

## **CURRICULUM VITAE: STEPHAN HECKERS, MD, MSc**

### **Personal Data**

**Office Address:** Vanderbilt Psychiatric Hospital  
1601 23<sup>rd</sup> Avenue South, Suite 3060  
Nashville, TN 37212  
(615) 322-2665

**Date of Birth:** October 12, 1960

**Place of Birth:** Waldniel, Germany

**Home Address:** 5895 Fredericksburg Drive  
Nashville, TN 37215

**Marital Status:** Married, 2 children

### **Education**

1981 Philosophical Institute, University of Munich, Germany  
1981 - 1982 Philosophical Institute, University of Cologne, Germany  
1982 - 1988 Medical School, University of Cologne, Germany  
1988 MD degree ('magna cum laude') with the thesis 'Surgical therapy of exocrine pancreatic tumors', University of Bonn, Germany  
2000 Harvard University, Master of Medical Sciences (MSc)

### **Postdoctoral Training:**

1988 - 1990 Research Fellow, Morphological Brain Research Laboratory,  
Department of Psychiatry, University of Würzburg, Germany  
1990 - 1993 Research Fellow, Department of Neurology, Beth Israel Hospital,  
Harvard Medical School, Boston  
1993 - 1994 Intern in Medicine, Massachusetts General Hospital, Harvard Medical School  
1994 - 1997 Resident in Psychiatry, Massachusetts General Hospital, Harvard Medical School  
1996 - 1997 Chief Resident, Avery D. Weisman Psychiatry Consultation Service,  
Massachusetts General Hospital, Harvard Medical School  
1997 - 1998 Dupont-Warren Fellow, Department of Psychiatry, Harvard University  
1998 - 2000 Research Fellow, Clinical Investigator Training Program,  
Harvard-MIT Division of Health Sciences and Technology

### **Licensure and Certification:**

1988 License to practice medicine in Germany  
1992 ECFMG part 1, USMLE part 2, FLEX part 1 and 2  
1995 Massachusetts Medical License  
1998 American Board of Psychiatry and Neurology  
2006 Tennessee Medical License  
2008 American Board of Psychiatry and Neurology, Recertification

### **Academic Appointments**

1988 - 1990 Research Fellow in Psychiatry, University of Würzburg, Germany  
1990 - 1993 Research Fellow in Neurology, Harvard Medical School, Boston  
1993 - 1997 Clinical Fellow in Psychiatry, Harvard Medical School  
1997 - 1999 Instructor in Psychiatry, Harvard Medical School

1999 - 2004 Assistant Professor of Psychiatry, Harvard Medical School  
 2004 - 2005 Associate Professor of Psychiatry, Harvard Medical School  
 2006 - 2010 James G. Blakemore Chair in Psychiatry, Vanderbilt University School of Medicine  
 2006 - Chair, Department of Psychiatry, Vanderbilt University School of Medicine  
 2006 - Professor of Psychiatry, Vanderbilt University School of Medicine, Nashville  
 2006 - Professor of Radiology, Vanderbilt University School of Medicine  
 2010 - Professor of Psychology, College of Arts and Sciences, Vanderbilt University  
 2010 - William P. and Henry B. Test Chair in Schizophrenia Research, Vanderbilt University  
 2012 - Training Director, General Psychiatry Residency, Vanderbilt University

### **Hospital Appointments**

1988 - 1990 Research Fellow in Psychiatry, Department of Psychiatry, University of Würzburg, Germany  
 1990 - 1993 Research Fellow in Neurology, Beth Israel Hospital, Boston  
 1993 - 1997 Clinical Fellow in Psychiatry, Massachusetts General Hospital, Boston  
 1997 - 2000 Clinical Associate in Psychiatry, Massachusetts General Hospital  
 2000 - 2003 Assistant Neuroanatomist, McLean Hospital, Belmont  
 2003 - 2005 Associate Psychiatrist, McLean Hospital  
 2006 - Psychiatrist, Vanderbilt Psychiatric Hospital, Nashville  
 2010 - Psychiatrist-in-Chief, Vanderbilt Psychiatric Hospital

### **Professional Organizations**

1990 - Society for Neuroscience  
 1991 - 2000 Boston Society for Neurology and Psychiatry  
 1995 - American Psychiatric Association  
 1996 - 2000 American Neuropsychiatric Association  
 1999 - Society of Biological Psychiatry  
 2002 - 2007 Deutsche Gesellschaft für Biologische Psychiatrie  
 2006 - 2011 Member, American College of Neuropsychopharmacology  
 2012 - Fellow, American College of Neuropsychopharmacology  
 2006 - Association for Academic Psychiatry  
 2006 - American Association of Chairs of Departments of Psychiatry  
 2007 - Schizophrenia International Research Society  
 2008 - The American College of Psychiatrists  
 2009 - Association for the Advancement of Philosophy & Psychiatry

