

Stanford



Jonathan Mulholland

Director, CSIF, School of Medicine - CMGM

Bio

CURRENT ROLE AT STANFORD

Director of the Cell Sciences Imaging Facility, CSIF

confocal/electron microscopy services

<http://microscopy.stanford.edu/>

Beckman Center, B050

INSTITUTE AFFILIATIONS

- Member, Stanford Cancer Institute

HONORS AND AWARDS

- Marsh O'Neill Award For Exceptional and Enduring Support of Stanford's Research Enterprise, Stanford University (2016)

LINKS

- CSIF iLabs Solutions site: <http://microscopy.stanford.edu/main.html>
- Cell Sciences Imaging Facility: <http://microscopy.stanford.edu/>
- Linkin: http://www.linkedin.com/profile/view?id=55721001&trk=hb_tab_pro_top

Professional

PROFESSIONAL INTERESTS

IMAGING - electron microscopy (SEM, TEM, immuno-EM), confocal, multi-photon microscopy, live cell imaging, super-resolution microscopy.

Yeast cell biology, cytoskeleton.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, ASCB, MSA, MSNC (2000 - present)

Publications

PUBLICATIONS

- **Multiplex imaging of human induced pluripotent stem cell-derived neurons with CO-Detection by indEXing (CODEX) technology.** *Journal of neuroscience methods*
Heinrich, L., Zafar, F., Morato Torres, C. A., Singh, J., Khan, A., Chen, M. Y., Hempel, C., Nikulina, N., Mulholland, J., Braubach, O., Schule, B.
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- **A novel platform for highly multiplexed, single-cell imaging of cell suspensions**
Khan, A., Lee, W., Mulholland, J., Wagh, D., Collier, J., Mercado, G.
BMC.2019
- **AP-2-Associated Protein Kinase 1 and Cyclin G-Associated Kinase Regulate Hepatitis C Virus Entry and Are Potential Drug Targets** *JOURNAL OF VIROLOGY*
Neveu, G., Ziv-Av, A., Barouch-Bentov, R., Berkerman, E., Mulholland, J., Einav, S.
2015; 89 (8): 4387-4404
- **Regulation of ER-phagy by a Ypt/Rab GTPase module.** *Molecular biology of the cell*
Lipatova, Z., Shah, A. H., Kim, J. J., Mulholland, J. W., Segev, N.
2013; 24 (19): 3133-3144
- **TRAPP II Complex Assembly Requires Trs33 or Trs65** *TRAFFIC*
Tokarev, A. A., Taussig, D., Sundaram, G., Lipatova, Z., Liang, Y., Mulholland, J. W., Segev, N.
2009; 10 (12): 1831-1844
- **Direct Interaction between a Myosin V Motor and the Rab GTPases Ypt31/32 Is Required for Polarized Secretion** *MOLECULAR BIOLOGY OF THE CELL*
Lipatova, Z., Tokarev, A. A., Jin, Y., Mulholland, J., Weisman, L. S., Segev, N.
2008; 19 (10): 4177-4187
- **The role of trs65 in the Ypt/Rab guanine nucleotide exchange factor function of the TRAPP II complex** *MOLECULAR BIOLOGY OF THE CELL*
Liang, Y., Morozova, N., Tokarev, A. A., Mulholland, J. W., Segev, N.
2007; 18 (7): 2533-2541
- **Three-way Ypt31p/32p, Sec2p, Sec4p interaction couples trans-Golgi vesicle formation with fusion to the plasma membrane.**
Lipatova, Z., Serachitopol, A., Liu, F., Jedd, G., Mulholland, J., Jones, S., Segev, N.
AMER SOC CELL BIOLOGY.2002: 505A
- **Immunoelectron microscopy of aldehyde-fixed yeast cells** *GUIDE TO YEAST GENETICS AND MOLECULAR AND CELL BIOLOGY, PT C*
Mulholland, J., Botstein, D.
2002; 351: 50-81
- **Visualization of receptor-mediated endocytosis in yeast** *MOLECULAR BIOLOGY OF THE CELL*
Mulholland, J., Konopka, J., Singer-Kruger, B., ZERIAL, M., Botstein, D.
1999; 10 (3): 799-817
- **The transcriptional program of sporulation in budding yeast** *SCIENCE*
Chu, S., DeRisi, J., Eisen, M., Mulholland, J., Botstein, D., Brown, P. O., Herskowitz, I.
1998; 282 (5389): 699-705
- **The role of Ypt GTPases in the yeast exocytic pathway.**
Segev, N., Jones, S., Jedd, G., Richardson, C., Mulholland, J.
AMER SOC CELL BIOLOGY.1997: 1131-1131
- **Yeast actin cytoskeleton mutants accumulate a new class of Golgi-derived secretory vesicle** *MOLECULAR BIOLOGY OF THE CELL*
Mulholland, J., Wesp, A., Riezman, H., Botstein, D.
1997; 8 (8): 1481-1499
- **Two new Ypt GTPases are required for exit from the yeast trans-Golgi compartment** *JOURNAL OF CELL BIOLOGY*
Jedd, G., Mulholland, J., Segev, N.
1997; 137 (3): 563-580
- **Aip3p/Bud6p, a yeast actin-interacting protein that is involved in morphogenesis and the selection of bipolar budding sites** *MOLECULAR BIOLOGY OF THE CELL*
Amberg, D. C., Zahner, J. E., Mulholland, J. W., Pringle, J. R., Botstein, D.
1997; 8 (4): 729-753
- **An essential role of the yeast pheromone-induced Ca²⁺ signal is to activate calcineurin** *MOLECULAR BIOLOGY OF THE CELL*
Withee, J. L., Mulholland, J., Jeng, R., Cyert, M. S.

