ELISA MARROQUIN, Ph.D., M.S.

Assistant Professor
Nutrition Department
Texas Christian University
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CURRENT TITLE

2022 – **Tenure Track Assistant Professor**
Department of Nutritional Sciences
Texas Christian University

2019 – 2022 **Postdoctoral Research Fellow**
University of Texas Health Science Center
Grant number: NIMHD/NIH R01 MD011686. Messiah, SE (PI)

EDUCATION

2015 – 2018 **Ph.D., Exercise Physiology and Nutrition**
Baylor University, Waco, TX, U.S.
Dissertation: "Microbiota Composition in Short Versus Adequate Sleepers"

2013 – 2015 **M.S., Exercise Physiology**
Baylor University, Waco, TX, U.S.
Thesis: "Effect of Pre-Exercise Nutrition on Human Skeletal Muscle UCP-3 Expression"

2008 – 2013 **B.S., Nutrition Science**
Universidad Autónoma de Nuevo León, Monterrey, N.L., México
Thesis: "Effect of Obesity on the Myocardial Leptin Signaling Pathway on Human Cardiac Tissue and Hearts from Animal models with Diet-Induced Obesity"

HONORS AND AWARDS

2022 The Microbiology Society did a press release of the article "Effect of Probiotics on the Human Gut Microbial Diversity and Composition During Antibiotic Treatment: A Systematic Review"
2022 International Conference Scholarship Recipient by the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO)
2022 Abstract Reviewer for The Obesity Society Annual Meeting 2022
2022 Invited Speaker Award by The Academy of Nutrition and Dietetics 2022, Weight Management Annual Meeting
2021 International Ethan Sims Award finalist, The Obesity Society (TOS)
2019 – 2021 Recognized National Scientist Level 1 by the Mexican National Council of Science and Technology (Conacyt)
2017 The Journal of the American College of Nutrition selected our article "Acute and Long-Term Impact of High-Protein Diets on Endocrine and Metabolic Function, Body Composition, and Exercise-Induced Adaptations" as "Trending Research"
2015 – 2018 Scholarship by the National Council of Science and Technology (México)
2013 – 2015 FULBRIGHT Scholarship
2008 – 2013 Graduated with honors, B.S. in Nutrition, UANL
2008 – 2013 Talented Students Program, UANL
Summer 2011 Scholarship for Summer Scientific Research from Mexican Academy of Sciences
Summer 2010 Scholarship for Summer Scientific Research from PROVERICYT, UANL

PROFESSIONAL EXPERIENCE

2018 – 2022 **Part-time Professor**
School of Medicine and Health Sciences
Tecnológico de Monterrey, Monterrey, NL, México

2018 – 2019 **Postdoctoral Researcher**
School of Medicine and Health Sciences
Tecnológico de Monterrey, Monterrey, N.L., México

2013 – 2018 **Graduate Research Assistant**
Exercise and Biochemical Nutrition Laboratory
Baylor University, Waco, TX, U.S.

2012 – 2013 **Nutrition Internship at Health Center**
Francisco Villa Health Center, San Nicolás de los Garza, N.L., México

2012 – 2012 **Nutrition Internship at Hospital**
Christus Muguerza Hospital, Monterrey, N.L., México

2011 – 2013 **Undergraduate Research Assistant**
Cardiology Department and Vascular Medicine
Zambrano Hellion Hospital, San Pedro Garza García, N.L., México

2010 – 2010 **Nutrition Internship at Food Service**
Mexican Economic Development Co., Monterrey, N.L., México

2010 – 2010 **Undergraduate Research Assistant**
School of Nutrition and Public Health
Universidad Autónoma de Nuevo León, Monterrey, N.L. México

PUBLICATIONS IN PEER-REVIEWED JOURNALS

27) Tang, M. and **Marroquin, E.** Material Obesity Potentially Regulating Offspring's Obesity by Acting Through the Gut Microbiota. *Accepted for publication in Frontiers in November, 2022.*

26) Fernández-Alonso M, Aguirre Camorlinga A, Messiah SE, Marroquin E. Effect of adding probiotics to an antibiotic intervention on the human gut microbial diversity and composition: a systematic review. J Med Microbiol. 2022 Nov;71(11). doi: 10.1099/jmm.0.001625.

25) Murvelashvili, N., Xie, L., Schellinger, J. Mathew, M., **Marroquin, E.,** Lingvay, I., Messiah, S.E., and Almandoz, J. Effectiveness of Semaglutide vs. Liraglutide for Treating Post-Metabolic and Bariatric Surgery Weight Recurrence. *Accepted for publication in JAMA Surgery in November, 2022.*

24) Graybeal, A.J., Willis, J.L., **Morales-Marroquin, E.**, Tinsley, G.M., Messiah, S.E., & Shaha M. Emerging evidence of the relationship between fat-free mass and ghrelin, glucagon-like peptide-1, and peptide-YY. *Nutrition.*doi.org/10.1016/j.nut.2022.111815.

23) Almandoz JP, Xie L, Schellinger JN, Mathew MS, **Marroquin EM**, Murvelashvili N, Khatiwada S, Kukreja S, McAdams C, Messiah SE. Changes in body weight, health behaviors, and mental health in adults with obesity during the COVID-19 pandemic. *Obesity (Silver Spring).* 2022 Jun 30. doi: 10.1002/oby.23501.

