

Curriculum Vitae

EMPLOYMENT**University of Bergen**

Associate Professor

Bergen, Norway

January 2023 – present

Linköping University

Associate Professor

Linköping, Sweden

September 2015 – December 2022

Laureate Institute for Brain Research &**Tulsa Community School of Medicine**

Assistant Professor

Tulsa, OK

February 2013 – June 2015

Stanford University

Research Faculty, Clinical Neuroscience

Stanford, CA

August 2009 – November 2012

EDUCATION**Stanford University**

Postdoctoral Fellow, Clinical Neuroscience

Stanford, CA

August 2004 – August 2009

University of Michigan

Ph.D., Computational and Cognitive Neuroscience

Ann Arbor, MI

August 1997 – May 2004

University of California BerkeleyB.A., Psychology, *summa cum laude*, Phi Beta Kappa**Berkeley, CA**

August 1992 – May 1996

RESEARCH STATEMENT

For the last fifty years, developments in bioassay and in-vivo imaging technologies have provided us with a unique “look under the hood” in psychiatric and neurologic disorders. Necessarily, most of this research has been exploratory because of the complexity of the biological systems investigated. Nonetheless, in the area of mood disorders, important regularities have emerged in the domains of genetics, endocrine and cytokine signaling, metabolomics, as well as molecular and functional neuroimaging. Currently, the primary motivator of research in my laboratory is that these regularities cohere in ways that promote development of theoretical models as well as approaches to subtyping and tailoring of treatment for mood disorders. Consequently, we apply to our investigations of mood disturbance a broad, multilevel array of methods including neuroimaging, whole-genome sequencing, and endocrine and cytokine assays of blood and cerebrospinal fluid. We apply these methods in natural-history studies to identify abnormal biological patterns in mood disorders, and in experimental medicine studies aimed at development of a more causal psychiatric science.

RESEARCH SUPPORT

Previous

Swedish Research Council, ALF
Characterizing and Modulating Neural Inflammation in Major Depression
Role: Co-Principal Investigator
Period of Funding: 2017 — 2022

Weston Havens Foundation
Neural-Systems Level Implications of Striatal Dopamine Anomalies in Major Depression: Concurrent [¹¹C]Raclopride Positron Emission Tomography and Functional Magnetic Resonance Imaging
Role: Principal Investigator
Period of Funding: 2012 — 2016

Department of Defense
Air Force Office of Scientific Research
R01: Cyber Trust and Suspicion
Role: Principal Investigator
Period of Funding: 2012 — 2015

National Institutes of Health
Ruth L. Kirschstein National Research Service Award
F32: Real-time Localized Neuromodulation in Major Depression
Role: Principal Investigator
Period of Funding: 2007 - 2010

National Alliance for Research on Schizophrenia and Depression
Young Investigator Award
Real-time Localized Neuromodulation in Major Depression
Role: Principal Investigator
Period of Funding: 2007 – 2011

HONORS AND AWARDS

2018 – Society of Biological Psychiatry Top Reviewer Award
2017 – American College of Neuropsychopharmacology Top Reviewer Award
2015 – American College of Neuropsychopharmacology Travel Award
2010 – Italian National Research Center Fellowship
2009 – University of Geneva Swiss Center for Affective Sciences Fellowship
2005 – National Institutes of Health Loan Repayment Program
2004 – Vivian Smith International Neuropsychological Society Fellowship
2003 – University of Michigan Outstanding Graduate Student Instructor Award
1996 – Phi Beta Kappa Honor Society Inductee
1992 – U.C. Berkeley President's Scholarship

PUBLICATIONS

* denotes undergraduate, post-baccalaureate, graduate-student, or post-doctoral mentee

^ denotes shared first/last authorship

Citation metrics

| | |
|------------------|-------|
| Total citations: | 12443 |
| h-index: | 43 |
| i10-index: | 59 |

Five most cited primary- / senior-author articles

Hamilton, J.P., Etkin, A., Furman, D.J., Lemus, M.G., Johnson, R.F., & Gotlib, I.H. (2012). Functional neuroimaging of Major Depressive Disorder: A meta-analysis and new integration of baseline activation and neural response data. *The American Journal of Psychiatry*, *169*, 693-703.

(citation count: 852)

Hamilton, J.P., Furman, D.J., Chang, C., Thomason, M.E., Dennis, E., & Gotlib, I.H. (2011). Default-mode and task-positive network activity in major depressive disorder: Implications for adaptive and maladaptive rumination. *Biological Psychiatry*, *70*(4), 327-333.

(citation count: 851)

Hamilton, J.P., *Farmer, M., *Fogelman, P., & Gotlib, I.H. (2015). Depressive rumination, the default-mode network, and the dark matter of clinical neuroscience. *Biological Psychiatry*, *78*(4), 224-230.

(citation count: 777)

Hamilton, J.P., Siemer, M., & Gotlib, I.H., (2008). Amygdala volume in major depressive disorder: A meta-analysis of magnetic resonance imaging studies. *Molecular Psychiatry*, *13*(11), 993-1000.

(citation count: 608)

Feldman Barrett, L., Quigley, K., & **Hamilton, J.P.** (2016). An active inference theory of allostasis and interoception in depression. *Philosophical Transactions of the Royal Society B*, *371*.

(citation count: 547)

Under review

Thunberg, P., Fresnais, D., **Hamilton, J.P.**, Bejerot, S., Humble, M.B. Immunomodulatory Treatment and Changes of Functional Brain Connectivity in Severe Mental Disorders.

Under revision

Howard, D., Paul, E.R., Heilig, M., Östman, L., Kämpe, R., **Hamilton, J.P.** Immune and metabolic disturbance as a function of genetic risk and phase of illness in major depression. *Translational Psychiatry*.

