

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.  
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NAME Steven G. Potkin, M.D.	POSITION TITLE		
eRA COMMONS USER NAME SPOTKIN	Professor		
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Pittsburgh, Pittsburgh, PA		No Degree	Early acceptance to medical school
Washington University, St. Louis, MO	M.D.	1971	
Duke University, NC		1975	Residency - Psychiatry

**A. Positions and Honors.****Professional Experience**

- 1975-80 Clinical Associate, Laboratory of Clinical Psychopharmacology, NIMH, St. Elizabeth's Hospital, Washington, D.C.
- 1980-84 Research Psychiatrist, Adult Psychiatry Branch, NIMH, Washington, D.C.
- 1983-84 Scientific Director for International Affairs (acting), Office of the Associate Administrator for International Affairs; Alcohol, Drug Abuse and Mental Health Administration, Rockville, MD
- 1983-84 Assistant Chief (acting), Center for Studies of Schizophrenia;  
Head, Center for Studies of Schizophrenia, NIMH
- 1984-Present Professor, Department of Psychiatry and Human Behavior, University of California, Irvine
- 1984-Present Director of Research, Department of Psychiatry and Human Behavior, UCI Medical Center
- 1997-Present Director, Brain Imaging Center, University of California, Irvine, Irvine, California
- 1999-2004 UCSD-UCI GCRC Advisory Committee
- 1999-Present Robert R. Sprague Director, Brain Imaging Center, University of California, Irvine

**Honors and Awards**

- Sol Ginsburg Fellowship, Group for the Advancement of Psychiatry (GAP), 1974-76
- A.E. Bennett Clinical Science Research Award from the Society of Biological Psychiatry, 1981
- NIMH Foreign Work Study Fellowship, 1981-83
- Moroccan-American Scientific Cooperation Commission Scholar, 1985
- World Health Organization, U.S. Center for Research & Training in Biological Psychiatry, Deputy Director and Coordinator, 1988.
- California Alliance for the Mentally Ill Outstanding Psychiatrist, 1990
- Listed in The Best Doctors in America, Woodward/White Inc. 1994 and 1998
- 1999 Recipient of the Riley Public Service Award, Mental Health Association of Orange County
- NAMI Exemplary Psychiatrist Award, 1992 and 2000
- Mitchell B. Balter Award recipient, 2001
- American Psychiatric Association Distinguished Fellow, 2003

**B. Selected peer-reviewed publications** (Selected from over 165 publications)

- Potkin, SG, Buchsbaum, MS, Jin, Y, Tang, C, Telford, J., Friedman, G., Lottenberg, S., Najafi, A., Gulasekaram, B., Costa, J., Richmond, G.H., Bunney, W.E. Jr.: Clozapine Effects on Glucose Metabolic Rate in Striatum and Frontal Cortex. *The Journal of Clinical Psychiatry*, 55:9: 63-66, 1994.
- Akbarian, S., Sucher, N.J., Bradley A., Taffozil, A., Trinh, D., Hetrick, W.P., Potkin, S.G., Sandman, C.A., Bunney, W.E., Jr., Jones, E.G.: Selective alterations in gene expression for NMDA receptor I subunits in prefrontal cortex of schizophrenics. *Journal of Neuroscience*, vol. 16 (1) 19-30, 1996.
- Hong CCH, Jin Y, Potkin SG, Wu JC, Buchsbaum M, Callaghan G, Nudleman K, Gillin JC: Language in Dreaming and Regional Alpha Power. *Sleep* 19(3):232-235, 1996.

