

## **Vivek Malhotra**

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**Nationality** USA

### **Education**

1978 -1982 B.Sc, Biochemistry Department, Stirling University  
1982 -1985 D.Phil, Biochemistry Department, Oxford University  
1985 -1990 Post-doc, Biochemistry Department, Stanford University

### **Research and professional experience**

7/1/90-7/1/95 Assistant Professor, Biology Department. UC San Diego (UCSD)  
7/1/95-7/1/99 Associate Professor (tenured), Biology Department, UCSD  
7/1/99 – 10/31/2007 Professor, Cell and Developmental Biology Department, UCSD  
1/1/2008- ICREA Chair, Cell and Developmental Biology, CRG  
2019- Adjunct Professor, Cell Biology Dept. Yale University, USA

### **Awards and Honors**

1982-1985 Pirie-Reid Scholar, Oxford University  
1985-1987 Damon-Runyon Walter-Winchell Post-doctoral Fellow  
1988-1990 American Cancer Society Senior Post-doctoral Fellow  
1992-1995 Basil O'Connor Scholars Award  
1995-2000 Established Investigator of the American Heart Association  
2004-2007 Senior investigator, Sandler's foundation for Asthma  
2005 Elected Fellow, AAAS  
2009 Elected Member, EMBO  
2013 ASBMB Merck award  
2010-2016 ERC Advanced grant  
2016 Miller visiting professor fellowship, UC Berkeley, USA  
2018 ASCB fellow, USA  
2019 NGBT, excellence in science award, India.  
2020 Humboldt research award, Germany.  
2020-2026 ERC synergy grant

### **Advisory committees**

1995-1999 Member, NIH study section Cell Biology and Physiology-1  
2003 Scientific Advisory Committee, Damon Runyon Foundation  
2006- 2007 Scientific Advisory Committee, Damon Runyon Foundation  
2009 Review Board, CSIC institutes, Spain  
2010-2011 EMBO Meeting Organizing Committee  
2011-2017 Scientific Advisory Board, CNR, Naples, Italy  
2011- Scientific Advisory Board, CBMSO, Madrid, Spain  
2015-2018 Scientific Advisory Board, DBT, India

2020- EMBO fellowship Committee

### **Editorial boards**

1995-2001 Cell  
1999- 2011 Associate Editor, Molecular biology of the Cell  
2007- Journal of Cell Biology  
2009- 2015 Curr. Opin. Cell Biology  
2012- 2014 eLIFE (reviewing editor)  
2014- eLIFE (Senior editor)

### **Meetings organizer**

1997 Juan March meeting 'membrane fusion,' Madrid, Spain  
2003 Chair, Organizing Committee, ASCB  
2009 The Golgi meeting, Barcelona, Spain  
2010 ASBMB meeting, The Biochemistry of Membrane Traffic, USA  
2010 EMBO Global Exchange Course, NCBS, Bangalore, India.  
2017 EMBL-India Young investigator meeting, CRG. Barcelona .  
2019 EMBO. Perugia, Italy. Unconventional protein secretion.  
2019 Areces foundation, Spain. Proteostasis and protein secretion.

### **Named and Honorific Lectures 2010- present**

May 5, 2010 Frontiers in science program, Stanford University, USA  
July 12, 2011 keynote speaker, Curie-Pasteur symposium, Paris, France  
August 16, 2011 Keynote speaker, Annexins in protein transport, Barcelona  
November 18, 2011 Ferris Lecture, Yale University, USA  
April 22, 2013 Merck Award, ASBMB, Boston, USA  
December 15, 2013 ASCB, Symposium seminar  
March 9, 2017 Keynote. The matrix biology society, Koln, Germany  
May 2, 2019 Keynote. 18<sup>th</sup> Annual Pittsburg Symposium on membrane traffic

### **Selected Alumni**

Brian Link (undergraduate thesis) Professor, Wisconsin Medical Center, USA  
Colin Jamora (PhD student) Group leader, IFOM-Milan and NCBS, India  
Peter Takizawa (PhD student) Associate Professor, Yale University, USA  
Matt Pecot (PhD student) Assistant Professor, Harvard Neurobiology, USA  
Adam Linstedt (postdoc) Professor, Carnegie Mellon Univ. USA  
Usha Acharya (postdoc) Assistant Professor, University of Massachusetts,  
Fred Bard (postdoc) Senior investigator, IMCB, Singapore  
Antonino Colanzi (postdoc) Group leader, CNR, Italy  
Caroline Denesvre (postdoc) Assistant Professor, Universite-Rabelais, France  
Alberto Diaz (postdoc) Group leader, Cordoba University, Argentina  
Hitoshi Kityama (Postdoc) Associate Professor, University of Kyoto, Japan  
Monika Liljedahl (postdoc) Associate director, Johnson and Johnson, California  
Yusuke Maeda (postdoc) Associate Professor, Osaka University, Japan  
Jean Ripoché (postdoc) Professor, INSERM, Bordeaux, France

