

Jonathan Bradley Savitz

Laureate Institute for Brain Research • 6655 S. Yale Rd. • Tulsa, OK 74136
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EDUCATION

Ph.D. (Human Genetics) University of Cape Town 2006

Thesis Title: The molecular genetics of bipolar affective disorder: South African populations, endophenotypes, and environmental influence.

Mentors: Rajkumar Ramesar and Mark Solms

External Examiners: Robert Cloninger (Washington University), Peter McGuffin (King's College, London), and Pamela Sklar (Harvard University)

M.Sc. (Neuropsychology) University of the Witwatersrand 2001

B.Sc. (Hons) Clinical Psychology (First Class) University of the Witwatersrand 1998

B.Sc. Genetics & Psychology (First Class) University of the Witwatersrand 1997

POSITIONS

Laureate Institute for Brain Research

Principal Investigator 2009 – present

The University of Tulsa

Associate Professor (with tenure), Oxley College of Health Sciences 2017 - present

Assistant Professor, Oxley College of Health Sciences 2011-2016

National Institutes of Health

Post-Doctoral Fellow (mentor Wayne Drevets)

Section on Neuroimaging in Mood and Anxiety Disorders, NIMH

University of Cape Town

Post-Doctoral Fellow (mentor Dan Stein) 2006

Brain and Behaviour Initiative, Department of Psychiatry

Clinical Intern in Neuropsychology 2004-2005

Department of Neurology, Groote Schuur Hospital

Ph.D. Candidate 2002-2006

Department of Human Genetics

FELLOWSHIPS & AWARDS

Faculty of Health Sciences Nominee for The University of Tulsa Research Award 2019, 2020

NARSAD Young Investigator Award 2015

Associate Member, American College of Neuropsychopharmacology (ACNP)	2013-2019
Career Development Award from the NIMH	2012-2018
Awardee of the Career Development Institute for Bipolar Disorder, Univ. of Pittsburgh	2010
NARSAD Anita C. and Robert F. Mitchell Memorial Investigator	2009
Post-Doctoral Fellow, SNMAD, NIMH	2007-2009
Post-Doctoral Fellow, Brain and Behaviour Initiative, UCT	2006
University of Cape Town Research Associateship	2004
South African Medical Research Council Local Scholarship	2002-2005
Witwatersrand University Postgraduate Merit Bursary	1998-2001
Centre for Science Development Scholarship	1998
University of the Witwatersrand Postgraduate Merit Scholarship	1998
University of the Witwatersrand Council Merit Scholarship	1997

RESEARCH GRANTS

Principal Investigator (Active)

Agency	Grant Number	Title	Years	Direct Costs	Effort
NIMH	R01MH123652	Neural response to inflammatory challenge in major depressive disorder	2021-2026	\$2,348,454	35%

Co-Investigator (Active)

Agency	Grant Number	Title	Years	Direct Costs	Effort
NINDS	R01NS102225	The role of neuroactive kynurenine metabolites in the chronic sequelae of concussion and contact sport exposure	2018-2022	\$1,785,448	5%

Principal Investigator (Past)

Agency	Grant Number	Title	Years	Direct Costs
Hope for Depression Research Foundation	RGA # 8-015	Catecholamine depletion in affective illness: functional imaging and genetic correlates	2008-2009	\$100,000
NARSAD	YI	Amygdala Response to Masked Sad	2009-	\$60,000

		and Happy Faces in Major Depressive Disorder and their First-Degree Relatives: A Genetically- Driven Subliminal Processing Bias?	2010	
Oklahoma Center for the Advancement of Science and Technology	HR10-172	Neuroimaging Biomarkers of Major Depression	2011-2013	\$150,000
Oklahoma Tobacco Research Center	RS20091891-18	Smoking, Inflammation and Neuromorphometric Abnormalities	2012-2012	\$59,542
Oklahoma Tobacco Research Center	RS20122397-15	α 7 Nicotinic Receptor Function in Depression: The Impact of Smoking	2012-2015	\$219,413
NIMH	K01MH096077	Neuroimaging abnormalities in major depressive disorder: effect of inflammation	2012-2017	\$905,484
Janssen Pharmaceuticals	NA	Biomarkers in Mood	2013-2016	\$829,703
NARSAD	YI 23850	Impaired Adaptive Immunity in Depression: Relationship with herpesviruses and inflammation	2016-2018	\$70,000
NIGMS	P20GM121312 (sub # 6550)	Response to inflammatory challenge in major depressive disorder	2017-2020	\$815,128
NIMH	R21MH113871	Acute modulation of neural circuitry regulating immune function in depression	2018-2020 (NCE)	\$275,000

Co-Investigator (Past)

Agency	Grant Number	Title	Years	Direct Costs
NIMH	R01MH098099	Inflammatory Transcripts, Genes and Positive Valence System Function in Anhedonia	2012-2016	\$1,601,159
Stanley Medical Research Foundation	10T-1401	Minocycline and Aspirin in the Treatment of Bipolar Depression	2012-2015	\$659,623
NINDS	R21 NS099789	Inflammation and kynurenine metabolites in the acute sequelae of concussion	2017-2019	\$246,757

PATENTS


U.S. patent. 10,213,444. Composition and Method for Treating Bipolar Disorder. Inventors: Wayne. C. Drevets, William. R. Yates, **Jonathan B. Savitz**, Sheldon H. Preskorn. Granted 02/26/2019.

