



OARSI
Collaborative
Scholarship
Summary

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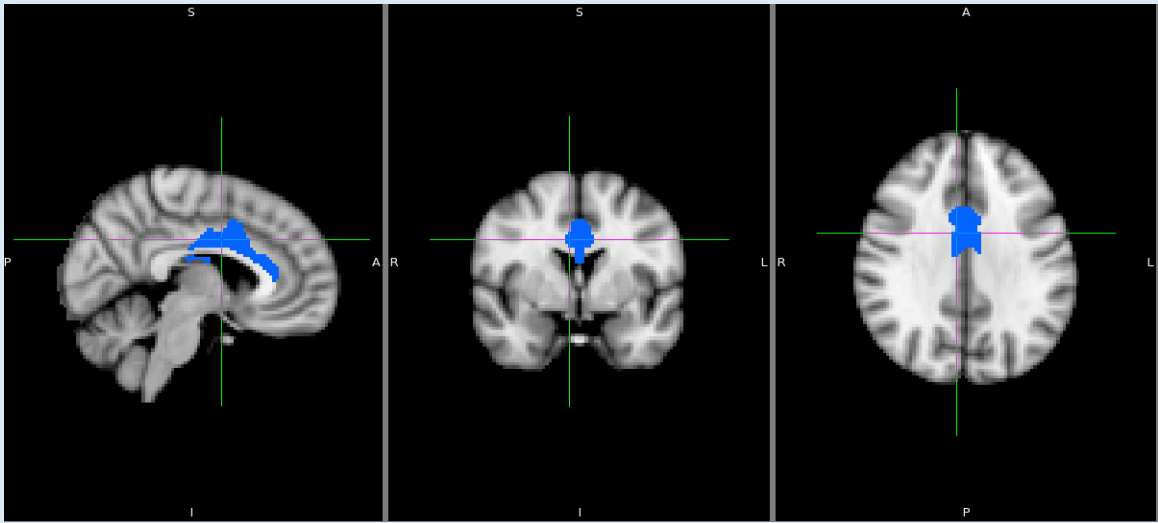
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As a recipient of the 2018 OARSI Collaborative Scholarship I had the opportunity to work in in PMR/Physiology Department of Feinberg School of Medicine, Northwestern University.

The study of osteoarthritis pain has historically focused in the articulation and local mechanisms of nociception. With the advent of neuroimaging the recognized importance of supra-spinal pain processing has increased, and the study of pain, chronic pain and pain perception gained new horizons. Osteoarthritis pain persistency after total joint replacement is not fully understood, and the idea of a sensitized central neural system leading to the persistency of pain after surgical treatment remains to be proved.

The training during my scholarship at Northwestern University allowed me to gain practice and technical knowledge in MRI anatomical and functional analysis, advanced statistical modelling and machine learning, which I'm currently conducting. Studying a large population of knee osteoarthritis patients with brain fMRI, before and after surgery, I'm currently building predictive models for pain persistence, and trying to unravel the importance of the brain's limbic system in chronic pain.

The OARSI collaborative scholarship was the starting point of a very important collaboration, that lead me from the clinic to high level research, where osteoarthritis meets computational neuroscience. It is my hope to productively contribute to the advance of osteoarthritis knowledge, and my firm belief that this scholarship was an amazing opportunity.



An actual image of our osteoarthritis brains under research.

