CURRICULUM VITAE, 1999- PRESENT
ELIZABETH J. WEST DAVIDSON

EDUCATION

6/64- B.S., Mount Union College, Alliance, Ohio
6/67- M.S., The Ohio State University, Columbus, Ohio
9/71- Ph.D., The Ohio State University, Columbus, Ohio

RESEARCH EXPERIENCE

2002-Visiting Professor, Mount Union College, Alliance, Ohio.
1999-present- Research Professor, Arizona State University, Tempe.
1986-1999- Associate Research Professor, Arizona State University, Tempe.
1993, 1994- Visiting Scientist, U.S. Department of Agriculture European Biocontrol Laboratory, Montpellier, France.
1994- Visiting Scientist, Department of Zoology, Cambridge University, Cambridge, England.

TEACHING EXPERIENCE

2007, Graduate Authorship Ethical Issues
2006, 07, 08, Insect Science (short course, Mt Union College, Alliance, OH)
2005, Responsible Conduct in Research (graduate; development of a new course)
2004, Advanced Training in Amphibian Population Decline Research, La Selva, Costa Rica
2003-04, Undergraduate Mentoring in Environmental Biology, Seminar Coordinator
2002, Professional Values in Science, Mt Union College, Alliance, OH
1992, 93, 95, 96, 97, 98, 99, 00, 01, 02, 03, 04, 05, 06, 07, 08- Professional Values in Science, ASU (development of new course).
1999, 00, 01- ASU/University of Arizona joint undergraduate bioethics conference
1999- Insect Science, ASU, graduate course in entomology
1995, 96- Patterns in Nature, course for in-service primary school teachers, 2-3 lectures.
1993-94- Minority Access to Research Careers Program, ASU, Undergraduate Special Topics in Research, (development of new course, new program).
1993-94- Course coordinator, Minority Access to Research Careers Program, ASU. Five Native American and African-American students.
1990, 92, 93, 95- Invertebrate Zoology, ASU.

AWARDS

2005 Mount Union College Alumni Achievement Award

SERVICE ON GRADUATE COMMITTEES (1999-2008)

James K. Jancovich, M.S., Department of Zoology (Co-advisor)
Jesse Brunner, Ph.D., SOLS
Danna Schock, Ph.D., SOLS
Cyd Hamilton, M.S., Department of Biology
Cindy Cordery, Ph.D., Molecular and Cell Biology
Verma Miera, MSc., SOLS
James K. Jancovich, Ph.D., Molecular and Cell Biology, SOLS
William Schaedla, Ph.D., SOLS (Co-advisor)
Amy Greer, PhD, SOLS
Mark Zubritski, PhD, SOLS

UNDERGRADUATE RESEARCH MENTOR

April Seilor, 1998-99 (Biology Research for Undergraduates; Currently Physician's Assistant)

Kori Feldman, 1999 (Honors College Thesis Director; Currently MD Candidate, University of Virginia)
Theresa Jordan O'Connor, 1999 (Biology Research for Undergraduates; received MSc Biology and Society, ASU)
Roman Barazza, 1997-2001 (Biology Research for Undergraduates; Minority Access to Research Careers; Honors College Thesis Director; Currently MD/PhD Candidate, Mayo Clinic)
Santos Rojas, 1999-2001 (Minority Access to Research Careers; Currently PhD Candidate, University of California, Irvine)
Dat Nguyen, 2001- 2002 (Biology Research for Undergraduates)
Timothy Sesterhenn 2002 (Summer Research Experience for Undergraduates; Currently PhD Candidate, University of Kentucky)
Sarah Austin, 2001-2002 - (Biology Research for Undergraduates; Currently PhD Candidate, University of Rochester, NY)
Scott Cashins, 2001-2002- (Biology Research for Undergraduates; Currently PhD Candidate, James Cook University, Queensland, Australia)
Bethany Van Vleet, 2004 (Biology 499, special topics; Currently MSc in Law Candidate, ASU)
Daniel Martinez, 2004-05 (Minority Access to Research Careers)
Luke Parr, 2004-05 (Currently MD Candidate, Indiana University)
Meredith Boley, Summer 2005 (Summer Research Experience for Undergraduates, student at Mt Union College, Ohio; currently PhD candidate, University of Kentucky)
Valerie Jacobs, 2005-2006 (currently MD/PhD candidate, Dartmouth University)
Michael Vergasson 2005-06 (currently DO candidate, Toro University, Henderson, NV)
Robert B. Johnson 2006 (DDS Candidate)
Julianne Dagget 2006
Lauren Kiraly 2007
Jeffrey Kasparek 2007, 2008 (honors)

