

CURRICULUM VITAE

Robert J. Deschenes, Ph.D.
Department of Molecular Medicine
Professor and Chair

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Place of Birth: Lynn, Massachusetts

Education:

1973-1977	B.A. St. Michael's College, Vermont (Biology)
1975-1976	McGill University, Montreal (Biology)
1977-1980	M.S. Tufts University (Biochemistry)
1981-1984	Ph.D., Purdue University (Biochemistry)
1984-1989	Postdoctoral Fellow, Molecular Biology, Princeton University

Appointments:

1989-2004	Assistant, Associate, and Professor Department of Biochemistry University of Iowa
2002-2004	Vice Chair Department of Biochemistry University of Iowa
1999-2004	Director Genetics Interdisciplinary Program University of Iowa
2004-2008	Professor and Chairman Department of Biochemistry Joseph F. Heil, Jr. Professor Medical College of Wisconsin
2009-present	Professor and Chairman Department of Molecular Medicine Associate Dean of Research Morsani College of Medicine University of South Florida
2009-present	Member, Drug Discovery Program Moffitt Cancer Center
2015-2026	Sr. Associate Dean of Graduate Education and Research Morsani College of Medicine, University of South Florida
2021-2023	Director, Biotechnology Program Morsani College of Medicine University of South Florida

Awards and Honors:

1981-1983	David Ross Research Fellow
1983	American Diabetes Association Summer Research Fellow
1985-1987	Anna Fuller Cancer Fund Postdoctoral Research Fellow
1987-1989	Postdoctoral Research Fellow, National Institutes of Health
1989-1992	Basil O'Connor Scholar, March of Dimes
2004-2008	Joseph Heil, Jr. Endowed Chair of Cancer Research
2009	Outstanding Service Award, Medical College of Wisconsin
2009	Fred Wright Endowed Professor
2009	Member, National Academy of Inventors
2011	Robert J. Grasso Award for Outstanding Dedication to Graduate Education
2013	Elected Fellow, American Association for the Advancement of Science
2013	Outstanding Faculty Award, USF
2014	Robert J Grasso Award for Outstanding Dedication to Graduate Education
2016	Robert J. Grasso Award for Outstanding Dedication to Graduate Education
2017	Purdue University, Distinguished Alumni Award

Editorial Boards/Study Sections:

1992-1997	Journal of Biological Chemistry, Editorial Board
2003-Present	Eukaryotic Cell, Editorial Board
1997-2003	NIH Study Section: Microbial Physiology and Genetics
2006-2009	NIH Study Section: Membrane Biology and Protein Processing
2006	St. Louis University, Biochemistry Department External Review
2010	Purdue Biochemistry Department External Review
2012-present	Peer J Editorial Board
2013-present	Editorial Board: PLOS One

Other Review Activity:

Journals

Science, J. Biological Chemistry, Molecular Cell Biology, EMBO, Cancer Research, Traffic, Molecular Biology of the Cell. FASEB Journal, Physiological Genetics, J Lipid Research, Biochemistry, FEBS LETT, J. Cellular Physiology, PNAS, Nature Cell Biology, Molecular Parasitology, BioTechniques, J. Molecular Biology, BBA, Analytical Biochemistry, J. Am Chem. Society, PLOS Pathogens, PLOS Biology, Nature Chemical Biology, Peer J, Biochemical Journal, PLOS One

Grants

NSF

NIH

American Cancer Society

Israel Bi-National Science Foundation

Medical Research Council (UK)

Research Grants, Contracts, Awards, Projects:**Active**

None

Prior Support:

R01EY024232 Deschenes (PI)

09/30/14-08/31/19

Grp94-selective inhibitors to treat hereditary glaucoma

This project seeks to validate and improve this Grp94 inhibitor for treating myocilin-associated POAG by establishing structure-activity relationships of Grp94 inhibitors to elucidate mechanisms of misfolded myocilin triage. These studies will yield a new suite of Grp94 modulators and demonstrate that Grp94 is a novel clinical target for treating glaucoma caused by misfolded myocilin. In addition, mechanisms identified herein that clarify how Grp94 regulates myocilin triage could provide new insights for other proteostasis diseases.

