

VIPA BERNHARDT, PhD OLY

CURRICULUM VITAE

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PROFESSIONAL APPOINTMENTS

2014 – present **Assistant Professor**

Texas A&M University - Commerce
Department of Health and Human Performance
Coordinator B.S. Kinesiology & Sports Studies - Human Performance
Director of Human Performance Laboratory

2017 – present **Associate Scientist**

Institute for Exercise and Environmental Medicine, Texas Health Presbyterian
Hospital Dallas and University of Texas Southwestern Medical Center, Dallas, TX

POSTDOCTORAL TRAINING

2011 – 2014 **Postdoctoral Research Fellow**

Institute for Exercise and Environmental Medicine, Texas Health Presbyterian
Hospital Dallas and University of Texas Southwestern Medical Center, Dallas, TX
Mentor: Tony G. Babb, Ph.D.

2010 – 2011 **Postdoctoral Associate**

College of Veterinary Medicine, University of Florida, Gainesville, FL

EDUCATION

2006 – 2010 **Ph.D. in Biomedical Sciences (Concentration: Physiology)**

University of Florida, Gainesville, FL
Mentor: Paul W. Davenport, Ph.D.
Dissertation: The Effects of Respiratory Muscle Training on Strength and
Performance in Collegiate Swimmers and on Thalamic Gene Expression in a Rat
Model

2002 – 2006 **B.S. in Neurobiological Sciences**

University of Florida, Gainesville, FL
Summa cum laude, GPA 3.91
Mentor: Edward L. Braun, Ph.D.
Thesis: Examining Genes Involved in Temperature-Dependent Sex Determination in
the Red-Eared Slider Turtle, *Trachemys Scripta*

2002 – 2006 **B.A. in Music Performance (Emphasis: Piano)**

University of Florida, Gainesville, FL
Summa cum laude

2002 **Abitur** (German certificate of general qualification for university entrance)

Modellschule Obersberg
Bad Hersfeld, Germany

TEACHING EXPERIENCE

Texas A&M University-Commerce, Dept of Health and Human Performance
Instructor of Record:

Undergraduate		
HHPK 250	Physical Conditioning I: Individual and Dual Sports	Fall 2016, Spring 2017
HHPK 450 HHPK 450L	Exercise Physiology	Fall 2014, Spring 2015, Summer 2015, Fall 2015, Spring 2016, Summer 2016, Fall 2016, Spring 2017, Summer 2017, Fall 2017, Spring 2018
HHPK 451	Topics in Exercise Science	Spring 2015, Fall 2015, Spring 2016, Spring 2017, Spring 2018
HHPK 417	Measurement and Evaluation	Fall 2014
HHPK 490/491	Honor's Thesis	Spring 2015, Spring 2016
FRA 105	Weight Training	Fall 2017
Graduate		
HHPK 530	Sports Conditioning	Summer 2015, Fall 2017
HHPK 532	Cardiopulmonary Physiology	Spring 2016, Spring 2018
HHPK 545	Advanced Exercise Physiology	Fall 2014, Fall 2016
HHPK 597	Individual Research in Human Performance	Spring 2015
HHPK 664	Fitness Testing and Exercise Prescription	Fall 2015, Fall 2017
HHPK 518	Thesis	Spring 2015, Summer 2015, Fall 2015, Spring 2016, Summer 2016, Fall 2016, Spring 2017, Summer 2017, Fall 2017, Spring 2018

Texas A&M University-Commerce, Graduate thesis and honor's thesis committees:

Graduate thesis:

- Christopher Sataray (chair): The Effects of High Intensity Interval Training with Functional Training Equipment on VO₂max and Peak Power. Graduation May 2016.
 - Sataray, C. and **Bernhardt V.** The effects of high intensity interval training, in conjunction with functional training equipment, on VO₂max and peak power in recreationally trained individuals. *International Journal of Exercise Science: Conference Proceedings*. 2016; 2(8): Article 47.
 - American Kinesiology Association National Masters Scholar Award 2016
- Atsushi Yamaguchi (chair): The Effect of Warm-up Using Alternate-leg Lateral Bounding on 18.3-m Shuttle-run Performance in Collegiate Football Players. Graduation August 2016.

