Curriculum Vitae

DENIS A. LAROCHELLE

Department of Biology
Clark University
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ACADEMIC APPOINTMENTS:

2003-present	Associate Professor, Department of Biology, Clark University, Worcester, MA.
1997-2003	Assistant Professor, Department of Biology, Clark University, Worcester, MA.
1994-1997	Postdoctoral Fellow, Department of Cell Biology, Duke University Medical Center, Durham, NC.
1991-1994	Postdoctoral Fellow, Department of Cancer Biology, Stanford University Medical Center, Stanford, CA and Bowman Gray School of Medicine, Winston-Salem, NC.

EDUCATION:

Ph.D.	1991	Department of Biological Sciences, Stanford University, Stanford, CA.
M.S.	1985	Department of Zoology, University of New Hampshire, Durham, NH.
B.A.	1983	Department of Zoology, University of New Hampshire, Durham, NH.

FELLOWSHIPS, AWARDS, and HONORS:

2009	Nuclea Biomarkers, Inc. “Dictyostelium-based screen for novel drugs.” $125,000
2008	Faculty Development Award, Clark University
2004	Faculty Development Award, Clark University
2004	Establishment of the Endowed Undergraduate Research Fund in Honor of Denis A. Larochelle.
2002-05	National Science Foundation. "Characterization of a novel regulatory protein required for cytokinesis." $309,028.
2001	Faculty Development Award, Clark University
2000	National Science Foundation Multi-User Grant. "Microscopy imaging system for Department of Biology at Clark University." $42,454.
1999-2002	National Institutes of Health AREA Grant. "The racE pathway in the regulation of cytokinesis." $110,325.

1998	Faculty Development Award, Clark University
1992	National Cancer Center Postdoctoral Fellowship, Stanford University
1991	Cancer Biology Training Grant Postdoctoral Fellowship, Stanford University
1988	Marine Biological Laboratory Scholarship, Woods Hole, MA
1988	Myers Grant, Stanford University
1983	Friends of Hopkins Scholarship, Stanford University
1982	Elected to Phi Beta Kappa
1982	Harry G. Bickwell Award, University of New Hampshire
1979-1982	Wagner-Hosser Scholarship, University of New Hampshire

PROFESSIONAL SOCIETIES:

American Society for Cell Biology
American Society for Microbiology
Sigma Xi
Phi Beta Kappa

PUBLICATIONS:

Mana-Capelli, S., R. Gräf, and **D.A. Larochelle.** (2009). *Dictyostelium discoideum* CenB is a *bona fide* centrin essential for nuclear architecture and centrosome stability. Eukaryotic Cell 8:

Hiong, H., F. Rivero, U. Euteneuer, S. Mondal, S. Mana-Capelli, **D.A. Larochelle**, Vogel, B. Gassen, and A. Noegel. (2008). Sun-1 connects the centrosome to chromatin and ensures genome stability. Traffic 9:1-17.

Agarwal, M., N. Guerin, and **D.A. Larochelle** (2004). Chimeric analysis of the small GTPase RacE in cytokinesis signaling in *Dictyostelium discoideum*. Experimental Cell Research 295:226-235.

Abysalh, J.C., L.L. Kuchnicki and **D.A. Larochelle** (2003) The identification of Pats1, a novel gene locus required for cytokinesis in *Dictyostelium discoideum.* Molecular Biology of the Cell 14:14-25.

Guerin, N. and **D.A. Larochelle** (2002). A user's guide to restriction enzyme-mediated integration in *Dictyostelium*. Journal of Muscle Research and Cell Motility 23(7-8): 597-604.

Agarwal, M., D.J. Nelson, and **D.A. Larochelle** (2002). The three dimensional model of *Dictyostelium discoideum* RacE based on the human RhoA-GDP crystal structure. Journal of Molecular Graphics and Modeling 21:3-18.

Neicu, T., A. Pradham, **D.A. Larochelle**, and A. Kudrolli (2000). Extinction transition in bacterial colonies under forced convection. Physical Review E 62(1):1059-1062.

Larochelle, D.A., N. Gerald, and A. De Lozanne (2000). Molecular analysis of racE function in *Dictyostelium*. Microscopy Research and Techniques - The Biology of Cytokinesis 49(2):145-151.

Kwak, E.L., N. Gerald, **D.A. Larochelle**, K.K. Vithalani, M.L. Niswonger, M. Maready, and A. De Lozanne (1999). LvsA, a protein related to the mouse beige protein, is required for cytokinesis in *Dictyostelium*. Molecular Biology of the Cell 10:4429-4439.

