

6. References

Abrami, L. and F. G. van Der Goot (1999). Plasma membrane microdomains act as concentration platforms to facilitate intoxication by aerolysin. *J Cell Biol* **147**(1): 175-84.

Alconada, A., U. Bauer, et al. (1996). A tyrosine-based motif and a casein kinase II phosphorylation site regulate the intracellular trafficking of the varicella-zoster virus glycoprotein I, a protein localized in the trans-Golgi network. *EMBO J* **15**(22): 6096-110.

Ali, S., J. Hall, et al. (1996). A protein targeting signal that functions in polarized epithelial cells in vivo. *Biochem J* **315** (Pt 3): 857-62.

Allan, B. B. and W. E. Balch (1999). Protein sorting by directed maturation of Golgi compartments. *Science* **285**(5424): 63-6.

Allan, B. B., B. D. Moyer, et al. (2000). Rab1 recruitment of p115 into a cis-SNARE complex: programming budding COPII vesicles for fusion. *Science* **289**(5478): 444-8.

Allan, V. J., H. M. Thompson, et al. (2002). Motoring around the Golgi. *Nat Cell Biol* **4**(10): E236-42.

Alvarez, C., H. Fujita, et al. (1999). ER to Golgi transport: Requirement for p115 at a pre-Golgi VTC stage. *J Cell Biol* **147**(6): 1205-22.

Arata, Y., T. Nishi, et al. (2002). Structure, subunit function and regulation of the coated vesicle and yeast vacuolar (H(+))-ATPases. *Biochim Biophys Acta* **1555**(1-3): 71-4.

Bachert, C., T. H. Lee, et al. (2001). Luminal endosomal and Golgi-retrieval determinants involved in pH-sensitive targeting of an early Golgi protein. *Mol Biol Cell* **12**(10): 3152-60.

Balch, W. E., B. S. Glick, et al. (1984). Sequential intermediates in the pathway of intercompartmental transport in a cell-free system. *Cell* **39**(3 Pt 2): 525-36.

Balch, W. E., W. G. Dunphy, et al. (1984b). Reconstitution of the transport of protein between successive compartments of the Golgi measured by the coupled incorporation of *N*-acetylglucosamine. *Cell* **39**(2Pt1): 405-16.

Bannykh, S. I. and W. E. Balch (1997). Membrane dynamics at the endoplasmic reticulum-Golgi interface. *J Cell Biol* **138**(1): 1-4.

- Bannykh, S. I. and W. E. Balch (1998). Selective transport of cargo between the endoplasmic reticulum and Golgi compartments. *Histochem Cell Biol* **109**(5-6): 463-75.
- Barenholz, Y. and T. E. Thompson (1980). Sphingomyelins in bilayers and biological membranes. *Biochim Biophys Acta* **604**(2): 129-58.
- Barlowe, C., L. Orci, et al. (1994). COPII: a membrane coat formed by Sec proteins that drive vesicle budding from the endoplasmic reticulum. *Cell* **77**(6): 895-907.
- Barr, F. A., N. Nakamura, et al. (1998). Mapping the interaction between GRASP65 and GM130, components of a protein complex involved in the stacking of Golgi cisternae. *EMBO J* **17**(12): 3258-68.
- Barr, F. A., C. Preisinger, et al. (2001). Golgi matrix proteins interact with p24 cargo receptors and aid their efficient retention in the Golgi apparatus. *J Cell Biol* **155**(6): 885-91.
- Barr, F. A., M. Puype, et al. (1997). GRASP65, a protein involved in the stacking of Golgi cisternae. *Cell* **91**(2): 253-62.
- Baumann, C. A., V. Ribon, et al. (2000). CAP defines a second signalling pathway required for insulin-stimulated glucose transport. *Nature* **407**(6801): 202-7.
- Beams, H. W. and R. G. Kessel (1968). The Golgi apparatus: structure and function. *Int Rev Cytol* **23**: 209-76.
- Becker, B. and M. Melkonian (1996). The secretory pathway of protists: spatial and functional organization and evolution. *Microbiol Rev* **60**(4): 697-721.
- Benting, J. H., A. G. Rietveld, et al. (1999). N-Glycans mediate the apical sorting of a GPI-anchored, raft-associated protein in Madin-Darby canine kidney cells. *J Cell Biol* **146**(2): 313-20.
- Boggs, J. M. and K. M. Koshy (1994). Do the long fatty acid chains of sphingolipids interdigitate across the center of a bilayer of shorter chain symmetric phospholipids? *Biochim Biophys Acta* **1189**(2): 233-41.
- Bonfanti, L., A. A. Mironov, Jr., et al. (1998). Procollagen traverses the Golgi stack without leaving the lumen of cisternae: evidence for cisternal maturation. *Cell* **95**(7): 993-1003.
- Bordier, C. (1981). Phase separation of integral membrane proteins in Triton X-114 solution. *J Biol Chem* **256**(4): 1604-7.

- Brown, D. (2002). Structure and function of membrane rafts. *Int J Med Microbiol* **291**(6-7): 433-7.
- Brown, D. A., B. Crise, et al. (1989). Mechanism of membrane anchoring affects polarized expression of two proteins in MDCK cells. *Science* **245**(4925): 1499-501.
- Brown, D. A. and E. London (1998). Functions of lipid rafts in biological membranes. *Annu Rev Cell Dev Biol* **14**: 111-36.
- Brown, D. A. and J. K. Rose (1992). Sorting of GPI-anchored proteins to glycolipid-enriched membrane subdomains during transport to the apical cell surface. *Cell* **68**(3): 533-44.
- Bruegger, B., R. Sandhoff, et al. (2000). Evidence for segregation of sphingomyelin and cholesterol during formation of COPI-coated vesicles. *J Cell Biol* **151**(3): 507-18.
- Burkhard, P., J. Stetefeld, et al. (2001). Coiled coils: a highly versatile protein folding motif. *Trends Cell Biol* **11**(2): 82-8.
- Chamberlain, L. H., R. D. Burgoyne, et al. (2001). SNARE proteins are highly enriched in lipid rafts in PC12 cells: implications for the spatial control of exocytosis. *Proc Natl Acad Sci U S A* **98**(10): 5619-24.
- Chamberlain, L. H. and G. W. Gould (2002). The vesicle- and target-SNARE proteins that mediate Glut4 vesicle fusion are localized in detergent-insoluble lipid rafts present on distinct intracellular membranes. *J Biol Chem* **277**(51): 49750-4.
- Chatterjee, S. and S. Mayor (2001). The GPI-anchor and protein sorting. *Cell Mol Life Sci* **58**(14): 1969-87.
- Chen, R., E. I. Walter, et al. (1998). Mammalian glycosylphosphatidylinositol anchor transfer to proteins and posttransfer deacylation. *Proc Natl Acad Sci U S A* **95**(16): 9512-7.
- Chiu, R., L. Novikov, et al. (2002). A caspase cleavage fragment of p115 induces fragmentation of the Golgi apparatus and apoptosis. *J Cell Biol* **159**(4): 637-48.
- Cole, N. B., C. L. Smith, et al. (1996). Diffusional mobility of Golgi proteins in membranes of living cells. *Science* **273**(5276): 797-801.
- Colley, K. J. (1997). Golgi localization of glycosyltransferases: more questions than answers. *Glycobiology* **7**(1): 1-13.

