

CURRICULUM VITAE

Robert W. Buchanan, M.D.

Maryland Psychiatric Research Center
P.O. Box 2147
Baltimore, MD 21228
(410) 402-7876

EDUCATION:

- 1972 - 1976 B.S. in Chemical Engineering, Magna Cum Laude, Lehigh University, Bethlehem, Pennsylvania (Scholarship)
- 1976 - 1980 M.D., UMDNJ - New Jersey Medical School, Newark, New Jersey
- July 1980 - June 1984 Residency in Psychiatry, George Washington University Medical Center, Washington, D.C.
- July 1983 - June 1984 Chief Resident, Inpatient Unit, George Washington University Medical Center, Washington, D.C.

BOARD CERTIFICATION:

- 1985 - Present American Board of Psychiatry and Neurology, Certificate Number 27284

LICENSURE: 1984 - Present: Maryland, D30807

MAJOR RESEARCH INTERESTS: Pharmacological treatment of schizophrenia; neuroanatomical basis of schizophrenic psychopathology.

EMPLOYMENT HISTORY:

- 7/1983 - 6/1984 Instructor, Psychiatry and Behavioral Sciences, George Washington University Medical Center, Washington, D.C.
- 7/1984 - 6/1986 Staff Psychiatrist, Eastern Shore Hospital Center, Cambridge, Maryland
- 7/1986 - 6/1988 Research Fellow, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland
- 7/1988 - 6/1994 Research Assistant Professor, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 3/1993 - Present Chief, Outpatient Research Program, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland
- 7/1994 - 6/1998 Research Associate Professor, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 7/1998 - 6/2002 Professor, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 7/2002 - Present Professor with Tenure, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 10/2010 - 3/2013 Deputy Director, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland
- 4/2013 – 2/2016 Interim Director, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland
- 2/2016 – Present Director, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland

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ADMINISTRATIVE SERVICE:

Institutional Service:

- 1993 - Present Executive Committee, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland
- 1998 - 2008 Intervention Research Center/Advanced Centers for Interventions and Services Research Executive Committee, Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, Maryland
- 1998 - Present Graduate Faculty, University of Maryland Graduate School, Baltimore, Maryland
- 1999 - Present Director, VISN 5 MIRECC Psychopharmacology Clinic, Baltimore Veterans Administration Medical Center, Baltimore, Maryland
- 2001 Strategic Planning Committee, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 2001 - 2003 Alternate on the School of Medicine Council, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 2001 - Present Research Track Committee, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 2004 - 2005 Member, Department of Psychiatry Appointment, Promotion, and Tenure Committee
- 2005 - 2011 Chair, Department of Psychiatry Appointment, Promotion, and Tenure Committee
- 2005 - Present Chair, Baltimore VA Medical Center/VA Maryland Health Care System Clozapine Treatment Team
- 2011 - 2014 Member, University of Maryland School of Medicine Appointment, Promotion, and Tenure Committee
- 2014 - Present Member, Brain Science Research Consortium Unit Executive Committee

National Service:

- 1994 - 1996 Reviewer for "Behavioral Science Track Award for Rapid Transition (B/START)" grant applications, NIH.
- 1996 Special reviewer for Veterans Administration Merit Awards.
- 1997 - 1999 Member, NIMH Treatment Assessment Review Committee
- 1999 - 2001 Member, NIMH ZMH1 National Institute of Mental Health Special Emphasis Panel, Interventions Research Review Committee (ITV-D)
- 2005 - 2006 Member, American College of Neuropsychopharmacology Ethics Committee
- 2006 - 2008 Chair, American College of Neuropsychopharmacology Ethics Committee
- 2006 - Present Member, National Alliance for Research on Schizophrenia and Depression (NARSAD) Scientific Council
- 2006 - Present Reviewer, National Alliance for Research on Schizophrenia and Depression (NARSAD) for Young Investigator, Independent Investigator, and Distinguished Investigator Awards
- 2008 - 2011 Ad Hoc Reviewer, NIMH R01 and R13 grant applications
- 2008 - 2011 Member, US Food and Drug Administration Psychopharmacologic Drugs Advisory Committee
- 2011 Reviewer, Wellcome Trust Senior Investigator Award

PROFESSIONAL MEMBERSHIP:

- 1982 - Present American Psychiatric Association
- 1984 - Present Maryland Psychiatric Association
- 1984 - Present Alpha Omega Alpha

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1997 - Present Society for Neuroscience

1997 - Present American College of Neuropsychopharmacology

HONORS AND AWARDS:

1984 Laughlin Fellow, American College of Psychiatrists

1984 Alpha Omega Alpha, George Washington University Medical School

1989 Young Investigator Award, International Congress on Schizophrenia Research

1992 Distinguished Fellow, American Psychiatric Association

2006 ISI Highly Cited Researcher

2007 Fellow, American College of Neuropsychopharmacology

2010 The Gerard E. Hogarty Excellence in Schizophrenia Research Memorial Award

2012 APA/Kempf Fund Award Research Development in Psychobiological Psychiatry

2013 Stanley Dean Research Award, American College of Psychiatrists

2013 APA Award for Research

2014 ISI Highly Cited Researcher

2015 ISI Highly Cited Researcher

2016 ISI Highly Cited Researcher

EDITORIAL TASKS:

1986 - Present	Reviewer for:	
	Schizophrenia Bulletin	Biological Psychiatry
	Psychiatry Research	Journal of Nervous and Mental Disease
	American Journal of Psychiatry	Archives of General Psychiatry
	Psychiatric Services	Schizophrenia Research
	Neuropsychopharmacology	Medical Letter

EDITORIAL BOARD:

2005 - 2007 Schizophrenia Bulletin

2008 - Present Clinical Schizophrenia & Related Psychoses

2013 - Present Schizophrenia Bulletin

2016 - Present Pharmacopsychiatry

TEACHING RESPONSIBILITIES:

1993-1994 Mentor, Program for Minority Research Training in Psychiatry (PMRTP), American Psychiatric Association.

1993-Present Supervise PGY-II, PGY-III, and PGY-IV psychiatry residents.

1999-Present Psychiatry Residency Research Track Mentor:

Cenk Tek, M.D. (2/98-1/01; Current Position: Associate Professor of Psychiatry, Yale University Medical School; Director, Psychosis Program, Connecticut Mental Health Center, New Haven, Connecticut)

David Potter, M.D. (7/00-6/03; Current Position: private practice)

Bernard Fischer, M.D. (7/04-6/07; Current Position: Assistant Professor of Psychiatry University of Maryland School of Medicine)

William Keller, M.D. (7/07-6/11; Current Position: T32 Research Fellowship, Maryland Psychiatric Research Center, University of Maryland School of Medicine)

1993-Present Mentor, Post-Doctoral Research Fellows:

Juan Bustillo, M.D. (6/93-6/96; Current Position: Professor of Psychiatry, University of New Mexico School of Medicine)

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Celso Arango, M.D. (1/97-2/99; Current Position: Associate Professor of Psychiatry, Universidad Complutense, Madrid, Spain; Voluntary Faculty Associate Professor of Psychiatry, University of Maryland School of Medicine, Maryland Psychiatric Research Center)

Bernard Fischer, M.D. (7/07-6/09; T32 Research Fellowship, Maryland Psychiatric Research Center, University of Maryland School of Medicine; Current Position: Assistant Professor of Psychiatry University of Maryland School of Medicine)

William Keller, M.D. (7/11-present; T32 Research Fellowship, Maryland Psychiatric Research Center, University of Maryland School of Medicine)

- 1996 Mentor, Short Term Research Training Program (STRTP), University of Maryland School of Medicine.
- 2004 - Present Lecturer, Biological Psychiatry GPILS 781; 5-10 graduate students
Signs and Symptoms of Schizophrenia
Pharmacological Treatment of Cognitive Impairments in People with Schizophrenia
- 2005 - Present Lecturer, T32 Fellowship Course on the Signs and Symptoms of Schizophrenia; 5-10 post-graduate students and fellows
Signs and Symptoms of Schizophrenia
- 2011 – Present Presenter, MPRC Research mini-Elective for medical students (MS-2) in the PSYCH 458-Combined Accelerated Program in Psychiatry (CAPP)

CONTRACT SUPPORT:

Center for Excellence on Early Intervention for Serious Mental Illness (DHMH 15-14183G); 7/1/2014 – 6/30/2015; \$1,224,000; P.I.: Robert W. Buchanan, M.D.

