

**HELEN S. MAYBERG, MD, FRCPC**  
**Curriculum Vitae**

**OFFICE ADDRESS**

Emory University School of Medicine  
Department of Psychiatry and Behavioral Sciences  
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**CV REVISED: MAY 2007**

**BIRTHDATE:** January 2, 1956

**BIRTHPLACE:** California

**CITIZENSHIP:** USA

**CURRENT TITLES AND AFFILIATIONS**

**ACADEMIC APPOINTMENTS**

***Primary Appointment***

Professor, Psychiatry and Neurology  
Emory University School of Medicine

***Adjunct Clinical Appointment***

Associate Staff, Toronto Western Hospital (Neurology & Psychiatry)  
Professor of Psychiatry and Neurology, University of Toronto

**PREVIOUS ACADEMIC AND PROFESSION APPOINTMENTS**

- 1999-2003 Sandra A. Rotman Chair in Neuropsychiatry  
Professor of Psychiatry and Medicine (Neurology)  
Rotman Research Institute  
University of Toronto  
Toronto, Ontario Canada
- 1999-2003 Director, Sandra Rotman Program in Neuropsychiatry  
Rotman Research Institute, University of Toronto
- 1999-2001 Director, Mental Health Research Program  
Sunnybrook Medical Center, Univ of Toronto
- 1994-1998 Associate Professor, with Tenure (1997)
- 1991-1994 Assistant Professor  
School of Medicine, Departments of Medicine (Neurology)  
Psychiatry, and Radiology  
School of Biomedical Sciences, Graduate Faculty for Radiology  
Senior Scientist, Research Imaging Center  
University of Texas Health Science Center at San Antonio
- 1990-1991 Assistant Professor
- 1987-1989 Instructor  
Departments of Radiology (Nuclear Medicine)  
Neurology, and Psychiatry  
Johns Hopkins University School of Medicine  
Baltimore, Maryland

1985-1987    Research Fellow  
 Johns Hopkins PET Facility  
 Division of Nuclear Medicine  
 Department of Radiology and Radiological Sciences  
 Johns Hopkins University School of Medicine  
 Baltimore, Maryland

### **PREVIOUS CLINICAL APPOINTMENTS**

1999-2003    Baycrest Centre for Geriatric Care (Neurology & Psychiatry)  
 Center for Addiction and Mental Health

1991-1998    Attending Staff, Neurology, Psychiatry and Nuclear Medicine  
 University Hospital and the Audie Murphy Memorial VA Hospital  
 University of Texas Health Science Center at San Antonio

1985-1991    Attending Staff, Neurology  
 1987-1991    Attending Staff, Radiology (Nuclear Medicine)  
 Johns Hopkins University School of Medicine  
 Baltimore, Maryland

### **LICENSURES, BOARDS, AND SPECIALTY BOARDS**

1998            Royal College of Physicians and Surgeons of Canada (Neurology)  
 1987            American Board of Neurology and Psychiatry (Neurology)  
 1982            National Board of Medical Examiners

2004            Georgia 54848  
 1998            Ontario, Canada 73175  
 1992            Texas J1305  
 1985            Maryland D32936  
 1982            New York 151325  
 1982            California G47745

### **EDUCATION**

1972-1976    University of California, Los Angeles  
 Degree: B.A. Psychobiology 1976

1976-1977    University of California, Irvine  
 Graduate studies: Department of Radiological Sciences

1977-1981    University of Southern California, School of Medicine  
 Degree: M.D. 1981

### **POST-GRADUATE TRAINING**

1981-1982    Intern, Internal Medicine  
 Los Angeles County-USC Medical Center  
 Los Angeles, California

1982-1985    Resident, Neurology  
 The Neurological Institute of New York  
 Columbia University, College of Physicians and Surgeons  
 New York, New York

1985-1987    Research Fellow

Johns Hopkins PET Facility (Supervisor Henry Wagner, MD)  
 Department of Radiology, Division of Nuclear Medicine  
 Johns Hopkins University School of Medicine  
 Baltimore, Maryland

## **COMMITTEE MEMBERSHIP**

### **NATIONAL AND INTERNATIONAL**

- 2006- Councilor, American Neurological Association
- 2005- NIH/NINDS: National Advisory Neurological Disorders and Stroke Council, member
- 2004- National Alliance for Research on Schizophrenia and Depression (NARSAD),  
 Scientific Advisory Board
- 2003-2004 National Advisory Mental Health Council Workgroup:  
 Setting Priorities for Basic Sciences of Mental Health
- 2003- Depression and Bipolar Support Alliance (DBSA), Scientific Advisory Board
- 1998-2000 Study Section - NIH Center for Scientific Review  
 Brain Disorders and Clinical Neuroscience (ZRG1 BDCN-6)
- 1996-1998 Study Section - National Institute of Mental Health (NIMH)  
 Clinical Neuroscience and Biological Psychopathology (CNBP)

### **INSTITUTIONAL**

- 2005- Member, Comprehensive Neurosciences Center (CNC) development project.  
 Alzheimers disease, Parkinson's disease, and Child Depression Subcommittees.
- 2004- Member, Dept of Psychiatry Promotions Committee
- 2004- Member, Center for Behavioral Neuroscience (CBN)
- 1999-2001 Member, Scientific Advisory Board, PET Centre, Clarke Institute/CAMH, U of Toronto
- 2000 Search Committee Member, Cameron Wilson Chair in Depression Studies, U Toronto
- 2000 Search Committee Member, Alzheimer's Chair, Rotman Research Institute
- 2000 Search Committee Member, Psychopharmacology Chair, Rotman Research Institute
- 1995-1998 Member, UTHSCSA, President's Committee on Accreditation
- 1994-1998 Member, San Antonio State Hospital Research Advisory Panel
- 1994-1995 Chairman, UTHSCSA, Institutional Review Board
- 1993-1994 Deputy Chairman, UTHSCSA, Institutional Review Board
- 1992-1995 Member, UTHSCSA Institutional Review Board
- 1993 Chair, UTHSCSA IRB committee-Consent form Language on Radiation Exposure Risk

