

## VIPA BERNHARDT, PhD OLY

Nursing and Health Sciences 165D • P.O. Box 3011 • Commerce, TX 75429 • [vipa.bernhardt@tamuc.edu](mailto:vipa.bernhardt@tamuc.edu)  
[www.linkedin.com/in/vipabernhardt](https://www.linkedin.com/in/vipabernhardt) • <https://www.researchgate.net/profile/Vipa-Bernhardt>

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### PROFESSIONAL APPOINTMENTS

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- 2019 – present      **Associate Professor**  
2014 – 2019      **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 (honorary)**  
Institute for Exercise and Environmental Medicine, Texas Health Presbyterian  
Hospital Dallas and University of Texas Southwestern Medical Center, Dallas, TX

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### POSTDOCTORAL TRAINING

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- 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

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### EDUCATION

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- 2006 – 2010      **Ph.D. in Biomedical Sciences (Concentration: Physiology)**  
University of Florida, Gainesville, FL  
*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  
*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

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**TEACHING EXPERIENCE**


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***Texas A&M University-Commerce, Instructor of Record:***

<b>Undergraduate</b>		
HHPK 250	Physical Conditioning I: Individual and Dual Sports	Fall 2016, Spring 2017
HHPK 450 & HHPK 450L	Exercise Physiology and Laboratory	Fall 2014, Spring 2015, Summer 2015, Fall 2015, Spring 2016, Summer 2016, Fall 2016, Spring 2017, Summer 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Summer 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024
HHPK 355	Evidence Based Practice in Kinesiology	Spring 2024
HHPK 451	Topics in Exercise Science	Spring 2015, Fall 2015, Spring 2016, Spring 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Summer 2023
HHPK 417	Measurement and Evaluation	Fall 2014
HHPK 490/491	Honor's Thesis	Spring 2015, Spring 2016, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Spring 2024
FRA 105	Weight Training	Fall 2017
<b>Graduate</b>		
HHPK 518	Thesis	Spring 2015, Summer 2015, Fall 2015, Spring 2016, Summer 2016, Fall 2016, Spring 2017, Summer 2017, Fall 2017, Spring 2018, Summer 2018, Fall 2018, Spring 2019, Summer 2019, Fall 2019, Spring 2020, Summer 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Summer 2022, Summer 2023, Fall 2023, Spring 2024
HHPK 519	Research Methods	Fall 2021, Spring 2023, Spring 2024
HHPK 530	Sports Conditioning	Summer 2015, Fall 2017, Spring 2019, Spring 2021
HHPK 532	Cardiopulmonary Physiology	Spring 2016, Spring 2018, Spring 2020, Spring 2022, Spring 2023, Spring 2024
HHPK 545	Advanced Exercise Physiology	Fall 2014, Fall 2016, Fall 2018, Fall 2020, Fall 2022
HHPK 597	Individual Research in Human Performance	Spring 2015
HHPK 664	Fitness Testing and Exercise Prescription	Fall 2015, Fall 2017, Fall 2019, Fall 2021, Fall 2023

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**RESEARCH EXPERIENCE**


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As of January 1, 2024

Citations: 416  
 h-index: 12  
 i10-index: 15  
 Research Gate scores: 136.9

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**PEER-REVIEWED PUBLICATIONS**


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**\*denotes student author**

**In progress:**

- 1) Zelicha H, Babb T, **Bernhardt V**, Chen Y, Livingston E. Obesity and clinically important dyspnea in ambulatory patients, 2018-2023. Submitted to *Obesity*.
- 2) Oldham M, Daniels KL, Jabai H, \*Herrera D, \*Ukpong I, **Bernhardt V**. The effects of hyperosmolar rehydration solutions on measures of recovery and hydration in firefighters. *In revision*.
- 3) **Bernhardt V**, Oldham M, Dondlinger MJ, Johnson G. Faculty and student perceptions on generative AI. *In preparation*.