- Hong C, Potkin SG, Antrobus JS, Dow BM, Callachan GM, Gillin JC: REM Sleep Eye Movement Correlate with Visual Imagery in Dreaming: A Pilot Study. *Psychophysiology* 34(3):377-381, 1997.
- Jin Y, Castellanos A Jr., Solis ER Jr., Potkin SG: EEG Resonant Responses in Schizophrenia: A Photic Driving Study with Improved Harmonic Resolution. *Schizophrenia Research*, 44(3):213-20, 2000.
- Potkin, SG; Anand, R; Alva, G; Fallon, JH; Keator, D; Carreon, D; Messina, J; Wu, JC; Hartman, R; Fleming, K: Brain Metabolic and Clinical Effects of Rivastigmine in Alzheimer's Disease. *International Journal of Neuropsychopharmacology*, 4 223-230 2001.
- Potkin SG, Alva GA, Fleming K, Anand R, Keator D, Carreon D, Doo M, Jin Y, Wu JC, Fallon JH: A PET Study of the Pathophysiology of Negative Symptoms in Schizophrenia, *Am J Psychiatry*, 159(2): 227-237, 2002.
- Potkin, SG, Alva G, Keator D, Carreon D, Fleming, K Brain metabolic effects of Neotrofin in patients with Alzheimer's disease. *Brain Res.*; 51(1):87-95, 2002.
- Albert, K.A., Hemmings, H.C., Adamo, A.I.B., Potkin, S.G., Akbarian, S., Sandman, C.A., Cotman, C.W., Bunney, W.E., Greengard, P.: Evidence for Decreased DARPP-32 in the Prefrontal Cortex of Schizophrenics. *Archives of General Psychiatry*, 59(8), 705-712, 2002.
- Basile, Vincenzo S, Masellis, Mario, Potkin, Steven G., Kennedy, James L.: Pharmacogenomics in schizophrenia: the quest for individualized therapy. *Human Molecular Genetics*, 11(20), 2517-2530, 2002.
- Potkin SG, Basile V, Jin Y, Masellis M, Badri F, Keator D, Wu J: D1 Receptor Alleles Predict PET Metabolic Correlates of Clinical Response to Clozapine. *Molecular Psychiatry*, 2003; Jan; 8(1):9-13.
- Fallon JH, Opole IO, Potkin SG: The Neuroanatomy of Schizophrenia: Circuitry and Neurotransmitter Systems. *Clinical Neuroscience Research*. 2003; 3(1-2):77-107.
- Potkin SG, Anand R, Alphs L, Fleming K: Neurocognitive Performance Does Not Correlate with Suicidality in Schizophrenic and Schizoaffective Patients at Risk for Suicide. *Schizophrenia Research*, 59 (1):59-66, 2003
- Sivagnansundaram S, Muller DJ, Gubanov A, Potkin SG, Kennedy JL; Genetics of Schizophrenia: Current Strategies. *Clinical Neuroscience Research*, 3(1-2): 5-15, 2003.
- Potkin SG, Saha AR, Kujawa MJ, Carson WH, Ali M, Stock E, Stringfellow J, Ingenito G, Marder SR: Aripiprazole, an Antipsychotic with a Novel Mechanism of Action, and Risperidone vs. Placebo in Patients with Schizophrenia and Schizoaffective Disorder. *Archives of General Psychiatry*, 60:681-690, 2003
- Potkin SG, Alphs L, Hsu C, Krishnan R, Anand R, Young FK, Meltzer H, Green A: Predicting Suicidal Risk in Schizophrenic and Schizoaffective Patients in a Prospective 2 Year Trial. *Biological Psychiatry*, 54:444-452, 2003.
- Lee, HJ, Turner, JA, Potkin, S.G. (2004). Scalable parallel reconstruction algorithm for magnetic resonance images. *Proceedings of the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA '04)*, Las Vegas, NV, Vol. 1, 73-79.
- Lee, H.J., Potkin, S.G. (2004). Fine-grain parallel reconstruction algorithm for MR images. *Proceedings of the 17th International Conference on Parallel and Distributed Computing Systems (PDCS '04)*, San Francisco, CA, Vol. 1, 383-389
- Fallon JH, Keator DB, Mbogori J, Turner J, Potkin SG: Hostility Differentiates the Brain Metabolic Effects of Nicotine. *Cognitive Brain Research*, 18(2):142-148, 2004.
- Chattonpadhyay S, Xue B, Collins D, Pichika R, Bagnera R, Leslie FM, Christian BT, Shi B, Narayanan TK, Potkin SG, Mukherjee J: Synthesis and Evaluation of Nicotine  $\alpha_4\beta_2$  Receptor Radioligand, 5-(3'-18F-Fluoropropyl)-3-(2-(S)-Pyrrolidinylmethoxy) Pyridine, in Rodents and PET in Nonhuman Primate. *Journal of Nuclear Medicine*, 46(1):130-140, 2005.
- Fallon J, Keator D, Mbogori J, Taylor D, Potkin SG: Gender: A Major Determinant of Brain Response to Nicotine. *International Journal of Neuropsychopharmacology*, 8(1): 17-26, 2005.
- Hwang R, Shinkai T, Deluca V, Mueller DJ, Ni X, Macciardi F, Potkin SG, Lieberman JA, Meltzer HY, Kennedy JL: Association Study of 12 Polymorphisms Spanning the Dopamine D2 Receptor Gene and Clozapine Treatment Response in Two Treatment Refractory/Intolerant Populations. *Psychopharmacology*, (1):179-87, 2005.
- Potkin S, Gharabawi G, Greenspan A, Rupnow M, Kosik-Gonzalez C, Remington G, Ruetsch C, Revicki D: Psychometric evaluation of the Readiness for Discharge Questionnaire. *Schizophrenia Research*, 80(2-3):203-12, 2005.