1R21NS090160-01A1 Deschenes (PI)

07/01/16- 6/31/19 (NCE)

Protein Palmitoylation and the Etiology of X-Linked Intellectual Disabilities

The development of a functional neural synapse is essential for intellectual development. The study of gene mutations that lead to intellectual disabilities provides insights into the underlying mechanism and suggests potential interventions to reduce the burden of this problem that affects 1-3% of the population. This proposal is to study the molecular mechanism by which mutations in the X-linked gene, zDHH9, lead to a form of X-linked Intellectual Disability (XLID).

R01HL070752-12A1 Yuan (PI); Deschenes (5% effort)

12/01/15-11/30/18

Microvascular barrier dysfunction in thermal injury

The goal of this long- standing project is to elucidate the endothelial-specific mechanisms of microvascular hyperpermeability following burns. Two of the three aims of this project are to characterize the molecular basis of palmitoylating enzyme (DHH9 PAT)-mediated permeability responses in vivo and in vitro; and to identify molecular targets of palmitoylation in endothelial cell- cell adherens junction barrier that regulate microvascular permeability.

Countermeasures to Combat Protozoan Parasites

Defense Advanced Research Projects Agency (DARPA)

8/24/11-8/23/13

R. Deschenes (PI)

Structural Modifications and the Function of RAS Oncogene Proteins

NIH RO1-CA50211

03/01/90-02/28/12

R Deschenes (PI)

Endomembrane targeting and signaling of Ras proteins

NIH RO1-GM073977

02/01/08-01/31/12

R Deschenes (PI)

Regulation of eukaryotic histidine kinases

NIH R01- GM068746

08/1/03 - 7/30/08

R Deschenes (PI)

FASEB Conference Support: "Protein Lipidation and Membrane Microdomains"

NIH
09/05/09-06/30/10

"Methods to identify chemotherapeutic lead inhibitors for protein palmitoyltransferases"
Biomedical Technology Alliance
04/01/06-03/31/07

"Protein palmitoylation and the regulation of signal transduction pathways in breast cancer"
Breast Cancer Showhouse Award
04/1/05-03/31/07

"Structural Modifications and the Function of RAS Oncogene Proteins"
NIH
07/01/90-07/01/2005

The Function of RAS Oncogenes in Eukaryotic Signal Transduction
Basil O'Connor Starter Scholar 09/01/89-06/30/92
Research Award (March of Dimes)

Function of RAS oncogenes in yeast
American Cancer Society 07/1/89-6/30/90
"Growth suppressors and cellular transformation"
Elsa U. Pardee Foundation 01/01/91-12/31/92

Yeast transport systems and function of CFTR
Pilot and Feasibility Project; Cystic Fibrosis 07/01/91-06/30/92
Research Center

The role of G proteins in the yeast mating pheromone signal transduction pathway"
Diabetes and Endocrinology Seed Grant 09/01/89-06/30/91

"Genetic and biochemical analysis of cystic fibrosis mutations in yeast"
National Institutes of Health SCOR: Subproject, Mike Welsh (PI) 0
9/30/93-09/29/98

Patents

US Patent	7,883,860	Human protein acyl transferases and methods of uses.	Issued 2009
	7,488,592	Human protein acyl transferases and methods of uses (amended).	Issued 2011
	10,085,981	Protein Acyl Transferase inhibitors and methods of treatment.	Issued 2018

Invited Talks:

UC-Irvine, Genetics (1988)
UT- Austin, Microbiology (1988)
Univ. of Vermont, Microbiology (1988)
Rice University, Biochemistry and Cell Biology (1988)
Boston University, Biology (1988)
Brandeis University, Biochemistry (1988)
University of Minnesota, Biochemistry (1988)
Purdue University, Biochemistry Program - Cancer Seminar Series (1989)
University of Chicago, Department of Biochemistry and Molecular Biology (1989)
Fels Institute, Temple University (1990)