Vithalani, K.K., C.A. Parent, E.M. Thorn, M. Penn, **D.A. Larochelle**, P.N. Devreotes, and A. De Lozanne (1998). Identification of darlin, a *Dictyostelium* protein with *armadillo*-like repeats that binds to small GTPases and is important for the proper aggregation of developing cells. Molecular Biology of the Cell 9:3095-3106.

Larochelle, D.A., K.K. Vithalani and A. De Lozanne (1997). The role of *Dictyostelium* racE in cytokinesis: Mutational analysis and localization studies by use of green fluorescent protein. Molecular Biology of the Cell 8:935-944.

Larochelle, D.A., K. Vithalani and A. De Lozanne (1996). A novel member of the rho family of small GTP-binding proteins is specifically required for cytokinesis. J. Cell Biology 133:1321-1329.

Burns, C.G., **D.A. Larochelle**, H. Erickson, M. Reedy and A. De Lozanne (1995). Single-headed myosin II acts a dominant negative mutation in *Dictyostelium*. Proceedings of the National Academy of Sciences 92:8244-8248.

Kwak, E.K., **D.A. Larochelle**, C. Beaumont, S.V. Torti, and F.M. Torti (1995). Role for NF-kB in the regulation of ferritin H by tumor necrosis factor-alpha. J. Biological Chemistry 270(25):15285-15293.

Larochelle, D.A. and D. Epel (1993). Myosin heavy chain dephosphorylation during cytokinesis in dividing sea urchin embryos. Cell Motility and the Cytoskeleton 25(3):369-380.

Larochelle, D.A. and D. Epel (1991). *In vivo* protein phosphorylation and labeling of ATP in sea urchin eggs loaded with $^{32}PO_4$ via electroporation. Developmental Biology 148:156-164.

Epel, D., R. Sweezey and **D.A. Larochelle** (1990). Analysis of metabolic activation at fertilization using permeabilized sea urchin embryos. Advances in Invertebrate Reproduction 5:125-131.

Walker, C.W. and **D.A. Larochelle** (1984). Interactions between germinal and somatic accessory cells of the spermatogenic epithelium of *Asterias vulgaris in vivo* and *in vitro*. Advances in Invertebrate Reproduction 3:41-52.

MEETING PRESENTATIONS:

Mana-Capelli, S. and **D.A. Larochelle** (2008). Loss of *Dictyostelium* Centrin B results in centrosome and nuclear abnormalities. 48th Annual Meeting of the American Society for Cell Biology.

Larochelle, D. A. and S. Mana-Capelli (2008). Centrin B and the *Dictyostelium* centrosome. New Perspectives on Development & Development-Environment Interactions: A Symposium in Honor of the Career & Contributions of David Epel.

Mana-Capelli, S. and **D.A. Larochelle** (2007). Mutational analysis of *Dictyostelium* Centrin B and its role in cell division. 47th Annual Meeting of the American Society for Cell Biology

Mana-Capelli, S. and **D.A. Larochelle** (2006). DdCenB, a unique centrin with predominant nuclear localization. 46th Annual Meeting of the American Society for Cell Biology.

Mana-Capelli, S. and **D.A. Larochelle** (2004). Silencing by RNAi in *Dictyostelium discoideum*. 44th Annual Meeting of the American Society for Cell Biology.

Mana-Capelli, S. and **D.A. Larochelle** (2004). Development of RNAi as a silencing tool in *Dictyostelium discoideum*. 2004 International *Dictyostelium* Conference.

Agarwal. M. and **D.A. Larochelle** (2002). Evidence of dimerisation of the small G protein racE in *Dictyostelium discoideum*. 42nd Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell, 13:30a.

Abysalh, J.C., L.L. Kuchnicki, and **D.A. Larochelle** (2001). Characterization of a novel gene required for cytokinesis in *Dictyostelium*. 41st Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell, 12:51a.

Agarwal, M., N. Guerin, and **D.A. Larochelle** (2001). Chimeric analysis of *Dictyostelium discoideum* racE in cytokinesis. 41st Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell, 12:413a.

Agarwal, M., D.J. Nelson, and **D.A. Larochelle** (2000). The three-dimensional model of *Dictyostelium discoideum* racE based on the human rhoA crystal structure. 40th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell, 11:338-339a.