Kota Saito (Postdoc)  
Christine Sutterlin (postdoc)  
Norma Yamanouye (postdoc)  
Julia Von Blume (postdoc)  
Yuichi Wakana (postdoc)  
Sandra Mitrovic (postdoc)  
Cristina Nogueira (postdoc)  
Patrik Erlmann (postdoc)  
Mariana Chiritoiu (postdoc)  
Felix Campelo (postdoc)  
Gerard Cantero (postdoc)  
Julien Villeneuve (postdoc)

Professor, Akita University, Japan  
Associate Professor, University of California Irvine  
Associate Professor, Insituto Butantan, Brazil  
Associate Professor, Yale University  
Assistant Professor, Tokyo college of Pharmacy,  
Group leader, Basel University hospital, Switzerland  
Senior Scientist, Oxford Biomedica, UK  
Head R&D, ViraTherapeutics, Austria  
Assistant Professor, Romanian Academy Inst. Bio.  
Ramon y Cajal fellow, ICFO, Barcelona  
Group leader, Vall D' Hebron, Spain.  
CNRS Professor, IGF, Montpellier, France.

## **Publications**

1. **Malhotra, V.** and Sim, R.B. Role of complement receptor CR1 in the breakdown of soluble and zymosan-bound C3b. **Bioc. Soc. Trans.** 12: 781-782 (1984).
2. **Malhotra, V.** and Sim, R.B. Expression of complement factor H on the cell surface of the human monocytic cell line U937. **Eur. J. Immunol.** 15: 935-941 (1985).
3. **Malhotra, V.**, Hogg, N. and Sim, R.B. Ligand binding by the p150, 95 antigen of U937 monocytic cell: properties in common with complement receptor type 3 (CR3). **Eur. J. Immunol.** 16:1117-1123 (1986).
4. Sim, R.B., **Malhotra, V.**, Ripoche, J., Day, A.J., Micklem, K.J. and Sim, E. Complement receptors and related complement control proteins. **Bioc. Soc. Symp.** 51: 83-96 (1986).
5. Sim, R.B., **Malhotra, V.**, Day, A.J. and Erdei, A. Structure and specificity of complement receptors. **Immunol. Lett.** 14: 183-190 (1987).
6. Melancon, P., Glick, B.S., **Malhotra, V.**, Weidman, P.T., Serafini, T., Gleason, M.L., Orci, L. and Rothman, J.E. A possible role for GTP binding "G" proteins in constitutive protein transport through the Golgi stacks. **Cell** 51: 221-227 (1987).
7. **Malhotra, V.**, Orci, L., Glick, B.S., Block, M.R. and Rothman, J.E. Role of an Nethylmaleimide sensitive transport component in promoting fusion of transport vesicles with the cisternae of the Golgi stacks. **Cell** 54: 1053-1062 (1989).
8. Orci, L., **Malhotra, V.**, Amherdt, M., Serafini, T. and Rothman, J.E. Biochemical dissection of a round of vesicular transport: Sequential coated and uncoated intermediates mediate inter-cisternal movement in the Golgi stack. **Cell** 56: 357-368 (1989).
9. **Malhotra, V.**, Serafini, T., Orci, L., Shepherd, J. and Rothman, J.E. Purification of a novel class of coated vesicles mediating biosynthetic protein transport through the Golgi stacks. **Cell** 58: 329-336 (1989).
10. Pfanner, N., Orci, L., Glick, B.S., Arden, S.R., **Malhotra, V.** and Rothman, J.E. Fatty acyl-coenzyme A is required for budding of transport vesicles from cisternae. **Cell** 59: 95-102 (1989).
11. Melancon, P., Glick, B.S., **Malhotra, V.**, Weidman, P.J., Serafini, T., Orci, L. and Rothman, J.E. A role for GTP-binding proteins in vesicular transport through the Golgi complex. **Secretion and its control**, J.S., Oxford and C.M. Armstrong, Eds. (New York: Rockefeller University Press): 175-188 (1989).
12. Takizawa, P.A., Yucel, J.K., Veit, B., Faulkner, D.J., Deerinck, T., Soto, C., Ellisman, M. and **Malhotra, V.** Complete vesiculation of Golgi membranes and inhibition of

protein transport by a novel sea sponge metabolite, Ilimaquinone. **Cell** 73: 1079-1091 (1993).

13. Veit, B., Yucel, J.K. and **Malhotra, V.** Microtubule independent vesiculation of Golgi membranes and the reassembly of vesicles into Golgi stacks. **J. Cell Biol.** 122: 1197- 1206 (1993).