### **CONSULTANTSHIPS**

- 2002-present Graduate Training Program in Translational Investigation (K30 Ext Advisory Board)  
 University of California Los Angeles, PI: Julio Lucinio, MD
- 2000 NIAID/NIH Chronic Fatigue Syndrome "State of the Science," Rockville, MD
- 1999-present Center for Studies of Late Life Depression (External advisory committee) U Pittsburgh,  
 PI: Charles F. Reynolds, MD
- 1997-1999 Geriatric Depression (Consultant), University of Pittsburgh,  
 PI: Charles F. Reynolds, MD
- 1996-1999 Mental Health Clinical Research Center (Consultant), University of Pittsburgh,  
 PI: David J. Kupfer, MD
- 1995-1999 Chronic Fatigue Center (External Advisory Board), University of Washington, Seattle.  
 PI: Deidra Buchwald, MD

### **EDITORIAL BOARDS**

- 2001-present NeuroInformatics

1999-present Depression & Anxiety  
 1998-present NeuroImage  
 1997-present Human Brain Mapping  
 1997-2003 Biological Psychiatry (Executive Committee 2001-2003)  
 2006- Brain Imaging and Behavior  
 2006- Brain Structure and Function

### MANUSCRIPT REVIEWER

Journal of Neuroscience	Nature Neuroscience
Molecular Psychiatry	Neuropsychopharmacology
American Journal of Psychiatry	Archives of General Psychiatry
Neuroimage	Human Brain Mapping
Proceedings National Academy of Science	Brain Research
Annals of Neurology	Brain
Cerebral Blood Flow & Metabolism	Neurology
Life Sciences	Epilepsia
Journal of Neuropsychiatry	Psychophysiology
Journal of Nervous and Mental Disorders	Movement Disorders

### HONORS AND AWARDS

2007 Plenary Lecture, British Neuroscience Association, York UK  
 2007 David Seegal AOA Visiting Professor and Lectureship, Columbia University , NYC  
 2007 Edwin Gildea Lecturer, Washington University, Dept of Psychiatry, St. Louis, MO  
 2006 Dal Grauer Lecturer, University of British Columbia, Vancouver, Canada  
 2006 Ved P. Sachdev MD, Endowed Lecturer, Department of Neurosurgery, Mount Sinai School of Medicine, New York  
 2003 Arnold Pfeffer Prize for the year 2001, Journal of Neuropsychanalysis (w/ Mario Liotti)  
 2003 American College of Neuropsychopharmacology (elected member)  
 2002 Distinguished Investigator Award, NARSAD  
 2002 Harold Lawn Memorial Lecturer, University of Minnesota  
 2000 The McMillan Lecturer, Women College Hospital, Toronto  
 2000 American Neurological Association (elected member)  
 1999 Litchfield Lecturer, Oxford College, England  
 1999 Sandra Rotman Chair in Neuropsychiatry, University of Toronto  
 1999 Fellow, Royal College of Physicians of Canada  
 1997 Bexar County Medical Society, 3rd Annual Women in Medicine, Honoree  
 1996 Gerald Klerman Memorial Award runner-up, NARSAD  
 1995 Independent Investigator Award, NARSAD  
 1994 Charles A. Dana Foundation Clinical Hypotheses Program Award  
 1991 Young Investigator Award, NARSAD  
 1980 NIH Student Research Fellowship: Psychopharmacology  
 1978 USC Psychiatry Summer Research Fellowship Award  
 1973 Alpha Lambda Delta, Scholastic Honor Society, UCLA

### SOCIETY MEMBERSHIPS

2003- American College of Neuropsychopharmacology (elected member)  
 Awards Committee (2003);  
 Program Committee (2005-07)  
 2000- American Neurological Association (elected member)

- 2000- Council Member (2006-2009)  
Biological Psychiatry  
Program (2002-), Membership (2001-) committees  
Journal Editorial Executive Committee (2001-2003)
- 1997- Organization for Human Brain Mapping  
Council Member; Secretary (2000-2003)  
Program Committee, reviewer (1997-present)
- 1995- American Neuropsychiatry Association  
Program Committee (1999-present)  
Research Committee Advisor (2001-present)
- 1991- Society of Cerebral Blood Flow and Metabolism
- 1989- Society of Nuclear Medicine  
Program Committee, reviewer (1995-present)  
President, President-elect, VP; Brain Image Council (1997-2000)  
Ethics Committee (1995-1999)  
Chair, Subcom on Ethical Clinical Practice of Functional Brain Imaging (1994-1996)  
Board of Trustees Brain Imaging Council (1992-1994)
- 1986- Society for Neuroscience  
Program Committee (2006-2008)
- 1985- American Association for the Advancement of Science
- 1982- American Academy of Neurology

## **ORGANIZATION OF NATIONAL OR INTERNATIONAL CONFERENCES**

Chair and Scientific Director, Rotman Research Institute 12th annual Conference, Emotions and the Brain; Toronto, Ontario March 25-26, 2002

Chair and Symposium Organizer, American Neuropsychiatric Association Annual Meeting, Evolution of Functional Imaging in Neuropsychiatry: Integrative Methods & Systems Models, Orlando Feb, 1997.

Chair and Symposium Organizer, American Academy of Neurology Annual Meeting, PET: Clinical and Research Applications in Neurology. Boston, May 2, 1994.