GRANT SUPPORT:

Current:

Kynurenic Acid and Cognitive Abnormalities in Schizophrenia (NIH P50 MH103222); 04/01/14-03/31/19; \$1,456,033; (P.I.: Robert Schwarcz); 15% time (role: P.I. for Project IV, "Tryptophan Challenge Study in Schizophrenia: The Relationship of Elevated Kynurenic Acid to Cognitive Impairments and Glutamate Release").

Mechanisms Mediating the Attention-Enhancing Effects of Nicotinic Receptor Agents. (NIH/NIDA 1R01 DA035813-01A1); 03/15/14-01/31/19; \$301,871 annual direct costs; (PI: Britta Hahn); 5% time (role: Co-Investigator).

3/3-Social Processes Initiative in Neurobiology of the Schizophrenia(s). (NIMH 1R01 MH102318-01A1); 07/01/14-06/30/19; \$225,000 annual direct costs; (PI: Robert W. Buchanan); 15% time.

Social Work Training to Reduce Duration of Untreated Psychosis. (NIMH 1R34 MH110506-01A1); 05/01/17-04/30/20; \$199,969 current year direct costs; (Co-PI: Robert W. Buchanan; Contact PI); 6% time.

Confirmatory Double-Blind Placebo-Controlled Efficacy Trial of a Gluten-Free Diet in a Subgroup of Persons with Schizophrenia Who Have High Levels of IgA Ant-Gliadin Antibodies. (NIMH 1R01 MH113617-01); 08/01/17-05/31/22; \$607,130 current year direct costs; (PI: Deanna Kelly); 2% time. (role: Co-Investigator).

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Completed Grants:

Deficit and Non-deficit Forms of Schizophrenia (NIMH: National Research Service Award); 07/02/86-07/01/88; \$66,000 (PI: Robert W. Buchanan).

Outpatient Treatment: Targeted Versus Maintenance Medication (Merit Award) (NIMH R01 MH35996); 07/01/87-06/30/97; \$1,411,509 total direct costs; (PI: William T. Carpenter, Jr., M.D.; Investigator: Robert W. Buchanan); 10% time.

National Alliance for Research on Schizophrenia and Depression (NARSAD); 1989-1990; \$30,000 (PI: Robert W. Buchanan).

Clozapine Treatment of Schizophrenic Outpatients (NIMH R01 MH45074); 04/01/90-03/31/95; \$1,014,719 total direct costs; (PI: Robert W. Buchanan); 35% time.

Neural Basis of the Deficit Syndrome of Schizophrenia (NIMH MH48225); 05/01/93-04/30/98; \$523,575 total direct costs; (PI: Robert W. Buchanan); 50% time.

Clinical Research Center: Classification and Course of the Schizophrenias (NIMH P50 MH40279); 08/01/93-07/31/98; \$2,781,009 total direct costs; (PI: William T. Carpenter, Jr.; Core Leader/Investigator: Robert W. Buchanan); 5% time.

Center for Research Services for Severe Mental Illness (NIMH 5P50 MH043703-18); 09/01/95-07/31/05; \$3,970,774 total direct costs; (PI: Donald M. Steinwachs); 2% time (role: Investigator).

Clozapine Treatment of Schizophrenic Outpatients (NIMH R01 MH45074); 04/01/96-03/31/01; \$1,386,514 total direct costs; (PI: Robert W. Buchanan); 30% time.

Intervention Research Center: Classification and Course of the Schizophrenias (NIMH P50 MH40279); 08/01/98-07/31/03; \$1,212,467 total direct costs; (PI: William T. Carpenter, Jr.); 15% time (10% Core Leader, 5% Co-PI).

Work Outcome in Schizophrenia: Brain Function/Structure (NIMH MH57749); 07/01/98-06/30/03; \$1,092,927; (PI: James Gold; Investigator: Robert W. Buchanan); 10% time.

Treatment of Negative Symptoms & Cognitive Impairments (NIMH MH59807); 12/01/99-11/30/03; \$272,577; (PI: William T. Carpenter, Jr.; Site PI: Robert W. Buchanan); 15% time.

Qualitative Structural Neuroimaging in Psychosis (NIMH MH3775-08); 07/01/99-03/31/04; \$1,943,716 total direct costs; (PI: Godfrey Pearlson; Investigator: Robert W. Buchanan); 10% time.

Research Track Residency Training Program (NIMH MH60487); 09/23/99-06/30/09; \$643,362; (PI: Gunvant Thaker); 2% time (role: Co-Investigator).

Research Corporation Agreement with Novartis Pharma AG (Novartis Pharma AG); 09/20/00-09/19/02; 2,189,840 total direct costs; (PI: William T. Carpenter, Jr.; Core Leader/Investigator: Robert W. Buchanan); 15% time.

Galantamine Treatment of Schizophrenia (Stanley Medical Research Foundation); 08/01/01-07/31/04; \$692,006; (PI: Robert W. Buchanan); 20% time.

Clozapine Treatment of Schizophrenic Outpatients (NIMH R01 MH045074); 01/01/01-12/31/06; \$2,087,597 total direct costs; (PI: Robert W. Buchanan); 25% time.

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Measurement and Treatment Development Activities on Cognition in Schizophrenia (NIMH MH22006); 10/01/02-09/30/04; \$648,422; (PI: Steve Marder and Michael Green); 5% time (role: Consultant and Executive Committee Member).

Advanced Centers for Interventions and Services Research (NIMH P30 MH068580); 09/03/03-07/31/08; \$6,045,094 total direct costs; (PI: Robert W. Buchanan, M.D.); 30% time.

Treatment Units for Research on Neurocognition and Schizophrenia (TURNS) (NIMH HHSN 278200441003C); 09/01/04-08/31/09; \$2,003,079 total direct costs; (PI: Steve Marder); 25% time (role: Maryland PI and Director of the Trials Management Unit).

Dopaminergic Mechanisms of Reward in Schizophrenia (NIMH 1R24 MH72647-01A1); 09/30/05-08/31/08; \$1,061,753 total direct costs; (PI: James Gold); 2% time (role: Co-Investigator).

Rasagiline in the Treatment of Persistent Negative Symptoms of Schizophrenia (Stanley Medical Research Institute 05T-705); 07/20/06-06/19/10 (1 year extension); \$450,039 total direct costs; (PI: Robert W. Buchanan); 15% time.

The Effects of the Cannabinoid-1 Receptor Antagonist, Rimonabant on Weight and Metabolic Risk Factors in People with Schizophrenia (NIMH 1 R34 MH077839-03); 07/01/06-06/30/09; \$450,000 total direct costs; (PI: Robert W. Buchanan); 10% time.

A Single-Dose, Placebo-Controlled, Stratified, Randomized, Double-Blind, Crossover Study to Determine the Pharmacodynamic Effects of AQW051 (Novartis Pharmaceuticals Corporation AQW051A); 09/25/08-06/30/10; \$208,326; (PI: Robert W. Buchanan); 15% time.

A Randomised Double-Blind, Placebo Controlled, Parallel Group Study to Evaluate the Cognitive Enhancing Effect of GSK239512 in Stable Patients with Schizophrenia (GlaxoSmithKline LLC Contract #013286); 04/05/10-12/31/10; \$339,938 total direct costs; (PI: Robert W. Buchanan); 15% time.