PEER-REVIEWED PUBLICATIONS

~6,500 citations, H-index 39 (Web of Science)
~9,500 citations, H-index 49 (Google Scholar)
Mean Relative Citation Ratio 3.43 (iCite)
Current Impact Factor for Publications in Parentheses

FIRST/SENIOR AUTHOR PUBLICATIONS

- (1) **Savitz, J.B** and Jansen, P. (2003). The Stroop Color-Word Interference Test as an Indicator of ADHD in Poor Readers. **Journal of Genetic Psychology**. 164, 319-333. [0.9]
- (2) **Savitz, J.B** & Ramesar, R.S. (2004). Genetic Variants Implicated in Personality: A Review of the More Promising Candidates. **American Journal of Medical Genetics**. 131B, 20-32. [3.4]
- (3) **Savitz, J.**, Solms, M., Pietersen, E., Ramesar, R., Flor-Henry, P. (2004). Dissociative Identity Disorder Associated with Mania and Change in Handedness. **Cognitive and Behavioral Neurology**. 17, 233-237. [0.8]
- (4) **Savitz, J.B** & Jansen, P. (2005). Mainstream and Remedial School ADHD Boys: More Alike Than Different. **South African Journal of Psychology**. 35, 73-88. [0.8]
- (5) **Savitz, J.B.**, Solms, M., Ramesar, R.S. (2005). Neurocognitive function as an endophenotype for genetic studies of bipolar affective disorder. **NeuroMolecular Medicine**. 7, 275-286. [2.6]
- (6) **Savitz, J.**, Solms, M., Ramesar, R. (2005). Neuropsychological Deficits in Bipolar Affective Disorder: A Critical Opinion. **Bipolar Disorders**. 7, 216-235. [4.9]
- (7) **Savitz, J.**, Solms, M., Ramesar, R. (2006). The Molecular Genetics of Cognition: Dopamine, COMT, and BDNF. **Genes, Brain and Behavior**. 5, 311-328. [3.4]
- (8) **Savitz, J.**, Solms, M., Ramesar, R. (2006). Apolipoprotein E Variants and Cognition in Healthy Individuals: A Critical Opinion. **Brain Research Reviews**. 51, 125-135. [5.9]
- (9) **Savitz, J.B.** & Ramesar, R.S. (2006). Personality: Is it a viable endophenotype for genetic studies of bipolar affective disorder? **Bipolar Disorders**. 8, 322-337. [4.9]

- (10) **Savitz, J.B.**, Cupido, C.L., Ramesar, R.S. (2006). Trends in Suicidology: Personality as an Endophenotype for Molecular Genetic Investigations. **PLoS Medicine**. 3, e107. [10.5]
- (11) **Savitz J.**, van der Merwe, L., Solms, M., Ramesar, R. (2007). A Linkage and Family-Based Association Analysis of a Neurocognitive Endophenotype of Bipolar Disorder. **NeuroMolecular Medicine**. 9, 101-116. [2.6]
- (12) **Savitz J.**, Cupido, C.L., Ramesar, R. (2007). Preliminary Evidence for Linkage to Chromosome 1q31-32, 10q23.3 and 16p13.3 in a South African Cohort with Bipolar Disorder. **American Journal of Medical Genetics**. 144, 383-387. [3.4]
- (13) **Savitz J.** van der Merwe, L., Solms, M., Ramesar, R. (2007). A Possible Cognitive Control Deficit in an Extended Afrikaner-Ancestry Pedigree with Affective Illness. **Journal of Psychiatry and Neuroscience**. 32, 116-120. [4.2]
- (14) **Savitz, J.**, van der Merwe, L., Stein, D.J., Solms, M., Ramesar, R. (2007). Genotype and childhood sexual trauma moderate neurocognitive performance: A possible role for BDNF and ApoE variants. **Biological Psychiatry**. 62, 391-399. [12.1]
- (15) **Savitz, J.**, van der Merwe, L., Solms, M., Ramesar, R. (2007). Lateralisation of Hand-Skill in Bipolar Affective Disorder. **Genes, Brain and Behavior**. 6, 698-705. [3.4]
- (16) **Savitz, J.**, van der Merwe, L., Newman, T.K., Solms, M., Stein, D.J., Ramesar, R. (2007). The Relationship Between Childhood Abuse and Dissociation. Is it influenced by catechol-o-methyltransferase (COMT) activity? **International Journal of Neuropsychopharmacology**. 11, 149-161. [4.3]
- (17) **Savitz, J.** van der Merwe, L., Stein, D.J., Solms, M., Ramesar, R. (2008). Neuropsychological Task Performance in Bipolar Spectrum Illness: Genetics, Medication, Alcohol Abuse and Childhood Trauma. **Bipolar Disorders**. 10, 479-494. [5.4]
- (18) **Savitz J.**, van der Merwe, L., Ramesar, R. (2008). Hyperthymic, Cyclothymic and Hostile Personality Traits in Bipolar Spectrum Illness: A Family Based Study. **Journal of Psychiatric Research**. 42, 920-929. [3.7]
- (19) **Savitz J.**, van der Merwe, L., Ramesar, R. (2008). Dysthymic and Anxiety-Related Personality Traits in Bipolar Spectrum Illness. **Journal of Affective Disorders**. 109, 305-311. [3.9]
- (20) Drevets, W.C. and **Savitz, J.**, with forward by Trimble, M. (2008). The Subgenual Anterior Cingulate Cortex in Mood Disorders. **CNS Spectrums**. 13, 663-681. [3.4]
-  **Highly Cited Paper** ISI rated in 2009-2017 as top 1% of the academic field of Psychiatry & Psychology
- (21) **Savitz J.**, van der Merwe, L., Ramesar, R. (2008). Personality Endophenotypes for Bipolar Affective Disorder: A Family-Based Genetic Association Analysis. **Genes Brain and Behavior**. 7, 869-876. [3.4]