In press

Sklivanioti Greenfield, M., Wang, Y., **Hamilton, J.P.**, Thunberg, P., Msghina, M. Emotion dysregulation in adult ADHD not reversed by stimulant medication. *Journal of Psychiatry and Neuroscience*.

Published

Belov, V., Erwin-Grabner, T., Aghajani, M., [et al, including **Hamilton, J.P.**]. (2024). Multi-site benchmark classification of major depressive disorder using machine learning on cortical and subcortical measures. *Scientific Reports*, 14(1), 1084.

Kämpe, R., Paul, E.R., Östman, L., Heilig, M., Howard, D.M., **Hamilton, J.P.** Contributions of polygenic risk and disease status to grey matter abnormalities in major depression. (2024). *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 9(4), 437-446.

Pietrzak, M., Yngve, A., Hamilton, J.P., Asratian, A., Gauffin, E., Löfberg, A., Gustavson, S., Persson, E., Capusan, A., Leggio, L., Perini, I., Tinghög, G., Heilig, M., & Boehme, R. (2024). Ghrelin decreases sensitivity to negative feedback and increases prediction-error related caudate activity in humans, a randomized controlled trial. *Neuropsychopharmacology*, 49(6), 1042-1049.

Eek, T., Lundin, F., Larsson, M., **Hamilton, J.P.**, Georgiopoulos, C. (2023). Neural suppression in odor recognition memory. *Chemical Senses*, 48.

Gallo, S., El-Gazzar, A., Zhutovsky, P., Thomas, R.M., Javaheripour, N., Li, M., Bartova, L., Bathula, D.R., Dannlowski, U., Davey, C., Frodl, T., Gotlib, I.H., Grimm, S., Grotegerd, D., Hahn, T., **Hamilton, J.P.**, Harrison, B., Jansen, A., Kircher, T., Meyer, B., Nenadic, I., Olbrich, S., *Paul, E.R., Pezawas, L., Sacchet, M.D., Sämann, P., Wagner, G., Walter, H., Walter, M., van Wingen, G.A. (2023). Functional connectivity signatures of major depressive disorder: machine learning analysis of two multicenter neuroimaging studies. *Molecular Psychiatry*, 28(7), 3013-3022.

Jönemoa, J., Akbar, M.U., Kämpe, R., **Hamilton, J.P.**, Eklund, A. Efficient brain age prediction from 3D MRI volumes using 2D projections. (2023). *Brain Sciences*, 13(9), 1329.

*Paul, E.R., Östman, L., Heilig, M., Mayberg, H.S., & **Hamilton, J.P.** (2023). Towards a multilevel model of major depression: Genes, immuno-metabolic function, and cortico-striatal signaling. *Translational Psychiatry*, 13(1), 171.

Perini, I., Mayo, L.M., Capusan, A.J., Paul, E.R., Yngve, A., Kämpe, R., Gauffin, E., Mazurka, R., Ghafouri, B., Stensson, N., Asratian, A., **Hamilton, J.P.**, Kastbom, A., Gustafsson, P.A., Heilig, M. (2023). Resilience to substance use disorder following childhood maltreatment: Association with peripheral biomarkers of endocannabinoid function and neural indices of emotion regulation. *Molecular Psychiatry*, 28(6), 2563-2571.

Pietrzak, M., Yngve, A., **Hamilton, J.P.**, Kämpe, R., Boehme, R., Asratian, A., Gauffin, E., Löfberg, A., Gustavson, S., Persson, E., Capusan, A.J., Leggio, L., Perini, I., Tinghög, G., & Heilig, M. (2023). A randomized controlled experimental medicine study of ghrelin in value-based decision making. *Journal of Clinical Investigation*, 133(12).

Asutay, E., Genevsky, A., **Hamilton, J.P.**, & Västfjäll, D. (2022). Affective context and its uncertainty drive momentary affective experience. *Emotion*, 22(6), 1336.

*Barazanji, N., **Hamilton, J.P.**, Icenhour, A., Simon, R.A., Bednarska, O., Tapper, S., Tisell, A., Lundberg, P., Engström, M., & Walter, S. (2022). Irritable bowel syndrome in women: Association between decreased insular subregion volumes and gastrointestinal symptoms. *NeuroImage: Clinical*, 35, 103128.

Ekhtiari, H., Zare-Bidoky, M., Sangchooli, A. [et al, including **Hamilton, J.P.**]. (2022). A Methodological Checklist for fMRI Drug Cue Reactivity Studies: Development and Expert Consensus. *Nature Protocols*, 17(3), 567-595.

Han, L.K.M., Dinga, R., Leenings, R., Hahn, T., Cole, J.H., Aftanas, L., Amod, A.R., Besteher, B., Colle, R., Corruble, E., Couvy-Duchesne, B., Danilenko, K., Fuentes-Claramonte, P., Gonul, A.S., Gotlib, I.H., Goya-Maldonado, R., Groenewold, N.A., **Hamilton, J.P.**, Ichikawa, N., Ipser, J.C., Itai, E., Koopowitz, S., Li, M., Okada, G., Okamoto, Y., Olga, C., Osipov, E., Penninx, B.W.J.H., Pomarol-Clotet, E., Rodríguez-Cano, E., Sacchet, M.D., Shinzato, H., Sim, K., Stein, D.J., Uyar-Demir, A., Veltman, D.J., & Schmaal, L. (2022). A Large-Scale ENIGMA Multisite Replication Study of Brain Age in Depression. *NeuroImage: Reports*, 2(4), 100149.