**Published:**

- 1) Bhammar DM, Balmain BN, Babb TG, **Bernhardt V**. Sex differences in the ventilatory responses to exercise in mild-moderate obesity. *Experimental Physiology*. 107, 965-977. 2022.
- 2) **Bernhardt V**, Stickford JL, Bhammar DM, Balmain BN, Babb TG. Repeatability of dyspnea measurements during exercise in women with obesity. *Respiratory Physiology and Neurobiology*. 297:103831. 2022.
- 3) Bhammar DM, **Bernhardt V**, Stickford J, Miller C., Babb TG. Recruitment and retention of healthy women with obesity for psychophysiological study before and after weight loss: Insights, challenges, and suggestions. *Journal of obesity and weight loss therapy*. 11(2):428. 2021.
- 4) Spencer MD, Balmain BN, **Bernhardt V**, Wilhite DP, Babb TG. Dyspnea during exercise and voluntary hyperpnea in women with obesity. *Respiratory Physiology and Neurobiology*. 287: 103638. 2021.
- 5) \*Ramirez O, **Bernhardt V**. Using Fitbit competitions to increase physical activity in college students. *The Macksey Journal*. 1:77. 2020.
- 6) Balmain BN, Weinstein K, **Bernhardt V**, Marines-Price R, Tomlinson AR, Babb TG. Multidimensional aspects of dyspnea in obese patients referred for cardiopulmonary exercise testing. *Respiratory Physiology and Neurobiology*. 274:103365. 2020.
- 7) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Weight loss reduces dyspnea on exertion and unpleasantness of dyspnea in obese men. *Respiratory Physiology and Neurobiology*. 261:55-61. 2019.
- 8) Marines-Price R, **Bernhardt V**, Bhammar DM, Babb TG. Dyspnea on exertion provokes unpleasantness and negative emotions in women with obesity. *Respiratory Physiology and Neurobiology*. 260:131-136. 2019.
- 9) \*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.
- 10) 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.

- 11) **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.
- 12) **Bernhardt V**, Babb TG. Exertional dyspnoea in obesity. *European Respiratory Review*. 142:487-495. 2016.
- 13) **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.
- 14) 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.
- 15) **Bernhardt V**, Babb TG. Weight loss reduces dyspnea on exertion in obese women. *Respiratory Physiology and Neurobiology*. 204:86-92. 2014.
- 16) **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.
- 17) 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.
- 18) **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.
- 19) **Bernhardt V**, Wood HE, Moran RB, Babb TG. Dyspnea on exertion in obese men. *Respiratory Physiology and Neurobiology*. 185(2):241-8. 2013.
- 20) **Bernhardt V**, Lorenzo S, Babb TG, Zavorsky GS. Corrected end-tidal PCO<sub>2</sub> accurately estimates arterial PCO<sub>2</sub> at rest and during exercise in morbidly obese adults. *Chest*. 143(2):471-7. 2013.
- 21) **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.
- 22) **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.

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#### INVITED SPEAKER AT CONFERENCES

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- 1) “The multifactorial etiologies of dyspnea in obesity.” American Heart Association Scientific Sessions. Chicago, IL. November 2022.
- 2) “Performance of obese patients during exercise.” American College of Chest Physicians (CHEST) international meeting. Los Angeles, CA. October 2016.
- 3) “Cardiopulmonary exercise testing in obesity.” International Conference on Respiratory Pathophysiology, Sleep and Breathing, Rome, Italy. June 2016.

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#### ABSTRACTS PRESENTED AT CONFERENCES

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**Count: 64**

**First-author: 22**

*ACSM – American College of Sports Medicine (MSSE - Medicine & Science in Sports & Exercise)*  
*ATS – American Thoracic Society (AJRCCM – American Journal of Respiratory and Critical Care Medicine)*

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

**\*denotes student author**

- 1) Bernhardt V, Oldham M, Ankle and knee stability as predictors for dynamic balance. European College of Sport Science. Paris, France. 2023.
- 2) \*Herrera D, Oldham M, **Bernhardt V**. Repeat jump and sprint performance in military specialty operators. TAMUC Annual Research Symposium. 2023.

