

BIOGRAPHICAL SKETCH

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NAME Heckers, Stephan	POSITION TITLE Professor		
eRA COMMONS USER NAME sheckers			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Bonn, Germany	MD	1988	Medicine
Harvard University, Cambridge, MA	MSc	2000	Clinical Investigation

A. Honors and Awards**Positions and Employment**

1988 – 1990 Research Fellow, Department of Psychiatry, University of Würzburg, Germany
 1990 – 1993 Research Fellow, Department of Neurology, Beth Israel Hospital, Harvard Medical School
 1993 – 1994 Intern in Medicine, Massachusetts General Hospital, Harvard Medical School
 1994 – 1997 Resident in Psychiatry, Massachusetts General Hospital, Harvard Medical School
 1997 – 1999 Instructor in Psychiatry, Harvard Medical School
 1999 – 2004 Assistant Professor of Psychiatry, Harvard Medical School
 2003 – 2005 Director, Schizophrenia and Bipolar Disorder Program, McLean Hospital
 2004 – 2005 Associate Professor of Psychiatry, Harvard Medical School
 2006 – pres Professor and Chair of Psychiatry, Vanderbilt University

Other Experience and Professional Memberships

1997 – 1998 Dupont Warren Fellow, Harvard Medical School
 1998 – 2000 Research Fellow, Clinical Investigator Training Program, Harvard-MIT, HST
 1999 – 2004 Director, Schizophrenia Neuroimaging Group, Massachusetts General Hospital
 1999 – 2003 Associate Director, Harvard Brain Tissue Resource Center, McLean Hospital
 2003 – pres Associate Editor, Archives of General Psychiatry

Honors

1991 – 1993 Young Investigator Award (NARSAD)
 1995 NIMH Outstanding Resident Award
 1997 Dupont-Warren Award (Harvard University)
 1998 – 2000 Young Investigator Award (NARSAD)
 2000 Outstanding Teacher Award, MGH/McLean Adult Psychiatry Residency Class 2000
 2001 – 2003 Stanley Foundation Research Award
 2002 Klerman Award, Honorable Mention (NARSAD)
 2004 Dr. Paul Janssen Schizophrenia Research Award (CINP)
 2005 A.E. Bennett Award (SOBP)

B. Selected peer- reviewed publications (in chronological order)

Heckers, S., Heinsen, H., Heinsen, Y. C., Beckmann, H. (1990). Limbic structures and lateral ventricle in schizophrenia: A quantitative postmortem study. *Archives of General Psychiatry*, 47, 1016-1022.

- Heckers, S., Heinsen, H., Heinsen, Y., Beckmann, H. (1991). Cortex, white matter, and basal ganglia in schizophrenia: a volumetric postmortem study. *Biological Psychiatry*, 29, 556-566.
- Heckers, S., Heinsen, H., Geiger, B., Beckmann, H. (1991). Hippocampal neuron number in schizophrenia. A stereological study. *Archives of General Psychiatry*, 48, 1002-1008.
- Heckers, S., Geula, C., Mesulam, M. M. (1992). Cholinergic innervation of the human thalamus: dual origin and differential nuclear distribution. *Journal of Comparative Neurology*, 325, 68-82.
- Heckers, S., Ohtake, T., Wiley, R. G., Lappi, D. A., Geula, C., Mesulam, M. M. (1994). Complete and selective cholinergic denervation of rat neocortex and hippocampus but not amygdala by an immunotoxin against the p75 NGF receptor. *Journal of Neuroscience*, 14, 1271-1289.
- Berger-Sweeney, J., Heckers, S., Mesulam, M. M., Wiley, R. G., Lappi, D. A., Sharma, M. (1994). Differential effects on spatial navigation of immunotoxin-induced cholinergic lesions of the medial septal area and nucleus basalis magnocellularis. *Journal of Neuroscience*, 14, 4507-4519.
- Konradi, C., Heckers, S. (1995). Haloperidol-induced Fos expression in striatum is dependent upon transcription factor cyclic AMP response element binding protein. *Neuroscience*, 65, 1051-1061.
- Becker, T., Elmer, K., Schneider, F., Schneider, M., Grodd, W., Bartels, M., Heckers, S., Beckmann, H. (1996). Confirmation of reduced temporal limbic structure volume on magnetic resonance imaging in male patients with schizophrenia. *Psychiatry Research*, 67, 135-143.
- Heckers, S. (1997). Neuropathology of schizophrenia: cortex, thalamus, basal ganglia, and neurotransmitter-specific projection systems. *Schizophrenia Bulletin*, 23, 403-421.
- Heckers, S., Rauch, S. L., Goff, D., Savage, C. R., Schacter, D. L., Fischman, A. J., Alpert, N. M. (1998). Impaired recruitment of the hippocampus during conscious recollection in schizophrenia. *Nature Neuroscience*, 1, 318-323.
- Heckers, S., Goff, D., Schacter, D. L., Savage, C. R., Fischman, A. J., Alpert, N. M., Rauch, S. L. (1999). Functional imaging of memory retrieval in deficit vs nondéficit schizophrenia. *Archives of General Psychiatry*, 56, 1117-1123.
- Heckers, S., Curran, T., Goff, D., Rauch, S. L., Fischman, A. J., Alpert, N. M., Schacter, D. L. (2000). Abnormalities in thalamus and prefrontal cortex during episodic object recognition in schizophrenia. *Biological Psychiatry*, 48, 651-657.
- Konradi, C., Heckers, S. (2001). Haloperidol and neuroplasticity: insights into the treatment and neurobiology of schizophrenia. *Biological Psychiatry*, 50, 729-742.
- Heckers, S., Stone, D., Walsh, J., Shick, J., Koul, P., Benes, F. M. (2002). Differential hippocampal expression of glutamic acid decarboxylase 65 and 67 messenger RNA in bipolar disorder and schizophrenia. *Archives of General Psychiatry*, 59, 521-529.
- Heckers, S., Weiss, A. P., Alpert, N. M., Schacter, D. L. (2002). Hippocampal and brain stem activation during word retrieval after repeated and semantic encoding. *Cerebral Cortex*, 12, 900-907.
- Heckers, S., Goff, D. C., Weiss, A. P. (2002). Reversed hemispheric asymmetry during simple visual perception in schizophrenia. *Psychiatry Research: Neuroimaging*, 116, 25-32.
- Weiss, A. P., Dodson, C. S., Goff, D. C., Schacter, D. L., Heckers, S. (2002). Intact suppression of increased false recognition in schizophrenia. *American Journal of Psychiatry*, 159, 1506-1513.
- Weiss, A. P., Schacter, D. L., Goff, D. C., Rauch, S. L., Alpert, N. M., Fischman, A. J., Heckers, S. (2003). Impaired hippocampal recruitment during normal modulation of memory performance in schizophrenia. *Biological Psychiatry*, 53, 48-55.
- Konradi, C., Heckers, S. (2003). Molecular aspects of glutamate dysregulation: implications for schizophrenia and its treatment. *Pharmacology & Therapeutics*, 97, 153-179.
- Heckers, S., Zalesak, M., Weiss, A. P., Ditman, T., Titone, D. (2004). Hippocampal activation during transitive inference in humans. *Hippocampus*, 14, 153-162.
- Heckers, S., Weiss, A. P., Deckersbach, T., Goff, D., Morecraft, R. J., Bush, G. (2004). Anterior cingulate cortex activation during cognitive interference in schizophrenia. *American Journal of Psychiatry*, 161, 707-715.
- Weiss, A. P., Zalesak, M., DeWitt, I., Goff, D., Kunkel, L., Heckers, S. (2004). Impaired hippocampal function during the detection of novel words in schizophrenia. *Biological Psychiatry*, 55, 668-675.
- Konradi, C., Eaton, M., MacDonald, M. L., Walsh, J., Benes, F. M., Heckers, S. (2004). Molecular evidence for mitochondrial dysfunction in bipolar disorder. *Archives of General Psychiatry*, 61, 300-308.