*Paul, E.R., Schweiler, L., Erhardt, S., Boda, S., Trepci, A., *Kämpe, R., Heilig, M., ^**Hamilton, J.P.**, & ^Samuelsson, M. (2022). Peripheral and central kynurenine pathway abnormalities in major depression. *Brain, Behavior, and Immunity*, 101, 136-145.

Commentary: Savitz, J. (2022). Blood versus cerebrospinal fluid: Kynurenine pathway metabolites in depression. *Brain, Behavior, and Immunity*, 101, 333-334.

Takamiya, A., Dols, A., Emsell, L., Abbott, C., Yroni, A., Mas, C.S., Jorgensen, M.B., Nordanskog, P., Rhebergen, D., Van Exel, E., Oudega, M.L., Bouckaert, F., Vandenbulcke, M., Sienaert, P., Péran, P., Cano, M., Cardoner, N., Jorgensen, A., Paulson, O.B., **Hamilton, J.P.**, *Kämpe, R., Bruin, W., Bartsch, H., Ousdal, O.T., Kessler, U., Van Wingen, G., Oltedal, L., Kishimoto, T. (2022). Neural substrates of psychotic depression: Findings from the Global ECT-MRI Research Collaboration. *Schizophrenia Bulletin. Schizophrenia bulletin*, 48(2), 514-523.

Mayo, L., Perini, I., Gustafsson, P.A., **Hamilton, J.P.**, *Kämpe, R., Heilig, M., Zetterqvist, M. (2021). Psychophysiological and neural support for enhanced emotional reactivity in adolescent females with nonsuicidal self-injury. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 6(7), 682-691.

Simon, R.A., *Barazanji, N., Bednarska, O., Icenhour, A., **Hamilton, J.P.**, Engström, M., Keita, A.V., Walter, S. (2021). Vasoactive intestinal polypeptide plasma levels associated with affective symptoms and brain structure and function in healthy individuals. *Scientific Reports*, 11, 1406.

Skagerlund, K., Skagenholt, M., **Hamilton, J.P.**, Slovic, P., & Västfjäll, D. (2021). Investigating the neural correlates of the affect heuristic using fMRI. *Journal of Cognitive Neuroscience*. 33(11), 2265-2278.

Wagner, G., Javaheripour, N., Li, M., Chand, T., Krug, A., Kircher, T., Nenadic, I., Dannlowski, U., **Hamilton, J.P.**, Sacchet, M., Gotlib, I., Walter, H., Frodl, T., Grimm, S., Harrison, B., Wolf, C., Olbrich, S., Van Wingen, G., Pezawas, L., Parker, G., Hyett, M., Saemann, P., Hahn, T., Steinsträter, O., Jansen, A., Yuksel, D., *Kämpe, R., Davey, C., Meyer, B., Bartova, L., Croy, I., & Walter, M. (2021). Altered resting-state functional connectome in major depressive disorder: A mega-analysis from the PsyMRI consortium. *Translational Psychiatry*, 11(1), 1-9.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C.F. [et al, including **Hamilton, J.P.**] (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*, 582, 84-88.

Lundblad, L.C., McIntyre, S., Olausson, H., Wasling, P., Jood, K., Wysockad, A., **Hamilton, J.P.**, & Wasling, H.B. (2020). Tactile direction discrimination in humans after stroke. *Brain Communications*, 2, 2.

Ousdal, O.T., Argyelan, M., Narr, K.L., Abbott, C., Wade, B., Vandenbulcke, M., Urretavizcaya, M., Tendolkar, I., Takamiya, A., Stek, M.L., Soriano-Mas, C., Redlich, R., Paulson, O.B., Oudega, M.L., Opel, N., Nordanskog, P., Kishimoto, T., *Kämpe, R., Jorgensen, A., Hanson, L.G., **Hamilton, J.P.**, Espinoza, R., Emsell, L., van Eijndhoven, P., Dols, A., Dannlowski, U., Cardoner, N., Bouckaert, F., Anand, A., Bartsch, H., Kessler, U., Oedegaard, K.J., Dale, A.M., & Oltedal, L. (2020). Brain changes induced by electroconvulsive therapy are broadly distributed. *Biological Psychiatry*, 87, 5, 451-461.

Asutay, E., Genevsky, A., Barrett, L.F., **Hamilton, J.P.**, Slovic, P., & Västfjäll, D. (2019). Affective calculus: The construction of affect through information integration over time. *Emotion*, 21(1), 159–174.

*Paul, E.R., *Farmer, M., *Kämpe, R., Cremers, H.R., & **Hamilton, J.P.** (2019). Functional connectivity between extrastriate body area and default-mode network predicts depersonalization symptoms in major depression: Findings from an a priori specified multi-network comparison. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 4, 7, 627-635.

Perini, I., Gustafsson, P.A., **Hamilton, J.P.**, *Kämpe, R., Mayo, L.M., Heilig, M., & Zetterqvist, M. (2019). Brain-based Classification of Negative Social Bias in Adolescents With Nonsuicidal Self-injury: Findings From Simulated Online Social Interaction. *EClinicalMedicine*, 13, 81-90.

Strauss, T., Rottstädt, F., Sailer, U., Schellong, J., **Hamilton, J. P.**, Raue, C., Weidner, K., & Croy, I. (2019). Touch aversion in patients with interpersonal traumatization. *Depression and Anxiety*, 36, 7, 635-646.

Strauss, T., Kämpe, R., **Hamilton, J. P.**, Olausson, H., Rottstädt, F., Raue, C., & Croy, I. (2019). Deactivation of default mode network during touch. *Scientific Reports*, 1293.