- 3) \*Riffe A, Varone N, **Bernhardt V**. Does diet self efficacy affect body composition in college students? TAMUC Annual Research Symposium. 2023.
- 4) \*Balderrama E, Oldham M, **Bernhardt V**, Jabai H. Does Spinal Range of Motion Predict Measures of Sport Performance in Firefighter Cadets? TAMUC Annual Research Symposium. 2023.
- 5) \*Gerner S, Mitchell S, Oldham M, **Bernhardt V**. The effect of performance in lower extremity bilateral asymmetries in Division 1 soccer players. TAMUC Annual Research Symposium. 2023.
- 6) \*Dunn H, **Bernhardt V**. COVID-19 Vaccine Effects on Exercise Habits and Attitudes in College Students. TAMUC Annual Research Symposium. 2023.
- 7) \*Dunn H, **Bernhardt V**. COVID-19 Vaccine Effects on Exercise Habits and Attitudes in College Students. Texas Chapter of the American College of Sports Medicine, *Int J Exerc Sci*, Conference Proceedings: 2(15):83, 2023.
- 8) Bhammar DM, **Bernhardt V**, Balmain BN, Babb TG. Variations in functional residual capacity in men and women with obesity. *ATS*. 2022.
- 9) \*Cast T, Oldham M., **Bernhardt V**. A biomechanical assessment of the drop vertical jump in collegiate female athletes with visual feedback. TAMUC Annual Research Symposium. 2022.
- 10) \*Ramirez O, **Bernhardt V**. Experiences and Attitudes of College Students towards Exercise during COVID-19. TAMUC Annual Research Symposium. 2022.
- 11) \*Herrera D, **Bernhardt V**. Using Garmin's Body Battery to Detect Changes in College Students Sleep, HRV, and Stress Level with Exercise. TAMUC Annual Research Symposium. 2022.
- 12) \*Ramirez O, **Bernhardt V**. COVID-19 and exercise habit of college students. Texas Association for Health, Physical Education, Recreation, and Dance. Arlington, TX, 2021.
- 13) \*Varone N, **Bernhardt V**. Changes in body composition and aerobic fitness levels in college students' first semester. Federation Graduate Student Virtual Research Symposium. 2021. <https://sites.google.com/twu.edu/federationsymposium/humanities-presentations/nicole-varone?authuser=0>
- 14) \*Ramirez O, **Bernhardt V**. Experiences and attitudes of college students towards exercise during COVID-19 - Preliminary results. Federation Graduate Student Virtual Research Symposium. 2021. <https://sites.google.com/twu.edu/federationsymposium/stem-presentations/omar-ramirez?authuser=0>
- 15) \*Varone N, **Bernhardt V**. Changes in body composition and aerobic fitness levels in college students' first semester. Texas Chapter of the American College of Sports Medicine, *Int J Exerc Sci*, Conference Proceedings: 2(12):90, 2021.
- 16) \*Ramirez O, **Bernhardt V**. Experiences and attitudes of college students towards exercise during COVID-19 - Preliminary results. Texas Chapter of the American College of Sports Medicine, *Int J Exerc Sci*, Conference Proceedings: 2(13):67, 2021.
- 17) \*Varone N, **Bernhardt V**. Body composition and aerobic fitness levels in college freshmen. ACSM, San Francisco, CA. *MSSE*, 52(5): S683, 2020. Cancelled due to COVID-19.
- 18) \*Ramirez O, **Bernhardt V**. Using Fitbit competitions to increase physical activity in college students. *Johns Hopkins University Richard Macksey National Undergraduate Humanities Research Symposium*. Baltimore, MD, 2020. Presented virtually due to COVID-19
- 19) \*Varone N, **Bernhardt V**. Changes in Body Composition and Aerobic Fitness Levels in College Students' First Semester of Freshman Year. Federation Research Symposium, Denton, TX, 2020.
- 20) \*Varone N, **Bernhardt V**. Changes in Body Composition and Aerobic Fitness Levels in College Students' First Semester of Freshman Year. Texas Chapter of the American