22) Messiah, S.E., Xie, L., Mathew, M.S. **Morales-Marroquin, E.**, et al. Impact of the COVID-19 Pandemic on Metabolic and Bariatric Surgery Utilization and Safety in the United States. (2022). *Obes Surg.* doi.org/10.1007/s11695-022-06077-x

21) **Morales-Marroquin E**, Khatiwada S, Xie L, et al. Five Year Trends in the Utilization of Robotic Bariatric Surgery Procedures, United States 2015-2019 (2022). *Obes Surg*. 2022;10.1007/s11695-022-05964-7. doi:10.1007/s11695-022-05964-7

20) Knell, G., Li, Q., **Morales-Marroquin, E**., Drope, J., Gabriel, K.P., & Shuval, K. (2021) Physical Activity, Sleep, and Sedentary Behavior among Successful Long-Term Weight Loss Maintainers: Findings from a U.S. National Study. *Int. J. Environ. Res. Public Health*, 18, 5557. doi.org/10.3390/ijerph18115557

19) Shuval K, **Marroquin EM,** Li Q, Knell G, Pettee Gabriel K, Drope J, Yaroch AL, Chartier KG, Fennis BM, Qadan M. Long-term weight loss success and the health behaviours of adults in the USA: findings from a nationally representative cross-sectional study. *BMJ Open*. 2021 Jul 14;11(7):e047743. doi: 10.1136/bmjopen-2020-047743.

18) **Morales-Marroquin, E.,** Xie, L., Uppuluri, M., Almandoz, J. P., Cruz-Muñoz, N., & Messiah, S. E. (2021). Immunosuppression and Clostridium difficile Infection Risk in Metabolic and Bariatric Surgery Patients. *Journal of the American College of Surgeons*, S1072-7515(21)00342-2. Advance online publication. doi.org/10.1016/j.jamcollsurg.2021.04.028

17) Arrona Cardoza P, Spillane MB, & **Morales Marroquin E**. (2021) Alzheimer's disease and gut microbiota: does trimethylamine N-oxide (TMAO) play a role? *Nutr Rev.* doi: 10.1093/nutrit/nuab022. PMID: 33942080.

16) Srikanth, N., Xie, L., **Morales-Marroquin, E.**, Ofori, A., de la Cruz-Munoz, N., & Messiah, S. E. (2021). Intersection of smoking, e-cigarette use, obesity, and metabolic and bariatric surgery: a systematic review of the current state of evidence. *J Addict Dis*, 1-19. doi:10.1080/10550887.2021.1874817

15) **Morales-Marroquin, E**., Xie, L., Meneghini, L., de la Cruz-Munoz, N., Almandoz, J. P., Mathew, S. M., . . . Messiah, S. E. (2021). Type 2 Diabetes and HbA1c Predict All-Cause Post-Metabolic and Bariatric Surgery Hospital Readmission. *Obesity* (Silver Spring), 29(1), 71-78. doi:10.1002/oby.23044

14) **Morales-Marroquin, E.**, Kohl, H. W., 3rd, Knell, G., de la Cruz-Munoz, N., & Messiah, S. E. (2020). Resistance Training in Post-Metabolic and Bariatric Surgery Patients: a Systematic Review. *Obes Surg*, 30(10), 4071-4080. doi:10.1007/s11695-020-04837-1

13) **Morales-Marroquin, E.**, Hanson, B., Greathouse, L., de la Cruz-Munoz, N., & Messiah, S. E. (2020). Comparison of methodological approaches to human gut microbiota changes in response to metabolic and bariatric surgery: A systematic review. *Obes Rev*, 21(8), e13025. doi:10.1111/obr.13025

12) **Morales, E.**, Chen, J., & Greathouse, K. L. (2019). Compositional Analysis of the Human Microbiome in Cancer Research. *Methods Mol Biol*, 1928, 299-335. doi:10.1007/978-1-4939-9027-6_16

11) Hwang, P., **Morales Marroquin, F.E.**, Gann, J., Andre, T., McKinley-Barnard, S., Kim, C., . . . Willoughby, D. S. (2018). Eight weeks of resistance training in conjunction with glutathione and L-Citrulline supplementation increases lean mass and has no adverse effects on blood clinical safety markers in resistance-trained males. *J Int Soc Sports Nutr*, 15(1), 30. doi:10.1186/s12970-018-0235-x

10) Liu, D., **Morales, F.E.**, IglayReger, H.B., Treutelaar, M. K., Rothberg, A.E., Hubal, M.J., . . . Gordon, P.M. (2018). Expression of macrophage genes within skeletal muscle correlates inversely with adiposity and insulin resistance in humans. *Appl Physiol Nutr Metab*, 43(2), 187-193. doi:10.1139/apnm-2017-0228
**Selected as "the Editor's Choice" by the Applied Physiology, Nutrition, and Metabolism Journal*

9) Tinsley, G.M., Forsse, J.S., **Morales, E.**, & Grandjean, P.W. (2018). Dual-energy X-ray absorptiometry visceral adipose tissue estimates: reproducibility and impact of pre-assessment diet. *Eur J Clin Nutr*, 72(4), 609-612. doi:10.1038/s41430-017-0038-1

