FUNDED PHD POSITION(S) IN BIOMEDICAL ENGINEERING – BONE AGING – BOISE STATE UNIVERSITY

NIH funded PhD position is available to study effects of long-term physical activity on bone and mesenchymal stem cells.

Project description:

We are looking for aspiring future leaders of science and translational medicine. This project will focus on understanding how long-term physical activity affects the bone quality and bone stem cell potency during chronological aging. These findings will ultimately help improving clinical outcomes related to unloading related bone-loss in astronauts, aged individuals with osteoporosis and impaired bone healing seen under extended bedrest such as injured service personnel.

For this project, the student will gain expertise in translational animal models and state-of-the-art technologies including micro computed tomography, Biomechanical Testing, Confocal Microscopy, and Bioreactor technology. PhD students will have a chance to work with an excellent multidisciplinary team of scientists as well as professional engineers to answer fundamental questions about bone health and tackle cutting edge engineering problems to prepare clinically relevant translational animal experiments.

Research position is fully funded, including graduate assistant salary, benefits and full tuition waiver.

Lab Website: https://www.boisestate.edu/coen-mal/

Biomedical Engineering PhD Website: https://www.boisestate.edu/bme/

The ideal profile for this position would include:

- B.S. or M.S. degree in Mechanical Engineering, Biomedical Engineering, Biology or Physics
- Aptitude towards working with mice models.
- Strong organizational skills and designing large experiments.
- Interest in primary cell culture experiments.
- Demonstrable effectiveness in disseminating scientific results (e.g. publications/talks in conferences) for extra brownie points.

To apply:

1) Position will start on Fall 2021 or Spring 2022

2) Please submit a detailed CV (max 4 pages), publication list (or other supporting material), details of two referees, and a 1-page motivation letter to gunesuzer@boisestate.edu

3) Shortlisted candidates will be interviewed remotely via Zoom.

About Mechanical Adaptations Laboratory:

Our goal is to establish causative relationships of how mechanical signals are transduced and sensed at cellular level with the motivation to provide non-pharmacologic solutions to musculoskeletal decline through careful study of mechanobiology. Current studies in MAL are directed towards establishing models to quantify how mechanical environment of bone in relation to exercise, injury, aging and disuse regulate structural adaptations at tissues and differentiation of stem cells. Research at MAL is actively funded by NIH, NSF and NASA for technology development, translational and basic science projects. Our research partners include, Mayo Clinic, University of Texas, Rensselaer Polytechnic Institute, University of Colorado Boulder and University of North Carolina Chapel Hill.

About Boise:

Boise State University is the largest university in Idaho, with enrollment of more than 22,000 students. The University is located in Idaho's capital city and largest metropolitan area, which serves as the government, business, high-tech, economic, and cultural center of the state. Boise has a vibrant downtown, and great outdoor recreation including skiing, rafting, camping, fishing, and biking. Forbes ranked Boise #2 in 2018 for best cities to raise a family, U.S. News & World Report ranked Boise in the top 10 for best places to live in 2016, and USA Today ranked Meridian (Boise suburb) as the #1 city to live in America in 2015.