Session Chair. Society of Nuclear Medicine Annual Meeting, PET Applications: Neurology; 98, 99, 00

## **RESEARCH FOCUS**

My research concerns the characterization of neural systems mediating mood and emotions in health and disease using functional neuroimaging. Defining brain mechanisms underlying major depression is the primary goal, with an emphasis on development of algorithms that will discriminate patient subgroups, optimize treatment selection, and provide markers of disease vulnerability. This work is the foundation for our development and testing of a new intervention for treatment resistant patients using deep brain stimulation, a study initiated at the University of Toronto and now continuing at Emory.

## **GRANT SUPPORT**

### **ACTIVE SUPPORT**

Project Title: Imaging Predictors of Treatment Response for Depression  
Principal Investigator: Helen Mayberg MD  
Funding Source: MH 1R01MH073719 NIMH  
Support Period: 09/01/06 – 08/31/2010  
Funding Amount: Annual Direct Costs: \$417,835

Project Title: Predictors of Antidepressant Treatment Response: The Emory CIDAR  
 Principal Investigator: Charles B. Nemeroff, MD, PhD (Mayberg CoDirector, PI Project 1)  
 Funding Source: P50 MH077083-01 NIMH  
 Support Period: 07/1/06 – 03/31/11  
 Funding Amount: Annual Direct Costs: \$1,500,000

Project Title: Deep Brain Stimulation for Bipolar-2 Treatment Resistant Depression  
 Principal Investigator: Helen Mayberg, MD  
 Funding Source: Stanley Medical Research Foundation SMRI#06T-901  
 Support Period: 09/1/06 – 08/31/09  
 Funding Amount: Total Direct Costs: \$661,000

Project Title: Deep Brain Stimulation Clinical Research Program for Treatment Resistant Depression (DCRP-TRD)  
 Principal Investigator: Helen Mayberg, MD  
 Funding Source: Woodruff Fund  
 Support Period: 09/1/06 – 08/31/08  
 Funding Amount: Total Direct Costs: \$270,000

Project Title: Deep Brain Stimulation for Treatment Resistant Depression  
 Principal Investigator: Helen Mayberg, MD  
 Funding Source: Dana Foundation  
 Support Period: 01/1/07 – 12/31/08  
 Funding Amount: Total Direct Costs: \$400,000

Project Title: Investigation of Structural & Functional Neuroanatomy of Late-Life Depression

Project Title: Emory Conte Center for the Neuroscience of Mental Disorders  
 Principal Investigator: Charles B. Nemeroff, MD, PhD (Mayberg PI-Project 8)  
 Funding Source: P50 MH58922 renewal NIH/NIMH  
 Support Period: 09/01/04 – 08/31/09  
 Funding Amount: Annual Direct Costs: \$1,500,000

Project Title: Neural Substrates of Depression Risk after Child Abuse  
 Principal Investigator: Christine Heim, PhD (Mayberg, Mentor)  
 Funding Source: 1K01 MH073698-01  
 Support Period: 7/01/06 – 6/31/11  
 Funding Amount: \$170,059

Project Title: Investigating structural-functional brain abnormalities in late-life depression  
 Principal Investigator: Paul Holtzheimer MD (Mayberg, Mentor)  
 Funding Source: NIH/NIMH 1K23MH077869-01  
 Support Period: 04/01/2007-03/31/2010  
 Funding Amount: \$171,059

Project Title: Functional Neuroanatomy of Recovery From Depression  
 Principal Investigator: Greg Siegel, PhD (U Pittsburgh) (Mayberg, co-Investigator)  
 Funding Source: NIMH Grant 1 RO1 MH074807-01A

Support Period 4/01/06- 3/30/10  
 Funding Amount \$200,000

Principal Investigator: Henry Blumberg, MD  
 Key Personnel: Paul Holzheimer, MD  
 Mentor: Helen Mayberg, MD  
 Funding Source: NIH/NCRR K12 RR017643  
 Support Period Active 9/01/05-8/31/07

**PENDING SUPPORT**

Project Title: Treatment for Bipolar Depression: Acute and Prophylactic Efficacy with Citalopram

Principal Investigator: Nassir Ghaemi, MD (Mayberg, Co-Investigator)  
 Funding Source: 1 R01 MH078060-01  
 Support Period 7/1/07-6/30/12  
 Funding Amount \$306,657 (Yr 1)

Project Title: Predictors of treatment response, relapse, and recurrence in major depression.

Principal Investigator: Ed Craighead, PhD (Mayberg, co-Investigator)  
 Funding Source: NIH/NIMH  
 Support Period 07/01/2007 – 06/30/2012  
 Funding Amount

Project Title: Metabolic Allostasis in Stress Induced Anovulation

Principal Investigator: Sarah Berga, MD (Mayberg, co-Investigator)  
 Funding Source: NIH/NICHD  
 Support Period 12/01/2007-11/30/2012  
 Funding Amount \$321,791 (Yr 1)

**PREVIOUS SUPPORT**

Project Title: Sylvio O. Conte Center for the Neuroscience of Mental Disorders

Principal Investigator: Charles B. Nemeroff, M.D. (Mayberg, project co-investigator)  
 Funding Source: NIMH  
 Support Period: 9/1/99-8/31/04  
 Funding Amount: \$13,079,284 USD (5 yrs total)

Project Title: Limbic-Cortical Metabolic Changes as a Final Common Pathway of Depression Remission: A Comparison of Reboxetine and Cognitive Behavioural Therapy

Principal Investigator: Helen S. Mayberg, M.D. (2 co-investigators)  
 Funding Source: CIHR  
 Support Period: 6/1/01-5/31/06  
 Funding Amount: \$439,249 CAD

