12/09/13

Curriculum Vitae

David E. Ross, M.D.

Narrative summary

Dr. Ross is the director of the Virginia Institute of Neuropsychiatry and clinical assistant professor at Virginia Commonwealth University (VCU). He completed medical school and residency in psychiatry at VCU. After that, he finished a fellowship in neuropsychiatry at the Maryland Psychiatric Research Center, University of Maryland, where he stayed on the faculty for several years. In 1997, he returned to VCU. In 2001, he founded the Virginia Institute of Neuropsychiatry, an organization dedicated to the understanding and treatment of patients with neuropsychiatric and general psychiatric disorders. He is a nationally recognized clinician, educator and author. He specializes in treatment and research of patients with neuropsychiatric disorders, especially traumatic brain injury, posttraumatic stress disorder and tardive dyskinesia.

Contact information

Mailing address: 364 Browns Hill Court Midlothian, VA 23114

Telephone: (804) 594-7046 (office), (866) 586-8977 (fax)

<u>E-Mail</u>: DRoss@VaNeuropsychiatry.org <u>Website</u>: www.VaNeuropsychiatry.org

Current positions

September 2001-present:

Director Virginia Institute of Neuropsychiatry Midlothian, VA

Clinical Assistant Professor of Psychiatry Virginia Commonwealth University - Medical College of Virginia Richmond, VA

2012: Consultant to the Virginia Board of Medicine, Richmond, VA, performing case reviews pertaining to physicians licensed in Virginia.

2012: Member of Advisory Board of VCU Traumatic Brain Injury Model Systems Program

Past positions

2011

Consultant to American Health and Wellness Institute, Verona, VA; and the Georgia state psychiatric hospital system

2002

Consultant to Lega F. D'Oro Research Center, Osimo, Italy. LDRC treated children and adults with multiple disabilities, including deafness, blindness, physical disabilities, cognitive disabilities and behavioral disabilities.

2001-2002

Consultant to Hiram Davis Medical Center, Petersburg, VA. HDMC treated patients who were dually diagnosed with mental retardation and somatic medical disorder requiring skilled, inpatient nursing care.

November, 1997 to September, 2001
Assistant Professor of Psychiatry
Medical College of Virginia-Virginia Commonwealth University
Richmond, VA

1993:

Part-time psychiatric consultant to the Emergency Department and Inpatient Medical Units
Howard County General Hospital
Columbia, Maryland

July, 1992 to October, 1997:
Assistant Professor of Psychiatry
Maryland Psychiatric Research Center
University of Maryland at Baltimore

Education

Fellowship in neuropsychiatry (July 1990 to June 1992)
Maryland Psychiatric Research Center
Department of Psychiatry
University of Maryland at Baltimore

Internship and residency in psychiatry (July 1986 to June 1990)

Medical College of Virginia Virginia Commonwealth University Richmond, Virginia Medical school (1982-86): M.D.

Medical College of Virginia

Virginia Commonwealth University
Richmond, Virginia

Undergraduate (1978-82): B.S. magna cum laude

Hampden-Sydney College Hampden-Sydney, Virginia

Certification

Current: Medical licensure in Virginia

<u>1994 - present</u>: Diplomate in psychiatry, American Board of Psychiatry and Neurology

<u>11/30/10 – 11/29/20</u>: Certified in the subspecialty of Behavioral Neurology & Neuropsychiatry by the United Council for Neurologic Subspecialties

Major career interests

Traumatic brain injury, movement disorders caused by psychiatric medications (including parkinsonism and tardive dyskinesia), posttraumatic stress disorder, sleep disorders, pain disorders, schizophrenia, bipolar disorder, depression, and anxiety.

Major career activities

<u>Clinical</u>: treated and consulted on hundreds of patients in both public and private sectors.

<u>Teaching</u>: Have given hundreds of oral and poster presentations on clinical and research topics to audiences including patients, family members, students, clinicians and researchers. Venues have included clinics, hospitals, international conferences and university Grand Rounds, in the United States and Europe. Supervised the research and clinical work of research fellows, graduate students, psychiatry residents and medical students.