1997; 8 (2): 263-277

- **Endocytosis in yeast observed by immuno-electron microscopy**
Mulholland, J., Konopka, J., SingerKruger, B., Zerial, M., Botstein, D.
AMER SOC CELL BIOLOGY.1996: 1540
- **The yeast gamma-tubulin, Tub4p, and microtubule nucleation at the spindle pole body.**
Jeng, R., Mulholland, J., Stearns, T.
AMER SOC CELL BIOLOGY.1996: 1325
- **Analysis of Tub4p, a yeast gamma-tubulin-like protein: Implications for microtubule-organizing center function** *JOURNAL OF CELL BIOLOGY*
Marschall, L. G., Jeng, R. L., Mulholland, J., Stearns, T.
1996; 134 (2): 443-454
- **ULTRASTRUCTURE OF THE YEAST ACTIN CYTOSKELETON AND ITS ASSOCIATION WITH THE PLASMA-MEMBRANE** *JOURNAL OF CELL BIOLOGY*
Mulholland, J., Preuss, D., Moon, A., Wong, A., Drubin, D., Botstein, D.
1994; 125 (2): 381-391
- **SUBCELLULAR-LOCALIZATION OF CDC42P, A SACCHAROMYCES-CEREVISIAE GTP-BINDING PROTEIN INVOLVED IN THE CONTROL OF CELL POLARITY** *MOLECULAR BIOLOGY OF THE CELL*
Ziman, M., Preuss, D., Mulholland, J., OBRIEN, J. M., Botstein, D., Johnson, D. I.
1993; 4 (12): 1307-1316
- **THE VPH1 GENE ENCODES A 95-KDA INTEGRAL MEMBRANE POLYPEPTIDE REQUIRED FOR INVIVO ASSEMBLY AND ACTIVITY OF THE YEAST VACUOLAR H⁺-ATPASE** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Manolson, M. F., PROTEAU, D., Preston, R. A., Stenbit, A., Roberts, B. T., Hoyt, M. A., Preuss, D., Mulholland, J., Botstein, D., Jones, E. W.
1992; 267 (20): 14294-14303
- **CHARACTERIZATION OF THE SACCHAROMYCES GOLGI-COMPLEX THROUGH THE CELL-CYCLE BY IMMUNOELECTRON MICROSCOPY** *MOLECULAR BIOLOGY OF THE CELL*
Preuss, D., Mulholland, J., Franzusoff, A., Segev, N., Botstein, D.
1992; 3 (7): 789-803
- **STRUCTURE OF THE YEAST ENDOPLASMIC-RETICULUM - LOCALIZATION OF ER PROTEINS USING IMMUNOFLUORESCENCE AND IMMUNOELECTRON MICROSCOPY** *YEAST*
Preuss, D., Mulholland, J., Kaiser, C. A., Orlean, P., Albright, C., Rose, M. D., Robbins, P. W., Botstein, D.
1991; 7 (9): 891-911
- **HOMOLOGY OF A YEAST ACTIN-BINDING PROTEIN TO SIGNAL TRANSDUCTION PROTEINS AND MYOSIN-I** *NATURE*
Drubin, D. G., Mulholland, J., Zhu, Z. M., Botstein, D.
1990; 343 (6255): 288-290
- **THE YEAST GTP-BINDING YPT1 PROTEIN AND A MAMMALIAN COUNTERPART ARE ASSOCIATED WITH THE SECRETION MACHINERY** *CELL*
Segev, N., Mulholland, J., Botstein, D.
1988; 52 (6): 915-924
- **SUBSTITUTION OF TYROSINE FOR EITHER CYSTEINE IN BETA-LACTAMASE PREVENTS RELEASE FROM THE MEMBRANE DURING SECRETION** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Fitts, R., REUVENY, Z., VANAMSTERDAM, J., Mulholland, J., Botstein, D.
1987; 84 (23): 8540-8543