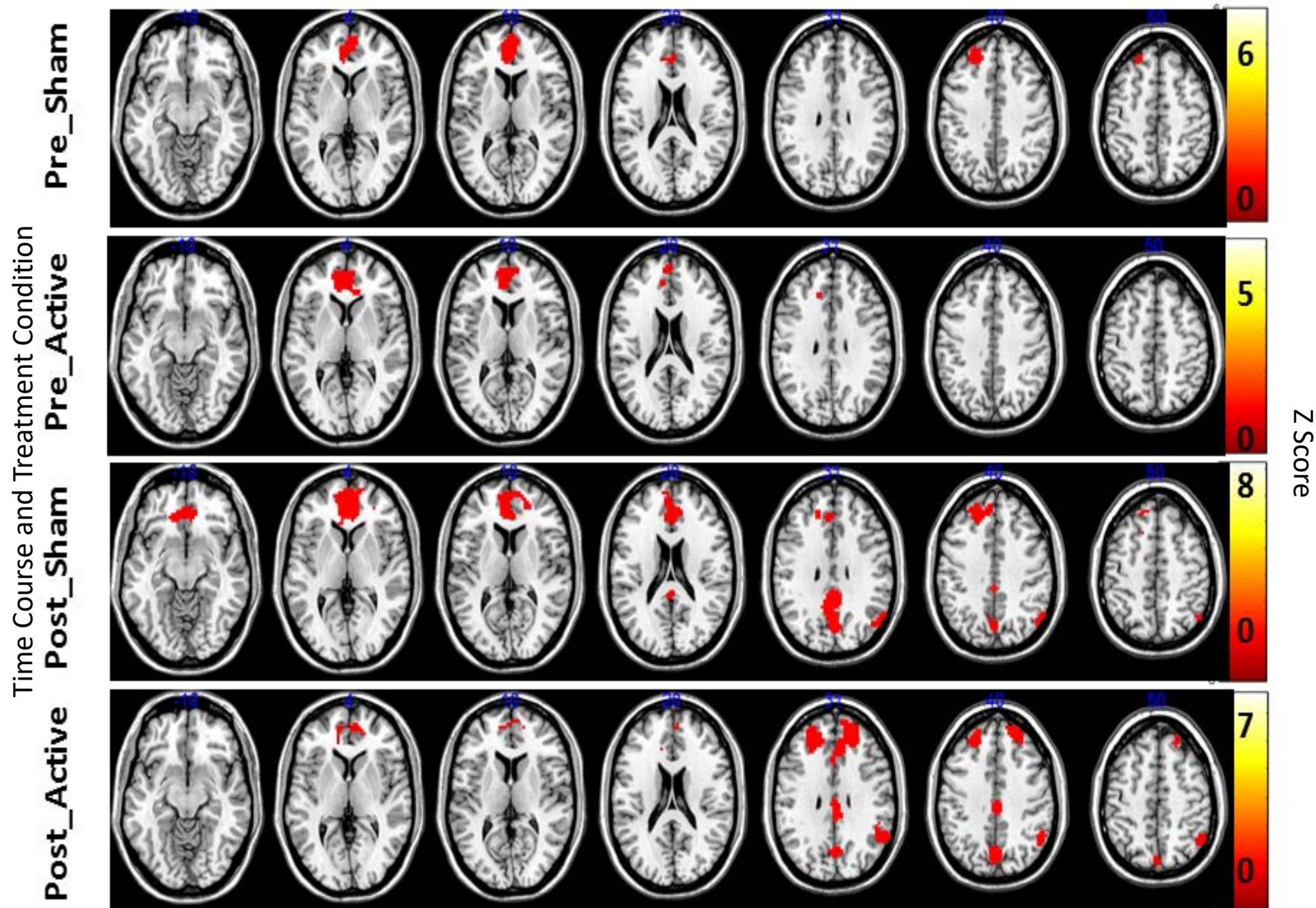


CBI's Image of the Month - October, 2021

Courtesy of Dr. Li, Department of Psychiatry and Behavioral Sciences

Increased executive brain connectivity associates with smoking cessation response to repetitive transcranial magnetic stimulation: A double-blind, randomized, sham-controlled trial



Smoking cue exposure fMRI scans were acquired before and after the ten sessions (two weeks) of active (n = 20) or sham (n=17) rTMS (10 Hz, 3000 pulses per session) to the left dorsal lateral prefrontal cortex (DLPFC) in 38 treatment-seeking smokers. Whole-brain activation to smoking cue (smoking greater than neutral) across rTMS groups (sham vs. active) and treatment course (pre vs. post). Illustrated are axial MRI slices of a Montreal Neurological Institute (MNI) standard brain at pre-treatment and post-treatment. Cluster-level threshold was set at $p < 0.05$ using family-wise error (FWE) rate correction for multiple comparisons, with voxel-wise threshold $p < 0.001$. The results of Post_active rTMS treatment showed increased brain activity in the bilateral middle prefrontal cortex and superior prefrontal cortex but decreased brain activity in the medial-orbital frontal cortex.