CURRICULUM VITAE

Research Interests:

Developmental physiology from the organ system to the molecular level:
Comparative Animal Physiology:
Fetal Programming in Vertebrates:

Personal Information:

Name: Dane Alan Crossley II

Address: University of North Dakota
Department of Biology
Grand Forks ND 58202

Telephone: (701) 777-4671
Fax: (701) 777-2623

E-mail: dane.crossley@und.nodak.edu
Citizenship: United States

Education:

B.S. Biology – Oregon State University, Corvallis, 1993.

B.S. Zoology – Oregon State University, Corvallis, 1993.

M.S. Biology – Portland State University, Portland, Oregon. 1995. Studied in the laboratory of Dr. Stanley Hillman. Masters thesis entitled "The role of pulmocutaneous baroreceptors in the control of lymphatic heart rate in the toad, *Bufo marinus*".

Ph.D. Biology – University of North Texas, Denton, Texas. 1999. Studied in the laboratory of Dr. Warren Burggren. Doctoral dissertation entitled "Development of cardiovascular regulation in embryos of the domestic fowl (*Gallus gallus*), with partial comparison to embryos of the desert tortoise, (*Gopherus agassizii)*".

Academic and Research Appointments:

2006-present **Assistant Professor**-Dept. of Biology University of North Dakota, Grand forks North Dakota.

2005-2006 **Visiting Assistant Professor**-Dept. of Biology, Lewis and Clark College, Portland Oregon.
Adjunct Faculty – Department of Biology, Portland State University, Portland, Oregon.

2005-6/2005 **Visiting Research Fellow-** Dept. of Biology, Institute of physics and measurement technology, Linkopings Universitet, Linkoping, Sweden.

2004-1/2005 **Adjunct Faculty** – Department of Biology, Portland State University, Portland, Oregon.

2003-2004	**Postdoctoral Fellow** - AHA and NIH. Department of Physiology and Pharmacology at Oregon Health Sciences University, Portland, Oregon.
2001-2003	**Postdoctoral Fellow** - American Heart Association Department of Ecology & Evolutionary Biology, University of California, Irvine.
1999-2001	**Postdoctoral Fellow** - NSF Department of Ecology and Evolutionary Biology, University of California, Irvine.
1998-99	**Research Assistant** - Department of Biological Sciences, University of North Texas.
1997, 1998	**Visiting Research Fellow** - Dept. of Zoophysiology, Institute of Biological Sciences, University of Aarhus, Aarhus, Denmark.

Awards & Grants:

2006	Und Travel Grant $350.
2004	Tartar trust Award, Oregon Health and Sciences University, $2000.
2001	American Heart Association Postdoctoral Fellowship Award, $67,000.
2001	American Physiological Society, Travel Award IUPS, Christchurch, New Zealand, $1000.
1999	SICB Student Support Award Denver, CO.
1998	Graduate Student Association Research Grant, UNLV, $500.
1998	SICB Student Support Award Boston, MA.
1997	Graduate Student Association Research Grant, UNLV, $500.
1997	Graduate Student Association Scholarship UNLV, $500.
1996	Graduate Student Association Travel Award, UNLV, $200.
1996	Berrick Award in Graduate Studies, UNLV, $3000.

Professional Service:

Reviewer for:
Journal of Comparative Biochemistry and Physiology
Journal of Functional Ecology
Journal of Experimental Biology
Physiological and Biochemical Zoology

Professional Societies:
Society for Integrative and Comparative Biology
American Society of Ichthyologists and Herpetologists
American Physiological Society
Species Survival Commission, World Conservation Union – Selected Member of the Crocodile Specialist Group

Student advisory
Elizibeth Braun 2003
Melissa S. Callahan 2005 Outside reader

Publications:

Published Articles (cited over 90 times)

(1) Crossley II, D.A., J. Altimiras and T. Wang. 1998. Hypoxia elicits an increase in pulmonary vasculature resistance in anaesthetized turtles (*Trachemys scripta*). **J. Exp. Biol**. 201:pp 3367-3375.

