, B., Zheng, C., Zhu, M., Tao, J., Vasievich, M. P., Baines, A., Kim, J., Schekman, R., Kaufman, R. J., and Ginsburg, D. (2011) Mice deficient in LMAN1 exhibit FV and FVIII deficiencies and liver accumulation of  $\alpha$ 1-antitrypsin. *Blood*, Sept. 22:118(12)3384-91. Epub 2011 Jul 27.
250. Rothman, J.E. and Schekman, R. (2011) Molecular mechanism of protein folding in the cell. *Cell* 146, 851-854.

251. Jin, Y., Sultana, A., Gandhi, P., Franklin, E., Hamamoto, S., Khan, A. R., Munson, M., Schekman, R., and Weisman, L.S. (2011) Myosin V Transports Secretory Vesicles VIAA Rab GTPase cascade and interaction with the exocyst complex, *Developmental Cell*, doi:10.1016/j.devcel.2011.10.009.
- 252 Zanetti, G., Pahuja, K. B., Studer, S., Shim, S. and Schekman, R. (2011) COPII and the regulation of protein sorting in mammals. *Nature Cell Biol.* 14, 20-28.
253. Kung, L. F., Pagant, S., Futai, E., D'Arcangelo, J. G., Buchanan, R., Dittmar, J. C., Reid, R. J. D., Rothstein, R., Hamamoto, S., Snapp, S., Schekman, R. and Miller, R. A. (2011) Sec24p and Sec16p cooperate to regulate the GTP cycle of the COPII coat. *EMBO J.* 31, 1014-1027.
254. Kim, S.-D, Pahuja, K.B., Ravazzola, M., Yoon, J., Boyadjiev, S.A., Hamamoto, S., Schekman, R., Orci, L., and Kim, J. (2012) SEC-23-SEC31 the Interface Plays Critical Role for Export of Procollagen from the Endoplasmic Reticulum, *J. Biol. Chem.* 287, 10134-10144.
255. Jin, L., Pahuja. K. B., Wickliffe, K. E., Gorur, A., Baumgartel, C., Schekman, R. and Rape, M. (2012) Ubiquitin-dependent regulation of COPII coat size and function. *Nature* 482, 495-500.
256. Choy, R. W.-Y., Cheng, Z. and Schekman, R. (2012) Amyloid precursor protein (APP) traffics from the cell surface via endosomes for amyloid  $\beta$ (A $\beta$ ) production in trans-Golgi network. *Proc. Natl. Acad. Sci. USA* 109, No. 30, pgs. ).
257. Starr, T. L., Pagant, S., Wang, C. W., and Schekman, R. (2012) Sorting signals that mediate traffic of chitin synthase III between the TGN1 endosomes and to the plasma membrane in yeast. *Plos One* 7 (10):e46386, Epub Oct. 3, 2012.
258. Guo, Y., Zanetti, G., and Schekman, R. (2013) A Novel GTP-binding protein-adaptor protein complex responsible for export of Vangl2 from the *trans* Golgi network. *eLife* DOI: <http://dx.doi.org/10.7554/eLife.00160> (online Jan. 8).
259. Dimitrov, L., Lam, S. K. and Schekman, R. (2013) The role of the endoplasmic reticulum in peroxisome biogenesis. *Cold Spring Harbor Perspect. Biol.* DOI: 10.1101/cshperspect. a013243 in The Endoplasmic Reticulum ed. Ferro-Novick, S., Rapoport, T. A. and Schekman, R.
260. Ferro-Novick, S., Rapoport, T. A. and Schekman, R. (2013) The Endoplasmic Reticulum. *Cold Spring Harbor Perspectives in Biology* (Cold Spring Harbor Press, 2013).
261. Lee, B. L., Moon, J. E., Shu, J. H., Yuan, L., Newman, Z. R., Schekman, R., and Barton, G. M. (2013) UNC93B1 mediates differential trafficking of endosomal TLRs. *eLife* DOI: <http://dx.doi.org/10.7554/eLife.00291> (online Feb. 19).
262. Zhang, M. and Schekman, R. (2013) Unconventional secretion, unconventional solutions. *Science* 340, 559-560.

263. Jakobsen, M. K., Cheng, Z., Lam, S. K., Roth-Johnson, E., Barfield, R. and Schekman, R. (2013) Phosphorylation of Chs2p regulates interaction with COPII. *J. Cell Sci.*, March 22 [Epub ahead of print].
264. Chen, X.-W., Wang, H., Bajaj, K., Zhang, P., Meng, Z., Ma, D., Bai, Y., Adams, E., Baines, E., Yu, G., Sartor, M.A. Zhang, B., Yi, Z., Lin, J., Young, S. G., Schekman, R., and Ginsburg, D. (2013) SEC24A Deficiency Lowers Plasma Cholesterol through Reduced PCSK9 Secretion. *eLife*, April 9; 2:e00444.doi:10.7554/eLife.00444.
265. Miller, E. A. and Schekman, R. (2013) COPII – a flexible vesicle formation system. *Curr. Opin. In Cell Biol.* <http://dx.doi.org/10.1016/j.ceb.2013.04.005> (online May 20, 2013)
266. Ge, L., Melville, D., Zhang, M. and Schekman, R. (2013) The ER-Golgi intermediate compartment is a key membrane source for the LC3 lipidation step of autophagosome biogenesis. *eLife* (in press).