- Cross, G. A. (1984). Release and purification of *Trypanosoma brucei* variant surface glycoprotein. *J Cell Biochem* **24**(1): 79-90.
- Dahan, S., J. P. Ahluwalia, et al. (1994). Concentration of intracellular hepatic apolipoprotein E in Golgi apparatus saccular distensions and endosomes. *J Cell Biol* **127**(6 Pt 2): 1859-69.
- David, D., S. Sundarababu, et al. (1998). Involvement of long chain fatty acid elongation in the trafficking of secretory vesicles in yeast. *J Cell Biol* **143**(5): 1167-82.
- de Figueiredo, P., R. S. Polizotto, et al. (1999). Membrane tubule-mediated reassembly and maintenance of the Golgi complex is disrupted by phospholipase A2 antagonists. *Mol Biol Cell* **10**(6): 1763-82.
- De Matteis, M. A., G. Santini, et al. (1993). Receptor and protein kinase C-mediated regulation of ARF binding to the Golgi complex. *Nature* **364**(6440): 818-21.
- Dermine, J. F., S. Duclos, et al. (2001). Flotillin-1-enriched lipid raft domains accumulate on maturing phagosomes. *J Biol Chem* **276**(21): 18507-12.
- Desjardins, M., J. E. Celis, et al. (1994). Molecular characterization of phagosomes. *J Biol Chem* **269**(51): 32194-200
- Deurs, B., K. Roepstorff, et al. (2003). Caveolae: anchored, multifunctional platforms in the lipid ocean. *Trends Cell Biol* **13**(2): 92-100.
- Diao, A., D. Rahman, et al. (2003). The coiled-coil membrane protein golgin-84 is a novel rab effector required for Golgi ribbon formation. *J Cell Biol* **160**(2): 201-12.
- Dickson, R. C. (1998). Sphingolipid functions in *Saccharomyces cerevisiae*: comparison to mammals. *Annu Rev Biochem* **67**: 27-48.
- Dirac-Svejstrup, A. B., J. Shorter, et al. (2000). Phosphorylation of the vesicle-tethering protein p115 by a casein kinase II-like enzyme is required for Golgi reassembly from isolated mitotic fragments. *J Cell Biol* **150**(3): 475-88.
- Doering, T. L. and R. Schekman (1996). GPI anchor attachment is required for Gas1p transport from the endoplasmic reticulum in COP II vesicles. *EMBO J* **15**(1): 182-91.

- Donaldson, J. G., D. Finazzi, et al. (1992). Brefeldin A inhibits Golgi membrane-catalysed exchange of guanine nucleotide onto ARF protein. *Nature* **360**(6402): 350-2.
- Donaldson, J. G., R. A. Kahn, et al. (1991). Binding of ARF and beta-COP to Golgi membranes: possible regulation by a trimeric G protein. *Science* **254**(5035): 1197-9.
- Donaldson, J. G. and J. Lippincott-Schwartz (2000). Sorting and signaling at the Golgi complex. *Cell* **101**(7): 693-6.
- Drevot, P., C. Langlet, et al. (2002). TCR signal initiation machinery is pre-assembled and activated in a subset of membrane rafts. *EMBO J* **21**(8): 1899-908.
- Dunphy, W. G. and J. E. Rothman (1983). Compartmentation of asparagine-linked oligosaccharide processing in the Golgi apparatus. *J Cell Biol* **97**(1): 270-5.
- Dupree, P., R. G. Parton, et al. (1993). Caveolae and sorting in the trans-Golgi network of epithelial cells. *EMBO J* **12**(4): 1597-605.
- Eberle, H. B., R. L. Serrano, et al. (2002). Identification and characterization of a novel human plant pathogenesis-related protein that localizes to lipid-enriched microdomains in the Golgi complex. *J Cell Sci* **115**(Pt 4): 827-38.
- Eisenkolb, M., C. Zenzmaier, et al. (2002). A Specific Structural Requirement for Ergosterol in Long-chain Fatty Acid Synthesis Mutants Important for Maintaining Raft Domains in Yeast. *Mol Biol Cell* **13**(12): 4414-28.
- Fath, K. R., G. M. Trimbur, et al. (1997). Molecular motors and a spectrin matrix associate with Golgi membranes in vitro. *J Cell Biol* **139**(5): 1169-81.
- Ferguson, M. A. (1999). The structure, biosynthesis and functions of glycosylphosphatidylinositol anchors, and the contributions of trypanosome research. *J Cell Sci* **112** (Pt 17): 2799-809.
- Fields, T. A. and P. J. Casey (1997). Signalling functions and biochemical properties of pertussis toxin-resistant G-proteins. *Biochem J* **321** (Pt 3): 561-71.
- Finazzi, D., D. Cassel, et al. (1994). Aluminum fluoride acts on the reversibility of ARF1-dependent coat protein binding to Golgi membranes. *J Biol Chem* **269**(18): 13325-30.
- Fivaz, M., L. Abrami, et al. (2001). Aerolysin from *Aeromonas hydrophila* and related toxins. *Curr Top Microbiol Immunol* **257**: 35-52.

