Identification of Blood-based Gene Expression Biomarkers for Major Depressive and Bipolar Disorders Seiji NAKAMURA¹, Hiroaki HORI², Yohei ISHIZAWA¹, Kenichi MATSUBARA¹, Ryo MATOBA¹, Hiroshi KUNUGI² ¹DNA Chip Research Inc., ²Department of Mental Disorder Research, National Institute of Neuroscience,

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Major depressive and bipolar disorders are typical psychiatric problems affecting about 350 million people globally. Pathogenesis is not fully understood and laboratory tests for diagnosis and prognosis are not established. We have performed microarray analysis using blood samples of major depressive and bipolar disorder (n=25) patients against age, gender-matched healthy controls (n=25). Genes related to ribosomes were found to be up-regulated in patients of major depressive and bipolar disorders. Ribosomal proteins RPL17 and RPL34 were further validated by qRT-PCR using independent test cohorts (15 patients each for depressive and bipolar against healthy controls). Reproducibility of the result indicates that ribosomes related genes could serve as useful screening biomarkers.