

**Tenure research position in
in vivo Metabolic MRI and
MRS at ultra-high field**



NeuroSpin (CEA, France) is looking to recruit at a tenured research position a confirmed NMR scientist to strengthen its “*Metabolic imaging and in vivo NMR spectroscopy*” team. The candidate is expected to put forward an ambitious research project dedicated to the development of advanced ^1H MR spectroscopy and X-nuclei (^{31}P , ^{23}Na , ^{13}C , ^2H , ^7Li ...) imaging methods dedicated to harness the strengths and tame our unique 11.7T clinical MRI scanner. These methods will be applied to further our understanding of brain metabolism and pharmacology in preclinical models of diseases as well as in patient’s cohorts. Considering the many challenges inherent to the physics of NMR at this extreme magnetic field, the candidate will benefit from the considerable knowledge and expertise from the other research teams at NeuroSpin. In particular, a fruitful collaboration is to be nurtured with the team of physicists developing optimized radiofrequency pulses for parallel transmission. Likewise, the candidate ought to cultivate strong ties with the local research teams of biologists and physicians. Therefore, the candidate should be both proficient in NMR physics and electromagnetism and knowledgeable in brain physiology, biology and medicine.

The candidate will lead his/her own research program and acquire the necessary funding (National, European) to broaden its scope and resources. However, it is expected that he/she will be eager to cooperate and join forces with other researchers at NeuroSpin and beyond. The sought profile is an NMR scientist with experience and keen interest in X-nuclei MRI and *in vivo* MRS. A PhD in physics, biomedical engineering or related fields, is desired and a minimum of 2 years post-doctoral experience is required. Experience in sequence programming as well as in conducting both preclinical and clinical MRI research projects is desired. Furthermore, the candidate should demonstrate its scientific excellence, project management, problem-solving and communication skills.

NeuroSpin is a research institute dedicated to the development of innovative MRI methods and technologies, which are implemented at ultra-high magnetic fields to investigate the brain function in normal and pathological conditions. NeuroSpin is located on the University Paris-Saclay campus (20 km south of Paris) and is directed by Prof. Stanislas Dehaene. It hosts approximately 150 staff members (tenure researchers, post-doctoral fellows and PhD/MSc students) including physicists, computer scientists, mathematicians, clinicians, neuroscientists and technicians. The institute is equipped with three preclinical (7, 11.7 & 17.2 T) and three clinical (3, 7 & 11.7 T) MRI scanners. The 11.7 T clinical MRI scanner is a world-premiere in the MR community. Designed by CEA, with a 90 cm wide bore, it holds a world record in terms of stored energy in a MRI magnet. X-nuclei MRI and *in vivo* MRS are considered among the most promising applications at this field strength.

The application deadline is set at Jan 31st 2022, for a position to be filled by mid 2022. To apply, please send your CV, as well as a 3 pages description of your research program, to fawzi.boumezeur@cea.fr. Please also arrange for three reference letters to be sent. For further inquiries about the position, please contact the same address.