A Randomized, Double-Blind, Parallel-Design Trial Comparing the Effects of Eltoprazine (as an Adjunctive Treatment to Anti-Psychotics) with Placebo in Adults with DSM IV/DSM IV TR Diagnosis of Schizophrenia, in Improving one or more Dimensions of Cognitive Impairment Associated with Schizophrenia (PsychoGenics, Inc.; PGI 12004; Contract); 03/01/11-02/29/13; \$117,995 total direct costs; (PI: Robert W. Buchanan); 6.5% time.

Clinical and Biomarker Assessment of Efficacy of Cognitive Remediation in Patients with Schizophrenia Stabilized on Lurasidone (Research Foundation for Mental Hygiene, Inc. Contract); 09/01/10-08/31/13; \$106,192 total direct costs; (PI: Robert W. Buchanan); 9.72% time.

Recovery After Initial Schizophrenia Episode - Impact Evaluation Study (RAISE-IES) (NIMH 08-DS-00009); 7/13/09-12/31/13; \$2,473,748 total direct costs; (role: Study Psychiatrist/Investigator); 15% time.

Interventions and Practice Research Infrastructure Program (IP-RISP) (NIMH 1R24 MH082755); 08/11/08-04/30/13 no cost extension; \$331,553 total direct costs; (PI: Robert W. Buchanan); 15% time.

MPRC Centers for Intervention Development and Applied Research (CIDAR) (NIMH 1P50 MH082999); 09/22/08-5/31/13 no cost extension; 1,999,879 total direct costs; (PI: William Carpenter); 23% time (role: Co-PI).

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Adjunctive Minocycline in Clozapine Treated Patients for Psychosis and Cognition (NIH Exploratory/Developmental Research 1R21 MH091184-01A1); 04/08/11-03/31/13 no cost extension; \$135,000 total direct costs; (PI: Deanna Kelly); 1% time (role: Investigator).

New Experimental Medicine Studies: Fast-Fail Trials in Psychotic Spectrum Disorders (FAST-PS) (HHSN2712012000071); (P.I.: Jeffrey A. Lieberman); (role: site P.I.).

3/3-Social Processes Initiative in Neurobiology of the Schizophrenia(s) (Supplement). (NIMH 3R01 MH102318-02S1); 06/23/15-03/31/16; \$37,826 annual direct costs; (PI: Robert W. Buchanan); 5% time

Adjunct Aripiprazole for Symptomatic Hyperprolactinemia in Female Schizophrenia (NIMH 1R01 MH09007-01A1); 08/02/11-06/30/16 (no cost extension); \$100,000 total direct costs; (PI: Deanna Kelly); 1% time (role: Co-Investigator).

Anti-Inflammatory Combination Therapy for the Treatment of Schizophrenia (Stanley Medical Research Institute 11T-002); 04/1/12-11/30/16 (no cost extension); \$598,559 total direct costs; (PI: Robert W. Buchanan); 20% time.

1/2-Combined Oxytocin and CBSST for Social Function in People with Schizophrenia (1R34MH100362-01); 6/20/2013-3/31/2017 (no cost extension); \$690,750 total costs (P.I.: Robert W. Buchanan); 15% time.

Nicotinic Enhancement of Cognitive Remediation Training in Schizophrenia. (NIMH 1R21 MH095824-01A1); 04/01/14-03/31/17 (no cost extension); \$275,000 total direct costs; (PI: Britta Hahn); 5% time (role: Co-Investigator).

A Double-Blind of Adjunctive Valacyclovir to Improve Cognition in Early Phase Schizophrenia (Stanley Medical Research Institute); 01/01/14-06/30/17; \$123,896 total direct costs; (PI: Robert W. Buchanan); 11% time.

PUBLICATIONS:

Book Chapters:

1. Carpenter WT, Buchanan RW. Domains of psychopathology relevant to the study of etiology and treatment in schizophrenia. In: Schulz SC, Tamminga CA (eds), Schizophrenia: Scientific Progress. New York: Oxford University Press, 1989, pp 13-23.
2. Pulver AE, Buchanan RW, Thompson BW, McGrath J, Wolyniec PS. Neurological soft signs in an epidemiologic sample of psychotic patients: Preliminary analyses. In: Schulz SC, Tamminga CA (eds), Schizophrenia: Scientific Progress. New York: Oxford University Press, 1989, pp 78-82.
3. Thaker GK, Buchanan RW, Kirkpatrick B, Tamminga CA. Oculomotor performance in schizophrenia. In: Schulz SC, Tamminga CA (eds), Schizophrenia: Scientific Progress. New York: Oxford University Press, 1989, pp 115-123.
4. Carpenter WT, Kirkpatrick B, Buchanan RW. Conceptual approaches to the study of schizophrenia. In: Kales A, Stefanis CN, Talbott JA (eds), Recent Advances in Schizophrenia. New York: Springer-Verlag, 1990, pp 95-113.

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5. Carpenter WT, Buchanan RW, Kirkpatrick B, Thaker G, Tamminga C. Negative symptoms: A critique of current approaches. In: Marneros A, Andreasen NC, Tsuang MT (eds), Negative Versus Positive Schizophrenia. Heidelberg: Springer-Verlag, 1991, pp 126-133.
6. Tamminga CA, Kaneda H, Buchanan R, Kirkpatrick B, Thaker GK, Yablonski MB, Holcomb HH. The limbic system in schizophrenia: Pharmacologic and metabolic evidence. In: Tamminga CA, Schulz SC (eds), Advances in Neuropsychiatry and Psychopharmacology, Vol. 1. Schizophrenia Research. New York: Raven Press, 1991, pp 99-109.
7. Carpenter WT, Buchanan RW, Kirkpatrick B. The concept of the negative symptoms of schizophrenia. In: Greden JF, Tandon R (eds), Negative Schizophrenic Symptoms: Pathophysiology and Clinical Implications. Washington: American Psychiatric Press, 1991, pp 3-20.
8. Waltrip RW, Carrigan DR, Buchanan RW, Carpenter WT. A virus associated immunopathological theory of schizophrenia. In: Kurstak E (ed), Psychiatry and Biological Factors. New York: Plenum Medical Books, 1991, pp 23-51.
9. Carpenter WT, Buchanan RW. Introduction and overview of schizophrenia. In: Kaplan HI, Sadock BJ (eds), Comprehensive Textbook of Psychiatry/VI. Baltimore: Williams and Wilkins, 1995, pp 889-901.
10. Buchanan RW, Brandes M, Breier A. Treating negative symptoms: Pharmacological strategies. In: Breier A (ed), The New Pharmacotherapy of Schizophrenia. Washington DC: American Psychiatric Press, 1996, pp 179-204.
11. Breier A, Buchanan RW. Clozapine: Current status and clinical applications. In: Breier A (ed), The New Pharmacotherapy of Schizophrenia. Washington DC: American Psychiatric Press, 1996, pp 1-13.
12. Carpenter WT Jr, Buchanan RW, Conley RR. Pharmacotherapy of schizophrenia. In: SJ Enna, JT Coyle (eds), Pharmacological Management of Neurological and Psychiatric Disorders. New York: McGraw-Hill, 1998, pp 27-51.
13. Buchanan RW, Carpenter WT. Schizophrenia: Introduction and overview. In: Kaplan HI, Sadock BJ (eds), Comprehensive Textbook of Psychiatry/VII. Baltimore: Williams and Wilkins, 1999, pp 1096-1110.
14. Buchanan RW, McKenna PJ. Clozapine: Clinical use and experience. In: Buckley PF, Waddington JL (eds), Schizophrenia and Mood Disorders: The New Drug Therapies in Clinical Practice. Oxford, England: Butterworth-Heinemann, 2000, pp 21-31.
15. Buchanan RW, Carpenter WT Jr. Evaluating negative symptom treatment efficacy. In: Keefe R, McEvoy JP (eds), Negative Symptom and Cognitive Deficit Treatment Response in Schizophrenia. Washington DC: American Psychiatric Press, 2001, pp 1-18.
16. Kirkpatrick B, Buchanan RW, Ross DE, Carpenter WT Jr. Una enfermedad aparte dentro del síndrome de la esquizofrenia. In: Pascual EV, Rodón EP (eds), Esquizofrenia Negativa: Madrid, España: Aula Medica Ediciones, 2002, pp 13-31.
17. Lehman AF, Buchanan RW, Dickerson FB, Dixon LB, Goldberg R, Green-Paden L, Kreyenbuhl J. Evidence-based treatment for schizophrenia. In: Drake RE (guest ed), The Psychiatric

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Clinics of North America: Evidence-based Practices in Mental Health Care. Philadelphia: W.B. Saunders Company, 2003, Volume 26, pp 939-954.