14. Takizawa, P and **Malhotra, V.** Coatomers and Snares in promoting membrane traffic. **Cell** 75: 597-603 (1993).

15. Kahn, R.A., Yucel, J.K., and **Malhotra, V.** ARF signaling: A potential role for phospholipase D in membrane traffic. **Cell** 75: 1045-1048 (1993).

16. Ripoche, J., Link, B., Yucel, J.K., Tokuyasu, K., and **Malhotra, V.** Location of Golgi membranes with reference to rapidly dividing nuclei in Syncytial Drosophila embryos. **Proc. Natl. Acad. Sci.** 91: 1878-1882 (1994).

17. Beck, K., **Malhotra, V.**, and Nelson, J.W. Golgi spectrin: Identification of an erythroid  $\beta$ spectrin homolog associated with the Golgi complex. **J. Cell Biol.** 127: 667-678 (1994).

18. Acharya, U., McCaffery, M., Jacobs, R., and **Malhotra, V.** Reconstitution of the fusion and assembly of vesiculated Golgi membranes (VGMs) into stacks of Golgi cisternae. Requirement of NSF in stack formation. **J. Cell Biol.** 129: 577-591 (1995).

19. Acharya, U., Jacobs, R., Peters, J, -M., Watson, N., Farquhar, M. and **Malhotra, V.** The formation of Golgi stacks from vesiculated Golgi membranes requires two distinct fusion events. **Cell** 82: 895-905 (1995).

20. Acharya, U., Elkins, K., Vance, J. and **Malhotra, V.** Keeping Golgi membranes intact in the pericentriolar region of mammalian cells. **Biochem. Soc. Trans.** 23: 538-541 (1995).

21. Mallabiabarrena, A and **Malhotra, V.** Vesicle biogenesis: The coat connection. **Cell** 83: 667-669 (1995).

22. Acharya, U and **Malhotra, V.** Formation of Golgi stacks from vesiculated Golgi membranes. **Cold Spring. Harb. Symp. "Protein Kinesis"** vol. LX: 559-566 (1995).

23. Denesvre, C and **Malhotra, V.** Membrane fusion in organelle biogenesis. **Curr. Opin. Cell Biol.** 8:519-524 (1996).

24. Acharya, U and **Malhotra, V.** Reconstitution of Golgi stack formation in permeabilized cells. **Sem. Cell and Dev. Bio.** 7: 511-516 (1996).

25. Emr, S and **Malhotra, V.** Membranes and Sorting; Editorial overview. **Curr. Opin. Cell Biol.** 9: 475-477 (1997).
26. Mironov, A., Colanzi, A., Fiucci, G., Flati, S., Fusella, A., Polishchuk, R., Tullio, G., **Malhotra, V.**, Corda, D., Matteis, M., and Luini, A. Role of NAD<sup>+</sup> and ADP-ribosylation in the maintenance of the Golgi structure. **J. Cell Biol.** 139: 1109-1118 (1997).
27. Stanley, H., Botas, J., Tokuyasu, K., and **Malhotra, V.** The mechanism of Golgi segregation during mitosis is cell type specific. **Proc. Natl. Acad. Sci.** 94:14467-14470 (1997).
28. Jamora, C., Takizawa, P., Zaarour, R., Denesvre, C., Faulkner, D.J., and **Malhotra, V.** Regulation of Golgi structure through heterotrimeric G-proteins. **Cell** 91: 617-626 (1997).
29. Acharya, U., Mallabiabarrena, A., Acharya, J.K., and **Malhotra, V.** Signaling via Mitogen activated protein kinase is required for Golgi fragmentation during mitosis. **Cell** 92: 183-192 (1998).
30. Warren, G and **Malhotra, V.** The organization of the Golgi complex. **Curr. Opin. Cell Biol.** 10: 493-498 (1998).
31. Glick, B.S and **Malhotra, V.** The curious status of the Golgi apparatus. **Cell** 95: 883-890 (1998).
32. Jamora, C., Yamanouye, N., Trowbridge, I., Lint, J.V., Lauudenslager, J.R., Faulkner, D.J., and **Malhotra, V.** Gβγ induced Golgi breakdown in through the activation of protein kinase D. **Cell** 98: 59-68 (1999).
33. Colanzi, A., Deerinck, T., Ellisman, M.E.H., and **Malhotra, V.** A specific activation of the Mitogen Activated Protein Kinase Kinase 1(MEK1) is required for Golgi fragmentation during mitosis. **J. Cell Biol.** 149: 331-339 (2000).
34. Liljedahl, M., Maeda, Y., Colanzi, A., Ayala, I., VanLint, J., and **Malhotra, V.** Protein kinase D regulates the fission of cell surface destined transport carriers from the Trans Golgi network. **Cell** 104: 409-420 (2001).
35. Jamora, C., Theodorakis, M.A., **Malhotra, V.**, Theodorakis, E.A. Investigation of the biological mode of clerocidin using whole cell assay. **Bioorganic and Medicinal Chemistry** 9: 1365-1370. (2001).
36. Sutterlin, C., Lin, C-Y., Feng, Y., Ferris, D., Erickson, R., and **Malhotra, V.** Polo-like kinase is required for the fragmentation of the pericentriolar Golgi stacks during mitosis. **Proc.Natl.Acad. Sci.** 98: 9128-9132 (2001).