### **Professional Activities**

#### **Hospital and Health Care Organization Service Responsibilities:**

1996 - 1997 Chief Resident, Avery D. Weisman Psychiatry Consultation Service, Massachusetts General Hospital  
 1999 - 2003 Assistant Director of Psychiatric Neuroimaging Research, Massachusetts General Hospital  
 2000 - 2003 Associate Director, Harvard Brain Tissue Resource Center  
 2003 - 2005 Director, Schizophrenia and Bipolar Disorder Program, McLean Hospital  
 2006 - Clinical Enterprise Group, Vanderbilt Medical Center  
 2006 - Clinical Enterprise Executive Committee, Vanderbilt Medical Center  
 2006 - Vanderbilt Medical Group Executive Committee, Vanderbilt Medical Center  
 2006 - Chair, Clinical Services Governance Committee, Department of Psychiatry, Vanderbilt Medical Center

2006 - Medical Center Medical Board, Vanderbilt Medical Center

**Major Committee Assignments:**

1996 - 1997 Chief Residents Council, Massachusetts General Hospital  
 1996 - 1997 Executive Committee on Teaching and Education (ECOTE), Massachusetts General Hospital  
 1998 NIMH, Clinical Research Planning Panel  
 1999 - 2003 Partners Psychiatry Research Committee  
 2000 - 2005 MGH/McLean Residency Curriculum Leadership Group  
 2001 - 2003 MIND Institute (Boston Site)  
 2000 Grant Reviewer: Medical Research Council, London, UK  
 2003 - 2005 Patient Care Assessment Quality Improvement Committee, McLean Hospital  
 2004 Special Emphasis Panel, Conte Centers for the study of Schizophrenia, ZMH1 BRB P05  
 2005 Award Committee, World Congress of Biological Psychiatry, Vienna, Austria  
 2005 - NARSAD, Scientific Council  
 2005 - 2008 Program Planning Committee, Society of Biological Psychiatry  
 2006 - 2008 Faculty Appointments and Promotions Committee, Vanderbilt University School of Medicine  
 2007 - ACNP Public Information Committee  
 2007 - NAMI Tennessee, Advisory Board  
 2007 - NAMI Nashville, Advisory Board  
 2007- 2010 Vanderbilt Medical Student Promotions Committee Class of 2010  
 2008 - Vanderbilt Institute for Clinical and Translational Research, Internal Advisory Board  
 2008 Search Committee for Dean, Vanderbilt University School of Medicine  
 2008 - Veterans Affairs Tennessee Valley Health Care System Academic Partnership Council  
 2008 - DSM-V Psychosis Work Group, American Psychiatric Association  
 2008 - 2011 Medical Center Appointments and Tenure Review Committee, Vanderbilt University  
 2008 - 2011 Vanderbilt Medical Group Budget and Finance Committee  
 2009 Co-Chair, ACNP Program Committee  
 2009 - International Congress on Schizophrenia Research, Advisory Board  
 2009 - International Congress on Schizophrenia Research, Program Committee  
 2009 - 2010 Faculty and Physician Wellness Committee, Vanderbilt Medical Center  
 2009 - 2010 Chair, Society of Biological Psychiatry Program Committee  
 2009 - Faculty Advisor, NAMI Vanderbilt  
 2008 Search Committee for Chair of Medicine, Vanderbilt University School of Medicine  
 2010 Chair, ACNP Program Committee  
 2010 - 2011 Chair, Vanderbilt Medical Group Budget and Finance Committee  
 2010 - 2011 Chair, Medical Center Appointments and Tenure Review Committee, Vanderbilt University  
 2010 Search Committee for Michael Burry Chair, Vanderbilt University School of Medicine  
 2011 NIMH, Special Emphasis Panel/Scientific Review Group 2012/01 ZMH1 ERB-C (02)  
 2011 - 2012 Search Committee for Chair of Radiology, Vanderbilt University School of Medicine  
 2011 - 2012 Chair, Vanderbilt Medical Group Executive Committee  
 2012 - Vanderbilt Prize in Biomedical Science Internal Review Committee  
 2012 - Neuroscience Visions Council, Vanderbilt University  
 2012 - 2013 Co-Chair, ACNP Publications Committee  
 2013 - 2014 Chair, ACNP Publications Committee  
 2013 Chair, Executive Committee, International Congress on Schizophrenia Research