- Fivaz, M., F. Vilbois, et al. (2002). Differential sorting and fate of endocytosed GPI-anchored proteins. *EMBO J* **21**(15): 3989-4000.
- Franco, M., J. Boretto, et al. (1998). ARNO3, a Sec7-domain guanine nucleotide exchange factor for ADP ribosylation factor 1, is involved in the control of Golgi structure and function. *Proc Natl Acad Sci U S A* **95**(17): 9926-31.
- Fuellekrug, J., T. Sukanuma, et al. (1999). Localization and recycling of gp27 (hp24 γ_3): Complex formation with other p24 family members. *Mol Cell Biol* **10**(6): 1939-55.
- Garin, J., R. Diez, et al. (2001). The phagosome proteome: insight into phagosome functions. *J Cell Biol* **152**(1): 165-80.
- Girod, A., B. Storrie, et al. (1999). Evidence for a COP-I-independent transport route from the Golgi complex to the endoplasmic reticulum. *Nat Cell Biol* **1**(7): 423-30.
- Gkantiragas, I., B. Brugger, et al. (2001). Sphingomyelin-enriched microdomains at the Golgi complex. *Mol Biol Cell* **12**(6): 1819-33.
- Grimmer, S., T. G. Iversen, et al. (2000). Endosome to Golgi transport of ricin is regulated by cholesterol. *Mol Biol Cell* **11**(12): 4205-16.
- Grote, E., M. Baba, et al. (2000). Geranylgeranylated SNAREs are dominant inhibitors of membrane fusion. *J Cell Biol* **151**(2): 453-66.
- Gudi, S., J. P. Nolan, et al. (1998). Modulation of GTPase activity of G proteins by fluid shear stress and phospholipid composition. *Proc Natl Acad Sci U S A* **95**(5): 2515-9.
- Hannan, L. A. and M. Edidin (1996). Traffic, polarity, and detergent solubility of a glycosylphosphatidylinositol-anchored protein after LDL-deprivation of MDCK cells. *J Cell Biol* **133**(6): 1265-76.
- Hannon, G. J. (2002). RNA interference. *Nature* **418**(6894): 244-51.
- Hansen, G. H., L. L. Niels-Christiansen, et al. (2000). Cholesterol depletion of enterocytes. Effect on the Golgi complex and apical membrane trafficking. *J Biol Chem* **275**(7): 5136-42.
- Harder, T. and K. Simons (1997). Caveolae, DIGs, and the dynamics of sphingolipid-cholesterol microdomains. *Curr Opin Cell Biol* **9**(4): 534-42.

- Helenius, A. and M. Aebi (2001). Intracellular functions of N-linked glycans. *Science* **291**(5512): 2364-9.
- Helms, J. B., D. Helms-Brons, et al. (1998). A putative heterotrimeric G protein inhibits the fusion of COPI-coated vesicles. Segregation of heterotrimeric G proteins from COPI-coated vesicles. *J Biol Chem* **273**(24): 15203-8.
- Helms, J. B. and J. E. Rothman (1992). Inhibition by brefeldin A of a Golgi membrane enzyme that catalyses exchange of guanine nucleotide bound to ARF. *Nature* **360**(6402): 352-4.
- Holthuis, J. C., T. Pomorski, et al. (2001). The organizing potential of sphingolipids in intracellular membrane transport. *Physiol Rev* **81**(4): 1689-723.
- Honda, A., M. Nogami, et al. (1999). Phosphatidylinositol 4-phosphate 5-kinase alpha is a downstream effector of the small G protein ARF6 in membrane ruffle formation. *Cell* **99**(5): 521-32.
- Hong, Y., K. Ohishi, et al. (2002). Requirement of N-glycan on GPI-anchored proteins for efficient binding of aerolysin but not Clostridium septicum alpha-toxin. *EMBO J* **21**(19): 5047-56.
- Horvath, A., C. Sutterlin, et al. (1994). Ceramide synthesis enhances transport of GPI-anchored proteins to the Golgi apparatus in yeast. *EMBO J* **13**(16): 3687-95.
- Ikezawa, H., M. Yamanegi, et al. (1976). Studies on phosphatidylinositol phosphodiesterase (phospholipase C type) of Bacillus cereus. I. purification, properties and phosphatase-releasing activity. *Biochim Biophys Acta* **450**(2): 154-64.
- Ikonen, E. (2001). Roles of lipid rafts in membrane transport. *Curr Opin Cell Biol* **13**(4): 470-7.
- Ilangumaran, S. and D. C. Hoessli (1998). Effects of cholesterol depletion by cyclodextrin on the sphingolipid microdomains of the plasma membrane. *Biochem J* **335** (Pt 2): 433-40.
- Ishikawa, J., T. Kaisho, et al. (1995). Molecular cloning and chromosomal mapping of a bone marrow stromal cell surface gene, BST2, that may be involved in pre-B-cell growth. *Genomics* **26**(3): 527-34.
- Jamora, C., P. A. Takizawa, et al. (1997). Regulation of Golgi structure through heterotrimeric G proteins. *Cell* **91**(5): 617-26.

- Jamora, C., N. Yamanouye, et al. (1999). Gbetagamma-mediated regulation of Golgi organization is through the direct activation of protein kinase D. *Cell* **98**(1): 59-68.
- Jenne, N., K. Frey, et al. (2002). Oligomeric state and stoichiometry of p24 proteins in the early secretory pathway. *J Biol Chem* **277**(48): 46504-11.
- Jokitalo, E., N. Cabrera-Poch, et al. (2001). Golgi clusters and vesicles mediate mitotic inheritance independently of the endoplasmic reticulum. *J Cell Biol* **154**(2): 317-30.
- Karadimitris, A. and L. Luzzatto (2001). The cellular pathogenesis of paroxysmal nocturnal haemoglobinuria. *Leukemia* **15**(8): 1148-52.
- Kenworthy, A. (2002). Peering inside lipid rafts and caveolae. *Trends Biochem Sci* **27**(9): 435-7.
- Kjer-Nielsen, L., R. D. Teasdale, et al. (1999). A novel Golgi-localisation domain shared by a class of coiled-coil peripheral membrane proteins. *Curr Biol* **9**(7): 385-8.
- Kozak, M. (1977). Nucleotide sequences of 5'-terminal ribosome-protected initiation regions from two reovirus messages. *Nature* **269**(5627): 391-4.
- Kuge, O., C. Dascher, et al. (1994). Sar1 promotes vesicle budding from the endoplasmic reticulum but not Golgi compartments. *J Cell Biol* **125**(1): 51-65.
- Ladinsky, M. S., D. N. Mastronarde, et al. (1999). Golgi structure in three dimensions: functional insights from the normal rat kidney cell. *J Cell Biol* **144**(6): 1135-49.
- Lane, J. D., J. Lucocq, et al. (2002). Caspase-mediated cleavage of the stacking protein GRASP65 is required for Golgi fragmentation during apoptosis. *J Cell Biol* **156**(3): 495-509.
- Lang, D. M., S. Lommel, et al. (1998). Identification of reggie-1 and reggie-2 as plasmamembrane-associated proteins which cocluster with activated GPI-anchored cell adhesion molecules in non-caveolar micropatches in neurons. *J Neurobiol* **37**(4): 502-23.
- Lang, T., D. Bruns, et al. (2001). SNAREs are concentrated in cholesterol-dependent clusters that define docking and fusion sites for exocytosis. *EMBO J* **20**(9): 2202-13.