UNDERGRADUATE HONORS COLLEGE THESIS ADVISOR
Kori Feldman, Biology
Roman Barraza, Biology
Kathryn Richards, SOLS (reader)
Luke Parr, SOLS
Laura Bell, SOLS
Jeffrey Kasparek, SOLS

RESEARCH FUNDING SINCE 1999 (approximately 80 prior to 1999)
Arizona Game and Fish Department, Biological control of Orconectes virilis, E. Davidson, $ 21,359.
MARC at Arizona State University, 2006-2009. J. Fewell, PI. In review.
REU Supplement to NSF "Emerging wildlife diseases: Threat to amphibian biodiversity", summer student, 2005 $16,750
"Physiological effects of temperature on Ambystoma tigrinum leading to changes in susceptibility to virus", NSF, ROA to bring Dr. Brandon Sheafor to ASU for spring, 2004. $22,425
"Undergraduate Mentoring in Environmental Biology", J. Collins et al., 2003-2004. NSF, $69,405
"Historical, geographical and taxonomic distribution of chytrid fungus in Arizona", E. Davidson (2003). Arizona Game and Fish, $10,000.
"Emerging wildlife diseases: Threat to amphibian biodiversity", J. Collins et al. (2003-2006). NSF, $3,000,000.

"Host-Pathogen Community Ecology in Frogs", AZ Game and Fish, J. Collins, E.Davidson and V. Miera, $30,000 (2002-2004).

"Host-Pathogen biology and the global decline of amphibians", NSF, $3,000,000 (1999-2002) J. Collins et. al.

"Structure based design of mosquitocidal toxins", Burroughs Wellcome Fund, $100,000 (1999-2002) J. Allen and E. Davidson.

"Population ecology of disease and its role in shaping life history", NSF, $220,000 (1999-2002) J. Collins, E.Davidson, A. Storfer.

"Artificial rearing of the silverleaf whitefly, Bemisia argentifolii, and its parasitoids", E. Davidson and W. Jones. USDA Competitive Grant. $130,000.(1997-2001)

PUBLICATIONS SINCE 1999 (approximately 80 prior to 1999)

Sheafor, B., Davidson, E.W., Parr, L., and Rollins-Smith, L. 2008. Antimicrobial peptides in the salamander, *Ambystoma tigrinum*: Effectiveness against emerging and potential amphibian pathogens. In press.

Davidson, E.W. 2006. Big Fleas Have Little Fleas; how diseases of invertebrate animals are important to mankind. ca. 208 pgs, University of Arizona Press.

Davidson, E.W. and Burges, H.D. 2005. History of the Society for Invertebrate Pathology. Journal of Invertebrate Pathology, 89:2-11.

Parris, M.J., Storfer, A., Collins, J.P. and Davidson, E.W. 2005. Pathogen effects on life history in tiger salamander (*Ambystoma tigrinum*) larvae. Journal of Herpetology, 39:366-372.

Collins, J.P., N. Cohen, E.W. Davidson, J.E. Longcore and A. Storfer. 2005. Meeting the challenge of amphibian declines with an interdisciplinary research program. pp. 23 - 27. **In:** Lannoo, M.J., ed. Declining amphibians: A United States' response to the global problem. University of California Press, Berkeley, California

Rojas, S., Richards, K., Jancovich, J.K. and Davidson, E.W. 2005. Influence of temperature on ranavirus infection in larval salamanders, *Ambystoma tigrinum*, Diseases of Aquatic Organisms 62:95-100.