Research: published 40 manuscripts, most of which were peer-reviewed; awarded total of \$425,000 for grants as principal investigator, and involved as sub-investigator on grants totalling several million dollars; reviewed manuscripts for multiple journals; reviewed grants for NIH.

<u>Expert consultation</u>: extensive experience in forensic, disability and other arenas.

Professional memberships

American Neuropsychiatric Association International Brain Injury Association

North American Brain Injury Society Brain Injury Association of Virginia American Psychiatric Association National Alliance for the Mentally III Psychiatric Society of Virginia Richmond Association of Phi Beta Kappa

Honors, awards

1994	Young Scientist Award, given by the Biennial Winter Workshop on Schizophrenia.
1993	McKee Jarboe Award, given to a young faculty member who has contributed to the understanding or treatment of chronic mental illness.
1992	Stanley Award, given for showing promise as young psychiatric researcher.
1989	Young Investigator Award, given by the International Congress on Schizophrenia Research.
1983	Summer fellowship in psychiatry.
1982	Phi Beta Kappa.
1982	Graduated Magna cum laude.
1981	Chi Beta Phi honorary scientific fraternity (president).
1978	Most Outstanding Freshman Chemistry Student.
1978-82	Allan Scholarship (full scholarship given to the best students based on academic and overall achievement).

Editorial tasks

Reviewed manuscripts for the following journals:

- American Journal of Psychiatry
- Biological Psychiatry
- Brain Injury
- Journal of Neuropsychiatry and Clinical Neurosciences
- Neurotoxicology and Teratology
- Psychiatry Research
- Psychophysiology
- Schizophrenia Bulletin

Grant support

Neuroleptics in Schizophrenia Outpatient Smokers: The Effects of Olanzapine

- and Risperidone on Smoking Behavior, Co-PI's A.K. Pandurangi, D.E. Ross, Lilly 4/15/99-10/14/00, \$248,000.
- Eye Tracking Disorder and Genetics in Schizophrenia, PI D.E. Ross, NARSAD 7/1/98-6/30/99, \$30,000.
- Eye Tracking Disorder in Relatives of Patients with Schizophrenia, PI D.E. Ross, A.D. Williams Program, Medical College of Virginia, Virginia Commonwealth University, 7/1/98-6/30/99, \$10,000.
- Functional Neuroanatomy of Eye Tracking Disorder in Normal Controls, PI- D.E. Ross, NIH (Seed money grant from a CRC grant, PI-W.T. Carpenter) 8/1/97-7/31/98 \$5,800.
- Optokinetic eye movements in schizophrenia, PI D.E. Ross, NIH 3/1/97-2/28/98 \$24.968.
- Functional Neuroanatomy of Eye Tracking Disorder in Schizophrenia, Pl- D.E. Ross, University of Maryland at Baltimore, 7/1/96-6/30/97 \$14,928.
- Prevalence of Schizophrenia Spectrum Disorders in Relatives of Schizophrenic Patients with and without the Deficit Syndrome, PI D.E. Ross, NIH (Seed money grant from a CRC grant, PI-W.T. Carpenter) 6/1/96-5/31/97 \$4,992.
- PET Study of Eye Tracking Disorder in Schizophrenia, PI D.E. Ross, NIH (Seed money grant from a CRC grant, PI-W.T. Carpenter) 7/1/95-6/30/96 \$9,942.
- Eye Tracking Disorder and the Deficit Syndrome of Schizophrenia, PI D.E. Ross, NIH (Seed money grant from a CRC grant, PI- W.T. Carpenter) 5/1/94-4/30/95 \$4,988.
- Classification and Course of the Schizophrenias, PI W.T. Carpenter, NIH 8/1/93-7/31/98 \$5,234,144 Young Investigator salary support.
- Familial Schizophrenia Spectrum Personality Disorders, PI G.K. Thaker, NIH 5/1/93-4/30/97 \$383,347, 10% Salary support.
- Specification of Abnormal Eye Movements in Schizophrenic Patients, PI D.E. Ross, Scottish Rite, 8/1/92-7/31/94 \$69,000, 30% Salary support.