- Lawrence, J. C., D. E. Saslowsky, et al. (2003). Real-time analysis of the effects of cholesterol on lipid raft behavior using atomic force microscopy. *Biophys J* **84**(3): 1827-32.
- Ledesma, M. D., K. Simons, et al. (1998). Neuronal polarity: essential role of protein-lipid complexes in axonal sorting. *Proc Natl Acad Sci U S A* **95**(7): 3966-71.
- Lee, H., S. E. Woodman, et al. (2001). Palmitoylation of caveolin-1 at a single site (Cys-156) controls its coupling to the c-Src tyrosine kinase: targeting of dually acylated molecules (GPI-linked, transmembrane, or cytoplasmic) to caveolae effectively uncouples c-Src and caveolin-1 (TYR-14). *J Biol Chem* **276**(37): 35150-8.
- Letourneur, F., E. C. Gaynor, et al. (1994). Coatamer is essential for retrieval of dilysine-tagged proteins to the endoplasmic reticulum. *Cell* **79**(7): 1199-207.
- Li, X. M., J. M. Smaby, et al. (2000). Sphingomyelin interfacial behavior: the impact of changing acyl chain composition. *Biophys J* **78**(4): 1921-31.
- Liljedahl, M., Y. Maeda, et al. (2001). Protein kinase D regulates the fission of cell surface destined transport carriers from the trans-Golgi network. *Cell* **104**(3): 409-20.
- Lin, P., T. Fischer, et al. (2000). Calnuc, an EF-hand Ca(2+) binding protein, specifically interacts with the C-terminal alpha5-helix of G(alpha)i3. *Proc Natl Acad Sci U S A* **97**(2): 674-9.
- Lin, P., H. Le-Niculescu, et al. (1998). The mammalian calcium-binding protein, nucleobindin (CALNUC), is a Golgi resident protein. *J Cell Biol* **141**(7): 1515-27.
- Linstedt, A. D. and H. P. Hauri (1993). Giantin, a novel conserved Golgi membrane protein containing a cytoplasmic domain of at least 350 kDa. *Mol Biol Cell* **4**(7): 679-93.
- Lisanti, M. P., A. Le Bivic, et al. (1990). Preferred apical distribution of glycosyl-phosphatidylinositol (GPI) anchored proteins: a highly conserved feature of the polarized epithelial cell phenotype. *J Membr Biol* **113**(2): 155-67.
- Low, M. G. and J. B. Finean (1977). Non-lytic release of acetylcholinesterase from erythrocytes by a phosphatidylinositol-specific phospholipase C. *FEBS Lett* **82**(1): 143-6.
- Low, M. G. and P. W. Kincade (1985). Phosphatidylinositol is the membrane-anchoring domain of the Thy-1 glycoprotein. *Nature* **318**(6041): 62-4.

- Lowe, M., C. Rabouille, et al. (1998). Cdc2 kinase directly phosphorylates the cis-Golgi matrix protein GM130 and is required for Golgi fragmentation in mitosis. *Cell* **94**(6): 783-93.
- Luetterforst, R., E. Stang, et al. (1999). Molecular characterization of caveolin association with the Golgi complex: identification of a cis-Golgi targeting domain in the caveolin molecule. *J Cell Biol* **145**(7): 1443-59.
- Lupas, A., M. van Dyke and J. Stock. (1991). Predicting coiled coils from protein sequences. *Science* **252**(5010): 1162-4
- Machamer C. E. (1993). Targeting and retention of Golgi membrane proteins. *Curr Opin Cell Biol* **5**(4): 606-12.
- Mancini, M., C. E. Machamer, et al. (2000). Caspase-2 is localized at the Golgi complex and cleaves golgin-160 during apoptosis. *J Cell Biol* **149**(3): 603-12.
- Mansour, S. J., J. Skaug, et al. (1999). p200 ARF-GEP1: a Golgi-localized guanine nucleotide exchange protein whose Sec7 domain is targeted by the drug brefeldin A. *Proc Natl Acad Sci U S A* **96**(14): 7968-73.
- Marra, P., T. Maffucci, et al. (2001). The GM130 and GRASP65 Golgi proteins cycle through and define a subdomain of the intermediate compartment. *Nat Cell Biol* **3**(12): 1101-13.
- Marsh, B. J. and K. E. Howell (2002). The mammalian Golgi--complex debates. *Nat Rev Mol Cell Biol* **3**(10): 789-95.
- Marsh, B. J., D. N. Mastronarde, et al. (2001). Organellar relationships in the Golgi region of the pancreatic beta cell line, HIT-T15, visualized by high resolution electron tomography. *Proc Natl Acad Sci U S A* **98**(5): 2399-406.
- Martin, M. E., J. Hidalgo, et al. (2000). Effect of protein kinase A activity on the association of ADP-ribosylation factor 1 to golgi membranes. *J Biol Chem* **275**(25): 19050-9.
- Martin, M. E., J. Hidalgo, et al. (1999). Trimeric G proteins modulate the dynamic interaction of PKAII with the Golgi complex. *J Cell Sci* **112** (Pt 22): 3869-78.
- Martinez-Menarguez, J. A., R. Prekeris, et al. (2001). Peri-Golgi vesicles contain retrograde but not anterograde proteins consistent with the cisternal progression model of intra-Golgi transport. *J Cell Biol* **155**(7): 1213-24.