Jin Y, Potkin S, Kemp A, Huerta S, Alva G, Thai TM, Carreon D, Bunney W: Therapeutic Effects of Individualized Alpha Frequency Transcranial Magnetic Stimulation ( $\alpha$ TMS) on the Negative Symptoms of Schizophrenia. *Schizophr Bulletin*, in print, 2005.

## Grants and Research Awards

### **Federal Government**

- Function BIRN – U24, NIH/NCRR (S.G. Potkin, PI), 2006-2010. This project will develop technology and methods to conduct multisite functional imaging studies, and to produce a knowledge base that would not otherwise be available through single-site imaging studies. The technology includes the development and refinement of multi-site, functional imaging protocols using robust cognitive tasks; the development and refinement of algorithms to reduce inter-site variability; the use of federated, distributed databases and storage; flexible and robust image processing software integrated with these databases and storage infrastructure; tools for data querying across the distributed databases to extract subset of data from multiple sources; and the development of both classical statistical and datamining methods to reveal the patterns of imaging, clinical, and behavioral data which differentiate important population clusters.  
Role: PI of the overall consortium
- Transdisciplinary Imaging Genetics Center – P20, NIH (S.G. Potkin, PI), 2004-2007. This Center is focuses on developing robust and sensitive methods of combining genetic and neuroimaging data in analysis and visualization, for a more complete understanding of genetic influences on cognitive processing.  
Role: PI
- National Alliance for Medical Imaging Computing (RFA Title: National Centers for Biomedical Computing), NIH, (S.G. Potkin, UCI PI & Core 3 Co-PI), 2004-2007. This project is a multi-institutional, interdisciplinary team of computer scientists, software engineers, and medical investigators who develop computational tools for the analysis and visualization of medical image data. Dr. Potkin's role in the NAMIC is to lead work in schizophrenic circuitry, exploring the function and dysfunction of various cortical areas as measured in PET, DTI and fMRI datasets in comparison to circuitry measurements and given genetic hypotheses.  
Role: UCI site PI
- Morphometry Biomedical Informatics Research Network, NIH, NCRR, (S.G. Potkin, PI), 2004-2009. This project focuses on collecting imaging data, upload data to BIRN infrastructure; develop software for BIRN. Morphometry BIRN participants are examining neuroanatomical/imaging (MRI) correlates of neuropsychiatric illnesses in such disorders as unipolar depression, mild Alzheimer's disease, and mild cognitive impairment.  
Role: UCI site PI
- Genomic Studies in Bipolar and Major Depression, NIMH - SILVIO O. CONTE CENTER GRANT Co-I, (W. Bunney PI), 2004-2009. This research program is focused on the discovery of etiologically relevant differentially expressed genes in postmortem brain tissue from depressed patients and individually matched controls utilizing the new cDNA microarray high throughput technology. Dr. Potkin is responsible for the post-mortem brain bank and is a co-investigator.
- Sensory Gating in Schizophrenia: Multiple Measures, NIH, 2001-2005, (J. Patterson, PI). Topical and quantitative EEG measures in normal subjects and patients with schizophrenia are being obtained to characterize the sensory gating abnormalities in schizophrenia. These EEG data are combined with clinical and neurocognitive assessments. Dr. Potkin is a co-investigator.
- Functional Imaging Research in Schizophrenia Testbed (First BIRN), NIH, NCRR, (S. G. Potkin, PI) 2002-2005. A consortium of eleven university sites using Internet 2, a distributed and federated database and grid computing to combine fMRI data from different magnet manufacturers and different strength magnets. COMPLETED  
Role: PI of the overall consortium
- Morphometry Biomedical Informatics Research Network, NIH, (S.G. Potkin, UCI PI; B. Rosen, Overall PI), 2001-2004. A consortium of five university sites combining structural MRI data to address questions concerning mild cognitive impairment, Alzheimer's disease, and clinical depression. A

