

Curriculum Vitae

PERSONAL INFORMATION

Brian James Dewar, Ph.D.
Born January 13, 1976; Phoenix Arizona

Work Address

Taylor University
School of Natural and Applied Science
Department of Biology, Environmental Science, & Sustainable Development
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EDUCATION

Geneva College, Beaver Falls, PA	B.S. in Biology	1998
University of North Carolina at Chapel Hill	Ph.D. in Toxicology	2007

PROFESSIONAL EMPLOYMENT

2022-present Dept Chair, Dept. of Biology, Environmental Science, and Sus. Development
2010-present Associate Professor, Tenured, Dept. of Biology, Taylor University, Upland, IN.
2008-2010 Postdoctoral Trainee, Curriculum in Toxicology (with the Dept. of Biomedical Engineering), Univ. of North Carolina, Chapel Hill, NC.
2007-2008 Postdoctoral Research Associate, Dept. of Biomedical Engineering, Univ. of North Carolina, Chapel Hill, NC.
2003-2007 Ph.D. Candidate, Curriculum in Toxicology, Univ. of North Carolina, Chapel Hill, NC.
1999-2001 Laboratory Research technician II, Laboratory of Hepatobiology and Toxicology, Univ. of North Carolina, Chapel Hill, NC.

Dissertation

PPAR γ -independent mechanisms of Src-kinase activation and EGFR transactivation in response to thiazolidinediones. Dissertation Advisor: Dr. Lee M Graves.

Fellowships

2008-2010 NIEHS Postdoctoral Traineeship (NIH T32 ES007126)

Teaching

Courses Taught

2023-present Natural Science Seminar (Coordinator and Course)
2022-present Biology Capstone
2021-present Pathophysiology of Immunological and metabolic chronic Diseases
2010-present Human Anatomy and Physiology I, TU
2010-present Human Anatomy and Physiology I Lab, TU
2010-present Human Anatomy and Physiology II, TU
2010-present Human Anatomy and Physiology II Lab, TU
2010-present Animal Physiology, TU
2010-present Animal Physiology Lab, TU

2010-2021 Principles of Genetics, TU
 2010-2021 Principles of Genetics Lab, TU
 2004-2005 Teaching Assistant, Vertebrate Embryology, UNC-CH
 1998 Student Res. Asst., Depart. of Biology, Geneva College, Beaver Falls, PA.

Courses Participated

2023 BIO201 – Fnd. of Cell Biology and Genetics Lab
 2020 BIO306 – Introduction to Bioinformatics
 2019 BIO493 – Senior Capstone
 2016 BIO280 – Research Methods
 2014 BIO493 – Senior Capstone
 2013 BIO493 – Senior Capstone
 2013 PSY370 – Neuroscience and the Soul

Non-Load Involvement with Students

2023-present Faculty Mentored Undergraduate Scholarship Program Facilitator
 2022-present Annual Dept. Academic Symposium
 2020-present Annual Dept. Lab Games
 2017-present Biology Department Specific 24@Taylor Recruitment
 2016-present Biology Department Coffee Conversations
 2014-2016 Community Connection Faculty Host to 3G
 2014 Freshmen Orientation-Group Faculty Host

Faculty Development

a. Grants

2015-2016 Developing the process of Teaching Critical Thinking
 2013 Educational Technology Center Mini-grant
 2012 Marshall Gregory Mini-grant – TU Pedagogy Seminar

b. Bedi Center for Teaching and Learning Excellence

2023 BrightSpace Ambassador (new LMS system)
 2023 Book Club – *UNgrading* by Susan D. Blum
 2023 Mini Course Design Institute
 2022 Engaging Lecture Series
 2019 Learning Community – Understanding and Engaging in Diversity
 2018 Faculty Reading Group: *The Christian Imagination: Theology and the Origins of Race* by Willie Jennings
 2018 Fall Teaching Squares
 2017 Dr. Richard Mouw Luncheon
 2017 How to Facilitate Student Learning
 2016 Managing Your **Emails: Tips, Tricks, and Strategies**
 2016 **Christian Higher Education in a Postmodern Age**
 2015 Us and Them: Engaging the ‘Others’ in the Classroom
 2015 The Implications for Assessment Data for Engaging Students in Meaningful Learning
 2015 Preparing to Apply for Promotion and Tenure
 2015 Faculty Reading Group: *Whistling Vivaldi* by Claude Steele
 2014 Fall Teaching Squares
 2014 Course Syllabus Construction (Part 1)
 2014 Integration of Faith and Living: Why should Taylor focus on the development of moral character?