18. Buchanan RW, Carpenter WT Jr. Concept of schizophrenia. In: Sadock BJ, Sadock VA (eds), Kaplan & Sadock's Comprehensive Textbook of Psychiatry/VI, Eighth Edition. New York: Lippincott Williams & Wilkins, 2005, pp 1329-1345.
19. Kelly DL, Buchanan RW. The current status of clozapine in and beyond treatment-resistant schizophrenia. In: Mortimer A, McKenna P (eds), Therapeutic Strategies in Schizophrenia. Oxford: Atlas Medical Publishing Ltd, 2010, pp. 157-172.
20. Bombin I, Arango C, Buchanan RW. Assessment for subtle neurological signs. In: Arciniegas DB, Anderson CA, Filley CM, Garcia TA (eds), Behavioral Neurology & Neuropsychiatry. Cambridge: Cambridge University Press, 2013, pp. 333-343.
21. Corvin A, Buchanan RW, Carpenter WT Jr, Kennedy JL, Keshavan MS, MacDonald AW III, Sass L, Wessa M. Which Aspects of Heterogeneity are Useful to Translational Success? In: Silverstein SM, Moghaddam B, Wykes T (eds), Schizophrenia: Evolution and Synthesis. Cambridge: The MIT Press, 2013, pp. 77-89.

Books:

1. Lewis SW, Buchanan RW. Schizophrenia. Oxford, England: Health Press Limited, 1998.
2. Lewis SW, Buchanan RW. Fast Facts - Schizophrenia. Second Edition, Oxford, England: Health Press Limited, 2002.
3. Lewis SW, Buchanan RW. Fast Facts – Schizophrenia. Third Edition, Oxford, England: Health Press Limited, 2007.

Journal Articles:

Refereed:

1. Heinrichs DW, Buchanan RW. Significance and meaning of neurological abnormalities in schizophrenia. American Journal of Psychiatry 145(1):11-18, 1988.
2. Buchanan RW, Heinrichs DW. The Neurological Evaluation Scale (NES): A structured instrument for the assessment of neurological signs in schizophrenia. Psychiatry Research 27(3):335-350, 1989.
3. Kirkpatrick B, Buchanan RW, Waltrip RW 2nd, Jauch D, Carpenter WT Jr. Diazepam treatment of early symptoms of schizophrenic relapse. Journal of Nervous and Mental Disease 177(1):52-53, 1989.
4. Kirkpatrick B, Buchanan RW, Maeda K, Carpenter WT Jr, Jauch D, Tamminga CA. Effect of neuroleptic withdrawal on plasma prolactin: A possible marker of receptor adaptation. Biological Psychiatry 26(2):131-138, 1989.
5. Kirkpatrick B, Buchanan RW, McKenney PD, Alphas LD, Carpenter WT Jr. The Schedule for the Deficit Syndrome: An instrument for research in schizophrenia. Psychiatry Research 30(2):119-123, 1989.

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6. Kirkpatrick B, Carpenter WT Jr, Buchanan RW. Empathy and schizophrenia. American Journal of Psychiatry 146(7):945-946, 1989.
7. Thaker G, Kirkpatrick B, Buchanan RW, Ellsberry R, Lahti A, Tamminga C. Oculomotor abnormalities and their clinical correlates in schizophrenia. Psychopharmacology Bulletin 25(3):491-497, 1990.
8. Kirkpatrick B, Buchanan RW. Anhedonia and the deficit syndrome of schizophrenia. Psychiatry Research 31(1):25-30, 1990.
9. Buchanan RW, Kirkpatrick B, Heinrichs DW, Carpenter WT Jr. Clinical correlates of the deficit syndrome of schizophrenia. American Journal of Psychiatry 147(3):290-294, 1990.
10. Kirkpatrick B, Buchanan RW. The neural basis of the deficit syndrome of schizophrenia. Journal of Nervous and Mental Disease 178(9):545-555, 1990.
11. Carpenter WT, Hanlon TE, Heinrichs DW, Summerfelt AT, Kirkpatrick B, Levine J, Buchanan RW. Continuous versus targeted medication in schizophrenic outpatients: Outcome results. American Journal of Psychiatry 147(9):1138-1148, 1990.
12. Carpenter WT Jr, Kurz R, Kirkpatrick B, Hanlon TE, Summerfelt AT, Buchanan RW, Waltrip RW, Breier A. Carbamazepine maintenance treatment in outpatient schizophrenics. Archives of General Psychiatry 48(1):69-72, 1991.
13. Carpenter WT, Buchanan RW, Breier A, Kirkpatrick B, Thaker G, Tamminga C. Psychopathology and the question of neurodevelopmental or neurodegenerative disorder. Schizophrenia Research 5(3):192-194, 1991.
14. Breier A, Davis OR, Buchanan RW. Alprazolam attenuates metabolic stress-induced neuroendocrine and behavioral effects in humans. Psychopharmacology 104:479-484, 1991.
15. Carpenter WT Jr, Kirkpatrick B, Buchanan RW. The new challenges in psychopathology. Yakubutsu Seishin Kodo 11(1):95-99, 1991.
16. Kirkpatrick B, Alphas L, Buchanan RW. The concept of supersensitivity psychosis. Journal of Nervous and Mental Disease 180(4):265-270, 1992.
17. Tamminga CA, Thaker GK, Buchanan RW, Kirkpatrick B, Carpenter WT, Chase T. Limbic system abnormalities identified in schizophrenia using PET/FDG; and neocortical alterations with the deficit syndrome. Archives of General Psychiatry 49:522-530, 1992.
18. Breier A, Buchanan RW. The effects of metabolic stress on plasma progesterone in healthy volunteers and schizophrenic patients. Life Sciences 51(19):1527-1534, 1992.
19. Buchanan RW, Kirkpatrick B, Summerfelt A, Hanlon TE, Levine J, Carpenter WT Jr. Clinical predictors of relapse following neuroleptic withdrawal. Biological Psychiatry 32(1):72-78, 1992.

20. Breier A, Buchanan RW, Elkashef A, Munson RC, Kirkpatrick B, Gellad F. Brain morphology and schizophrenia: A magnetic resonance imaging study of limbic, prefrontal cortex, and caudate structures. Archives of General Psychiatry 49(12):921-926, 1992.
21. Breier A, Davis OR, Buchanan R, Listwak SJ, Holmes C, Pickar D, Goldstein DS. Effects of alprazolam on pituitary-adrenal and catecholaminergic responses to metabolic stress in humans. Biological Psychiatry 32:880-890, 1992.
22. Kirkpatrick B, Carpenter WT, Maeda K, Buchanan RW, Breier A, Tamminga CA. Plasma prolactin as a predictor of relapse in drug free schizophrenic outpatients. Biological Psychiatry 32(11):1049-1054, 1992.
23. Buchanan RW, Breier A, Kirkpatrick B, Elkashef A, Munson RC, Gellad F, Carpenter WT Jr. Structural abnormalities in deficit and non-deficit schizophrenia. American Journal of Psychiatry 150(1):59-65, 1993.
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Robert W. Buchanan, M.D.

Waltrip RW, Carrigan DR, Buchanan RW, Carpenter WT. Virogenesis of Schizophrenia? A virus-associated immunopathological theory. FASEB Summer Conference on Neuroimmunomodulation, Copper Mountain, Colorado, June 1988.

Carpenter WT, Kurz R, Kirkpatrick B, Buchanan RW, Hanlon T. Carbamazepine treatment of schizophrenia. American College of Neuropsychopharmacology 27th Annual Meeting, Puerto Rico, December 1988.

