**CURRICULUM VITAE**

Christopher Robert Bowie, Ph.D., C.Psych.

Professor & Clinical Psychologist

Work Address: Queen’s University, Department of Psychology, Kingston, Ontario, K7L 3N6, Canada

 Tel 613-533-3347, Fax 613-533-2499, Email: BowieC@QueensU.ca

 Website: [www.queensu.ca/psychology/People/Faculty/Christopher-Bowie.html](http://www.queensu.ca/psychology/People/Faculty/Christopher-Bowie.html)

**Biosketch**

Dr. Bowie is a Professor in the Department of Psychology, and a member of the Psychiatry Department and Centre for Neuroscience Studies, at Queen’s University in Kingston, Ontario. He is the Head Consulting Psychologist at the Early Psychosis Intervention Program in Kingston and a Clinician Scientist at the Centre for Addiction and Mental Health in Toronto. His research interests focus on determining the causes and correlates, and developing treatments for, cognitive deficits in mental disorders such as schizophrenia and mood disorders.

He completed his Ph.D. at Hofstra University in New York, training with Drs. Mark Serper and Philip Harvey. For his PhD work, was awarded the Association for Psychological Science’s award for Top Ranked Thesis of the year. He was the first doctoral student to receive the New York State Office of Mental Health Award for Services Research based on his pioneering work on cognitive remediation for severely ill people with schizophrenia.

After his doctoral internship at the Clinical Neuroscience Center of Pilgrim Psychiatric Center, he did post-doctoral training with Dr. Barbara Cornblatt, earning a Young Investigator Award from the National Alliance for Research in Schizophrenia and Depression (NARSAD). Dr. Bowie then accepted an academic appointment at Mount Sinai School of Medicine in New York and continued to study the functional consequences of cognitive impairment in schizophrenia before moving to Queen’s in 2008. He has received two additional NARSAD Awards to study cognitive remediation in schizophrenia and in 2011 received the Top-Ranked Young Investigator Fellow at the annual Winter Brain Conference. Most recently, he was awarded the Dr. Samarthji Lal award for mental health research from the Graham Boeckh Foundation.

Dr. Bowie is the author of over 175 peer reviewed scientific publications and several books and book chapters. He was co-editor of: *Cognitive Remediation to Improve Functional Outcomes* and his novel cognitive remediation’s treatment manual: *Action-Based Cognitive Remediation*. Currently he is leading multiple trials of cognitive remediation for severe mental disorders, developing new approaches to understand stigma and social exclusion toward psychosis, and examining the interactive effects of cognitive deficits and cognitive processes.

**Table of Contents (Ctrl + click) \_**

[Current Positions](#Current_positions)

[Employment History](#Employment)

[Research Interests](#Research_Inter)

[License](#License)

[Education](#Education)

[Honors and Awards](#honors)

[Teaching](#teaching)

[Administrative](#admin)

[Advising/Supervision](#advising)

[Professional Affiliations](#professional_affiliations)

[Professional Activities](#professional_activities)

[Ad Hoc Journal and Publisher Reviews](#ad_hoc)

[External Grant Reviewer](#external_grant)

[Original Peer-Reviewed Publications](#original_publications)

[Edited Books](#edited_books)

[Book Chapters](#book_chapters)

[Academic Reviews of Scholarly Work](#academic_reviews)

[Selected Oral Presentations](#oral_presentations)

[Ongoing Research Support](#ongoing_research_support)

[Completed Research Support](#completed_research_support)

**CURRENT POSITIONS**

**Primary Appointment:**

Professor (1 July 2016)

Department of Psychology, Queen’s University

**Other Appointments:**

Head Consulting Psychologist, Heads Up! Early Intervention for Psychosis Program, Kingston, ON

Independent Scientist at Centre for Addiction and Mental Health, Toronto, ON

**Cross-Appointments**

Department of Psychiatry, Queen’s University

Centre for Neuroscience Studies, Queen’s University

**EMPLOYMENT HISTORY**

2015-2020 **Director of Clinical Training**

 Department of Psychology, Queen’s University

2012-2016 **Associate Professor**

 Department of Psychology, Queen’s University

2008-2012 **Assistant Professor**

 Department of Psychology, Queen’s University

2006-2008 **Assistant Professor**

 Mount Sinai School of Medicine

2004-2008 **Clinical Psychologist**

 Bronx Veteran’s Affairs Medical Center

1997-2008 **Applied Behavior Science Specialist**

 Epilepsy Foundation of Long Island

2003-2006 **Instructor**

 Mount Sinai School of Medicine

2002-2003 **Assistant Psychologist/Post-Doctorate in Neuropsychology**

 The Recognition and Prevention Program (B. Cornblatt, PhD, Mentor)

 The Zucker Hillside Hospital of the North-Shore LIJ Health System

2002-2004 **Neuropsychological Examiner**

 The Epilepsy Foundation of Long Island

1998-2002 **Neuropsychology** **Research Fellowship**

 Mount Sinai School of Medicine (P.Harvey, PhD, Mentor)

2000-2002 **Assistant Research Coordinator**

 The Zucker Hillside Hospital of the North-Shore LIJ Health System

1999-2000 **Clinical** **Psychology** **Intern**

 Pilgrim Psychiatric Center, Brentwood, NY, USA

**RESEARCH INTERESTS**

 Neurocognition in Psychosis and Mood Disorders

 Functional Outcomes in Psychotic and Mood Disorders

 Novel Behavioral Assessment Methods

 Early Intervention and Prevention of Severe Mental Illness

 Pharmacological and Behavioral Treatment of Cognitive Deficits and Affective Biases

**LICENSE**

New York State Licensed Psychologist #016712-1

College of Psychologists of Ontario, Certificate in Clinical Psychology (Certificate Number 4913)

**EDUCATION**

Hofstra University, Clinical/School Psychology

 M.A. Awarded, August 1997

 Ph.D. Awarded, June 2002

 Dissertation Title: "Neurocognition, Symptomatology, and Social-Adaptive Functioning in

 Alcohol-Abusing Schizophrenia Patients"

State University of New York, Oswego, Psychology

 B.A. with Honors Awarded, May 1996

**HONORS AND AWARDS**

**American Psychological Society (*Now* *Association for Psychological Science*)**

 Graduate Student Grant Program: First Prize for Ph.D. Dissertation, June 2002

**The New York State Office of Mental Health**

 Achievement Award in the Area of Services Research for 2002

**National Alliance for Research in Schizophrenia and Depression**

 Young Investigator's Award, 2003

**Schizophrenia Global Medical Conference**

 Young Investigator Travel Award, 2004

**National Institute of Health**

 Student Loan Repayment Award, 2004

**National Alliance for Research in Schizophrenia and Depression**

 Young Investigator's Award, 2007

**Winter Conference on Brain Research**

 Travel Fellowship, 2011 \*Ann Kelley Memorial Fellowship as top rated fellow

**Queen’s University**

 Office of Research Services Travel Award, 2011

**Ontario Ministry of Research and Innovation**

 Early Researcher Award, 2011

**American Journal of Psychiatry**

 Editor’s choice for article of the year, 2012

**Brain and Behavior Research Foundation**

Independent Investigator Award, 2013

**Queen’s University**

 Undergraduate Teaching Award, 2019

**Graham Boeckh Foundation**

Dr. Samarthji Lal Award for Mental Health Research, 2020

**TEACHING**

*Mount Sinai School of Medicine*

Classification of Memory Disorders; Differential Diagnosis of Geriatric Depression; (“Pseudodementia”) and Dementia; Differential Diagnosis of Psychotic Disorders; Neuropsychiatry of Schizophrenia; Neuropsychology of Schizophrenia; Research Methodology; Statistics

*Queen’s University*

 Undergrad

 Abnormal Psychology

 Psychotic Disorders Seminar

 Graduate

 Adult Psychopathology

 Behaviour Therapy for Serious Mental Illnesses

**ADMINISTRATIVE**

*Bronx Veterans Affairs Medical Center*

 Institutional Review Board Member

 Supervisor of MIRECC Psychology Fellows

*Mount Sinai School of Medicine*

 Director of clinical assessment: Conte Neuroscience Center

*Queen’s University*

 Clinical Program Comprehensive Examination Committee 2010-2012

 Merit Committee 2010-2011

 Colloquium Coordinator 2011-2013

 Undergraduate Committee 2012-2015

 Policy and Procedures Committee 2015-2018

 Graduate Committee 2015-2018

 Director of Clinical Training 2015-2020

**ADVISING/SUPERVISION**

**Thesis Committee**

**Supervisor**

**Master’s Theses:**

 Maya Gupta, Clinical Psychology, Queen’s University, 2011, M.Sc. Thesis:

*Understanding treatment-resistant depression: the complicated relationships among neurocognition, symptoms, and functioning.*

 Katherine Holshausen, Clinical Psychology, Queen’s University, 2012, M.Sc. Thesis:

*Structured Therapy for the Enhancement of Purposeful Speech (STEPS): A step in the right direction to treating formal thought disorder in schizophrenia.*

 Michael W. Best, Clinical Psychology, Queen’s University, 2013, M.Sc. Thesis:

*Neurophysiological Behavioural Responses to Schizophrenia-Associated Communication Abnormalities*

 Melissa Milanovic, Clinical Psychology, Queen’s University, 2016, M.Sc. Thesis: *Self-efficacy in*

 *depression: bridging the gap between competence and real-world functioning*

 Tanya Tran, Clinical Psychology, Queen’s University, 2017, M.Sc.: *Effort-based Decision Making in*

 *Behavioral and Cognitive Challenges as Predictors of Functioning in Major Depression*

 Stephanie Woolridge, Clinical Psychology, Queen’s University, 2019, M.Sc.Thesis: *Reducing diagnostic*

*uncertainty in first-episode psychosis: a neuropsychological approach to differentiating between cannabis-induced and primary psychotic disorders.*

Cheslea Wood-Ross, Clinical Psychology, Queen’s University, 2020, M.Sc.: *Cognitive performance in*

*geriatric depression: examining the sensitivity of clinical neuropsychological and experimental working memory tasks.*

**Ph.D. Theses:**

 Maya Gupta, Clinical Psychology, Queen’s University, 2015, Ph.D. Thesis: *Family Cohesion and*

 *Flexibility in Early Episode Psychosis*

 Katherine Holshausen, Clinical Psychology, Queen’s University, 2016, Ph.D. Thesis: *What’s so funny?*

 *an evaluation of the relations among humour use, mirth, and depressive symptomatology*

 Michael Grossman, Clinical Psychology, Queen’s University, 2018, Ph.D. Thesis: *Mechanisms of*

 *Social Cognition in Early Episode Psychosis*

 Michael W. Best, Clinical Psychology, Queen’s University, 2019, Ph.D. Thesis: *A Comparison of*

*Perceptual Training and Executive Training for Improving Neurophysiological Processing, Neurocognition, and Community Functioning in Individuals with Psychotic Disorders*

 Melissa Milanovic, Clinical Psychology, Queen’s University, 2020, Ph.D. Thesis: *Cognitive training in*

*major depressive disorder: perceptions of cognitive malleability, importance of autonomy, and efficacy of a brief psychoeducational intervention.*

***Committee Member***

Clinical Psychology, Queen’s University M.Sc. Theses:

Allisha Patterson, 2009, Sylvia Magrys, 2009, Cherie La Roque, 2010, Laura Katz, 2010, Reagan Mazurka, 2012, Daniella Ladowski, 2014, Tiffany Tsui, 2016, Mashal Haque, 2016, Simone Cunningham, 2017, Katherine Fretz, 2018