**Editorial Boards:**

2003 - 2011 Associate Editor, Archives of General Psychiatry

2001 -	Editorial Board Member, Revista de Psiquiatria Clinica
2003 - 2006	Advisory Board Member, Journal of Neural Transmission
2001	Guest Editor: Neuroscience Newsletter (MGH, Department of Psychiatry)
2001	Guest Editor: Hippocampus, Special Issue: Schizophrenia (Vol 11, 2001)
2005 - 2009	Scientific Advisory Board, Schizophrenia Research Forum
2008 -	Editorial Board Member, European Archives of Psychiatry and Clinical Neuroscience
2011 -	Editorial Board Member, Schizophrenia Research
2012 -	Editorial Board Member, Archives of General Psychiatry
2012 -	Editorial Board Member, Neuroimage: Clinical
2013 -	Editorial Board Member, Schizophrenia Bulletin

*Ad Hoc Reviewer:* Acta Neuropathologica, Animal Cognition, Archives of General Psychiatry, American Journal of Psychiatry, Biological Psychiatry, Brain Imaging and Behavior, Cerebral Cortex, European Journal of Neuroscience, European Journal of Pharmacology, Experimental Brain Research, Harvard Review of Psychiatry, Journal of Abnormal Psychology, Journal of Child Psychology and Psychiatry, Journal of Clinical Psychiatry, Journal of Comparative Neurology, Journal of Neuroscience, Molecular Psychiatry, Nature, Nature Neuroscience, Neuroimage, Neuroimage: Clinical, Neuron, Neuropsychiatry Neuropsychology and Behavioral Neurology, Neuropsychobiology, Neuropsychology, Neuropsychopharmacology, Neuroscience, PNAS, Psychiatry Research: Neuroimaging, Schizophrenia Bulletin, Schizophrenia Research, Trends in Neuroscience, World Journal of Biological Psychiatry

### **Awards and Honors**

1982 - 1988	Honorary Scholar of the Education Foundation of Germany (Studienstiftung des Deutschen Volkes)
1988 - 1990	Deutsche Forschungsgemeinschaft (DFG): Grant to study neuroanatomical changes in brains of schizophrenic patients
1990 - 1992	Deutsche Forschungsgemeinschaft (DFG): Grant to study abroad (Dr. M.-M. Mesulam)
1995	NIMH Outstanding Resident Award
1997	Thomas P. Hackett Award (MGH Department of Psychiatry)
1997 - 1998	Dupont-Warren Fellowship (Harvard Department of Psychiatry)
1998	APA Research Colloquium for Young Investigators Award
1998	Stanley Cobb Award
1998	Harry C. and Maida Solomon Award (Harvard Department of Psychiatry)
2000	Outstanding Teacher Award, MGH/McLean Adult Psychiatry Residency Class 2000
2001	International Congress on Schizophrenia Research Young Investigator Award
2002	Klerman Award Honorable Mention, National Alliance for Research on Schizophrenia and Depression (NARSAD)
2003	George B. Murray Lectureship
2004	Dr. Paul Janssen Schizophrenia Research Award (CINP)
2005	Nominee, Cynthia N. Kettyle Teaching Award, Medical Education Council of the Departments of Psychiatry at Harvard Medical School
2005	A.E. Bennett Award (Society of Biological Psychiatry)
2006	Philip Isenberg Teaching Award (Teacher of the Year), MGH/McLean Adult Psychiatry Residency Class 2006

### **Teaching Activities**

#### **Undergraduate Courses:**

Harvard University

1995 Tutorial: "Exploring the mind through biological models and human disease"  
Lecturer, 1 hour/year, 10 undergraduate students

Vanderbilt University

2006 - 2010 Psychology 235: Schizophrenia, Lecturer, 1 hour/year, 60 students

### Medical School Courses:

University of Würzburg Medical School

1988 - 1990 Introduction to Biological Psychiatry  
Lecturer and tutor, 20 medical students, 10 hours/year

Harvard Medical School

1991 - 1992 HST 130: Introduction to Neurobiology  
Lecturer and tutor, 20-60 medical students

1994 HMS: Human Nervous System and Behavior  
Lecturer, 1 hour/year, 150 medical students

1997 HMS: Introduction to Psychiatry - Mental status exam  
Lecturer, 1 hour/year, 20 medical students

1999 HST 350: Clinical Pharmacology and Therapeutics  
Lecturer, 1 hour/year, 20 medical students

2000 HMS: Human Nervous System and Behavior  
Lecturer, 1 hour/year, 150 medical students

2004 HMS MJ700: Psychopathology and Introduction to Clinical Psychiatry  
Lecturer, 3 hours/year, 150 medical students

IPOKRATES

2000 Psychiatrieseminar, BKH Gabersee, Germany  
Bedside-Teaching of Psychiatry for German Medical Students  
1week, 8 hours/day, 20 medical students