(22) **Savitz, J.**, van der Merwe, L., Stein D.J., Solms, M., Ramesar, R. (2009). Neuropsychological Status of Bipolar Disorder Type I: The Impact of Psychosis. **British Journal of Psychiatry.** 194, 243-251. [7.9]

(23) **Savitz J.** and Drevets, W.C. (2009). Bipolar and Major Depressive Disorder: Neuroimaging the Developmental Degenerative Divide. **Neuroscience and Biobehavioral Reviews.** 33, 699-771. [8.3]



ISI rated in 2010-2015 as top 1% of the academic field of Psychiatry & Psychology

(24) **Savitz J.** and Drevets, W.C. (2009). 5-HT_{1A} Receptor Function in Major Depressive Disorder. **Progress in Neurobiology.** 88, 17-31. [9.4]



ISI rated in 2010-2016 as top 1% of the academic field of Psychiatry & Psychology

(25) Stein, D.J., Horn, N., Ramesar, R., **Savitz, J.** (2009). Bipolar Disorder: Emotional Dysregulation and Neuronal Vulnerability. **CNS Spectrums.** 14, 122-126. [3.4]

(26) **Savitz J. B.** and Drevets, W.C. (2009). Imaging Endophenotypes for Major Depressive Disorder. **Neuroscience.** 164, 300-330. [3.1]

(27) **Savitz, J.**, van der Merwe, L., Newman, T.K., Stein, D.J., Ramesar, R. (2010). Catechol-o-Methyltransferase Genotype and Childhood Trauma May Interact to Impact Schizotypal Personality Traits. **Behavior Genetics.** 40, 415-423. [2.2]


(28) **Savitz, J.**, Nugent, A.C., Bogers, W., Liu, L., Sills, R., Luckenbaugh, D., Bain, E.E., Price, J.L., Zarate, C., Manji, H.K., Cannon, D.M., Marrett, S., Charney, D., Drevets, W.C. (2010). Amygdala Volume in Depressed Patients with Bipolar Disorder Assessed using High Resolution 3T MRI: The Impact of Medication. **NeuroImage.** 49, 2966-2976. [5.9]

(29) **Savitz, J.B.**, Nugent, A.C., Bogers, W., Roiser, J.P., Bain, E.E., Neumeister, A., Zarate, Jr., C.A., Manji, H.K., Cannon, D.M., Marrett, S., Henn, F., Charney, D.S., Drevets, W.C. (2011). Habenula Volume in Bipolar Disorder and Major Depressive Disorder: A High Resolution MRI Study. **Biological Psychiatry.** 69, 336-343. [12.1]

(30) **Savitz, J.**, Bonne, O., Nugent, A.C., Vythilingam, M., Bogers, W., Charney, D.S., Drevets, W.C. (2011). Habenula Volume in Post-Traumatic Stress Disorder Measured with High-Resolution MRI. **Biology of Mood and Anxiety Disorders.** 1, 7.

(31) **Savitz, J.**, Preskorn, S.H., Teague, T.K., Drevets, D.A., Yates, W., Drevets, W.C. (2012). Minocycline and Aspirin in the Treatment of Bipolar Depression: a protocol for a proof-of-concept randomized, double-blind, placebo-controlled, 2x2, clinical trial. **BMJ Open.** 2, e000643. [2.4]

(32) **Savitz, J.**, Nugent, A.C., Cannon, D.M., Carlson, P.J., Davis, R., Rallis-Frutos, D., Fromm, S., Herscovitch, P., Drevets, W.C. (2012). Effect of arterial cannulation stress on regional cerebral blood flow in major depressive disorder. **Scientific Reports.** 2, 308. [4.0]