Waltrip RW, Carrigan DR, Buchanan RW, Carpenter WT. An interferon theory of schizophrenia. American Psychiatric Association 142nd Annual Meeting, May 1989.

Kirkpatrick B, Buchanan RW. Asociality and schizophrenia. American Psychiatric Association 143rd Annual Meeting, May 1990.

Buchanan RW, Kirkpatrick B, Carpenter WT. Neurobehavioral studies of the deficit syndrome. American Psychiatric Association 143rd Annual Meeting, May 1990.

Carpenter WT, Buchanan RW, Kirkpatrick B. Schizophrenia subtypes: Current concepts. American Psychiatric Association 143rd Annual Meeting, May 1990.

Carpenter W, Hanlon T, Kirkpatrick B, Buchanan R, Summerfelt A, Levine J. Innovative strategies of neuroleptic treatment of schizophrenia. 17th Congress of Collegium Internationale Neuro-Psychopharmacologicum, 1990.

Carpenter W, Tamminga C, Buchanan R, Kirkpatrick B, Thaker G. Neural circuit differentiation of deficit and non-deficit schizophrenia. 17th Congress of Collegium Internationale Neuro-Psychopharmacologicum, 1990.

Buchanan RW, Breier A, Kirkpatrick B, Elkashef A, Munson RC, Carpenter WT. The deficit syndrome: Functional and structural characteristics. American College of Neuropsychopharmacology 29th Annual Meeting, 1990.

Breier A, Buchanan RW, Munson R, Elkashef A, Hanlon TE. Prefrontal cortex and limbic structures in schizophrenia: An in vivo morphological study. American College of Neuropsychopharmacology 29th Annual Meeting, 1990.

Buchanan RW, Kirkpatrick B, Carpenter WT. Domains of psychopathology: Concept and validity. American Psychiatric Association 144th Annual Meeting, May 1991.

Waltrip RW, Buchanan RW, Carpenter WT, Summerfelt A, Breier A, Thaker G, Carbone KM. The etiological association between Borna disease virus and schizophrenia. Eighth International Conference on Negative Strand Viruses, September 1991.

Breier A, Buchanan, RW, Munson R, Elkashef A, Hanlon T. Brain morphology and schizophrenia. American College of Neuropsychopharmacology 30th Annual Meeting, December 1991.

Davis O, Breier A, Buchanan RW, Holstein C, Jermay M, Carpenter WT. Obstetric complications in schizophrenia. American College of Neuropsychopharmacology 30th Annual Meeting, December 1991.

Robert W. Buchanan, M.D.

Davis OR, Breier A, Buchanan RW, Holstein C, Mertine J, Carpenter WT. Obstetric complications in schizophrenia. American Psychiatric Association 145th Annual Meeting, May 1992.

Breier A, Buchanan RW, Kirkpatrick B, Carpenter WT, Davis OR, Moricle LA. Clozapine: Current status and future directions. American Psychiatric Association 145th Annual Meeting, May 1992.

Buchanan RW, Breier A, Carpenter WT. The pharmacological treatment of negative symptoms. American Psychiatric Association 145th Annual Meeting, May 1992.

Carpenter WT, Buchanan RW, Kirkpatrick B, Waltrip RW, Breier A. Neuroleptic reduction in schizophrenic treatment. American Psychiatric Association 145th Annual Meeting, May 1992.

Breier A, Kirkpatrick B, Buchanan RW. Neuroleptic augmentation: Serotonin effects. American Psychiatric Association 146th Annual Meeting, May 1993.

Breier A, Buchanan RW, Kirkpatrick B, Carpenter WT, Davis OR, Moricle LA. Clozapine: Current status and future directions. American Psychiatric Association 146th Annual Meeting, May 1993.

Buchanan RW. Treatment of negative symptoms and cognitive impairments. American Psychiatric Association 146th Annual Meeting, May 1993.

Buchanan RW. Neurological Signs in Schizophrenia. Society for Biological Psychiatry, May 1994.

Buchanan RW, Breier A, Carpenter WT. Treatment of negative symptoms. American Psychiatric Association 147th Annual Meeting, May 1994.

Buchanan RW, Strauss M, Breier A, Kirkpatrick B, Carpenter WT. Attentional impairments in deficit and nondeficit forms of schizophrenia. American College of Neuropsychopharmacology 33rd Annual Meeting, December 1994.

Bustillo J, Moran M, Thaker G, Buchanan RW. Covert visual attention in deficit schizophrenia. American Psychiatric Association 148th Annual Meeting, May 1995.

Buchanan RW, Kirkpatrick B, Carpenter WT. Non-neuroleptic agents for the treatment of the negative symptoms of schizophrenia. American College of Neuropsychopharmacology 34th Annual Meeting, December 1995.

Carpenter WT, Lahti A, Holcomb H, Kirkpatrick B, Buchanan RW, Tamminga CA. The deficit domain of psychopathology. American College of Neuropsychopharmacology 34th Annual Meeting, December 1995.

Bustillo JR, Moran M, Thaker G, Buchanan RW. Asymmetry of visual information processing and symptomatic heterogeneity in schizophrenia. American College of Neuropsychopharmacology 34th Annual Meeting, December 1995.

Malhotra AK, Goldman D, Ozaki N, Lappalainen J, Buchanan R, Breier A, Pickar D. Allelic variability in the 5-HT2A Gene: Association with clozapine response. American College of Neuropsychopharmacology 34th Annual Meeting, December 1995.

Robert W. Buchanan, M.D.

Buchanan RW, Breier A, Kirkpatrick B, Ball P, Carpenter WT. Clozapine treatment of positive and negative symptoms in deficit and nondeficit outpatients with schizophrenia. American College of Neuropsychopharmacology 34th Annual Meeting, December 1996.

Buchanan RW, Zito J, Lyles A, Lehman AF. PORT pharmacological treatment recommendations. American Psychiatric Association 150th Annual Meeting, May 1997.

Lafargue T, Malhotra A, Duncan G, Arango C, Vladar K, Buchanan R, Breier A, Pickar D. The APOE E4 allele and brain volume in schizophrenia. American College of Neuropsychopharmacology 36th Annual Meeting, 1997.

Carpenter WT Jr, Lahti AC, Conley RR, Bartko JJ, Buchanan RW, Appelbaum P. Competency to consent to research in schizophrenia. American Psychiatric Association 150th Annual Meeting, May 1997.

Olivares EB, Buchanan RW. Acute vs. gradual discontinuation of clozapine in schizophrenic outpatients. Regional Symposium of the World Psychiatric Association, Santiago, Chile, October 1997.

Buchanan RW, Kirkpatrick B, Breier A, Carpenter WT. Antipsychotic dose reduction in schizophrenia: The comparative efficacy of Q2week versus Q6 week fluphenazine decanoate injections. American College of Neuropsychopharmacology 37th Annual Meeting, December 1998.

Gold JM, Buchanan RW. Neurocognitive impairment in schizophrenia: Markers of risk, illness and disability. American College of Neuropsychopharmacology 37th Annual Meeting, December 1998.

Gold J, Iannone V, Queern C, Buchanan R. Working memory in schizophrenia: impairments in storage and processing. International Neuropsychological Society Twenty-Seventh Annual Meeting, Boston, Massachusetts, February 1999.

Olivares EB, Carpenter WT Jr, Kirkpatrick B, Buchanan RW. The deficit syndrome and the hypothalamic-pituitary-adrenal axis. Annual Latin American Psychiatric Society Meeting, Venezuela, November 1999.

Malhotra AK, Peterson R, Finnegan R, Buchanan RW, Dean M, Goldman D. Chemokine receptor variation in schizophrenia: A novel test of the retroviral hypothesis? American College of Neuropsychopharmacology 38th Annual Meeting, , San Juan, Puerto Rico, December 1999.