8) Ismaeel, A., Weems, S., McClendon, M., & **Morales, F. E.** (2018). Interventions Aimed at Decreasing Obesity in Hispanic Children in the First 1000 Days: A Systematic Review. *J Immigr Minor Health,* 20(5), 1288-1293. doi:10.1007/s10903-017-0672-7

7) **Morales Marroquín, F.E.,** & Willoughby, D. (2017) "Exercise and Dietary Factors Affecting the Microbiota: Current Knowledge and Future Perspectives" *Journal of Nutritional Health and Food Engineering.* DOI: 10.15406/jnhfe.2017.06.00199

6) **Morales, F. E. M**., Tinsley, G. M., & Gordon, P. M. (2017). Acute and Long-Term Impact of High-Protein Diets on Endocrine and Metabolic Function, Body Composition, and Exercise-Induced Adaptations. *J Am Coll Nutr*, 36(4), 295-305. doi:10.1080/07315724.2016.1274691
** Selected as "Trending Research" by the Journal of the American College of Nutrition*

5) **Morales, F.E.,** Forsse, J.S., Andre, T.L., McKinley-Barnard, S.K., Hwang, P.S., Anthony, I.G., . . . Willoughby, D. S. (2017). BAIBA Does Not Regulate UCP-3 Expression in Human Skeletal Muscle as a Response to Aerobic Exercise. *J Am Coll Nutr*, 1-10. doi:10.1080/07315724.2016.1256240

4) Tinsley, G.M., **Morales, E.**, Forsse, J.S., & Grandjean, P.W. (2017). Impact of Acute Dietary Manipulations on DXA and BIA Body Composition Estimates. *Med Sci Sports Exerc*, 49(4), 823-832. doi:10.1249/MSS.0000000000001148

3) Hwang, P.S., Andre, T.L., McKinley-Barnard, S.K., **Morales Marroquin, F.E.**, Gann, J. J., Song, J.J., & Willoughby, D.S. (2017). Resistance Training-Induced Elevations in Muscular Strength in Trained Men Are Maintained After 2 Weeks of Detraining and Not Differentially Affected by Whey Protein Supplementation. *J Strength Cond Res*, 31(4), 869-881. doi:10.1519/JSC.0000000000001807

2) **Marroquín, F.E.M.**, & Willoughby, D.S. (2015) "Factors Regulating Uncoupling Protein-3 Expression in Skeletal Muscle". *Journal of Nutritional Health and Food Engineering* 3(1): 00101. doi: 10.15406/jnhfe.2015.03.00101

1) Riojas-Hernandez, A., Bernal-Ramirez, J., Rodriguez-Mier, D., **Morales-Marroquin, F. E.,** Dominguez-Barragan, E. M., Borja-Villa, C., . . . Garcia, N. (2015). Enhanced oxidative stress sensitizes the mitochondrial permeability transition pore to opening in heart from Zucker Fa/fa rats with type 2 diabetes. *Life Sci*, 141, 32-43. doi:10.1016/j.lfs.2015.09.018

MANUSCRIPTS UNDER REVIEW

4) Ngenge, S., Xie, L., McAdams, C., Almandoz, J. P., Mathew, S.M., Schellinger, J.N., Kapera, O., Marroquin, E., Francis, J., Kukreja, S., Schneider, B.E., Messiah, S.E., Depression and anxiety as predictors of metabolic and bariatric surgery completion among ethnically diverse patients (Submitted to Journals of Eating Disorders)

3) Kapera, O., **Marroquin, E**., Almandoz, J.P., Cruz-Munoz, N., Xie, L., Srikanth, N., Ngenge, S., and Messiah. The Role of Body Appreciation in the Decision to Pursue Metabolic and Bariatric Surgery Among Ethnically Diverse Patients

2) Ngenge, S., Kapera, O., **Marroquin, E**., Almandoz, J.P., Cruz-Munoz, N., Xie, L., Srikanth, N., and Messiah. Impact of Metabolic and Bariatric Surgery on Maternal and Perinatal Outcomes Among Ethnically Diverse Women: A Scoping Review

1) Muñoz Mireles, G., Mantzios, M., Schellinger, J. N., Messiah, S. E., and **Morales Marroquin, E**. Mindful and Intuitive Eating as Tools for Diabetes Prevention and Management: A Review of Potential Mechanisms of Action *(Submitted to Mindfulness in November 2022)*

MANUSCRIPTS IN PREPARATION

1) Aguirre Camorlinga, A., Srikanth, N., Messiah, S.E., and **Morales-Marroquin, E**. Effect of Fiber Intake on Cardiovascular Diseases by Acting Through the Gut Microbiota.

PRESS-RELEASE

Nov 2022 Article "Effect of Probiotics on the Human Gut Microbial Diversity and Composition During Antibiotic Treatment: A Systematic Review."

