

CURRICULUM VITAE

JAMES E.J. BEDARD, Ph.D.

*Assistant Professor of Biology
Adams State College
Department of Biology
Porter Hall Room 206
208 Edgemont Blvd.
Alamosa, CO 81102*

719-587-8256

Email: jamesbedard@adams.edu

EDUCATION

2002 University of Manitoba, Ph.D. (Microbiology)
1997 University of Manitoba, B.S.

POSITIONS

2008 – **Assistant Professor**, Department of Biology, Adams State College, Alamosa, CO
2005 – 2008 **Postdoctoral Fellow**, Division of Molecular Cardiovascular Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
Mentor: Stephanie M. Ware, M.D., Ph.D.
2002 – 2005 **Postdoctoral Fellow**, Department of Genome Science, Genome Research Institute, University of Cincinnati, Cincinnati, OH
Mentor: David E. Millhorn, Ph.D.
1999 **Visiting Scholar** under Arthur W.A.M de Cock, Ph.D., Centraalbureau voor Schimmelcultures, Delft, Netherlands.
1997 – 2002 **Graduate Student**, Department of Microbiology, University of Manitoba; Winnipeg, MB, Canada
Mentor: Glen R. Klassen, Ph.D.

COURSES TAUGHT

Introductory Biology (BIOL 101)
General Biology (BIOL 203 / BIOL 204)
Microbiology for Non-Majors (BIOL 215)
MCAT Review (BIOL 279)
Cellular Biology (BIOL 323)
Cellular Biology and Genetics Lab (BIOL 325)
Developmental Biology (BIOL 408)
Immunology (BIOL 450)
Molecular Biology (BIOL/CHEM 476)
Molecular Biology II (BIOL 477)
Special Topics (BIOL 479)
Thesis II (BIOL 494)

PREVIOUS TEACHING EXPERIENCE

- 2008 **Lecturer**, Osher Lifelong Learning Institute, University of Cincinnati.
Course: *The Human Genome Project and its everyday applications*.
- 2007 **Visiting Instructor**, Department of Biology, Earlham College, Richmond,
Indiana. Course: *Molecular Genetics*
- 2002 **Instructor**, Department of Microbiology, University of Manitoba. Course:
Essentials of Microbiology
- 2001 **Lecturer**, Department of Biology, University of Manitoba. Course:
Introductory Biology
- 1997 – 2001 **Teaching Assistant**, Department of Microbiology, University of
Manitoba.
Courses: *Introductory Microbiology I, Introductory Microbiology II,
Microbial Systematics, and Immunology* (Lab demonstration, tutorials,
grading and advising students).

INVITED LECTURES

- 2010 Lunchtime Talks in Science and Mathematics, Adams State College, Gene
Annotation of Genomic DNA. Alamosa, CO.
- 2007 Cincinnati Children's Hospital Medical Center, Division of
Cardiovascular Molecular Biology, Annual Retreat. Identification of a
novel ZIC3 isoform and mutation screening in congenital heart disease
patients. Loveland, OH.
- 2006 Cincinnati Children's Hospital Medical Center, Division of
Cardiovascular Molecular Biology, Annual Retreat. Nuclear import and
export signals are essential for proper cellular trafficking and function of
ZIC3. Loveland, OH.
- 2001 University of Manitoba, Department of Botany, Seminar Series. DNA
fingerprinting techniques used in *Pythium* and *Phytophthora* species
delineation. Winnipeg, Canada.

HONORS AND PROFESSIONAL MEMBERSHIPS

- 2011 U.S. Department of Agriculture E. Kika De La Garza Fellowship
- 2010 – 11 Adams State College Associated Students & Faculty Senate Excellence in
Research and Publications Award
- 2010 – Genomics Education Partnership (GEP)
- 2010 – Genetics Society of America
- 2010 Adams State College Presidential Teaching Award Finalist
- 2009 – 10 Adams State College Associated Students & Faculty Senate Excellence in
Student Centered Instruction Nominee
- 2009 – American Association for the Advancement of Science
- 2009 – Tri-Beta National Biological Honor Society
- 2009 – National Association of Advisors for the Health Professions
- 2007 – 08 American Heart Association Postdoctoral Fellowship
- 2006 Weinstein Cardiovascular Development Conference Travel Award
- 2002 Mycological Society of America
- 2000 University of Manitoba Graduate Fellowship

PUBLICATIONS

Dissertation

Bedard, J.E.J. 2002. Evolution and diversity of 5S rRNA gene family organization in *Pythium* and other stramenopiles. *University of Manitoba, Library and Archives Canada*, ISBN: 0612798321.

