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Relationship of Epilepsy Genes with JAK/STAT Inhibition					
Gene of Interest	FC V+B	FC WP+B	Name	Function	References
GALR1	34.36	-115.70	Galinin receptor 1	Protective in Epilepsy	Mazarati, 2004
BHLHE22	-5.1	7.78	Basic Helix Loop Helix E 22	Repressor involved in neurodevelopment	Joshi, 2008
SOCS3	2.89	-3.29	Suppressor of Cytokine Signaling 3	Inhibits JAK signaling, increased in epilepsy	Pernot, 2011
DRD5	14.91	-63.92	Dopamine Receptor 5	Knockout protects from seizures	O'Sullivan, 2008
INHBA	5.26	-5.27	Inhibin Beta A	Reduces excitotoxicity	Lau, 2015
NPTX1	5.01	-6.30	Neuronal Pentraxin 1	Plays role in epileptogenic synaptic remodeling	Sanabria, 2008
GRIN2A	2.18	-8.80	Glutamate Ionotropic Receptor NMDA Type Subunit 2A	Mutations cause epilepsy, involved in LTP	Carvill, 2013
CXCR4	-1.53	1.77	CXC Motif Chemokine Receptor 4	Inhibition protects against epilepsy	Song, 2016
HRH3	-3.93	6.53	Histamine H3 Receptor	Increased Histamine confers protection in epilepsy	Bhowmik, 2012
RGS4	4.46	-2.77	Regulator of G protein signaling 4	Inhibition protects against epilepsy	Chen, 2012
SH2D3C	-11.46	14.91	SH2 Domain Containing 3C	Involved in cell migration	Wang, 2012
ELAVL4	-2.04	2.76	ELAV Like RNA Binding Protein 4	Controls mRNA processing, increased in Epilepsy models	Bronicki, 2013
FYN	1.35	NA	FYN Proto-Oncogene, Src Family Tyrosine Kinase	Overactivity leads to epilepsy, activates mTORC1 pathway	Kojima, 1996; Wang, 2015
RPS6K(A2, A3, A5, A6, B1, B2)	A2--2.04	A2-2.59	Ribosomal Protein S6 Kinase	mTOR activated, involved in proliferation and cell growth	Cho, 2011
ARC	33.24	-15.04	Activity Regulated Cytoskeleton Associated Protein	Known to be seizure and BDNF induced, plasticity	Kulpers, 2016
BDNF	3.23	-2.90	Brain Derived Neurotrophic Factor	Increased in epilepsy, neuroplasticity	Binder, 2001
JAK2	1.79	-2.11	Janus Kinase 2	Activated by BDNF and Status Epil.	Lund, 2008
EGR3	5.57	-6.08	Early Growth Response 3	Regulates $\alpha 4$ subunit GABA _A R	Roberts et al, 2006