Cold Spring Harbor Conference, "The Structure and Evolution of RAS ". (1990)
 Burroughs Wellcome Research Laboratories, Research Triangle Park, N.C. (1991)
 San Francisco Bay Area Yeast Meeting- UCSF (1992)
 Loras College, Dubuque, Iowa (1992)
 Midwest yeast meeting, University of Chicago (1992)
 University of Michigan, Department of Biochemistry (1992)
 Indiana University School of Medicine (Indianapolis) (1992)
 Department of Microbiology, University of Iowa (1993)
 Loyola University, Department of Biochemistry, Chicago (1993)
 Seattle, Wash., Yeast Genetics and Molecular Biology Meeting (1994)
 University of New Hampshire, Department of Biochemistry and Mol. Biology (1994)
 Iowa State University, Department of Molecular Biology, Ames, IA. (1994)
 Midwest yeast meeting, University of Chicago (1995)
 Medical College of Wisconsin Dept. of Biochemistry (1995)
 Pharmaceutical Research Institute, Johnson and Johnson, N.J. (1996)
 Wolkhart Pharmaceutical Research Center, Aurangabad, India (1997)
 FASEB Research Conference, Ras GTPase Superfamily (1997)
 University of Wisconsin, Madison- Dept. of Pharmacology (1997)
 Cold Spring Harbor, Yeast Cell Biology Meeting (1997)
 Bristol-Myers Squibb Research Institute, Connecticut (1997)
 Univ. of Maryland, Yeast Genetics and Molecular Biology Meeting (1998)
 Pharmaceutical Research Institute, Johnson and Johnson, N.J. (1998)
 Louisiana State University Med Ctr, Dept. of Biochemistry (1998)
 Purdue University, Dept. of Biochemistry (1999)
 Iowa State Univ., Molecular Biology Program (1999)
 ASBMB meeting, San Francisco (1999)
 University of Miami, Dept. of Physiology and Biophysics (1999)
 Cold Spring Harbor Yeast Cell Biology Meeting (2001)
 Washington University, Department of Cell Biology (2001)
 Syracuse University, Dept of Cell and Molecular Biology (2002)
 FASEB Research Conference, Tucson, AZ Lipid Modification and Signaling (2002)
 University of Toledo, Department of Biological Sciences (2002)
 University of Michigan, Department of Biochemistry (2002)
 Yeast Genetics Meeting, Madison University, Molecular and Cell Biology (2002)
 Dept of Chemistry, Augustana College (2003)
 Viterbo University, Dept. of Chemistry (2003)
 Gordon Conference: Second Messenger and Prot. Phosphorylation (2003)
 Gordon Conference: Mechanosensory Signal Transduction (2003)
 Dept. of Chemistry and Biochemistry, University of Oklahoma (2003)
 Dept. of Biochemistry, University of Georgia (2003)
 Dept. of Biochemistry, University of Indiana School of Medicine (2004)
 FASEB meeting Lipid protein modifications – Tucson, AZ (2004)
 Biochemical Society Focused Meeting, Royal Agriculture College, UK (2005)
 Center of Membrane Biology, UT-Houston (2005)
 Dept. of Pharmacology, Thomas Jefferson University (2005)
 Sigman Symposium, UCLA (2005)
 Department of Biology Sciences, Marquette (2005)
 Tata Institute of Fundamental Research; Mumbai, India (2006)
 Indian Institute of Science; Bangalore, India (2006)
 National Center for Biological Research (NCBS) Bangalore, India (2006)
 Department of Microbiology, San Francisco State University (2006)

Blood Research Institute, Milwaukee, WI (2006)
 Department of Pharmacology, University of North Carolina, Chapel Hill (2006)
 Academia Sinica, Taiwan (2007)
 National Health Research Institute, Taipei, Taiwan (2007)
 Symposium Keynote, National Pingtung University, Pingtung, Taiwan (2007)
 National Taiwan University, Taipei, Taiwan (2007)
 Gordon Conference, Biddeford, Maine (2007)
 Dept. of Medical Microbiology, Immunology, and Cell Biol, Southern Illinois Univ. (2007)
 Human Biology & Chemistry, University of Wisconsin-Green Bay (2007)
 Cancer Center, University of Southern Illinois, Springfield (2007)
 Dept. of Cell Biology, Edmonton, Alberta, Canada (2008)
 Department of Chemistry, Lawrence University, Appleton, WI (2008)
 FASEB Meeting – GTPases Saxtons River, VT (2008)
 Dept. of Molecular Medicine, Univ. South Florida (2008)
 Midwest Yeast Meeting, Northwestern University, Evanston, Illinois (2008)
 The Lipid Group/ French Society of Biochemistry and Molecular Biology(GERLI), Renne, France (2009)
 Moffitt Cancer Center, Univ. South Florida (2009)
 Medical College of Georgia (2010)
 Southern Medical College, Guangzhou, China (2011)
 FASEB Protein Lipidation Conference (2011)
 Medical College of Georgia-Augusta (2011)
 Dept. of Molecular Medicine, Univ. South Florida (2012)
 Indian Institute of Science; Bangalore, India (2012)
 National Center for Biological Science; Bangalore (2012)
 Dept. of Cell Biology, Edmonton, Alberta, Canada (2013)
 FASEB Protein Lipidation Conference (2013)
 FASEB Protein Lipidation Conference (2015)
 Department of Pharmacology, National Univ of Ireland- Galway (2016)
 Purdue University, Distinguished Alumni Award Lecture (2017)
 University of Kentucky (2107)
 FASEB Protein Lipidation Conference (2017)
 UCSD Symposium to Honor Jack Dixon (2018)