Peer Reviewed Articles and Book Chapters

Bedard, J.E.J., Haaning, A. and Ware, S.M. 2011. Identification of a novel ZIC3 isoform and mutation screening in congenital heart disease patients. *PLoS ONE* 6(8): e23755. doi:10.1371/journal.pone.0023755.

Bedard, J.E.J., Wang, S. and Ware, S.M. 2009. Structure-function analyses of the ZIC family of zinc finger transcription factors. *Focus on Zinc Finger Protein Research*. Ed. Kenichi Yoshida. Research Signpost. ISBN: 978-81-308-0320-3.

Bedard, J.E.J., Purnell, J.D. and Ware, S.M. 2007. Nuclear import and export signals are essential for proper cellular trafficking and function of ZIC3. *Human Molecular Genetics*. 16:187-98. Epub 2006 Dec 21.

Bedard, J.E.J., Schurko, A., de Cock A.W.A.M., and Klassen, G.R. 2006. Diversity and evolution of 5S rRNA gene family organization in *Pythium*. *Mycological Research*, 110:86-95. Epub 2005 Nov 2.

Seta K.A., Yuan Y., Spicer Z., Lu G., **Bedard J.**, Ferguson T.K., Pathrose P., Cole-Strauss A., Kaufhold A., and Millhorn D.E. 2004. The role of calcium in hypoxia-induced signal transduction and gene expression. *Cell Calcium*, 36(3-4):331-40.

Schurko, A.M., Mendoza, L., de Cock, A.W.A.M., **Bedard, J.E.J.**, and Klassen, G.R. 2004. Development of a species-specific probe for *Pythium insidiosum* and the diagnosis of pythiosis. *Journal of Clinical Microbiology*, 42:2411-2418.

Abstracts

Harlan, A.L.* , Machone, J.F.* and **Bedard, J.E.J.** Gene annotation of 90 kb genomic DNA sequence of *Drosophila mojavensis* dot chromosome. 52nd Annual *Drosophila* Research Conference, San Diego, CA. March, 2011. *Undergraduate students

Shaffer, C., Leung, W., **Bedard, J.**, Bhalla, S., Burg, M., Chandrasekaran, V., Coyle-Thompson, C., DiAngelo, J., Jones, C, Kadlec, L., McNeil, G., Nagengast, A., Paetkau, D, Saville, K., Stamm, J., Wawersik, M., Zhou, L., Elgin, S.C.R. Exploring genome organization and chromatin structure in *Drosophila*, a distributed undergraduate research project. 52nd Annual *Drosophila* Research Conference, San Diego, CA. March, 2011.

Bedard, J.E.J., Fernbach, S., Belmont, J.W. and Ware, S.M. Identification of a novel ZIC3 isoform and mutation screening in patients with congenital heart defects. American Society of Human Genetics 2007 Annual Meeting. San Diego, California, USA. October, 2007.

Bedard, J.E.J. and Ware, S.M. Nucleocytoplasmic shuttling defects in heterotaxy. American Society of Human Genetics 2006 Annual Meeting. New Orleans, Louisiana, USA. October, 2006.

Bedard, J.E.J., Purnell, J.D. and Ware, S.M. Nucleocytoplasmic shuttling defects in heterotaxy: Importance of appropriate cellular trafficking of ZIC3 in early cardiac development. The 13th Annual Weinstein Cardiovascular Development Conference. St. Petersburg, Florida, USA. May, 2006.