Vanderbilt Medical School

2006 - 2008 Psychiatry, 2<sup>nd</sup> year medical school course  
Course director and lecturer, 110 students, 45 hours/year

2009 - 2012 Brain & Behavior, 2<sup>nd</sup> year medical school course  
Course director and lecturer, 110 students, 40 hours/year

### Graduate Courses:

Harvard Medical School

1996 - 2000 PGY IV Neuroscience Seminar  
Course Director; organizer and lecturer, 11-16 psychiatry residents,  
12 hours/year

1996 PGY III Neuroscience Seminar  
Lecturer, 11 psychiatry residents, 2 hours/year

1997 PGY III Psychiatry Consultation Seminar  
Lecturer, 10 psychiatry residents, 2 hours/year

Vanderbilt Medical School

2006 PGY II/III Psychopathology – Clinical Application Seminar  
Course director; organizer and lecturer, 16 psychiatry residents, 8 hours/year

2007 PGY II/III Psychopathology - Mood Disorders Seminar  
Course director; organizer and lecturer, 16 psychiatry residents, 8 hours/year

2007 PSY II/III Psychopathology - Schizophrenia Seminar  
Course director; organizer and lecturer, 16 psychiatry residents, 8 hours/year

## Vanderbilt University

- 2007 - Cellular and Molecular Neuroscience, NURO 345  
Lecturer, 20 students, 2 hours/year
- 2008 - Molecular Basis of Neural Disease, NURO 366  
Lecturer, 6 students, 2 hours/year

**Continuing Medical Education Courses:**

Harvard Medical School, Continuing Medical Education

- 1991 - 2000 Neurobiology of Behavior: Is there a neuroanatomy of schizophrenia?;  
Lecturer, 20 hours of preparation
- 1997 - 2005 Psychiatry Board Review Course: Basic Neuropharmacology: Transmitters and Receptors;  
Lecturer, 30 hours of preparation
- 1997 - 2005 Child Psychopharmacology Course: Basic Neuropharmacology: Transmitters and Receptors;  
Lecturer, 20 hours of preparation
- 1998 - 2005 Psychopharmacology Course: The neural basis of psychosis; Lecturer, 20 hours of preparation
- 2000 - 2002 Psychiatric Neuroscience Course; Course Co-Director, Major role in inviting speakers,  
organizing schedule, preparing syllabus
- 2000 - 2006 Psychiatric Neuroscience Course: 1) Cells and circuits; Lecturer, 20 hours of preparation (every  
other year); 2) Schizophrenia; Lecturer, 20 hours of preparation (every other year)

**Clinical Teaching:**

- 1997 - 2000 Supervising Attending, Psychiatry Consultation Service, Massachusetts General Hospital (1.  
Clinical practice: Psychiatric consultation service in hospital setting; 2. Patient load:  
Approximately 10 cases per week; 3. Clinical contributions: Providing supervision for PGY-3  
psychiatry residents, evaluating patients, writing attending consultation notes)
- 1998 Staff Psychiatrist, Behavioral Neurology Clinic, Department of Neurology, Massachusetts  
General Hospital (1. Clinical practice: Outpatient clinic, group practice. 2. Patient load:  
Approximately 5 cases per week. 3. Clinical contributions: Psychiatric assessments in  
patients with primarily neurological disorders).
- 1998 - 2000 Psychiatrist, Psychotic Disorders Unit, Massachusetts General Hospital (1. Clinical practice:  
Outpatient clinic, managed care organization, 2. Patient load: Approximately 5 cases per  
week. 3. Clinical contributions: Psychiatric assessments of outpatients)
- 2003 - 2005 Director, Schizophrenia and Bipolar Disorder Program, McLean Hospital (1. Clinical  
practice: Two psychiatric inpatient units and outpatient program for patients with  
psychotic disorders. 2. Patient load: 50 inpatient beds, more than 1000 admissions per  
year. 3. Clinical contributions: a) Restructuring of one inpatient unit to provide optimal  
medical care and decrease length of stay (reduced from 14 to 9 days within the first year).  
b) Supervision of 2 attending and 4 resident physicians. c) Design and delivery of clinically-  
oriented seminar series and case conferences for medical students and psychiatry  
residents)
- 2006 - Supervising Attending, Vanderbilt Psychiatric Hospital (Supervision of 1 adult psychiatry  
resident, 1-5 hours per week)

