

Curriculum Vitae

Nanette J. Tomicek, Ph.D.

Department of Kinesiology
Temple University
College of Public Health
Philadelphia, PA 19121
nanette.tomicek@temple.edu

Education

- 2006-2012 **Ph.D. Physiology** Intercollege Graduate Degree Program in Physiology
Noll Research Laboratory
The Pennsylvania State University, University Park, PA
- Dissertation Title: *“Estrogen Receptor Beta and Adiponectin as Targets in Cardiovascular and Metabolic Disease”*
- 2002-2006 **B.S. Biology** with College Honors
Westminster College, New Wilmington, PA
- Honors Thesis Title: *“The Effect of Amphotericin B on Gill Water Permeability”*

Positions and Employment

2017-present Assistant Professor of Instruction
Dept. Kinesiology, Temple University, Philadelphia, PA

- **Laboratory Coordinator and Instructor**
 - Oversight of laboratory instruction (900 undergrads/semester)
 - Responsibilities associated with managing, training, and preparing graduate teaching assistants for instruction (approximately 12 teaching assistants/year)
 - Management of laboratory safety protocols
- **Lecture Instructor**
 - Undergraduate Instruction (150 undergraduates/semester)
 - Developing new and revamping dated curriculum
- **Adjunct Graduate Faculty**
 - Serve and Mentor M.S. Students in Integrative Exercise Physiology Program

2012-2017 Assistant Teaching Professor

Dept. Biology, The Pennsylvania State University, University Park, PA

- **Lecture Instructor**
 - o Continuing Education Instructor for returning adult students (300 undergrads/semester)

- **Laboratory Coordinator**
 - o Oversight of laboratory instruction in physiology courses (500 undergrads/sem.)
 - o Administrative responsibilities associated with hiring and managing graduate and undergraduate teaching assistants (approximately 40 teaching assistants/year)
 - o Management of laboratory safety protocols
 - o Writing and maintaining IACUC protocols for animal use in teaching laboratories

- **Academic Advisor**
 - o Advise 60+ students majoring in Biology per academic year
 - o Welcome and schedule courses for 60+ incoming first year students majoring Biology per academic year

2008-2011 Teaching Assistant

Dept. Biology, The Pennsylvania State University, University Park, PA

- Instruct undergraduates in laboratory setting
 - o Mammalian Physiology Laboratory (BIOL 473; 2009-2010)
 - o Introductory Human Physiology Laboratory (BIOL 142; 2008-2009)

2004-2005 Undergraduate Intern

- Research Intern, Dept. Pharmacology, University of Pittsburgh, Pittsburgh, PA (2005)
 - o Performed cell culture and drug dosing on isolated human coronary artery cells.
- Intern Carnegie Science Center: Science on the Road Division, Pittsburgh PA (2004)
 - o Developed curriculum for biology based laboratories

2003-2006 Teaching Assistant for General Biology and Anatomy and Physiology,

Dept. Biology, Westminster College, New Wilmington, PA

- Assist faculty member in laboratory setting
 - o Anatomy and Physiology I and II (BIO 222 and 223; 2005-2006)
 - o Fundamentals of Biology I & II (BIO 110 and 111; 2003-2005)

Courses Taught

Temple University

- Human Anatomy and Physiology I & II (KINES 1223 & 1224; 2017-present)
 - o Lecture and Laboratory

The Pennsylvania State University

- Instructor of Record:
 - o Introductory Human Physiology Lecture (BIOL 141; 2011-2017)

- Introductory Human Physiology Laboratory (BIOL 142; 2012-2017)
- Mammalian Physiology Laboratory (BIOL 473; 2015-2017)
- The Biology of Sex (BIOL 177; 2012-2015)
- The Biology of Sex Online (BIOL 177WD; 2013- 2018)
- Teaching in Biology (BIOL 400; 2012-2017)
- Introductory Human Anatomy Lecture (BIOL 129; 2012)
- Guest Lecturer:
 - Mammalian Physiology Lecture (BIOL 472; 2013 7 lectures)
 - Animal Physiology Lecture (Graduate Level; PHYSIO 572; 2015 4 lectures)

