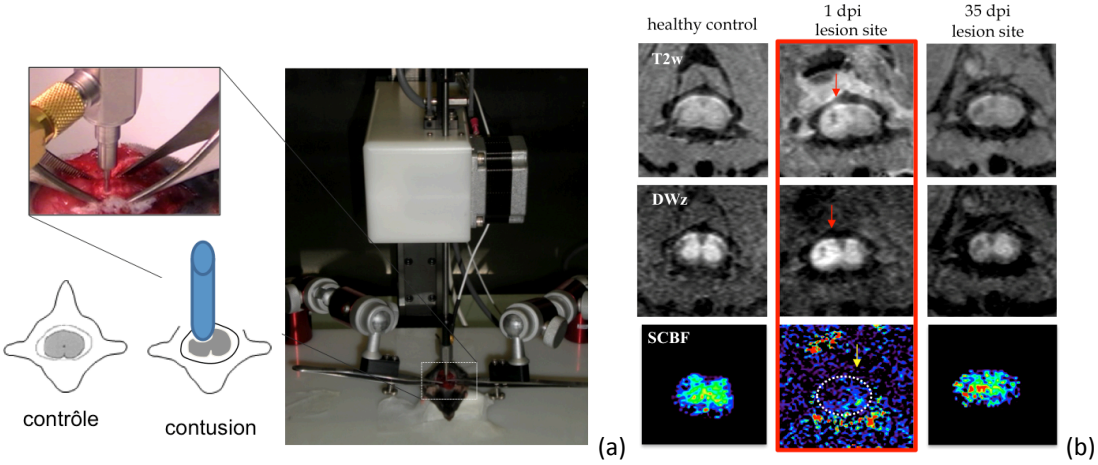
URGENT
Engineer position – Mouse Spinal Cord MRI (Marseille, France)

Position description: A 6-month engineer position, extendable to 12 months, is available at the Centre de Résonance Magnétique Biologique et Médicale (CRMBM, UMR7339, CNRS/Aix-Marseille Université), located in Marseille, France. The position will focus on the non-invasive characterization of spinal cord injury mouse models (contusion/compression) using multimodal MRI at 11.75T (diffusion, perfusion, relaxometry, ..) [1-3].
The main objectives of the study are to identify the different pathophysiological mechanisms and their timelines through longitudinal follow-ups, and to make correlation with histology, functional tests and biomechanical analysis to identify injury thresholds and new biomarkers or early predictors of potential recovery.

Starting date: Autumn 2014 **!! Deadline for application**: Mid-june 2014

Salary: up to 1900 euros net/month, depending on experience. Salary is provided by an IRME grant (Institut pour la Recherche sur la Moelle Epinière).

Candidate profile: The candidate should possess a Master or a PhD in biology, neurophysiology, life science, physics or related field. Ideally, he/she will have a previous experience in animal MR investigations, or experience using a Bruker/Paravision system, as well as experience in MR data post-processing (FSL, matlab or IDL).
The candidate will be in charge of the multimodal MR investigations (11.75T, Bruker system, Paravision 5) and data analysis.



(a) Contusion-compression mouse model using a dedicated impactor (PSI Inc.), (b) Post-injury multimodal MRI (relaxometry (top), diffusion (middle), and perfusion (bottom) at baseline and 1 and 35 days post injury.

Lab description: CRMBM researches focus on multimodal MR investigations of heart, muscle and central nervous system pathologies. Translational researches are conducted, from animal models to patients and from MR developments to clinical applications. CRMBM MR facilities include Bruker 4.7T and 11.75T MR systems for small animal imaging and Siemens 1.5T, 3T and 7T MR systems for human studies. For more information on CRMBM: http://crmbm.univ-amu.fr

Collaborations: the project is conducted in collaboration with ISM (Institut des Sciences du Mouvement, Equipe Plasticité des Systèmes Nerveux et Musculaire, Marseille) and LBA (Laboratoire de Biomécanique Appliquée, Marseille). It is part of a larger project including human and clinical studies, at 3T and very soon at 7T.

Applications: Please send your detailed CV and references to Virginie Callot: virginie.callot@univ-amu.fr

CRMBM-CEMEREM UMR 7339

References : 1. Callot V, et al. (2008). Short scan-time multi-slice diffusion MR Imaging of the mouse cervical spinal cord using echo planar imaging. NMR in Biomed 21: 868-877. **2.** Duhamel G, et al. (2008). Spinal cord blood flow measurement by arterial spin labeling. Magn Reson Med 59: 846-854. **3.** Callot V, et al. (2012). Multimodal spinal cord MRI for temporal characterization of posttraumatic events in a mouse model of spinal cord injury. In Proceedings of the 19th Scientific Meeting of ISMRM.