Statistics up to Nov 19th, 2022, the paper has been ranked by the Microbiology Society as:

- One of the highest-scoring outputs from this source (#4 of 2,765)
- High Attention Score compared to outputs of the same age and source (99th percentile)
- High Attention Score compared to outputs of the same age (98th percentile)
- In the top 5% of all research outputs scored by Altmetric

Link to current paper stats. (https://microbiologyresearch.altmetric.com/details/138502635)

30 News Outlets created articles about our publication:

Microbiology Society (https://microbiologysociety.org/news/press-releases/take-probiotics-alongside-antibiotics-says-first-review.html)

American Association for the Advancement of Science (AAAS) (https://www.eurekalert.org/news-releases/971242)

The Pharmaceutical Journal (Official Journal of the Royal Pharmaceutical Society (https://pharmaceutical-journal.com/article/news/probiotics-should-be-considered-when-prescribing-antibiotics-systematic-review-finds)

Science Daily (https://www.sciencedaily.com/releases/2022/11/221116090004.htm)

UK Today News (https://todayuknews.com/health/taking-probiotics-alongside-prescribed-antibiotics-could-reduce-damage-to-gut-microbiome/)

Genetic Engineering & Biotechnology Tools (https://www.genengnews.com/topics/translational-medicine/probiotics-taken-with-antibiotics-reduce-damage-to-gut-microbiome/)

Science News Net England (https://sciencenewsnet.in/take-probiotics-alongside-your-prescribed-antibiotics-to-reduce-damage-to-your-gut-microbiome-says-the-first-review-of-the-data/)

News Medical (https://www.news-medical.net/amp/news/20221116/Taking-probiotics-alongside-antibiotics-can-prevent-or-lessen-damage-to-gut-microbiome-composition.aspx)

Medical News Today (medicalnewstoday.com/articles/probiotics-may-offset-gut-damage-caused-by-antibiotics)

Verve Times (https://vervetimes.com/take-probiotics-alongside-your-prescribed-antibiotics-to-reduce-damage-to-your-gut-microbiome-says-the-first-review-of-the-data-sciencedaily/)

Mirage (https://www.miragenews.com/take-probiotics-alongside-your-prescribed-897043/)

Health Reporter (https://health-reporter.news/probiotics-may-offset-gut-damage-caused-by-antibiotics/)

MD Edge (https://www.mdedge.com/internalmedicine/article/259518/lotme/give-bacterial-diversity-chance-antibiotic-dichotomy)

EX Bulletin (https://exbulletin.com/world/health/1918460/)

Study Finds (https://studyfinds.org/probiotics-antibiotics-microbiome/)

Big News Network (https://www.bignewsnetwork.com/news/273103870/experts-advice-taking-probiotic-along-with-antibiotic-to-reduce-damage-to-gut-microbiome)

News Wise (https://www.newswise.com/articles/take-probiotics-alongside-your-prescribed-antibiotics-to-reduce-damage-to-your-gut-microbiome-says-the-first-review-of-the-data)

The Print (https://theprint.in/health/experts-advice-taking-probiotic-along-with-antibiotic-to-reduce-damage-to-gut-microbiome/1220417/)

Ask By Geeks (https://www.nach-welt.com/die-einnahme-von-probiotika-zusammen-mit-antibiotika-kann-schaden-an-der-zusammensetzung-des-darmmikrobioms-verhindern-oder-verringern/)

Latestly (https://www.latestly.com/agency-news/health-news-experts-advice-taking-probiotic-along-with-antibiotic-to-reduce-damage-to-gut-microbiome-4468374.html)

Medical Xpress (https://medicalxpress.com/news/2022-11-probiotics-antibiotics-gut-microbiome.html)

newKerala.com (https://www.newkerala.com/news/2022/145976.htm)

Swift Telecast (https://swifttelecast.com/take-probiotics-alongside-your-prescribed-antibiotics-to-reduce-damage-to-your-gut-microbiome-says-the-first-review-of-the-data-sciencedaily/)

NewsAzi (https://newsazi.com/take-probiotics-alongside-your-prescribed-antibiotics-to-reduce-damage-to-your-gut-microbiome-says-the-first-review-of-the-data/)

Devdiscourse (https://www.devdiscourse.com/article/health/2254345-experts-advice-taking-probiotic-along-with-antibiotic-to-reduce-damage-to-gut-microbiome)

Revyuh (https://www.revyuh.com/news/lifestyle/health-and-fitness/are-antibiotics-hurting-your-gut-a-simple-thing-you-can-do-to-avoid-the-damage-new-research/)

Other Languages:

Galileo [Italian] (https://www.galileonet.it/probiotici-antibiotici-microbiota/)

Pourquoi Docteur [French](https://www.pourquoidocteur.fr/Articles/Question-d-actu/41326-Antibiotiques-reduire-impact-microbiote)

Aponet.DE [German](https://www.pourquoidocteur.fr/Articles/Question-d-actu/41326-Antibiotiques-reduire-impact-microbiote)

Nach Welt [German] (https://www.nach-welt.com/die-einnahme-von-probiotika-zusammen-mit-antibiotika-kann-schaden-an-der-zusammensetzung-des-darmmikrobioms-verhindern-oder-verringern/)

BOOK CHAPTERS

2) **Morales, E.**, Pecoriello, J., & Shuval, K. (2021) Models of Behavior Modification for Diet and Activity Patterns, and Weight Management. Nutrition in Clinical Practice, 4th Edition, Edited by David Katz. Wolters Kluwer. *ISBN-13: 978-1975161491; ISBN-10: 1975161491*

1) Peterson, M.D., Gordon, P.M., & **Morales, F.E.** (2019). Exercise Prescription in Metabolic Syndrome. Clinical Exercise Physiology. 4th ed. Human Kinetics.

