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Voxel-Based Morphometry ALE meta-analysis of Bipolar Disorder OMAR MAGANA, ROBERT LAIRD, St. Mary's University — A meta-analysis was performed independently to view the changes in gray matter (GM) on patients with Bipolar disorder (BP). The meta-analysis was conducted on a Talairach Space using GingerALE to determine the voxels and their permutation. In order to achieve the data acquisition, published experiments and similar research studies were uploaded onto the online Voxel-Based Morphometry database (VBM). By doing so, coordinates of activation locations were extracted from Bipolar disorder related journals utilizing Sleuth. Once the coordinates of given experiments were selected and imported to GingerALE, a Gaussian was performed on all foci points to create the concentration points of GM on BP patients. The results included volume reductions and variations of GM between Normal Healthy controls and Patients with Bipolar disorder. A significant amount of GM clusters were obtained in Normal Healthy controls over BP patients on the right precentral gyrus, right anterior cingulate, and the left inferior frontal gyrus. In future research, more published journals could be uploaded onto the database and another VBM meta-analysis could be performed including more activation coordinates or a variation of age groups.

Richard Cardenas
St. Mary's University

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