37. Maeda, Y., Van Lint, J., and **Malhotra, V.** Activation dependent recruitment of Protein kinase D to the trans Golgi network. **EMBO J.** 20: 5982-5990 (2001).
38. Baron, C.L. and **Malhotra, V.** Role of Diacylglycerol in PKD recruitment to the TGN and protein transport to the plasma membrane. **Science.** 295: 325-328 (2001).
39. Van Lint J., RyKx, A., Maeda, Y., Vantus, T., Sturany, S., **Malhotra, V.**, Vandenheede, J.R., and Seufferlein, T. Protein Kinase D: an intracellular traffic regulator on the move. **Trend. Cell Biol.** 12: 185-192 (2002).
40. Sutterlin, C., Hsu, P., Mallabiabarrena, A., and **Malhotra, V.** Fragmentation and dispersal of the pericentriolar Golgi complex is required for entry into mitosis in mammalian cells. **Cell** 109: 359-370 (2002).
41. **Malhotra, V** and Emr, S.D. Rothman and Schekman SNAREd by Lasker for trafficking. **Cell** 111: 1-3 (2002)
42. Duran, J.M., Castel, S., Tomas, M., **Malhotra, V.**, and Egea, G. Myosin Motors and not actin comets are mediators of the actin-based Golgi to ER protein transport. **Mol. Biol. Cell.** 14: 445-459 (2003).
43. Colanzi, A., Sutterlin, C., and **Malhotra, V.** RAF-1 activated MEK1 is found on the Golgi apparatus in late prophase and is required for Golgi complex fragmentation in mitosis. **J. Cell Biol.** 161: 27-32 (2003).
44. Colanzi, A., Sutterlin, C and **Malhotra, V.** Mitosis specific Golgi fragmentation: how and why? **Curr. Opin. Cell Biol.** 15: 462-467 (2003).
45. Bard, F.A., Mazelin, L., Longin-Pechous, C., **Malhotra, V.**, Jurdic, P. Src regulates Golgi structure and KDEL-R dependent retrograde transport to the endoplasmic reticulum. **J. Biol. Chem.** 278:46601-46606 (2003).
46. Shemesh, T., Luini, A., **Malhotra, V.**, Burger, K.N.J. and Kozlov, M.M. Pre-fission constriction of Golgi tubular carriers driven by local lipid metabolism: a theoretical model. **Biophys. J.** 85: 3813-3827 (2003).
47. Yeaman, C., Ayala, I., Wright, J., Ang, A., Maeda, Y., Mellman, I., Nelson, W.J., and **Malhotra, V.** Protein kinase D (PKD) regulates basolateral, but not apical plasma membrane protein exit from the Trans Golgi Network. **Nature Cell Biology** 6: 107-112 (2004).
48. Pecot, M.Y and **Malhotra, V.** Golgi membranes remain segregated from the endoplasmic reticulum during mitosis in mammalian cells. **Cell** 116: 99-107 (2004).
49. Brady, T.P., Wallace, E.K., Kim, S.H., Guizzunti, G., **Malhotra, V.** and Theodorakis, E.A. Fragmentation of Golgi membranes by norrisolide and designed analogs. **Bioorg.**

**Med. Chem. Lett.** 14: 5035-5039 (2004).

50. Diaz Añel, A.M and **Malhotra, V.** PKC is required for PLC and PKD mediated transport to the cell surface and the organization of the Golgi apparatus. **J. Cell Biol.** 169: 83-91. (2005).

51. Sutterlin, C., Polishchuk, R., Pecot, M., and **Malhotra, V.** The Golgi associated protein GRASP65 regulates spindle dynamics and cell division. **Mol. Biol. Cell.** 16:3211-3222 (2005).

52. **Malhotra, V** and Yaffe, M.P. Membranes and organelles: regulating the size, shape, and plasticity of cellular compartments. **Curr. Opin. Cell Biol.** 17 (2005).

53. Bard, F., Casano, L., Mallabiabarrena, A., Wallace, E., Dasgupta, R., Perrimon, N., and **Malhotra, V.** Functional analysis of the drosophila genome reveals new components involved in protein secretion and Golgi organization. **Nature** 439: 604-607 (2006).

54. Guizzunti, G., Brady, T.P., **Malhotra, V.** and Theodorakis, E.A. Chemical analysis of norrisolide-induced Golgi vesiculation. **J. Am.Chem. Soc.** 128: 4190-4191 (2006).