- Weiss, A. P., DeWitt, I., Goff, D., Ditman, T., Heckers, S. (2005). Anterior and posterior hippocampal volumes in schizophrenia. *Schizophrenia Research*, 73, 103-112.
- Holt, D. J., Weiss, A. P., Rauch, S. L., Wright, C. I., Zalesak, M., Goff, D. C., Ditman, T., Welsh, R. C., Heckers, S. (2005). Sustained activation of the hippocampus in response to fearful faces in schizophrenia. *Biological Psychiatry*, 57, 1011-1019.
- Manoach, D. S., White, N. S., Lindgren, K. A., Heckers, S., Coleman, M. J., Dubal, S., Goff, D. C., Holzman, P. S. (2005). Intact hemispheric specialization for spatial and shape working memory in schizophrenia. *Schizophrenia Research*, 78, 1-12.
- Sim, K., Cullen, T. J., Ongur, D., Heckers, S. (2005). Testing models of thalamic dysfunction in schizophrenia using neuroimaging. *Journal of Neural Transmission*.
- Holt, D. J., Kunkel, L., Weiss, A. P., Goff, D. C., Wright, C. I., Shin, L. S., Rauch, S. L., Hootnick, J., Heckers, S. (2006). Increased medial temporal lobe activation during the passive viewing of emotional and neutral facial expressions in schizophrenia. *Schizophrenia Research*, 2-3, 153-162.
- Sim, K., DeWitt, I., Ditman, T., Zalesak, M., Greenhouse, I., Goff, D., Weiss, A. P., Heckers, S. (2006). Hippocampal and parahippocampal volumes in schizophrenia: a structural MRI study. *Schizophrenia Bulletin*, 32, 332-340.
- Ongur, D., Cullen, T. J., Wolf, D. H., Rohan, M., Barreira, P., Zalesak, M., Heckers, S. (2006). The neural basis of relational memory deficits in schizophrenia. *Archives of General Psychiatry*, 63, 356-365.

C. Research Support

Ongoing Research Support

R01 MH067999-01A1 Heckers (PI) 01/01/04 – 12/31/08

NIH/NIMH

Hippocampus in Schizophrenia and Bipolar Disorder

The goal of this project is to study the cellular and molecular basis of hippocampal pathology in schizophrenia and bipolar disorder.

Role: PI

R01 MH070560-01A1 Heckers (PI) 02/07/05 – 01/31/10

NIH/NIMH

Imaging Hippocampal Function in Psychosis

The goal of this project is the study of hippocampal structure and function in schizophrenia and bipolar disorder using structural and functional MRI.

Role: PI

Completed Research Support

MIND Institute Research Award Rosen (PI) 01/01/05 – 12/31/05

Mental Illness Neuroscience Discovery (MIND) Institute

Functional and Structural Imaging of Higher Cognitive Function in Schizophrenia

This is a collaborative study of brain function in schizophrenia, involving several investigators at MGH.

Role: Co-Investigator