A Proton MR Spectrum (left) from the Anterior Cingulate Cortex (right: green box) of a child with Bipolar Disorder. This data was acquired on the human 3.0 T Philips Achieva MRI system at the Advanced MRI Center at UMMS.

Proton Spectra give information about Neuronal viability (N-acetyl aspartate (NAA)), Glial metabolism (Inositol (Ino), Glutamine (Gln), Neurotransmitter (Glutamate (Glu) and GABA).
A Proton MR Spectrum (left) from an SHR Rat (a rodent model of ADHD) brain (right). This data was acquired on the animal 4.7 T Brüker MRI system at the Center for Comparative NeuroImaging at UMMS.
A Proton MR Spectrum (left) from a “wild type” mouse brain (right). This data was acquired on the animal 4.7 T Brüker MRI system at the Center for Comparative NeuroImaging at UMMS.
A GABA Spectrum (bottom) from the Anterior Cingulate Cortex (top: green box) of a healthy adult. This data was acquired on the human 3.0 T Philips Achieva MRI system at the Advanced MRI Center at UMMS.