- Masoud Moghaddam (chair): The Effects of Ultra Short High Intensity Interval Functional-equipment Training on Anaerobic Capacity and Body Composition of Healthy College Students. Graduation August 2016.
 - Poster presentation at National American College of Sports Medicine Annual Conference, Denver, CO, May 2016.
- Jade Bell (committee member): Athlete Identity, Team Motivational Climate and Career Exploration and Engagement. Graduation August 2017.
 - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2017
- Keith Crabtree (chair): Impact of the Ingestion of Dark Chocolate on the Cardiovascular Fitness of Moderately Active Individuals. Graduation August 2017.
 - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2017
 - TAMUC Summer Thesis Fellowship
- Yangmi Kang (chair): Muscle Strength and Flexibility Differences between High and Low Landing Error Scores in Youth Female Athletes. Graduation August 2017.
 - TAMUC Summer Thesis Fellowship
- Tanner Crutcher (chair): Thermoregulatory and Cardiovascular Response of Structural Firefighters during Fire Suppression Operations.
 - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2018
- Guadalupe Herrera (chair): Bilateral Asymmetry and Dynamic Balance in Collegiate Athletes.
 - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2018

Undergraduate honor's thesis:

- Kyle Hackney (chair): Sprinting toward health: A review of high intensity interval training in clinical and recreational populations (defended on 9/30/2015)
- Collin Rodgers (committee member): The effects of various intensities of active recovery following cryotherapy as a post-game therapeutic modality for baseball pitchers (defended on 11/10/2015)
- Laura Heron (committee member): Athlete and team responses to injury (defended on 4/14/2016)
- Sarah Geller (committee member): The effect of positive facial expression on false face recognition: do positive faces seem more familiar? (defended on 4/19/2018)
- Logan Talley (committee member): The lack of knowledge in the prevalence of stimulating neonatal intensive care unit (NICU) patients and the lifelong effect of the stimulation. (defended on 5/3/2018)

McNair Scholar Program, faculty mentor:

- Fritzi Quinones, 2017-18: Proportion of physically active individuals at risk for lower extremity injury determined by Y-Balance Test
 - Oral presentation at TAMUC McNair Showcase, Commerce, TX, Oct 2017
 - Poster presentation at TAMUS Pathways Annual Symposium, Tarleton State University, Stephenville, TX, Nov 2017
 - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2018

PEER-REVIEWED PUBLICATIONS

- 1) Bell JM, Prewitt S, **Bernhardt V**, Culpepper D. The relationship between athlete identity and career exploration and engagement in Division II athletes. *International Journal of Exercise Science*. 11(5):493-502. 2018.
- 2) Bhammar DM, Stickford JL, **Bernhardt V**, Babb TG. Verification of maximal oxygen uptake in obese and nonobese children. *Medicine & Science in Sports & Exercise*. 49(4):702-710. 2017.
- 3) **Bernhardt V**, Mitchell GS, Lee WY, Babb TG. Short-Term modulation of the ventilatory response to exercise is preserved in obstructive sleep apnea. *Respiratory Physiology and Neurobiology*. 236:42-50. 2017.
- 4) **Bernhardt V**, Babb TG. Exertional dyspnoea in obesity. *European Respiratory Review*. 142:487-495. 2016.
- 5) **Bernhardt V**, Stickford JL, Bhammar DM, Babb TG. Aerobic exercise training reduces dyspnea on exertion in obese women. *Respiratory Physiology and Neurobiology*. 221:64-70. 2016.
- 6) Bhammar D, Stickford J, **Bernhardt V**, Babb TG. Effect of weight loss on operational lung volumes and oxygen cost of breathing in obese women. *International Journal of Obesity*. 40:998-1004. 2016.
- 7) **Bernhardt V**, Babb TG. Weight loss reduces dyspnea on exertion in obese women. *Respiratory Physiology and Neurobiology*. 204:86-92. 2014.
- 8) **Bernhardt V**, Spencer MD, Babb TG. Pulmonary function in obese women: Importance of reference equations and racial background. *Journal of Qinghai Medical College*. 35:73-81. 2014.
- 9) Spencer MD, **Bernhardt V**, Haller SF, Locke KW, Babb TG. Abdominal volumes in nonobese and obese women and men. *Journal of Qinghai Medical College*. 35:145-152. 2014.
- 10) **Bernhardt V**, Babb TG. Respiratory symptom perception differs in obese women with strong or mild breathlessness during constant-load exercise. *Chest*. 2014; 145(2):1-9.
- 11) **Bernhardt V**, Wood HE, Moran RB, Babb TG. Dyspnea on exertion in obese men. *Respiratory Physiology and Neurobiology*. 185(2):241-8. 2013.
- 12) **Bernhardt V**, Lorenzo S, Babb TG, Zavorsky GS. Corrected end-tidal PCO₂ accurately estimates arterial PCO₂ at rest and during exercise in morbidly obese adults. *Chest*. 143(2):471-7. 2013.
- 13) **Bernhardt V**, Hotchkiss MT, Garcia-Reyero N, Denslow N, Davenport PW. Tracheal occlusion conditioning in conscious rats modulates gene expression profile of medial thalamus. *Frontiers in Respiratory Physiology*. 2:24. 2011.
- 14) **Bernhardt V**, Garcia-Reyero N, Vovk A, Denslow N, Davenport PW. Tracheal Occlusion Modulates The Gene Expression Profile Of The Medial Thalamus In Anesthetized Rats. *Journal of Applied Physiology*. 111(1):117-24. 2011.