- Project Title: Deep Brain Stimulation for Refractory Major Depression  
 Principal Investigator: Helen S. Mayberg, M.D. (2 co-investigators)  
 Funding Source: NARSAD Distinguished Investigator Award  
 Support Period: 5/1/02-4/31/05  
 Funding Amount: \$100,000 USD
- Project Title: Age Related Changes in Cortico-limbic Brain Networks for Episodic Memory  
 Principal Investigator: Cheryl Grady PhD (Mayberg co-investigator)  
 Funding Source: Medical Research Council of Canada  
 Support Period: 3/1/00 - 2/27/05  
 Funding Amount: \$594,000 CAD
- Project Title: Defining the Functional Interaction of Depression and Mood Lability in Mood Processing: A PET Mood Induction Study in Parkinson's Disease.  
 Principal Investigator: Taresa Stefurak (Mayberg, mentor)  
 Funding Source: NARSAD Young Investigator Award  
 Support Period: 5/1/02-4/31/04  
 Funding Amount: \$60,000 USD
- Project Title: Brain Reward System, Depression and Nicotine Dependence  
 Principal Investigator: Usoa E. Busto, Pharm. D. (Mayberg co-investigator)  
 Funding Source: NIH/NIDA  
 Support Period: 9/1/01-8/31/04  
 Funding Amount: \$546,000 CAD
- Project Title: Brain Reward System Dysfunction in Major Depression: An fMRI Study  
 Principal Investigator: Claudio A. Naranjo, M.D. (Mayberg co-investigator)  
 Funding Source: CIHR  
 Support Period: 9/1/01-8/31/04  
 Funding Amount: \$219,000 CAD
- Project Title: Anterior Cingulate Function in Bipolar Disorder: Testing a Network Model of Mood Regulation  
 Principal Investigator: Helen S. Mayberg, M.D. (2 co-investigators)  
 Funding Source: Stanley Foundation Research Award  
 NAMI Research Institute  
 Support Period: 1/1/99 - 12/31/00  
 Funding Amount: \$150,000 USD
- Project Title: Interactive Effects of Mood and Cognitive Challenges on Anterior Cingulate Function in Remitted Depression  
 Principal Investigator: Mario Liotti, M.D., Ph.D. (HS Mayberg, Mentor)  
 Funding Source: NARSAD Young Investigator's Award  
 Support Period: 9/15/98 - 8/14/00  
 Funding Amount: \$60,000 USD
- Project Title: Anterior Cingulate Metabolism in Depression: Testing a Network Model of Mood Regulation  
 Principal Investigator: Helen S. Mayberg, M.D. (2 co-investigators)



Funding Source: NARSAD Independent Investigator's Award  
 Support Period: 9/15/95 - 8/14/98  
 Funding Amount: \$100,000 USD

Project Title: Fluoxetine Effects on Mood, Cognition and Metabolism  
 Principal Investigator: Helen S. Mayberg, M.D. (4 co-investigators)  
 Funding Source: National Institute of Mental Health-1R29 MH49553-01  
 Support Period: 10/1/92 - 9/31/98  
 Funding Amount: \$350,000 USD

Project Title: Testing a Model of Mood: Affective Challenges in Active and Remitted Depression  
 Principal Investigator: Helen S. Mayberg, M.D. (2 co-investigators)  
 Funding Source: Charles Dana Foundation, Clinical Hypotheses in Neuroscience Program  
 Support Period: 1/1/95 - 6/30/98  
 Funding Amount: \$100,000 USD

Project Title: The Effects of Prozac Treatment on Mood, Cognition, and Brain Glucose Metabolism in Patients with Primary Unipolar Depression  
 Principal Investigator: Helen S. Mayberg, M.D. (4 co-investigators)  
 Funding Source: Eli Lilly and Company (physician initiated application)  
 Support Period: 9/1/93 - 12/31/96  
 Funding Amount: \$50,000 USD

Project Title: Brain Glucose Metabolism in Idiopathic Depression and Depression Associated with Basal Ganglia Disorders  
 Principal Investigator: Helen S. Mayberg, M.D. (4 co-investigators)  
 Funding Source: National Alliance Research on Schizophrenia & Depression (NARSAD) Young Investigator's Award  
 Support Period: 7/1/91 - 6/30/94  
 Funding Amount: \$60,000 USD

Project Title: Program for Study of Neuroreceptor Binding in Man  
 Principal Investigator: Henry Wagner, M.D. (Johns Hopkins)  
 Co-Investigator: Helen S. Mayberg, M.D.  
 Funding Source: National Institute of Health  
 Support Period: 12/1/89 - 11/30/94  
 Funding Amount: \$898,983 USD

Project Title: Opiate Receptor Quantification in Alzheimer's Disease  
 Principal Investigator: J. James Frost, M.D. (Johns Hopkins)  
 Co-Investigator: Helen S. Mayberg, M.D.  
 Funding Source: National Institute on Aging  
 Support Period: 7/1/90 - 6/30/93  
 Funding Amount: \$235,264 USD

## **FORMAL TEACHING**

### **MEDICAL/GRADUATE STUDENTS**

1991-1998 Neurology Clinical Clerkship (3 months/year)(UTHSCSA)  
 1992-1998 Lecture, Functional Brain Imaging; Year 1 Neuroscience Course (UTHSCSA)

- 1996-1998 Lecture, Epilepsy; Year 2 Neuroscience Course (UTHSCSA)  
 1996-1998 Lecture, Functional Brain Imaging; PhD students, Pharmacology (UTHSCSA)  
 1996-1998 Lecture, Clinical PET. MA, PhD students, Radiological Sciences (UTHSCSA)  
 2004- Research Electives, Neurosciences Graduate Program (Emory)  
 2005- Lecture, Neural Circuits in Depression; Year 2 Neuroscience (Emory)

