

SUPPLEMENTARY TABLE S1 - Table showing the number of genes expressed in each CNS region

Region	No. of genes expressed
CRBL	16,653
FCTX	15,213
HIPP	14,830
HYP0	14,956
MEDU	14,388
OCTX	15,274
PUTM	15,036
SNIG	14,392
SPCO	14,506
TCTX	15,310
THAL	14,599
WHMT	14,078

SUPPLEMENTARY TABLE S2 - Canonical pathways with evidence of sex-biased expression in at least one CNS region

Canonical Pathway	Enrichment	CNS Region	p-value
BIOCARTA_STRESS_PATHWAY	F>M	HIPP, WHMT	0.001, 0.009
KEGG_LYSOSOME	F>M	WHMT	0.016
KEGG_INSULIN_SIGNALING_PATHWAY	F>M	WHMT	0.039
REACTOME_COMPLEMENT_CASCADE	F>M	WHMT	0.04
KEGG_CHEMOKINE_SIGNALING_PATHWAY	F>M	WHMT	0.022
KEGG_LYSOSOME	M>F	CRBL	0.006
KEGG_SNARE_INTERACTIONS_IN_VESICULAR_TRANSPORT	M>F	SNIG	0.006

Significant sex-biased enrichment in at least one region (p-value < 0.05, where enrichment p-values were estimated using an empirical permutation-based procedure) was detected for 12 canonical pathways of which 7 could be considered independent.

Supplementary Note 1. Investigators within the North American Brain Expression Consortium

- Laboratory of Neurogenetics, National Institute on Aging, National Institutes of Health, Bethesda, MD, USA:
Sampath Arepalli, Mark R Cookson, Allissa Dillman, J Raphael Gibbs, Dena G Hernandez, Michael A Nalls, Andrew Singleton, Bryan Traynor & Marcel van der Brug
- Clinical Research Branch, National Institute on Aging, Baltimore, MD, USA:
Luigi Ferrucci
- Department of Molecular Neuroscience, UCL Institute of Neurology, London, UK:
J Raphael Gibbs & Dena G Hernandez
- NICHD Brain and Tissue Bank for Developmental Disorders, University of Maryland Medical School, Baltimore, Maryland 21201, USA:
Robert Johnson
- Lymphocyte Cell Biology Unit, Laboratory of Immunology, National Institute on Aging, National Institutes of Health, Baltimore, MD, USA:
Dan L Longo
- Brain Resource Center, Johns Hopkins University, Baltimore, MD, USA:
Juan Troncoso
- ITGR Biomarker Discovery Group, Genentech, South San Francisco, CA, USA:
Marcel van der Brug
- NICHD Brain and Tissue Bank for Developmental Disorders, University of Maryland Medical School, Baltimore, Maryland 21201, USA:
Ronald Zielke
- Research Resources Branch, National Institute on Aging, National Institutes of Health, Bethesda, MD, USA:
Alan Zonderman