



Doctoral position financed by the Excellence Cluster (IDEX) of the University of Strasbourg

Topic: *Characterization of the therapeutic potential of LRP1 and the adaptor protein ShcA for cartilage repair*

Host Laboratory: UMR 7213 CNRS-UdS, Strasbourg, FRANCE

Project summary:

Given the evident need for improvement of therapeutic options in the treatment of articular defects such as those observed in osteoarthritis (OA), we propose to elucidate the role of two genes recently associated with chondrocyte biology, a transmembrane receptor, the low density lipoprotein receptor-related protein 1 (LRP1) and its binding partner Src homology and collagen A (ShcA) in chondrocyte differentiation, and to test the potential of LRP1^{-/-} and ShcA^{-/-} deleted chondrocytes for cartilage repair in an animal model of OA using tissue engineering. The project involves multidisciplinary approaches with conditional knockout mice characterization, animal models of OA, proteomic, RNA-seq, CRISPR/Cas 9 technology, and models of chondrogenic cell culture. It will be performed in collaboration with Andreas Niemeier (Hamburg, Germany), an orthopaedic surgeon scientist.

Skills required:

The ideal candidate for this post (3 years contract) should have an excellent study track record. The candidate must hold a Master degree awarded by a foreign University or hold a License degree awarded by a foreign University and a Master degree awarded by the University of Strasbourg. The candidate will spend part of his research time in Hamburg, Germany (Andreas Niemeier's laboratory). A strong motivation for interdisciplinary research is required. The successful candidate will benefit from housing facilities and financial aids for travel through the "Collège Doctoral Européen" of the University of Strasbourg.

How to apply:

Please send, your CV, a short motivation letter, two to three letters of reference, copy of ranking and grades during the master, and a copy of the master report by e-mail to Prof. Philippe BOUCHER (philippe_boucher@yahoo.com) and Dr Rachel MATZ-WESTPHAL (rachel.matz-westphal@unistra.fr).