- Bedard, J.E.J.**, Seta, K.A., Kaufhold, A.N., and Millhorn, D.E. Hypoxic-induced expression of hexokinase II involves the activation of PI3K but not mTOR. XXXV International Congress of Physiological Sciences (FASEB). San Diego, California, USA. April, 2005.
- de Cock, A.W.A.M., Lévesque, C.A., Man in't Veld, W.A., Schurko, A.M., **Bedard, J.E.J.** and Klassen, G.R. Molecular taxonomy and speciation in *Pythium* and *Phytophthora*. 20th Annual International Symposium of the Korean Society for Plant Pathology. Phoenix Park, Korea. October, 2004.
- de Cock, A.W.A.M., Lévesque, C.A., Schurko, A.M., **Bedard, J.E.J.** and Klassen, G.R. *Pythium*, fylogenie en soortafgrenzingen. Annual meeting of Royal Netherlands Society of Plant Pathology. Merelbeke, Belgium. Gewasbescherming 36:24. September, 2004.
- de Cock, A.W.A.M., Lévesque, C.A., **Bedard, J.E.J.**, Schurko, A.M., and Klassen, G.R. A molecular taxonomic revision of the genus *Pythium*. 7th International Mycological Congress. Oslo, Norway. August, 2002.
- Bedard, J.E.J.**, de Cock, A.W.A.M., and Klassen, G.R. 5S rRNA gene organization in the genus *Phytophthora*. 2000 Mycological Society of America Annual Meeting. Burlington, Vermont, USA. July 2000.
- Bedard, J.E.J.**, de Cock, A.W.A.M., and Klassen, G.R. The ribosomal DNA intergenic spacer as a source of information for species assignment in *Phytophthora*. 50th Annual Meeting of the Canadian Society of Microbiologists. Winnipeg, Manitoba. June 2000.
- Bedard, J.E.J.** & Klassen, G.R. 5S rRNA gene organization in Hyphochytriomycetes. 14th International Botanical Congress. St. Louis, Missouri, USA. August 1999.
- Bedard, J.**, Schurko, A., Klassen, G.R., and de Cock, A.W.A.M. Evolution of the 5S rRNA gene family in *Pythium*. 6th Annual Meeting of the Society for Molecular Biology and Evolution Vancouver, British Columbia. June 1998.
- de Cock, A.W.A.M., Klassen, G.R., **Bedard, J.** & Schurko, A. A molecular evaluation of species boundaries and relationships in *Pythium* and its feed-back to morphology. 140th Annual Meeting of the Society of General Microbiology. Nottingham, England. April 1998.
- Klassen, G.R., Balcerzak, M., **Bedard, J.**, Schurko, A., and de Cock, A.W.A.M. Identification of *Pythium* species by analysis of the amplified rDNA intergenic spacer. 48th Annual Meeting of the American Institute of Biological Sciences. Montreal, Quebec. August 1997.

RESEARCH SUPPORT

ARL-AHPCRC (PIs: Bedard, Ikle, Loveland, Sellman, Travers) 2010-11
 U.S. Army Research Laboratory (ARL) Army High Performance Computing Research Center (AHPCRC) Research and Infrastructure Development Program. Total award amount: \$113,360.73

AHA 0725539B (PI: Bedard) 7/1/2007-6/30/2009
 American Heart Association Postdoctoral Research Fellowship, Great Rivers Affiliate. Genetic and molecular roles of a novel ZIC3 isoform in cardiovascular development. Total award amount: \$86,000.

ADDITIONAL SERVICE

- 2011 Session Moderator for the 2011 WGEA/ WGSA/ WAAHP/ WOSR – AAMC Western Regional Conference, Stanford University School of Medicine.
- 2011 Assistant faculty supervisor for the Adams State College Geology Student Spring Break Trip to Capital Reef National Park, Utah.
- 2010 – Tri-Beta National Biological Honor Society Faculty Advisor.
- 2010 – San Luis Valley Area Health Education Center – CREATE (Colorado Rural Education and Training Enterprise) for Health Scholars Acceptance Committee Member.
- 2010 – Board Member - San Luis Valley Cancer Relief Fund.
- 2009 – Member of Health Professions Advisory Committee, Adams State College.
- 2009 Participant of Computational Biology for Biology Educators Workshop, University of California, Merced, California.
- 2009 Assistant faculty supervisor for the Adams State College Geology Student Spring Break Trip to Natural Bridges National Monument, Utah.
- 2008 – Active member of the EARTH Sustainability Group, Adams State College.
- 2008 Invited Oral Examiner for Earlham College’s Senior Capstone. Comprehensive Exams, Biology Department, Earlham College.
- 2007 Judge for the 28th Annual Graduate Student Research Forum. Molecular and Developmental Biology Program. University of Cincinnati College of Medicine and Cincinnati Children’s Hospital Medical Center.