Buchanan RW, Summerfelt A, Tek C, Ball P, Waltrip RW. An open-labeled evaluation of the efficacy of donepezil for cognitive impairment in patients with schizophrenia. American College of Neuropsychopharmacology 38th Annual Meeting, , San Juan, Puerto Rico, December 1999.

Buchanan RW, Tek C, Gold JM, Blaxton TA. Visual information processing and working memory in patients with schizophrenia. Cognitive Neuroscience Society, April 2000.

Buchanan RW, Summerfelt A, Tek C, Gold J. An open-labeled trial of the efficacy of adjunctive donepezil for cognitive impairment in patients with schizophrenia. American College of Neuropsychopharmacology 39th Annual Meeting, San Juan, Puerto Rico, December 2000.

Robert W. Buchanan, M.D.

Arango C, Olivares E, Buchanan R. Structural findings in neuropsychiatric disorders: the role of stress. 10th Congress of the Association of European Psychiatrists, Prague, Czech Republic, October 30, 2000.

Buchanan RW, Arango C, Breier A, McMahon R, Carpenter WT Jr. The relationship of clozapine and haloperidol treatment response to prefrontal, hippocampal, and caudate brain volumes. American College of Neuropsychopharmacology 41st Annual Meeting, December 9, 2002.

Buchanan RW. Adjunctive pharmacotherapy for the treatment of cognitive impairments in patients with schizophrenia. The New Clinical Drug Evaluation Unit (NCDEU) 43rd Annual Meeting, Boca Raton, Florida, May 27-30, 2003.

Buchanan RW. The relative risk among new generation antipsychotics for the development of metabolic abnormalities. American College of Neuropsychopharmacology 42nd Annual Meeting, San Juan, Puerto Rico, December 9, 2003.

Buchanan RW. Adjunctive pharmacotherapy for the treatment of cognitive impairments in patients with schizophrenia. American College of Neuropsychopharmacology 42nd Annual Meeting, San Juan, Puerto Rico, December 11, 2003.

Buchanan RW. The relative risk among new generation antipsychotics for the development of metabolic abnormalities. XXIVth CINP Congress, Paris, France, June 22, 2004.

Arango C, Laita P, Doll A, Buchanan RW. Safety and tolerability of antipsychotics in children and adolescents. American College of Neuropsychopharmacology 43rd Annual Meeting, San Juan, Puerto Rico, December 12-16, 2004.

Buchanan RW, Summerfelt A, Francis G, Conley RC, Nelson M, Dickinson D. The effect of galantamine on sensory gating abnormalities in patients with schizophrenia. American College of Neuropsychopharmacology 43rd Annual Meeting, San Juan, Puerto Rico, December 12-16, 2004.

Carpenter WT, Buchanan RW, Javitt DC, Marder SR, Schooler NR, Heresco-Levy U, Gold JM. Is glutamatergic therapy efficacious in schizophrenia? American College of Neuropsychopharmacology 43rd Annual Meeting, San Juan, Puerto Rico, December 12-16, 2004.

Buchanan RW. Pharmacological treatment of cognitive impairments in schizophrenia. American Psychiatric Association 158th Annual Meeting, Atlanta, Georgia, May 22, 2005.

Buchanan RW. Cognitive neuroscience and new schizophrenia treatments. American Psychiatric Association 158th Annual Meeting, Atlanta, Georgia, May 23, 2005.

Buchanan RW. The use of brain imaging to predict antipsychotic treatment effects. NCDEU 46th Annual Meeting, Boca Raton, Florida, June 14, 2006.

Wonodi I, Hong LE, Stine OC, Mitchell BD, Gold JM, Buchanan RW, Thaker GK. Effect of dopamine transporter (DAT1) VNTR polymorphism on eye tracking endophenotypes in schizophrenia. American College of Neuropsychopharmacology 45th Annual Meeting, Hollywood, Florida, December 3-7, 2006.

Robert W. Buchanan, M.D.

Buchanan RW, Conley RC, Dickinson D, Nelson MW, Gold JM, McMahon RP. Galantamine for the treatment of cognitive impairments in patients with schizophrenia. American College of Neuropsychopharmacology 45th Annual Meeting, Hollywood, Florida, December 3-7, 2006.

Boggs DL, Nelson MW, Buchanan RW, Kelly DL, McMahon RP, Dickinson D, Gold JM, Feldman S, Ball MP, Liu F, Conley RR. Adjunctive atomoxetine on the psychiatric symptoms of schizophrenia. American College of Neuropsychopharmacology 46th Annual Meeting, Boca Raton, Florida, December 9-13, 2007.

Conley RR, Buchanan RW, Nelson MW, Dickinson D, Gold J, McMahon RP, Feldman S, Ball MP, Kelly DL, Boggs DL, Liu F. Atomoxetine for neurocognitive deficits in people with schizophrenia. American College of Neuropsychopharmacology 46th Annual Meeting, Boca Raton, Florida, December 9-13, 2007.

Cazorla P, Buchanan R, Panagides J, Kouassi A, Szegedi A. Asenapine versus olanzapine in patients with predominant, persistent negative symptoms of schizophrenia. 1st Schizophrenia International Research Society Conference, Venice, Italy, June 21-25, 2008.

Buchanan RW, Weiner E, Ball MP, Feldman S, Conley RR, Kelly D, Gold JM, McMahon R. Adjunctive risperidone in clozapine treated people with treatment-resistant schizophrenia. American College of Neuropsychopharmacology 47th Annual Meeting, Scottsdale, Arizona, December 8, 2008.

Cazorla P, Kouassi A, den Hollander W, Phiri P, Panagides J, Alphs L, Szegedi A, Schooler N, Buchanan R. Long-term treatment with asenapine versus olanzapine in subjects with predominant, persistent negative symptoms of schizophrenia. American College of Neuropsychopharmacology 47th Annual Meeting, Scottsdale, Arizona, December 9, 2008.

Buchanan RW. Combination treatment strategies in schizophrenia: Methodology and evidence. 49th Annual NCDEU Meeting, Hollywood, Florida, June 30, 2009.

Buchanan RW, Marder SR. The FDA-NIMH-MATRICES guidelines for clinical trial design of cognitive-enhancing drugs: What do we know five years later? 49th Annual NCDEU Meeting, Hollywood, Florida, July 1, 2009.

Buchanan RW. The FDA-NIMH-MATRICES guidelines for clinical trial design of cognitive-enhancing drugs: the Treatment Units for Research on Neurocognition and Schizophrenia (TURNS) experiences. 49th Annual NCDEU Meeting, Hollywood, Florida, July 1, 2009.

Buchanan RW, Barch D, Csernansky J, Goff D, Gold J, Jarskog F, Javitt D, Keefe R, Lieberman J, McEvoy J, McMahon R, Marder S. MK-0777 for the Treatment of Cognitive Impairments in People with Schizophrenia. 2nd Schizophrenia International Research Society Conference, Florence, Italy, April 10-14, 2010.

Buchanan RW, Boggs DL, Conley RR, Gorelick DA, McMahon RP, Gold JM, Waltz J, Huestis MA, Kelly DL. A pilot study evaluating the cognitive effects of rimonabant in people with schizophrenia. American College of Neuropsychopharmacology 50th Annual Meeting, Waikoloa, Hawaii, December 5, 2011.

Keefe R, Buchanan R, Marder S, Schooler N, Dugar A, Zivkov M, Stewart M. Clinical trials of potential cognitive-enhancing drugs in schizophrenia: What have we learned so far? American College of Neuropsychopharmacology 50th Annual Meeting, Waikoloa, Hawaii, December 5, 2011.

Robert W. Buchanan, M.D.

Fischer BA, Rowland LM, Keller WR, Holcomb HH, Buchanan RW. Acamprosate acts as a partial agonist of the NMDA receptor: Evidence from a spectroscopy study in schizophrenia. American College of Neuropsychopharmacology 50th Annual Meeting, Waikoloa, Hawaii, December 7, 2011.