- College of Sports Medicine, Waco, TX. *Int J Exerc Sci*, Conference Proceedings: 2 (12):90, 2020.
- 21) \*Ramirez O, **Bernhardt V**. Using Fitbit competitions to increase physical activity in college students. Texas Chapter of the American College of Sports Medicine, Waco, TX. *Int J Exerc Sci*, Conference Proceedings: 2(12):31, 2020.
  - 22) \*Ramirez O, **Bernhardt V**. Using Fitbit competitions to increase physical activity in college students. *Texas A&M System Pathways Annual Symposium*. Texas A&M International University-Laredo, TX. 2019.
  - 23) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Weight loss decreases dyspnea on exertion and unpleasantness in obese adults. ACSM, Orlando, FL. *MSSE*, 51(6): 534, 2019.
  - 24) \*Herrera G, **Bernhardt V**. Bilateral lean mass and dynamic balance asymmetry in collegiate athletes. ACSM, Orlando, FL. *MSSE*, 51(6): 906, 2019.
  - 25) \*Herrera G, **Bernhardt V**. Bilateral lean mass and dynamic balance asymmetry in collegiate athletes. Federation Research Symposium, Denton, TX, 2019.
  - 26) \*Herrera G, **Bernhardt V**. Bilateral lean mass and dynamic balance asymmetry in collegiate athletes. Texas Chapter of the American College of Sports Medicine, Fort Worth, TX. *Int J Exerc Sci*, Conference Proceedings: 2 (11):49, 2019.
  - 27) Bhammar DM, Wilhite DP, Marines-Price R, **Bernhardt V**, Huet B, Gupta O, Martinez-Fernandez T, Babb TG. Quantifying maximal oxygen uptake using lean body mass in children with obesity. *EB*, Orlando, FL. 2019.
  - 28) **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(S1):913.10, 2018.
  - 29) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Cardiorespiratory fitness of otherwise healthy obese women. ACSM, Minneapolis, MN. *MSSE*, 50(5S):406, 2018.
  - 30) Bhammar DM, **Bernhardt V**, Marines-Price R, Babb TG. Effect of growth and changes in body composition on cycling efficiency in obese and normal weight children. ACSM, Minneapolis, MN. *MSSE*, 50(5S):284, 2018.
  - 31) **Bernhardt V**, Bhammar DM, Marines-Price R, Babb TG. Weight loss improves dyspnea on exertion in obese men. *ATS*, San Diego, CA. *AJRCCM*, 197:A4340, 2018.
  - 32) Bhammar DM, **Bernhardt V**, Marines-Price R, Babb TG. Effect of growth and changes in body composition on pulmonary function in obese and normal weight children. *ATS*, San Diego, CA. *AJRCCM*, 197:A2036, 2018.
  - 33) Babb TG, **Bernhardt V**, Weinstein K, Walker-Williams S, Tomlinson AR. Multidimensional dyspnea profile in patients referred for cardiopulmonary exercise testing. *Dyspnea Society*, Montreal, Quebec, Canada. 2018.
  - 34) \*Quinones F, **Bernhardt V**. Proportion of physically active college students at risk for lower extremity injury. *Texas A&M System Pathways Annual Symposium*. Tarleton State University, Stephenville, TX. 2017.
  - 35) **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. 2017.
  - 36) \*Crane L, Marines-Price R, **Bernhardt V**, Bhammar DM, Babb TG. Obesity, dyspnea on exertion, and health related quality of life in obese men. *Texas Health Presbyterian Hospital Dallas Research & Evidence-Based Practice Poster Fair*. Dallas, TX. 2017.
  - 37) **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.