- Matter, K., W., Hunziker et al. (1992). Basolateral sorting of LDL receptor in MDCK cells: the cytoplasmic domain contains two tyrosine-dependent targeting determinants. *Cell* **71**(5): 741-53.
- Mayor, S., S. Sabharanjak, et al. (1998). Cholesterol-dependent retention of GPI-anchored proteins in endosomes. *EMBO J* **17**(16): 4626-38.
- Mays, R. W., K. A. Siemers, et al. (1995). Hierarchy of mechanisms involved in generating Na/K-ATPase polarity in MDCK epithelial cells. *J Cell Biol* **130**(5): 1105-15.
- McConville, M. J., T. A. Collidge, et al. (1993). The glycoinositol phospholipids of *Leishmania mexicana* promastigotes. Evidence for the presence of three distinct pathways of glycolipid biosynthesis. *J Biol Chem* **268**(21): 15595-604.
- Melancon, P., B. S. Glick, et al. (1987). Involvement of GTP-binding G proteins in transport through the Golgi stack. *Cell* **51**(6): 1053-62.
- Mellman, I. and K. Simons (1992). The Golgi complex: in vitro veritas? *Cell* **68**(5): 829-40.
- Mertens, G., B. Van der Schueren, et al. (1996). Heparan sulfate expression in polarized epithelial cells: the apical sorting of glypican (GPI-anchored proteoglycan) is inversely related to its heparan sulfate content. *J Cell Biol* **132**(3): 487-97.
- Micanovic, R., L. D. Gerber, et al. (1990). Selectivity of the cleavage/attachment site of phosphatidylinositol-glycan-anchored membrane proteins determined by site-specific mutagenesis at Asp-484 of placental alkaline phosphatase. *Proc Natl Acad Sci U S A* **87**(1): 157-61.
- Mironov, A. A., G. V. Beznoussenko, et al. (2001). Small cargo proteins and large aggregates can traverse the Golgi by a common mechanism without leaving the lumen of cisternae. *J Cell Biol* **155**(7): 1225-38.
- Mironov, A. A., P. Weidman, et al. (1997). Variations on the intracellular transport theme: maturing cisternae and trafficking tubules. *J Cell Biol* **138**(3): 481-4.
- Moran, P. and I. W. Caras (1992). Proteins containing an uncleaved signal for glycoposphatidylinositol membrane anchor attachment are retained in a post-ER compartment. *J Cell Biol* **119**(4): 763-72.
- Morandat, S., M. Bortolato, et al. (2003). Role of GPI-anchored Enzyme in Liposome Detergent-Resistance. *J Membr Biol* **191**(3): 215-21.

- Morel-Huau, V. M., M. Pypaert, et al. (2002). The calcium-binding protein p54/NEFA is a novel luminal resident of medial Golgi cisternae that traffics independently of mannosidase II. *Eur J Cell Biol* **81**(2): 87-100.
- Morrow, I. C., S. Rea, et al. (2002). Flotillin-1/reggie-2 traffics to surface raft domains via a novel golgi-independent pathway. Identification of a novel membrane targeting domain and a role for palmitoylation. *J Biol Chem* **277**(50): 48834-41.
- Moyer, B. D., B. B. Allan, et al. (2001). Rab1 interaction with a GM130 effector complex regulates COPII vesicle cis-Golgi tethering. *Traffic* **2**(4): 268-76.
- Mukherjee, S. and A. Chattopadhyay (1996). Membrane organization at low cholesterol concentrations: a study using 7-nitrobenz-2-oxa-1,3-diazol-4-yl-labeled cholesterol. *Biochemistry* **35**(4): 1311-22.
- Muniz, M., P. Morsomme, et al. (2001). Protein sorting upon exit from the endoplasmic reticulum. *Cell* **104**(2): 313-20.
- Muniz, M. and H. Riezman (2000). Intracellular transport of GPI-anchored proteins. *EMBO J* **19**(1): 10-5.
- Munro, S. (1998). Localization of proteins to the Golgi apparatus. *Trends Cell Biol* **8**(1): 11-5.
- Munro, S. (2001). What can yeast tell us about N-linked glycosylation in the Golgi apparatus? *FEBS Lett* **498**(2-3): 223-7.
- Munro, S. and B. J. Nichols (1999). The GRIP domain - a novel Golgi-targeting domain found in several coiled-coil proteins. *Curr Biol* **9**(7): 377-80.
- Murata, M., J. Peranen, et al. (1995). VIP21/caveolin is a cholesterol-binding protein. *Proc Natl Acad Sci U S A* **92**(22): 10339-43.
- Nagahama, M., S. Usui, et al. (2002). Inactivation of Galpha(z) causes disassembly of the Golgi apparatus. *J Cell Sci* **115**(Pt 23): 4483-93.
- Nakagawa, T., H. Zhu, et al. (2000). Caspase-12 mediates endoplasmic-reticulum-specific apoptosis and cytotoxicity by amyloid-beta. *Nature* **403**(6765): 98-103.
- Nakamura, N., M. Lowe, et al. (1997). The vesicle docking protein p115 binds GM130, a cis-Golgi matrix protein, in a mitotically regulated manner. *Cell* **89**(3): 445-55.

- Nakamura, N., C. Rabouille, et al. (1995). Characterization of a cis-Golgi matrix protein, GM130. *J Cell Biol* **131**(6 Pt 2): 1715-26.
- Nebi, T., K. N. Pestonjamas, et al. (2002). Proteomic analysis of a detergent-resistant membrane skeleton from neutrophil plasma membranes. *J Biol Chem* **277**(45): 43399-409.
- Nichols, B. J., A. K. Kenworthy, et al. (2001). Rapid cycling of lipid raft markers between the cell surface and Golgi complex. *J Cell Biol* **153**(3): 529-41.
- Nichols, B. J. and J. Lippincott-Schwartz (2001). Endocytosis without clathrin coats. *Trends Cell Biol* **11**(10): 406-12.
- Nickel, W. and F. T. Wieland (1998). Biosynthetic protein transport through the early secretory pathway. *Histochem Cell Biol* **109**(5-6): 477-86.
- Nilsson, T., M. H. Hoe, et al. (1994). Kin recognition between medial Golgi enzymes in HeLa cells. *EMBO J* **13**(3): 562-74.
- Nilsson, T., M. Pypaert, et al. (1993). Overlapping distribution of two glycosyltransferases in the Golgi apparatus of HeLa cells. *J Cell Biol* **120**(1): 5-13.
- Nilsson, T., C. Rabouille, et al. (1996). The role of the membrane-spanning domain and stalk region of N-acetylglucosaminyltransferase I in retention, kin recognition and structural maintenance of the Golgi apparatus in HeLa cells. *J Cell Sci* **109** (Pt 7): 1975-89.
- Nilsson, T., P. Slusarewicz, et al. (1993). Kin recognition. A model for the retention of Golgi enzymes. *FEBS Lett* **330**(1): 1-4.
- Nishi, T. and M. Forgacs (2002). The vacuolar (H⁺)-ATPases--nature's most versatile proton pumps. *Nat Rev Mol Cell Biol* **3**(2): 94-103.
- Ohtomo, T., Y. Sugamata, et al. (1999). Molecular cloning and characterization of a surface antigen preferentially overexpressed on multiple myeloma cells. *Biochem Biophys Res Commun* **258**(3): 583-91.
- Okamoto, T., A. Schlegel, et al. (1998). Caveolins, a family of scaffolding proteins for organizing preassembled signaling complexes at the plasma membrane. *J Biol Chem* **273**(10): 5419-22.
- Orci, L., R. Montesano, et al. (1981). Heterogeneous distribution of filipin-cholesterol complexes across the cisternae of the Golgi apparatus. *Proc Natl Acad Sci U S A* **78**(1): 293-7.