POSTER PRESENTATIONS

15) **Morales-Marroquin, E.,** Xie, L., Uppuluri, M., Almandoz, J. P., Cruz-Muñoz, N., & Messiah, S. E. (2021). Immunosuppression and Clostridium difficile Infection Risk in Metabolic and Bariatric Surgery Patients. International Federation for the Surgery of Obesity. Presential conference August 2022. Awarded a conference trip.

14) **Morales-Marroquin E**, Khatiwada S, Xie L, de la Cruz-Muñoz N, Kukreja S, Schneider B, and Messiah SE. Five-year Trend Utilization of Robotic-Assisted Bariatric Surgeries - MBSAQIP data. Accepted as a platform presentation for the 2021 Obesity Week Virtual Conference on November 1-4, 2021.

13) **Morales, E.**, Fletcher, E., Scullin, M.K., Gordon, P., & Greathouse, L. (2018). Association between sleep quality and microbiome composition. *International Microbiome Consortium* meeting, Ireland.

12) Umstattd Meyer, M.R., Bridges, C.N., Prochnow, T., Arnold, K.T., McClendon, M.E., Wilkins, E., **Morales, F.E.,** Benavidez, G.A., Williams, T.D., Abildso, C. & Pollack Porter, K. (2018). Come together, play, be active: Physical activity engagement of children at Play Streets in four diverse rural communities. *American Academy of Health Behavior*. Portland, OR.

11) Umstattd Meyer, M.R., Bridges, C.N., Prochnow, T., Arnold, K.T., McClendon, M.E., **Morales, F.E.,** Benavidez, G., Williams, T.D., Abildso, C., & Pollack Porter, K.M. Let them play: Physical activity of children attending Play Streets in four diverse rural communities. (2018). *Annual Active Living Research*. Banff, CAN.

10) Tinsley, G.M., Forsse, J.S., **Morales Marroquín, F.E.**, & Grandjean, P.W. (2016) Bias Between DXA and BIA Varies Based on Quantity of Fat Mass and Fat-Free Mass". *American College of Sports Medicine,* Denver, CO.

9) Forsse, J.S., Tinsley, G.T., **Morales Marroquín, F.E.**, & Grandjean, P.W. (2016) Impact of Acute Dietary Manipulations on Dual-Energy X-ray Absorptiometry Estimates of Visceral Adipose Tissue. *American College of Sports Medicine*, Denver, CO.

8) Hwang, P.S., Andre, T., McKinley, S., Gann, J., **Morales, E.**, Tinsley, G.M., & Willoughby, D.S. (2016) Effects of detraining and retraining on muscular strength and hypertrophy in trained males are not impacted by whey protein supplementation. *National Strength and Conditioning Association*, New Orleans, LA.

7) **Morales Marroquín, F.E.**, Forsse, J., Andre, T., McKinley-Barnard, S., Hwang, P., Tinsley, G., Davis, J., Spillane, M., Grandjean, P., & Willoughby, D. (2016) β-aminoisobutyric Acid Does Not Regulate Exercise-Induced UCP-3 Expression In Skeletal Muscle. *International Society of Sports Nutrition*, Clearwater, FL.

6) Hwang, P.S., Andre, T., McKinley, S., Gann, J., **Morales, E.**, Tinsley, G.M., and Willoughby, D.S. (2016) The Effects of Short Term Detraining and Subsequent Retraining in Males with Whey Protein or Carbohydrate Supplementation on Body Composition and Muscle Performance. *American College of Sports Medicine,* Texas Meeting, College Station, TX.

5) Forsse, J.S., Papadakis, Z., Bane, A.A., **Morales Marroquín, F.E.**, & Grandjean, P.W. Brachial Artery FMD and Endothelial Responses to High-Intensity Interval and Steady-State Moderate-Intensity Exercise. (2016). Medicine and Science in Sports and Exercise, Vol. 48 (5). *American College of Sports Medicine*, Boston, MA.

4) **Morales Marroquín, F.E.**, Forsse, J., Andre, T., McKinley-Barnard, S., Hwang, P., Tinsley, G., Davis, J., Spillane, M., Grandjean, P., & Willoughby, D. (2016) Effect of Pre-Exercise Nutrition on Human Skeletal Muscle UCP3 Expression. *Advances in Skeletal Muscle Biology in Health and Disease*, Gainesville FL.

3) Papadakis, Z., Forsse, J.S., Bane, A., Kyle, T., Qian, L., **Morales Marroquín, F.E**., & Grandjean, P.W. (2015) High-Density Lipoprotein Antioxidant Responses to High-Intensity Interval and Steady-State Moderate-Intensity Exercise, Medicine and Science in Sports and Exercise, Vol. 47 (5). *American College of Sports Medicine* International Meeting, San Diego, CA

2) Forsse, J.S., Papadakis, Z., Bane, A.A., Taylor, J.K., Qian, L., **Morales Marroquín F.E**., & Grandjean P.W. (2015) 3-Nitrotyrosine and Soluble Vascular and Intracellular Adhesion Molecule Responses to High-Intensity Interval and Steady-State Moderate-Intensity Exercise, Medicine and Science in Sports and Exercise, Vol. 47 (5). *American College of Sports Medicine* International Meeting, San Diego, CA

1) Riojas, A., **Morales-Marroquín, F.E.**, García-Rivas, G., & García, N. (2012) Obesity generates metabolic alterations in the myocardium leading to changes in mitochondrial membrane permeability. Volume 1817, Supplement, Page S122, ISSN 0005-2728. *European Bioenergetics Conference*, Freiburg im Breisgau, Germany.