55. **Malhotra, V** and Mayor, S. Cisternal Maturation: is it the way forward. **Nature** 441: 939- 940 (2006).

56. Pecot, M and **Malhotra, V.** The Golgi apparatus maintains its organization independent of the endoplasmic reticulum. **Mol. Biol. Cell.** 17:5372-5389 (2006).

57. Bard, F and **Malhotra, V.** (2006). The formation of TGN to cell surface specific transport carriers. **Ann. Rev. Cell Dev. Biol.** 22: 439-455 (2006).

58. Guizzunti G, Brady TP, **Malhotra V,** and Theodorakis EA. Trifunctional norrisolide probes for the study of Golgi vesiculation. **Bioorg. Med. Chem. Lett.** 15: 320-5 (2007).

59. Kinseth, M.A., Anjard, C., Fuller, D., Guizzunti, G., Loomis, W.F., and **Malhotra, V.** The Golgi-associated protein GRASP is required for unconventional protein secretion during development. **Cell** 130: 524-534 (2007).

60. Bossard, C., Bresson, D., Polishchuk, R.S., and **Malhotra, V.** Dimeric PKD regulates membrane fission to form transport carriers at the TGN. **J. Cell Biol.** 179: 1123-1131 (2007).

61. Duran, J.M., Kinseth, M., Bossard, C., Rose, D.W., Polishchuk, R., Wu, C.C., Yates, J., Zimmerman, T., and **Malhotra, V.** The role of GRASP55 in Golgi fragmentation and entry of cells into mitosis. **Mol. Biol. Cell** 19: 2579-2587 (2008).



62. Nakagomi, S., Barsoum, M.J., Bossy-Wetzel, E., Sutterlin, C., **Malhotra, V.**, Lipton, S.A. A Golgi fragmentation pathway in neurodegeneration. **Neurobiology of Disease** 29: 221-231 (2008).
63. Tsang, W., Bossard, C., **Malhotra, V** and Dynlacht, B. CP110 suppresses primary cilia formation through its interaction with CEP290, a protein deficient in human ciliary disease. **Dev. Cell.** 16: 187-197 (2008).
64. Bisbal, M., Conde, C., Donoso, M., Bolati, F., Sesma, J., Quiroga, S., Diaz-Anel, A., **Malhotra, V.**, Marzolo, M., and Caceres, A. Protein Kinase D regulates trafficking of dendritic membrane proteins in developing neurons. **J. Neuroscience.** 28: 9297-9308 (2008).
65. **Vivek Malhotra:** Gaga for the Golgi. Interview by Liz Savage. **J. Cell Biol.** 184: 4-5 (2009).
66. Saito, K., Chen, M., Bard, F., Chen, S., Woodley, D., Polischuk, R., Schekman, R., and **Malhotra, V.** Tango1 facilitates cargo loading at endoplasmic reticulum exit sites. **Cell** 136: 891-902 (2009).
67. Emr, S et al., Journey through the Golgi-taking stock in a new era. **J. Cell Biol.** 187: 449-453 (2009). Corresponding author **Malhotra, V.**
68. Von Blume, J., Duran, J.M., Forlanelli, E., Alleaume, A.M., Egorov, M., Polischuk, R., Molina, H and **Malhotra, V.** Actin remodeling by ADF/Cofilin is required for cargo sorting at the Trans Golgi Network. **J. Cell Biol.** 187:1055-1069 (2009).
69. Duran, J.M., Anjard, C., Stefan, C, Loomis, W.F., and **Malhotra, V.** Unconventional secretion of Acb1 is mediated by autophagosome. **J. Cell Biol.** 188: 527-536 (2010).
70. Pusapati, G.V., Krndija, D., Armacki, M., vonWickert, G., vonBlume, J., **Malhotra, V.**, Adler, G., and Seufferlein, T. Role of the second cysteine-rich domain and Pro 275 in PKD2 interaction with ARF1, TGN recruitment and protein transport. **Mol. Biol. Cell.** 21: 1011-1022 (2010).
71. Guizzunti G., Brady, T.P., Fischer, D., **Malhotra, V.**, and Theodorakis, E.A. Chemical biology studies on norrisolide. **Bioorg. Med. Chem.** 18: 2115-2122 (2010).
72. Cabral, M., Anjard, C., **Malhotra, V.**, Loomis, W., Kuspa, A. Unconventional Secretion of AcbA in *Dictyostelium discoideum* through a vesicular intermediate. **Euk. Cell.** 9:1009-1017 (2010).
73. **Malhotra, V.**, Warren, G and Mellman, I. Protein trafficking between membranes. **Lewin's Cells.** Second edition. Eds Cassimeris, Lingappa and Plopper.. Pp 345-390 (2010).