Professional Development and Curriculum Design

Professional Development

- **2018 Completion of Provost's Teaching Academy at the Temple University Center for Advancement of Teaching**
 - Participated in intensive pedagogy course for best practices for teaching
- **2017 Discussion Series at Temple University Center for Advancement of Teaching**
 - Participated in sessions on Sandra McGuire's book "Teach Students How to Learn"
- **2017 Completion of Advanced Human Dissection Course at Penn State University**
 - Audited special topics course in anatomy with a regional approach to cadaver dissection.
- **2016 Completion of the Penn State Certificate for Online Teaching with Penn State World Campus**
 - *2015 Introduction to World Campus (OL 1000)*
 - Special topics course on online course development including introductory look at the development of online courses.
 - *2015 Accessibility (OL 1800)*
 - Special topics course on online course development including a guide for student support to common barriers associated with disabilities.
 - *2016 Prove It! (OL 1900)*
 - Special topics course on online course development including a guide to familiarize faculty with common online course management tools.
 - *2016 Effective Online Teaching (OL 2000)*
 - Special topics course on online course development and effective teaching strategies.
 - *2015 Online Presence (OL 2700)*
 - Special topics course on online course development including strategies to develop an online presence, create an online learning community, and cultivate a rich learning experience.
- **2015 Completion of Penn State's Online Learning Course Design (OL 4000)**
 - Special topics course on online course development including creation and critique of a syllabus, learning objectives, lessons, and use of media.
- **2015 Completion of Penn State's Orientation for Continuing Education (CE 1000)**
 - Special topics course focusing on andragogy and the challenges and strategies associated with a classroom composed traditional students and adult learners of various generations.
- **2012 Completion of Penn State's Human Anatomy Course (BIOL498C)**

- Special topics course in anatomy with a hands on cadaver based approach.
- **2011 Completion of Penn State's Human Anatomy (BIOL497G)**
 - Special topics course in anatomy with a hands on cadaver based approach.
- **2009 Completion of American Physiological Society's: Professional Writing Skills Course**
 - Manuscript writing workshop tailored to graduate students or post docs writing their first peer-reviewed paper.
- **2008 Hands on Training in Cardiovascular Physiology and Cell Signaling Laboratory at Penn State in Noll Research Laboratory**
 - Mastered Langedorff isolated heart technique with assessment of ischemic injury in an aging female rat model; proficient in differential centrifugation, western blotting and imaging.

Laboratory Education

- **Co-Authored Penn State's Physiology Laboratory Manual editions 1-5.**
 - This is a custom laboratory book used by Penn State Physiology faculty for both introductory physiology (BIOL 142), and upper level mammalian physiology (BIOL 473).
- **Authored a cadaver based discovery activity**
 - Introduces students to hands-on cadaver experience
- **Authored a diving response activity**
 - Advanced cardiovascular physiology concept for upper level mammalian physiology course (BIOL 473).
- **Updated Penn State surgical training video**
 - Changes reflect modifications to IACUC procedures for rat ovariectomy surgery.
- **Created dissection training videos**
 - Videos pair with the reproductive endocrinology laboratory associated with rat ovariectomy surgery.
- **Authored lung physiology lab**
 - Advanced lung function component in an upper level mammalian physiology (BIOL 473) and adapted the lesson for non-majors (BIOL 142) in 2016.
- **Authored renal physiology lab**
 - Created both an introductory physiology activity for non-majors (BIOL 142) in 2013, and a more advanced version of the lab in upper level mammalian physiology students (BIOL 473) in 2015.
- **Authored a renal physiology laboratory tutorial**
 - Online pre-lab exercise to prepare students for the renal lab experience for introductory physiology students (BIOL 142) in 2013.

Course Development

- **Temple University**
 - 2018 Authored materials for use in Kines 1223 & 1224 Anatomy and Physiology I& II courses
 - Updated existing materials and authored new content for blood pressure and electrocardiogram (ECG) laboratories in Kines 1224.
 - 2017 Authored materials for use in Kines 1223 & 1224 Anatomy and Physiology I& II courses
 - Updated existing materials and authored new content for bone, muscle, and nervous system laboratories in Kines 1223.

- Updated existing materials and authored new content for digestive, cardiac, and respiratory system laboratories in Kines 1224.
- **Human Anatomy and Physiology Society**
 - 2016 Co-Author of Human Anatomy and Physiology Society Compressive Anatomy Exam
 - Contributing author for reproductive anatomy learning objectives
- **Penn State University**
 - 2012 Designed a specialty course, the Biology of Sex (BIOL 177) for continuing education curriculum at Penn State.
 - Authored and developed a course, The Biology of Sex, (BIOL 177) at Penn State in 2012. The course topics include basic reproductive anatomy and physiology, sexual differentiation, intersex disorders, aging, puberty, fundamentals of cell division, fertilization, gestation, pregnancy, parturition, and lactation.
 - 2013 Developed an online version of the Biology of Sex course, (BIOL 177WD) for world campus students at Penn State.
 - Adapted existing course to an online format.