(2) Crossley II, D.A. and S. Hillman. 1999. The role of pulmonary baroreceptors in the control of lymphatic heart rate in the toad (*Bufo marinus)*. **Physiol. Biochem. Zool.** 72(1):pp 109-115.

(3) Bagatto, B. P., D. A. Crossley II and W. Burggren 2000. Physiological variability in neonatal armadillo quadruplets: within- and between-litter differences. **J. Exp. Biol.** 203:pp 1733-1740. (Cover article).

(4) Crossley II, D. A., T. Wang and J. Altimiras. 2000. Role of nitric oxide in the systemic and pulmonary circulation of anaesthetized turtles (*Trachemys scripta*). **J. Exp. Zool.** 286:pp 683-689.

(5) Altimiras, J. and D. A. Crossley II. 2000. Control of blood pressure mediated by baroreflex changes of heart rate in the chicken embryo (*Gallus gallus*). **Am. J. Physiol**. 278:pp R980-R086.

(6) Crossley II, D.A. and J. Altimiras. 2000. Ontogeny of cholinergic and adrenergic cardiovascular regulation in the domestic chicken (*Gallus gallus).* **Am. J. Physiol**. 279:pp R1091-R1098.

(7) Platzack, B., Y. Wang, D. A. Crossley II, V. Lance, J. Hicks and M. Conlon. 2002. Purification, characterization and cardiovascular actions of endothelin-1 and endothelin-3 from the alligator, *Alligator mississipiensis.* **Am. J. Physiol.** 282:pp R594-R602.

(8) Xu, X., S. E. Meiler, T. P. Zhong, M. Mohideen, D. A. Crossley II, W. W. Burggren and M. C. Fishman. 2002. Cardiomyopathy in zebrafish due to mutation in an alternatively spliced exon of titin. **Nature Genetics**. 30(2):pp 205 – 209.

(9) Burggren, W. W. and D. A. Crossley II. 2002. Comparative cardiovascular development: improving the conceptual framework. **Comp Biochem and Physio - Part A: Molecular & Integrative Physiology** 132(4):pp 661-674.

(10) Crossley II, D. A., W. W. Burggren and J. Altimiras. 2003. Cardiovascular regulation during hypoxia in embryos of the domestic chicken *Gallus gallus.* **Am. J. Physiol.** 284:pp R219-R226.

(11) Burggren, W., D. A. Crossley II, G. Rogowitz and D. Thompson. 2003. Clutch effects explain heart rate variation in embryonic frogs (Cave Coqui, *Eleutherodactylus cooki*). **Physiol. Biochem. Zool.** 76(5):672-678.

(12) Crossley II, D.A., B. P. Bagatto, E. Dzialowski and W. W. Burggren. 2003 Temporal changes in cardiovascular regulation during embryonic development of the Emu (*Dromaius novaehollandiae*). **J. Exp. Biol.** 206**:**pp 2895-2902.

(13) Crossley II, D. A., J. W. Hicks and J. Altimiras. 2003. Ontogeny of baroreflex control in the American alligator, *Alligator mississippiensis*. **J. Exp. Biol**. 206:pp 2703-2710.

(14) Scanlan T. S., K. L. Suchland, M. E. Hart, Y. Huang, D. A. Crossley II, P. J. Kruzich; J. R. Bunzow, E. T. Lin, D. Hatton, and D. K. Grandy. 2004. 3-Iodothyronamine is an endogenous and rapidly-acting derivative of thyroid hormone. **Nature Medicine** 10(6): pp 638-642.

(15) Crossley D. A. and J. Altimiras 2005. Cardiovascular development in embryos of the American alligator *Alligator mississippiensis*: effects of chronic and acute hypoxia **J. Exp. Biol**. 207:pp31-39. Featured in Inside JEB.

