Genetics of Fibromuscular Dysplasia and Spontaneous Coronary Artery Dissection

ERC-Funded 2-3 years postdoctoral position, INSERM Paris FRANCE.

Postdoctoral position is available at the Paris Cardiovascular research Center of the INSERM (The French Institute for Health, Basic and Medical Research), Paris, France, to study the genetic basis of Fibromuscular Dysplasia (FMD) and Spontaneous Coronary Artery Dissection (SCAD).

**Diseases.**

FMD is a non-atherosclerotic neglected vascular disease leading to arterial stenosis, aneurysm and dissection. The renal and cerebrovascular arteries are most commonly affected and FMD is often diagnosed after a longstanding resistant hypertension or a stroke event. FMD patients are 80-90% premenopausal women under 50 yrs. Our group is leading the genetic investigation thanks to the largest existing cohort of FMD patients followed-up at the European Hospital Georges Pompidou with DNA available. FMD and SCAD are considered rare because of a complex diagnosis based on imaging that needs special expertise in referral centers for vascular diseases. Recently, a clinical link was provided between FMD and SCAD, a rare cause of acute myocardial infarctus and we are currently collecting DNA for SCAD patients through a national recruitment. We have recently established a common genetic cause for FMD and SCAD and we are using GWAS and exome sequencing followed by functional genomics analyses to decipher the physiopathology of FMD and SCAD.

**Mission.** We are seeking an early postdoc (up to 5 years post PhD) to join the Genetics and Functional Genomics of FMD and SCAD team. This is a multidisciplinary team using high throughput genomics, genomic regulation and cell models to decipher the physiopathology of vascular disease in medium arteries. An important component of this position will be 1) analyzing GWAS for FMD and SCAD, 2) performing imputation and computationally based annotation using large reference panels, 3) integrating omics and eQTL datasets, either publically available or generated in house, to prioritize loci and genes for relevance for vascular integrity in the absence of atherosclerosis and 4) studying potential existing interactions with gene risk (e.g sex, hormone hypersensitivity and smoking).

**Requirements.** The candidate should hold a PhD in genetic epidemiology or statistical genetics, or extensive experience using relevant tools for GWAS, especially using R and PLINK packages, knowledge of programming for genetic analyses and basics in genetic epidemiology. The post-holder should have excellent organization and communication skills, and a good publication track, ideally issued from GWAS and/or exome or genome sequencing projects.

**Environment**

In addition to spend 2 years in the exciting city of Paris, FRANCE, the PARCC-INSERM UMR970 is a world-class on the HEGP hospital university campus for basic and translational research and training focused on cardiovascular diseases.

Position available from the 1st January 2018. Send application letter, CV and at least 2 reference names to nabila(dot)bouatia-naji(at)inserm(dot)fr.