

"Hands-on MR spectroscopy to study brain metabolism in vivo"

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The goal of this workshop is to introduce the concepts of in vivo magnetic resonance spectroscopy (MRS) and provide the participants with hands-on experience. We will show how a proton spectrum can be acquired from pre-selected small areas in the human brain and demonstrate necessary steps for optimizing the signal, such as shimming or suppression of the water signal. Following the acquisition, the raw data are fitted to a basis set of model spectra from characteristic brain metabolites for extracting information on absolute concentrations of brain metabolites. Finally, we will briefly discuss the information content that can be extracted from the spectra and the neurochemical role of individual metabolites.

Requirements

Although some basic background in MRI will be beneficial to appreciate the methodological aspects, particular knowledge about spectroscopy is not required. The participants should have some interest in brain metabolism.