**RESIDENTS**

- 1999-2000 Lecture, Psychiatric Applications of PET imaging. Psychiatry Residents (U Toronto)  
 2001-2003 Lecture, Functional Neurosurgery Course, Neurosurgery Residents, (U Toronto)  
 2004- Seminar, Functional Imaging and Depression, Yr 2 Psychiatry residents (Emory)  
 2005- Course, Neurology for Psychiatry Residents (Emory)

**INSTITUTIONAL/LOCAL GRAND ROUNDS**

- |                         |                                      |
|-------------------------|--------------------------------------|
| Emory Psychiatry        | 2006                                 |
| Emory Neurology         | 2004                                 |
| UT/Sunnybrook Hosp      | 2002 (Clinical Neuroscience Rounds)  |
| UT/Mt Sinai Hospital    | 2001 (Pain Clinic Rounds)            |
| Rotman Research Inst    | 2000 (Research Rounds)               |
| Toronto Psychiatric Soc | 2000                                 |
| U Toronto Neurology     | 2000, 2001                           |
| U Toronto Psychiatry    | 1999, 2000, 2001/b, 2002a/b, 2003a/b |
| UTHSCSA Radiology       | 1998 (Teleconference to Mexico)      |
| UTHSCSA Neurology       | 1991, 1995, 1998                     |
| UTHSCSA Psychiatry      | 1996, 1998                           |

**TRAINING PROGRAMS**

- 1987-1991 Functional Brain Imaging Training, Research and Clinical activities  
 Nuclear Medicine Residents and Fellows  
 Johns Hopkins Dept of Radiology, Division of Nuclear Medicine
- 1991-1998 PET Imaging, Research and Clinical activities  
 Nuclear Med Residents; MD and PhD post-Docs, Radiological Sciences PhD students  
 Research Imaging Center  
 The University of Texas Health Science Center at San Antonio
- 1999-2003 Sandra Rotman Program in Neuropsychiatry (Post-doc research fellowship program)  
 Functional Neuroimaging focus (PET, fMRI)

**RESIDENCY PROGRAMS**

- 1987-1991 Clinical Attending, Johns Hopkins Neurology Consult Service (2 months/year)  
 1991-1998 Clinical Attending, UTHSCSA Neurology in-patient and Consult Service (3 mo/yr)

**SUPERVISORY TEACHINGS****PHD STUDENTS (OUTSIDE PROJECT SUPERVISOR/THESIS COMMITTEES)**

- |   |   |
|---|---|
| Robin Westmacott (Psychology) U Toronto   | Post-Doc, 1 <sup>st</sup> year, Neuropsychology |
| Michelle Keightley (Psychology), U Toronto  | PhD student, 4 <sup>th</sup> year.              |
| Eva Svoda (Psychology), U Toronto   | PhD student, 3 <sup>rd</sup> year.              |
| Laura Cardenas (Pharmacology), U Toronto  | PhD student, 4 <sup>th</sup> year               |
| Elyse Katz (Neuroscience), Emory University   | PhD Student, 2 <sup>nd</sup> year               |
| Cameron Craddock (Electrical/Computer Engineering), Georgia Institute of Technology | PhD Student                                     |

**MASTER'S STUDENTS (PRIMARY SUPERVISOR)**

Kim Goldapple (IMS) U Toronto  
 Ali Mazaheri (IMS) U Toronto

MA student 3<sup>rd</sup> year  
 MA student 3<sup>rd</sup> year

**POST-DOCTORAL FELLOWS**

Steven Brannan MD (Psychiatry) UTHSCSA→  
 Mario Liotti MD, PhD (Neurology), UTHSCSA  
 Stephanie Kruger MD (Psychiatry), Toronto→  
 Philippe Fossati MD (Psychiatry), Toronto→  
 Taresa Stefurak MD (Neurology), Toronto→  
 Raj Ramasubbu (Psychiatry), Sabbatical, Emory

Project Manager, Cyberonics Co, Houston Tx  
 Associate Professor, University of Nottingham, UK  
 Assistant Professor, Psychiatry, Dresden, Germany  
 Assistant Prof, Psychiatry, Salpêtrier Hosp, France  
 Clinical Scientist, Rotman Research Inst, Toronto  
 Associate Professor, Psychiatry, U Calgary

**K-AWARD MENTORING (PRIMARY MENTOR)**

Christine Heim PhD (Psychiatry) Emory  
 Paul Holzhheimer, MD (Psychiatry) Emory

**K-AWARD MENTORING (OUTSIDE MENTOR)**

Ziad Nahas, MD (Psychiatry) MUSC  
 Lam Phan, MD (Psychiatry) U Florida  
 Charles Conway, MD (Psychiatry) U Saint Louis (MO)  
 Alex Dranowsky MD, PhD (psychiatry) Columbia U (NY)

**VISITING PROFESSORSHIPS AND INVITED LECTURES**

- 2007 Plenary Lecturer, British Neuroscience Association, North Yorkshire, UK
- 2007 Neurosurgery Grand Rounds, Johns Hopkins, Baltimore, MD
- 2007 Psychiatry Grand Rounds, Johns Hopkins, Baltimore, MD
- 2007 David Seegal AOAS Visiting Professorship Lecture, Columbia University, NYC
- 2007 Visiting Neuroscience Lecturer, Dept of Neuroscience, Stanford University, CA
- 2007 Psychiatry Grand Rounds, Stanford University, CA
- 2006 Plenary Speaker, Psychiatry Update, Copenhagen, Denmark
- 2006 Psychiatry Grand Rounds, MUSC, Charlotte, SC
- 2006 Psychiatry Grand Rounds, Vanderbilt University, Nashville, TN
- 2006 Dal Grauer Lecturer, University of British Columbia, Vancouver, Canada
- 2006 Psychiatry Grand Rounds, Columbia University, NYC
- 2006 Psychiatry Grand Rounds, University of Chicago, Illinois
- 2006 Psychiatry Grand Rounds, Dartmouth University, New Hampshire
- 2006 Keynote Speaker, International Neuropsychiatry Meeting, Sydney, Australia
- 2006 Ved P. Sachdev MD, Endowed Lecturer, Mount Sinai, Dept of Neurosurgery, New York
- 2006 Presidential Lecture Speaker, Society for Biological Psychiatry Annual Meeting, Toronto
- 2005 Lecturer/Panelist, Mind and Life Institute XIII meeting with the Dalai Lama, Washington DC
- 2005 Invited Discussant, The Dalai Lama at Stanford: Craving, Suffering and Choice, Stanford CA