74. **Malhotra, V** and Campelo, F. PKD Regulates Membrane Fission to Generate TGN to Cell Surface Transport Carriers. **Cold Spring Harb Perspect Biol.** First published online January 19. (2011).
75. Von Blume, J., Alleaume, A.M., Recasens, G.C., Valverde, M.A, and **Malhotra, V.** ADF/Cofilin regulates secretory cargo sorting at the TGN via the Ca<sup>2+</sup> ATPase SPCA1. **Dev. Cell.** 20: 652-662 (2011).
76. Saito, k., Yamashiro, k., Ichikawa, Y., Erlmann, P., Kontani, K., **Malhotra, V** and Katada. T. cTAGE mediates collagen secretion through interaction with TANGO1 at Endoplasmic reticulum exit sites. **Mol. Biol. Cell** 22: 2301-2308 (2011).
77. **Malhotra, V** and Erlmann, P. Protein export at the ER: TANGO1 helps COPII carriers grow in size. **EMBO. J.** 30. 3475-3480 (2011).
78. Bruns, C., McCaffery, J.M., Curwin, A.J., Duran, J.M., and **Malhotra, V.** Biogenesis of a novel compartment for unconventional protein secretion. **J. Cell Biol.** 195: 979-992 (2011).
79. Campelo, F and **Malhotra V.** Membrane Fission: the biogenesis of transport carriers. **Ann. Rev. Biochem.** 81:407-427 (2012)
80. von Blume J, Alleaume AM, Kienzle C, Carreras-Sureda A, Valverde M, Malhotra V. Cab45 is required for Ca(2+)-dependent secretory cargo sorting at the trans-Golgi network. **J Cell Biol.** 199:1057-66 (2012)
81. **Malhotra, V.** COPII vesicles get supersized by ubiquitin. **Cell.** 149:20-21 (2012)
82. Curwin, A.J., VonBlume, J and **Malhotra, V.** Cofilin dependent export of specific cargo from the Golgi. **Mol. Biol. Cell.** 23: 2327-2338 (2012).
83. Wakana, Y., Felix Meissner, F., van Galen, J., Mann, M, and **Malhotra, V.** A new class of carriers that transport selective cargo from the TGN to the cell surface. **EMBO J** 31:3976-90 (2012).
84. Rossella Venditti, Tiziana Scanu, Michele Santoro, Giuseppe Di Tullio, Alexander Spaar, Renato Gaibisso, Galina V. Beznoussenko, Alexander A. Mironov, Alexander Mironov jr, Leopoldo Zelante, Maria Rosaria Piemontese, Notarangelo Angelo, **Vivek Malhotra**, Barbara M. Vertel, Cathal Wilson, Maria Antonietta De Matteis. Sedlin controls the ER export of procollagen by regulating the Sar1GTP cycle. **Science** 337: 1668-1672 (2012).
85. Juan M. Duran, Felix Campelo., Josse van Galen., Timo Sachsenheimer., Jesús Sot., Mikhail V. Egorov., Carles Rentero., Carlos Enrich., Roman S. Polishchuk., Félix M. Goñi., Britta Brügger., Felix Wieland, and **Vivek Malhotra.** Sphingomyelin organization is required for vesicle biogenesis at the Golgi complex. **EMBO J.** 31:4535-46 (2012).

86. Julien Villeneuve, Margherita Scarpa., Maria Ortega Bellido, and **Vivek Malhotra**. MEK1 inactivates Myt1 to regulate Golgi membrane fragmentation and mitotic entry in mammalian cells. **EMBO J.** 32:72-85 (2013).
87. Catherine Rabouille., **Vivek Malhotra**, and Walter Nickel. Functional and Structural Diversity of Unconventional Secretory Mechanisms. **J. Cell Science.** 125: 5251-5255 (2013).
88. Suresh Subramani and **Vivek Malhotra**. Non-autophagic roles of autophagy-related proteins. **EMBO Reports.** 14: 143-151 (2013).
89. Sandra Mitrovic, Cristina Nogueira, Gerard Cantero-Recasens, Kerstin Kiefer, José M.Fernández-Fernández, Jean-François Popoff, Laetitia Casano, Frederic Bard, Raul Gomez1, Miguel A. Valverde and **Vivek Malhotra**. TRPM5-mediated calcium uptake regulates mucin secretion from human colon goblet cells. **Elife.** 2:e00658. doi: 10.7554/eLife.00658. Print (2013).
90. Vivek Malhotra. Unconventional protein secretion: an evolving mechanism. **EMBO J.** 32:1660-1664 (2013).
91. David Cruz-Garcia, Maria Ortega-Bellido, Margherita Scarpa, Julien Villeneuve, Marko Jovic, Marc Porzner, Tamas Balla, Thomas Seufferlein, and **Vivek Malhotra**. PI(4)P-dependent recruitment of arfaptins to the trans-Golgi network and their involvement in cargo export. **EMBO J.** 32:1717-1729 (2013).
92. Yuichi Wakana, Julien Villeneuve, Josse van Galen, David Cruz-Garcia, Mitsuo Tagaya, and **Vivek Malhotra**. The kinesin Eg5 moves CARTS during protein secretion in non-mitotic cells. **J. Cell Biol.** 202: 241-250 (2013).
93. Nogueira C, Erlmann P, Villeneuve J, Santos AJ, Martínez-Alonso E, Martínez-Menárguez JÁ, **Vivek Malhotra**. SLY1 and Syntaxin 18 specify a distinct pathway for procollagen VII export from the endoplasmic reticulum. **Elife** (Cambridge). May 19;3:e02784. doi: 10.7554/eLife.02784 (2014).
94. van Galen J, Campelo F, Martínez-Alonso E, Scarpa M, Martínez-Menárguez JÁ, **Vivek Malhotra**. Sphingomyelin homeostasis is required to form functional enzymatic domains at the trans-Golgi network. **J Cell Biol.** 206: 609-18 (2014).
95. Cruz-Garcia D, Curwin AJ, Popoff JF, Bruns C, Duran JM, **Malhotra V**. Remodeling of secretory compartments creates CUPS during nutrient starvation. **J Cell Biol.** 207:695-703 (2014).
96. **Malhotra V**, Marder E. The pleasure of publishing. **Elife.** 6;4. doi: 10.7554/eLife.05770 (2015).

