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Summaries From The XIX World Congress of Psychiatric Genetics, Washington, DC, September 10–14, 2011

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The XVIII World Congress of Psychiatric Genetics (WCPG), sponsored by The International Society of Psychiatric Genetics (ISPG) took place in Washington, DC on September 10–14, 2011. Approximately 540 participants gathered to discuss the latest findings in this rapidly advancing field. The topics covered can be subdivided into the following categories: the latest results from Genome-Wide Association Studies (GWAS)

examining the effects of common allele variation, the new focus on sequencing studies, other genomic mechanisms that include epigenetic gene modification and rare copy number variations, biologic and other endophenotypes, the genetics of post-traumatic stress disorder, substance abuse, gene functioning, pharmacogenomics, and other miscellaneous topics of genetic interest. Some notable reported findings introduced at this congress included: several new or replicated associations for common alleles in GWAS for schizophrenia (a SNP located near the hyaluronan binding protein 2 gene (HABP2) on chromosome 10, an SNP in the Transmembrane protein 45B gene (TMEM45B) on chromosome 11, some popular schizophrenia candidate genes, TCF4, NOTCH4, ZNF804A, and the MHC region replicated, and several novel genes reported, POM121L2, AS3MT, CNNM2, NT5C2; for major depression, the neuronal transporter gene SLC6A15; for bipolar disorder, *TRANK1* gene, as well as *LMAN2L*, *PTGFR* and the *SYNE1* gene encoding Nesprin. Some initial exome sequencing results were reported, but very preliminary, although promising. Endophenotypes that specifically were discussed included amygdala volume and prefrontal cortex activation, suicidal behavior, and impulsivity. There was a large emphasis on nicotine dependence in the substance abuse sessions and an association between smoking quantity and genetic loci on the chromosome 15q25 region was clearly demonstrated. The GABRA2 association to alcohol dependence was confirmed. There were several presentations of candidate gene polymorphisms associated with antidepressant and mood stabilizer response from large pharmacological treatment trials, but no one finding was confirmed and to be definitive yet to be able to be used commercially in the clinic.

The complete report summarizing the findings reported at this meeting was written by junior travel awardees, as well as other individuals in training who were volunteers from meeting attendees. Each was assigned sessions as rapporteurs. The entire manuscript represents topics covered in oral presentations during the conference and can be found on line as a journal supplement.

It is clear from this 2011 congress that multi-international collaborative efforts to solve the genetic tendency for all major psychiatric disorders are necessary and underway. It is impressive to find that the field has come together in such a collegial fashion in order to make progress toward alleviating the suffering of people with mental illnesses. It is now important to be able to decipher which if any of the accumulating findings are ready for communication to clinicians and implementation clinically. Ethical considerations to their use in treatment of patients will be a continuing ongoing discussion.