- 2005 Psychiatry Grand Rounds, University of Pennsylvania
- 2005 Lehmann lecturer, McGill University, Dept of Psychiatry, Montreal, Canada
- 2005 Keynote, Petersberg Symposium on Depression, Bonn, Germany
- 2005 Psychiatry Grand Rounds, University of North Carolina, Chapel Hill
- 2005 European College Neuropsychopharmacology, Young Scientists Workshop, Nice, France
- 2005 Keynote, Swiss Societies for Neuroscience and Biological Psychiatry Meeting, Zurich
- 2005 Psychiatry Grand Rounds, University of Texas, Galveston
- 2005 NIMH Alliance for Research Progress, Winter Science Meeting, Bethesda, MD
- 2005 Psychiatry Grand Rounds, University of Alabama, Birmingham
- 2004 Psychiatry Grand Rounds, Beth Israel Hospital, Albert Einstein School of Medicine, NY
- 2004 Psychiatry Grand Rounds, Centre for Addiction and Mental Health, University of Toronto
- 2004 Institute of the Humanities, University of Montana, Missoula
- 2004 Invited Speaker, Workshop on Brain Mechanisms in the Placebo Response NIMH, MBBH
- 2004 Distinguished Speaker, Medical Student Research Day, UTHSCSA, San Antonio
- 2004 Visiting Professor, Behavioral & Cognitive Neurosciences, U Groningen, Netherlands.
- 2004 Future Leaders in Psychiatry. Emory University, Palm Beach, Florida.
- 2004 10<sup>th</sup> Annual Health and Emotions Conference. University of Wisconsin, Madison.
- 2004 Psychiatry Grand Rounds, Dept of Psychiatry, University of Washington, Seattle.
- 2004 Neuroscience Seminar, Dept of Psychiatry, University of Illinois at Chicago.
- 2003 Visiting Professor, Littman Psychiatric Research Day, Key Note Speaker, In Search of Depression Circuits: A functional Neuroimaging Odessey. U of Calgary
- 2003 Grass Neuroscience Lecturer, The Neurology of Depression. Univ Mississippi, Jackson MI
- 2003 Norway Mental Health Research Conference, Foreign Guest Lecturer. 4 Lectures.
- 2002 Psychiatry Grand Rounds, Dept of Psychiatry, Modulating limbic-cortical circuits in depression: Targets of Antidepressant Treatments. University of Michigan.
- 2002 Center for Behavioral Neurobiology, Seminar Series, In Search of Depression Circuits. Emory University, Atlanta GA
- 2002 Neuroscience Colloquium Speaker. Dept of Neuroscience, Depression Circuits: The Functional Neuroimaging Evidence. University of Rochester, NY
- 2002 Neurobiology Seminar Speaker. Dept of Neurobiology, In support of a Depression Circuit. Yale Medical School, CN.
- 2002 Psychiatric Neuroscience: A Primer for Physicians, Massachusetts General Hospital CME Course, 'Major Depressive Disorders' Lecture, Boston MA
- 2002 Presidential Symposium Plenary Speaker, Society for Biology Psychiatry, Philadelphia PA.
- 2002 Harold Lawn Memorial Lecture. Dept Psychiatry, In Search of Depression Circuits. University Minnesota, Minneapolis, MN
- 2002 Massachusetts General Hospital, Harvard Medical School, Psychiatry Grand Rounds, Boston

- 2002 Psychiatric Institute of NY, Columbia University College of Physicians and Surgeons, Psychiatry Grand Rounds, "Is There a Depression Circuit?", New York, NY
- 2002 Neurological Institute of NY, Columbia University College of Physicians and Surgeons, Neurology Grand Rounds, "The Neurology of Depression", New York, NY
- 2002 Mass Mental Health Center, Harvard Medicine School, Psychiatry Grand Rounds, The Neurology of Depression. Boston
- 2001 McMaster University, Department Psychiatry Research Day, Keynote Speaker, "The Neurology of Depression: Role of Limbic-Cortical Interactions. Hamilton, Ontario.
- 2001 University of California San Francisco, Department of Psychiatry Grand Rounds, "The Neurology of Depression". San Francisco, California.
- 2001 Dalhousie University, Department of Psychiatry, 11<sup>th</sup> Annual Research Day. Keynote Speaker. Pathways in Depression: Lessons from Healthy & Depressed Populations. Halifax
- 1999 Emory University School of Medicine, Department of Psychiatry Grand Rounds, "The Neurology of Depression", Atlanta, Georgia.
- 2001 The Harvey Stancer Lecture, "The Neuropsychopathology of Depression," University of Toronto, Department of Psychiatry Research Day, Keynote speaker. Toronto, Ontario.
- 2001 International Congress on Schizophrenia Research, Plenary lecture, "The Neurology of Depression: Perspectives from Functional Neuroimaging. Whistler, B.C.
- 2000 White House Office of Science Technology: Crime Technology Initiative Forum "Neuroscience Meets the Criminal Justice System: Present Status and Future Scientific and Ethical Implications," Washington, DC.
- 2000 10<sup>th</sup> Annual Rotman Research Institute Frontal Lobes Conference. "Mapping Mood: Anevolving emphasis on limbic-cortical interactions". Toronto, Canada
- 2000 Medical University of South Carolina, Department of Psychiatry, Grand Rounds," The Neurology of Depression," Charleston, South Carolina.
- 1999 Litchfield Lecturer, Oxford College. "The Functional Neuroanatomy of Mood: Clues from Imaging Studies of Depression and Normal Sadness," Oxford, England.
- 1999 New England Medical Center/Tufts University School of Medicine. "The Neuroimaging of Depression," Boston, MA
- 1999 The Boston Society of Neurology and Psychiatry, "Mania and Depression in Neurological Diseases". "PET in Neurological Disorders," Boston, MA.
- 1998 The Baylor College of Medicine, Department of Psychiatry and Behavioral Sciences Grand Rounds, "The Neurology of Depression," Houston, TX.
- 1998 The John L. McClellan Veterans' Hospital, Department of Psychiatry Grand Rounds, "Traumatic Brain Injury and Forensic Responsibility," Little Rock, AR.
- 1998 The International Neuropsychological Society, The Neurology of Depression, Honolulu. HI