INVITED SPEAKER ENGAGEMENTS

23) "My transition from RD to a scientist." Tec3D, EMCS región Centro-Sur. Tecnológico de Monterrey *(Online).* November 2022

22) "Interval Exercise Influence on the Microbiome Gut-Brain Axis" *(Online).* Universidad Autónoma de Baja California. September 2022

21) "Exercise and the gut microbiota" *(Online).* Federación Centroamericana y del Caribe de Obesidad y Metabolismo (FECCOM), Sociedad Mexicana de Obesidad (SMO), Asociación Mexicana de Nutriología, Sociedad Española de Obesidad (SEEDO), Consulado de Colombia en Madrid, and Observatorio de la Diplomacia. October 2022 (Available on YouTube: https://youtu.be/HpSsAEciZKc)

20) "Weight Training Post-Bariatric Surgery" (*Online).* Mexican Society of Obesity. June 2022

19) "Role of the Gut Microbiota Regulating Body Weight" (*In Person*). Texas American College of Sports Medicine. February 2022

18) "Sports Supplements" (*Online*). Nutrition Department. Universidad Autónoma de Nuevo León. February 2022.

17) "Exercise Prescription for Patients with Cardiometabolic Syndrome" *(Online).* Mexican Nutrition Association. December 2021

16) "Weight Training and Health" Global Health, *(Online).* November 2021

15) "Gut Microbiota and Obesity" International Society of Sports Nutrition Annual Conference *(Online)*. February 2021.

14) "Exercise Prescription in Obesity" World Obesity Federation, Monterrey, México. September 2019.

13) "High Protein Diet and its Effects on Body Composition" Mexican Society of Obesity, Monterrey, México. September 2019.

12) "Effectiveness and Safety of Sports Supplements" School of Nutrition and Public Health, Monterrey, México. September 2019.

11) Talk 1 - "Carbohydrate loading in sports", Talk 2 - "Supplementation in strength-related sports" Talk 3 - "Macronutrient distribution in athletes" Nutrition, Health and Sports International Congress, Cancún, México. May 2019.

10) "Impact of Acute Dietary Manipulations on DXA and BIA Body Composition" Nutrition Journal Club, Medicine School, Tecnológico de Monterrey, Monterrey, NL, México. April 2019

9) "Exercise Based on Goals" Fit-Friday, Tecnológico de Monterrey, Monterrey, NL, México. April 2019.

8) "Scientific Basis of the Effect of High Protein Diets on Body Composition" Mexican Society of Obesity and Medicine School, Universidad Autónoma de Nuevo León, NL, México. March 2019.

7) "Protein Supplements and their Effect on Body Composition" Feed your Brain, Tecnológico de Monterrey, Monterrey, NL, México. February 2019.

6) "Microbiota and Obesity – Scientific Basis" Medicine School, Tecnológico de Monterrey, Monterrey, NL, México. October 2018.

5) "Correct Use of Protein Supplements in Exercise" Universidad Autónoma de Baja California, California, México. April 2018.

4) Coffee for Science: "Correct Use of Protein Supplements" Mexican College of Dietitians, Monterrey, NL, México. March 2018 .

3) "Effect of Sleep Time and Quality on Body Composition" Universidad Autónoma de California Ensenada, California, México. October 2017.

2) "Correct Use of Protein Supplements in Exercise: Metabolic and Physiologic Effects" & workshop "Use of Protein Supplements to Maximize their Effect on Exercise" Universidad Autónoma de Querétaro, Querétaro, México. October 2017.

1) "The Metabolic Effects of a High Protein Diet on Body Composition" International Conference on Nutrition, Physical Activity and Sports, Monterrey, N.L., México. February 2016.

RESEARCH SUPPORT

Current

1) **R01MD011686 - Socioecological Factors Associated With Ethnic Disparities In Bariatric Surgery Utilization - DEIA Mentorship Supplement**
Role: Co-PI
Total funding: $406,558
Years: Start Date: July 2022 – End Date: January 2023
Source of funding: National Institute On Minority Health and Health Disparities

Completed

6) **Validation of 1,5-Anhidroglucitol in Saliva as a Method to Screen for Diabetes Mellitus**
Role: Research coordinator
Total funding: 62,000 USD
Years: 2019-2020
Source of Funding: FEMSA (Fomento Económico Mexicano, S.A.B. de C.V.)