**Trainees / Advisees:**

Examiner for PhD Thesis Committee:

- |                     |                    |  |
|---------------------|--------------------|--|
| 2002                | David Volk         | University of Pittsburgh, Department of Neuroscience |
| Predoctoral Fellows |                    |  |
| 2002 - 2006         | Martin Zalesak, MS | PhD Student, MIT                                     |

2007 - 2008	Elizabeth Zellner	Medical student (Emphasis), Vanderbilt University
2008 - 2009	Jae Yoon Park	Medical student (Emphasis), Vanderbilt University
2012 -	Pratik Talati	MSTP student, Vanderbilt University
Postdoctoral Fellows		
2000 - 2004	Anthony Weiss, MD MSc	Instructor in Psychiatry, MGH
2001 - 2004	Laura Kunkel, MD	Instructor in Psychiatry, MGH
2002 - 2005	Daphne Holt, MD PhD	Instructor in Psychiatry, MGH
2003 - 2005	Dost Ongur, MD PhD	Chief Resident; Research Fellow, McLean Hospital
2003 - 2005	Tom Cullen, MD PhD	Postdoctoral Fellow, McLean Hospital
2003 - 2005	Kang Sim, MD	Postdoctoral Fellow, McLean Hospital
2004 - 2005	Daniel Wolf, MD PhD	Chief Resident; McLean Hospital
2005 - 2006	Birgit Ablner, MD	Postdoctoral Fellow, McLean Hospital
2007 - 2008	Paul Gresch, PhD	Research Instructor, Vanderbilt University
2007 - 2009	Cara Pendergrass, PhD	Assistant Professor of Psychiatry, Vanderbilt University
2007 - 2009	Neil Woodward, PhD	Postdoctoral Fellow, Vanderbilt University
2007 - 2009	Yanghyun Lee, MD	Visiting Scholar, Vanderbilt University
2009 - 2011	Samet Kose, MD PhD	Research Assistant Professor, Vanderbilt University
2009 - 2012	Lisa Williams, PhD	Postdoctoral Fellow, Vanderbilt University
2013 -	Maureen McHugo, PhD	Postdoctoral Fellow, Vanderbilt University

### **Invited Lectures**

- 1996 Yale University, Department of Psychiatry: Role of cholinergic neurons in normal and abnormal brain function
- 1997 Brown University, Department of Biology: Schizophrenia
- 1998 Salem Hospital, Department of Psychiatry: The hallucinating brain
- 1998 Wellesley College, Department of Biology: Schizophrenia
- 1998 ACNP, Las Croabas, Puerto Rico: Impaired recruitment of the hippocampus during conscious recollection in schizophrenia
- 1999 Yale University, Department of Neuroscience: Impaired recruitment of the hippocampus during conscious recollection in schizophrenia
- 1999 University of Pittsburgh, Department of Psychiatry: The hippocampus and schizophrenia
- 1999 University of Miami School of Medicine, *Masters of Psychiatry, Psychopharmacology Update: Neuropharmacology for Clinicians*
- 1999 University of North Carolina, Chapel Hill, Department of Psychiatry: Impaired recruitment of the hippocampus during conscious recollection in schizophrenia
- 1999 North Dakota Psychiatric Association, Fargo, North Dakota: Advances in neuropsychiatry (series of 4 lectures)
- 1999 National Institute of Mental Health, Bethesda, MD: Hippocampus and schizophrenia
- 1999 Rouffach, France; Conference *Recent advances in psychiatry*: Pathophysiology of schizophrenia
- 2000 Maryland Psychiatric Research Center; Grand Rounds: Neuroimaging studies of memory function in schizophrenia
- 2000 Santiago de Chile, Chile; Colegio Chileno de Neuropsicofarmacologia IV International Symposium *The fundamentals of psychiatry: history, genetics, neurobiology and clinics*: The neural basis of schizophrenia, Psychiatric Neuroscience: Cells and circuits
- 2000 Whitehead Institute, MIT, Cambridge; *CITP Festschrift for Dr. Craig Saxton*: Imaging the neurobiology for psychiatric disorders
- 2001 Magdeburg, Germany; 2nd Symposium: *Limbic structures and functions*: Structural and functional imaging of limbic structures in schizophrenia