#### **INVITATIONS TO NATIONAL OR INTERNATIONAL CONFERENCES**

- 2005 Invited Speaker, Royal College of Psychiatry, Edinburgh, UK
- 2004 American Stroke Association, 29th International Stroke Conference. San Diego

- 2003 European Neuropsychopharmacology (ENCP), Keynote speakers, Brugge, Belgium.
- 2003 Canadian College Neuropsychopharmacology (CCNP), Keynote speaker. Towards Development of Brain-based Algorithms for Diagnosis & Optimised Treatment Montreal
- 2003 Anxiety Disorders Association of America (ADA). Neurocircuits in Mood and Anxiety Research Symposium. Defining Dysfunctional Depression Circuits. Toronto, Canada
- 2003 16<sup>th</sup> Annual Conference of the General Practice of Psychotherapy Association, Keynote speaker, A Functional imaging Perspective on the Treatment of Depression Toronto, Canada
- 2003 Pasteur Institute, Conference on Depression, In Search of Depression Circuits:Paris, France
- 2002 1<sup>st</sup> Arvid Carlsson Symposium. Motivation, Mind & Movement in Neuropsychiatric Disease. Defining Dysfunctional Limbic-Cortical Circuits in Depression. Gottenburg, Sweden.
- 2002 NATO Psychiatric Imaging Advanced Research Workshop. PET studies of Dep. Italy.
- 2002 Organization for Human Brain Mapping, Education Program, fMRI Course, Experimental Design: "Mapping Emotions." Sendai, Japan
- 2002 Course Director, 12th Rotman Res Inst Conference: Emotions and the Brain, Toronto.
- 2001 Matter to Mind Symposium on Bipolar Disorder. Depression Circuits. IOP, London
- 2001 American Association Neurosurgeons, Annual meeting. Symposium on "The Neurology of Depression: Functional Neurosurgery of Psychiatric Disorders. Toronto, Ontario
- 2000 British Association for Psychopharmacology, The Neuro-psychopathology of Mood Regulation & Depression: Converging Evidence in Unipolar and Bipolar pts, Cambridge UK.
- 1998 Oxford Autumn School in Cognitive Neuroscience, Oxford University, "Mapping Mood: Neuroimaging Studies of Depression," Oxford, England.
- 1999 International Symposium: Depression in Neurology. "The Neurology of Depression: A Functional Imaging Perspective".Sao Paulo, Brazil.
- 1998 British Neuroscience Association/Glaxo Welcome Symposium on Neuroimaging, "State and Trait Markers of Depression Identified using PET," Oxford, England.
- 1998 The 50th Annual Meeting, The American Academy of Neurology. Dinner Seminar, "Frontal Subcortical Circuits and Human Behavior: From Theory to Practice," .Minneapolis, MN.
- 1998 The 7th International Conference: Peace Through Mind/Brain Science, "The Neurology of Depression: A Functional Imaging Perspective, . Hamamatsu City, Japan. "

#### **DOCUMENTARY/MEDIA COVERAGE**

- 1997 BBC Documentary, 'The Last Defense.' Functional Neuroimaging as Forensic Evidence.
- 2000 CBC Radio. 'Depths of Despair: A Primer on Depression'
- 2002 Discovery TV. The Nature of Things. The Frontal Lobes
- 2003 CTV. Depression: The Hidden Dragon.
- 2003 TVO. Placebo. Ontario Public Television
- 2004 Walrus Magazine, Canada. Biographical Profile
- 2005 NPR. DBS for Depression
- 2006 60 Minutes. DBS for Depression
- 2006 W5 Canada. DBS for Depression
- 2006 Scientific American Mind. Biographical Profile
- 2006 NY Times Sunday Magazine. DBS for Depression