INVITED SPEAKER AT CONFERENCES

- 1) “Cardiopulmonary exercise testing in obesity.” International Conference on Respiratory Pathophysiology, Sleep and Breathing, Rome, Italy. June, 2016.
- 2) “Performance of obese patients during exercise.” American College of Chest Physicians (CHEST) international meeting. Los Angeles, CA. October 2016.

SELECTED ABSTRACTS PRESENTED AT CONFERENCES (First-author only)

Count: 44**First-author: 21**

ACSM – American College of Sports Medicine (MSSE - Medicine & Science in Sports & Exercise)

ATS – American Thoracic Society (ARJCCM – American Journal of Respiratory and Critical Care Medicine)

EB – Experimental Biology (FASEB J – Journal of the Federation of American Societies for Experimental Biology)

- 1) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Work of breathing in obese men with and without dyspnea on exertion. *EB*, San Diego, CA. *FASEB J*, 32(1_supplement):913.10, 2018.
- 2) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Cardiorespiratory fitness of otherwise healthy obese women. *ACSM*, Minneapolis, MN. *MSSE*, 50(5S):406, 2018.
- 3) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Weight loss improves dyspnea on exertion in obese men. *ATS*, San Diego, CA. *ARJCCM*, 197:A4340, 2018.
- 4) **Bernhardt V**, Marines-Price R, Weinstein K, Walker-Williams S, Tomlinson AR, Babb TG. Dyspnea on exertion in nonobese and obese patients. *Texas Health Presbyterian Hospital Dallas Research & Evidence-Based Practice Poster Fair*. Dallas, TX. September 2017.
- 5) **Bernhardt V**, Marines-Price R, Weinstein K, Walker-Williams S, Tomlinson AR, Babb TG. Dyspnea on exertion in nonobese and obese patients. *ACSM*, Denver, CO. *MSSE*, 49(5S):326, 2017.
- 6) **Bernhardt V**, Bassett JT, Moran RB, Marines-Price R, Mitchell GS, Lee WY, Babb TG. Short-term modulation of the ventilatory response to exercise is preserved in obstructive sleep apnea. *EB*, San Diego, CA. *FASEB J*, 30:1261.15, 2016.
- 7) **Bernhardt V**, Bhammar DM, Stickford JS, Bassett JT, Marines-Price R, Pineda JN, Genovese J, Babb TG. Aerobic exercise training without weight loss improves dyspnea on exertion in obese women. *ATS*, Denver, CO. *ARJCCM*, 191:A1732, 2015.
- 8) **Bernhardt V**, Moran RB, Bassett JT, Lorenzo S, Pineda JN, Genovese J, Babb TG. Weight loss reduces dyspnea on exertion in obese women independent of improvement in respiratory function. *ATS*, San Diego, CA. *ARJCCM*, 189:A5386, 2014.
- 9) **Bernhardt V**, Moran RB, Bassett JT, Lorenzo S, Pineda JN, Genovese J, Babb TG. Breathlessness, but not oxygen cost of breathing, is higher during voluntary hyperpnea in obese women with vs without dyspnea on exertion. *ATS*, San Diego, CA. *ARJCCM*, 189: A5038, 2014.
- 10) **Bernhardt V**, Bhathia S, Moran RB, Bassett JT, Lorenzo S, Pineda JN, Genovese J, Babb TG. Repeatability of Rating of Perceived Breathlessness during Exercise in Obese Women. *ACSM*, Orlando, FL. *MSSE*, 46(5): S529, 2014.
- 11) **Bernhardt V**, Lorenzo S, Moran RB, Bassett JT, Haller SF, Pineda JN, Babb TG. Oxygen cost of breathing does not differ between women with vs. without dyspnea on exertion. *ACSM*, Indianapolis, IN. *MSSE*, 45(5S):292, 2013.
- 12) **Bernhardt V**, Lorenzo S, Moran RB, Bassett JT, Haller SF, Pineda JN, Babb TG. Breathlessness descriptors during constant load cycling in obese women with or without dyspnea on exertion. *EB*, Boston, MS. *FASEB J*, 27:718.3, 2013.