- 38) Bhammar DM, Stickford J, **Bernhardt V**, Marines-Price R, Bassett JT, Roman MC, Babb TG. Operational lung volumes while seated, supine, and during exercise in obese and nonobese children. *ACSM*, Denver, CO. *MSSE*, 49(5S):16, 2017.
- 39) **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.
- 40) Babb TG, **Bernhardt V**, Bhammar DM, Stickford JL, Bassett JT, Marines-Price R, Roman MC. Fat weight rises but not lean body mass with increased severity of obesity in women. *EB*, San Diego, CA. *FASEB J*, 30:868.10, 2016.
- 41) Marines-Price R, **Bernhardt V**, Bhammar DM, Stickford JL, Bassett JT, Roman MC, Insel K, Babb TG. Unpleasantness and negative emotions related to dyspnea on exertion in obese women. *EB*, San Diego, CA. *FASEB J*, 30:1288.23, 2016.
- 42) Bhammar DM, Stickford JL, Bernhardt V, Kim RJ, Marines-Price R, Bassett JT, Contreras MC, Kreutzer A, Babb TG. Respiratory effects of weight loss or gain over 1 year in obese children. *EB*, San Diego, CA. *FASEB J*, 30:687.5, 2016.
- 43) Babb TG, **Bernhardt V**, Bhammar DM, Stickford JL, Bassett JT, Marines-Price R, Roman MC. Effect of obesity-classification on dyspnea on exertion in obese women. *ATS*, San Francisco, CA. *AJRCCM*, 193:A4513, 2016.
- 44) Bhammar DM, Stickford JL, **Bernhardt V**, Marines-Price R, Bassett JT, Kreutzer A, Roman MC, Babb TG. Dyspnea intensity, descriptors, and negative symptoms during exercise in obese and nonobese children. *ACSM*, San Diego, CA. *MSSE*, 48(5S):455, 2016.
- 45) \*Sataray CS, **Bernhardt V**. The effects of high intensity interval training, in conjunction with functional training equipment, on VO<sub>2</sub>max and peak power in recreationally trained individuals. Texas Chapter of the American College of Sports Medicine, College Station, TX. *Int J Exerc Sci*, Conference Proceedings, 2(8):47, 2016.
- 46) **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. *AJRCCM*, 191:A1732, 2015.
- 47) Bhammar DM, **Bernhardt V**, Stickford JL, Bassett JT, Marines-Price R, Babb TG. Quantification of cardiorespiratory fitness in obese children. *ACSM*, San Diego, CA. *MSSE*, 47(5S):298, 2015.
- 48) **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. *AJRCCM*, 189:A5386, 2014
- 49) **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. *AJRCCM*, 189:A5038, 2014.
- 50) Bhammar DM, **Bernhardt V**, Lorenzo S, Moran RB, Bassett JT, Pineda JN, Genovese JP, Babb TG. Modest weight loss significantly reduces oxygen cost of breathing in obese women. *ATS*, San Diego, CA. *AJRCCM*, 189:A3520, 2014.
- 51) **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.
- 52) Bhammar DM, **Bernhardt V**, Lorenzo S, Moran RB, Bassett JT, Pineda JN, Genovese JP, Babb TG. Weight Loss via Diet and Resistance Exercise Improves Exercise Breathing Mechanics in Obese Women. *ACSM*, Orlando, FL. *MSSE*, 46:9, 2014.

- 53) **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.
- 54) Bassett JT, **Bernhardt V**, Lorenzo S, Moran RB, Haller SF, Pineda JN, Babb TG. Peak oxygen uptake differs between obese women with vs. without dyspnea on exertion. *ACSM*, Indianapolis, IN. *MSSE*, 45(5S):401, 2013.
- 55) Moran RB, **Bernhardt V**, Lorenzo S, Bassett JT, Haller SF, Pineda JN, Babb TG. Pulmonary function does not differ between obese women with and without dyspnea on exertion. *ACSM*, Indianapolis, IN. *MSSE*, 45(5S):401, 2013.
- 56) Pineda JN, **Bernhardt V**, Lorenzo S, Moran RB, Bassett JT, Haller SF, Babb TG. Similar body composition and fat distribution between obese women with vs. without dyspnea on exertion. *ACSM*, Indianapolis, IN. *MSSE*, 45(5S):294, 2013.
- 57) **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.
- 58) Spencer MD, Pineda JN, Haller SF, Moran RB, Lorenzo S, **Bernhardt V**, Bassett JT, Weatherall PT, Babb TG. Reliability of adipose tissue quantification using water suppressed and non-water suppressed MRI in obese women. *EB*, Boston, MS. *FASEB J*, 27:852.12, 2013.
- 59) **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.
- 60) **Bernhardt V**, Straub AM, Lavin KM, Lorenzo S, Babb TG, Zavorsky GS. Arterial PCO<sub>2</sub> (PaCO<sub>2</sub>) can be accurately estimated using end-tidal PCO<sub>2</sub> (P<sub>ET</sub>CO<sub>2</sub>) during rest and exercise in obese subjects. *EB*, San Diego, CA. *FASEB J*, 26:1146.4, 2012.
- 61) **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.
- 62) Babb TG, Haller SF, **Bernhardt V**, Locke KW. Regional body volumes in nonobese and obese women and men. *EB*, San Diego, CA. *FASEB J*, 2012 26:877, 2012.
- 63) Zavorsky GS, **Bernhardt V**, Straub AM, Lavin KM, Babb TG. Accuracy of Non-invasive Estimates of Dead Space/Tidal Volume Ratios during Exercise in Morbidly Obese Subjects. *ACSM*, San Francisco, CA. *MSSE*. 44(5S): 94, 2012.
- 64) **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.
- 65) **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.
- 66) **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.
- 67) **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.
- 68) **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.