Grant review work

1997-98: Ad hoc reviewer for National Institute of Mental Health, Clinical Psychopathology Committee.

Pharmaceutical company relationships

- 2000, 2006 2008: <u>Company</u>: AstraZeneca. <u>Product</u>: quetiapine (Seroquel®). <u>Relationship</u>: Speaker's bureau.
- 2004 2007: <u>Company</u>: Forest Pharmaceuticals. <u>Products</u>: memantine (Namenda®) and escitalopram (Lexapro®). <u>Relationships</u>: Speaker's bureau; consultant.
- 2005: Company: Cephalon. Products: modafinil (Provigil®). Relationships:

- Speaker's bureau.
- 2000 2004: <u>Company</u>: Eli Lilly and Company. <u>Product</u>: olanzapine (Zyprexa®). <u>Relationships</u>: Speaker's bureau; consultant; educational grants.
- **Publications**: 52 total; all were reviewed by an independent editor; all but five were peer-reviewed.
 - Statistics per Google Scholar (http://scholar.google.com/citations?user=Q6UYdIYAAAAJ)
 - o Citations: 1446
 - o h index: 19
 - Per Wikipedia, the h index is a measure of academic productivity, combining number of publications and number of citations per publication. An h index of 19 indicates that 19 of the below cited publications have been cited at least 19 times each. Wikipedia reported that "...a value for h of about 12 might be typical for advancement to tenure (associate professor) at major research universities. A value of about 18 could mean a full professorship...." Comparative values for physicians working in private practice settings are unavailable but would be expected to be less than those of full-time academicians.
- Ross, D. E., A. L. Ochs, M. E. DeSmit, J. M. Seabaugh, M. D. Havranek (in press). Man vs. Machine Part 2: Comparison of radiologists' interpretations and NeuroQuant[®] measures of brain asymmetry and progressive atrophy in patients with traumatic brain injury. *Journal of Neuropsychiatry and Clinical Neurosciences*.
- Ross, D. E., C. Castelvecchi, A. L. Ochs (2013). Brain MRI volumetry in a single patient with mild traumatic brain injury. *Brain Injury* 27:634-636.
- Ross, D. E., A. L. Ochs, J. M. Seabaugh, C. R. Shrader (2013). Man vs. machine: Comparison of radiologists' interpretations and NeuroQuant[®] volumetric analyses of brain MRIs in patients with traumatic brain injury. *Journal of Neuropsychiatry and Clinical Neurosciences* 25:1-8.
- Ross, D. E., T. J. Graham, A. L. Ochs (2013). Review of the evidence supporting the medical and forensic use of NeuroQuant[®] in patients with traumatic brain injury. *Psychological Injury and the Law* 6:75-80.
- Ross, D. E. (September 29, 2012). New advances help detect brain injuries (Correspondent of the Day -- Letter to the Editor). *Richmond Times Dispatch*.
- Ross, D. E., A. L. Ochs, J. M. Seabaugh, M. F. DeMark, C. R. Shrader, J. H. Marwitz, M. D. Havranek (2012). Progressive brain atrophy in patients with