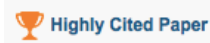
- (33) **Savitz, J.** and Drevets, W.C. (2013). Neuroreceptor Imaging in Depression. **Neurobiology of Disease**. 52, 49-65. [5.3].
- (34) **Savitz, J.**, Frank, M.B, Victor, T, Bebak, M, Marino, J.H, Bellgowan, P.S, McKinney, B.A, Bodurka, J, Teague, T.K., Drevets, W.C. (2013). Inflammation and neurological disease-related genes are differentially expressed in depressed patients with mood disorders and correlate with morphometric and functional imaging abnormalities. **Brain, Behavior and Immunity**. 31, 161-171. [6.6].
- (35) **Savitz, J.**, Hodgkinson, C.A., Martin-Soelch, C., Shen, P.H., Szczepanik, J., Nugent, A., Herscovitch, P., Grace, A.A., Goldman, D., Drevets, W.C. (2013). The functional DRD3 Ser9Gly polymorphism (rs6280) is pleiotropic, affecting reward as well as movement. **PLoS ONE**. 8, e54108. [2.7].
- (36) **Savitz, J.B.**, Rauch, S. L., Drevets, W.C. (2013). Clinical Application of Brain Imaging for the Diagnosis of Mood Disorders: The current state of play. **Molecular Psychiatry**. 18, 528-539. [12.4].
- (37) **Savitz, J.**, Nugent, A.C., Bellgowan, P.S.F., Wright, N., Tinsley, R., Zarate, Jr., C.A., Herscovitch, P., Drevets, W.C. (2013). Catecholamine Depletion in First-Degree Relatives of Individuals with Mood Disorders: an [18F]Fluorodeoxyglucose Positron Emission Tomography Study. **NeuroImage: Clinical**. 2, 341-355. [4.4].
- (38) **Savitz, J.**, Hodgkinson, C.A., Martin-Soelch, C., Shen, P.H., Szczepanik, J., Nugent, A., Herscovitch, P., Grace, A.A., Goldman, D., Drevets, W.C. (2013). DRD2/ANKK1 Taq1A polymorphism (rs1800497) has opposing effects on D2/3 receptor binding in healthy controls and patients with major depressive disorder. **International Journal of Neuropsychopharmacology**. 16, 2095-2101. [4.3].
- (39). **Savitz, J.B.**, Price, J.L., Drevets, W.C. (2014). Neuropathological and Neuromorphometric Abnormalities in Bipolar Disorder: View from the Medial Prefrontal Cortical Network. **Neuroscience and Biobehavioral Reviews**. 42C, 132-147. [8.3].
- (40). **Savitz, J.**, Drevets, W.C., Smith, C.M., Victor, T.A., Wurfel, B.E., Bellgowan, P.S.F., Bodurka, J., Teague, T.K., Dantzer, R. (2015). Putative Neuroprotective and Neurotoxic Kynurenine Pathway Metabolites are Associated with Hippocampal and Amygdalar Volumes in Subjects with Major Depressive Disorder. **Neuropsychopharmacology**. 40, 463-471. [6.8].
-  **Highly Cited Paper** ISI rated in 2016-2017 as top 1% of the academic field of Neuroscience & Behavior
- (41). **Savitz, J.**, Dantzer, R., Wurfel, B.E., Victor, T.A., Ford, B.N., Bodurka, J., Bellgowan, P.S.F., Teague, T.K., Drevets, W.C. (2015). Neuroprotective kynurenine metabolite indices are abnormally reduced and positively associated with hippocampal volume in bipolar disorder. **Psychoneuroendocrinology**. 52, 200-211. [4.7].
- (42). **Savitz, J.**, Drevets, W.C., Bellgowan, P.S.F., Wurfel, B.E., Ford, B.N., Victor, T.A., Teague, T.K., Dantzer, R. (2015). Reduction of kynurenic acid to quinolinic acid ratio in the remitted phase of major depressive disorder. **Brain Behavior and Immunity**. 46, 55-59. [6.6].

(43). **Savitz, J.**, Dantzer, R., Meier, T.B., Wurfel, B.E., Victor, T.A., McIntosh, S.A., Ford, B.N., Morris, H.M., Bodurka, J., Teague, T.K., Drevets, W.C. (2015). Activation of the kynurenine pathway is associated with striatal volume in major depressive disorder. **Psychoneuroendocrinology**. 62, 54-58. [4.7].

(44). Meier, T.B., Drevets, W.C., Wurfel, B.E., Ford, B.N., Morris, H.M., Victor, T.A., Bodurka, J., Teague, T.K., Dantzer, R., **Savitz, J.** (2016). Relationship between neurotoxic kynurenine metabolites and reductions in right medial prefrontal cortical thickness in major depressive disorder. **Brain Behavior and Immunity**. 53, 39-48. [6.6].

(45). Young, K.D., Drevets, W.C., Dantzer, R., Teague, T.K., Bodurka, J., **Savitz, J.** (2016). Kynurenine Pathway Metabolites are Associated with Hippocampal Activity during Autobiographical Memory Recall in Patients with Depression. **Brain Behavior and Immunity**. 56, 335-342. [6.6].

(46). Mechawar, N. and **Savitz, J.** (2016). Neuropathology of Mood Disorders: Do we see the stigmata of inflammation? **Translational Psychiatry**. 6, e946. [5.3].



ISI rated in 2017 as top 1% of the academic field of Neuroscience & Behavior

(47). Victor, T.A., Drevets, W.C., Misaki, M., Bodurka, J., **Savitz, J.** (2017). Sex Differences in Neural Responses to Subliminal Sad and Happy Faces in Healthy Individuals: Implications for Depression. **Journal of Neuroscience Research**. 95, 703-710. [4.7].

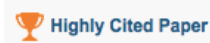
(48). Meier, M.B., Lancaster, M.A., Mayer, A.R., Teague, T.K., **Savitz, J.** (2017). Abnormalities in functional connectivity in collegiate football athletes with and without a concussion history: implications and role of neuroactive kynurenine pathway metabolites. **Journal of Neurotrauma**. 34, 824-837. [3.8].

(49). Wurfel, B.E., Drevets, W.C., Bliss, S.A., McMillin, J.R., Suzuki, H., Ford, B.N., Morris, H.M., Teague, T.K., Dantzer, R., **Savitz, J.** (2017). Serum Kynurenic Acid is Reduced in Affective Psychosis. **Translational Psychiatry**. 7, e1115. [5.3].