^**Hamilton, J.P.**, ^Sacchet, M.D., Hjørnevik, T., Chin, F.T., Shen, B., *Kämpe, R., Park, J.H., Knutson, B. D., Williams, L.M., Borg, N., Zaharchuk, G., Camacho, C., Mackey, S., Heilig, M., Drevets, W.C., Glover, G.H., Gambhir, S., & Gotlib, I.H. (2018). Striatal dopamine deficits predict reductions in striatal functional connectivity in major depression: A concurrent ¹¹C-raclopride positron emission tomography and functional magnetic resonance imaging investigation. *Translational Psychiatry*, 8, 264.

Perini, I., Gustafsson, P.A., **Hamilton, J.P.**, *Kämpe, R., Zetterqvist, M., & Heilig, M. (2018). The salience of self, not social pain, is encoded by dorsal anterior cingulate and insula. *Scientific Reports*, 8, 6165.

Augier, E., Dulman, R.S., Damadzic, R., Pilling, A., **Hamilton, J.P.**, & Heilig, M. (2017). The GABA_B positive allosteric modulator, ADX71441 attenuates alcohol self-administration and relapse to alcohol seeking in rats. *Neuropsychopharmacology*, 42, 1789-1799.

*Bergamino, M., *Farmer, M., Yeh, J., & **Hamilton, J.P.** (2017). Statistical differences in white matter tracts in subjects with depression using different skeletonized voxel-wise analysis approaches and DTI fitting procedures. *Brain Research*, 1669, 131-140.

*Chau, D.T., *Fogelman, P., Nordanskog, P., Drevets, W.C., & **Hamilton, J.P.** (2017). Distinct Neural-Functional Effects of Treatments With Selective Serotonin Reuptake Inhibitors, Electroconvulsive Therapy, and Transcranial Magnetic Stimulation and Their Relations to Regional Brain Function in Major Depression: A Meta-analysis. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 2(4), 318-326.

Commentary: Zubieta, J. K. (2017). Meta-analysis of Neural Effects of Depression Therapies. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 2(4), 305-306.

Oltedal, L., Bartsch, H., Sørhaug, O.J.E., Kessler, U., Abbott, C., Dols, A., Stek, M.L., Ersland, L., Emsell, L., van Eijndhoven, P., Argyelan, M., Tendolkar, I., Nordanskog, P., **Hamilton, J.P.**, Jorgensen, B.M., Sommer, I.E., Heringa, S.M., Draganski, B., Redlich, R., Dannlowski, U., Kugel, H., Bouckaert, F., Sienaert, P., Anand, A., Espinoza, R., Narr, K. L., Holland, D., Dale, A. R., Oedegaard, K. J. (2017). The Global ECT-MRI Research Collaboration (GEMRIC): Establishing a multi-site investigation of the neural

mechanisms underlying response to electroconvulsive therapy. *NeuroImage: Clinical*, 14, 422-432.

Sacchet, M.D., Levy, B.J., **Hamilton, J.P.**, Maksimovskiy, A., Hertel, P.T., Joormann, J., Anderson, M.C., Wagner, A.D., & Gotlib, I.H. (2017). Cognitive and neural consequences of memory suppression in major depressive disorder. *Cognitive Affective and Behavioral Neuroscience*, 17(1), 77-93.

*Bergamino, M., Pasternak, O., *Farmer, M., Shenton, M.E., & **Hamilton, J.P.** (2016). Applying a free-water correction to diffusion imaging data uncovers stress-related neural pathology in depression. *NeuroImage: Clinical*, 10, 336-442.

Croy, I., Drechsler, E., **Hamilton, J.P.**, Hummel, T., & Olausson, H. (2016). Olfactory modulation of affective touch processing – a neurophysiological investigation. *NeuroImage*, 135, 135-141.

Feldman Barrett, L., Quigley, K., & **Hamilton, J.P.** (2016). An active inference theory of allostasis and interoception in depression. *Philosophical Transactions of the Royal Society B*, 371.

Hamilton, J.P., Glover, G.H., Bagarinao, E., Chang, C., Mackey, S., Sacchet, M. & Gotlib, I.H. (2016). Effects of salience-network-node neurofeedback training on affective biases in major depressive disorder. *Psychiatry Research: Neuroimaging*, 249, 91-96.

Sailer, U., Tricoli, C., Häggblad, G., **Hamilton, J.P.**, Olausson, H., & Croy, I. (2016). Temporal dynamics of brain activation during 40 minutes of pleasant touch. *NeuroImage*, 139, 360-367.

*Bellgowan, J.F., Molfese, P., Marx, M., Thomason, M., Glen, D., Santiago, J., Gotlib, I.H., Drevets, W.C., & **Hamilton, J.P.** (2015). A neural substrate for behavioral inhibition in the risk for major depressive disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 54(10), 841-848.

*Bratman, G.N., **Hamilton, J.P.**, Hahn, K.S., Daily, G.C., and Gross, J.J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the National Academy of Sciences*, 112(28), 8567-8572.

Hamilton, J.P. (2015). Amygdala reactivity as mental-health risk endophenotype: A tale of many trajectories. *The American Journal of Psychiatry*, 172(3), 214-215.

Hamilton, J.P., *Farmer, M., *Fogelman, P., & Gotlib, I.H. (2015). Depressive rumination, the default-mode network, and the dark matter of clinical neuroscience. *Biological Psychiatry*, 78(4), 224-230.

LeMoult, J., Colich, N.L., Sherdell, L., **Hamilton, J.P.**, & Gotlib, I.H. (2015). Influence of menarche on the relation between diurnal cortisol production and ventral striatum activity during reward anticipation. *Social Cognitive and Affective Neuroscience*, 10(9), 1244-1250.