- 2001 Society of Biological Psychiatry 2001 Annual Meeting, New Orleans, Louisiana; Workshop: *How postmortem studies can inform in vivo imaging studies in mood disorders and schizophrenia: Neuroimaging and postmortem studies of the hippocampus in schizophrenia*
- 2001 Berlin, Germany; 7th World Congress of Biological Psychiatry Symposium: *The role of the thalamus in the pathophysiology of schizophrenia: Impaired recruitment of the thalamus during recognition of novel objects in schizophrenia*
- 2001 Royal University Hospital, Department of Medical Imaging, Saskatoon, Saskatchewan, Canada; Childers' Lecture: Neuroimaging studies of memory function in schizophrenia
- 2001 Royal University Hospital, Department of Psychiatry, Saskatoon, Saskatchewan, Canada; Psychiatric Neuroscience: Cells and circuits
- 2001 National Football League Program for Substances of Abuse: Chicago, Illinois; Psychiatric Neuroscience: Cells and circuits
- 2001 Wellesley College, Department of Biology, Wellesley, Massachusetts; The neural basis of psychosis
- 2001 8th International Psychiatric Congress, Buenos Aires, Argentina; *Asociacion Argentina de Psiquiatras: The neural basis of psychosis*
- 2001 8th International Psychiatric Congress, Buenos Aires, Argentina; *Asociacion Argentina de Psiquiatras: Psychiatric Neuroscience*
- 2001 Massachusetts Institute of Technology, Cambridge, Massachusetts; Conference: *Learning and the Brain V: Human Neuroanatomy: Basic Principles*
- 2001 University of Massachusetts, Department of Biology, Boston, Massachusetts: The neural basis of psychosis
- 2001 Tufts University, New England Medical Center, Boston, Massachusetts; Psychiatry Grand Rounds: Neuroimaging studies of memory in schizophrenia
- 2002 Center for Addiction and Mental Health, Toronto, Canada: Neuroimaging studies of memory function in schizophrenia
- 2002 Center for Addiction and Mental Health, Toronto, Canada: Hippocampus in psychiatric disorders
- 2002 College of Psychiatric and Neurologic Pharmacists, Seattle, Washington; 5th Annual Meeting, *Neuroanatomy for the Clinician: Cells and Circuits*
- 2002 Athens, Greece; Brainstorms 2002: *The Future of Neuroimaging: Imaging the Hippocampus in Schizophrenia*
- 2002 Massachusetts Institute of Technology; Conference: *Learning and the Brain V: Human Neuroanatomy: Basic Principles*
- 2002 St. Joseph Medical Center, Department of Psychiatry, Baltimore, Maryland: Grand Rounds: Psychiatric Neuroscience: Cells and circuits
- 2003 Juan March Institute, Madrid, Spain; Center for International Meetings on Biology *Workshops on synaptic dysfunction and schizophrenia: Structure and function of the hippocampus in schizophrenia*
- 2003 Janssen CNS Advisory Summit: Scottsdale, Arizona: The hippocampus in schizophrenia
- 2003 International Congress on Schizophrenia Research: Colorado Springs, Colorado: Selective anterior cingulate dysfunction during cognitive interference in schizophrenia
- 2003 Guarunja, Brazil; 5<sup>th</sup> Symposium: *Search for the causes of schizophrenia: Hippocampal structure and function in schizophrenia*
- 2003 The Banbury Center, Cold Spring Harbor Laboratory; *Integrating Progress in the Genetics and Neuropharmacology of Schizophrenia: Hippocampal structure and function in schizophrenia*
- 2004 Zucker Hillside Hospital, Department of Psychiatry, Glen Oaks, New York; Grand Rounds: The structure and function of hippocampus in schizophrenia
- 2004 Cambridge City Hospital, Department of Psychiatry, Cambridge, Massachusetts; Grand Rounds: The pathogenesis of schizophrenia: developmental or degenerative?
- 2004 St. Louis, Missouri; *Systems Analysis and Hands-on Dissection of the human brain:*