Clinical Psychology, Queen’s University Ph.D. Theses:

Julie Burbidge, 2013, Adam Heenan, 2014, Sylvia Magrys, 2015, Lisa Bradford, 2015, Laura Katz, 2015, Cherie La Roque, 2018, Justin Gates, 2019, Amanda Shamblaw, 2019, Ashley Vanstone, 2018

 Brain Behaviour, and Cognitive Psychology, Queen’s University Ph.D. Theses:

 Nicole Bardikoff, 2016

 Neuroscience, Queen’s University, M.Sc. Theses:

 Ryland Steel, 2013, Elaine Choi, 2015, Staci Angelis, 2016, Robyn Cardy, In Progress

 Neuroscience, Queen’s University, M.Sc. Theses:

 Celina Nahanni, 2014,

 Education, Queen’s University, M.Sc. Theses:

 Christina Luzius-Vanin, 2019

***External Examiner***

 Margarita Bougioukas, Clinical Psychology, Hofstra University, 2008, Ph.D. Thesis

 Regan Eric Patrick, Psychology, McMaster University, 2014, Ph.D. Thesis

 June Lystad, Clinical Psychology, University of Oslo, 2016, Ph.D. Thesis

 Heather Brooks, Medical Science, University of Toronto, 2018, MSc Thesis

 Jessica D’Arcy, Medical Science, University of Toronto, 2020, MSc Thesis

 Elayne Aherne, Clinical Psychology, University of Limerick, 2020, PhD Thesis

 Karolina Rokita, Clinical Psychology, National University of Ireland-Galway, 2020, PhD Thesis

**Post-Doctoral Fellows**

 Winnie Leung, Ph.D., Mount Sinai School of Medicine, 2006-2008
 Matt Vandermeer, Ph.D., Queen’s University, 2021-

 Chloe Stewart, Ph.D., Queen’s University, 2021-

**Undergraduate Honour’s Psychology Students**

 ***2009***

 Shannon Xavier, Queen’s University: *Neurocognition, functional capacity and real-world outcomes in psychometrically defined schizotypy*

 Emma Bassett, Queen’s University: *Neurocognitive and functional deficits in undergraduate students with elevated depressed*

***2010***

 Michael Levi, Queen’s University: *An evoked potential examination of emotional processing in schizophrenia*

 Theresa Bernard, Queen’s University: *The association between hypomania, self-reported confidence, and betting: an investigation into goal dysregulation*

***2011***

 Lisa Gou, Queen’s University: *Does Misery Love Company? Non-conscious Social Mimicry as a Function of Depressive Symptoms and Conversational Partner Affect*

 Lauren David, Queen’s University: *Deconstructing the Wisconsin Card Sorting Test: Investigating cognitive impairments in schizophrenia using psychophysical and behavioural assessment*

 Laura Stefanik, Queen’s University: *Explaining neurocognitive variance in functioning in schizophrenia using eye movement and performance-based measures*

***2012***

 Sarah Oullettte, Queen’s University: *Measuring Stigmatizing Attitudes toward Schizophrenia: A Comparison of Traditional and Novel Approaches*

 Erin Meiklejohn, Queen’s University: *Influence of* *Psychiatric Labels and Schizophrenia Symptom Behaviours on Nonverbal Behaviours during Interpersonal Interactions*

***2014***

Caitlin Heino, Queen’s University: *Demonstrating continuity in hallucinations and delusions: A novel method of stigma reduction*

Jennifer Rigby, Queen’s University: *Reducing stigma towards schizophrenia with education: A cognitive behavioural theory-approach to group intervention.*

***2016***

Mariana Borsuk-Gudz, Queen’s University: *Affective attentional bias flexibility and depressive symptomatology*

***2017***

Stephanie Woolridge, Queen’s University: *Look on the bright side: Affective attentional bias training in depression*

Chelsea Wood-Ross, Queen’s University: *Cognitive Training in Major Depressive Disorder: An investigation of cognitive engagement and perceived self-efficacy*

***2018***

Lilian J.C. Laferriere, Queen’s University: *The Impact of Napping on the Consolidation of Clinically-Relevant Information: A Comparison of Depressed and Healthy Individuals*

Jessie Leigh Eriksen, Queen’s University: *A Comparison of Reading Ability in First-Episode Psychosis and Developmental Dyslexia: Evidence for a Differential Diagnosis*

Amanda Hagen, Queen’s University: *Effects of Computer- versus Self-Titration of Difficulty during a Cognitive Remediation Exercise on Intrinsic Motivation in Major Depressive Disorder*

***2019***

Alison Carney, Queen’s University: *An Analysis of Strategy Use in Cognitive Remediation for Depression*

Andrew Whiteman, Queen’s University: *Chunking Memory and Social Functioning*

***2020***

Mara Dempsey, Queen’s University: *Meeting your potential: Predictors of the competence-performance discrepancy in schizophrenia*

Natasha Barich, Queen’s University: *Cognitive and physical activity in individuals with major depressive disorder.*

***2021***

Lindsay Simourd, Queen’s University: *Neurocognitive Ability and Performance Appraisals as a Function of Task Difficulty in Remitted Depression*

**2022**

Ian Doell, Queen’s University: *Social Media Stigmatization of Schizophrenia and Depression*

Maya McGregor, Queen’s University: *Subjective disability and distress in early psychosis: Patient and clinician perspectives*

**Supervised Graduate Students**

*Completed*

Maya Gupta, M.Sc. & Ph.D., currently Psychologist, PEPP Early Psychosis Program, London, ON

Katherine Holshausen, M.Sc. & Ph.D., currently Director of Research, Community Psychiatry, St.

 Joseph’s Hospital, Hamilton, ON

Michael Grossman, Ph.D., currently Post-Doctoral Fellow at CAMH, Toronto, ON

Mike Best, currently a Ph.D., currently Assistant Professor at University of Toronto

Melissa Milanovic, Ph.D., currently a Psychologist at Centre for Addiction and Mental Health

*Active*

Mashal Haque

Tanya Tran

Stephanie Woolridge

Chelsea Wood-Ross

Lindsay Simourd

**Awards for Supervised Students**

Canadian Psychological Association Award for Undergraduate Thesis, 2009 (Shannon Xavier)

Canadian Institute of Health Research Student Fellowship, 2010 (Katherine Holshausen)

Canadian Institute of Health Research Student Fellowship, 2010 (Maya Gupta)

Ontario Graduate Scholarship Fellowship, 2011 (Maya Gupta)

Cognitive Remediation in Psychiatry, 2011: Best Student Poster Presentation (Maya Gupta)

Canadian Psychological Association Clinical Section Travel Award, 2011 (Katherine Holshausen)

Canadian Psychological Association Clinical Section Travel Award, 2011 (Maya Gupta)

Ontario Graduate Scholarship Fellowship, 2012 (Katherine Holshausen)

Cognitive Remediation in Psychiatry, 2011: Best Student Poster Presentation (Michael Grossman)

Canadian Institute of Health Research Doctoral Student Fellowship, 2013 (Maya Gupta)

Vanier Award, 2013 (Katherine Holshausen)

Canadian Institute of Health Research Doctoral Student Fellowship, 2014 (Katherine Holshausen)

Vanier Award, 2014 (Michael Best)

Canadian Institute of Health Research Doctoral Student Fellowship, 2014 (Michael Best)

Social Sciences and Humanities Research Council Doctoral Student Award, 2014 (Michael Grossman)

Social Sciences and Humanities Research Council Master’s Student Award, 2014 (Melissa Milanovic)

Social Sciences and Humanities Research Council Doctoral Student Award, 2016 (Melissa Milanovic)

Ontario Graduate Scholarship Fellowship, 2017 (Tanya Tran)

Beck Institute Scholar, 2017 (Michael Best)

Canadian Institute of Health Research Student Fellowship, 2018 (Stephanie Woolridge)

Vanier Award, 2020 (Stephanie Woolridge)

**PROFESSIONAL AFFILIATIONS**

Canadian Psychological Association

Ontario Psychology Association

Schizophrenia International Research Society

Society for Research in Psychopathology

Society for a Science of Clinical Psychology

**PROFESSIONAL ACTIVITIES**

Program Committee, Society for Research in Psychopathology, 2009

Fellowship Committee, Ontario Mental Health Foundation, 2009-2014- Chair, 2012-2013

International Advisory Board, New Zealand and Australian Journal of Psychiatry 2011 - Present

Consulting Editor, Journal of Abnormal Psychology 2012-Present

Editorial Board, Schizophrenia Research: Cognition, 2014-Present

Editorial Board, Schizophrenia Bulletin, 2016-Present

Committee Member, Canadian Institute for Health Research, Behavioural Sciences, 2014; 2016; 2018

Mood Disorder Association of Ontario, Advisory Board Member, 2013-Present

Panel Member, Health Quality Ontario Expert Advisory Panel for Patients with Schizophrenia, 2016

Advisory Board for Research Advisory Council, Addiction & Mental Health Services – KFLA 2015

Program Committee, Schizophrenia International Research Society, 2016-18

Board Member, Ontario Psychological Association, 2017-2021

**AD HOC JOURNAL AND PUBLISHER REVIEWS**

Acta Neuropsychiatrica, American Journal of Geriatric Psychiatry, American Journal of Psychiatry, American Psychological Association Press, Archives of General Psychiatry, Biological Psychiatry, Bipolar Disorders, CNS Spectrums, Community Mental Health Journal, European Psychiatry, Journal of Abnormal Psychology, Journal of the American Association of Psychiatric Nurses, Journal of Behavior Therapy and Experimental Psychiatry, Journal of Clinical and Experimental Neuropsychology, Journal of Clinical Psychopharmacology, Journal of Neurological Sciences, Journal of Nervous and Mental Disease, Journal of Psychiatric Research, Journal of Visualized Experiments, Neuropsychological Rehabilitation, Neuropsychopharmacology, Progress in Neuro-Psychopharmacology and Biological Psychiatry, Psychiatric Services, Psychological Medicine, Psychosomatics, Schizophrenia Bulletin, Schizophrenia Research, Social Psychiatry and Psychiatric Epidemiology