Miller, C.H., **Hamilton, J.P.**, Sacchet, M.D., & Gotlib, I.H. (2015). Meta-analysis of Functional Neuroimaging of Major Depressive Disorder in Youth. *JAMA Psychiatry*, 72(10), 1045-1053.

Foland-Ross, L.C., **Hamilton, J.P.**, Sacchet, M., Sherdell, L., and Gotlib, I.H. (2014). Activation of the medial prefrontal and posterior cingulate cortex during encoding of negative material predicts symptom worsening in major depression. *Neuroreport*, 25, 324-329.

Hamilton, J.P., Chen, M.C., Waugh, C.E., Joormann, J., & Gotlib, I.H. (2014). Distinctive and common neural underpinnings of major depression, social anxiety, and their comorbidity. *Social Cognitive and Affective Neuroscience*, 10(4), 552-560.

Sacchet, M.D., Prasad, G. Foland-Ross, L.C., Joshi, S.H., **Hamilton, J.P.**, Thompson, P.M., and Gotlib, I.H. (2014). Structural abnormality of the corticospinal tract in Major Depressive Disorder. *Biology of Mood and Anxiety Disorders*, 4(8).

Hamilton, J.P., Chen, M.C., & Gotlib, I.H. (2013). Neural systems approaches to understanding Major Depressive Disorder: An intrinsic functional organization perspective. *Neurobiology of Disease*, 52, 4-11.

Singh, M.K., Kesler, S.R., Hosseini, H., Kelley, R.G., Amatya, D., **Hamilton, J.P.**, Chen, M.C., Gotlib, I.H. (2013). Anomalous gray matter structural networks in Major Depressive Disorder. *Biological Psychiatry*, 74(10), 777-785.

Bratman, G.N., **Hamilton, J.P.**, & Daily, G.C. (2012). The impacts of nature experience on human cognitive function and mental health. *Annals of the New York Academy of Sciences*, 1249(1), 118-136.

Foland-Ross, L.C., **Hamilton, J.P.**, Joormann, J., Berman, M.G., Jonides, J., and Gotlib, I.H. (2013). The Neural Basis of Difficulties Disengaging From Negative Irrelevant Material in Major Depression. *Psychological Science*, 24(3), 334-344.

Gotlib I.H. & **Hamilton, J.P.** (2012). Bringing genetics back to psychiatric endophenotypes. *Biological Psychiatry*, 71, 2-3.

Hamilton, J.P., Etkin, A., Furman, D.J., Lemus, M.G., Johnson, R.F., & Gotlib, I.H. (2012). Functional neuroimaging of Major Depressive Disorder: A meta-analysis and new integration of baseline activation and neural response data. *The American Journal of Psychiatry*, 169, 693-703.

Hamilton, J.P., Furman, D.J., & Gotlib, I.H. (2011). The neural foundations of major depression: Classical approaches and new frontiers. In *Frontiers in neuroscience: The neurobiology of depression*, F. López-Muñoz, Ed. Boca Raton: Taylor & Francis Group, pp. 57-73.

Waugh, C.E., **Hamilton, J.P.**, Chen, M.C., Joormann, J. & Gotlib, I.H. (2012). Neural temporal dynamics of stress in comorbid major depressive disorder and social anxiety disorder. *Biology of Mood & Anxiety Disorders*, 2(11), 1-15.

Berman, M.G., Nee, D.E., Casement, M., Kim, H.S., Deldin, P., Kross, E., Gonzalez, R., Gotlib, I.H., **Hamilton, J.P.**, Joorman, J., Waugh, C., Jonides, J. (2011). Neural and behavioral effects of interference resolution in depression. *Cognitive, Affective, and Behavioral Neuroscience*, 11(1), 85-96.

Chen, G., Glen, D.R., Saad, Z.S., **Hamilton, J.P.**, Thomason, M.E., Gotlib, I.H., & Cox, R.W. (2011) Vector autoregression, structural equation modeling, and their synthesis in neuroimaging data analysis. *Computers in Biology and Medicine*, 41(12), 1142-1155.

Furman, D.J., **Hamilton, J.P.**, & Gotlib, I.H. (2011). Frontostriatal functional connectivity in Major Depressive Disorder. *Biology of Mood & Anxiety Disorders*, 1-11.

Furman, D.J., **Hamilton, J.P.**, Joorman, J. & Gotlib, I.H. (2011). Altered timing of amygdala activation during sad mood elaboration as a function of 5-HTTLPR. *Social Cognitive and Affective Neuroscience*, 6(3), 270-276.

Hamilton, J.P., Chen, G., Thomason, M.E., Schwartz, M.E., & Gotlib, I.H. (2011). Investigating neural primacy in Major Depressive Disorder: Granger causality analysis of resting-state fMRI time-series data. *Molecular Psychiatry*, 16, 763-772.

Hamilton, J.P., Furman, D.J., Chang, C., Thomason, M.E., Dennis, E., & Gotlib, I.H. (2011). Default-mode and task-positive network activity in major depressive disorder: Implications for adaptive and maladaptive rumination. *Biological Psychiatry*, 70(4), 327-333.

Commentary: Berman, M. G., & Jonides, J. (2011). Ruminating on rumination. *Biological psychiatry*, 70(4), 310-311.

Hamilton, J.P., Glover, G.H., Hsu, J.J. Johnson, R.F., & Gotlib, I.H. (2011). Modulation of subgenual anterior cingulate cortex activity with real-time neurofeedback. *Human Brain Mapping*, 32, 22-31.