2007 NY Times Sunday Magazine NeuroLaw

## PUBLICATIONS

### RESEARCH ARTICLES

1. Cohen B, Herschel M, Miller E, **Mayberg HS**, Baldessarini R: Radioreceptor assay of haloperidol tissue levels in the rat. *Neuropharmacology* 19:663-668, 1980
2. Hui A, Ehresman G, Quismorio F, Boylen T, **Mayberg HS**, Koss M: Wegeners granulomatosis: EM and immunofluorescent studies. *Chest* 80:753-756, 1981
3. Wernicke JF, Sweet PM, van den Noort S, **Mayberg HS**, Armentrout SA: A humoral lymphocyte transformation inhibition factor in multiple sclerosis. *J of Clin & Lab Immun* 12(4):187-195, 1983
4. Kumar AJ, Rosenbaum AE, Naidu S, Wener L, Citrin CM, Lindenberg R, Kim WS, Zinreich SJ, Molliver ME, **Mayberg HS**, Moser HW: Adrenoleukodystrophy: correlating MR Imaging with CT. *Radiology* 165:497-504, 1987
5. **Mayberg HS**, Robinson RG, Wong DF, Parikh R, Bolduc P, Price T, Dannals RF, Links JM, Wilson AA, Ravert HT, Wagner HN Jr: PET imaging of cortical 5-HT<sub>2</sub>-serotonin receptors following stroke: Lateralized changes and relationship to depression. *Am J Psychiatry* 145(8):937-943, 1988
6. Frost JJ, **Mayberg HS**, Fisher RS, Douglass KH, Dannals RF, Links JM, Wilson AA, Ravert HT, Rosenbaum AE, Snyder SH, Wagner HN Jr: Mu-opiate receptors measured by positron emission tomography are increased in temporal lobe epilepsy. *Ann Neurol* 23:231-237, 1988
7. Starkstein SE, Preziosi TJ, Berthier ML, Bolduc PL, **Mayberg HS**, Robinson RG: Depression and cognitive impairments in Parkinson's Disease. *Brain* 112:1141-1153, 1989
8. Frost JJ, Douglass KH, **Mayberg HS**, Dannals RF, Links JM, Wilson AA, Ravert HT, Crozier WC, Wagner HN: Multi-compartmental analysis of C-11-Carfentanil binding to opiate receptors in man measured by positron emission tomography. *J Cereb Blood Flow Metab* 9:398-409, 1989
9. **Mayberg HS**, Starkstein SE, Sadzot B, Preziosi TJ, Andrezejewski PL, Dannals RF, Robinson RG: Selective hypometabolism in the inferior frontal lobe in depressed patients with Parkinson's Disease. *Ann Neurol* 28:57-64, 1990
10. **Mayberg HS**, Moran TH, Robinson RG: Remote lateralized changes in cortical 3H-Spiperone binding following focal frontal cortex lesions in the rat. *Brain Research* 514:127-131, 1990
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12. Frost JJ, **Mayberg HS**, Sadzot B, Dannals RF, Lever JR, Links JM, Ravert HT, Wilson AA, Wagner Jr. JH: Comparison of C11-diprenorphine and C11-carfentanil binding to opiate receptors in man by positron emission tomography. *J Cereb Blood Flow Metab* 10:484-492, 1990
13. Sadzot B, **Mayberg HS**, Frost JJ: Detection and quantification of opiate receptors in man by positron emission tomography. Potential applications to the study of pain. *Neurophysiol Clin* 20:323-334, 1990
14. Starkstein SE, Bolduc PL, **Mayberg HS**, Preziosi TJ, Robinson RG: Cognitive impairments and depression in Parkinson's Disease: follow-up study. *J Neurol Neurosurg Psych* 53:597-602, 1990.
15. Cidis-Meltzer CC, Leal JP, **Mayberg HS**, Wagner HN Jr, Frost JJ: Correction of PET data for

partial volume effects in human cerebral cortex by MRI. *JCAT* 14:561-70, 1990

16. Cidis-Meltzer CC, Bryan R, Holcomb H, Kimball A, **Mayberg HS**, Sadzot B, Leal JP, Wagner HN, Frost JJ: Anatomical localization for PET using MR Imaging. *JCAT* 14:418-26, 1990
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18. **Mayberg HS**, Parikh RM, Morris PLP, Robinson RG: Spontaneous remission of post-stroke depression and temporal changes in cortical S2-Serotonin receptors. *J Neuropsych and Clin Neurosci* 3:80-83, 1991
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20. Sadzot B, **Mayberg HS**, Frost JJ: Imaging opiate receptors in the human brain with positron emission tomography. *Acta Psychiatrica Belgica*, 1991
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24. **Mayberg HS**: Functional brain scans as evidence in criminal court: An argument for caution. *J Nucl Med* 33(6):18N-25N, 1992
25. **Mayberg HS**, Starkstein SE, Peyser CP, Brandt J, Dannals RF, Folstein S: Paralimbic frontal lobe hypometabolism in depression associated with Huntington's Disease. *Neurology*, 42:1791-7, 1992
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29. Müeller-Gäertner HW, **Mayberg HS**, Fisher RS, Lesser RP, Wilson AA, Ravert HT, Dannals RF, Wagner HN, Uematsu S, Frost JJ: Decreased hippocampal muscarinic cholinergic receptor binding measured by <sup>123</sup>I-Iododexetimide and SPECT in epilepsy. *Ann Neurol*, 34:235-38, 1993



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55. **Mayberg HS**, Lozano AM: Editorial: Penfield revisited? Understanding and modifying behavior by deep brain stimulation for PD. *Neurology* 2002; 59:1298-99
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71. **Mayberg HS**. Defining Dysfunctional Limbic-Cortical Circuits in Depression: Strategies using Functional Neuroimaging, *TENS* 2004, in press.
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  86. Ramasubbu R, Masalovich M, Peltier S, Holtzheimer P, Heim C, **Mayberg H**. Neural Representation of Maternal Face Processing: An fMRI Study, *Canadian J Psychiatry*, in press 2007
  87. McNeely HE, **Mayberg HS**, Lozano AM, Kennedy SH. Longitudinal Effects of Cg25 Deep Brain Stimulation on Neurocognitive Function in Persons with Major Depressive Disorder, *Biol Psychiatry*, revision in review, 2007
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*Industrial Health*, 10(4/5): 661-666, 1994

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#### BOOK CHAPTERS

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## ABSTRACTS

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