**EXTERNAL GRANT REVIEWER**

North Shore – LIJ Research Institute 2006

Ontario Mental Health Foundation 2006

The Netherlands Organisation for Health Research and Development 2008

Austrian Science Foundation 2011

Ireland Health Research Board 2012

National Institute for Health Research, U.K., 2013; 2016

**ORIGINAL PEER-REVIEWED PUBLICATIONS**

 **(Number of Citations as of 19 January 2022 retrieved from Google Scholar)**

 ***Supervised students and post-doctoral fellows are italicized***

1. Bowie CR, Moriarty PJ, Harvey PD, Parrella M, White L, Davis KL. Aggression in elderly schizophrenia patients: A comparison of nursing home and state hospital residents. Journal of Neuropsychiatry and Clinical Neurosciences, 2001, 13, 357-366. **(41)**
2. Friedman JI, Harvey PD, Coleman T, Moriarty PJ, Bowie C, Parrella M, White L, Adler D, Davis KL. Six-year follow-up study of cognitive functional status across the lifespan in schizophrenia: A comparison with Alzheimer’s disease and normal aging. American Journal of Psychiatry, 2001, 158, 1441-144. **(301)**
3. Harvey PD, Serper MR, White L, Parrella MJ, McGurk, SR, Moriarty PJ, Bowie C, Vadhan N, Friedman J, Davis KL. The convergence of neuropsychological testing and clinical ratings of cognitive impairment in patients with schizophrenia. Comprehensive Psychiatry, 2001, 42, 306-313. **(75)**
4. Harvey PD, Bowie CR, Friedman JI. Cognition in schizophrenia. Current Psychiatry Reports, 2001, 3, 423-428. **(69)**
5. Bowie CR, Harvey PD, Moriarty PJ, Parrella M, White L, Mohs RC, Davis KL. Cognitive assessment of geriatric schizophrenic patients with severe impairment. Archives of Clinical Neuropsychology, 2002, 17, 611-623. **(33)**
6. Harvey PD, Moriarty PJ, Bowie C, Friedman JI, Parrella M, White L, Davis KL. Cortical and subcortical cognitive deficits in schizophrenia: Convergence of classifications based on language and memory skill areas. Journal of Clinical and Experimental Neuropsychology, 2002, 24, 55-66. **(28)**
7. Harvey PD & Bowie CR. Cognitive deficits in schizophrenia: Early course and treatment. Clinical Neuroscience Research, 2003, 3, 17-22. **(18)**
8. Auther AM, Lencz T, Smith CW, Bowie CR & Cornblatt BA. Overview of the first annual workshop on the schizophrenia prodrome. Schizophrenia Bulletin, 2003, 29, 625-631. **(11)**
9. Harvey, PD & Bowie, CR. Cognitive functioning in schizophrenia. Current Psychosis and Therapeutics Reports, 2003, 1, 22-27. **(1)**
10. Bowie CR, Harvey PD, Moriarty PJ, Parrella M, White L, Davis KL. A comprehensive analysis of verbal fluency deficit in geriatric schizophrenia. Archives of Clinical Neuropsychology, 2004, 19, 289-303. **(39)**
11. Bowie CR, Reichenberg A, Rieckmann N, Parrella M, White L, Harvey PD. Stability and functional correlates of memory-based classification in older schizophrenia patients. American Journal of Geriatric Psychiatry, 2004, 12, 376-386. **(27)**
12. Bowie CR, Serper MR, Riggio S Harvey PD. Neurocognition, symptomatology, and functional skills in older alcohol-abusing schizophrenia patients. Schizophrenia Bulletin, 2005, 31, 175-182. **(71)**
13. Bowie CR & Harvey PD. Cognition in Schizophrenia: Impairments, Determinants, and Functional Importance. Psychiatric Clinics of North America, 2005, 28, 613-633. **(375)**
14. Bowie CR. Cognitive impairment in schizophrenia spectrum personality disorders. Current Psychosis and Therapeutics Reports, 2005, 3, 147-151. **(3)**
15. Harvey, PD & Bowie, CR. Ziprasidone: efficacy, tolerability, and emerging data on wide-ranging effectiveness. Expert Opinion in Pharmacotherapy, 2005, 6, 337-46. **(86)**
16. Bowie CR, *Tsapelas I*, Friedman J, Parrella M, White L, Harvey PD. The longitudinal course of thought disorder in chronic geriatric schizophrenia patients. American Journal of Psychiatry, 2005, 162, 793-795. **(35)**
17. Harvey PD, Bowie CR, Loebel A. Is cognitive improvement associated with switching to a new atypical antipsychotic sustained over time? A six-month extension study of patients switched to ziprasidone. Clinical Neuropsychiatry – Journal of Treatment Evaluation, 2005, 2, 110-115. **(2)**
18. Rieckmann N, Reichenberg A, Bowie CR, Parrella M, White L, Harvey PD. Depressed Mood and Its Functional Correlates in Institutionalized Schizophrenia Patients. Schizophrenia Research, 2005, 77, 179-187. **(38)**
19. Bowie CR, Reichenberg A, Patterson TL, Heaton RK, Harvey PD. Determinants of Real World Functional Performance in Schizophrenia Subjects: Correlations with Cognition, Functional Capacity, and Symptoms. American Journal of Psychiatry, 2006, 163, 418-425. **(841)**
20. Harvey PD, Koren D, Reichenberg A, Bowie CR. Negative Symptoms and Cognitive Deficits: What is the nature of their relationship? Schizophrenia Bulletin, 2006, 32, 250-258. **(508)**
21. Harvey PD, Bowie CR, Loebel A. Neuropsychological Normalization with Long-Term Atypical Antipsychotic Treatment: Results of a Six-Month, Randomized, Double-Blind Comparison of Ziprasidone vs. Olanzapine. Journal of Neuropsychiatry and Clinical Neurosciences, 2006, 18, 54-63. **(56)**
22. Harvey PD, Friedman JI, Bowie C, Reichenberg A, Parrella M, White L, Davis KL. Validity and stability of performance-based estimates of premorbid educational functioning in older patients with schizophrenia. Journal of Clinical and Experimental Neuropsychology, 2006, 28, 178-92. **(38)**
23. Bowie CR, *Fallon C*, Harvey PD. Convergence of Clinical Staff Ratings and Research Ratings to Assess Patients with Schizophrenia in Nursing Homes. Psychiatric Services, 2006, 57, 838-843. **(11)**
24. Harvey PD, Green M, Bowie, C, Loebel A. The dimensions of clinical and cognitive change in schizophrenia: evidence for the independence of improvements. Psychopharmacology, 2006, 187, 356-363. **(76)**
25. Chemerinski E, Reichenberg A, Kirkpatrick B, Bowie CR, Harvey PD. Three dimensions of clinical symptoms in elderly patients with schizophrenia: prediction of six-year cognitive and functional status. Schizophrenia Research, 2006, 85, 12-19. **(34)**
26. Bowie CR & Harvey PD. Treatment of Cognitive Deficits in Schizophrenia. Current Opinion in Investigational Drugs, 2006, 7, 608-613. **(53)**
27. Bowie CR & Harvey PD. Cognitive deficits and functional outcome in schizophrenia. Neuropsychiatric Disease and Treatment, 2006, 2, 531-536. **(470)**
28. Bowie CR & Harvey PD. Schizophrenia from a neuropsychiatric perspective. Mount Sinai Journal of Medicine, 2006, 73, 993-998. **(27)**
29. White L, Friedman JI, Bowie CR, Evers M, Harvey PD, Parrella M, Mihaila E, Davis KL. Long-term Outcomes In Chronically Hospitalized Geriatric Patients With Schizophrenia: Retrospective Comparison of First Generation and Second Generation Antipsychotics. Schizophrenia Research, 2006, 88, 127-134. **(30)**
30. Bowie CR & Harvey PD. Administration and interpretation of the trail making test. Nature Protocols, 2006, 1, 2277-2281. **(886)**
31. Harvey PD, Reichenberg A, Bowie C. Cognition and aging in psychopathology: focus on schizophrenia and depression. Annual Review of Clinical Psychology, 2006, 2, 389-409. **(55)**
32. McClure MM, Zegarelli G, Bowie CR, Mitropoulou V, Siever LJ, Harvey PD. Cognitive impairment in the schizophrenia spectrum: What is the evidence for similarity to schizophrenia? Current Psychosis and Therapeutics Reports, 2006, 4, 128-133.
33. McClure MM, Bowie CR, Patterson TL, Heaton RK, Weaver C, Anderson H, Harvey PD. Correlations of functional capacity and neuropsychological performance in older patients with schizophrenia: evidence for specificity of relationships? Schizophrenia Research, 2007, 89, 330-338. **(184)**
34. McClure MM, Bowie CR, Siever L, Harvey PD. Visual-Spatial Learning and Memory in Schizotypal Personality Disorder: Continued Evidence for the Importance of Working Memory in the Schizophrenia Spectrum. Archives of Clinical Neuropsychology, 2007, 22, 109-116. **(53)**
35. Bowie CR & *Jaga K*. Methods for treating cognitive deficits in schizophrenia. Expert Review of Neurotherapeutics, 2007, 7, 281-287. **(19)**
36. Buckley PF, Harvey PD, Bowie CR, Loebel A. The relationship between symptomatic remission and neuropsychological improvement in schizophrenia patients switched to treatment with ziprasidone. Schizophrenia Research, 2007, 94, 99-106. **(60)**
37. Bowie CR, Twamley EW, *Anderson H*, *Halpern B*, Patterson T & Harvey PD. Self-assessment of functional status in schizophrenia. Journal of Psychiatric Research, 2007, 41, 1012-1018. **(251)**
38. Mausbach BT, Bowie CR, Harvey PD, Twamley EW, Goldman SR, Jeste DV, Patterson TL. Usefulness of the UCSD Performance-based Skills Assessment (UPSA) for predicting residential independence in patients with chronic schizophrenia. Journal of Psychiatric Research. 2008, 42, 320-327. **(142)**
39. Bowie CR, *Leung WL*, Reichenberg A, *McClure MM*, Patterson TL, Heaton RK, Harvey PD. Predicting Schizophrenia Patients’ Real-World Behavior with Specific Neuropsychological and Functional Capacity Measures. Biological Psychiatry, 2008, 63(5), 505-511. **(712)**
40. *Leung WL*, Bowie CR, Harvey PD. Functional implications of neuropsychological normality and symptom remission in older outpatients diagnosed with schizophrenia: a cross-sectional study. Journal of the International Neuropsychological Society, 2008, 14, 479-488. **(138)**
41. Chemerinski E, Bowie CR, *Anderson H*, Harvey PD. Depression in schizophrenia: Methodological artifact or distinct feature of the illness? Journal of Neuropsychiatry and Clinical Neurosciences, 2008, 20, 431-440. **(69)**
42. Kirkpatrick B, Messias E, Harvey PD, Fernandez-Egea E, Bowie CR. Is schizophrenia a syndrome of accelerated aging? Schizophrenia Bulletin, 2008, 34, 1024-1032. **(264)**
43. Bowie CR, Harvey PD. Communication Abnormalities Predict Functional Outcomes in Chronic Schizophrenia: Differential Associations with Social and Adaptive Functions. Schizophrenia Research, 2008, 103, 240-247. **(113)**
44. Bowie CR, Reichenberg A, McClureMM*, Leung WL*, Harvey PD. Age-associated differences in cognitive performance in older community dwelling schizophrenia patients: differential sensitivity of clinical neuropsychological and experimental information processing tests. Schizophrenia Research, 2008, 106, 50-58. **(53)**
45. Yehuda R, Harvey PD, Golier J, Newmark RE, Bowie CR, *Wohltmann JJ*, Grossman RA, Schmeidler J, Hazlett EA, Buchsbaum M. Changes in Relative Glucose Metabolic Rate Following Cortisol Administration in Aging Veterans with Posttraumatic Stress Disorder: An FDG-PET Neuroimaging Study. Journal of Neuropsychiatry and Clinical Neurosciences, 2009, 21, 132-143. **(37)**
46. Harvey PD, Keefe RSE, Patterson TL, Heaton RK, Bowie CR. Abbreviated Neuropsychological Assessment in Schizophrenia: Prediction of Different Aspects of Outcome. Journal of the International Neuropsychological Society, 2009, 31, 462-471. **(67)**
47. Reichenberg A, Harvey PD, Bowie CR, Mojtabai R, Rabinowitz J, Heaton RK, Bromet E. Neuropsychological function and dysfunction in schizophrenia and psychotic affective disorders. Schizophrenia Bulletin, 2009, 35, 1022-1029. **(561)**
48. Leifker FR, Bowie CR, Harvey PD. Determinants of everyday outcomes in schizophrenia: the influences of cognitive impairment, functional capacity, and symptoms. Schizophrenia Research, 2009,115, 82-87. **(229)**
49. Bellack AS, Boweden CL, Bowie CR, et al. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. Journal of Clinical Psychiatry, 2009, 70, 1-48. **(708)**
50. Mausbach BT, Moore R, Bowie C, Cardenas V, Patterson TL. A review of instruments for measuring functional recovery in those diagnosed with psychosis. Schizophrenia Bulletin, 2009, 35, 307-318. **(148)**
51. Harvey PD, Helldin L, Bowie C, Olsson AK, Hjarthag F, Torsten N, Heaton RK, Patterson TL. Performance-Based Measurement of Functional Disability in Schizophrenia: A Cross-National Study in the United States and Sweden. American Journal of Psychiatry, 2009, 166, 821-827. **(129)**