Bibliography: (h-index 45)

A. Publications

1. Deschenes, R.J., Hilt, D.C., Marquis, J.K., and Mautner, H.G. (1981) Terbium binding to axonal membrane vesicles from lobster (*Homarus americanus*) peripheral nerve. A probe of calcium binding sites. Biochem. Biophys. Acta **641(1)**: 166-172.
2. Deschenes, R.J., Mautner, H.G., and Marquis, J.K. (1981) Local anesthetics noncompetitively inhibit terbium binding to the exterior surface of nerve membrane vesicles. Biochem. Biophys. Acta **649(3)**: 515-520.
3. Marquis, J.K., and Deschenes, R.J. (1982) A reevaluation of calcium-local anesthetic antagonism. Exp. Neurol. **76(3)**: 547-552.
4. Taylor, W.L., Collier, K.J., Deschenes, R.J., Weith, H.L., and Dixon, J.E. (1981) Sequence analysis of a cDNA coding for a pancreatic precursor to somatostatin. Proc. Natl. Acad. Sci. USA **78(11)**: 6694-6698.
5. Magazin, M., Minth, C.D., Funckes, C.L., Deschenes, R.J., Tavianini, M.A., and Dixon, J.E. (1982) Sequence of a cDNA encoding pancreatic preprosomatostatin-22. Proc. Natl. Acad. Sci. USA **79(17)**: 5152-5156.

6. Funckes, C.L., Minth, C.D., Deschenes, R.J., Magazin, M., Tavianini, M., Sheets, M., Collier, K.J., Weith, H.L., Aron, D., Roos, B., and Dixon, J.E. (1983) Cloning and characterization of a mRNA-encoding rat preprosomatostatin. J. Biol. Chem. **258(14)**: 8781-8787.
7. Deschenes, R.J., Lorenz, L., Haun, R., Roos, B., Collier, K., and Dixon, J.E. (1984) Cloning and sequence analysis of a cDNA encoding rat preprocholecystokinin. Proc. Natl. Acad. Sci. USA **81(3)**: 726-730.
8. Deschenes, R.J., Haun, R.S., Sunkel, D., Roos, B.A., and Dixon, J.E. (1985) Modulation of cholecystokinin gene expression. Ann. N Y Acad. Sci. **448**: 53-60.
9. Deschenes, R.J., Narayana, S.V.L., Argos, P., and Dixon, J.E. (1985) Primary structural comparison of the preprohormones cholecystokinin and gastrin. FEBS Lett. **182(1)**: 135-138.
10. Deschenes, R.J., Haun, R.S., Funckes, C.L., and Dixon, J.E. (1985) A gene encoding rat cholecystokinin. Isolation, nucleotide sequence, and promoter activity. J. Biol. Chem. **260(2)**: 1280-1286.
11. Deschenes, R.J., and Broach, J.R. (1987) Fatty acylation is important but not essential for *Saccharomyces cerevisiae* RAS function. Mol. Cell. Biol. **7(7)**: 2344-2351.
12. Duchemin, A.M., Quach, T.T., Iadarola, M.J., Deschenes, R.J., Schwartz, J.P., and Wyatt, R.J. (1987) Expression of the cholecystokinin gene in rat brain during development. Dev. Neurosci. **9(1)**: 61-67.
13. Clarke, S., Vogel, J.P., Deschenes, R.J., and Stock, J. (1988) Posttranslational modification of the Ha-ras oncogene protein: Evidence for a third class of protein carboxyl methyltransferases. Proc. Acad. Sci. USA **85(13)**: 4643-4647.
14. Deschenes, R.J., Stimmel, J.B., Clarke, S., Stock, J., and Broach, J.R. (1989) RAS2 protein of *Saccharomyces cerevisiae* is methylesterified at its carboxy terminus. J. Biol. Chem. **264**: 11865-11873.
15. Fedor-Chaiken, M., Deschenes, R.J., and Broach, J.R. (1990) SRV2, A gene required for RAS activation of adenylate cyclase in yeast. Cell **61(2)**: 329-340.
16. Deschenes, R.J., Resh, M., and Broach, J.R. (1990) Acylation and prenylation of proteins. Curr. Opin. Cell Biol. **2(6)**: 1108-1113.
17. Stimmel, J.B., Deschenes, R.J., Volker, C., Stock, J., and Clarke, S. (1990) Evidence for an S-farnesylcysteine methyl ester at the carboxyl terminus of the *Saccharomyces cerevisiae* RAS2 protein. Biochemistry **29(41)**: 9651-9659.
18. Broach, J.R., and Deschenes, R.J. (1990) The function of *ras* genes in *Saccharomyces cerevisiae*. Adv. Cancer Res. **54**: 79-139.
19. Guan, K.L., Deschenes, R.J., Qui, H., and Dixon, J.E. (1991) Cloning and expression of a yeast protein tyrosine phosphatase. J. Biol. Chem. **266**: 12964-12970.
20. Guan, K., Deschenes, R.J., and Dixon, J.E. (1992) Isolation and characterization of a second protein tyrosine phosphatase gene, *PTP2*, from *Saccharomyces cerevisiae*. J. Biol. Chem. **267(14)**: 10024-10030.
21. Guan, K., Farh, L., Marshall, T.K., and Deschenes, R.J. (1993) Normal mitochondrial structure and genome maintenance in yeast requires the dynamin-like product of the MGM1 gene. Curr. Genet. **24(1-2)**: 141-148.
22. Mitchell, D.A., Marshall, T.K., and Deschenes, R.J. (1993) Vectors for the inducible overexpression of glutathione S-transferase fusion proteins in yeast. Yeast **9(7)**: 715-723.
23. Mitchell, D.A., Farh, L., Marshall, T.K., and Deschenes, R.J. (1994) A polybasic domain allows nonprenylated Ras proteins to function in *Saccharomyces cerevisiae*. J. Biol. Chem. **269(34)**: 21540-21546.