Jancovich, J.K., Davidson, E.W., Parameswaran, N., Mao, J., Chinchar, V.G., Collins, J.C., Jacobs, B., and Storfer, A. 2005. "Emergence of an amphibian disease due to human-enhanced spread". Molecular Ecology, 14:213-224.

Brunner, J.L., Schock, D.M., Davidson, E.W., and Collins, J.P. 2004. Intraspecific reservoirs: complex life history and the persistence of a lethal ranavirus. Ecology 85(2): 560-566.

Jancovich, J.K., Mao, J., Chinchar, V.G., Wyatt, C., Case, S.T., Kumar, S., Valente, G., Subramanian, S., Davidson, E.W., Collins, J.P. and Jacobs, B.J. 2003. Genomic sequence of a ranavirus associated with salamander mortalities in North America. Virology, 316 (1), 90-103 (2003).

Rollins-Smith, L., Carey, C., Reinert, L.K., Miera, V., Davidson, E.W., Tyler, M.J. and Bowie, J. 2003. Antimicrobial peptide defenses of Australian frogs against the chytrid fungus associated with global amphibian declines. Proceed.. Int'l Congress Devel. Comp. Immunol.

Carey, C., D.F. Bradford, J.L. Brunner, J.P. Collins, E.W. Davidson, J.E. Longcore, M. Ouellet, A.P. Pessier, and D.M. Schock. 2003. Biotic factors in amphibian population declines. pp. 153 - 208. In: G.L. Linder, S.K. Krest, and D.W. Sparling, eds. Amphibian decline: An integrated analysis of multiple stressor effects. Society of Environmental Toxicology and Chemistry (SETAC), Pensacola, Florida.

Davidson, E.W., Parris, M., Collins, J.P., Longcore,J.E., Pessier, A. and Brunner, J. 2003. Pathogenicity and transmission of chytridiomycosis in tiger salamanders (*Ambystoma tigrinum*). Copeia 2003(3): 196-201.

Rosell, R.C., Davidson, E.W., Jancovich, J.K., Hendrix, D.L. and Brown, J.K. 2003. Size exclusion limitations in the filter chamber and digestive tract of nymphal and adult *Bemisia tabaci* whiteflies. Annals Entomological Society of America, 96(4)544-552.

Davidson, E.W., Jancovich, J.K., Borland, S., Newbery, M., and Gresens, J. 2003. Dermal lesions, hemorrhage, and limb swelling in laboratory axolotls. Lab Animal 32(3):23-25.

Davidson, E.W., Farmer, F.E. and Jones, W.A. 2002. Artificially-reared whiteflies, *Bemisia argentifolii*, as hosts for parasitic wasps. Florida Entomologist, 85:474-480..

Jancovich, J.K., Davidson, E.W., Seilor, A. and Jacobs, B. 2001. Transmission of the *Ambystoma tigrinum* virus to alternative hosts. Diseases of Aquatic Organisms, 46:159-163.

Turrens, J.F. and Davidson, E. 2001. Data manipulation by undergraduates and the risk of future academic misconduct. Council on Undergraduate Research Quarterly, 22(2):64-65.

Davidson, E.W., Cate, H.E., Lewis, C.M. Jr. and Hunter, M. 2001. Data manipulation in the undergraduate laboratory: what are we teaching? Proceed. Conference, Research on Research Integrity, Office of Research Integrity. http://ori.hhs.gov/html/publications/rcri.html.

Davidson, E.W., Fay, M., Blackmer, J. and Lavine, M. 2000. Improved artificial feeding system for rearing the whitefly, *Bemisia argentifolii*. Fla. Entomol., 83(4):459-468

Chiou, C-K., Davidson, E.W., Thanabalu, T., Porter, A.G. and Allen, J.P. 1999. Crystallization and preliminary X-ray diffraction studies of the 51 kDa protein of the mosquito-larvicidal binary toxin from *Bacillus sphaericus*. Acta Crystallographica, D 55, 1083-1085 (1999).