52. Harvey PD, Reichenberg A, Bowie CR, Patterson TL, Heaton RK. The course of neuropsychological performance and functional capacity in older patients with schizophrenia: influences of previous history of long-term institutional stay. Biological Psychiatry, 2010, 67, 933-939. **(82)**
53. Mausbach BT, Harvey PD, Pulver AE, Depp CA, Wolyniec PS, Thornquist JR, McGrath JA, Bowie CR, Patterson TL. Relationship of the Brief UCSD Performance-based Skills Assessment (UPSA-B) to multiple indicators of functioning in people with schizophrenia and bipolar disorder. Bipolar Disorders, 2010, 12, 45-55. **(110)**
54. Bowie CR, Depp C, McGrath JA, Wolyniec P, Mausbach BT, Thornquist MH, Luke J, Patterson TL, Harvey PD, Pulver AE. Prediction of Real World Functional Disability in Chronic Mental Disorders: A Comparison of Schizophrenia and Bipolar Disorder. American Journal of Psychiatry, 2010, 167, 1116-1124. **(452)**
55. Leifker FR, Patterson TL, Bowie CR, Mausbach BT, Harvey PD. Psychometric Properties of Performance-based Measurements of Functional Capacity: Test-Retest Reliability, Practice Effects, and Potential Sensitivity to Change. Schizophrenia Research, 2010, 119, 246-252. **(83)**
56. Depp CA, Mausbach BT, Harvey PD, Bowie CR, Wolyniec PS, Thornquist MH, Luke JR, McGrath JA, Pulver AE, Patterson TL. Social Competence and observer-rated social functioning in bipolar disorder. Bipolar Disorders, 2010, 12, 843-850. **(53)**
57. Adelsky MB, Bowie CR, Goldberg TE, Serper MR. Adaptive competence impairment and cognitive deficits in acutely ill schizophrenia patients residing in nursing homes. American Journal of Geriatric Psychiatry, 2011, 19, 752-756. **(12)**
58. *Larochette AC*, Harrison AG, Rosenblum Y, Bowie CR. Additive neurocognitive deficits in adults with ADHD and depressive symptoms. Archives of Clinical Neuropsychology, 2011, 26, 385-395. **(31)**
59. Bowie CR, *Gupta M, Holshausen* *K*. Disconnected and underproductive speech in schizophrenia: Unique relationships across multiple indicators of social functioning. Schizophrenia Research, 2011, 131, 152-156. **(40)**
60. Mausbach BT, Depp CA, Bowie CR, Harvey PD, McGrath JA, Thornquist MH, Luke JR, Wolyniec PS, Pulver AE, Patterson TL. Sensitivity and specificity of the UCSD Performance-Based Skills Assessment (UPSA-B) for identifying functional milestones in schizophrenia. Schizophrenia Research, 2011, 132, 165-170. **(76)**
61. Harvey PD, McClure MM, Patterson TL, McGrath JA, Pulver A, Bowie CR, Siever LJ. Impairment in functional capacity as an endophenotype candidate in severe mental illness. Schizophrenia Bulletin, 2012, 38(6), 1318-1326. **(31)**
62. *Gupta M, Bassett E*, Iftene F, Bowie CR\*. Functional outcomes in schizophrenia: understanding the competence-performance discrepancy. Journal of Psychiatric Research, 2012, 46, 205-211. \*Corresponding author **(55)**
63. Loewenstein DA, Czaja SJ, Bowie CR, Harvey PD. Age-associated differences in cognitive performance in older patients with schizophrenia: a comparison with healthy older adults. American Journal of Geriatric Psychiatry, 2012, 20, 29-40. **(70)**
64. Bowie CR, *Mclaughlin D*, Carrión RE, Auther AM, Cornblatt BA. Cognitive changes following antidepressant or antipsychotic treatment in adolescents at clinical risk for psychosis. Schizophrenia Research, 2012, 137, 110-117. **(28)**
65. Harvey PD, Bowie CR. Cognitive Remediation in Severe Mental Illness. Innovations in Clinical Neuroscience, 2012, 9, 1-4. **(9)**
66. Mausbach BT, Roepke SK, Chattillion EA, Harmell AL, Moore R, Romero-Moreno R, Bowie CR, Grant I. Multiple mediators of the relations between caregiving stress and depressive symptoms. Aging and Mental Health, 2012, 16, 27-38. **(118)**
67. Depp CA, Mausbach BT, Harmell AL, Salva GN, Bowie CR, Harvey PD, Patterson TL. Meta-analysis of the association between cognitive abilities and everyday functioning in bipolar disorder. Bipolar Disorders, 2012, 14, 217-226. **(259)**
68. Depp CA, Mausbach BT, Bowie C, Wolyniec P, Thornquist MH, Luke JR, McGrath JA, Pulver AE, Harvey PD, Patterson TL. Determinants of occupational and residential functioning in bipolar disorder. Journal of Affective Disorders, 2012, 136, 812-818. **(41)**
69. Gould F, Bowie CR, Harvey PD. The influence of demographic factors on functional capacity and everyday functional outcomes in schizophrenia. Journal of Clinical and Experimental Neuropsychology, 2012, 34, 467-475. **(44)**
70. *Gupta M, Holshausen K*, Mausbach B, Patterson T, Bowie CR\*. Predictors of change in functional competence and real world behavior following Functional Adaptation Skills Training for schizophrenia. Journal of Mental and Nervous Disease, 2012, 200, 705-711. \*Corresponding author **(20)**
71. Bowie CR, McGurk SM, Mausbach BT, Patterson TL, Harvey PD. Combined cognitive remediation and functional skills training for schizophrenia: effects on cognition, functional competence, and real world behavior. American Journal of Psychiatry, 2012, 169, 710-718. **(324)**
72. Harvey PD, Bowie CR. Cognitive enhancement in schizophrenia: Pharmacological and cognitive remediation approaches. Psychiatric Clinics of North America, 2012, 35(3), 683-698. **(74)**
73. Chengappa KNR, Turkin SR, DeSanti S, Bowie CR, Brar JS, Schlicht PJ, Murphy SL, Hetrick ML, Bilder R, Fleet D. A preliminary, randomized, double-blind, placebo-controlled trial of L-Carnosine to improve cognition in schizophrenia. Schizophrenia Research, 2012, 142, 145-152. **(78)**
74. *Best M* & Bowie CR\*. Neurophysiological responses to schizophrenia-associated communication abnormalities.Schizophrenia Research, 2013, 148, 157-162. \*Corresponding Author **(7)**
75. Cardenas V, Abel S, Bowie CR, Tiznado D, Depp CA, Patterson TL, Jeste DL, Mausbach BT. When functional capacity and real world functioning converge: the role of self-efficacy. Schizophrenia Bulletin, 2013, 39, 908-916. **(93)**
76. Mausbach BT, Moore RC, Davine T, Cardenas V, Bowie CR, Ho J, Jeste DV, Patterson TL. The use of the theory of planned behavior to predict engagement in functional behaviors in schizophrenia. Psychiatry Research, 2013, 205, 36-42. **(32)**
77. Bowie CR, *Gupta M, Holshausen K*. Cognitive remediation therapy for mood disorders: rationale, early evidence, and future directions. Canadian Journal of Psychiatry, 2013, 58, 319-325. **(80)**
78. Bowie CR, *Gupta M, Holshausen K*, Jokic R, *Best, M*, Milev, R. Cognitive remediation for treatment resistant depression: Effects on cognition and functioning and the role of online homework. Journal of Nervous and Mental Disorders, 2013, 201, 680-685. **(138)**
79. McClure MM, Harvey PD, Bowie CR, Iacoviello B, Siever LJ. Functional outcomes, functional capacity, and cognitive impairment in schizotypal personality disorder. Schizophrenia Research, 2013, 144, 146-150. **(54)**
80. *Gupta M, Holshausen K, Best M,* Jokic R, Milev R, *Bernard T, Gou L,* Bowie CR\*. Relationships among neurocognition, symptoms, functioning in treatment-resistant depression. Archives of Clinical Neuropsychology, 2013, 28, 272-281. \*Corresponding Author **(44)**
81. *Best MW*, Fitzpatrick M, Milev R, Bowie CR, Jokic R. Utility of the Berlin questionnaire for predicting obstructive sleep apnea in individuals with treatment-resistant depression. Sleep and Breathing, 2013, 17, 1221-1227. **(17)**
82. Iftene F, Bowie CR, Milev R, Hawken E, Talikowska-Szymczak E, Potopsingh D, Hanna S, Mulroy J, Groll D, Millson R. Identification of primary polydipsia in a severe and persistent mental illness outpatient population: A prospective observational study. Psychiatry Research, 2013, 210, 679-683. **(27)**
83. Porter RJ, Bowie CR, Jordan J, Malhi G. Cognitive remediation as a treatment for major depression – a rationale, review of evidence, and recommendations for future research. Australia and New Zealand Journal of Psychiatry, 2013, 47, 1165-1175. **(94)**
84. Ho J, Moore R, Cardenas V, Bowie CR, Patterson TL, Mausbach, BT. Direct and mediated effects of cognitive function with multidimensional outcome measures in schizophrenia: The role of functional capacity. Journal of Clinical and Experimental Neuropsychology, 2013, 35(8), 882-895. **(11)**
85. Chengappa KNR, Bowie CR, Schlicht PJ, Fleet D, Brar JS, Jindal R. Randomized placebo-controlled adjunctive study of an extract of *Withania somnifera* for cognitive dysfunction in bipolar disorder. J Clin Psychiatry, 2013, 74(11), 0-0. **(92)**
86. Harvey PD & Bowie CR. Improving cognition in schizophrenia: Pharmacological and cognitive remediation approaches. Minerva Psichiatrica, 2013, 54, 1-13. **(2)**
87. *Best MW, Gupta M*, Bowie CR\*, Harvey PD. A longitudinal examination of the moderating effects of symptoms on the relationship between functional competence and real world functional performance in schizophrenia. Schizophrenia Research: Cognition, 2014, 1(2), 90-95. **(41)** \*Corresponding Author
88. Reichenberg, A, Feo, C, Prestia, D, Bowie, CR, Patterson, TL, Harvey, PD. The course and correlates of everyday functioning in schizophrenia. Schizophrenia Research: Cognition, 2014, 1(1), 47-52. **(51)**
89. Depp CA, Strassnig M, Mausbach BT, Bowie CR, Wolyniec P, Thornquist MH, Luke JR, McGrath JA, Pulver AE, Patterson TL, Harvey PD. Association of obesity and treated hypertension and diabetes with cognitive ability in bipolar disorder and schizophrenia. Bipolar Disorders, 2014, 16, 422-431. **(78)**
90. Lepage M, Bodnar M, Bowie CR. Neurocogition: clinical and functional outcomes in schizophrenia. Canadian Journal of Psychiatry, 2014, 59, 5-12. **(258)**
91. Bowie CR, *Grossman M, Gupta M*, Oyewumi LK, Harvey PD. Cognitive remediation in schizophrenia: efficacy and effectiveness in patients with early versus long-term course of illness. Early Intervention in Psychiatry, 2014, 8, 32-38. **(123)**
92. *Holshausen K*, Bowie CR\*, Mausbach BT, Patterson TL, Harvey PD. Neurocognition, functional capacity, and functional outcomes: The cost of inexperience. Schizophrenia Research, 2014, 152, 430-434. \*Corresponding Author **(46)**
93. *Holshausen, K,* Harvey, PD, Elvevåg, B, Foltz, PW, Bowie, CR\*. Latent semantic variables are associated with formal thought disorder and adaptive behavior in older inpatients with schizophrenia. Cortex, 2014, 55, 88-96. **(66)**
94. *Gupta, M, Holshausen, K, Gou L,* Bowie, CR\*. Measuring negative symptom change in schizophrenia: considering alternatives to self-report. Expert Rev Neurother, 2014, 14(8), 911-922. **(5)**
95. *Heenan, A*, *Best, MW,* *Oullette, SJ, Meiklejohn, E*, Troje, NF, Bowie, CR\*. Assessing threat responses towards the symptoms and diagnosis of schizophrenia using visual perceptual biases. Schizophrenia Research, 2014, 159, 238-242. **(6)**
96. Porter, RJ, Douglas, K, Jordan, J, Bowie, CR, Roiser, J, Malhi, GS. Psychological treatments for cognitive dysfunction in major depressive disorder: current evidence and perspectives. CNS and Neurological Disorders – Drug Targets, 2014, 13(10), 1677-1692. **(12)**
97. Robertson BR, Prestia D, Twamley EW, Patterson, TL, Bowie CR, Harvey PD. Social competence versus negative symptoms as predictors of real world social functioning in schizophrenia. Schizophrenia Research, 2014, 160, 136-141. **(108)**
98. *Xavier, S*, *Best,MW*, *Schorr, E*, Bowie, CR. Neurocognition, functional competence, and self-reported functional impairment in psychometrically defined schizotypy. Cognitive Neuropsychiatry, 2015, 20, 53-63. **(7)**
99. Depp, CA, Bowie, CR, Mausbach, BT, Wolyniec, P, Thornquist, MH, Luke, JR, McGrath, JA, Pulver, AE, Patterson, TL, Harvey, PD. Current smoking is associated with worse cognitive and adaptive functioning in serious mental illness. Acta Psychiatrica Scandinavica, 2015, 131(5), 333-341. **(63)**