- 69) **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. *AJRCCM*, 177. 2008.
- 70) Pate K, Hotchkiss M, **Bernhardt V**, Shahan P, Vovk A, Davenport PW. Tracheal Obstruction Elicited C-Fos Expression in the Somatosensory and Affective Central Neural Pathways. *ATS*, Toronto, Canada. *AJRCCM*, 177, 2008.
- 71) Hotchkiss M, **Bernhardt V**, Pate K, Shahan P, Robertson E, Davenport PW. Respiratory Related Anxiety Induced by Tracheal Obstruction in Conscious Rats. *ATS*, Toronto, Canada. *AJRCCM* 177, 2008.

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## MENTORSHIP

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### *Graduate master's thesis:*

In progress:

1. Raquel Cavazos: The relationship between shoulder mobility and upper body mass on 2-RM bench press in division I collegiate football players. Anticipated graduation May 2024
2. Shelby Gerner: The effect of lower extremity bilateral asymmetries on performance in division I soccer players. Anticipated graduation May 2024
3. Francesca Aquilino. Anticipated graduation August 2024.

Completed:

4. Omar Ramirez: Exercise habits before and during COVID-19 in college students. Graduation August 2022.
  - 1<sup>st</sup> place poster presentation at TAMUC Annual Research Symposium, April 2022.
  - 1<sup>st</sup> place poster presentation at Texas Association for Health, Physical Education, Recreation, and Dance, December 2021.
  - Virtual poster presentation at Federation Research Symposium, April 2021.
  - Virtual poster presentation at Texas ACSM, Feb 2021.
5. Nicole Varone (chair): Changes in Body Composition and Aerobic Fitness Levels of College Students from Freshman to Senior Year. Graduation May 2021.
  - Virtual poster presentation at Federation Research Symposium, April 2021.
  - Submitted for the Texas ACSM manuscript award: "Changes in body composition in college students' first semester". Virtual Feb 2021.
  - Virtual poster presentation at Texas ACSM, Feb 2021.
  - Abstract accepted at ACSM, San Francisco, CA. 2020. (Cancelled due to COVID-19)
  - Abstract accepted at Federation Research Symposium, Denton, TX, April 2020. (Cancelled due to COVID-19)
  - Poster presentation at Texas ACSM, Waco, TX, Feb 2020.
  - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2019.
  - Oral presentation, Student Research Development Award, at Texas ACSM, Fort Worth, TX, Feb 2019.
6. Guadalupe Herrera (chair): Bilateral Asymmetry and Dynamic Balance in Collegiate Athletes.
  - Poster presentation at ACSM, Orlando, FL. 2019.
    - \*Herrera GG and Bernhardt V. Bilateral lean mass and dynamic balance asymmetry in collegiate athletes. ACSM, Orlando, FL. 2019.
  - Poster presentation at Federation Research Symposium, Denton, TX, April 2019
  - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2019
  - Poster presentation at Texas ACSM, Fort Worth, TX, Feb 2019.
    - Herrera GG and Bernhardt V. Bilateral Lean Mass and Dynamic Balance Asymmetry in Collegiate Athletes. *International Journal of Exercise Science: Conference Proceedings*. 2019; 2(11): Article 49.

- 2<sup>nd</sup> place, poster presentation at TAMUS Pathways Annual Symposium, West Texas A&M University, Canyon, TX, Nov 2018
- Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2018
- 7. Ai Ogata (chair): Risk Factors of Medial Tibial Stress Syndrome in Division II Track and Field/Cross-Country Athletes. Graduation May 2019.
- 8. Tanner Crutcher (chair): Thermoregulatory and Cardiovascular Response of Structural Firefighters during Fire Suppression Operations. Expected Graduation May 2019.
  - Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2018
- 9. 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
- 10. 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
- 11. 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
- 12. 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 American College of Sports Medicine Annual Conference, Denver, CO, May 2016.
- 13. 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.
- 14. Christopher Sataray (chair): The Effects of High Intensity Interval Training with Functional Training Equipment on VO<sub>2</sub>max 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 VO<sub>2</sub>max and peak power in recreationally trained individuals. *International Journal of Exercise Science: Conference Proceedings*. 2016; 2(8): Article 47.
  - American Kinesiology Association Masters Scholar Award 2016

