



Junior Postdoctoral position in

Renal Pathophysiology at the CoRaKID Unit

Paris, France - Director: Dr Christos Chatziantoniou -

Project supervisor: Dr. Khalil El Karoui)

Project. The 'Shockid' project aims to study the impact of cellular stress in kidney glomerular diseases. Among kidney injuries, glomerular lesions are involved in more than 30% patients reaching end stage kidney disease (ESKD) each year. Our preliminary results demonstrated a strong overexpression of a specific heat shock protein (HSP) with pro-survival properties in glomerular parietal epithelial cells (PEC) during glomerular diseases in both mice and humans. Preliminary experiments suggest that the inhibition of this HSP could reduce glomerular lesions by preventing the migration of PEC.

The aim of the project is to define precisely the mechanisms by which this HSP regulates PECs function in physiological and pathological conditions. For this purpose, the candidate will use a combination of in vivo mouse models, in vitro studies of cultured PEC, and patients prospective cohort analysis. We strongly believe, that deciphering the function of this HSP during PEC activation could lead to new diagnostic and therapeutic strategies in human kidney diseases, with the use of already available inhibitors of this HSP.

Work environment. CoRaKID is composed of 6 tenured Inserm investigators and 14 tenured Faculty of Medicine full or associate professors. Its research activities are mostly devoted to the pathophysiology of kidney diseases, being bi-directionally oriented from the bench to the bedside (translational research) and from the bedside to the bench (clinical research). These activities are basically aimed at acquiring new knowledge beyond the frontiers of medical science, always with clinical applications in mind. Our basic research strategy is based on the use of advanced state-of-the art methodological approaches such as genetically modified mice, specific targeted drug delivery, and bio-informatics and genetic analyses, to investigate the role of a pre-defined candidate gene, and/or to apply therapy-driven hypotheses to uncover the underlying mechanisms and mediators, and/or to correlate gene mutations to specific renal pathologies.

Skills. We are looking for candidates with experience in cellular/molecular biology and signal transduction analysis. A strong knowledge of the pathways and mechanisms of cellular stress (such as heat shock response, oxidative stress or endoplasmic reticulum stress) would be of particular interest. Candidates are expected to be highly motivated with a strong work ethic. Good communication, ability to work in an interdisciplinary team, and oral/written communication in English are a requirement.

Location. The CoRaKID lab is an international research unit focusing on kidney disease pathophysiology, genomics and personalized medicine at the Institut National de la Santé et de la Recherche Médicale (INSERM) and the Sorbonne University-a leading French university heavily involved in life science research (<https://corakid.com/>)

The Tenon hospital is located in downtown Paris (France), in a nice and lively area with convenient public transportations.

Contract Fixed-term contract (CDD) for a minimum of 36 months (one-year contract renewable for 2 years). Salary will be commensurate to skills and previous experience and in line with EU standards. The earliest starting date is the 15th of March 2022 (depending on the date of the selection of the applicant).

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