

VIPA BERNHARDT

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

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
HHPK 451	Topics in Exercise Science	Spring 2015, Fall 2015, Spring 2016, Spring 2017
HHPK 417	Measurement and Evaluation	Fall 2014
HHPK 490/491	Honor's Thesis	Spring 2015, Spring 2016
Graduate		
HHPK 530	Sports Conditioning	Summer 2015, Fall 2017
HHPK 532	Cardiopulmonary Physiology	Spring 2016
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

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

Graduate thesis:

1. Keith Crabtree (chair): Impact of the Ingestion of Dark Chocolate on the Cardiovascular Fitness of Moderately Active Individuals. Graduation August 2017.
 - TAMUC Summer Thesis Fellowship
2. 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
3. Jade Bell (committee member): Athlete Identity, Team Motivational Climate and Career Exploration and Engagement. Graduation August 2017.
4. 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.

5. 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.
6. 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

Undergraduate honor's thesis:

1. Laura Heron (committee member): Athlete and team responses to injury (defended on 4/14/2016)
2. 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)
3. Kyle Hackney (chair): Sprinting toward health: A review of high intensity interval training in clinical and recreational populations (defended on 9/30/2015)

McNair Scholar Program, faculty mentor:

- Fritzi Quinones, Spring and Summer 2017

SERVICE (Texas A&M-University-Commerce)

2014-present Department, college, and university committees

- Faculty Senate Academic Practices Committee
- Faculty Senate Award Committee
- College Curriculum Committee
- Honors College Committee
- Search Committees

2014, 15, 16 Annual Huffines Discussion

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

2017 Texas Chapter of the American College of Sports Medicine in Waco, TX

- Travel with 3 graduate students and 3 undergraduate students
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Jonathan Marshall
- Awards Committee member

2016 Texas Chapter of the American College of Sports Medicine in College Station, TX

- Travel with 4 graduate students and 3 undergraduate students
- Poster presentation by master's student Christopher Sataray
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: William Holcomb

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

- Travel with 3 graduate students and 5 undergraduate students
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Kyle Hackney

PEER-REVIEWED PUBLICATIONS

1. 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):710-717. 2017.
2. **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.
3. **Bernhardt V**, Babb TG. Exertional dyspnea in obesity. *European Respiratory Review*. 142:487-495. 2016.
4. **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.
5. 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.
6. **Bernhardt V**, Babb TG. Weight loss reduces dyspnea on exertion in obese women. *Respiratory Physiology and Neurobiology*. 204:86-92. 2014.
7. **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.
8. 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.
9. **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.
10. **Bernhardt V**, Wood HE, Moran RB, Babb TG. Dyspnea on exertion in obese men. *Respiratory Physiology and Neurobiology*. 185(2):241-8. 2013.
11. **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.
12. **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.
13. **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)

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**, 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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.
7. **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.
8. **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.
9. **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. *International Society for the Advancement of Respiratory Psychophysiology*, Orlando, FL. September 2012.

10. **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.
11. **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.
12. **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.
13. **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.
14. **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.
15. **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.
16. **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.
17. **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.

SCHOLARSHIPS, FELLOWSHIPS, & TRAVEL GRANTS

- 2015, 2016, 2017 TAMUC Faculty Development Grant
- 2016 CHEST Annual Meeting, Travel Grant
- 2014 Abstract Scholarship, American Thoracic Society
- 2006-2010 University of Florida Alumni Fellowship
- 2006-2009 University of Florida Grinter Fellowship
- 2010 University of Florida Department of Physiological Sciences Travel Grant
- 2010 University of Florida Interdisciplinary Program Biomedical Sciences Travel Grant
- 2010 University of Florida Council for Graduate Researchers Travel Grant
- 2010 University of Florida Department of Physiology & Pharmacology Travel Grant
- 2008 University of Florida Department of Neuroscience, Graduate Travel Grant
- 2008 University of Florida Graduate School Council Travel Grant
- 2008 University of Florida Medical Guild Research Incentive Award
- 2006 James W. Kynes Memorial Scholarship
- 2002-2006 University of Florida, Full athletic scholarship

HONORS & AWARDS

ACADEMICS

- 2017 TAMUC Junior Faculty Research Award
- 2017 Nominee TAMUC Lafferty Award
- 2016 Nominee TAMUC faculty award “Research, Scholarship, and Creative Activities”
- 2015 TAMUC Global Fellow
- 2013 Postdoctoral Certificate in Research, University of Texas Southwestern
- 2008, 2010 UF International Center, Certificate of Outstanding Academic Achievement
- 2005 and 2006 SEC Women’s Scholar Athlete of the Year
- 2005 *ESPN The Magazine* Academic All-America 2nd Team
- 2005 Outstanding International Student Award (College of Fine Arts)
- 2003-06 Academic All-SEC Honor Roll Recipient
- 2003 and 2006 Academic NCAA First Team All-American

ATHLETICS

(SWIMMING)

- 5-time SEC Champion 2004-06
- 19-time All-American 2003-06
- 2006 University of Florida Most Valuable Swimmer
- 2005 World University Games in Izmir, Turkey (4th, 5th, 7th, 8th, 10th)
- **2004 Summer Olympic Games in Athens, Greece (13th place)**
- 2003 World Championships in Barcelona, Spain (9th, 14th place)
- 2003 Tracy Caulkins Outstanding Freshman Award
- 2000 European Championships in Valencia, Spain (7th places)

(UNDERWATER HOCKEY)

- 2013 World Championship, Women’s Elite Division, Eger, Hungary (6th place)
- 2012 America’s Cup, Women’s Elite Division, Milwaukee, WI (2nd place)
- 2011 National Championships, Los Angeles, CA (2nd place)
- 2010 National Championships, Gainesville, FL (1st place)