### ***Undergraduate honor's thesis:***

In progress:

1. Emily Urban (chair): Super shoes on jumping biomechanics.

Completed:

2. Heaven Dunn (chair): COVID-19 vaccination and exercise habit in college students. (defended on 3/29/2023).
  - Poster presentation at TACSM annual conference. Dunn H, Bernhardt V. COVID-19 Vaccine Effects on Exercise Habits and Attitudes in College Students. Texas Chapter of the American College of Sports Medicine, *Int J Exerc Sci*, Conference Proceedings: 2(15):83, 2023.
  - Poster presentation at TAMUC Annual Research Symposium, April 2023.
3. Lainey Whittle (chair): Exercise mode for the management and improvement of symptoms of fibromyalgia in women: a systematic review. (defended on 12/7/2022).
4. Taryn Cast (committee member): A Biomechanical Assessment of the Drop Vertical Jump with or without Visual Feedback in Collegiate Female Athletes. (defended 11/3/2022).
  - 1<sup>st</sup> place poster presentation at TAMUC Annual Research Symposium, April 2022.
5. Rachel Scarcelli (chair): The use of multi-sensory environments for children with autism spectrum disorder in occupational therapy clinics. (defended on 4/13/2021)
6. 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)

7. 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)
8. Laura Heron (committee member): Athlete and team responses to injury (defended on 4/14/2016)
9. 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)
10. 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:***

1. Marshall Tousant, 2023: Do highly cushioned 'super' shoes have an affect on jump performance?
2. Omar Ramirez, 2019: Can Fitbit competitions increase physical activity in college students?
  - a. Ramirez O, Bernhardt V. Using Fitbit competitions to increase physical activity in college students. *The Macksey Journal*. 2020.
  - b. Presentation at Johns Hopkins University Macksey National Undergraduate Humanities Research Symposium, May 2020. (Virtually due to COVID-19).
  - c. Poster presentation at Texas ACSM, Waco, TX, Feb 2020.
  - d. 1st place, poster presentation at TAMUS Pathways Annual Symposium, Texas A&M International University at Laredo, Nov 2019
3. Fritzi Quinones, 2017-18: Proportion of physically active individuals at risk for lower extremity injury determined by Y-Balance Test
  - a. Oral presentation at TAMUC McNair Showcase, Commerce, TX, Oct 2017
  - b. Poster presentation at TAMUS Pathways Annual Symposium, Tarleton State University, Stephenville, TX, Nov 2017
  - c. Poster presentation at TAMUC Annual Research Symposium, Commerce, TX, April 2018

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**RESEARCH SUPPORT**

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**Submitted**

2023 TAMU system: FY25 Appropriations Request for NIST Scientific and Technical Research and Services  
 Role: Assistant Researcher; PI: Michael Oldham  
 “Biometric Wearables in Affecting First Responders Wellness and Resiliency”  
 \$1,339,000

**Funded**

2021 Texas A&M University-Commerce  
 Humanities, Social Sciences and Arts Research Support  
 Role: Co-Investigator; PI: Michael Oldham  
 “Stress and recovery of first responders”  
 \$9,900

2021 American College of Sports Medicine, Texas Chapter  
 Undergraduate Student Research Development Award  
 Student Investigator: Taryn Cast  
 “Physical Fitness of Texas Law Enforcement Cadets”  
 \$1,000

2019 American College of Sports Medicine, Texas Chapter  
 Student Research Development Award  
 Student Investigator: Nicole Varone, B.S.  
 “Changes in Body Composition and Aerobic Fitness Levels of College Students from Freshman to Senior Year”

\$1,000

2018 American College of Sports Medicine, Texas Chapter  
 Student Research Development Award  
 Student Investigator: Tanner Crutcher, B.S.  
 “Thermoregulatory and cardiovascular response of structural firefighters during  
 clinical simulated conditions”  
 \$750