24. Farh, L., Mitchell, D.A., and Deschenes, R.J. (1995) Farnesylation and proteolysis are sequential, but distinct steps in the CaaX box modification pathway. Arch. Biochem. Biophys. **318(1)**: 113-121.
25. Yu, G., Deschenes, R.J., and J.S. Fassler, J.S. (1995) The essential transcription factor, Mcm1, is a downstream target of Sln1, a yeast "two-component" regulator. J. Biol. Chem. **270(15)**: 8739-8743.
26. Mitchell, D.A., and Deschenes, R.J. (1995) Characterization of protein prenylation in *Saccharomyces cerevisiae*. Methods Enzymol. **250**: 68-78.
27. Quinby, G.E., and Deschenes, R.J. (1997) An amino terminal prosequence is required for efficient synthesis of *S. cerevisiae* a-factor Biochim. Biophys. Acta **1356(1)**: 23-34.
28. Fassler, J.S., Gray, W.M., Malone, C.L., Tao, W., Lin, H., and Deschenes, R.J. (1997) Activated alleles of yeast SLN1 increase Mcm1-dependent reporter gene expression and diminish signaling through the Hog1 osmosensing pathway. J. Biol.Chem. **272**: 13365-13371.
29. Zhan, X.L., Deschenes, R.J., and Guan, K.L. (1997) Differential regulation of *FUS3* MAP kinase by tyrosine-specific phosphatases *PTP2/PTP3* and dual-specificity phosphatase *MSG5* in *Saccharomyces cerevisiae*. Genes Dev. **11(13)**: 1690-1702.
30. Kurth, D.D., Farh, L., and Deschenes, R.J. (1997) Functional consequences of mutating conserved residues of the yeast farnesyl-protein transferase beta-subunit Ram1(Dpr1). Biochemistry **36(50)**: 15932-15939.
31. Li, S., Ault, A., Malone, C.L., Raitt, D., Dean, S., Johnston, L.H., Deschenes, R.J., and Fassler, J.S. (1998) The yeast histidine protein kinase, Sln1p, mediates phosphotransfer to two response regulators, Ssk1p and Skn7p. EMBO J. **17(23)**: 6952-6962.
32. Quinby, G.E., Dean, J.P., and Deschenes, R.J. (1999) Expression of *MFA1* and *STE6* is sufficient for mating type-independent secretion of yeast a-factor, but not mating competence. Curr. Genet. **35(1)**: 1-7.
33. Tao, W., Deschenes, R.J., and Fassler, J.S. (1999) Intracellular glycerol levels modulate activity of Sln1p, a *Saccharomyces cerevisiae* two-component regulator. J. Biol. Chem. **274(1)**: 360-367.
34. Deschenes, R.J., Lin, H., Ault, A.D., and Fassler, J.S. (1999) Antifungal properties and target evaluation of three putative bacterial histidine kinase inhibitors. Antimicrob. Agents Chemother. **43(7)**: 1700-1703.
35. Bartels, D.J., Mitchell, D.A., Dong, X., and Deschenes, R.J. (1999) Erf2, a novel gene product that affects the localization and palmitoylation of Ras2 in *Saccharomyces cerevisiae*. Mol. Cell. Biol. **19(10)**: 6775-6787.
36. Zhan, X.L., Hong, Y., Zhu, T., Mitchell, A.P., Deschenes, R.J., and Guan, K.L. (2000) Essential functions of protein tyrosine phosphatases PTP2 and PTP3 and RIM11 tyrosine phosphorylation in *Saccharomyces cerevisiae* meiosis and sporulation. Mol. Biol. Cell. **11(2)**: 663-676.
37. Tao, W., Malone, C.L., Ault, A.D., Deschenes, R.J., and Fassler, J.S. (2002) The cytoplasmic coiled-coil domain is required for histidine kinase activity of the yeast osmosensor, SLN1. Mol. Microbiol. **43(2)**: 459-473.
38. Li, S., Dean, S., Li, Z., Horecka, J., Deschenes, R.J., and Fassler, J.S. (2002) The eukaryotic two-component histidine kinase Sln1p regulates *OCH1* via the transcription factor, Skn7p. Mol. Biol. Cell **13(2)**: 412-424.
39. Ault, A.D., Fassler, J.S., and Deschenes, R.J. (2002) Altered phosphotransfer in an activated mutant of the *Saccharomyces cerevisiae* two-component osmosensor, Sln1p. Eucaryot. Cell **1(2)**: 174-180.
40. Lobo, S., Greentree, W.K., Linder, M.E., and Deschenes, R.J. (2002) Identification of a Ras palmitoyltransferase in *Saccharomyces cerevisiae*. J. Biol. Chem. **277(43)**:41268-41273.