- Orci, L., M. Stannnes, et al. (1997). Bidirectional transport by distinct populations of COPI-coated vesicles. *Cell* **90**(2): 335-49.
- Pelham, H. R. (2001). Traffic through the Golgi apparatus. *J Cell Biol* **155**(7): 1099-101.
- Pelham, H. R. and J. E. Rothman (2000). The debate about transport in the Golgi--two sides of the same coin? *Cell* **102**(6): 713-9.
- Peters, C., M. J. Bayer, et al. (2001). Trans-complex formation by proteolipid channels in the terminal phase of membrane fusion. *Nature* **409**(6820): 581-8.
- Pfeffer, S. (2003). Membrane domains in the secretory and endocytic pathways. *Cell* **112**(4): 507-17.
- Pfeffer, S. R. (2001a). Constructing a Golgi complex. *J Cell Biol* **155**(6): 873-5.
- Pfeffer, S. R. (2001b). Rab GTPases: specifying and deciphering organelle identity and function. *Trends Cell Biol* **11**(12): 487-91.
- Pierce, K. L., R. T. Premont, et al. (2002). Seven-transmembrane receptors. *Nat Rev Mol Cell Biol* **3**(9): 639-50.
- Powner, D. J. and M. J. Wakelam (2002). The regulation of phospholipase D by inositol phospholipids and small GTPases. *FEBS Lett* **531**(1): 62-4.
- Prescott, A. R., T. Farmaki, et al. (2001). Evidence for prebudding arrest of ER export in animal cell mitosis and its role in generating Golgi partitioning intermediates. *Traffic* **2**(5): 321-35.
- Puri, S., C. Bachert, et al. (2002). Cycling of early Golgi proteins via the cell surface and endosomes upon luminal pH disruption. *Traffic* **3**(9): 641-53.
- Rambourg, A. and Y. Clermont (1990). Three-dimensional electron microscopy: structure of the Golgi apparatus. *Eur J Cell Biol* **51**(2): 189-200.
- Reaves, B., M. Horn, et al. (1993). TGN38/41 recycles between the cell surface and the TGN: brefeldin A affects its rate of return to the TGN. *Mol Biol Cell* **4**(1): 93-105.
- Reggiori, F., E. Canivenc-Gansel, et al. (1997). Lipid remodeling leads to the introduction and exchange of defined ceramides on GPI proteins in the ER and Golgi of *Saccharomyces cerevisiae*. *EMBO J* **16**(12): 3506-18.

- Roberts, W. L., J. J. Myher, et al. (1988). Lipid analysis of the glycoinositol phospholipid membrane anchor of human erythrocyte acetylcholinesterase. Palmitoylation of inositol results in resistance to phosphatidylinositol-specific phospholipase C. *J Biol Chem* **263**(35): 18766-75.
- Rodgers, W., B. Crise, et al. (1994). Signals determining protein tyrosine kinase and glycosyl-phosphatidylinositol-anchored protein targeting to a glycolipid-enriched membrane fraction. *Mol Cell Biol* **14**(8): 5384-91.
- Ropert, C. and R. T. Gazzinelli (2000). Signaling of immune system cells by glycosylphosphatidylinositol (GPI) anchor and related structures derived from parasitic protozoa. *Curr Opin Microbiol* **3**(4): 395-403.
- Rossanese, O. W., J. Soderholm, et al. (1999). Golgi structure correlates with transitional endoplasmic reticulum organization in *Pichia pastoris* and *Saccharomyces cerevisiae*. *J Cell Biol* **145**(1): 69-81.
- Rothman, J. E. (1981). The golgi apparatus: two organelles in tandem. *Science* **213**(4513): 1212-9.
- Rothman, J. E. (1994). Mechanisms of intracellular protein transport. *Nature* **372**(6501): 55-63.
- Rothman, J. E. and G. Warren (1994). Implications of the SNARE hypothesis for intracellular membrane topology and dynamics. *Curr Biol* **4**(3): 220-33.
- Rothman, J. E. and F. T. Wieland (1996). Protein sorting by transport vesicles. *Science* **272**(5259): 227-34.
- Rukmini, R., S. S. Rawat, et al. (2001). Cholesterol organization in membranes at low concentrations: effects of curvature stress and membrane thickness. *Biophys J* **81**(4): 2122-34.
- Salzer, U. and R. Prohaska (2001). Stomatin, flotillin-1, and flotillin-2 are major integral proteins of erythrocyte lipid rafts. *Blood* **97**(4): 1141-3.
- Sankaram, M. B. and T. E. Thompson (1990). Interaction of cholesterol with various glycerophospholipids and sphingomyelin. *Biochemistry* **29**(47): 10670-5.
- Sapperstein, S. K., V. V. Lupashin, et al. (1996). Assembly of the ER to Golgi SNARE complex requires Uso1p. *J Cell Biol* **132**(5): 755-67.
- Satoh, A., Y. Wang, et al. (2003). Golgin-84 is a rab1 Binding Partner Involved in Golgi Structure. *Traffic* **4**(3): 153-61.