2013	Student Engagement Outside of Class
2012	Lecturing Masters Panel
2012	Teaching as Acting
2012	Creating Effective Writing Assignments
2011	Forming/Managing Cooperative Learning
2011	New Faculty Lunch: Teaching for Critical Thinking
2011	Improving Student Writing by Improving Writing Assignments
2011	New Faculty Lunch: Making Sense of Course Evaluations

c. Sabbaticals

2022	Cuenca, Ecuador – 6-month Sabbatical.
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Administrative Activities

a. Department

2022-pres.	Dept. Chair
2018	New Student Summer Orientation
2016	New Student Summer Orientation
2014	New Student Summer Orientation
2013-present	24@Taylor Recruitment Breakfasts
2012-present	Dept. of Biology under-classman Pre-Med., Pre-Vet., Pre-Dental Track Advisor

b. University

2022-present	Biology Program Faculty Advisor, Ecuador Study Abroad Program
2022-present	University Assembly
2021-2022	Academic Policy Committee
2018-present	Student Advisor to newly created Human Physiology and Preventative Medicine major
2017-2020	Faculty Development and Candidate Interview Committee (Chair – 2018)
2017-present	Institutional Animal Care and Use Committee (Chair)
2017-2018	Facilitated the creation of Human Physiology and Preventative Medicine major
2017	Health Professions Committee (Generation of Nursing 3+1 major)
2012-2017	Curriculum Management Committee, School of Natural and Applied Science

Membership in Professional Teaching Societies

2018-present	Human Anatomy and Physiology Society
2014-present	National Association of Biology Teachers

Professional Teaching Meetings Attended

2022	National Association of Biology Teachers Conference, Indianapolis, IN
2019	Physiology Majors Interest Group (Minneapolis, MN)
2017	Physiology Majors Interest Group (East Lansing, MI)
2017	National Association of Biology Teachers Conference, St. Louis, MO
2014	National Association of Biology Teachers Conference, Cleveland, OH

RESEARCH AND SCHOLARSHIP

Membership in Professional Research Societies

2013-present	American Physiological Society
2013-present	Indiana Physiological Society (State Chapter of the American Physiological Society)
2008-2009	International Society for Magnetic Resonance in Medicine (Post-Grad Member)

- 2007-2009 Society of Toxicology (Student Member)
 2006-2009 American Society for Pharmacology and Experimental Therapeutics (Student Member)

Involvement in Professional Research Societies

- 2019-2020 President, Indiana Physiological Society (State Chapter of the American Physiological Society)
 2018-2019 President Elect, Indiana Physiological Society (State Chapter of the American Physiological Society)
 2018 Annual Meeting Host, Indiana Physiological Society
 2014-present Council Member, Indiana Physiological Society

Professional Research Meetings Attended

- 2023 Indiana Physiological Society (Manchester University, North Manchester, IN)
 2019 Indiana Physiological Society (Wabash College, Crawfordsville, IN)
 2019 Experimental Biology – APS Chapter Advisory Committee rep. (Orlando, FL)
 2019 Human Anatomy and Physiology Society Regional Meeting (Louisville, KY)
 2018 Indiana Physiological Society (Taylor University, Upland, IN)
 2017 Indiana Physiological Society (Butler University, Indianapolis, IN)
 2017 Experimental Biology (Chicago, IL)
 2016 Indiana Physiological Society (DePauw University, Greencastle, IN)
 2015 Midwest American College of Sports Medicine (Ft. Wayne, IN)
 2015 Indiana Physiological Society (Marion Univ. College of Osteopathic Med., Indianapolis, IN)
 2014 American College of Sports Medicine (Orlando, FL)
 2014 Indiana Physiological Society (Univ. of S. Indiana, Evansville, IN)
 2013 Indiana Physiological Society (Indianapolis, IN)
 2013 Experimental Biology (Boston, MA)
 2009 International Society for Magnetic Resonance in Medicine (Honolulu, HI)
 2007 Society of Toxicology (Charlotte, NC)
 2005 Experimental Biology (San Francisco, CA)
 2003 Zinc Signaling (Cayman Islands)
 2002 Experimental Biology (New Orleans, LA)