Invited Talks and Presentations

Invited Talks

- 2016 York College Clark Lecture Series: *Estrogen Receptors in the Aging Female Heart: Hormone replacement therapy for your heart.*
- 2013 Westminster College Biology Seminar Series: *What can fat do for your heart? Reducing cardiac damage with adiponectin*

Workshop Presentations

- 2018 Workshop presentation: *The Biology of Sex: Myths and Facts* at 32nd annual Human Anatomy and Physiology Conference
- 2017 Workshop presentation: *The Biology of Sex: Myths and Facts* at 31st annual Human Anatomy and Physiology Conference
- 2016 Workshop presentation: *The Biology of Sex: Myths and Facts* at 30th annual Human Anatomy and Physiology Conference
- 2015 Workshop presentation: *Estrogen and Estrogen Receptors in the Aging Female Heart: What Happened to Hormone Replacement Therapy?* at 29th annual Human Anatomy and Physiology Conference
- 2014 Workshop presentation: *Estrogen And Estrogen Receptors In The Aging Female Heart: Is There Any Hope For Hormone Replacement Therapy?* at 28th annual Human Anatomy and Physiology Conference
- 2013 Workshop presentation: *Good things do come from fat: adiponectin reduces cardiac damage following ischemic injury* at 27th annual Human Anatomy and Physiology Conference

Poster Presentations

- 2011 Experimental Biology annual conference: *Estrogen Receptor β Does Not Influence Ischemic Tolerance in the Aged Female Rat Heart.*

- 2011 The Pennsylvania State University Graduate Exhibition: *Estrogen receptor β activation does not affect adiponectin bioavailability in adipose-like cells*
- 2009 Experimental Biology annual conference: *Estrogen Receptor β in Female Adipose Tissue: Impact on Metabolic Dysregulation in a Model of Senescence and Estrogen Deficiency.*
- 2009 The Pennsylvania State University Graduate Exhibition: *Increased Cardiovascular Risk in Post-menopausal Women May be Explained by Altered Signals from Fat Tissue*
- 2009 The Pennsylvania State University Graduate Exhibition: *Increased Cardiovascular Risk in Post-menopausal Women May be Explained by Altered Signals from Fat Tissue*
- 2009 The Pennsylvania State Institute for Diabetes and Obesity (PSIDO) Meeting: *Estrogen Receptor β in Female Adipose Tissue: Impact on Metabolic Dysregulation in a Model of Senescence and Estrogen Deficiency.*
- 2007 American Heart Association conference: *The Role of Chronic PPAR α Activation During Ischemia and Reperfusion Injury in the Female Rat Heart.*
- 2006 Experimental Biology annual conference: *Effects of Amphotericin B on Gill Water Permeability.*

Professional Membership, Awards and Service

Membership

- 2012-present Human Anatomy and Physiology Society (HAPS)
 2007-2012 American Heart Association (AHA)
 2006-2012 American Physiological Society (APS)

Awards

- 2006-2008 Huck Institute Graduate Fellowship Award
 2006 Westminster College Honors

Service

- 2018 Temple Provost's Teaching Academy Representative
 2018-present Student Appeal and Grievance committee for Temple University College of Public Health
 2018-present Awards Committee for Temple University Kinesiology Department
 2017-present Integrative Exercise Physiology M.S. Program Committee Member
 2016-2017 HAPS Regional Conference Planning Committee for a Penn State Biology hosted event
 2015-2017 Anatomy and Physiology Faculty Search Committee for Penn State Biology
 2015-2017 Member of Penn State Biology Teaching Assistant Allocation Committee
 2015-2017 HAPS Testing Committee Member
 2013-2017 Academic advisor for State College Area Roller Derby Student Group at Penn State
 2008-2017 Judge for Annual Pennsylvania Junior Academy of Science, State Meeting

Non Peer-reviewed Publications

Instructional Manuals

1. **Tomicek, N. J.** Instructor's Manual for Fundamentals of Anatomy and Physiology Eleventh Edition. Upper Saddle River, NJ: Pearson Education Inc. 2017.

2. Waters, J.R. and **N.J. Tomicek** 2017. Physiology Laboratory Manual. 5th ed. Macmillan Learning.
3. Waters, J.R. and **N.J. Tomicek** 2016. Physiology Laboratory Manual. 4th ed. Hayden McNeil.
4. Waters, J.R. and **N.J. Tomicek** 2015. Physiology Laboratory Manual. 3rd ed. Hayden McNeil.
5. Waters, J.R. and **N.J. Tomicek** 2014. Physiology Laboratory Manual. 2nd ed. Hayden McNeil.
6. Waters, J.R. and **N.J. Tomicek** 2013. Physiology Laboratory Manual. 1st ed. Hayden McNeil.