Keefe RSE, Buchanan RW, Marder SR, Schooler N, Dugar A, Zivkov M, Stewart M. Clinical Trials of Potential Cognitive-Enhancing Drugs in Schizophrenia: What Have We Learned So Far? 3rd Schizophrenia International Research Society Conference, Florence, Italy, April 14-18, 2012.

Kelly DL, Wehring HJ, McMahon RP, Liu F, Linthicum J, Verbalis JG, Buchanan RW, Strauss G, Rubin LH, Lee MR. Relationship of plasma oxytocin levels to baseline symptoms and symptom changes during oxytocin administration in men and women with schizophrenia. American College of Neuropsychopharmacology 51st Annual Meeting, Hollywood, Florida, December 3, 2012.

Buchanan RW, Weiner E, Kelly DL, McMahon RP, Gold JM, Gorelick D. Rasagiline in the treatment of the persistent negative symptoms of schizophrenia. American College of Neuropsychopharmacology 51st Annual Meeting, Hollywood, Florida, December 5, 2012.

Buchanan RW. Cognitive Impairments in Schizophrenia. American Psychiatric Association 166th Annual Meeting, San Francisco, California, May 18, 2013.

Buchanan RW. α 7-Nicotinic Agents for the Treatment of Cognitive Impairments and Negative Symptoms. American Psychiatric Association 166th Annual Meeting, San Francisco, California, May 20, 2013.

Buchanan RW. The Neural Circuitry of Social Impairments in Schizophrenia Spectrum Disorders. American College of Neuropsychopharmacology 52nd Annual Meeting, Hollywood, Florida, December 9, 2013.

Reddy F, Horan W, Wynn JK, Corey-Lisle P, Maglinte G, Barch DM, Buchanan RW, Gold J, Young J, Green MF. Assessing Effort-Based Decision-Making in Schizophrenia with Two Novel Behavioral Paradigms. American College of Neuropsychopharmacology 52nd Annual Meeting, Hollywood, Florida, December 9, 2013.

Fischer BA, Keller WP, McMahon RP, Meyer W, Miller M, Buchanan RW. Endothelial Function in Schizophrenia. American College of Neuropsychopharmacology 52nd Annual Meeting, Hollywood, Florida, December 10, 2013.

Barch DM, Marder SR, Harms MP, Jarskog LF, Cronenwett W, Chen L-S, Weiss M, Maguire RP, Pezous N, Feuerbach D, Lopez-Lopez C, Behrje RB, Gomez-Mancilla B, Buchanan RW. Task-Related Brain Activation in Subjects with Chronic, Stable Schizophrenia and the Effects of a Single-Dose α -7 Nicotinic Acetylcholine Receptor Agonist (AQW051): A Placebo-Controlled, Double-Blind, Randomized Study. American College of Neuropsychopharmacology 52nd Annual Meeting, Hollywood, Florida, December 11, 2013.

Buchanan RW. Maryland Early Intervention: Overview. Mental Hygiene Administration's Conference: "Proactive Approaches to Care in a Time of Change", Baltimore, Maryland, May 14, 2014.

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Reddy F, Horan WP, Wynn JK, Corey-Lisle PK, Maglante GA, Barch D, Buchanan RW, Gold J, Young J, Marder SR, Green MF. Assessing Effort-Based Decision-Making in Schizophrenia with Two Novel Behavioral Paradigms. 4th Schizophrenia International Research Society Conference, Florence, Italy, April 5-9, 2014.

Buchanan RW. The Neural Circuitry of Social Impairments in Schizophrenia Spectrum Disorders. 4th Schizophrenia International Research Society Conference, Florence, Italy, April 5-9, 2014.

Hawco C, Kovacevic N, Buchanan RW, Malhotra A, McIntosh AR, Voineskos A. Activation During a Facial Emotion Observe/Imitate Task and Social Cognitive Performance: An fMRI Analysis Using Partial Least Squares. Cognitive Neuroscience Society 22nd Annual Meeting, San Francisco, California, March 28-31, 2015.

Buchanan RW, Kelly DL, Strauss GP, Gold JM, McMahon RP, Wehring HJ, Weiner E, Osing J, Sullivan KM, Feldman SM, Carpenter WT. Oxytocin and Galantamine for the Treatment of Negative Symptoms and Cognitive Impairments in Schizophrenia. 15th International Congress on Schizophrenia Research, Colorado Springs, Colorado, March 29, 2015.

Garcia CP, Blanchard J, Buchanan RW, Kelly D, Strauss G, Gold JM, McMahon RP, Osing J, Adams HA, Carpenter WT. Subjective Responses to Affiliative Interactions in Schizophrenia: Examining the Contributions of Negative Symptoms and Plasma Oxytocin. 15th International Congress on Schizophrenia Research, Colorado Springs, Colorado, March 30, 2015.

Warren KR, Buchanan RW, McMahon RP, Wehring H, Kearns AM, Feldman S, Richardson C, Vyas G, Koola MM, Keller W, Muhler P, Cassell S, Weiner E, Carpenter WT. Effects of Intranasal Oxytocin on Satiety Signaling in People with Schizophrenia. 15th International Congress on Schizophrenia, Colorado Springs, Colorado, March 31, 2015.

Cohen AS, Strauss G, Mitchell K, Meaux L, Buchanan RW, McMahon R, Carpenter W. Computerized Vocal and Facial Analysis in Schizophrenia During Social Interactions: Data from the Baseline Phase of the Cidar Study. 15th International Congress on Schizophrenia Research, Colorado Springs, Colorado, April 1, 2015.

Hawco C, Kovacevic N, Buchanan RW, Malhotra A, McIntosh AR, Voineskos A. Activation During a Facial Emotion Observe/Imitate Task and Social Cognitive Performance: An fMRI Analysis Using Partial Least Squares. Organization for Human Brain Mapping Meeting, Honolulu, Hawaii, June 14-18, 2015.

Waltz J, Xu Z, Ruiz R, Brown E, Buchanan R, Gold J. Reduced Rostrolateral Prefrontal Cortex Activity Associated with Exploration in Schizophrenia. American College of Neuropsychopharmacology 54th Annual Meeting, Hollywood, Florida, December 7, 2015.

Mitchell KR, Strauss GP, Blanchard JJ, Buchanan RW, McMahon RP, Kelly DL, Adams HA, Carpenter WT, Cohen AS. Examining the Effects of Intranasal Oxytocin on Negative Symptoms in Schizophrenia Using Computer-Based Measures of Expressivity. 2016 Society for Affective Sciences Annual Conference, Chicago, Illinois, March 17-19, 2016.

McGovern J, Horan WP, Gard DE, Docherty NM, Strauss GP, Gold JM, Carpenter WT, Buchanan RW, McMahon RP, Cohen A. Vocal Expression Predicts Variance in Different Neurocognitive Domains in Schizophrenia Patients: Data from Five Archived Databases. 2016 Society for Research in Psychopathology Annual Conference, Baltimore, Maryland, September 29-October 2, 2016.

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Granholm EL, Kelly DL, Strauss GP, Gold JM, Weiner E, McMahon RP, Holden JL, Buchanan RW. Combined oxytocin and CBSST for social function in people with schizophrenia. 2017 Society for Research in Psychopathology Annual Conference, Denver, Colorado, September 14-17, 2017.

Buchanan RW, Kelly DL, Strauss GP, Gold JM, Weiner E, McMahon RP, Holden J, Granholm E. Combined oxytocin and CBSST for social function in people with schizophrenia. 16th International Congress on Schizophrenia Research, San Diego, California, March 2017.

Buchanan RW, Kelly DL, Strauss GP, Gold JM, Weiner E, McMahon RP, Holden J, Granholm E. Combined oxytocin and CBSST for social function in people with schizophrenia. American College of Neuropsychopharmacology 56th Annual Meeting, Palm Springs, California, December 3-7, 2017.