Professional Research Posters, Presentations, and Seminars

- 2023 *Presenting a Oral Presentation or Poster you made*, Faculty Mentored Undergraduate Scholarship, Taylor University, Upland, IN
 2019 *What are taste receptors doing in bone.* Oral Presentation, 55th Annual Natural Science Seminar, Taylor University, Upland, IN
 2019 *Cloning of gRNA sequences for Tas1R family members into the PX459 plasmid*, Poster by Joel Bragg, INPhys Annual Meeting, Wabash College, Crawfordsville, IN
 2019 *Presenting a POSTER you made*, Oral Presentation, Faculty Mentored Undergraduate Scholarship, Taylor University, Upland, IN
 2018 *Cloning of gRNA sequences for Tas1R family members into the PX459 plasmid*, Poster Presentation by Joel Bragg, Celebration of Scholarship, Taylor University, Upland, IN
 2018 *Presenting a POSTER you made*, Oral Presentation, Faculty Mentored Undergraduate Scholarship, Taylor University, Upland, IN
 2017 *From Lab to Life*, Oral Presentation, Dept. of Pharmacology, University of North Carolina, Chapel Hill, NC.
 2016 *Learning and mastering two techniques for the functional investigation of Tas1R protein receptors in bone remodeling*, Poster Presentation by Aidan Edmunds and Margariite Riggenbach, Faculty Mentored Undergraduate Scholarship, Taylor University, Upland, IN

- 2016 *Loss of the nutrient sensor Tas1R3 leads to reduced bone resorption*, Poster Presentation by Maggie Plattes and Hanna Foster, Indiana Physiology Society, DePauw University, Greencastle, IN
- 2015 *Investigation of taste receptors in bone remodeling*, Oral Presentation by Maggie Plattes and Hanna Foster, School of Natural and Applied Science Seminar, Taylor University, Upland, IN
- 2014 *Alterations in liver lipid deposition in T1R3 knockout mice fed a western diet*, Oral Presentation by Jennifer Dolzal, School of Natural and Applied Science Seminar, Taylor University, Upland, IN
- 2014 National Institute for Environmental Health Sciences Biomedical Career Fair
- 2013 National Institute for Environmental Health Sciences Biomedical Career Fair

Professional Research Grants

- 2018 Faculty Mentored Undergraduate Scholarship Program
- 2016 Faculty Mentored Undergraduate Summer Scholarship Program
- 2015 Dept. of Biology SRTP
- 2015 Faculty Mentored Undergraduate Summer Scholarship Program
- 2014 Dept. of Biology SRTP
- 2014 Lilly Research Grant
- 2012 Taylor University Women's Giving Circle Grant

Professional Research Publications

Okumu DO, Aponte-Collazo LJ, Dewar BJ, Cox NJ, East MP, Tech K, McDonald IM, Tikunov AP, Holmuhamedov E, Macdonald JM, Graves LM. Lyn regulates creatine uptake in an imatinib-resistant CML cell line. *Biochimica et Biophysica Acta (BBA)*, (2020), 1864(4):129507.

Eaton MS, Weinstein N, Newby JB, Plattes MM, Foster HE, Arthur JW, Ward TD, Shively SR, Shor R, Nathan J, Davis HM, Plotkin LI, Wauson EM, Dewar BJ, Broege A, Lowery JW. Loss of the nutrient sensor TAS1R3 leads to reduced bone resorption. *J of Phys. and Biochem.* (2018) 74:3-8.

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 ^{13}C 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.

Professional Goals

My professional goal is to continue to be actively engaged in effective teaching and instruction at the undergraduate level, while participating in student-focused scholarly scientific research.