(50). Suzuki, H., **Savitz, J.** (*joint first authors*), Teague, T.K., Gandhapudi, S.K., Tan, C., Misaki, M., McKinney, B.A., Irwin, M.R., Drevets, W.C., Bodurka, J. (2017). Altered Populations of Natural Killer Cells, Cytotoxic T Lymphocytes, and Regulatory T Cells in Major Depressive Disorder: Association with Sleep Disturbance. **Brain, Behavior, and Immunity**. 66, 193-200. [6.6].

(51). Meier, T.B., Drevets, W.C., Teague, T.K., Wurfel, B.E., Mueller, S.C., Bodurka, J., Dantzer, R., **Savitz, J.** (2018). Kynurenic Acid is Reduced in Females and Oral Contraceptive Users: Implications for Depression. **Brain, Behavior, and Immunity**. 67, 59-64. [6.6].

(52). **Savitz J.**, Teague T.K., Misaki M., Macaluso M., Wurfel B.E., Meyer M., Drevets D., Yates W., Gleason O., Drevets W.C., Preskorn S.H. (2018). Treatment of Bipolar Depression with Minocycline and/or Aspirin: An adaptive, 2 X 2 double-blind, randomized, placebo-controlled, phase IIA clinical trial. **Translational Psychiatry**. 8, e27. [5.3].



ISI rated in 2019-2021 as top 1% of the academic field of Psychiatry & Psychology

- (53). **Savitz J.** and Harrison N.A. (2018). Interoception and Inflammation in Psychiatric Disorders. **Biological Psychiatry: Cognitive Neuroscience and Neuroimaging.** 3, 514–524. [5.3].
- (54). Ford, B.N., Yolken, R.H., Dickerson, F.B., Teague, T.K., Irwin, M.R., Paulus, M.P., **Savitz, J.** (2019). Reduced Immunity to Measles in Adults with Major Depressive Disorder. **Psychological Medicine.** 49, 243-249. [5.8].
- (55). Ford, B.N., Yolken, R.H., Aupperle, R.L., Teague, T.K., Irwin, M.R., Paulus, M.P., **Savitz, J.** (2019). Association of Early-Life Stress with Cytomegalovirus Infection in Adults with Major Depressive Disorder. **JAMA Psychiatry.** 76, 545-547. [17.5].
- (56). **Savitz, J.** (2020). The Kynurenine Pathway: A Finger in Every Pie. **Molecular Psychiatry.** 25, 131-147. [12.4].
-  **Highly Cited Paper** ISI rated in 2020-2021 as top 1% of the academic field of Neuroscience & Behavior
-  **Hot Paper** ISI rated in 2021 as top 0.1% of the academic field of Neuroscience & Behavior
- (57). Meier, T.B., Nitta, M.E., Teague, T.K., Nelson, L.D., McCrea, M.A., **Savitz, J.** (2020). Prospective study of the effects of sport-related concussion on serum kynurenine pathway metabolites. **Brain, Behavior, and Immunity.** 87, 715-724. [6.6].
- (58). Ford, B.N., Teague, T.K., Bayouth, M., Yolken, R. H., Bodurka, J., Irwin, M.R., Paulus, M.P., **Savitz, J.** (2020). Diagnosis-independent loss of T-cell costimulatory molecules in individuals with cytomegalovirus infection. **Brain, Behavior, and Immunity.** 87, 795-803. [6.6].
- (59). Figueroa-Hall, L., Paulus, M.P., **Savitz, J.** (2020). Toll-Like Receptor Signaling in Depression. **Psychoneuroendocrinology.** 121, 104843. [4.7].
- (60). Zheng, H., Ford, B.N., Bergamino, M., Kuplicki, R., Tulsa 1000 Investigators, Hunt, P.W., Bodurka, J., Teague, T.K., Irwin, M.R., Yolken, R., Paulus, M.P., **Savitz, J.** (2021). A Hidden Menace? Cytomegalovirus Infection is Associated with Reduced Cortical Gray Matter Volume in Major Depressive Disorder. **Molecular Psychiatry.** In press. [12.4].
- (61). **Savitz, J.**, Ford, B.N., Yeh, W.H., Akeman, E., Cosgrove, K., Clausen, A.N., Martell, C., Kirlic, N., Santiago, J., Teague, T.K., Irwin, M.R., Paulus, M.P., Aupperle, R. L. (2021). Behavioral Activation Therapy for Depression is Associated with a Reduction in the Concentration of Circulating Quinolinic Acid. **Psychological Medicine.** In press. [5.8].
- (62). Meier T.B., España L.E., Nitta M.E., Teague T.K., Brett B.L., Nelson L.D., McCrea M.A., **Savitz J.** (2021). Positive association between serum quinolinic acid and functional connectivity following concussion. **Brain, Behavior, and Immunity.** 91, 531-540. [6.6].
- (63). Tsuchiyagaito, A., Smith, J.L., El-Sabbagh, N., Zotev, V., Misaki, M., Al Zoubi, O., Teague, T.K., Paulus, M.P., Bodurka, J., **Savitz, J.** (2021). Real-time fMRI Neurofeedback Amygdala Training May Influence Kynurenine Pathway Metabolism in Major Depressive Disorder. **NeuroImage Clinical.** 29, 102559. [4.4].