INVITED SPEECHES, GRAND ROUNDS

- 10/1988 Neurological Signs in Schizophrenia. Grand Rounds, Department of Psychiatry, George Washington University Medical Center, Washington, DC
- 7/1994 Update on Clozapine. Grand Rounds, Department of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland
- 7/1994 Psychopharmacology of Schizophrenia. Go-Getters, Inc. Salisbury, Maryland
- 11/1994 Etiology and Pathophysiology of Schizophrenia. PhRMA Education and Research Institute (PERI), Philadelphia, Pennsylvania
- 12/1994 Where Are We Headed with Drug Treatment? 2nd Annual Maryland Conference on Schizophrenia, Pikesville, Maryland
- 1/1996 Efficacy & Side Effect Profile of Clozapine - A Reassessment. Department of Psychiatry, V.A. Medical Center, Philadelphia, Pennsylvania
- 11/1996 The New Genetics of Schizophrenia. Fourth Annual Maryland Schizophrenia Conference, Hunt Valley, Maryland
- 12/1997 The Schizophrenia PORT: A Review of the Findings. Psychiatry Grand Rounds, University of Maryland School of Medicine. Baltimore, Maryland
- 1/1998 Novel Anti-Psychotics, Novel Anti-Depressants and Formulary Management. The Annual Winter Meeting of the American Association of Community Psychiatrists (AACCP): Transformation of Public Mental Health Systems: A National Forum in a State in Transition, Baltimore, Maryland
- 11/1998 Second National Congress of Biological Psychiatry, Istanbul, Turkey
- 1/1999 Pharmacological Treatment of Negative Symptoms. Psychiatry Grand Rounds, Crownsville Hospital Center, Crownsville, Maryland
- 3/1999 The Treatment of Negative Symptoms and Deficit Syndrome of Schizophrenia. Grand Rounds and Research Seminar Presentations, Department of Psychiatry, The University of Iowa Hospitals & Clinics, Iowa City, Iowa

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- 5/1999 Treatment of Negative Symptoms. New Perspectives in Schizophrenia Psychopathology Meeting, Madrid, Spain
- 11/2000 The Pharmacologic Treatment of Negative Symptoms and Cognitive Impairments. Psychiatry Grand Rounds, Springfield Hospital Center, Sykesville, Maryland
- 3/2001 The Pharmacological Treatment of Negative Symptoms. Grand Rounds Presentation, Department of Psychiatry, Hillside Hospital, Glen Oaks, New York
- 6/2001 New Generation Antipsychotics: What is the Evidence for Their Efficacy in Schizophrenia? Psychiatry Grand Rounds, Department of Psychiatry, Dartmouth-Hitchcock Medical Center, Dartmouth Medical School, Lebanon, New Hampshire
- 11/2001 New Generation Antipsychotics: How Good Are They Really? Ninth Annual Maryland Conference on Schizophrenia, Baltimore, Maryland
- 5/2002 New Generation Antipsychotics: What is the Evidence for Their Efficacy? Video Conference, VISN 3, New York
- 9/2002 Neuropsychological Impairments in Schizophrenia: From Anatomical Localization to Functional Outcome. Presentation, Department of Psychiatry, University of Maryland Baltimore, School of Medicine, Baltimore, Maryland
- 11/2003 New Generation Antipsychotics Have Their Own Problems. Annual Maryland Schizophrenia Conference, Baltimore, Maryland
- 4/2004 Treatment Delivery Systems in Schizophrenia. Chair of Session, ICOSR CME/Distance Learning Initiative Meeting, Chicago, Illinois
- 4/2004 The Relationship of Neuropsychological Measures of Symptoms: Design Approaches to Isolate Specific Domains for Investigation. FDA-NIMH-MATRICES Workshop in Clinical Trial Designs for Neurocognitive Drugs for Schizophrenia, Neuroscience Center, Rockville, Maryland
- 4/2004 MATRICS Project: Applications to Drug Development in the Treatment of Cognition in Schizophrenia. CNS Clinical Trials and Drug Development Conference, Philadelphia, Pennsylvania
- 6/2004 Second Generation Antipsychotics: What is the Evidence for Their Efficacy? Grand Rounds, UMDNJ, New Jersey Medical School, Newark, New Jersey
- 3/2005 Adjunctive Pharmacotherapy for the Treatment of Cognitive Impairments in Patients with Schizophrenia. Grand Rounds, Department of Psychiatry, University of Maryland Baltimore, School of Medicine, Baltimore, Maryland
- 6/2005 Pharmacological Treatment of Cognitive Impairments in Patients with Schizophrenia. University of Santiago de Compostela, Santiago de Compostela, Spain

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- 8/2005 Clinical Issues in the Design of Clinical Trials for Neurocognitive Drugs. The International Society for CNS Clinical Trials and Methodology (ISCTM) Meeting, Chicago, Illinois
- 2/2006 Design of Clinical Trials for Negative Symptoms: A Clinical/Academic Perspective. The International Society for CNS Clinical Trials and Methodology (ISCTM) Satellite Meeting, Washington, DC
- 9/2008 Cognition-Enhancing Interventions as Early Treatment in Schizophrenia. Invited Speech. 21st European College of Neuropsychopharmacology Congress, Barcelona, Spain
- 9/2008 New Directions in the Pharmacological Treatment of Schizophrenia. NARSAD meeting at the Maryland Psychiatric Research Center, Baltimore, Maryland
- 10/2008 The Pharmacological Treatment of Cognitive Impairments in People with Schizophrenia. Schizophrenia Conference, Georgetown University, Washington, DC
- 2/2009 The Pharmacological Treatment of Cognitive Impairments in People with Schizophrenia. Grand Rounds, Long Island Jewish Medical Center, New Hyde Park, New York
- 3/2009 The 2009 PORT Psychopharmacology Treatment Recommendations and Summary Statements. Grand Rounds, Department of Psychiatry, University of Maryland Baltimore, School of Medicine, Baltimore, Maryland
- 4/2009 The 2009 PORT Psychopharmacology Treatment Recommendations and Summary Statements. Grand Rounds, Springfield Hospital Center, Sykesville, Maryland
- 5/2009 The Pharmacological Treatment of Cognitive Impairments in People with Schizophrenia. NIDA Clinical Rounds, Johns Hopkins Bayview Medical Center, Baltimore, Maryland
- 7/2009 Selective nicotinic agonists for the treatment of cognitive impairments in schizophrenia. Summer Meeting of the British Association for Psychopharmacology, Oxford, UK, July 26-29, 2009.
- 10/2010 Pharmacological Treatment of Cognitive Impairments in People with Schizophrenia. Grand Rounds, Dartmouth-Hitchcock Medical Center, Department of Psychiatry, Lebanon, New Hampshire
- 11/2010 Pharmacotherapy in Development for Cognition and for Negative Symptoms in Schizophrenia. Grand Rounds, University of Maryland School of Medicine, Department of Psychiatry, Baltimore, Maryland
- 9/2012 The Psychopharmacology of Psychosis: An Update on the State of the Art. Seventh Annual UC Davis Conference Psychotic Disorders, "Advanced Strategies for the Management of Psychosis: A State-of-the-Art Conference for Experienced Clinicians. University of California, Davis, Sacramento, California

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- 2/2013 The Pharmacological Treatment of Cognitive Impairments in People with Schizophrenia. Dean Award Lecture. The American College of Psychiatrists 2013 Annual Meeting. Kauia'i, Hawaii
- 3/2013 Update on the Pharmacological Treatment of Cognitive Impairments in Schizophrenia. UMDNJ-University Behavioral HealthCare Schizophrenia Conference: Schizophrenia from Advances in Neuroscience to Evidence-Based Treatment. Somerset, New Jersey
- 6/2013 35 Years of Clinical Trials. University of Maryland School of Medicine, Festschrift Seminar Honoring William T. Carpenter, Jr., M.D. Linthicum Heights, Maryland
- 10/2014 Glutamatergic Agents for the Treatment of Schizophrenia. Invited Speech. 27th European College of Neuropsychopharmacology Congress, Berlin, Germany
- 3/2015 Neuroimaging Strategies to Dissect the Heterogeneity of the Psychoses. Chair Symposium 3-3, 15th International Congress on Schizophrenia Research, Colorado Springs, Colorado