100. *Best MW*, Bowie CR. Neurophysiological evidence for a processing bias toward schizophrenia-associated communication abnormalities. Schizophrenia Research, 2015, 169, 334-339. **(2)**
101. Strassnig, MT, Raykov, T, O’Gorman, C, Bowie, CR, Sabbag, S, Durand, D, Patterson, TL, Pinkham, A, Penn, DL, Harvey, PD. Determinants of different aspects of everyday outcome in schizophrenia: The roles of negative symptoms, cognition, and functional capacity.Schizophrenia Research, 2015, 165(1), 76-82. **(170)**
102. Golas, AC, Kalache, SM, Tsoutsoulas, C, Mulsant, BH, Bowie, CR, Rajji, TK. Cognitive remediation for older community-dwelling individuals with schizophrenia: A pilot and feasibility study. International Journal of Geriatric Psychiatry, 2015, 30(11), 1129-1134. **(8)**
103. Moore, RC, Harmell, AL, Harvey, PD, Bowie, CR, Depp, C, Pulver, AE, McGrath, JA, Patterson, TL, Cardenas, V, Wolyniec, P,Thornquist, MH, Luke, JR, Palmer, BW, Jeste, DV, & Mausbach, BT (2015). Improving the understanding of the link between cognition and functional capacity in schizophrenia and bipolar disorder. Schizophrenia Research, 2015, 169, 121-127. **(18)**
104. Keefe, RS, Haig GM, Harvey PD, Dunayevich E, Medalia A, Davidson M, Lombardo I, Bowie CR, Buchanan RW, Bugarski-Kirola D, Carpenter WT, Csernansky JT, Dago PL, Durand DM, Frese FJ, Goff DC, Gold JM, Hooker CI, Kopelowicz A, Loebel A, McGurk SR, Opler LA, Pinkham AE, Stern RG. Report on ISCTM Consensus Meeting on Clinical Assessment of Response to Treatment of Cognitive Impairment in Schizophrenia. Schizophrenia Bulletin, 2016, 2(1), 19-33. **(47)**
105. *Holshausen, K*, Bowie CR, Harkness, KL. The relation of childhood maltreatment to psychotic symptoms in adolescents and young adults with depression. Journal of Clinical Child and Adolescent Psychology, 2016, 45(3), 241-247. **(23)**
106. *Best, MW, Grossman, M,* Oyewumi, K, Bowie, CR. Examination of the positive and negative syndrome scale (PANSS) factor structure and longitudinal relationships with functioning in early psychosis. Early Intervention in Psychiatry, 2016, 10(2), 165-170. **(21)**
107. Kumar S, Mulsant BH, Tsoutsoulas C, Ghazala Z, Voineskos AN, Bowie C, Rajji TK. An optimal combination of MCCB and CANTAB to assess functional capacity in older individuals with schizophrenia. International Journal of Geriatric Psychiatry, 2016, 31, 1116-1123. **(10)**
108. Naiberg MR, Newton DF, Collins JE, Dickstein DP, Bowie CR, Goldstein BI. Elevated triglycerides are associated with decreased executive function among adolescents with bipolar disorder. Acta Psychiatrica Scandinavica, 2016, 134, 241-248. **(39)**
109. Naiberg MR, Newton DF, Collins JE, Bowie CR, Goldstein BI. Impulsivity is associated with blood pressure and waist circumference among adolescents with bipolar disorder. Journal of Psychiatric Research, 2016, 83, 230-239. **(28)**
110. *Best MW*, Bowie CR, Naiberg M, Goldstein BI, Newton, DF. Neurocognition and psychosocial functioning in adolescents with bipolar disorder. Journal of Affective Disorders, 2017, 207, 406-412. **(15)**
111. Cha DS, *Best MW*, Bowie CR, Gallaugher LA, Woldeyohannes HO, Soczynska JK, Lewis G, MacQueen G, Sahakian BJ, Kennedy SH, Lui JP, Mansur RB, McIntyre RS. A randomized, double-blind, placebo-controlled, crossover trial evaluating the effect of intranasal insulin on cognition and mood in individuals with treatment-resistant major depressive disorder. Journal of Affective Disorders, 2017, 210, 57-65. **(34)**
112. Bowie CR, *Milanovic M, Tran T, Cassidy S*. Disengagement from Tasks as a Function of Cognitive Load and Depressive Symptom Severity. Cognitive Neuropsychiatry, 2017, 22, 83-94. **(23)**
113. *Grossman* M, Bowie CR, Lepage M, Malla AK, Joober R, Iyer SN. Smoking status and its relationship to demographic and clinical characteristics in first episode psychosis. Journal of Psychiatric Research, 2017, 85, 83-90. **(15)**
114. Porter RJ, Hammar A, Beevers CG, Bowie CR, Nodtvedt OO, Peckham AD, Siegle GJ, Tharp JA, Ueland T, Vinogradov S, Johnson SL. Cognitive and affective remediation training for mood disorders. Australia and New Zealand Journal of Psychiatry, 2017, 51(4), 317-319. **(9)**
115. Benoit A, Bowie CR, Lepage M. Is cognitive insight relevant to functional capacity in schizophrenia? Schizophrenia Research, 2017, 184, 150-151. **(5)**
116. Bowie CR, *Grossman M, Gupta M, Holshausen K, Best MW*. Action-based cognitive remediation for individuals with serious mental illnesses: Effects of real-world simulations and goal setting on functional and vocational outcomes. Psychiatric Rehabilitation Journal, 2017, 40(1), 53-60. **(56)**
117. *Best MW,* Bowie CR\*. A Review of Cognitive Remediation Approaches for Schizophrenia: From Top-Down to Bottom-Up, Brain Training to Psychotherapy. Expert Review of Neurotherapeutics, 2017, 17, 713-723. **(54)**
118. Miskowiak KW, Burdick KE, Martinez-Aran A, Bonnin CM, Bowie CR, Carvalho AF, Gallagher P, Lafer B, López-Jaramillo C, Sumiyoshi T, McIntyre RS, Schaffer A, Porter R, Torres I, Yatham LN, Young AH, Kessing LV, Vieta E.Methodological Recommendations for Cognition Trials in Bipolar Disorder by the International Society for Bipolar Disorders Targeting Cognition Task Force. Bipolar Disorders, 2017, 19, 614-626. **(111)**
119. McIntyre, R.S., *Best, M*., Bowie, C.R., Carmona, N.C., Cha, D.S., Lee, Y. ... et al. The THINC-integrated tool (THINC-it) screening assessment for cognitive dysfunction: Validation in patients with major depressive disorder. Journal of Clinical Psychiatry, 2017, 78, 873-881. **(73)**
120. *Gupta M,* Bowie CR. Family cohesion and flexibility in early episode psychosis. Early Intervention in Psychiatry, 2018, 12, 886-892. **(8)**
121. Muralidharan A, Finch A, Bowie CR, Harvey PD. Thought, language, and communication deficits and association with everyday functional outcomes among community-dwelling middle-aged and older adults with schizophrenia. Schizophrenia Research, 2018, 196, 29-34. **(19)**
122. Lenze EJ, Bowie CR. Cognitive training for older adults: what works? Journal of the American Geriatrics Society, 2018, 66, 645-647. **(10)**
123. Miskowiak KW, Burdick KE, Martinez-Aran A, Bonnin CM, Bowie CR, Carvalho AF, Gallagher P, Lafer B, López-Jaramillo C, Sumiyoshi T, McIntyre RS, Schaffer A, Porter R, Torres I, Yatham LN, Young AH, Kessing LV, Vieta E.Assessing and Addressing Cognitive Impairment in Bipolar Disorder: The International Society for Bipolar Disorders Targeting Cognition Task Force Recommendations for Clinicians. Bipolar Disorders, 2018, 20, 184-194. **(94)**
124. *Haque M*, Jacobson J, Bowie CR, Munhall KG. The score distribution and factor structure of the Community Assessment of Psychic Experiences-Positive Scale (CAPE-P15) in a Canadian sample. Early Intervention in Psychiatry, 2018, 12, 1217-1221. **(2)**
125. *Milanovic M, Ayukawa E, Usyatynsky A, Holshausen K,* Bowie CR. Self-efficacy in depression: Bridging the gap between competence and real world functioning. Journal of Nervous and Mental Disease, 2018, 206, 350-355. **(23)**
126. *Milanovic M, Holshausen K,* Milev R, Bowie CR. Functional competence in major depressive disorder: Objective performance and subjective perceptions. Journal of Affective Disorders, 2018, 234, 1-7. **(10)**
127. *Best MW, Grossman M, Milanovic M,* Renaud S, Bowie CR. Be Outspoken and Overcome Stigmatizing Thoughts (BOOST): A Group Treatment for Internalized Stigma in First-Episode Psychosis. Psychosis, 2018, 10(3). 187-197. **(13)**
128. Goodman MS, Kumar S, Zomorrodi R, Ghazala Z, Cheam ASM, Baarr MS, Daskalakis ZJ, Blumberger DM, Fischer C, Flint A, Mah L, Hermann N, Bowie CR, Mulsant BH, Rajji T. Theta-gamma coupling and working memory in Alzheimer’s Dementia and Mild Cognitive Impairment. Frontiers in Aging Neuroscience, 2018, 10, 101. **(48)**
129. Bowie CR, *Best MW*, Depp C, Mausbach BT, Patterson TL, Pulver AE, Harvey PD. Cognitive and Functional Deficits in Bipolar Disorder and Schizophrenia as a Function of the Presence and History of Psychosis. Bipolar Disorders, 2018, 20, 604-613. **(31)**
130. Harrison J, Barry H, Baune B, *Best M*, Bowie, CR; et al. Stability, reliability and validity of the THINC-it screening tool for cognitive impairment in depression: A psychometric exploration in healthy volunteers. International Journal of Methods in Psychiatric Research, 2018, 27, e1736. **(16)**
131. Muralidharan A, Bowie CR, Harvey PD. Associations of Age and Gender with Negative Symptom Factors and Functioning Among Middle-Aged and Older Adults with Schizophrenia. American Journal of Geriatric Psychiatry, 2018, 26, 1215-1219. **(8)**
132. Strassnig M, Bowie C, Pinkham AE, Penn D, Twamley EW, Patterson TL, Harvey PD. Which levels of cognitive impairments and negative symptoms are related to functional deficits in schizophrenia?. Journal of Psychiatric Research. 2018, 1(104), 124-129. **(48)**
133. Ott CV, Vinberg M, Bowie CR, Christensen EM, Knudsen GM, Kessing LV, Miskowiak KW. Effect of action-based cognitive remediation on cognition and neural activity in bipolar disorder: study protocol for a randomized controlled trial. Trials. 2018, 19, l487. **(15)**
134. *Best MW, Gale D, Tran T, Haque MK*, Bowie CR\*. Brief executive function training for individuals with severe mental illness: Effects on EEG synchronization and executive functioning. Schizophrenia Research, 2019, 203, 32-40. **(21)**
135. *Grossman M, Best MW*, Harrison AH, Bowie CR. Comparison of the neurocognitive profiles of individuals with elevated psychotic or depressive symptoms. Early Intervention in Psychiatry, 2019, 13(4), 928-934. **(3)**
136. *Best MW, Milanovic M*, Iftene F, Bowie CR. A randomized controlled trial of executive functioning training compared with perceptual training for schizophrenia spectrum disorders: effects on neurophysiology, neurocognition, and functioning. American Journal of Psychiatry. 2019, 176(4), 297-306. **(24)**
137. Fischer CE, Kortebi I, Karameh WK, Kumar S, Gallagher D, Golas A, Munoz D, Barfett J, Butters MA, Bowie CR, Flint A, Rajji T, Herrmann N, Pollock B, Mulsant B, Schweizer TA, Mah L, and the PACT-MD Study Group. Examining the link between cardiovascular risk factors and neuropsychiatric symptoms in mild cognitive impairment and major depressive disorder in remission. Journal of Alzheimer’s Disease, 2019, 67(4), 1305-1311. **(5)**
138. Burdick KE, Millett CE, del Mar Bonnin C, Bowie C, Carvalho AF, Tyler LT, Gallagher P, Harvey P, Kellsing LV, Lafer B, Langenecker SA, Lewandowski KE, Lopez-Jaramillo C, Marshall DF, Martinez-Aran A, McInnis M, McIntyre R, Miskowiak KW, Porter RJ, Purdon S, Ryan KA, Sumiyoshi T, Torres IJ, Van Rheenen TE, Vieta E, Woodward N, Yatham LN, Young A. The International Constorium Investigating Neurocognition in Bipolar Disorder. Bipolar Disorders, 2019, 21(1), 6-10. **(11)**
139. MacQueen GM, Hassel S, Arnott SR, Jean A, Bowie CR, Bray SL, Davis AD, Downar J, Foster JA, Frey BN, Goldstein BI. The Canadian Biomarker Integration Network in Depression (CAN-BIND): magnetic resonance imaging protocols. Journal of psychiatry & neuroscience: JPN, 2019, 44(3), 1-4. **(27)**
140. Bowie CR. Cognitive remediation for severe mental illness: state of the field and future directions. World Psychiatry, 2019, 18(3), 274. **(21)**
141. Lenze EJ, Bowie CR, Avidan MS. Cognitive training for optimizing perioperative brain health. American Journal of Geriatric Psychiatry, 2019, 27(11), 1228-1231. **(2)**
142. Brown EE, Rashidi-Ranjbar N, Caravaggio F…Bowie CR, Voineskos AN, Graff-Guerrero A. Brain amyloid PET tracer delivery is related to white matter integrity in patients with mild cognitive impairment. Journal of Neuroimaging, 2019, 29(6), 721-729.