- chronic neuropsychiatric symptoms after mild traumatic brain injury: A preliminary study. *Brain Injury* 26:1500-9.
- Ross DE, Ochs AL, Seabaugh J, Henshaw T (2012): NeuroQuant® revealed hippocampal atrophy in a patient with traumatic brain injury. *Journal of Neuropsychiatry and Clinical Neurosciences* 24: E33.
- Ross DE (2011): Review of longitudinal studies of MRI brain volumetry in patients with traumatic brain injury. *Brain Injury* 25:1271-8.
- Ross DE (2009): High tech does not mean high quality. *Richmond Times Dispatch* 03/08/09, section A, p. 9.
- Ross DE, Clevinger LE (2008): Managing more than medications. *Brain Injury Professional* 5:22-25.
- Hettema JM, Ross DE (2007): A case of aripiprazole-related tardive akathisia and its treatment with ropinirole (letter). *J Clin Psychiatry* 68:1814-1815.
- Ross, DE (2005): Methodological concerns in a trial of ziprasidone and olanzapine (letter). *Am J Psychiatry* 262:1391.
- Ross, DE (2005): Tardive dyskinesia and second-generation antipsychotics (letter). *Am J Psychiatry* 162:405.
- Ross DE, Thomas M, Booth M, Weinborn M (2005): Rate of tardive dyskinesia in hospitalized patients (letter). *Am J Psychiatry* 162:816.
- Messias E, Kirkpatrick B, Bromet E, Ross D, Buchanan RW, Carpenter WT Jr, Tek C, Kendler KS, Walsh D (2004): Summer birth and deficit schizophrenia: A pooled analysis from six countries. *Arch Gen Psychiatry* 61:985-989.
- Ross, DE (2004): Clozapine and typical antipsychotics (letter). *Am J Psychiatry* 161:1925-1926.
- Ross DE (2004): Ziprasidone and mania (letter). *Am J Psychiatry* 161:1503.
- Ross DE (2003): Improving the DSM Axis System (letter). *Psychiatric News* 38:29.
- Thaker GK, Avila MT, Hong EL, Medoff DR, Ross DE, Adami HM (2003): A model of smooth pursuit eye movement deficit associated with the schizophrenia phenotype. *Psychophysiology* 40:277-84.
- Ross DE (2003): Psychiatry and neurology. Am J Psychiatry 160:596.

- Kirkpatrick B, Buchanan RW, Ross DE, Carpenter Jr WT (2001): In reply: Distinguishing simple schizophrenia and the deficit syndrome of schizophrenia. *Arch Gen Psychiatry*, in press.
- Ross DE, Hasnain M, Pandurangi AK (2001): Subspecialty training in schizophrenia may lead to improved treatment for treatment-resistant patients. *Psychiatric Services* 52:240.
- Kirkpatrick B, Buchanan RW, Ross DE, Carpenter Jr WT (2001): A separate disease within the syndrome of schizophrenia. *Arch Gen Psychiatry* 58:165-171.
- Ross DE, Kirkpatrick B, Karkowski LM, Straub RE, MacLean CJ, O'Neill A, Compton AD, Murphy B, Walsh D, Kendler KS (2000): Sibling correlation of deficit syndrome in the Irish study of high-density schizophrenia families. *Am J Psychiatry* 157:1071-6.
- Ross DE (2000): The deficit syndrome and eye tracking disorder may reflect a distinct subtype within the syndrome of schizophrenia. *Schizophr Bull* 26:855-66.
- Ross DE (2000): Update on movement disorders caused by antipsychotic medications. *Psychiatric Society of Virginia News* Summer:3,8.
- Kirkpatrick B, Ross DE, Walsh D, Karkowski L, Kendler KS (2000): Family characteristics of deficit and nondeficit schizophrenia in the Roscommon Family Study. *Schizophr Res* 45:57-64.
- Ross DE (2000): New hope for consumers with movement disorders caused by antipsychotic medications. *The Network* 16:6.
- Ross DE (2000): A method for developing a biopsychosocial formulation. *Journal of Child and Family Studies* 9:1-6.
- Thaker GK, Ross DE, Cassady SL, Adami HM, Medoff DR, Sherr J (2000): Saccadic eye movement abnormalities in relatives of patients with schizophrenia. *Schizophr Res* 45:235-44.
- Thaker GK, Ross DE, Buchanan RW, Adami HM, Medoff DR (1999): Smooth pursuit eye movements to extraretinal motion signals: deficits in patients with schizophrenia. *Psychiatry Res* 88:209-19.
- Kunkel R, Adami H, Zetlmeisl M, Ross D, Thaker G (1998): Recruitment of nonpatient volunteers with schizophrenia spectrum personality symptoms. Schizophr Res 34:181-186.