Peer-reviewed Publications

Manuscripts

1. **Tomicek NJ**, JC Hunter, RW Ball, DH Korzick. Acute Adiponectin Delivery is Cardioprotective in the Aged Female Rat Heart, *Geriatrics and Gerontology International*, 2014 Aug 12.
2. **Tomicek NJ**, TS Lancaster, DH Korzick. Increased Estrogen Receptor β in Adipose Tissue Is Associated With Increased Intracellular and Reduced Circulating Adiponectin Protein Levels in Aged Female Rats, *Gender Medicine*, 2011 Oct;8(5):325-33. (Epub 2011 Jul 22).
3. **Tomicek NJ**, JL Miller-Lee, JC Hunter, DH Korzick. Estrogen Receptor Beta Does Not Influence Ischemic Tolerance in the Aged Female Rat Heart, *Cardiovascular Therapeutics*, (Epub 2011 May 31).
4. Novotny JL, AM Simpson, **NJ Tomicek**, TS Lancaster, and DH Korzick, Rapid Estrogen Receptor- α Activation Improves Ischemic Tolerance in Aged Female Rats Through a Novel PKC ϵ -Dependent Mechanism. *Endocrinology*. 2009 Feb;150(2):889-96. (Epub 2008 Oct 16).

Abstracts

1. **Tomicek NJ**. The Biology of Sex: Myths and Facts, Human Anatomy and Physiology Society 32nd Annual. May 2018; 78.
2. **Tomicek NJ**. The Biology of Sex: Myths and Facts, Human Anatomy and Physiology Society 31st Annual. May 2017; 78.
3. **Tomicek NJ**. The Biology of Sex: Myths and Facts, Human Anatomy and Physiology Society 30th Annual. May 2016; 84.
4. **Tomicek NJ**. Estrogen and Estrogen Receptors in the Aging Female Heart: What Happened to Hormone Replacement Therapy? Human Anatomy and Physiology Society 29th Annual. May 2015; 66.
5. **Tomicek NJ**. Estrogen And Estrogen Receptors In The Aging Female Heart: Is There Any Hope For Hormone Replacement Therapy? Human Anatomy and Physiology Society 28th Annual. May 2014; 60.
6. **Tomicek NJ**. Good things do come from fat: adiponectin reduces cardiac damage following ischemic injury, Human Anatomy and Physiology Society 27th Annual. May 2013; 74.
7. **Tomicek NJ**, J L Miller-Lee, J C Hunter, and DH Korzick. Estrogen Receptor β Does Not Influence Ischemic Tolerance in the Aged Female Rat Heart. *FASEB J* March 17, 2011 25:1097.19.

8. **Tomicek NJ**, TS Lancaster, DH Korzick. Estrogen Receptor β in Female Adipose Tissue: Impact on Metabolic Dysregulation in a Model of Senescence and Estrogen Deficiency. *FASEB J* April 22, 2009 23:991.6
9. Lancaster TS, **NJ Tomicek**, C Lynch, B Stanley, DH Korzick. iTRAQ Proteomic Approaches Reveal Novel Mitochondria PKC ϵ -Mediated Targets in Aged Female Rat Heart, *Circ. Res.* 2008; 103; e70.
10. Korzick DH, JL Novotny, AM Simpson, TS Lancaster, **NJ Tomicek**. Acute Estrogen Receptor- α Activation Improves Ischemic Tolerance in the Aged Female Rat Heart Through a PKC ϵ -Dependent Mechanism, *FASEB J.* Mar 2008; 22:750.23.
11. Jefferson SJ, TS Lancaster, **NJ Tomicek**, and DH Korzick. Local Delivery of an PKC ϵ -Activating Peptide Improves Ischemic Tolerance in Estrogen Deficient and Aged Rats and Regulates Protective Gene Transcription, *FASEB J.* Mar 2008;22:750.22.
12. Simpson AM, JL Novotny, **NJ Tomicek**, TS Lancaster and DH Korzick. Abstract1401: The Role of Chronic PPAR α Activation During Ischemia and Reperfusion Injury in the Female Rat Heart, *Circulation.* Oct 2007; 116: II_288. (**Tomicek presenting author**)
13. Dubey RK, **NJ Tomicek**, DG Gillespie, EK Jackson. In Human Coronary Artery Smooth Muscle Cells (CASMCs) Adenosine Induces Antimitogenesis via A_{2B} Receptors, *Hypertension.* 2006; 48; e54.
14. **Tomicek NJ** and JC Robertson. Effects of Amphotericin B on Gill Water Permeability, *FASEB J.* 2006; 20: A824