143. Goodday SM, Rivera D, Foran, H, King N, *Milanovic M*, Keown-Stoneman C, Horrocks J, Tetzlaff E, Pickett W, Harkness, K, Bowie, C, Saunders K, Cunningham S, McNevin, S, Duffy A. The U-Flourish University Student Well-Being and Academic Success Longitudinal Survey: A Study Protocol. British Medical Journal Open, 2019, 9(8), e029854. **(13)**
144. Miskowiak KW, Seeberg I, Kjaerstad HL, Burdick KE, Martinez-Aran A, Bonnin CM, Bowie CR, Carvalho AF, Gallagher P, Hasler G, Lafer B, López-Jaramillo C, Sumiyoshi T, McIntyre RS, Schaffer A, Porter RJ, Purdon S, Torres IJ, Yatham LN, Young AH, Kessing LV, Van Rheenen TE, Vieta E. Affective cognition in bipolar disorder: A systematic review by the ISBD targeting cognition task force. Bipolar Disorders, 2019, 21(8), 686-719. **(41)**
145. *Best MW, Milanovic M, Tran T, Leung P, Jackowich R, Gauvin S, Leibovitz T*, Bowie CR. Motivation and engagement during cognitive training for schizophrenia spectrum disorders. Schizophrenia Research: Cognition, 2020, 19, 100151. **(7)**
146. Kidd SA, Herman Y, Virdee G, Bowie CR, Velligan D, Plagiannakos C, Voineskos A. A comparison of compensatory and restorative cognitive interventions in early psychosis. Schizophrenia Research – Cognition, 2020, 19, 100157. **(8)**
147. *Grossman MJ*, Bowie CR. Jumping to Social Conclusions?: The Implications of Early and Uninformed Social Judgments in First Episode Psychosis. Journal of Abnormal Psychology, 2020, 129(1), 131. **(2)**
148. Bowie CR, Bell MD, Fiszdon JM, Johannesen JK, Lindenmayer JP, McGurk SR, Medalia AA, Penades R, Saperstein AM, Twamley EW, Ueland T, Wykes T. Cognitive remediation for schizophrenia: An expert working group white paper on core techniques. Schizophrenia Research, 2020, 215, 59-53. **(46)**
149. *Grossman MJ*, *Woolridge SW, Lichtenstein S,* McGlaughlin D, Auther A, Carrion R, Cornblatt B, Bowie CR. Patterns and Perceptions of Face-to-Face and Digital Communication in the Clinical High Risk and Early Stages of Psychosis. Psychiatry Research, 2020, 284, 112667. **(3)**
150. Duffy A, Keown-Stoneman, C., Goodday, S., Horrocks, J., Lowe, M., King, N., Pickett, W., McNevin, S., Cunningham, S., Rivera, D., Bisdounis, L., Bowie, C.R., Harkness, K., Saunders, K. Predictors of mental health and school-related outcomes in first year university students: Identifying prevention targets. British Journal of Psychiatry Open, 2020, 6(3), e46. **(1)**
151. Voleti R, *Woolridge S*, Liss JM, *Milanovic M*, Bowie CR, Berisha V. Objective assessment of social skills using automated language analysis for identification of schizophrenia and bipolar disorder. Proceedings of Interspeeech. 2019, *arXiv preprint arXiv:1904.10622*. **(14)**
152. Douglas KM, Jordan J, Inder M, Crowe MT, Mulder R, Lacey C, Beaglehole B, Bowie CR, Porter RJ. Cognitive Remediation for Outpatients with Recurrent Mood Disorders: A Feasibility Study. Journal of Psychiatric Practice, 2020, 26, 273-283. **(2)**
153. Muralidharan A, Finch A, Bowie CR, Harvey PD. Older Versus Middle-Aged Adults with Schizophrenia: Executive Functioning and Community Outcomes. Schizophrenia Research, 2020, 216, 547-549. **(2)**
154. Allott, K., van-der-EL, K., Bryce, S., Parrish, E.M., McGurk, S.R., Hetrick, S., Bowie, C.R., Kidd, S., Hamilton, M., Killackey, E., & Velligan, D.. Compensatory interventions for cognitive impairments in psychosis: A systematic review and meta-analysis. Schizophrenia Bulletin, 2020, 46(4), 869-883. **(8)**
155. Dham P, Bingham KS, Bowie CR,…et al. Functional competence and Cognition in Individuals with Amnestic Mild Cognitive Impairment. Journal of the American Geriatrics Society, 2020, 68(8), 1787-1795.
156. Lenze EJ, Stevens A, Waring JD, Pham VT, Haddad R, Shimony J, Miller P, Bowie CR. Augmenting computerized cognitive training with vortioxetine for age-related cognitive decline: A randomized controlled trial. American Journal of Psychiatry, 2020, 177(6), 548-555. **(20)**
157. *Best MW, Milanovic M, Shamblaw AL, Muere A, Lambe LJ. Hong IK, Haque MK*, Bowie CR. An examination of the moderating effects of neurophysiology on treatment outcomes from cognitive training in schizophrenia-spectrum disorders. International Journal of Psychophysiology, 2020, 154, 59-66. **(3)**
158. King N, Pickett W, McNevin SH, Bowie CR, Rivera D, Keown-Stoneman C, Harkness KL, Cunningham S, *Milanovic M*, Saunders KEA, Goodday S, Duffy A. Mental health need of students at entry to university: Baseline findings from the U‐Flourish Student Well‐Being and Academic Success Study. Early Intervention in Psychiatry, 2021, 15(2), 286-295. **(11)**
159. *Tran T, Hagen AEF,* Hollenstein T, Bowie CR. Physical- and cognitive-effort-based decision-making in depression: relationships to symptoms and functioning. Clinical Psychological Science, 2021, 9(1), 53-67. **(9)**
160. Douglas KM, *Milanovic M,* Porter RJ, Bowie CR. Clinical and methodological considerations for psychological treatment of cognitive impairment in major depressive disorder. British Journal of Psychiatry, Open, 2020, 6(4), e67. **(10)**
161. Brooks, H., Goodman, M. S., Bowie, C. R., Zomorrodi, R., Blumberger, D. M., Butters, M. A., Daskalakis, Z. J., Fischer, C. E., Flint, A., Herrmann, N., Kumar, S., Mah, L., Mulsant, B. H., Pollock, B. G., Voineskos, A. N., Rajji, T. K., on behalf of the PACt-MD Study Group. Theta-Gamma Coupling and Ordering Information: A Stable Brain-Behaviour Relationship Across Cognitive Tasks and Clinical Conditions. Neuropsychopharmacology, 2020, 45, 2038-2047.
162. *Wood-Ross C, Best MW, Milanovic M*, Bowie CR. Brain of Thrones: Cognitive effort and perceived performance during a cognitive task in major depressive disorder. Cognitive Therapy and Research, 2021, 45(5), 986-999.
163. *Woolridge SM, Harrison GW, Best MW*, Bowie CR. Attention bias modification in depression: A randomized trial using a novel, reward-based, eye-tracking approach. Journal of Behavior Therapy and Experimental Psychiatry, 2021, 71, 101621. **(2)**
164. VanDyke DJ, Zimmerman T, Vanrooy T, *Milanovic M*, Bowie CR. Seeing the bigger picture: A lesson for accessible treatment design. Canadian Journal of Community Mental Health, 2021, 39(3), 89-92.
165. Williams RS, Virdee GK, Bowie CR, Velligan DI, Maples NJ, Herman Y, Kidd SA. Development and feasibility exploration of a combined compensatory and restorative approach to addressing cognitive challenges in early intervention psychosis. Cognitive and Behavioral Practice, 2020; 27, 454-469. **(1)**
166. *Tran T, Milanovic M, Holshausen K*, Bowie CR. What is Normal Cognition in Depression? Prevalence and Functional Correlates of Normative versus Idiographic Cognitive Impairment. Neuropsychology, 2021, 35(1), 33. **(9)**
167. Ott CV, Vinberg M, Kessing LV, Bowie CR, Forman JL, Miskowiak, KW. Effect of Action-Based Cognitive Remediation on cognitive impairment in patients with remitted bipolar disorder: a randomized controlled trial. Bipolar Disorders, 2021, 23(5), 487-499. **(9)**
168. Ott C, Macoveanu J, Bowie CR, Fisher P, Knudsen G, Kessing L, Miskowiak K. Change in prefrontal activity and executive functions after Action-Based Cognitive Remediation in bipolar disorder: a randomized controlled trial. Neuropsychopharmacology, 2021, 46(6), 1113-1121. **(6)**
169. Diniz BS, Vieira EM, Mendes-Silva AP, Bowie CR, Butters MA, Fischer CE, Flint A, Herrmann N, Kennedy J, Lactot K, Mah L, Mulsant BH, Pollock BG, Rajji TK. Mild cognitive impairment and major depressive disorder are associated with molecular senescence abnormalities in older adults. Alzheimer’s & Dementia: Translational Research and Clinical Interventions. 2021, 7(1), e12129. **(2)**
170. *Lo E, Laferriere L*, Stewart MR, *Milanovic M, Kinney M*, Bowie CR, Dringenberg HC. Does napping enhance the consolidation of clinically relevant information? A comparison of individuals with low and elevated depressive symptoms. Nature and Science of Sleep, 2021, 13, 141-152.
171. Rahmani N, Hatch J, Dimick M, Naiberg MR, Fiksenbaum L, Andreazza AC, Bowie CR, Dickstein DP, Goldstein BI. Lower Pro-to Anti-Inflammatory Ratios Associated with Reduced Neurocognitive Flexibility in Symptomatic Adolescents with Bipolar Disorder. Journal of Affective Disorders, 2021, 292, 430-438. **(1)**
172. *Grossman M*, Bowie CR. Money Talks : The influence of extrinsic motivators on social cognition in early episode psychosis. Schizophrenia Research, 2021, 233, 52-59.
173. Thérond A, Pezzoli P, Abbas M, Howard A, Bowie CR, Gumond S. The efficacy of cognitive remediation in depression: A systematic literature review and meta-analysis. Journal of Affective Disorders, 2021, 284, 238-246. **(8)**
174. Karameh WK, Kortebi I, Kumar S, Gallagher D, Golas A, Lanctot K, Butters MA, Bowie CR, Flint A, Rajji T, Herrmann N, Pollock BG, Mulsant B, Mah L, Munoz DG, Schweizer TA, Fischer CE. Comparing cardiovascular risk factors in older persons with Mild Cognitive Impairment and lifetime history of Major Depressive Disorder. International Psychogeriatrics,  2021, 29, 1-7.
175. Groves SJ, Douglas KM, Milanovic M, Bowie CR, Porter RJ. Systematic review of the effects of evidence-based psychotherapies on neurocognitive functioning in mood disorders. Australian and New Zealand Journal of Psychiatry, 2021, 55, 944-957. **(2)**
176. Lecomte T, Addington J, Bowie CR, Lepage M, Potvin S, Shah J, Summerville C, Tibbo P. The Canadian Network for Research in Schizophrenia and Psychoses: a nationally focused approach to psychosis and schizophrenia research. Canadian Journal of Psychiatry, In Press.
177. Weinstein AM, Gujral S, Butters MA, Bowie CR, Fischer CE, Flint AJ, Herrmann N, Kennedy JL, Mah L, Ovaysikia S, Pollock BG, Rajji TK, Mulsant BH, for the PACt-MD Study Group. Diagnostic Precision in the Detection of Mild Cognitive Impairment: A Comparison of Two Approaches, Am J Geriatr Psychiatry, 2022, 30(1), 54-64.
178. Brooks H, Mirjalili M, Wang W, Kumar S, Goodman MS, Zomorrodi R, Blumberger DM, Bowie CR, Daskalakis ZJ, Fischer CE, Flint AJ, Herrmann N, Lanctôt KL, Mah L, Mulsant BH, Pollock BG, Voineskos AN, Rajji TK. on behalf of the PACt-MD Study Group. Assessing the longitudinal relationship between theta-gamma coupling and working memory performance in older adults. Cerebral Cortex, In Press. **(1)**
179. Lalovic A, Wang S, Keilp JG, Bowie CR, Kennedy SH, Rizvi SJ. A qualitative systematic review of neurocognition in suicide ideators and attempters: Implications for cognitive-based psychotherapeutic interventions. Neuroscience and Biobehavioral Reviews, 2022, 132, 92-109. **(1)**
180. Douglas KM, Groves S, Crowe MT, Inder ML, Jordan J, Carlyle D, Wells H, Beaglehole B, Mulder R, Lacey C, Luty S, Eggleston K, Frampton C, Bowie CR, Porter RJ. A randomised controlled trial of psychotherapy and cognitive remediation to target cognition in mood disorders. Acta Psychiatrica Scandanivaca, In Press.
181. *Best MW*, Bowie CR. Social exclusion in psychotic disorders: An International Processing Model. Schizophrenia Research, In Press.
182. Mendelson D, Thibaudeau E, Sauve G, Lavigne K, Bowie CR, Menon M, Woodward TS, Lepage M, Raucher-Chene D. Remote group therapies for cognitive health in schizophrenia-spectrum disorders: Feasible, acceptable, engaging. Schizophrenia Research : Cognition, In Press.
183. Soffer M, Melichercik A, Hermann N, Bowie CR, et al. Time setting errors in the Clock Drawing Test are associated with both semantic ands executive deficits. Applied Neuropsychology: Adult, In Press.
184. Lavigne KM, Sauvé G, Raucher-Chéné D, Guimond S, Lecomte T, Bowie CR, Menon M, Lal S, Lepage M. Remote cognitive assessment in psychiatry: A scoping review. NPJ, Schizophrenia, In Press
185. Miskowiak KW, Seeberg I, Jensen MB, Balanzá-Martínez V, del Mar Bonnin C, Bowie CR, et al. Randomised controlled cognition trials in remitted patients with mood disorders published between 2015-2021: A systematic review by the International Society for Bipolar Disorders Targeting Cognition Task Force. Bipolar Disorders, In Press.