- Ross DE, Buchanan RW, Thaker GK, Medoff DR, Lahti AC (1998): Association between eye tracking disorder in schizophrenia and poor sensory integration. *Am J Psychiatry* 155:1352-1357.
- Thaker GK, Ross DE, Cassady SL, Adami HM, LaPorte D, Medoff DR, Lahti A (1998): Smooth pursuit eye movements to extraretinal motion signals: deficits in relatives of patients with schizophrenia. *Arch Gen Psychiatry* 55:830-836.
- Ross DE, Buchanan RW, Lahti AC, Medoff D, Bartko JJ, Compton AD, Thaker GK (1998): The relationship between smooth pursuit eye movements and tardive dyskinesia in schizophrenia. *Schizophr Res* 31:141-150.
- Hashimoto T, Ross DE, Gao X, Medoff DR, Tamminga CA (1998): Mixture in the distribution of haloperidol-induced oral dyskinesias in the rat supports an animal model of tardive dyskinesia. *Psychopharmacology* 137:107-112.
- Ross DE, Thaker GK, Buchanan RW, Lahti AC, Conley R, Medoff D (1998): Specific measures account for most of the variance in qualitative ratings of smooth pursuit eye movements in schizophrenia. *Arch Gen Psychiatry* 55:184-185.
- Kirkpatrick B, Ross DE (1997): The trap of protopathic bias in neuropsychiatric research. *Biol Psychiatry* 41:257-8.
- Ross DE (1997): Grey matter correlates of syndromes in schizophrenia. *Br J Psychiatry* 171:484.
- Ross DE, Carpenter Jr WT (1997): Negative symptoms in schizophrenia. *The Journal of the California Alliance for the Mentally III* 8:81-83.
- Ross DE, Thaker GK, Buchanan RW, Kirkpatrick B, Lahti AC, Medoff D, Bartko JJ, Goodman J, Tien AY (1997): Eye tracking disorder in schizophrenia is characterized by specific ocular motor defects and is associated with the deficit syndrome. *Biol Psychiatry* 42:781-796.
- Kim CE, Thaker GK, Ross DE, Moran MJ (1997): Accuracies of saccades to moving targets: During pursuit initiation and maintenance. *Experimental Brain Research* 113:371-377.
- Moran MJ, Thaker GK, LaPorte DJ, Cassady SL, Ross DE (1996): Covert visual attention in schizophrenia spectrum personality disordered subjects: Visuospatial cuing and alerting effects. *J Psychiatr Res* 4:261-275.
- Ross DE, Thaker GK, Buchanan RW, Lahti AC, Medoff D, Bartko JJ, Moran M, Hartley J (1996): Association of abnormal smooth pursuit eye movements with the deficit syndrome in schizophrenic patients. *Am J Psychiatry*

- 153:1158-1165.
- Thaker GK, Ross DE, Moran MJ, Lahti A, Buchanan R, Ellsberry RL (1996): Does pursuit abnormality in schizophrenia represent a deficit in the predictive mechanism? *Psychiatry Res* 59:221-237.
- Tien AY, Ross DE, Pearlson G, Strauss ME (1996): Eye movements and psychopathology in schizophrenia and bipolar disorder. *Journal of Nervous and Mental Diseases* 184:331-338.
- Ross DE, Ochs AL, Pandurangi AK, Thacker LR, Kendler KS (1996): Mixture analysis of smooth pursuit eye movements in schizophrenia. *Psychophysiology* 33:390-397.
- Thaker G, Cassady S, Adami H, Moran M, Ross D (1996): Eye movements in spectrum personality disorders: comparison of community subjects and relatives of schizophrenic patients. *Am J Psychiatry* 153:362-368.
- Ross DE, Thaker GK, Holcomb HH, Cascella NG, Medoff DR, Tamminga CA (1995): Abnormal smooth pursuit eye movements in schizophrenic patients are associated with cerebral glucose metabolism in oculomotor regions. *Psychiatry Res* 58:53-67.
- Dixon L, Thaker GK, Conley R, Ross DE, Cascella N, Tamminga CA (1993): Changes in psychopathology and dyskinesia after neuroleptic withdrawal in a double-blind design. *Schizophr Res* 10:267-271.
- Kendler K, Ochs A, Gorman A, Hewitt J, Ross D, Mirsky A (1991): The structure of schizotypy: a pilot multitrait twin study. *Psychiatry Res* 36:19-36.
- Ross DE, Ochs AL, Hill MP, Goldberg SC, Pandurangi AK, Winfrey J (1988): The erratic nature of eye movements in schizophrenic patients as revealed by high resolution techniques. *Biol Psychiatry* 24:675-688.