Thomason, M.E., **Hamilton, J.P.**, & Gotlib, I.H. (2011). Stress-induced activation of the HPA axis predicts connectivity between subgenual cingulate and salience network during rest in adolescents. *The Journal of Child Psychology and Psychiatry*, 52(10), 1026-1034.

Chen, M.C., **Hamilton, J.P.**, & Gotlib, I.H. (2010). Decreased hippocampal volume in healthy girls at risk of depression. *Archives of General Psychiatry*, 67(3), 258-267.

Gotlib I.H., **Hamilton, J.P.**, Cooney, R.E., Singh, M.K., Henry, M.L. & Joorman, J. (2010). Neural processing of reward and loss in girls at risk for major depression. *Archives of General Psychiatry*, 67(4), 380-387.

Thomason, M.E., Henry, M.L., **Hamilton, J.P.**, Joorman, J., Pine, D.S., Ernst, M., Goldman, D., Mogg, K., Bradley, B.P., Britton, J.C., Lindstrom, K.M., Monk, C., Sankin, L.S., Louro, H.M., Gotlib, I.H. (2010). Neural and behavioral responses to threatening emotion faces in children as a function of the short allele of the serotonin transporter gene. *Biological Psychology*, 85, 38-44.

Waugh, C.E., **Hamilton, J.P.**, & Gotlib, I.H. (2010). The neural temporal dynamics of the intensity of emotional experience. *NeuroImage*, *49*(2), 1699-1707.

Gotlib I.H. & **Hamilton, J.P.** (2009). Functional Neuroimaging in Depression. In R. Ingram (Ed.), *International Encyclopedia of Depression*. New York: Springer Publishing.

Ofek, E., Riis, J., & **Hamilton, J.P.** (2011). Emotiv Systems Inc.: It's the thoughts that count. *Harvard Business Review*.

Hamilton, J.P. & Gotlib, I.H. (2008). Neural substrates of increased memory sensitivity for negative stimuli in depression. *Biological Psychiatry*, *63*(12) 1155-1162.

Hamilton, J.P., Siemer, M., & Gotlib, I.H., (2008). Amygdala volume in major depressive disorder: A meta-analysis of magnetic resonance imaging studies. *Molecular Psychiatry*, *13*(11), 993-1000.

Gotlib, I.H. & **Hamilton, J.P.** (2008). Neuroimaging and Depression: Current Status and Unresolved Issues. *Current Directions in Psychological Science*, *17*(2), 159–163.

Kim, J.M., **Hamilton, J.P.** & Gotlib, I.H. (2008). Reduced caudate gray matter volume in women with major depressive disorder. *Psychiatry Research: Neuroimaging*, *164*(2), 114-22.

Hamilton, J.P., Mirkin, M., & Polk, T.A. (2006). Category-level contributions to the alphanumeric category effect in visual search. *Psychonomic Bulletin and Review*, *13*(6), 1074-1077.

Polk, T.A. & **Hamilton, J.P.** (2006). Reading, writing, and arithmetic in the brain: Neural specialization for acquired functions. In P. B. Baltes, P. Reuter-Lorenz, & Frank Rossler (Eds.), *Lifespan development and the brain: The perspective of biocultural co-constructivism*. New York: Cambridge University Press.

TEACHING EXPERIENCE

Summary

- Constructed and taught 13 courses at three universities in the United States and Sweden.
 - Course content has included cognitive, social/affective, and clinical psychology from behavioral and neuroscientific perspectives.
 - Methodological and skill-based courses included concepts from basic and advanced statistics and artificial intelligence, neuroimaging, cross-sectional and experimental study design, and meta-analysis.
 - Teaching contexts have included survey courses for undergraduates, graduate student seminars, medical school courses, and continuing education courses for medical professionals.
- Advanced pedagogical training has included one-on-one training in facilitating group discussions, thesis and project advising, and problem based, student centered learning.
- Received the University of Michigan Outstanding Graduate Student Instructor Award.
- Have served or am serving as primary or secondary thesis advisor for two postdoctoral

fellows, five Ph.D. students, three master's students, four medical students, and three undergraduate honors students.

Teaching Interests

- **Conceptual foundations.** In this context, my teaching interests and experiences are broad and include the domains of cognitive, developmental, biological, clinical, and social/personality psychology.
- **Methods.** With respect to developing students' skills as researchers, I am interested in teaching basic and advanced quantitative analysis in addition to study design both in laboratory contexts and "in the wild" with community samples and large, consortium-based datasets. Importantly, I believe that emerging techniques from artificial intelligence are essential for understanding complex patterns in large datasets.
- **Thesis advising.** With regard to immersive, hands-on research experiences for students my teaching interests are in social, affective, and clinical neuroscience, particularly in multimodal investigations bridging basic biological (e.g., genetics) and neural-systems levels. I access multi-level data through ongoing work with the UK Biobank—which contains biological and behavioral data from over half a million people—and through collaborations and data-sharing agreements with large research institutions.

Thesis Advising

Elisabeth Paul, Linköping University, Doctoral research: Investigating immunological changes in depression and first-time psychosis, and psychotic-like symptoms in depression.

Peter Bang, Linköping University, Doctoral research: Exploring sensory-motor interactions in neurodiverse populations.

Sam Skoglund, Linköping University, Medical Program Honor's research: Gray matter reductions in thalamus and parahippocampal gyri correlates with metabolic marker ApoB:A1 in depressed and controls: A voxel-based morphometry study.

Breno Rabelo de Carvalho E Silva, Linköping University, Masters research: Central monoamines and their relations to the intrinsic functional connectivity of the brain.

Agnes Sjöstrand, Linköping University, Medical Program Honor's research: Dopaminergic functioning, genetic risk, and sleep impairments in major depression.

