ELSC Special Seminar: Dr. Noam Ben-Eliezer

December 27, 2015

On the topic of: Identification of pathological changes in normal-appearing white and gray matter of multiple sclerotic patients using a novel MRI mapping technique?

ELSC cordially invites you to the lecture given by:

Dr. Noam Ben-Eliezer

On the topic of:

Identification of pathological changes in normal-appearing white and gray matter of multiple sclerotic patients using a novel MRI mapping technique?

The lecture will be held on Sunday December 27th at 12:15, at ELSC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus.

Light refreshments at 12:00

Abstract:

Recent advances in magnetic resonance imaging are challenging the classical view of Multiple Sclerosis as a focal white matter disease, and provide increasing evidence as to the significance of pathological processes occurring in normal appearing white and gray matter tissues, i.e., away from visible macroscopic lesions. One of the most significant (and early) manifestations of these pathologies are changes in the tissue T2 relaxation value. Accurate quantification T2, however, is very challenging in vivo, and is indeed a long-standing problem in MRI, due to the inherent inaccuracy of rapid multi Spin-Echo sequences. This inaccuracy is, moreover, not constant and depends on both the protocol implementation and parameter-set employed, resulting in different vendors / scanners producing different values.

In this talk I will show how a recently developed T2 mapping technique (the EMC algorithm) can produce accurate and scanner-independent T2 maps, which can be used to detect subtle changes in normal appearing brain regions of healthy controls and multiple sclerotic patients. Further discussion will be focused on how this new approach can be used to investigate tissues at sub-voxel resolution, and how all this can be used to gain new insights on the pathophysiology of different MS phenotypes.

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