Selected recent presentations

- Ross DE (May 3, 2013): (invited speaker) Update on Neuropsychiatry and Traumatic Brain Injury. *Williamsburg Annual Conference on Traumatic Brain Injury*, Williamsburg, VA.
- Ross DE (March 15, 2013): (invited speaker) Using Neuroimaging Tests on the Brain to Detect Areas of Damage and Determining Admissibility Under Daubert/Frye. Brain Injury Claims & Litigation, American Conference Institute's 2nd Annual Summit for Med Mal and Other Personal Injury Leaders, Philadelphia, PA.

- Ross DE (September 28, 2012): (invited speaker) Update on MRI and Mild Traumatic Brain Injury. *Grand Rounds, Department of Physical Medicine and Rehabilitation, Virginia Commonwealth University*, Richmond, VA.
- Ross DE (April 18, 2012): (invited speaker) Update on NeuroQuant[®]: A Breakthrough Method for Detecting MRI Brain Atrophy in Patients with Traumatic Brain Injury. *Neuropsychology and Rehabilitation Psychology Rounds*, Richmond, VA.
- Ross DE (March 30, 2012): (invited speaker) An update on NeuroQuant[®] in traumatic brain injury. *American Conference Institute Brain Injury Litigation Conference*, Philadelphia, PA.
- Ross DE, Jones RT (March 10, 2012): (invited speaker) Traumatic Brain Injury and Posttraumatic Stress Disorder. *Brain Injury Association of Virginia*, Richmond, VA.
- Ross DE, Ochs AL, Havranek M (September 2011): Update on NeuroQuant[®]. *NABIS Ninth Annual Conference on Brain Injury*, New Orleans, LA.
- Ochs AL, Ross DE (2011): Artefacts affecting NeuroQuant automated measures of brain MRI volumes. *Journal of Head Trauma Rehabilitation* 26: 414-415.
- Ross DE, Ochs AL, Seabaugh JS, Henshaw T (June 2011): MRI Brain Volumetry Reveals Atrophy and Asymmetry in Patients with Traumatic Brain Injury. *Federal Interagency Conference on TBI*, Washington, D.C.
- Ross DE, Ochs AL, Seabaugh JS, Henshaw T (May 2011): Brain MRI Volume in Traumatic Brain Injury: Clinical and Forensic Applications. *Williamsburg Annual Conference on Traumatic Brain Injury*, Williamsburg, VA.
- Ross DE, Ochs AL, Seabaugh JS, Henshaw T (presented on March 24, 2011):
 A Case Report of Small Hippocampi in a Patient with Mild Traumatic Brain Injury. *Annual Meeting of the American Neuropsychiatric Association*, Denver, CO.
- Ross DE (June 4, 2009): Neuropsychiatry of traumatic brain injury in 2009. *Williamsburg Annual Conference on Traumatic Brain Injury*, Williamsburg, VA.
- Ross DE (April 21, 2008): Neuropsychiatric Medications and Traumatic Brain Injury. *Meeting of the Brain Injury Assocation of Virginia*, Richmond, VA.
- Ross DE (December 14, 2007): Neuropsychiatric Medications and Traumatic Brain Injury. *Lecture to the physiatry residents at Virginia Commonwealth University*, Richmond, VA.

- Ross DE (March 2006): Neuropsychiatry and Traumatic Brain Injury. Lecture to the Neuropsychology division of the Department of Rehabilitation Medicine at Virginia Commonwealth University, Richmond, VA.
- Ross DE (2008 to present): Neuropsychiatry and Traumatic Brain Injury. *Annual lecture to the psychiatry residents at Virginia Commonwealth University*, Richmond, VA.
- Ross DE (1998 to present): Tardive Dyskinesia and Other Movement Disorders in Neuropsychiatry. *Annual lecture to the psychiatry residents at Virginia Commonwealth University*, Richmond, VA.