**EDITED BOOKS**

1. Medalia A, Bowie CR (eds.). Cognitive Remediation to Improve Functional Outcomes, Oxford University Press, 2016.

**BOOK CHAPTERS \_\_\_\_\_\_**

***Supervised students and post-doctoral fellows are italicized***

1. Harvey PD & Bowie CR. The clinical neuropsychology of schizophrenia. In M Gelder, J Lopez-Ibor, N Andreasen, & J Geddes (Eds) New Oxford Textbook of Psychiatry, 2nd ed. 2010.
2. Bowie CR. Delusional Disorder. In I Weiner & E Craighead (Eds) Encyclopedia of Psychology, 4th ed., 2010.
3. Harvey PD & Bowie CR. Schizophrenia spectrum disorders. In G Stricker & TA Widiger (Eds) Handbook of Psychology, Volume 8: Clinical Psychology, 2012 ISBN-10:0470917997
4. Bowie CR, *Gupta M, Holshausen K*. Comparative impairments across schizophrenia and bipolar disorder. In PD Harvey (Ed) Cognitive Impairment in Schizophrenia: Characteristics, Assessment, and Treatment, 2013.
5. Harvey PD, Bowie CR. Cognitive deficits in psychiatric disorders. In Husain M & Schott J (Eds) Cognitive Neurology & Dementia, 2017.
6. Bowie CR. Cognitive remediation for major depressive disorder. In McIntyre R & Cha D (Eds). Cognitive Impairment in Major Depressive Disorder. Cambridge Press, 2016.
7. Bowie CR & Medalia A. Bridging Groups. In Medalia A, Bowie CR (eds.). Cognitive Remediation to Improve Functional Outcomes, Oxford University Press, 2016
8. Bowie CR & *Gupta M*. Addressing cognitive distortions, dysfunctional attitudes, and low engagement in cognitive remediation. Medalia A, Bowie CR (eds.). Cognitive Remediation to Improve Functional Outcomes, Oxford University Press, 2016
9. Bowie CR. Cognitive Remediation for Major Depressive Disorder. McIntyre RS (ed.). Cognitive Impairment in Major Depressive Disorder, Cambridge University Press, 2016
10. Bowie, CR., *Milanovic M, and Tran T*. "Pathophysiology of Cognitive Impairment in Depression." Neurobiology of Depression. Academic Press, 2019. 27-30.
11. Bowie CR, *Best MW, Tran T*, Boyd JE. Cognitive Remediation. In McClintock S & Choi J, Neuropsychology of Depression. In Press.

**ACADEMIC REVIEWS OF SCHOLARLY WORK\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Bowie CR, Reichenberg A, Patterson TL, Heaton RK, Harvey PD. Determinants of Real World Functional Performance in Schizophrenia Subjects: Correlations with Cognition, Functional Capacity, and Symptoms. American Journal of Psychiatry, 2006, 163, 418-425

1. Carpenter WT. Targeting schizophrenia research to patient outcomes. American Journal of Psychiatry, 2006, 163, 353-355

Bowie CR, McGurk SM, Mausbach BT, Patterson TL, Harvey PD. Combined cognitive remediation and functional skills training for schizophrenia: effects on cognition, functional competence, and real world behavior. American Journal of Psychiatry, 2012, 169, 710-718

1. Lehman AF. Making a difference (Editorial). American Journal of Psychiatry, 2012, 678-680
2. Continuing Medical Education: American Journal of Psychiatry
3. In Review Podcast, American Journal of Psychiatry
4. Editor’s Choice for Article of the Year 2012, American Journal of Psychiatry

**ORAL PRESENTATIONS (SELECTED) \_\_\_\_\_**

Enhancing Cognition in Severe Mental Disorders. Plenary Talk, Canadian Association for Geriatric Psychiatry, 5 November 2017

Cognition in Mental Disorders: Impairments, Implications, and Opportunities for Treatment. Invited Plenary Speaker, Schizophrenia Society of British Columbia Conference: Bringing Cognitive Remediation to British Columbia, 14 Oct 2017

Avoidance of Cognitive Effort in Depression. Invited Talk, Cognitive Remediation in Psychiatry Conference, 9 June 2017.