(64). Zheng, H., Bergamino, M., Ford, B.N., Kuplicki, R., Yeh, F.C., Bodurka, J., Burrows, K., Tulsa 1000 Investigators, Hunt, P.W., Teague, T.K., Irwin, M.R., Yolken, R., Paulus, M.P., **Savitz, J.** (2021). Replicable Association between Human Cytomegalovirus Infection and Reduced White Matter Fractional Anisotropy in Major Depressive Disorder. **Neuropsychopharmacology**. 46, 928-938. [6.8].

(65). Meier, T.B. and **Savitz, J.** (2021). The kynurenine pathway in traumatic brain injury: Implications for psychiatric outcomes. **Biological Psychiatry**. In Press. [12.1].

SECOND/SECOND TO LAST AUTHOR PUBLICATIONS

(1). Stein, D.J., Newman, T.K., **Savitz, J.**, Ramesar, R. (2006). Warriors versus Worriers: The Role of COMT Gene Variants. **CNS Spectrums**. 11, 745-748. [3.4]

(2) Stein, D.J., Daniels, W., **Savitz, J.**, Harvey, B.H. (2008). Brain-Derived Neurotrophic Factor: The Neurotrophin Hypothesis of Psychopathology. **CNS Spectrums**. 13, 945-949. [3.4]

(3). Misaki, M., **Savitz, J.**, Zotev, V., Phillips, R., Yuan, H., Young, K.D., Drevets, W.C., Bodurka, J. (2015). Contrast Enhancement by Combining T1- and T2-weighted Structural Brain MR Images. **Magnetic Resonance in Medicine**. 74, 1609-1620. [3.6].

(4). Singh, R., **Savitz, J.**, Teague, T.K., Polanski, D.W., Mayer, A.R., Bellgowan, P.S.F., Meier, T.B. (2016). Mood symptoms correlate with kynurenine pathway metabolites following sports-related concussion. **Journal of Neurology, Neurosurgery, and Psychiatry**. 87, 670-675. [8.2].

(5). Meier T.B., **Savitz J.**, Singh R., Teague T.K., Bellgowan P.S.F. (2016). Smaller Dentate Gyrus and CA 2 & 3 volumes are associated with kynurenine metabolites in collegiate football athletes. **Journal of Neurotrauma**. 33, 1349-57. [3.8].

(6). Le, T.T., Simmons, W.K., Misaki, M., Bodurka, J., White, B.C., **Savitz, J.**, McKinney, B.A. (2017). Differential privacy-based evaporative cooling feature selection and classification with relief-F and random forests. **Bioinformatics**. 15, 2906-2913. [5.6].

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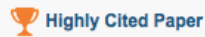
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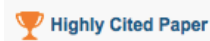


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SELECTED TALKS

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(2). **Savitz, J.** Genetics of Bipolar Disorder. **Laboratory of Neurogenetics (LNG), NIAAA**. Rockville, MD, February, 2005.

- (3). **Savitz, J.**, Drevets, W., Nugent, A., Bogers, W., Solomon, G., Wright, N., Bonne, O. Increased left subgenual prefrontal cortex and decreased right amygdala volumes in post-traumatic stress disorder. **Society for Neuroscience (SfN)** annual Meeting. Washington DC, 18th November, 2008.
- (4). **Savitz, J.** The Immunological Basis of Mood Disorders. Department of Psychiatry, Grand Rounds. **University of Oklahoma College of Medicine**, Tulsa, OK. 1st May, 2013.
- (5). **Savitz, J.** The Immunological Basis of Mood Disorders. Department of Psychiatry, Grand Rounds. **University of Kansas School of Medicine**, Wichita, KS. 10th October, 2013.
- (6). **Savitz, J.** Immune function in depression: association with neuroimaging abnormalities. Department of Psychology Colloquium Series. **University of Alabama, Birmingham**, AL. 22nd January 2014.
- (7). **Savitz, J.** Immunological and Neuroimaging Abnormalities in Depression: a unifying hypothesis. Department of Psychiatry, Grand Rounds. **University of Cincinnati**, Cincinnati, OH. 19th February 2014.
- (8). **Savitz, J.** Neuroprotective and neurotoxic kynurenine metabolites are associated with hippocampal and amygdalar volumes in depression. **International Society of Bipolar Disorders (ISBD)** annual Meeting. Seoul, South Korea. 20th March, 2014.
- (9). **Savitz, J.** Depression and "inflammation": what can we see with neuroimaging? Department of Symptom Research, **University of Texas, M.D. Anderson Cancer Center**. 25th March, 2014.
- (10). **Savitz, J.** Depression and "inflammation": what can we see with neuroimaging? Department of Psychiatry, **University of Pittsburgh**, Pittsburgh, PA. 9th April, 2014.
- (11). **Savitz, J.** Kynurenine pathway imbalance in mood disorders: association with neuromorphometric abnormalities. Department of Psychiatry. **University of Texas Health Sciences Center**, Houston, TX. 29th April, 2014.
- (12). **Savitz, J.** Association between kynurenine-pathway metabolites and gray matter volumes of the hippocampus and amygdala in patients with bipolar disorder. **American Society of Clinical Psychopharmacology** annual meeting. Hollywood, FL. 17th June, 2014.
- (13). **Savitz, J.** The tryptophan-kynurenine metabolic pathway in mood disorders: what can we see with neuroimaging? **International Society for Tryptophan Research (ISTRYP)** Meeting. Grand Rapids, MI. 18th September, 2015.
- (14). **Savitz, J.** Kynurenine pathway, immune system, and brain imaging in affective and psychotic disorders. **Stanley Medical Research Foundation** annual meeting. Baltimore, MD. 2nd December, 2015.
- (15). **Savitz, J.** Relationship between microglial/macrophage-derived neurotoxic kynurenine metabolites and hippocampal structure and function in depression. **Society of Biological Psychiatry (SOBP)** annual Meeting. Atlanta, GA. 12th May, 2016.

