

Brian Dewar

Taylor University
Biology
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Education

Ph.D., Toxicology, 2007, University of North Carolina at Chapel Hill

B.S., Biology, 1998, Geneva College

Professional Employment

2010–Present, Assistant Professor, Department of Biology, Taylor University, Upland, Ind.

2007–2010, Postdoctoral Fellow, Department of Biomedical Engineering, University of North Carolina at Chapel Hill.

2003–2007, Ph.D. Candidate, Curriculum in Toxicology, University of North Carolina at Chapel Hill.

2004–2006, Teaching Assistant, Biology 104 Vertebrate Embryology, Department of Biology, University of North Carolina at Chapel Hill.

1999–2001, Laboratory Research II, Laboratory of Hepatobiology and Toxicology, University of North Carolina at Chapel Hill.

1998, Student Research Assistant, Department of Biology, Geneva College, Beaver Falls, Pa.

Membership in Professional Societies

2013–Present, American Physiological Society

2013–Present, Indiana Chapter of the American Physiological Society

Administrative Activities

2012–Present, Department of Biology underclassman pre-medical, veterinary, and dental track advisor

2012–Present, School of Natural and Applied Sciences, Curriculum Management Committee

2014–Present, Indiana Chapter of the American Physiological Society, Council Member

Professional Meetings Attended

2016, Indiana Chapter of the APS (DePauw University, Greencastle, Ind.)

2015, Midwest American College of Sports Medicine (Fort Wayne, Ind.)

2015, Indiana Chapter of the APS (Marion University College of Osteopathic Medicine, Indianapolis, Ind.)

2014, Indiana Chapter of the APS (University of Southern Indiana, Evansville, Ind.)

2013, Experimental Biology (Boston, Mass.)

2013, Indiana Chapter of the APS (Indianapolis, Ind.)

2009, International Society for Magnetic Resonance in Medicine (Honolulu, Hawaii)

Research Grants, Contracts and Fellowships

2016, Faculty Mentored Undergraduate Summer Scholarship Program

2015, Department of Biology SRTP

2015, Faculty Mentored Undergraduate Summer Scholarship Program

2014, Department of Biology SRTP

2014, Lilly Research Grant

2013, Education Technology Center Mini Grant

2012, Taylor University Women's Giving Circle Grant

2012, Taylor University Pedagogy Seminar Mini Grant

2008–2010, NIEHS Postdoctoral Traineeship (NIH T32 ES007126)

Publications

Eaton MS, Newby JB, Plattes MM, Foster HE, Arthur JW, Ward TD, Shor R, Wauson EM, Dewar BJ, Broege A, Lowery JW. Loss of the nutrient sensor TAS1R3 leads to reduced bone resorption. (submitted for publication - *in review*)

Fiordalisi JJ, Dewar BJ, Graves LM, Madigan JP and Cox AD. Src-mediated phosphorylation and regulation of the tyrosine phosphatase PRL-3 is required for PRL-3 promotion of Rho activation, motility and invasion. *PLoS One* (2013) 8:1-10.

Cooper MJ, Cox NJ, Zimmerman EI, Dewar BJ, Duncan JS, Whittle MC, Nguyen TA, Jones LS, Ghose Roy S, Smalley DM, Kuan PF, Richards KL, Christopherson RI, Jin J, Frye SV, Johnson GL, Baldwin AS, Graves LM. Application of multiplexed kinase inhibitor beads to study kinome adaptations in drug-resistant leukemia. *PLoS One* (2013) 8:1-14.

Mousley CJ, Yuan P, Gaur NA, Trettin KD, Nile AH, Deminoff SJ, Dewar BJ, Wolpert M, Macdonald JM, Herman PK, Hinnebusch AG, Bankaitis VA. A sterol-binding protein integrates endosomal lipid metabolism with TOR signaling and nitrogen sensing. *Cell* (2012), 148:702-715.

Dewar BJ, Keshari KR, Jeffries R, Graves LM and Macdonald JM. Metabolic assessment of a novel chronic myelogenous leukemic cell line and an imatinib resistant subline by ¹H NMR spectroscopy. *Metabolomics* (2010) 6:439-450.

Alan JK, Berzat AC, Dewar BJ, Graves LM and Cox AD. Src-mediated tyrosine phosphorylation of its C-terminal membrane targeting domain regulates both localization and function of the Rho family small GTPase Wrch-1. *Mol Cell Biol* (2010) 30:4324-38.

Bullock GC, Delehanty LL, Talbot A-L, Gonias SL, Tong W-H, Rouault TA, Dewar BJ, Macdonald JM, Chruma JJ, Goldfarb AN. Iron control of erythroid development by novel aconitase-associated regulatory pathway. *Blood* (2010) 116:97-108.

Keshari KR, Kurhanewicz J, Wilson DM, Jeffries RE, Dewar BJ, Van Criekinge M, Vigneron DB and Macdonald JM. Hyperpolarized ¹³C spectroscopy and a novel NMR-compatible bioreactor system for the investigation of real time cellular metabolism. *Magnetic Resonance in Medicine* (2010) 63: 322-329.

Wolak J, Rashimi-Keshari K, Jeffries R, Poulo JM, Todd A, Pediatitakis P, Dewar BJ, Favorov O, Elston TC, Graves LM, Kurhanewicz J, Vigneron D, Holmuhamedov E, and Macdonald JM. Non-Invasive fluxomics in mammals by nuclear magnetic resonance spectroscopy. In "Handbook of Metabolomics" Lane AN, Fan TW-M, Higashi RM (eds).

Madigan JP, Bodemann BO, Brady DC, Dewar BJ, Keller PJ, Leitges M, Philips MR, Ridley AJ, Der CJ and Cox AD. Regulation of RND3 localization and function by PKC-mediated phosphorylation. *Biochem J* (2009) 424: 153-161.

Dewar BJ, Gardner OS, Chen C-S, Samet JM, and Graves LM. Capacitative calcium entry contributes to the differential transactivation of the epidermal growth factor receptor in response to Thiazolidinediones. *Mol Pharmacol* (2007) 72:1146-1156.

Gardner OS, Dewar BJ, and Graves LM. Activation of mitogen-activated kinases by peroxisome proliferators-activated receptor ligands: an example of non-genomic signaling. *Mol Pharmacol* (2005) 68:933-941.

Gardner OS, Dewar BJ, Earp HS, Samet JM, Graves LM. Dependence of Peroxisome Proliferator-activated Receptor Ligand-induced Mitogen-activated Protein Kinase Signaling on Epidermal Growth Factor Receptor Transactivation. *J Biol Chem* (2003) 278(47): 46261-9.

Samet JM, Dewar BJ, Wu W, Graves LM. Mechanisms of Zn(2+)-induced signal initiation through the epidermal growth factor receptor. *Toxicol Appl Pharmacol* (2003) 191(1): 86-93.

Dewar BJ, Bradford BU, Thurman RG. Nicotine increases hepatic oxygen uptake in the isolated perfused rat liver by inhibiting glycolysis. *J Pharmacol Exp Ther* (2002) 301(3): 930-7.