41. Zhao, L., Lobo, S., Dong, X., Ault, A., and Deschenes, R.J. (2002) Erf4p and Erf2p form an endoplasmic reticulum-associated complex involved in the plasma membrane localization of yeast Ras proteins. J. Biol. Chem. **277(51)**:49352-49359.
42. Linder, M.E., and Deschenes, R.J. (2003) New insights into the mechanisms of protein palmitoylation. Biochemistry **42(15)**: 4311-4320.
43. Dong, X., Mitchell, D.A., Lobo, S., Zhao, L., Bartels, D.J., and Deschenes, R.J. (2003) Palmitoylation and plasma membrane localization of Ras2p by a nonclassical trafficking pathway in *Saccharomyces cerevisiae*. Mol. Cell. Biol. **23(18)**: 6574-6584.
44. Lu, J.M., Deschenes, R.J., and Fassler, J.S. (2003) *Saccharomyces cerevisiae* histidine phosphotransferase Ypd1p shuttles between the nucleus and cytoplasm for *SLN1*-dependent phosphorylation of Ssk1p and Skn7p. Eukaryot. Cell **2(6)**: 1304-1314.
45. Linder, M.E., and Deschenes, R.J. (2004) Model organisms lead the way to protein palmitoyltransferases. J. Cell Sci. **117(Pt 4)**: 521-526.
46. Babu, P., Deschenes, R.J., and Robinson, L.C. (2004) Akr1p-dependent palmitoylation of Yck2p yeast casein kinase 1 is necessary and sufficient for plasma membrane targeting. J. Biol. Chem. **279(26)**: 27138-27147.
47. Lu, J.M., Deschenes, R.J., and Fassler, J.S. (2004) Role for the Ran binding protein, Mog1p, in *Saccharomyces cerevisiae* *SLN1-SKN7* signal transduction. Eukaryot. Cell. **3(6)**: 1544-1556.
48. Swarthout, J.T., Lobo, S., Farh, L., Croke, M.R., Greentree, W.K., Deschenes, R.J., and Linder, M.E. (2005) DHHC9 and GCP16 constitute a human protein fatty acyltransferase with specificity for H- and N-Ras. J. Biol. Chem. 280:31141-31148.
49. Wang, G. and Deschenes, R.J. (2006) Plasma membrane localization of Ras2 requires Class C Vps proteins and functional mitochondria in *Saccharomyces cerevisiae*. Mol. Cell. Biol. **26**:3243-3255.
50. Mitchell, D.A., Vasudevan, A., Linder, M.E., and Deschenes, R.J. (2006) Protein palmitoylation by a family of DHHC protein S-acyltransferases. J. Lipid Res. **47(6)**: 1118-1127.
51. Linder, M and Deschenes, R (2006) Protein Palmitoylation. Methods 40(2): 125-6.
52. Budde, C., Schoenfish, M.J., Linder, M.E., and Deschenes, R.J. (2006) Purification and characterization of recombinant protein acyltransferases. Methods **40(2)**: 143-150.