- (16). **Savitz, J.** Do neuroactive kynurenine metabolites affect brain structure and function in depression? **Psychoneuroimmunology Research Society (PNIRS)** annual Meeting. Plenary Session. Brighton, England. 9th June, 2016.
- (17). **Savitz, J.** Treatment of bipolar disorder with minocycline and/or aspirin: an adaptive, double-blind, randomized, placebo-controlled clinical trial (NCT01429272). **International Society of Bipolar Disorders (ISBD)** annual Meeting. Amsterdam, The Netherlands. 14th July, 2016.
- (18). **Savitz, J.** Relationship between neurotoxic kynurenine metabolites and hippocampal structure in bipolar disorder. **International Society of Bipolar Disorders (ISBD)** annual Meeting. Amsterdam, The Netherlands. 14th July, 2016.
- (19). **Savitz, J.** Relationship between neurotoxic kynurenine metabolites and hippocampal structure and function in depression. **SALSI Neuroscience Symposium: Translational Neuroimmunology**. San Antonio, TX., 22nd July, 2016.
- (20). **Savitz, J.** Depression and Inflammation: Etiology, Mechanism, and Treatment. Department of Psychiatry, Grand Rounds. **University of Arkansas Medical School**. Little Rock, AR. January, 12th 2017.
- (21). **Savitz, J.** Neuroimmunology of Depression. **Oklahoma Center for Neuroscience, OUHSC**. Oklahoma City, OK. March 9th, 2017.
- (22). **Savitz, J.** Immune Dysregulation in Depression. **NIAAA Laboratory of Neurogenetics**. Rockville, MD. April 10th, 2017.
- (23). **Savitz, J.** Immunophenotyping the mood disorder spectrum. **International Society of Bipolar Disorders (ISBD)** annual Meeting. Washington, DC. 6th May, 2017.
- (24). **Savitz, J.** Infectious Agents, Adaptive Immunity and Inflammation in Depression. **Society of Biological Psychiatry (SOBP)** annual Meeting. New York City, NY. May 11th 2018.
- (25). **Savitz, J.** Immune dysregulation in mood disorders. **Medical College of Wisconsin**. Milwaukee, WI. 28th June, 2018.
- (26). **Savitz, J.** Childhood abuse is associated with cytomegalovirus infection. **Anxiety and Depression Association of America (ADAA)** annual Meeting. Chicago, IL. 30th March, 2019.
- (27). **Savitz, J.** Impaired immunity to measles in adults with depression. NIH/NIGMS IDeA Meeting. Oklahoma City, OK. 14th June, 2019.
- (28). Joshua Cho (UCLA), Julie Lasselin, (Karolinska Institutet), Mats Lekander (Karolinska Institutet), **Jonathan Savitz (LIBR)**, Manfred Schedlowski (University of Duisberg-Essen). Panel Discussion. Advantages and methodological considerations of experimental endotoxemia in humans – towards a standardized procedure for its application in PNI. **Psychoneuroimmunology Research Society (PNIRS)** annual meeting. Los Angeles, CA. 21st May, 2021.

SERVICE

Professional Societies

Associate Member, American College of Neuropsychopharmacology (ACNP)	2013-2019
Member, Psychoneuroimmunology Research Society (PNIRS)	2016-

Editorial Work

Journal	Date	Impact Factor
Associate Editor of <i>Neuroscience Letters</i>	2015-2019	2.3
Editorial Board Member of <i>Brain, Behavior and Immunity</i>	2018-	6.6
Editorial Board Member of <i>BBI Health</i>	2018-	-
Editorial Board Member of <i>Heliyon</i>	2018-	-
Editorial Board Member of <i>Psychoneuroendocrinology</i>	2019-	4.7
Editorial Board Member of <i>Comprehensive Psychoneuroendocrinology</i>	2019-	-
Editorial Board Member of <i>International Journal of Molecular Sciences</i>	2020-	4.6

Ad Hoc Reviewer

National Institutes of Health (NIH) Panels	Date
Biobehavioral Mechanisms of Emotion, Stress and Health (MESH)	2016
Biobehavioral Research Awards for Innovative New Scientists (BRAINS)	2017
National Cancer Institute Special Emphasis Panel (ZCA1 SRO-Q)	2017
Biobehavioral Mechanisms of Emotion, Stress and Health (MESH)	2018
Early Phase Clinical Trials of Natural Products (ZAT1 SM (45) 1)	2019
Neural Basis of Psychopathology, Addictions, and Sleep (NPAS)	2020
Neural Basis of Psychopathology, Addictions, and Sleep (NPAS)	2021
Special Emphasis Panel, ZRG1 BDCN-C (02) Neuropsychiatric Disorders	2021

