

Jaime Alfredo Perales

243 Flynn Dr • El Paso, TX • jperales7@miners.utep.edu • (915) 820-1233

EDUCATION

UNIVERSITY OF TEXAS AT EL PASO Bachelor of Science, Kinesiology Minor, Military Science (ARMY ROTC) College of Health Science and Nursing	El Paso, TX May 2020
Master of Science, Kinesiology Thesis: <i>The Role of MAP Kinase Phosphatase-5 In Cardiac Adaptation To Endurance Exercise</i> College of Health Science and Nursing	May 2022
Doctor of Philosophy, Interdisciplinary Health Science Dissertation: College of Health Science and Nursing	Expected May 2026
NCAA Division I Football, UTEP Athletics Conference-USA Commissioners Academic Honor Roll 2019-2022	2017 – 2022
EL PASO COMMUNITY COLLEGE 100 W Rio Grande Ave, El Paso, TX 79902	El Paso, TX May 2017
CATHEDRAL HIGH SCHOOL 1309 N Stanton St, El Paso, TX 79902	El Paso, TX May 2017

RESEARCH EXPERIENCE

UNIVERSITY OF TEXAS AT EL PASO MUSCLE MOLECULAR PHYSIOLOGY LABORATORY – ADVISOR: DR. KISUK MIN	El Paso, TX 2020 – Present
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Graduate Research Assistant August 2020 – May 2022

- Examine and measure Protein Concentration using CLARIOstar Plus to provide analysis of Assay Development, Protein Detection, and DNA/RNA Quantification
- Practice and perform experiments using Western Blotting to detect specific proteins within the MAP-Kinase Pathway and quantify through LI-COR Image Studio Software Analysis
- Examined RNA Isolation, cDNA Generation, and mRNA Measurements.
- Train Graduate/Undergraduate students in animal care and management of mice for treatment in experiments
- Tissue Homogenization
- Conduct mouse genotyping, animal harvesting, euthanasia, and IP/Tail Vein Injections
- Use QuanStudio 7 PCR to Quantify and detect RNA expressions as well as provide calibrations.
- Perform C2C12/H9C2 cell culture analysis independently.
- Train students and provide updated protocols for Laboratory Experiments
- Use statistical programs such as GraphPad Prism 9 and SPSS for data visualization and analysis
- Fluorescence Microscopy
- Exercise stress testing for MKP-5 mice
- Body Composition Assessments
- Managed laboratory functions and organization of tissues, chemicals, and equipment

- Calibrations, systems maintenance, and construction of laboratory equipment and strength & conditioning equipment

TEACHING EXPERIENCE

UNIVERSITY OF TEXAS AT EL PASO

COLLEGE OF HEALTH SCIENCE AND NURSING – DEPARTMENT OF KINESIOLOGY

El Paso, TX
2022 - Present

Graduate Teaching Assistant

January 2022 – Present

KIN 4334 Coronary Interventions – Lab Instructor

- Facilitate the discussion of Coronary Interventions and the understanding of ECG readings during a Clinical Exercise Stress Test
- Monitor and teach hands-on placement of Electrodes and Blood Pressure Cuffs before and after testing.
- Grading and distribution of lecture assignments and exams for 25 Students

KIN 4312 Exercise Physiology – Lab Instructor

- Provide Students an overview of topics of Exercise Physiology, in how cells, tissues, and organs within the body respond to exercise and other metabolic mechanisms
- Discuss and participate in laboratory experiments subjected to Clinical Exercise Physiologists (ex: Body Composition Measurements, Blood Pressure Readings, Bioenergetics, Musculoskeletal Fitness Assessments, and Research Applications and Methods)
- Grading and distributing lecture assignments, research articles, quizzes, and exams for 42 Students.