53. Linder, M.E., and Deschenes, R.J. (2007) Palmitoylation: policing protein stability and traffic. Nat. Rev. Mol. Cell Biol. **8(1)**: 74-84.
54. Narang, S.S., Malone, C.L., Deschenes, R.J., and Fassler, J.S. (2008) Modulation of yeast Sln1 kinase activity by the Ccw12 cell wall protein. J. Biol. Chem. **283(4)**: 1962-1973.
55. Jennings, B.C., Nadolski, M.J., Ling, Y., Baker, M.B., Harrison, M.L., Deschenes, R.J., and Linder, M.E. (2009) 2-Bromopalmitate and 2-(2-hydroxy-5-nitro-benzylidene)-benzo[b]thiophen-3-one inhibit DHHC-mediated palmitoylation in vitro. J. Lipid Res. **50(2)**: 233-242.
56. Vinnakota, K.C., Mitchell, D.A., Deschenes, R.J., Wakatsuki, T., and Beard, D.A. (2010) Analysis of the diffusion of Ras2 in *Saccharomyces cerevisiae* using fluorescence recovery after photobleaching. Phys. Biol. **7(2)**: 026011
57. Mitchell, D.A., Mitchell, G., Ling, Y., Budde, C., and **Deschenes, R.J.** (2010) Mutational analysis of *Saccharomyces cerevisiae* Erf2 reveals a two-step reaction mechanism for protein palmitoylation by DHHC enzymes. J Biol. Chem. **285(49)**: 38104-38114.
58. Pedram, A., Razandi, M., **Deschenes, R.J.**, and Levin, E.R. (2012) DHHC-7 and -21 are palmitoylacyltransferases for sex steroid receptors. Mol. Biol. Cell **23(1)**:188-199.

59. Mitchell, D.A., Hamel, L., Mitchell, G., Ling, Y., Ishizuka, K., and **Deschenes, RJ**. (2012) The Erf4 subunit of the yeast Ras palmitoyl acyltransferase is required for stability of the acyl-enzyme intermediate and palmitoyl transfer to protein substrate. J. Biol. Chem 287:34337-48
60. Luongo, K, Holton, A, Kaushik, A, Spence, P, Ng, B, **Deschenes, R**, Sundaram, S, and Bhansali, S. (2013) Microfluidic device for trapping and monitoring three dimensional multicell spheroids using electrical impedance spectroscopy. Biomicrofluidics 7: 034108
61. Mitchell DA, Hamel LD, Reddy KD, Farh L, Rettew LM, Sanchez PR, **Deschenes RJ** (2014) Mutations in the X-linked intellectual disability gene, zDHHC9, alter autopalmitoylation activity by distinct mechanisms. J Biol Chem. 289(26):18582-92. PMID: 24811172, PMCID: PMC414026262
62. Hamel LD, **Deschenes RJ**, Mitchell DA (2014) A fluorescence-based assay to monitor autopalmitoylation of zDHHC proteins applicable to high-throughput screening. Anal Biochem. 460:1-8 PMID: 24878334
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