variety of non-human and human phantoms are used for calibration and automatic segmentation algorithms and measures of cortical thinness across the sites. A federated and distributed database and broadband networking are key components. COMPLETED

Role: UCI site PI.

- General Clinical Research Center: Positron Emission Tomography Core, NIH, PET Core, S. G. Potkin, PET Co-PI; part of UCI GCRC Satellite (D. Cooper, Director), 2000-2004. This is a PET imaging core for a variety of clinical studies sponsored by the GCRC. Dr. Potkin's role is to facilitate imaging research for clinical investigators in many fields. COMPLETED
- Human Imaging Studies of Nicotine Dependence and Withdrawal (S.G. Potkin, Co-PI); NIDA, part of Transdisciplinary Tobacco Research Center (F. Leslie, PI), 1999-2004. This study investigates the effects of nicotine in animals and humans using PET and fMRI methods. One goal of the study is to combine these methods in understanding the susceptibility to nicotine dependence. Dr. Potkin is the PI for the PET imaging study. COMPLETED
- Neuropathological and Genetic Abnormalities in Depression, NIMH, 1999-2004 (W. Bunney, PI). This study investigates the gene expression differences in post-mortem tissue between depressed and schizophrenic patients and normal controls. Dr. Potkin is responsible for the post-mortem brain bank and is a co-investigator. COMPLETED

### **Private Foundations**

- Alpha EEG-Guided Transcranial Magnetic Stimulation, Stanley Medical Research Institute, 2003-2005 (Y. Jin, PI). The use of individualized transcranial magnetic stimulation based on individual subjects' alpha EEG rhythms. Dr. Potkin is the study PI.
- Randomized Parallel Group of the Effects of Augmenting Pharmacotherapy with a Chronobiological Acceleration Package in 66 Bipolar Depressed Patients, 2003-2006 (J.C. Wu, PI). This single site study involves clinical efficacy measures, and does not include imaging. Single site. Dr. Potkin is a co-investigator.
- Rivastigmine Combination Therapy to Enhance Cognition and Decrease Behavioral Symptoms in Schizophrenia – A Clinical Trial with EEG Measures, Stanley Foundation, 2002-2004, (S.G. Potkin, PI) Evaluates the use of Rivastigmine to enhance cognition in schizophrenic patients using clinical assessment, EEG measures, fMRI, and PET imaging. Dr. Potkin is overall PI for the conducting of the clinical trial and data analysis.
- The Neurocognitive Effects of AIT-082 in Patients with Schizophrenia, Stanley Medical Research Institute, 2002-2003 (K. Fleming, PI) A clinical study which does not include brain imaging. Dr. Potkin is the co-investigator.

### **Investigator-Initiated Industry Studies and Other Agencies**

- Fallypride and altanserin imaging studies of Risperidol Consta, Janssen. 2003-2004. Measurement of dopamine D2 and serotonin 2 brain regional receptor occupancy in schizophrenic subjects treated with a novel antipsychotic medication formulation. The purpose of this study is to establish appropriate clinical dosing based on brain receptor occupancy. Dr. Potkin is responsible for the logistics and data analysis.
- An fMRI and FDG PET double-blind, placebo-controlled study in patients with traumatic brain injury with persistent cognitive deficits. Novartis. 2003-2004. This is a two-center, UCI and Stanford, imaging study combining fMRI and PET data to understand traumatic brain injury and its modification by treatment. Dr. Potkin is the PI for both sites, and is responsible for the overall design and analysis.
- Comparative effectiveness of antipsychotic medications in patients with Alzheimer's disease. CATIE NIH/UNC. 2002-2004. A multi-center clinical study of antipsychotic medications in Alzheimer's disease, which does not involve imaging. Dr. Potkin is the site PI.