5) **Can Microbiota Composition in the Gut Influence Metabolic Syndrome Risk in the Chronically Sleep Deprived?**
Role: PI
Total funding: 5,000.00 USD
Years: 2018-2019
Source of funding: Baylor University – URC (small-range)

4) **Sleep Duration and Microbiota Composition**
Role: PI
Total funding: 3,000.00 USD
Years: 2018-2019
Source of funding: Health, Human Performance and Recreation Department, Baylor University

3) **Association Between Sleep Duration and Quality with Microbiota Composition and Functionality**
Role: PI
Total funding: 1,500.00 USD
Years: 2018-2019
Source of funding: Texas American College of Sports Medicine – Student Research Development Grant Award

2) **Effect of Pre-Exercise Nutrition and Body Composition on Irisin Expression**
Role: PI
Total funding: 5,000.00 USD
Years: 2014-2015
Source of funding: University Research Committee, Baylor University

1) **BAIBA Expression in Human Skeletal Muscle**
Role: PI
Total funding: 1,500.00 USD
Years: 2014-2015
Source of funding: Health, Human Performance and Recreation Department, Baylor University

Under Revision

2) **UT Southwestern Nutrition & Obesity Research Center (NORC)**
Role: Co-I
Total funding: 50,000
Years: 2022-2023
Source: UT Southwestern Nutrition & Obesity Research Center (NORC)

1) **Implementation and Efficacy Outcomes of Telehealth-Delivery of Multidisciplinary Obesity Care Among Ethnic Minority Patients**
Role: Co-I
Total funding: ~500,000 USD
Years: Start Date: July, 2023 – End Date: June, 2028
Source of funding: R01, NIMHD - NIH

Previously Submitted as PI, Not Funded

9) **Effect of a Next-Generation Synbiotic on Body Weight, Insulin Resistance, and Hunger/Satiety Hormones in Subjects with Obesity (Application ID = 1R01DK000000-00)**
Role: PI
Total funding: 913,671 USD
Years: 2023-2026
Source of Funding: R01, NIDDK – NIH

8) **Can Gut Microbial Composition Predict Glycemic and Weight Loss in T2DM?**
Role: PI
Total funding: 271,200 USD
Years: 2023-2025
Source of Funding: Eli Lilly Company

7) **Role of the Blood and Gut Microbiotas Regulating the Effect of a Cardiovascular and Resistance Exercise Intervention in Breast Cancer Survivors (Application ID = 1R21CA270758-01)**
Role: PI
Total funding: 478,152 USD
Years: 2023-2025
Source of Funding: R21, NIMHD – NIH

6) **Implementation and effectiveness of a very low-calorie diet program in a multi-ethnic cohort of women with obesity and type 2 diabetes mellitus**
Role: PI
Total funding: 414,000 USD
Years: 2022-2025
Source of Funding: American Diabetes Association

5) **Role of the Blood and Gut Microbiotas in Regulating the Effect of a Cardiovascular and Resistance Exercise Intervention in Breast Cancer Survivors (Application ID = 1R21CA270758-01)**
Role: PI
Total funding: 398,962 USD
Years: 2022-2025
Source of Funding: R21, NCI – NIH
Impact Score: 43
Percentile: 44

4) **Microbial Composition in Patients with Obesity and in Response to Metabolic and Blood Bariatric Surgery (Application ID = 1R01AI165591-01)**
Role: PI
Total funding: 1;827,580 USD
Years: 2021-2026
Source of Funding: R01 for Early Career Investigators, NHLBI – NIH
Impact Score: 72
Percentile: 53

3) **Effect of Gut Probiotics on Weight Loss and Insulin Resistance After Bariatric Surgery Among Non-Hispanic Blacks (Application ID = 1K99MD016428-01A1)**
Role: PI
Total funding: 1;003,500 USD
Years: 2021-2026
Source of Funding: K99 NIMHD – NIH
Impact Score: 46
Percentile: Not reported

2) **Gut Metabolism in Response to Bariatric Surgery: Are There Differences Between Hispanics in México and Hispanics in the United States?**
Role: PI
Total funding: 100,000 USD
Years: 2020-2021
Source of Funding: CONTEX Grants

1) **Hanna H. Gray - Howard Hughes Fellowship**
Role: PI
Total funding: 320,000 USD
Years: 2020-2024
Source of Funding: Howard Hughes Medical Institute

RESEARCH MENTORING EXPERIENCE

Years	Student	University	Department	Level
2022 – Current -	Megan McArthur	UT Southwestern	Medicine School	Graduate
2022 – Current	Yasmin Hamad	University of Texas	School of Public Health	Graduate
2022 – Current	Eleni T-Giorgs	University of Texas	School of Public Health	Graduate
2022 – 2023	Swapnil Gupta	University of Texas Health	School of Public Health	Graduate
Summer 2022	Tang Mabel	Rice University	Biochemistry & Cell Biology	Undergraduate
Summer 2022	Hannah Ceron	University of Texas Rio Grande	Biomedical Sciences	Undergraduate
Summer 2022	Brandon Kelley	UT Southwestern Medical Center	Nutrition	Graduate
2021 – Current	Guillermo Muñoz Mireles	Tecnológico de Monterrey	Medicine and Health Sciences	Undergraduate
2020 – Current	Andrea Aguirre Camorlinga	Tecnológico de Monterrey	Medicine and Health Sciences	Undergraduate
2020 – 2022	Melissa Fernández Alonso	Tecnológico de Monterrey	Medicine and Health Sciences	Undergraduate
2018 – 2020	Pablo Arrona Cardoza	Tecnológico de Monterrey	Medicine and Health Sciences	Undergraduate
2018 – 2019	Greta Patiño Gonzáles	Tecnológico de Monterrey	Medicine and Health Sciences	Undergraduate