- Schafer, K. and T. Braun (1995). Monoclonal anti-FLAG antibodies react with a new isoform of rat Mg²⁺ dependent protein phosphatase beta. *Biochem Biophys Res Commun* **207**(2): 708-14.
- Scherer, P. E., G. Z. Lederkremer, et al. (1996). Cab45, a novel (Ca²⁺)-binding protein localized to the Golgi lumen. *J Cell Biol* **133**(2): 257-68.
- Schroeder, R., E. London, et al. (1994). Interactions between saturated acyl chains confer detergent resistance on lipids and glycosylphosphatidylinositol (GPI)-anchored proteins: GPI-anchored proteins in liposomes and cells show similar behavior. *Proc Natl Acad Sci U S A* **91**(25): 12130-4.
- Schroeder, R. J., S. N. Ahmed, et al. (1998). Cholesterol and sphingolipid enhance the Triton X-100 insolubility of glycosylphosphatidylinositol-anchored proteins by promoting the formation of detergent-insoluble ordered membrane domains. *J Biol Chem* **273**(2): 1150-7.
- Sciaky, N., J. Presley, et al. (1997). Golgi tubule traffic and the effects of brefeldin A visualized in living cells. *J Cell Biol* **139**(5): 1137-55.
- Seemann, J., M. Pypaert, et al. (2002). Partitioning of the matrix fraction of the Golgi apparatus during mitosis in animal cells. *Science* **295**(5556): 848-51.
- Sevlever, D., S. Pickett, et al. (1999). Glycosylphosphatidylinositol-anchor intermediates associate with triton-insoluble membranes in subcellular compartments that include the endoplasmic reticulum. *Biochem J* **343 Pt 3**: 627-35.
- Shenoy-Scaria, A. M., D. J. Dietzen, et al. (1994). Cysteine3 of Src family protein tyrosine kinase determines palmitoylation and localization in caveolae. *J Cell Biol* **126**(2): 353-63.
- Shenoy-Scaria, A. M., L. K. Gauen, et al. (1993). Palmitoylation of an amino-terminal cysteine motif of protein tyrosine kinases p56lck and p59fyn mediates interaction with glycosyl-phosphatidylinositol-anchored proteins. *Mol Cell Biol* **13**(10): 6385-92.
- Shima, D. T., K. Haldar, et al. (1997). Partitioning of the Golgi apparatus during mitosis in living HeLa cells. *J Cell Biol* **137**(6): 1211-28.
- Short, B., C. Preisinger, et al. (2001). A GRASP55-rab2 effector complex linking Golgi structure to membrane traffic. *J Cell Biol* **155**(6): 877-83.
- Shorter, J. and G. Warren (2002). Golgi architecture and inheritance. *Annu Rev Cell Dev Biol* **18**: 379-420.

- Shorter, J., R. Watson, et al. (1999). GRASP55, a second mammalian GRASP protein involved in the stacking of Golgi cisternae in a cell-free system. *EMBO J* **18**(18): 4949-60.
- Simons, K. and R. Ehehalt (2002). Cholesterol, lipid rafts, and disease. *J Clin Invest* **110**(5): 597-603.
- Simons, K. and E. Ikonen (2000). How cells handle cholesterol. *Science* **290**(5497): 1721-6.
- Simons, K. and D. Toomre (2000). Lipid rafts and signal transduction. *Nat Rev Mol Cell Biol* **1**(1): 31-9.
- Simons, K. and G. van Meer (1988). Lipid sorting in epithelial cells. *Biochemistry* **27**(17): 6197-202.
- Sipos, G., F. Reggiori, et al. (1997). Alternative lipid remodelling pathways for glycosylphosphatidylinositol membrane anchors in *Saccharomyces cerevisiae*. *EMBO J* **16**(12): 3494-505.
- Skippen, A., D. H. Jones, et al. (2002). Mechanism of ADP ribosylation factor-stimulated phosphatidylinositol 4,5-bisphosphate synthesis in HL60 cells. *J Biol Chem* **277**(8): 5823-31.
- Slusarewicz, P., T. Nilsson, et al. (1994). Isolation of a matrix that binds medial Golgi enzymes. *J Cell Biol* **124**(4): 405-13.
- Smart, E. J., G. A. Graf, et al. (1999). Caveolins, liquid-ordered domains, and signal transduction. *Mol Cell Biol* **19**(11): 7289-304.
- Sohn, K., L. Orci, et al. (1996). A major transmembrane protein of Golgi-derived COPI-coated vesicles involved in coatamer binding. *J Cell Biol* **135**(5): 1239-48.
- Solomon, K. R., E. A. Kurt-Jones, et al. (1998). Heterotrimeric G proteins physically associated with the lipopolysaccharide receptor CD14 modulate both in vivo and in vitro responses to lipopolysaccharide. *J Clin Invest* **102**(11): 2019-27.
- Solomon, K. R., C. E. Rudd, et al. (1996). The association between glycosylphosphatidylinositol-anchored proteins and heterotrimeric G protein alpha subunits in lymphocytes. *Proc Natl Acad Sci U S A* **93**(12): 6053-8.
- Song, K. S., Z. Tang, et al. (1997). Mutational analysis of the properties of caveolin-1. A novel role for the C-terminal domain in mediating homo-typic caveolin-caveolin interactions. *J Biol Chem* **272**(7): 4398-403.