- Imaging of psychiatric disorders
- 2004 Bern, Switzerland; *Sechstes Drei Laender Symposium: European Psychiatry*
- 2004 Berkshire Medical Center, Department of Psychiatry, Pittsfield, Massachusetts;  
Grand Rounds: The neural basis of schizophrenia
- 2004 Academy of Psychosomatic Medicine, Marco Island, Florida; Plenary Lecture: Hippocampal dysfunction and psychosis
- 2004 University of Massachusetts Medical School, Department of Psychiatry, Worcester, Massachusetts: Imaging hippocampal dysfunction in schizophrenia
- 2004 San Juan, Puerto Rico; ACNP Meeting 2004: Imaging hippocampal dysfunction in schizophrenia
- 2005 The Banbury Center, Cold Spring Harbor Laboratory; Schizophrenia workshop; Hippocampus in schizophrenia
- 2005 Yale University, New Haven, Connecticut; *Biological Sciences Training Program Lecture: Hippocampal dysfunction in psychiatric disorders*
- 2005 MGH Psychiatry Academy, Dallas, Texas; Live Roundtable Discussion: Executive Function, Cognition and Psychiatric Disorders
- 2006 Vanderbilt University, Nashville, Tennessee; Brain Awareness Keynote Address: Is there a neuroanatomy of schizophrenia?
- 2006 Zucker Hillside Hospital, Department of Psychiatry, Glen Oaks, New York; Dr. Lewis L. Robbins Memorial Lecture: Hippocampal dysfunction in psychiatric disorder
- 2006 New York University, Department of Psychiatry, New York, New York; Grand Rounds: Neuroimaging of memory function in schizophrenia
- 2007 Warren Foundation, Tulsa Oklahoma; Grand Rounds: Hippocampal dysfunction in psychiatric disorders
- 2007 University of Mississippi, Department of Psychiatry, Jackson, Mississippi; Grand Rounds: Hippocampal dysfunction in psychiatric disorders
- 2008 University of Tennessee, Department of Psychiatry, Memphis, Tennessee; Grand Rounds: Hippocampal dysfunction in psychiatric disorders
- 2008 Vanderbilt University Institute for Imaging Science (VUIIS) Retreat 2008, Chattanooga, Tennessee: Neuroimaging in Psychiatry
- 2008 Universität Freiburg, Psychiatrische Klinik, Freiburg, Germany: Bildgebung in der Psychiatrie (Neuroimaging in Psychiatry)
- 2008 Washington University, St. Louis, Missouri; Memory Disorders Research Society: Hippocampal mechanisms of memory dysfunction in schizophrenia
- 2008 XIV World Congress of Psychiatry, Prague, Czech Republic; DSM-V Symposium: Status report of the DSM-V Psychosis Work Group: DSM-V Workgroup Psychosis.
- 2008 University of Texas Southwestern Medical Center, Dallas, Texas: Hippocampal pathology in psychiatric disorders
- 2009 Vanderbilt University, Nashville, Tennessee; Brain Awareness Keynote Address: Are mental illnesses disorders of the brain?
- 2009 University of Michigan, Department of Psychiatry, Ann Arbor, Michigan: Hippocampal dysfunction in psychosis
- 2009 East Tennessee State University, Department of Psychiatry, Johnson City, Tennessee: DSM Workgroup on Psychotic Disorders Plans for DSM-V.
- 2009 Meharry Medical College, Department of Psychiatry, Nashville, Tennessee: The future of psychiatric Diagnosis
- 2010 Ludwigs-Maximilians-University, Munich, Germany: Hippokampale Mechanismen der Psychose
- 2010 Southern Psychiatric Association Meeting, Asheville, North Carolina: Psychotic Disorders in DSM-5
- 2011 University of Illinois at Urbana-Champaign, Beckman Institute for Advanced Science and Technology, Urbana, Illinois: Relational memory in psychotic disorders

- 2012 44<sup>th</sup> Annual Family Medicine Review Course and the 5<sup>th</sup> Family Medicine/Psychiatry CME Conference, The University of Tennessee, Memphis, Tennessee: DSM 5 - A preview
- 2012 Joint Meeting of ECNS/ISBET/ISNIP/EPIC, Bristol, Tennessee: Neuroimaging of psychotic disorders
- 2013 University of Illinois at Chicago, Department of Psychiatry, Chicago, Illinois: Hippocampal dysfunction in psychotic disorders
- 2013 University of Maryland, Department of Psychiatry, Festschrift for William Carpenter: The future of psychopathology research
- 2013 International Conference on Basic and Clinical Multimodal Imaging, University of Geneva, Geneva, Switzerland: Imaging hippocampal function in psychotic disorders; The future of psychopathology research
- 2014 Johns Hopkins University, Department of Psychiatry, Baltimore, Maryland: What is wrong with the hippocampus in psychosis?
- 2014 Wayne State University, Department of Psychiatry, Detroit, Michigan: Hippocampal dysfunction in psychotic disorders