Kuchnicki, L. and **D.A. Larochelle** (1999). Isolation of a new cytokinesis mutant in *Dictyostelium*. 39th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell. 10(S):263a.

De Lozanne, A., N. Gerald, E. Kwak. **D.A. Larochelle**, K. Vithalani, M.L. Niswonger, and M. Maready (1999). New frontiers in cytokinesis: The role of Biege-related proteins in cell division. 39th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell. 10(S):239a.

Gerald, N., E. Kwak, **D. Larochelle**, K. Vithalani, and A. De Lozanne (1999). LvsA is a large cytosolic protein that is required for proper cleavage furrow morphology in *Dictyostelium*. 39th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell. 10(S):263a.

Gerald, N.J., E. Kwak, **D. Larochelle**, K. Vithalani, and A. De Lozanne (1999). *Dictyostelium* cells with mutations in *lvsA* have defects in cleavage furrow morphology. 1999 International *Dictyostelium* Conference.

Neicu, T., A. Pradhan, **D. Larochelle**, and A. Kudrolli (1999). Experiments on pattern formation in bacterial colonies under convection. American Physical Society Centennial Meeting. Bulletin of the American Physical Society, 44(1) part II:1387.

Larochelle, D.A., N. Gerald, E. Kwak, K. Vithalani, and De Lozanne A. (1998). LvsA, a protein related to the mouse beige protein, is essential for cytokinesis in *Dictyostelium*. 38th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell 9(S):400a.

Gerald, N., E. Kwak, **D. Larochelle**, K. Vithalani, D. Wessels, D.R. Soll, and A. De Lozanne (1998). The *Dictyostelium* LvsA protein is required for cleavage furrow formation during cytokinesis. 38th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell 9(S):399a.

Larochelle, D.A. (1996). Understanding cytokinesis: a molecular genetic approach. Memorial Symposium in Honor of Professor Daniel Mazia: Cell Biology at the Cellular Level.

Larochelle, D.A., N.K. Gerald, K.K. Vithalani, and A. De Lozanne (1996). Localization and mutational analysis of *racE* in dividing *Dictyostelium* cells. 36th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell 7(S).

Larochelle, D.A., K. Vithalani and A. De Lozanne (1995). RacE, a novel member of the rho family of proteins required for cytokinesis in *Dictyostelium discoideum*. 35th Annual Meeting of the American Society for Cell Biology. Molecular Biology of the Cell 6(S).

Larochelle, D.A. and D. Epel (1990). Protein phosphorylation and the fate of ^{32}P-PO4 during fertilization and first cleavage in sea urchin eggs loaded by transient electrical permeabilization. 30th Annual Meeting of the American Society for Cell Biology. J. Cell Biology, 111:112a.

Larochelle, D.A. and C.W. Walker (1984). Changing properties of somatic accessory and germinal cells during the amitotic/mitotic and premeiotic/meiotic transitions of spermatogenesis in *Asterias vulgaris*. Fifth International Echinoderm Conference, Galway Ireland. Echinodermata. Eds. Keegan and O'Connor, pg 595.

INVITED LECTURES and SEMINARS:

Cytokinesis and what we can learn from giant amoebas. New England Complex Fluids Workgroup. June 9, 2006

Cell division, molecular genetics, and giant amoebas. Keynote speaker at the 2006 Workshop on Cell Biology, sponsored by MBTA (Massachusetts Biology Teachers Association). April 1, 2006

Cytokinesis in *Dictyostelium*. Presented to the Department of Molecular Medicine, University of Massachusetts Medical School. March 5, 2004

Molecular genetics, cell division, and giant amoebas. Presented to the Department of Biology, College of the Holy Cross, Worcester, Massachusetts. April 9, 2002.

Amoebas from hell, and what they can teach us about cell division. Presented to the Department of Biological Sciences, University of Rhode Island, Kingston, Rhode Island. January 22, 2001.

History of Molecular Biology. A week-long course presented at the University for Europe, Tuzla, Bosnia-Herzegovina. July 17-22, 2000.

Cell division and slime mold - a molecular genetic approach. Presented to the Department of Zoology, University of New Hampshire, Durham, New Hampshire. April 7, 2000.

Dictyostelium, a fungal model system for research in cell biology. Presented to the Mycology class at Worcester State University, Worcester, Massachusetts. October 18, 1999.

Modern aspects of cell biology. A week-long course presented at the Summer University Tuzla, Tuzla, Bosnia-Herzegovina. July 16-22, 1999.