- 13) **Bernhardt V**, Lorenzo S, Moran RB, Basset JT, Haller SF, Pineda JN, Babb TG. Breathlessness descriptors during constant load cycling in obese women with or without dyspnea on exertion. *International Society for the Advancement of Respiratory Psychophysiology*, Orlando, FL. September 2012.
- 14) **Bernhardt V**, Straub AM, Lavin KM, Lorenzo S, Babb TG, Zavorsky GS. Arterial PCO₂ (PaCO₂) can be accurately estimated using end-tidal PCO₂ (P_{ET}CO₂) during rest and exercise in obese subjects. *EB*, San Diego, CA. *FASEB J*, 26:1146.4, 2012.
- 15) **Bernhardt V**, Haller SF, Moran RB, Wood HE, Babb TG. Breathlessness descriptors during constant load cycling in obese men with and without dyspnea on exertion. *EB*, San Diego, CA. *FASEB J*, 26:704.25, 2012.
- 16) **Bernhardt V**, Nedrud SM, Hotchkiss MT, Davenport PW. The Effects of Expiratory Muscle Strength Training on Subjective Ratings and Performance in Elite Swimmers. *International Society for the Advancement of Respiratory Psychophysiology*, Athens, Greece. 2011.
- 17) **Bernhardt V**, Nedrud SM, Davenport PW. The Effects of Expiratory Muscle Strength Training (EMST) in Collegiate Swimmers. *EB*, Washington, DC. *FASEB J*, 25:1057.8, 2011.
- 18) **Bernhardt V**, Nedrud SM, Troy G, Davenport PW. The Effects of Expiratory Muscle Strength Training in Elite College Swimmers. *EB*, Anaheim, CA. *FASEB J*, 24:618.4, 2010.
- 19) **Bernhardt V**, Hotchkiss M, Garcia-Reyero N, Denslow N, Davenport PW. Chronic Tracheal Occlusions Modulate Gene Expression in the Medial Thalamus. *EB*, Anaheim, CA. *FASEB J*, 24:1021.7, 2010.
- 20) **Bernhardt V**, Nedrud SM, Troy G, Davenport PW. The Effects of Expiratory Muscle Strength Training in Elite College Swimmers. *University of Florida Graduate Student Council Interdisciplinary Conference*, Gainesville, FL. 2010.
- 21) **Bernhardt V**, Denslow N, Liu L, Pate K, Vovk A, Davenport PW. Tracheal Occlusion Modulation of Gene Expression in the Medial Thalamus. *ATS*, Toronto, Canada. *ARJCCM*, 177. 2008.

SERVICE (Texas A&M-University-Commerce)

2014-present Department, college, and university committees

- Institutional Review Board, member (2017 – present)
- Faculty Development Grants Committee (2017 – present)
- Honors College Committee (2015 – present)
- Faculty Senate Academic Practices Committee (2016 – present)
- Faculty Senate Awards Committee (2017 – present)
- College Curriculum Committee
- QEP/Global Fellow (2015 – present)
- Institutional Effectiveness Coordinator for B.S. Kinesiology & Sports Studies (2014 – present)
- HHP Human Performance committee, chair (2014 – present)
- HHP Graduate Program committee, member (2014 – present)
- HHP strategic planning committee, member (2014 – present)
- HHP scholarship committee, member (2015 – present)

2015-2018 Texas Chapter of the American College of Sports Medicine in Austin, TX

- Travel with graduate and undergraduate students
- Undergraduates competed in Annual Student Bowl Competition

2014, 15, 16, 17 Annual Huffines Discussion

- Coordinate and advertise broadcasting of the event in conjunction with Texas A&M

2017 Faculty Judge at TAMUS Pathways Annual Symposium, Tarleton State University, Stephenville, TX.

PROFESSIONAL MEMBERSHIPS

2007 – present	American Physiological Society
2013 – present	American College of Sports Medicine
2014 – present	American Thoracic Society
2015 – present	Texas Chapter of the American College of Sports Medicine
2015 – present	National Association for Kinesiology in Higher Education

GRANTS, HONORS & AWARDS

- 2015, 2016, 2017, 2018 TAMUC Faculty Development Grant
- 2018 TAMUC Phi Pi Delta “Lion Heart” Award
- 2017 TAMUC Junior Faculty Research Award
- 2017, 18 Nominee TAMUC Lafferty Award
- 2016 Nominee TAMUC faculty award “Research, Scholarship, and Creative Activities”
- 2016 CHEST Annual Meeting, Travel Grant
- 2015 TAMUC Global Fellow
- 2014 Abstract Scholarship, American Thoracic Society