### **Research Program**

#### Past support

- 1991 - 1993 NARSAD Young Investigator Award: Chemoarchitecture of the schizophrenic brain, PI: Stephan Heckers, Total award \$60,000.
- 1997 - 1998 Harvard University, Dupont-Warren Fellowship, PI: Stephan Heckers, Total award \$40,000.
- 1998 - 2000 Harvard University/MIT, CITP, PI: Stephan Heckers, Total award \$80,000.
- 1998 - 2000 NARSAD Young Investigator Award: Assessment of hippocampal function in schizophrenia, PI: Stephan Heckers, Total award \$60,000.
- 1999 - 2000 Education and Research Foundation of the Society of Nuclear Medicine, PI: Stephan Heckers, Total award: \$8,000.
- 1999 - 2004 NIMH K23: Neuroimaging of hippocampal function in schizophrenia, PI: Stephan Heckers, Total award \$755,366.
- 2000 - 2002 NIMH R21 MH62822: Hippocampal gene expression in schizophrenia, PI: Francine Benes, Co-PI: Stephan Heckers, Total award \$250,000.
- 2001 - 2003 Stanley Foundation Research Award: Hippocampal neuron number and gene expression in bipolar disorder and schizophrenia, PI: Stephan Heckers, Total award \$25,000.
- 2001 - 2005 MIND Institute Grant: Neuroimaging studies of schizophrenia, PI: Stephan Heckers, Total award \$60,000.
- 2004 - 2010 NIMH R01 MH067999: Hippocampus in schizophrenia and bipolar disorder, PI: Stephan Heckers, Total award \$1,247,991.
- 2005 - 2018 NIMH R01 MH070560: Imaging hippocampal function in psychosis, PI: Stephan Heckers, Total award \$1,289,348 (project period #1: 2005-2012) and \$2,045,685 (project period #2: 2013-2018)

### **Publications and Presentations (Web of Science h-Index in January 2014 = 43)**

#### **Original Articles:**

1. **Heckers S**, Heinsen H, Heinsen YC, Beckmann H. Limbic structures and lateral ventricle in schizophrenia. A quantitative postmortem study. Archives of General Psychiatry 1990; 47: 1016-22.

2. **Heckers S**, Heinsen H, Heinsen Y, Beckmann H. Morphometry of the parahippocampal gyrus in schizophrenics and controls. Some anatomical considerations. *Journal of Neural Transmission - General Section* 1990; 80: 151-5.
3. Sofic E, Götz M, Frölich L, Burger R, **Heckers S**, Riederer P, Jellinger K, Beckmann H. Reflection of changes in membrane constituents in various regions of Alzheimer brains to differential scanning thermograms. *Journal of Neural Transmission* 1990; Suppl. 32: 259-67.
4. **Heckers S**, Heinsen H, Heinsen Y, Beckmann H. Cortex, white matter, and basal ganglia in schizophrenia: a volumetric postmortem study. *Biological Psychiatry* 1991; 29: 556-66.
5. Sofic E, Frölich L, Riederer P, Jellinger K, **Heckers S**, Beckmann H, Deinzer E, Pantucek F, Hebenstreit G, Ransmayr G. Biochemical membrane constituents and activities of alkaline and acidic phosphatase and cathepsin in cortical and subcortical brain areas in dementia of Alzheimer type. *Dementia* 1991; 2: 39-44.
6. **Heckers S**, Heinsen H, Geiger B, Beckmann H. Hippocampal neuron number in schizophrenia. A stereological study. *Archives of General Psychiatry* 1991; 48: 1002-8.
7. **Heckers S**, Geula C, Mesulam MM. Cholinergic innervation of the human thalamus: dual origin and differential nuclear distribution. *Journal of Comparative Neurology* 1992; 325: 68-82.
8. **Heckers S**, Geula C, Mesulam MM. Acetylcholinesterase-rich pyramidal neurons in Alzheimer's disease. *Neurobiology of Aging* 1992; 13: 455-60.
9. Konradi C, Kornhuber J, Sofic E, **Heckers S**, Riederer P, Beckmann H. Variations of monoamines and their metabolites in the human brain putamen. *Brain Research* 1992; 579: 285-90.
10. Götz ME, Freyberger A, Hauer E, Burger R, Sofic E, Gsell W, **Heckers S**, Jellinger K, Hebenstreit G, Frölich L, Beckmann H, Riederer P. Susceptibility of brains from patients with Alzheimer's disease to oxygen stimulated lipid peroxidation and differential scanning calorimetry. *Dementia* 1992; 3: 213-222.
11. Emre M, **Heckers S**, Mash DC, Geula C, Mesulam MM. Cholinergic innervation of the amygdaloid complex in the human brain and its alterations in old age and Alzheimer's disease. *Journal of Comparative Neurology* 1993; 336: 117-34.
12. Gsell W, Lange KW, Pfeuffer R, **Heckers S**, Heinsen H, Senitz D, Jellinger K, Ransmayr G, Wichart I, Vock R, Beckmann H, Riederer P. How to run a brain bank. A report from the Austro-German brain bank. *Journal of Neural Transmission* 1993; Suppl. 39: 31-70.
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