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## PROFESSIONAL MEMBERSHIPS

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2013 – present American College of Sports Medicine  
 2015 – present Texas Chapter of the American College of Sports Medicine  
 2021 – 2022 International Organization for Health, Sports, and Kinesiology  
 2015 – 2016 National Association for Kinesiology in Higher Education  
 2015 – 2016 Texas Assoc for Health, Physical Education, Recreation & Dance  
 2014 – 2017 American Thoracic Society  
 2011 – 2013 American Heart Association  
 2012 – 2013 International Society for the Advancement of Respiratory Psychophysiology  
 2009 – 2010 Society for Neuroscience  
 2007 – 2018 American Physiological Society

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## SERVICE

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### TAMUC University Committees

- Honors College Committee, member (2015–present)
- Institutional Review Board
  - Member (2017–present)
  - Post-Approval Monitoring reviewer (2022–present)
- Faculty Development Grants Committee, member (2017–present)
- Trio McNair Program (2017–present)
- Faculty Senate, HHP representative (2018–2021)
- Faculty Senate Academic Practices Committee, member (2016–2019)
- Faculty Senate Awards Committee, member (2015–2019)

### TAMUC College of Education and Human Services Committees

- Mentoring Committee, member (2023)
- College Curriculum Committee, member (2014–present)

### TAMUC Department of Health and Human Performance Committees

- Exercise is Medicine-On Campus, supervisor/advisor (2019–present)
- Tenure and Promotion Committee (2020–present)
- Phi Pi Delta HHP majors club, faculty advisor (2023–present)
- Institutional Effectiveness Coordinator for B.S. Kinesiology & Sports Studies (2014–present)
- HHP Kinesiology & Sports Studies-Human Performance committee, chair (2014–present)
- HHP Graduate Program committee, member (2014–present)
- HHP strategic planning committee, member (2014–present)
- HHP scholarship committee, member (2015–2021)

Exercise is Medicine-on Campus initiative

- Recognized by American College of Sports Medicine as Silver Campus 2021, 2022
- Recognized by American College of Sports Medicine as Bronze Campus 2019, 2020
- Organized the Fitness Crawl during EIM-OC Week 2019, 2021, 2022, 2023
- Organized guest speaker Dr. Matt Green during TACSM Fall Lecture Tour, 2021
- Provides workshops on Physical Activity 1-2x per year

2023 Texas Chapter of the American College of Sports Medicine, virtual conference

- Travel with 3 graduate student and 3 undergraduate students
- Poster presentation by master's student Raquel Cavazos
- Poster presentation by undergraduate student Heaven Dunn
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Jorja Bessonett
- Awards Committee member

2022 Texas Chapter of the American College of Sports Medicine, Waco, TX

- Travel with 2 graduate student and 4 undergraduate students
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Taryn Cast

2021 Texas Chapter of the American College of Sports Medicine, virtual conference

- Travel with 3 graduate student and 3 undergraduate students
- Poster presentation by master's student Nicole Varone
- Poster presentation by undergraduate student Omar Ramirez
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Challis Lockett

2020 Texas Chapter of the American College of Sports Medicine, Waco, TX

- Travel with 3 graduate student and 3 undergraduate students
- Poster presentation by master's student Nicole Varone
- Poster presentation by undergraduate student Omar Ramirez
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Linda Ngo

2019 Texas Chapter of the American College of Sports Medicine in Fort Worth, TX

- Travel with 2 graduate student and 5 undergraduate students
- Oral presentation by master's student Nicole Varone
- Poster presentation by master's student Guadalupe Herrera
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Carly Prim
- Awards Committee member

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

- Travel with 1 graduate student and 3 undergraduate students
- Undergraduates competed in Annual Student Bowl Competition
- Major of the Year: Nicole Varone

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

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**CERTIFICATIONS**

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|---|--------------|
| • CPR/AED for Professional Rescuers, American Red Cross   | exp. 11/2024 |
| • Certificate in “Effective College Instruction”, Association of College and University Educators and the American Council on Education | 2021         |
| • Microcredential in “Inclusive Teaching for Equitable Learning”, Association of College and University Educators                       | 2021         |
| • Certified DXA technologist/operator, Hologic  | 2021         |
| • Certificate in Radiation Safety, Advanced Health Education Center   | 2021         |
| • EastTex Community Emergency Response Team   | 2018         |
| • Olympian, World Olympians Association   |              |