

POST-DOCTORAL POSITION IN MUSCULOSKELETAL REGENERATION AND STEM CELLS

INSERM, Mondor Biomedical Research Institute, Univ Paris-Est Créteil,
France

Colnot group “Stem cells in musculoskeletal development, regeneration and diseases” colnotlab.com

We are seeking a highly motivated and enthusiastic postdoctoral candidate to join our team to study skeletal stem/progenitor cells (SSPCs) in bone regeneration. SSPCs comprise a diversity of cell populations that are essential for bone repair. The laboratory has shown that SSPCs reside in several bone compartments including the bone marrow and the periosteum (the tissue at the outer surface of bone), but also in adjacent skeletal muscle. In response to bone injury, SSPCs sense signals in their local tissue environment, differentiate and must self-renew. Disruption of the SSPC niche can lead to delayed or failed healing. Our goal is to better understand the diversity of SSPCs, the SSPC-niche interactions and how SSPCs are affected in bone repair disorders, to explore new therapeutic strategies for bone regeneration.

Project objectives: Examine the cellular and molecular bases of fracture non-union in genetically modified mouse models and patient samples to uncover the mechanisms of skeletal stem cell dysfunctions in bone repair disorders. Applicants should have a background in cellular and molecular biology, in vivo mouse models, primary cell culture methods, flow cytometry, microscopy and image analyses. The project also involves single cell RNAseq analyses to investigate the heterogeneity and differentiation trajectories of SSPCs. Candidates familiar with bio-informatics analyses, and specifically programming in languages including R and Python, are strongly encouraged.

The applicants should be PhDs. Ability to initiate, conduct, evaluate and report research studies in English is essential. Salary is available for 3 years, renewed on a yearly basis according to progress. In addition to completing this funded research, the candidate will be strongly encouraged to develop research objectives that will lead to fellowship funding.

Mondor Biomedical Research Institute is a large research institute located in the east of Paris. The institute is affiliated with Henri Mondor Hospital, the faculty of Health and Université Paris-Est Créteil, providing a multidisciplinary research environment and state-of-the-art research platforms.

Applicants should send a motivation letter, Curriculum Vitae and names of 2-3 references to:

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