Articles in Submitted for publication (Manuscripts Available)

(1) Crossley II, D. A. B. Platzack, L. Hartzler and J. W. Hicks. Changes in cardiovascular regulation during simulated hibernation in the red-eared slider (*Trachymes scripta*). (**Am. J. Physio.)**

Selected Articles in Preparation (Manuscripts Available)

(1) Crossley II, D. A., and K. Thornburg. The functional significance of Ang II as a regulator of cardiovascular function in developing White Leghorn chickens (*Gallus gallus*): Molecular and physiological findings. (**Am. J. Physio.)**.

(2) Crossley II, D. A., S. Yonker, And K. Thornburg. The Maturation of Angiotensin II receptors signaling in the cardiovascular system of White Leghorn chickens (*Gallus gallus*).

(3) Bagatto, B. P., J. Altimiras, J. W. Hicks and D. A. Crossley II. Physiological variability in yearly American alligators (*Alligator missipissiensis)*, inter vs intra-clutch comparisons. (**J. Exp. Biol.)**.

***Selected Symposia Contributor (of 11)*:**

"Hypoxia elicits pulmonary vasoconstriction in anaesthetized red eared sliders, *Trachemys scripta*." Presented in the heart, lung, and blood section of the Experimental Biology annual meeting. San Francisco, CA 1998. **Poster presentation.**

"Ontogeny of cardiovascular function and regulation in embryos of the Desert Tortoise, *Gopherus agassizii.*'" Presented in the Developmental and Cell Biology section of the Society for Integrative & Comparative Biology annual meeting. Denver, CO. 1999. **Lecture presentation.**

"Postprandial changes in cardiopulmonary control in the Savanna monitor lizard" Presented in the Scholander Award Competition of the Experimental Biology annual meeting. San Diego, CA. 2000. **Poster presentation.**

"Postprandial changes in Cardio-respiratory responses of the Savannah monitor (*Varanus exanthematicus*)." Presented in the Comparative physiology and biochemistry section of the Society for Integrative & Comparative Biology annual meeting. Chicago, Il. 2001. **Lecture presentation.**

Selected Invited Lectures:

"Development and Evolution of Cardiovascular Control." Grinnell–Miller Seminar in Evolutionary Biology, Speaker. Department of Integrative Biology, University of California at Berkeley, March 2001.

"A Developmental Perspective For Understanding Cardiovascular Physiology In Vertebrates." Department of Biology, Portland State University, April 5 2002.

"Understanding Developmental Cardiovascular Function in Vertebrates". Department of Zoophysiology, Arrhus University, Denmark, October 2002.

"The Role of Angiotensin II in Cardiovascular Control in the Embryonic White Leghorn chicken (*Gallus gallus*)". Department of Physiology, Oregon Heath Science University, November 2003.

"Cardiovascular Function in Avian and Reptilian Embryos The Importance of Ontogeny". Department of Biology, Eastern Washington University, April 2004.

"Cardiovascular Physiology in Embryos: Importance of the Developmental Environment". Department of Biology, Simon Fraser University, Vancouver BC February 2005.

"Maturation of Cardiovascular Physiology in Vertebrates". Faculty of Life Science, University of Manchester, Manchester UK. June 2005.

"Cardiovascular Development in Vertebrates: an integrative approach to understanding maturation". Department of Surgery, University of Toronto, Toronto Ontario, August 2005.

"Maturation of Cardiovascular Physiology in Vertebrates". Development of Veterinary Medicine, Iowa State University, Ames Iowa. August 2005.

"Cardiovascular Physiology in Embryonic Vertebrates: Importance of The Developmental Environment", Department of Biology, Portland State University, Portland Oregon, February 2006.

"The Mismatch Between Molecular And Physiological Development" Depart of Anatomy and Cell Biology, University of North Dakota, Grand Forks North Dakota November 2006.

