Pompeu Fabra University (UPF), PRBB, Barcelona
National Cardiovascular Research Center (CNIC), Madrid

Pura Muñoz-Cánoves lab

Postdoc and PhD student positions

Positions are available for both **postdocs** and **PhD students** to study cellular and molecular mechanisms controlling **stem cell aging**.

The basic mechanisms of stem cell malfunction during aging are poorly understood even though they underlie the regenerative decline of most organs and tissues as we age. Failure or proteostasis and senescence entry significantly alter tissue regenerative capacity. How these variables connect to drive stem cell aging is not known.

In the context of a five-year **ERC Advanced Grant project** starting at **t**he Pompeu Fabra University (UPF) at the PRBB, in Barcelona, and the National Cardiovascular Research Center (CNIC), in Madrid, in November 2017, we will integrate mouse genetics, cell biology, biochemistry, transcriptomics, epigenetics and bioinformatics, to define the regulatory circuitry of stem cell aging (particularly in skeletal muscle), and potential rejuvenating strategies.

Highly motivated scientists with a strong interest in proteostasis, senescence and DNA damage in the context of stem cells are encouraged to apply.

CV, list of publications and contact information for referees should be sent to: marina.raya@upf.edu and aquesada@cnic.es

Recent publications from the lab

- Proteostatic and Metabolic Control of Stemness. García-Prat L, Sousa-Victor P, Muñoz-Cánoves P. **Cell Stem Cell** 20:593-608, 2017
- Autophagy maintains stemness by preventing senescence. García-Prat L, Martínez-Vicente M, Perdiguero E, Ortet L, Rodríguez-Ubreva J, Rebollo E, Ruiz-Bonilla V, Gutarra S, Ballestar E, Serrano AL, Sandri M, Muñoz-Cánoves P. **Nature** 529:37-42, 2016
- Muscle stem cell aging: regulation and rejuvenation. Sousa-Victor P, García-Prat L, Serrano AL, Perdiguero E, Muñoz-Cánoves P. **Trends Endocrinol Metab** 26:287-96, 2015
- Geriatric muscle stem cells switch reversible quiescence into senescence. Sousa-Victor P, Gutarra S, García-Prat L, Rodriguez-Ubreva J, Ortet L, Ruiz-Bonilla V, Jardí M, Ballestar E, González S, Serrano AL, Perdiguero E, Muñoz-Cánoves P. **Nature** 506:316-21, 2014)