

## **SNP FUNCTION PORTAL: A WEB DATABASE FOR EXPLORING THE FUNCTION IMPLICATION OF SNP ALLELES**

Wang, Pinglang<sup>1</sup>; Dai, Manhong<sup>1</sup>; Xuan, Weijian<sup>1</sup>; McEachin, Richard C.<sup>2</sup>; Jackson, Anne U.<sup>3</sup>; Scott, Laura J.<sup>3</sup>; Athey, Brian D.<sup>2</sup>; Watson, Stanley J.<sup>1</sup>; Meng, Fan<sup>1,2</sup>

<sup>1</sup>Molecular and Behavioral Neuroscience Institute and Department of Psychiatry, University of Michigan, Ann Arbor, MI; <sup>2</sup>National Center for Integrative Biomedical Informatics, University of Michigan, Ann Arbor, MI; <sup>3</sup>Biostatistics Department, School of Public Health, University of Michigan, Ann Arbor, MI

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Finding the potential functional significance of SNPs is a major bottleneck in understanding genome-wide SNP scanning results, as the related functional data are distributed across many different databases. The SNP Function Portal is designed to be a clearing house for all public domain SNP functional annotation data, as well as in-house functional annotations derived from different data sources. It currently contains SNP functional annotations in six major categories including genomic elements, transcription regulation, protein function, pathway, disease and population genetics. Besides extensive SNP functional annotations, the SNP Function Portal includes a powerful search engine that accepts different types of genetic markers as input and identifies all genetically related SNPs based on the HapMap Phase II data as well as the relationship of different markers to known genes. As a result, our system allows users to identify the potential biological impact of genetic markers and complex relationships among genetic markers and genes, and it greatly facilitates knowledge discovery in genome-wide SNP scanning experiments. We have started using our methods with type 2 Diabetes and Bipolar Disorder.

<http://brainarray.mbni.med.umich.edu/Brainarray/Database/SearchSNP/snpfunc.aspx>

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