GRANTS AND AWARDS

UNIVERSITY OF TEXAS AT EL PASO

COLLEGE OF HEALTH SCIENCE – PHARMACY & KINESIOLOGY

El Paso, TX
2021 – Present

Graduate Research Assistant / Principal Investigator

January 2021 – Present

College of Health Science and Nursing – Outstanding Thesis of the Year Award

December 2022

- University of Texas at El Paso – Graduate School
- Kinesiology Department – Muscle Molecular Physiology Laboratory
- Category: Master's
- Thesis Title: The Role of MAP Kinase Phosphatase-5 In Cardiac Adaptation to Endurance Exercise

Interdisciplinary Health Sciences PhD Travel Award Grant – **In Review**

March 2023

- College of Health Science and Nursing / Graduate School
- Amount: \$850

ACSM Foundation Doctoral Student Research Grant – **Not Funded**

December 2022

- American College of Sports Medicine
- Project Title: The Role of MAP Kinase Phosphatase-5 in Chemotherapy-Induced Cardiac Muscle Protein Degradation
- Amount: \$5,000

Les and Harriet Dodson Research Grant – **Not Funded**

November 2022

- University of Texas at El Paso – Graduate School
- Project Title: The Role of MAP Kinase Phosphatase-5 in Chemotherapy-Induced Cardiac Muscle Protein Degradation
- Amount: \$3,000

Les and Harriet Dodson Research Grant - **Funded**

March 2021

- University of Texas at El Paso – Graduate School
- Project Title: MAP Kinase Phosphatase-5 Regulates Cardiac Adaptation to Endurance Exercise
- Amount: \$3,000

STATISTICAL ANALYSIS & COMPUTER SCIENCE EXPERIENCE

UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE & COLLEGE OF ENGINEERING

El Paso, TX
2022 - Present

Languages & Programs: R, Python, SPSS, MATLAB, Julia, Visual Studio Code

- Analyze Health Science and Public Data using sophisticated statistical software packages
- Organize, measure, and identify data within the fields of Health Science, Biological Sciences, and Bioinformatics
- Introduce Measurement Methods, Descriptive Statistics, Confidence Intervals, and Parametric Testing
- Applications of Measurement Theories and Pragmatic Information on Measurement Tools
- Introductory Skills within Bioinformatics and understanding Sequence Analysis, Nucleic Acid Comparisons, and Public Sequencing Databases

PRESENTATIONS

Perales, J. A., (2022). The Role of MAP Kinase Phosphatase-5 In Cardiac Adaptations to Endurance Exercise.; University of Texas at El Paso GradExpo Competition 2022

Perales, J. A., (2022). The Role of MAP Kinase Phosphatase-5 In Cardiac Adaptations to Endurance Exercise.; 2023 ACSM Annual Meeting, World Congress on Exercise is Medicine®, World Congress on the Basic Science of Physical Activity and Aging Biology. Denver, Colorado USA

Perales, J. A., Rojas, A. S, Gutierrez, J. P, Min, K., (2022) MAP Kinase Phosphatase-5 Deficiency Promotes Cardiac Adaption to Endurance Exercise. Inaugural Rio Grande Physiological Society Meeting. American Physiology Society Chapter. Las Cruces, New Mexico USA

ABSTRACTS

Perales, J. A., & Min, K. (2021). MAP Kinase Phosphatase-5 Regulates Cardiac Adaptation to Endurance Exercise. In International Journal of Exercise Science: Conference Proceedings (Vol. 2, No. 13, p. 32).

Perales, J. A., (2022). The Role of MAP Kinase Phosphatase-5 In Cardiac Adaptations to Endurance Exercise.; Medicine & Science in Sports & Exercise® (MSSE) (vol. 55).

PROFESSIONAL MEMBERSHIPS

American College of Sports Medicine / Texas Chapter

The Rio Grande Physiological Society

Clinical Exercise Physiology Association

PROFESSIONAL EXPERIENCE

THE HOSPITALS OF PROVIDENCE – MEMORIAL CAMPUS
DEPARTMENT – CHILDREN’S SPECIALTY CLINIC (PEDIATRICS)

El Paso, TX
June – August 2022

Clerk / Register / Transportation

50 hrs. 00min

- Registration of Children, Adolescents, and High-Risk infants for appropriate screening

- Calling for confirmation, rescheduling, and cancellation of appointments
- Transportation of High-Risk patients to and from Infusion, Rehabilitation, Nutrition and Psychiatric Therapy Departments