Lars Östman, Linköping University, Doctoral research: Effects of serotonergic challenge and polygenic risk for depression on microstructural plasticity.

Sarah Heilig, Linköping University, Medical Program Honor's research: The relation between polygenic risk and stress in major depressive disorder.

Elisabeth Paul, Linköping University, Master's thesis: Neural-functional hypotheses of depersonalization in major depression.

Mariam Ashoor Aura, Linköping University, Medical Program Honor's research: Molecular and neural signatures of low- versus high-genetic-load major depression

Robin Kämpe, Linköping University, Doctoral research: Applying convolutional neural networks to the biological psychiatry of mood disorders.

Maurizio Bergamino, Laureate Institute for Brain Research, Post-doctoral research: Effects of mild traumatic brain injury on neural white matter integrity and depressive and anxiety symptoms.

David Chau, Laureate Institute for Brain Research, Post-doctoral research: Effects of psychotropic pharmacologic intervention on brain function in major depressive disorder.

Greg Bratman, Stanford University, Doctoral research: Neural substrates of mood and cognitive augmentation via nature experience.

Sita Nojopranoto, Stanford University, Honor's thesis: Effective connectivity during ventral anterior cingulate cortex neurofeedback.

Mirra E. Schwartz, Stanford University, Honor's thesis: Discovering neural primacy in depression: Granger causality analysis of resting state BOLD data.

Victoria Thornton, Stanford University, Master's thesis: Association of brain-derived neurotrophic factor allele polymorphisms with hippocampal volume in children.

Jennifer E. Cribbs, Stanford University, Honor's thesis: A BOLD Diagnosis: Clustering of blood oxygen level dependent (BOLD) fMRI data as a potential method for brain-based diagnosis of major depressive disorder.

Courses Taught

Affective Illness. *Linköping University: Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022.* Fifth-term medical school short-course presenting biological hypotheses of mood disorders. Perspectives include neural-network, monoamine, immunological, neuroplastic, and endocrine disturbance in depression.

Affective Neuroscience. *Linköping University: Spring 2020, Fall 2020, Spring 2021.* Fifth-term medical school short-course on models of emotional function and findings from neuroscientific investigations of affect.

Emotion and Emotion Regulation in Healthy and Depressed Brains. *Spring 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022.* Continuing education course for psychiatric healthcare professionals across Sweden on the functional neuroanatomy of affective illness.

Functional Neuroanatomy of the Brain. *Linköping University: Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Fall 2021, Spring 2022, Fall 2022.* Second-term medical school short-course presenting neuroanatomy from perspectives rendered by results from task-provocation functional neuroimaging and intrinsic functional connectivity studies of the brain.

Introduction to Systematic Review and Meta-analysis. *Linköping University: Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022.* Fifth-term medical school short-course on principles of data search and synthesis, bias detection, and interpretation of findings.

Molecular Neuroimaging. *Linköping University: Spring 2019.* Masters-level short-course on the physical and molecular foundations of blood-oxygen-level dependent imaging of the brain using MRI.

Science for Physicians. *Linköping University: Fall 2018.* Fifth-term medical school course presenting fundamental concepts of scientific investigation from hypothesis generation to formulation of empirical tests to presentation of findings.

Contemporary Topics in the Clinical Neuroscience of Depression and Anxiety. *University of Tulsa: Winter 2015.* Graduate-level seminar covering *in vivo* imaging methods, analytic techniques, and findings for neural functional and anatomical investigations of major depression and anxiety.

Introduction to Psychology. *University of Michigan: Winter 2004.* Lower-division, undergraduate course presenting primary theories and findings from clinical, developmental, cognitive, social, and biological psychology.

Laboratory in Cognitive Psychology. *University of Michigan: Fall 2003.* Upper-division, undergraduate laboratory on conducting research on human perception, attention, memory, language, problem solving and reasoning.

Introduction to Cognitive Psychology. *University of Michigan: Winter 2000, Winter 2002, Winter 2003.* Upper-division, undergraduate course on findings from behavioral investigations of human perception, attention, memory, language, problem solving and reasoning.

Cognitive Neuropsychology. *University of Michigan: Fall 2001, Fall 2002.* Upper-division, undergraduate course on cognitive and affective assessments of patients with focal brain damage to frontal, temporal, parietal, occipital, or basal ganglia regions.

Introduction to Mind and Brain. *University of Michigan: Fall 1998, Fall 1999.* Lower-division, undergraduate course presenting foundational work on basic neurobiology and neuroscientific methods and the biology of perception, attention, memory, language and psychopathology.

INVITED TALKS

Multilevel integration in the clinical neuroscience of major depression. University of Bergen. February 2022.

Multilevel integration in the clinical neuroscience of major depression. Uppsala University. November 2021.

Multilevel integration in the clinical neuroscience of major depression. University of Wyoming. October 2021.

Multilevel integration in the clinical neuroscience of major depression. University of Oslo. October 2018.

Striatal dopamine deficits predict reductions in striatal functional connectivity in major depression. Klinisk neurovetenskap. Göteborg, Sweden. November 2017.

Striatal dopamine deficits predict reductions in striatal functional connectivity in major depression. Swedish Society for Biological Psychiatry. Uppsala, Sweden. September 2017.

Depression from top to bottom: Inflammatory gut-microbiome and brain interactions in major depression. Ghrelin Symposium. Linköping, Sweden. March 2017.

Assessing neural inflammation in major depressive disorder: Relations of peripheral and central measures. SyBil-AA Consortium Meeting. Berlin, Germany. September 2016.

The neurosciences and our evolving self concept. Vetenskaps Festivalen. Göteborg, Sweden. April 2016.