97. **Malhotra V**, Erlmann P, Nogueira C. Procollagen export from the endoplasmic reticulum. **Biochem Soc Trans.** 43:104-7 (2015).
98. **Malhotra V**, Erlmann P. The Pathway of Collagen Secretion. **Annu Rev Cell Dev Biol.** 2015 Nov 13;31:109-24. doi: 10.1146/annurev-cellbio-100913-013002. Epub 2015 Sep 29.
99. Tiwari P, Kumar A, Das RN, **Malhotra V**, VijayRaghavan K. A Tendon Cell Specific RNAi Screen Reveals Novel Candidates Essential for Muscle Tendon Interaction. **PLoS One.** 2015 Oct 21;10(10):e0140976. doi: 10.1371/journal.pone.0140976. eCollection 2015.
100. Santos AJ, Raote I, Scarpa M, Brouwers N, **Malhotra V**. TANGO1 recruits ERGIC membranes to the endoplasmic reticulum for procollagen export. **Elife.** 2015 Nov 14;4. pii: e10982. doi: 10.7554/eLife.10982.
101. Curwin AJ, Brouwers N, Alonso Y Adell M, Teis D, Turacchio G, Parashuraman S, Ronchi P, **Malhotra V**. ESCRT-III drives the final stages of CUPS maturation for unconventional protein secretion. *Elife.* Apr 26;5. pii: e16299. doi: 10.7554/eLife.16299. (2016).
102. Santos AJ, Nogueira C, Ortega-Bellido M, **Malhotra V**. TANGO1 and Mia2/cTAGE5 (TALI) cooperate to export bulky pre-chylomicrons/VLDLs from the endoplasmic reticulum. **J Cell Biol.** May 9;213(3):343-54. doi: 10.1083/jcb.201603072. Epub 2016 May 2. (2016).
103. Villeneuve J, Duran J, Scarpa M, Bassaganyas L, Van Galen J, **Malhotra V**. Golgi enzymes do not cycle through the endoplasmic reticulum during protein secretion or mitosis. **Mol Biol Cell.** Jan 1;28(1):141-151. doi: 10.1091/mbc.E16-08-0560. (2017).
104. Raote I, Ortega Bellido M, Pirozzi M, Zhang C, Melville D, Parashuraman S, Zimmermann T, **Malhotra V**. TANGO1 assembles into rings around COPII coats at ER exit sites. **J Cell Biol.** Apr 3;216(4):901-909. (2017).
105. Capasso S, Sticco L, Rizzo R, Pirozzi M, Russo D, Dathan NA, Campelo F, van Galen J, Hölttä-Vuori M, Turacchio G, Hausser A, **Malhotra V**, Riezman I, Riezman H, Ikonen E, Luberto C, Parashuraman S, Luini A, D'Angelo G. Sphingolipid metabolic flow controls phosphoinositide turnover at the *trans*-Golgi network. **EMBO J.** May 10. pii: e201696048. doi: 10.15252/embj.201696048. [Epub ahead of print] (2017).
106. Campelo, F., van Galen, J., Turacchio, G., Parashuraman, S., Kozlov, M., Garcia-Parajo, M, and **Malhotra, V**. Sphingomyelin metabolism controls the shape and function of the Golgi cisternae. **Elife.** May 13;6. pii: e24603. doi: 10.7554/eLife.24603. [Epub ahead of print] (2017).
107. Cruz-Garcia, D., Brouwers, N., Duran, J., Curwin, A. J, and **Malhotra, V**.

