Post-doctoral or Ph.D research fellow in Bone Biology

The Center for Osteoporosis and Metabolic Bone Diseases of the University of Arkansas for Medical Sciences (UAMS) is one of the largest research units of its kind in the United States, dedicated to the study of osteoporosis and its treatment.

The Center is internationally recognized as a center of excellence and a unique resource. The faculty of the center has a collective record of more than 1,000 publications, and it represents a highly synergistic team with complimentary expertise in molecular and cellular biology, molecular genetics, the biology of bone as a tissue, and the clinical diagnosis and treatment of osteoporosis. The research of the center is supported by numerous grants from the State of Arkansas, the National Institutes of Health, and the U.S. Department of Veterans Affairs.

The focus of the research program is to improve the understanding of the pathophysiology of osteoporosis, and develop optimal therapies for its treatment. Through interrelated projects supported by shared cores, the investigators of the center work to elucidate the cellular, molecular and genetic mechanisms that underlie loss of bone particularly, with aging, immobilization, and sex steroid deficiency. To support and strengthen its research team the Center seeks a highly motivated

Cellular and Molecular Biologist

to perform in vitro and in vivo (using genetically modified mouse models) work. The position is funded for up to 4 years, with a salary of $53.000 (Post-doc), to start anytime during 2021.

The ideal candidate has a recent PhD in Molecular Biology, Biochemistry or related field. PhD students in a Portuguese University who wish to pursue studies in the area of bone biology can also apply. Enthusiasm for lab work and an ability to work as part of a team are essential requirements for the position available. Candidates should submit a cover letter briefly describing prior research experience and detailed curriculum vitae to:

Dr. Maria Schuller Almeida (schullermaria@uams.edu)

Recent Publications:

- Iyer S, Ambrogini E, Bartell SM, Han L, Roberson PK, de Cabo R, Jilka RL, Weinstein RS, O'Brien CA, Manolagas SC, **Almeida M** 2013. FoxOs attenuate bone formation by suppressing Wnt signaling. J Clin. Invest. 123(8):3409-3419.

- Bartell SM, Kim HN, Ambrogini E, Han L, Iyer S, Ucer SS, Rabinovitch P, Jilka RL, Weinstein RS, Zhao H, O'Brien CA, Manolagas SC, **Almeida M**. 2014. FoxO proteins restrain osteoclastogenesis and bone resorption by attenuating H2O2 accumulation. Nature Communications 5:3773.

- Ucer S, Iyer S, Kim HN, Han L, Rutlen C, Allison K, Thostenson JD, de Cabo R, Jilka RL., O'Brien C, **Almeida M***, Manolagas SC*. 2016. The effects of aging and sex steroid deficiency on the murine skeleton are independent and mechanistically distinct. J Bone Miner Res. doi: 10.1002/jbmr.3014 * Contributed equally

- **Almeida M**, Laurent M, Dubois V, Claessens F, O'Brien CA, Bouillon R, Vanderschueren D, Manolagas SC. 2017. Estrogens and Androgens in Skeletal Physiology and Pathophysiology. Physiological Reviews 97(1):135-187.

- Farr J, **Almeida M** 2018. The spectrum of fundamental basic science discoveries contributing to organismal aging. J Bone Miner Res 33(9):1568-1584.

- Kim HN, Chang J, Iyer S, Han L, Campisi J, Manolagas SC, Zhou D, **Almeida M**. 2019. Elimination of senescent osteoclast progenitors has no effect on the age-associated loss of bone mass in mice. Aging Cell 18(3): e12923.

- Kim HN, Xiong J, Macleod RS, Iyer S, Fujiwara Y, Cawley KM, Han L, He Y, Thostenson JD, Ferreira E, Jilka RL, Zhou D, **Almeida M***, O'Brien CA* 2020. Osteocyte RANKL is required for loss of cortical bone with age and is induced by cellular senescence. JCI Insight 5(19):e138815. ***Contributed equally

- Ponte F, Kim HN, Iyer S, Han L, **Almeida M**, Manolagas SC. 2020. Cxcl12 deletion in mesenchymal cells increases bone turnover and attenuates the loss of cortical bone caused by estrogen deficiency in mice. J Bone Miner Res. 35(8):1441-1451.

- Kim HN, Ponte F, Nookaew I, Ucer Ozgurel S, Marques-Carvalho A, Iyer S, Warren A, Aykin-Burns N, Krager K, Sardao VA, Han L, de Cabo R, Zhao H, Jilka RL, Manolagas SC, **Almeida M**. 2020. Estrogens decrease osteoclast number by attenuating mitochondria oxidative phosphorylation and ATP production in early osteoclast precursors. Scientific Reports 10(1):11933.

- Kim HN, Ponte F, Warren A, Ring R, Iyer S, Han L, **Almeida M**. 2021. A decrease in NAD^+ contributes to the loss of osteoprogenitors and bone mass with aging. NPJ Aging and Mechanisms of Disease (accepted)