- Sonnichsen, B., M. Lowe, et al. (1998). A role for giantin in docking COPI vesicles to Golgi membranes. *J Cell Biol* **140**(5): 1013-21.
- Soole, K. L., M. A. Jepson, et al. (1995). Epithelial sorting of a glycosyl-phosphatidylinositol-anchored bacterial protein expressed in polarized renal MDCK and intestinal Caco-2 cells. *J Cell Sci* **108** (Pt 1): 369-77.
- Sotgia, F., B. Razani, et al. (2002). Intracellular retention of glycosylphosphatidyl inositol-linked proteins in caveolin-deficient cells. *Mol Cell Biol* **22**(11): 3905-26.
- Stahlhut, M. and B. van Deurs (2000). Identification of filamin as a novel ligand for caveolin-1: evidence for the organization of caveolin-1-associated membrane domains by the actin cytoskeleton. *Mol Biol Cell* **11**(1): 325-37.
- Stamnes, M. (2002). Regulating the actin cytoskeleton during vesicular transport. *Curr Opin Cell Biol* **14**(4): 428-33.
- Steggmaier, M., J. Klumperman, et al. (1999). Vesicle-associated membrane protein 4 is implicated in trans-Golgi network vesicular trafficking. *Mol Biol Cell* **10**(6): 1957-72.
- Stevens, T. H. and M. Forgac (1997). Structure, function and regulation of the vacuolar (H⁺)-ATPase. *Annu Rev Cell Dev Biol* **13**: 779-808.
- Stintzi, A., T. Heitz, et al. (1993). Plant 'pathogenesis-related' proteins and their role in defense against pathogens. *Biochimie* **75**(8): 687-706.
- Storrie, B. and T. Nilsson (2002). The Golgi apparatus: balancing new with old. *Traffic* **3**(8): 521-9.
- Storrie, B., J. White, et al. (1998). Recycling of golgi-resident glycosyltransferases through the ER reveals a novel pathway and provides an explanation for nocodazole-induced Golgi scattering. *J Cell Biol* **143**(6): 1505-21.
- Stow, J. L., J. B. de Almeida, et al. (1991). A heterotrimeric G protein, G alpha i-3, on Golgi membranes regulates the secretion of a heparan sulfate proteoglycan in LLC-PK1 epithelial cells. *J Cell Biol* **114**(6): 1113-24.
- Stow, J. L. and K. Heimann (1998). Vesicle budding on Golgi membranes: regulation by G proteins and myosin motors. *Biochim Biophys Acta* **1404**(1-2): 161-71.

- Sullivan, B. M., K. J. Harrison-Lavoie, et al. (2000). RGS4 and RGS2 bind coatamer and inhibit COPI association with Golgi membranes and intracellular transport. *Mol Biol Cell* **11**(9): 3155-68.
- Takeda, J. and T. Kinoshita (1995). GPI-anchor biosynthesis. *Trends Biochem Sci* **20**(9): 367-71.
- Tansey, M. G., R. H. Baloh, et al. (2000). GFRalpha-mediated localization of RET to lipid rafts is required for effective downstream signaling, differentiation, and neuronal survival. *Neuron* **25**(3): 611-23.
- Teasdale, R. D. and M. R. Jackson (1996). Signal-mediated sorting of membrane proteins between the endoplasmic reticulum and the golgi apparatus. *Annu Rev Cell Dev Biol* **12**: 27-54.
- Teuchert, M., S. Berghofer, et al. (1999). Recycling of furin from the plasma membrane. Functional importance of the cytoplasmic tail sorting signals and interaction with the AP-2 adaptor medium chain subunit. *J Biol Chem* **274**(51): 36781-9.
- Teuchert, M., W. Schafer, et al. (1999). Sorting of furin at the trans-Golgi network. Interaction of the cytoplasmic tail sorting signals with AP-1 Golgi-specific assembly proteins. *J Biol Chem* **274**(12): 8199-207.
- Treumann, A., M. R. Lifely, et al. (1995). Primary structure of CD52. *J Biol Chem* **270**(11): 6088-99.
- Udenfriend, S. and K. Kodukula (1995). How glycosylphosphatidylinositol-anchored membrane proteins are made. *Annu Rev Biochem* **64**: 563-91.
- Uittenbogaard, A. and E. J. Smart (2000). Palmitoylation of caveolin-1 is required for cholesterol binding, chaperone complex formation, and rapid transport of cholesterol to caveolae. *J Biol Chem* **275**(33): 25595-9.
- Volchuk, A., M. Amherdt, et al. (2000). Megavesicles implicated in the rapid transport of intracisternal aggregates across the Golgi stack. *Cell* **102**(3): 335-48.
- Vowels, J. J. and G. S. Payne (1998). A role for the lumenal domain in Golgi localization of the *Saccharomyces cerevisiae* guanosine diphosphatase. *Mol Biol Cell* **9**(6): 1351-65.
- Wang, T. Y. and J. R. Silvius (2001). Cholesterol does not induce segregation of liquid-ordered domains in bilayers modeling the inner leaflet of the plasma membrane. *Biophys J* **81**(5): 2762-73.

- Ward, T. H., R. S. Polishchuk, et al. (2001). Maintenance of Golgi structure and function depends on the integrity of ER export. *J Cell Biol* **155**(4): 557-70.
- Warren, G. and V. Malhotra (1998). The organisation of the Golgi apparatus. *Curr Opin Cell Biol* **10**(4): 493-8.
- Watanabe, R., N. Inoue, et al. (1998). The first step of glycosylphosphatidylinositol biosynthesis is mediated by a complex of PIG-A, PIG-H, PIG-C and GPI1. *EMBO J* **17**(4): 877-85.
- Weide, T., M. Bayer, et al. (2001). The Golgi matrix protein GM130: a specific interacting partner of the small GTPase rab1b. *EMBO Rep* **2**(4): 336-41.
- Weigert, R., M. G. Silletta, et al. (1999). CtBP/BARS induces fission of Golgi membranes by acylating lysophosphatidic acid. *Nature* **402**(6760): 429-33.
- Weiss, T. S., C. E. Chamberlain, et al. (2001). Galpha i3 binding to calnuc on Golgi membranes in living cells monitored by fluorescence resonance energy transfer of green fluorescent protein fusion proteins. *Proc Natl Acad Sci U S A* **98**(26): 14961-6.
- Wilson, B. S., C. Nuoffer, et al. (1994). A Rab1 mutant affecting guanine nucleotide exchange promotes disassembly of the Golgi apparatus. *J Cell Biol* **125**(3): 557-71.
- Xue, M. and B. Zhang (2002). Do SNARE proteins confer specificity for vesicle fusion? *Proc Natl Acad Sci U S A* **99**(21): 13359-61.
- Yamaguchi, T., M. Nagahama, et al. (2000). Regulation of the golgi structure by the alpha subunits of heterotrimeric G proteins. *FEBS Lett* **470**(1): 25-8.
- Zaal, K. J., C. L. Smith, et al. (1999). Golgi membranes are absorbed into and reemerge from the ER during mitosis. *Cell* **99**(6): 589-601.
- Zacchetti, D., J. Peranen, et al. (1995). VIP17/MAL, a proteolipid in apical transport vesicles. *FEBS Lett* **377**(3): 465-9
- Zurzolo, C., M. P. Lisanti, et al. (1993). Glycosylphosphatidylinositol-anchored proteins are preferentially targeted to the basolateral surface in Fischer rat thyroid epithelial cells. *J Cell Biol* **121**(5): 1031-9.