A molecular genetic approach to cell division. Presented to the Department of Cell Biology, Harvard University Medical School, Boston, Massachusetts. May 27, 1999.

Understanding cell division at the molecular level. Presented to the Department of Biology, Union College, Schenectady, New York. May 12, 1998.

The actin cytoskeleton & cell movement and motility. Presented to the Eukaryotic Cell and Developmental Biology class at the University of New Hampshire, Durham, New Hampshire. April 22, 1996.

COURSES TAUGHT AT CLARK UNIVERSITY:

Introduction to Biology I w/ J. Thackeray (Bio 101): Fall 1999, 2000, 2001, 2002, 2003. 2004
Introduction to Biology II w/ Susan Foster and T. Leonard (Bio 102): Spring 1998, 2008.
Cell Biology (Bio 137): Fall 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2006, 2007, 2008.
Developmental Biology (Bio 221): Spring 1999, 2000, 2002, 2004, Fall 2007.
Recombinant DNA (BCMB 231): Spring 2004, 2005, 2007, 2008, 2009.
Signal Transduction (Bio 234): Fall 1998 (w/ J. Thackeray), Spring 2003, 2005, 2006.
Seminar in Cell Biology (Bio 238): Spring 2000, 2002, 2003, 2007, 2009.
Tomorrow's Medicine Today w/ other faculty members: Summer 1998, 2007.

GRADUATE STUDENTS ADVISED AT CLARK UNIVERSITY:

Jonathan Abysalh: M.S. graduated May, 2002.
Madhavi Agarwal,: Ph.D. graduated May, 2004
Stephen Burrows: Ph.D. student since spring 2003.
Sarah Deroko: M.A. graduated May, 2004.
Catherine Foley: M.A. graduated May 2007
Brandon Gaytan: M.A. graduated May 2008
Nicholas Guerin: M.A. graduated May, 2002.
Ensar Halilovic: M.A. graduated May, 2002.
Mark Joubert: M.A. graduated May 2006.
Lisa Kuchnicki,: M.A. graduated May, 2000.
Sebastian Mana-Capelli: Ph.D. student since summer 2003.

HONORS STUDENTS ADVISED AT CLARK UNIVERSITY:

Adamiak, Lian: Highest Honors, May 1999. Isolation of a cytokinesis mutant (24AA9) in *Dictyostelium* cells using REMI.

Adams, Daniel: Honors, May 2007. *Dictyostelium discoideum* CenB: a mutational analysis.

Davis, Jesse: Highest Honors, May 2006. Investigation of the *Dictyostelium discoideum* Pats1 protein.

Deroko, Sarah: Highest Honors, May 2003. Analysis of Pats1 in *Dictyostelium discoideum*.

Guerin, Nicholas: Highest Honors, May 2001. The characterization of a novel mutant defective in cell division.

Halilovic, Ensar: High Honors, May 2000. The design and synthesis of new plasmids for REMI screening and Cloning of human genes for expression in cytokinesis-deficient *Dictyostelium* cells.

Kuchnicki, Lisa: Highest Honors, May 1999. The isolation of cytokinesis-deficient *Dictyostelium discoideum* cells via restriction enzyme mediated integration of pRHI30.

Peragallo, Rachel: Highest Honors May 2001. Inhibition of Endothelial Cell Migration by Endostatin.

Somberg, Andrew: Highest Honors, May 2004. Isolation and Characterization of a New Cell Division Defective Cell Line.
Vecchione, James J: Highest Honors, May 2005. The Molecular Characterization of the pats1 Gene and its Role in Cytokinesis.

UNDERGRADUATE STUDENTS WHO HAVE PARTICIPATED IN LAB RESEARCH:

Abysalh, Jonathan: 2000-2002. Completed Master's degree, summer 2002. Working at Genzyme, Inc. Framingham, MA.
Adamiak, Lian: 1999. Employed at Abbott Laboratories, Worcester, MA.
Adams, Dan: 2006-2007. PhD. student at University of Colorado, Boulder.
Badon, Mary: 2002-2005. Medical student at Yale University.
Batten, Michael: 2008-currently a junior at Clark university.
Berthel, Derek: 2005-2006. Student at Clark University.
Davis, Jesse: 2004 – 2006. PhD. student at Brown University.
Deroko, Sarah: 2001-2004. Completed Master's degree, spring 2004. Working as a research technician at Cetek Inc., Marlborough, MA.
Dydyn, Jessica: 1999. PhD. student at Wesleyan University.
Foley, Catherine: 2005-2007. Completed Master's degree.
Gaytan, Brandon: 2006-2008. PhD student at UC Berkeley.
Guerin, Nicholas: 1997-2002. Completed Master's degree, summer 2002. Teaching high school chemistry at Wachusett Regional High School.
Halilovic, Ensar: 1999-2001. Completed Master's degree, 2002. Worked as a research technician in the laboratory of Steve Doxsey, UMass Medical Center. Currently a Ph.D. student at Cornell University in the Department of Pharmacology, New York, NY.
Karetskiy, Viktor: 2001-2005. Employed at Mat-tek, Ashland, MA.
Kuchnicki (Cutler), Lisa: 1999-2000. Currently working as a research technician at Abbott Laboratories, Worcester, MA.
Lui, Jason: 2008-currently a sophomore at Clark University.
Marchand, Lindsey: 2007-currently entering her senior year at Clark University.
McLoughlin, Amanda: 2008. currently a senior at Clark University.
Moore, John: 2002-2004. PhD. student at UMass Medical Center.
Nelkenbaum, Annette: 2008-currently a senior at Clark University
Peragallo, Rachel: 2001. Medical student at Harvard University Medical School.
Seedhom, Mina: 2000. PhD. student at UMass Medical Center.
Somberg, Andrew: 2001-2004. Medical student at Albert Einstein College of Medicine.
Tam, Karen: 1999. Working at a local environmental consulting firm.
Timmreck, Jennifer: 2007-currently entering her junior year at Clark University.
James Vecchione. 2003-2005. PhD. student at Brown University.

SPREE DAY POSTERS PRESENTED BY UNDERGRADUATE STUDENTS:

2007 – Generation of a Centrin B knockout in *Dictyostelium discoideum*. Brandon Gaytan.

2007- Mutational analysis of *Dictyostelium* centrin B. Dan Adams.
2006 – Exploration of *Dictyostelium* as a model system for the development of anti-amoebic drugs. Catherine Foley.
2006 – Hsc70 interacts with the myotubularin-related domain of the *Dictyostelium* Pats1 protein. Jesse Davis.
2005 - The Investigation and Characterization of the Myotubularin-Related Domain of Pats1. Jesse Davis.
2005 - Search for Centrosomal Genes in *Dictoyostelium discoideum*. Viktor Karetskiy.
2004 - Isolation and Characterization of a New Cell Division Defective Cell Line. Andrew Somberg.
2004 - Pats1 Gene Sequence Characterization. John Moore.
2004 – Understanding the Pats1 Gene and its Involvement in the Molecular Regulation of Cytokinesis. James Vecchione.
2003 - Analysis of Pats1 in cytokinesis through anti-peptide antibodies. Sarah Deroko.
2003 - Analysis of centrosome function in *Dictyostelium discoideum*. Mary Badon.
2002 - Isolation and characterization of six new cell division defective cell lines. Sarah Deroko and Andrew Somberg.
2001 - The characterization of a novel mutant defective in cell division. Nicholas Guerin.
2001 - Inhibition of endothelial cell migration by endostatin. Rachel Peragallo (in collaboration with Sarah Short and Bruce Zetter).
2000 - The isolation of a novel mutant defective in cell division. Nicholas Guerin.
2000 - Disruption of the 17HG5 gene locus in wild-type *Dictyostelium* cells. Rachel Peragallo.
2000 - Attempts to clone the disrupted gene from the 24AA9 mutant cell line. Jonathan Abysalh.
2000 - Expression of mammalian genes in cytokinesis-deficient *Dictyostelium* cells. Ensar Halilovic.
1999 - The isolation of cytokinesis-deficient *Dictyostelium* mutants by REMI. Lian Adamiak and Lisa Cutler.
1999 - The design and synthesis of new plasmids for REMI screening. Nick Guerin and Ensar Halilovic.

UNIVERSITY-WIDE COMMITTEES SERVED ON:

1998-1999: The Convocation and Academic Orientation Committee
1998-1999: The Risk Management/Safety Committee
1999-2000: The Risk Management/Safety Committee
2000-2001: The College Board
2000-2001: The Risk Management/Safety Committee
2001-2004: The Graduate Board
2001-2002: The Risk Management/Safety Committee
2006-current: Admissions Committee
2006-current: Premedical/Predental Committee