The default-mode network in major depressive disorder: Role in MDD and resolution with ECT. Linköping University Neuro-strategy Area Retreat. Hooks Herrgård. November 2015.

Neural functional changes resulting from SSRI and ECT treatments for major depressive disorder. Inaugural Symposium for the Center for Social and Affective Neuroscience. Linköping, Sweden, September 2015.

Big data for the impatient: Meta-analysis in the clinical neuroscience of major depression. National Institutes of Health, Washington, DC, March 2015.

The future of psychotherapy for emotional disorders: Neuroscience/clinical dialogs. Society for Affective Science, San Francisco, CA, April 2015.

Next-generation neuroscience of major depression: Applying lessons from 25 years of neuroimaging. Linköping University, Center for Medical Image Science and Visualization, February 2015.

Second generation clinical neuroscience of major depression. Northeastern University, Department of Psychology, April 2014.

Second generation clinical neuroscience of major depression. Harvard University, Brigham and Women's Hospital, April 2014.

Second generation clinical neuroscience of major depression. University of Miami, Department of Psychology, January 2014.

Second generation clinical neuroscience of major depression. University of Illinois, Chicago, Department of Psychology, October 2013.

Advancing neural systems-level models of Major Depressive Disorder. Yale University, Department of Psychology, December 2011.

Advancing neural systems-level models of Major Depressive Disorder. The Laureate Institute. Tulsa, OK, November 2011.

Neuromodulatory approaches to the treatment of Major Depressive Disorder. International Society for Neurofeedback and Research. Phoenix, AZ, September 2011.

Identifying and modulating the neural macro- and micro-architecture of Major Depressive Disorder. University of California, Santa Cruz, Department of Psychology, May 2011.

Advancing neural systems-level models of Major Depressive Disorder. Harvard University, Department of Psychology, December 2010.

Neural substrates of memory sensitivity for negative information in Major Depressive Disorder. University of California, Berkeley, Department of Psychology, May 2008.

PROFESSIONAL SERVICE

Professional Society Committees

Society for Biological Psychiatry.

Program committee, *2021-2022*

Travel award committee, *2019-2022*

Membership committee, *2018-2019*

Society for Affective Science.

Program planning committee, *2016-2018*

Grant Review

US-Israel Binational Science Foundation.

1. Depressive symptoms across domains and disorders.

Swiss National Science Foundation.

1. Treatment of human brain dysfunction with neurofeedback.
2. Closed-loop brain training.

UCLA Grand Challenge for Depression.

1. Does a 'sticky' default mode network contribute to ruminative thinking in major depressive disorder?

The Dutch Research Council-Vici Programme

1. Artificial intelligence for precision treatment of depression.

External Thesis Review

Giulia Forcellini, University of Trento. Brain functional connectivity and alcohol use disorder: A graph theoretical approach.

Filip Grill, Umeå University. Dopamine and the affective-cognitive gradient in the human striatum studied with multimodal brain imaging.

Myrto Sklivanioti-Greenfield, Karolinska Institute. The Pill and the Will. Pharmacological and psychological modulation of cognitive and affective processes.

Wiebke Struckmann, Uppsala University. The effect of intermittent theta-burst stimulation over the dorsomedial prefrontal cortex on brain activity in depression.

Anna Jane Watters, University of Sydney. Emotional reactivity as a marker of familial vulnerability for major depression: An integrative brain-behavior investigation.

Docentur Review

Jonas Persson

Manuscript Review

Addiction Biology

Archives of General Psychiatry

American Journal of Psychiatry

Behavioral Brain Research

Biological Psychiatry

Biological Psychiatry: Cognitive Neuroscience and Neuroimaging

Biological Psychiatry: Global Open Science

Biological Psychology

Brain

British Journal of Psychiatry

Cerebral Cortex

Clinical Psychological Science

CNS Neuroscience & Therapeutics

Cortex

Cognitive, Affective, and Behavioral Neuroscience

Current Opinion in Behavioral Sciences

Frontiers in Psychiatry

International Journal of Neuropsychopharmacology

Journal of Affective Disorders

JAMA Psychiatry

Journal of the American Academy of Child and Adolescent Psychiatry

Journal of Clinical Endocrinology & Metabolism

Journal of Neuroscience

Journal of Psychiatry and Neuroscience

Journal of Psychiatric Research

Memory
Molecular Psychiatry
Nature Communications
NeuroImage
NeuroImage: Clinical
Neuropsychologia
Neuropsychology Review
Neuropsychopharmacology
Neuroscience and Biobehavioral Reviews
PLOS ONE
Progress in Neuropsychopharmacology and Biological Psychiatry
Psychiatry Research: Neuroimaging
Psychological Medicine
Psychological Review
Schizophrenia Bulletin
Science
Social Cognitive and Affective Neuroscience
Social Neuroscience
Translational Psychiatry
World Journal of Biological Psychiatry

REFERENCES

Dr. Wayne Drevets, Janssen Pharmaceuticals of Johnson & Johnson
E-mail: wdrevets@ITS.JNJ.com

Dr. Helen Mayberg, Mount Sinai School of Medicine
E-mail: helen.mayberg@mssm.edu

Dr. Ian Gotlib, Stanford University, Department of Psychology
E-mail: ian.gotlib@stanford.edu

Dr. Brian Knutson, Stanford University, Department of Psychology
E-mail: knutson@psych.stanford.edu

Dr. Sean Mackey, Stanford University, School of Medicine
E-mail: smackey@pain.stanford.edu

Dr. William Gehring, University of Michigan, Department of Psychology
E-mail: wgehring@umich.edu

Dr. Thad Polk, University of Michigan, Department of Psychology
E-mail: tpolk@umich.edu