Requirement of a A di-acidic motif for unconventional secretion of wild type and ALS linked mutant SOD1. In review. **J Cell Biol.** Aug 9. pii: jcb.201704056. doi: 10.1083/jcb.201704056. 2017

108. Villeneuve J, Bassaganyas L, Lepreux S, Chiritoiu M, Costet P, Ripoche J, **Malhotra V\***, Schekman R\* (\*co-correspondents). Unconventional secretion of FABP4 by endosomes and secretory lysosomes. **J Cell Biol.** Dec 6. pii: jcb.201705047. doi: 10.1083/jcb.201705047. [Epub ahead of print]. (2017).

109. Ashe, S., **Malhotra, V** and Padinjat, R. Protein Kinase D regulates metabolism and growth by controlling secretion of insulin like peptides. **Dev. Biol.** 434: 194-201(2018).

110. Raote, I., Bellido, M., Santos, A., Foresti, O., Zhang, C., Parajo, M., Campelo, F and **Malhotra, V**. TANGO1 builds a machine for collagen export by recruiting and spatially organizing COPII, tethers and membranes. **Elife.** Mar 7;7. pii: e32723. doi: 10.7554/eLife.32723. [Epub ahead of print] (2018).

111. Cruz, D\*., **Malhotra, V\*** and Curwin, A\*. Unconventional protein secretion triggered by nutrient starvation. **Seminars in Cell and Developmental Biology.** Feb 28. pii: S1084 9521(18)30003-X. doi: 10.1016/j.semcdb.2018.02.021. [Epub ahead of print] (\* equal contributions). (2018).

112. Cantero-Recasens G, Butnaru CM, Valverde MA, Naranjo JR, Brouwers N, **Malhotra V**. KChIP3 coupled to Ca<sup>2+</sup> oscillations exerts a tonic brake on baseline mucin release in the colon. **Elife.** 2018 Oct 1;7. pii: e39729. doi: 10.7554/eLife.39729.

113. Cantero-Recasens G, Butnaru CM, Brouwers N, Mitrovic S, Valverde MA, **Malhotra V**. Sodium channel TRPM4 and sodium/calcium exchangers (NCX) cooperate in the control of Ca<sub>2+</sub>-induced mucin secretion from goblet cells. **J Biol Chem.** 2019. 294: 816-826.

114. Raote, I and **Malhotra, V**. Protein transport by vesicles and Tunnels. **J. Cell Biol.** 2019 218(3):737-739.

115. Chiritoiu, M., Brouwers, N., Turacchio, G., Pirozzi, M, and **Malhotra, V**. GRASP55 and UPR control interleukin-1 $\beta$  aggregation and secretion. **Developmental Cell.** 2019. 49(1):145-155.

116. Lekszas C., Foresti, O., Raote, I., Liedtke, D., Konig, EM., Nanda, I., Vona, B., **Malhotra, V\*** and Haaf, T\* (\* co-corresponding authors). Biallelic *TANGO1* mutations cause a novel syndromal disease due to hampered cellular collagen secretion. **Elife.** 2020 Feb 26;9. pii: e51319. doi: 10.7554/eLife.51319.

117. Cruz, D., Brouwers, N., **Malhotra, V\*** and Curwin, A. J\* (\* co-corresponding authors). Reactive oxygen species (ROS) triggers unconventional secretion of

antioxidants and Acb1. **J Cell Biol.** 2020. 219(4):e201905028. doi: 10.1083/jcb.201905028.

118. Raote, I., Ernst, A.M., Campelo, F., Rothman, J.E., Pincet, F., and **Malhotra, V.** TANGO1 membrane helices create a lipid diffusion barrier at curved membranes **Elife.** 2020. Elife. 2020 May 26;9:e57822. doi: 10.7554/eLife.57822.

119. Grond, R., Veenendaal, T., Duran, J., Raote, I., Delgrou, L., Benaissa El Haddouti, **Malhotra, V\*** and Rabouille, C\* . (\* co-corresponding authors). Golgi cisternae are stacked in a GRASP knockout mouse. **J. Cell Biol.** 2020. 219(9):e202004191. doi: 10.1083/jcb.202004191.

120. Raote, I\*, Chabanon, M, Walani, N, Arroyo, M, Garcia-Parajo, M.F, **Malhotra, V\***, and Campelo F\*. **Elife.** (\* co-corresponding authors) A physical mechanism of TANGO1-mediated bulky cargo export. **Elife.** 2020 Nov 10;9:e59426. doi: 10.7554/eLife.59426.

121. Raote, I and Malhotra, C. New principles in protein secretion. **Ann. Rev. Biochem.** 2021. In press