***Selected Invited Symposia Speaker/Participant*:**

"Temporal changes in barostatic regulation of cardiovascular function during the ontogeny of three vertebrates species, the domestic fowl (*Gallus gallus*), the American alligator (*Alligator mississipiensis*) and the Emu (*Dromaius novaehollandiae*). Presented in the Symposium "First Beat to Last Beat" at the Society of Experimental Biology annual meeting. Canterbury, England. 2001

"Cardiovascular control mechanisms present during the embryonic development of the American alligator, *Alligator missippiensis*, an assessment of autonomic tone in developing reptiles". Presented in the Symposium "Ontogeny of Cardiovascular Regulation" at the 6th International Congress of Comparative Physiology and Biochemistry. February, 2003.

"Hypoxic Cardiovascular Response of *in ovo* Developing Vertebrates". Presented in the Symposium "Hypoxic Effects On Vascular Tone: Mechanisms Of Hypoxic Vasoconstriction In Vertebrates" At The APS Conference Comparative Physiology 2006: Integrating Diversity. Virginia Beach USA, October, 2006

Selected Published Abstracts (of 17).

(1) Burggren, W. W., D.A. Crossley II, G. Rogowitz and D. Thompson 1998. Heart rate varies less between siblings than non-siblings in embryos of the anuran *Eleutherodactylus cookii*. **Amer. Zool.** 37(5):142A.

(2) Crossley II, D.A., B. Bagatto and W. Burggren 1998. Chronic exposure to incubation environments of low water content alters cardiovascular function in embryos of the African brown house snake. **Amer. Zool** 37(5):155A.

(3) Crossley II, D.A., C. Reiber and W. Burggren 1999. Ontogeny of cardiovascular function and regulation in embryos of the desert tortoise (*Gopherus agassizii*). **Amer. Zool.** 38(5):31A.

(4) Crossley II, D.A., J. Hicks and A. Bennett. 2000. Postprandial changes in cardiopulmonary control in the Savanna monitor lizard. **FASEB J** 14(4):72.16.

(5) Crossley II, D. A. J. W. Hicks and J. Altimiras 2000. "Changes in cardiovascular regulation during the embryonic development of the American alligator, (*Alligator mississippiensis)*." **Amer. Zool.** 40(6) P1.90.

(6) Crossley, D. A. II and J. W. Hicks. 2002. Changes in blood chemistry during hypoxic exposures in embryos of the domestic chicken (*Gallus gallus*).

(7) Crossley, D. A. II, J. W. Hicks and K. Thornburg. 2003. A comparison of cardiovascular regulatory mechanisms present during fowl ontogeny; White leghorn vs. Bantam chickens.

(8) Crossley, D. A. II and K. Thornburg 2003. The role of angiotensin II in cardiovascular control in the embryonic white leghorn chicken (*Gallus gallus*).

(9) Crossley, D. A. II and Kent Thornburg. 2003. The physiological consequences of intermittent dehydration periods on the developmental of embryonic American alligators (*Alligator mississippiensis*).

(10) Crossley, D. A. II, A. Gräns and J. Altimiras. 2007. Morphological and Physiological Embryonic Development of the Humboldt Penguin,Spheniscus humboldti.

Teaching Experience:

Lewis and Clark College

2005-2006 Instructor for the following courses:
Comparative Physiology lecture
Comparative Physiology Lab
Herpetology lecture
Herpetology Lab
Guest lecture in Developmental Biology

Linkopings Universitet

2005 Molecular Physiology Contributing Instructor

Portland State University

2003-2006 Instructor for the following courses:
253 Principles of Biology,
101,102, and 103 General Biology Series,
301 Human Anatomy and Physiology.
411 Topics in Biology: Field Herpetology
413 Herpetology

1994-95 Human Anatomy & Physiology Lab Teaching Assistant.

1994 Principles of Biology Lab Teaching Assistant.

University of Nevada, Las Vegas

1998 Human Anatomy and Physiology Interim Lecturer (G. I. Endocrine & Immune System Function).

1997-98 Herpetology Lab Instructor.

1996 Histology Lab Instructor.

1996 Human Anatomy and Physiology Lab Teaching Assistant.

1996 Comparative Anatomy Lab Instructor.

1995-96 Comparative Physiology Lab Instructor.

University of California at Irvine

2001 Physiology Lab Instructor.