TEACHING EXPERIENCE

Texas Christian University

Year	Course	Role	Mode	Level	Sections
2022	Experimental Food Science	Instructor of record	In person	Undergraduate	1
2022	Integrative Functional Nutrition and Nutritional Genomics	Instructor of record	In person	Graduate	1

University of Texas

Year	Course	Role	Mode	Level	Sections
2021	Nutrition in Public Health	Invited speaker	Online	Graduate	1

Universidad Autónoma de Nuevo León

Year	Course	Role	Mode	Level	Sections
2021	Exercise and Genetics	Invited speaker	Online	Graduate	1

Tecnológico de Monterrey

Year	Course	Role	Mode	Level	Sections
2022	Exercise Physiology	Co-Instructor (30%)	Online	Undergraduate	1
2022	Nutrition and Physical Performance	Co-Instructor (30%)	Online	Undergraduate	1
2022	Exercise Program Design	Co-Instructor (30%)	Online	Undergraduate	2
2022	Clinical Exercise Prescription	Co-Instructor (30%)	Online	Undergraduate	1
2022	Medical Nutrition Therapy	Co-Instructor (30%)	Online	Undergraduate	1
2021	Nutrigenetics	Co-Instructor (65%)	Online	Undergraduate	1
2021	Nutrigenomics	Co-Instructor (30%)	Online	Undergraduate	1
2021	Clinical Exercise Prescription	Co-Instructor (30%)	Online	Undergraduate	1
2021	Medical Nutritional Therapy	Co-Instructor (30%)	Online	Undergraduate	1
2021	Exercise Physiology	Co-Instructor (50%)	Online	Undergraduate	1
2021	Exercise Program Design	Co-Instructor (50%)	Online	Undergraduate	1
2020	Medical Nutritional Therapy in Obesity and Metabolic Syndrome	Co-Instructor (50%)	Online	Undergraduate	1
2019	Exercise Physiology	Instructor of record	In-Person	Undergraduate	1
2019	Exercise Program Design	Instructor of record	In-Person	Undergraduate	2
2018	Exercise Physiology	Instructor of record	In-Person	Undergraduate	1
2018	Methods in Physical Activity	Instructor of record	In-Person	Undergraduate	1
2018	Basics in Nutrition and Exercise	Instructor of record	In-Person	Undergraduate	1

Baylor University

Year	Course	Role	Mode	Level	Sections
2018	Exercise Physiology Laboratory	Instructor of record	In-Person	Undergraduate	2
2018	Human Physiology Laboratory	Instructor of record	In-Person	Undergraduate	2
2018	Anatomy Laboratory	Instructor of record	In-Person	Undergraduate	2
2017	Exercise Physiology Laboratory	Instructor of record	In-Person	Undergraduate	2
2017	Human Physiology Laboratory	Instructor of record	In-Person	Undergraduate	2
2017	Anatomy Laboratory	Instructor of record	In-Person	Undergraduate	2
2016	Exercise Physiology Laboratory	Instructor of record	In-Person	Undergraduate	2
2016	Human Physiology Laboratory	Instructor of record	In-Person	Undergraduate	2
2016	Anatomy Laboratory	Instructor of record	In-Person	Undergraduate	2
2015	Weight Control	Instructor of record	In-Person	Undergraduate	4
2015	Fitness Theory and Practice	Instructor of record	In-Person	Undergraduate	4
2014	Weight Control	Instructor of record	In-Person	Undergraduate	4
2014	Fitness Theory and Practice	Instructor of record	In-Person	Undergraduate	4

AD-HOC REVIEWER

2022 Frontiers
Journal of Sports Science and Medicine
2021 Surgery for Obesity and Related Diseases
International Society of Sports Nutrition
Clinical Obesity
2020 Surgery for Obesity and Related Diseases
Bariatric Surgical Practice and Patient Care
Microbiology Open
American Society of Microbiology
Molecular Metabolism

MEMBERSHIPS

2022 Texas American College of Sports Medicine
2021 The Obesity Society Member
2021 International Federation for the Surgery of Obesity and Metabolic Disorders
2021 American Society of Metabolic and Bariatric Surgery

CLINICAL EXPERIENCE

Jan 2013 – May 2013 **Internship as Dietitian Assistant (public health)**
Francisco Villa Health Center
San Nicolás de los Garza, N.L., México

Aug 2012 – Dec 2012 **Internship as Dietitian Assistant (private institution)**
Sport Gym and Fitness Zone
Allende, N.L., México

Jan 2012 – May 2012 **Internship as Dietitian Assistant (private hospital)**
Christus Muguerza Hospital
Monterrey, N.L., México

Aug 2010 – Dec 2010 **Internship as Dietitian Assistant (food service)**
Mexican Economic Development Co. (FEMSA in Spanish)
Monterrey, N.L., México

COMMUNITY SERVICE

2012 – 2018 Undergraduate students' mentor in the laboratory, Baylor University, Waco, TX, U.S.
2014 – 2014 Undergraduate mentor for Texas American College of Sports Medicine Student Bowl, Baylor University, Waco, TX, U.S.
2012 – 2013 Volunteer at CARITAS (food and medicine donation centers), San Pedro Garza García, N.L., México
2010 – 2010 Volunteer in SER JOVEN SANO (government anti-drug program designed to improve healthy lifestyles in children), Santiago, N.L., México