Granting Agency	Date
Austrian Science Fund (FWF)	2015
Chief Scientists' Office, Scotland	2016
Dutch Organisation for Health Research and Development (ZonMw)	2017
Geneva University Hospitals and Faculty of Medicine Research Foundation	2016
Health Research Board, Ireland	2017
KU Leuven, Belgium	2016- 2018
National Initiative Brain and Cognition, The Netherlands	2015
National Research, Development and Innovation Office, Hungary	2013
Ontario Mental Health Foundation, Canada	2014
Prinses Beatrix Fonds, The Netherlands	2012

PSI Foundation, Canada	2017
Research Foundation – Flanders, Belgium	2016
St Vincent's Clinic Foundation, NSW, Australia	2018
Swiss National Science Foundation	2014

Journals (selected):

Acta Psychiatrica Scandinavica
American Journal of Psychiatry
Archives of General Psychiatry
Biological Psychiatry
Bipolar Disorders
Brain, Behavior and Immunity - “outstanding reviewer” 2015, 2017
British Journal of Psychiatry
Cerebral Cortex
Human Brain Mapping
International Journal of Neuropsychopharmacology
JAMA Psychiatry
Journal of Abnormal Psychology
Journal of Clinical Psychiatry
Journal of the American Academy of Child and Adolescent Psychiatry
Journal of Neurology, Neurosurgery and Psychiatry
Journal of Psychiatry and Neuroscience
Lancet Psychiatry
Molecular Psychiatry
NeuroImage
Neuropsychology
Neuropsychologia
Neuropsychopharmacology
Neuroscience and Biobehavioral Reviews
Psychological Medicine
Psychological Review
Psychoneuroendocrinology - “outstanding reviewer” 2016
Psychopharmacology
Schizophrenia Bulletin
Schizophrenia Research
Translational Psychiatry

External Reviews (Promotion and Tenure):

Department of Psychiatry, University of Illinois, Chicago	Date 2017
Department of Psychiatry and Behavioral Sciences, University of Texas, Houston	2020
Department of Psychiatry, University of Pittsburgh	2020
Van Andel Institute, Michigan State University	2020

PhD Theses (external examiner):

University of Cape Town	Date 2013
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University Service	Date
College of Health Sciences Representative in The University of Tulsa Senate	2016-2017
Chair, Oxley College of Health Sciences Tenure Committee, The University of Tulsa	2017
Faculty of Community Medicine, Tenure Committee, The University of Tulsa	2018-2020
Oxley College of Health Sciences Tenure Committee, The University of Tulsa	2018

Data Safety and Monitoring Boards (DSMB)

Study Title	Principal Investigator	Role	Years
Experimental Model of Depression in Aging: Insomnia, Inflammation, and Affect Mechanisms	Michael R. Irwin, MD, University of California, Los Angeles	Member	2017-
An Experimental Treatment Approach for Inflammation-Induced Depression	Hyong-Jin Cho, M.D., Ph.D., University of California, Los Angeles	Chair	2018-

Public Lectures

- (1). The inflamed brain. **Healthy Brains for a Healthy Oklahoma Lecture Series.** Tulsa, OK, 2016
- (2). The inflamed brain. **Healthy Brains for a Healthy Oklahoma Lecture Series.** Tulsa, OK, 2017
- (3). Immune Function in Depression. **Zarrow Mental Health Symposium.** Tulsa, OK, 2019

MENTORING

Undergraduate Students

Amritha Harikumar, The University of Tulsa	2014-2015
Caroline Ibrahim, TURC scholar, The University of Tulsa	2015-2016
Maria Nadeem, TURC scholar, The University of Tulsa	2015-2017

Graduate Students

Mentee	Year/s	Degree/Institution	Awards/Grants	Current Position
Bart Ford	2015-2020	Ph.D., University of Tulsa	- Winner of the 2019 Michael Irwin Equity and Diversity Award from PNIRS - First place graduate poster presentation at 2018 Emory STEM Symposium - First place oral presentation at 2018 University of Tulsa Research Colloquium	Assistant Professor, Department of Pharmacology, Oklahoma State University

Post-Doctoral Fellows

Mentee	Year/s	Awards/Grants	Current Position
Leandra Figueroa-Hall	2019-		
Haixia Zheng	2019-		
Bart Ford	2020-2021		Assistant Professor, Department of Pharmacology, Oklahoma State University

TEACHING

Facilitator, OU-TU School of Community Medicine

M.D. Program, “Patients, Physicians, and Society 1”

2015-2017

Ad Hoc Lecturer, The University of Tulsa

Principles of Neuroscience (BIOL 4173)

2018-2019

Ad Hoc Lecturer University of Oklahoma College of Medicine

Neuroinflammation and Neuroimmunology (OCNS 6311)

2017-2018

Genetics of Mood Disorders (Psychiatry Resident Program)

2012-2013

Immunological Basis of Mood Disorders (Psychiatry Resident Program)

2014-2015

Ad Hoc Lecturer National Institutes of Health

Post-Baccalaureate Intra-Mural Training Awardees Program

2007-2009

Tutor University of Cape Town

MBChB (M.D.) Program

2004

Tutor University of the Witwatersrand

Statistics and Statistics and Research Methodology II, Department of Psychology

1998-1999