Metacognition in Psychosis: From Evidence to Treatment, Symposium Discussant. International Conference on Schizophrenia Research, 26 March 2017

Action-Based Cognitive Remediation: Pairing Cognitive Training with Skill Development and CBT Principles, Oral Paper Session. International Conference on Schizophrenia Research, 28 March 2017

Psychological Treatments for Cognition. Centre for Addiction and Mental Health, McCain Centre Grand Rounds, 22 March, 2017

Cognition and Functional Capacity in Depression as Critical Treatment Targets. Canadian Psychiatric Association Annual Meeting, Continuing Professional Development Symposium. Toronto, 22 September 2016

Action Based Cognitive Remediation. Invited Talk. Rigshospitalet, Denmark, 5 Aug 2016.

Bridging Groups for Cognitive Remediation. Invited Symposium. Cognitive Remediation in Psychiatry, New York, 10 June 2016

Changes in dimensions of negative symptoms differentially predict self-rated and observer-rated functional outcomes following cognitive remediation. Symposium. Schizophrenia International Research Society, Florence, Italy, 4 April 2016

Cognitive remediation for psychosis: which approaches produce effective and sustained behavior change? Invited Talk. Cognition Conference: Schizophrenia International Research Society, Florence, Italy, 1 April 2016

Functioning in Depression: Cognition, Competence, & Everyday Outcomes. Invited Clinical Rounds. St. Joseph’s Hospital, Hamilton ON. 16 June 2016.

Cognition in Severe Mental Illness: Implications for Functioning and New Treatment Options. Invited Clinical Rounds. London Health Sciences Centre, London, ON. 5 Feb 2016.

Cognitive Remediation. Invited Workshop. Crisis Workers Society of Ontario. May 2015

Cognitive Remediation to Promote Recovery: Innovative Models from Canada, France, and the New York State Office of Mental Health. Workshop, American Psychiatric Association, May, 2015

Cognitive Impairments in Severe Mental Illness: Implications and Treatment. Invited Psychology Department Talk. National University of Ireland, Galway, March, 2015

Cognitive Impairments in Severe Mental Illness: Implications and Treatment. Invited Psychology Department Talk. University of Limerick, April, 2015

Cognitive Remediation in Depression. Invited Talk. Institute of Medicine Workshop on Enabling Discovery, Development, and Translation of Treatments for Cognitive Dysfunction in Depression, Washington, D.C., February, 2015

Enhancing Cognition and Function in Older Patients with Serious Mental Illness: A Focus on Cognitive-Behavioural Therapy and Skills Training. Workshop, Center for Addiction and Mental Health, Toronto, ON, 10 Oct 2014.

Premorbid Adjustment and Current Societal Factors Contribute to the Prediction of Functional Outcome in Schizophrenia. Symposium Session, Society for Research in Psychopathology, Evanston, IL, 19 Sept 2014.

Cognition in Bipolar Disorder: Profile of Impairment and Strategies for Treatment. Invited Talk, Sunnybrook Hospital, Toronto, ON, 19 August 2014.

Cognitive Remediation: New Methods for Improving Functioning and Reaching Underserved Populations. Invited Talk, Douglas Institute, Montreal, QC, 26 Jun 2014.

Rehabilitation of the Patient with Schizophrenia. Invited Talk, Fundacion Cerebro y Mente Conference, Madrid, Spain, 21 Jun 2014.

Cognitive Remediation Methods to Enhance Functional Outcomes. Invited Plenary Talk, Cognitive Remediation in Psychiatry Conference, New York, 6 Jun 2014.

Early Intervention Programs should not Discourage Struggle and Failure: They are Developmentally Typical and Critical Experiences. Invited Talk, Queen’s University Department of Psychiatry Research Day, Kingston, ON, 30 May 2014.

The Experience of Psychosis across Mental Disorders. Invited Talk, Educational Workshop Presented by the Centre for Abuse and Trauma Therapy, Kingston, ON, 23 May 2014.

Functional Capacity Measures. Invited Talk, The International Society for CNS Clinical Trials and Methodology, 20 March 2014.

Selecting Patients for Cognitive Treatment Trials. Invited Talk, The International Society for CNS Clinical Trials and Methodology, 20 March 2014.

 “Raising the Bar” Moving Beyond Symptom Reduction and Targeting Everyday Functioning as the Barometer for Treatment Success in Mental Disorders. Invited Talk, Healthy Minds Canada, Kingston ON, Sept 2012.

Neurocognitive Enhancement for Treatment-Resistant Depression: Efficacy, Effectiveness, and
the Role of Internet-Based Homework. Invited Talk, Cognitive Remediation in Psychiatry Conference, June 2012.

Cognitive Remediation for Treatment Resistant Depression. Invited Talk, Psychiatry Research Day, Queen’s University, Kingston, ON, June 2012.

Cognitive Remediation in Schizophrenia: Maximizing Efficacy and Promoting Effectiveness. Invited Talk, Centre for Addiction and Mental Health, Toronto, April, 2012.

Incorporating Cognitive-Behavioural Techniques into Cognitive Remediation Therapy. Workshop Presented at Cognitive Remediation in Psychiatry. New York, June 10, 2011.

Self-reported Quality of Life and Clinician-Reported Functioning in Schizophrenia:
Interrelationships and Sensitivity to Neurocognitive Change. The International Congress on Schizophrenia Research. Symposium Presentation. Colorado Springs, April 6, 2011.

Cognition in Schizophrenia and Bipolar Disorder as a Function of Psychosis Status. Cognition Satellite Conference of the International Congress on Schizophrenia Research. Oral Session. Colorado Springs, April 1, 2011.

Cognitive Remediation in Schizophrenia: Challenges in Generalizing Neurocognitive Enhancement to Everyday Behavior Change. Winter Conference on Brain Research. Symposium Session. January 24, 2011.

Neurocognitive Enhancement in Schizophrenia: Generalization to Real World Disability Reduction? Invited Speaker. Cognitive Remediation in Psychiatry. Invited Speaker. June, 2010.

Prediction and Treatment of Real World Functional Impairments in Schizophrenia. International Conference on Handicap Psychique [MENTAL DISABILITY], *Real-World Functioning”*  et Retablissement [RECOVERY], Ecole Normale Supérieure, Paris. Invited Speaker. May, 2010.

Functional Disability as a Treatment Target in Psychotic Disorders. Zucker Hillside Hospital, April, 2010. Grand Rounds.

Assessing and Predicting Social versus Adaptive Impairments in Schizophrenia. Zucker Hillside Hospital. April 2010. Research Symposium.

Direct and Indirect Predictors of Real World Outcomes in Bipolar Disorder and Schizophrenia. Society for Research in Psychopathology. Symposium. September, 2009.

Assessment of Disability in Asian Clinical Trials. National Clinical Drug Evaluation Unit. Panel Discussion, May, 2009.

Preparing for the Academic Job Market. Society for Research in Psychopathology. Panel Discussion. September, 2008.

Correlates of Lifetime Work Outcomes in Schizophrenia. Society for Research in Psychopathology. Paper Session. September, 2008.

Cognition and Functional Outcomes in Schizophrenia. University of Medicine and Dentistry of New Jersey. Grand Rounds, November, 2007.

Direct and mediated effects of cognition on functional outcomes in schizophrenia. Society for Research in Psychopathology. Symposium. September, 2007.

What are the functional implications of neuropsychological normality in schizophrenia? Society for Biological Psychiatry. Paper Session. May, 2007.

Predicting real world outcomes from discrete functional and cognitive abilities. International Congress on Schizophrenia Research. Paper Session. April, 2007.

Cognitive and functional deficits in schizophrenia. Woodhull Hospital, Brooklyn, NY. Grand Rounds. September, 2006.

Sadder but wiser in schizophrenia. Society for Research in Psychopathology. Paper Session. September, 2006.

Determinants of functional disability in schizophrenia. Hudson Valley Veteran’s Hospital. Grand Rounds, April, 2005.

Are negative symptoms and cognitive impairment separable treatment targets in schizophrenia? National Clinical Drug Evaluation Unit, 2005. Invited Symposium.

**ONGOING RESEARCH SUPPORT**

1. Canadian Institutes of Health Research

April 2020-March 2025

**Functional Improvement and Recurrence Risk after First Episode Depression: Independent and Interactive Roles of Premorbid Factors, Cognition, Reward, and Stress**

This study is examining how early adverse experiences, cognitive ability, cognitive effort, and reward processing are associated with recovery of daily living skills and episode recurrence in a 2 year period following first episode depression.

*Role: Principal Investigator*

Total Direct Costs: 673,200 CAD

2. The Graham Boeckh Foundation

April 2020

**Dr. Samarthji Lal award for mental health research**

This award provides support for our laboratory’s activities to engage in research on cognitive remediation for severe mental illnesses.

*Role: Principal Investigator*

Total Direct Costs: 25,000 CAD

3. Mental Health Research Canada

April 2020-April 2022

**Effectiveness of a Self-Stigma Therapy for Reducing Suicidal Thoughts and Behaviours in Early** **Psychosis**.

This five site trial will examine post-treatment and one-year follow-up effects of a group therapy for self stigma on mood, hopelessness, and suicidal thoughts and behaviours in early psychosis.

*Role: Principal Investigator*

Total Direct Costs: 50,000 CAD

4. Early Psychosis Intervention Ontario Network: Contract

 November 2018-November 2022

**Implementation of Action-Based Cognitive Remediation**

This study will examine implementation of Action-Based Cognitive Remediation across 20 clinical sites affiliated with a Provincial network.

*Role: Principal Investigator*

Total Direct Costs: 35,000 CAD

5. Canadian Institutes of Health Research

April 2019-March 2024

**Enhancing Frontal Lobes Plasticity and Function in Patients with Mild Cognitive Impairment**

This study is examining how neurostimulation can affect cognitive functioning in patients at-risk for dementia.

*Role: Co-Investigator (Tarek Rajji, PI)*

Total Direct Costs: 707,625 CAD

6. Brain Canada, Famille Chagnon: Interventions for Prevention of

May 2014-May 2019; 5-year extension awarded to 2024

Alzheimer Disease and Related Disorders: Multi-Investigator Research Initiative.

**Prevention of Alzheimer’s Dementia in high risk population: A randomized controlled trial of a combination of cognitive training and brain stimulation**

This study pairs the cognitive training I have developed with Transcranial Direct Current Stimulation in an older sample at risk for dementia.

*Role:Co-Investigator; Lead Investigator:Cognitive Remediation; Lead Investigator:Cognitive Assessment*

*Overall PIs: Tarek Rajji & Benoit Mulsant*

Total Direct Costs: 9,996,087 CAD

7. First Episode Psychosis Program, Hotel Dieu Hospital

April 2010 – Annual Renewal

**Contract**

*Role: Principal Investigator*

Total Direct Costs per year: 56,000 CAD

**COMPLETED RESEARCH SUPPORT**

1. NARSAD Young Investigator’s Award

July 2003- June 2006

**Changes in Cognitive Functioning after Pharmacological Treatment in Adolescents At-Risk for Schizophrenia**

The major goal of this study was to examine changes in neurocognition in adolescents considered prodromal for schizophrenia after they were treated with antipsychotic or antidepressant medications. *Role: Principal Investigator*

Total Direct Costs: 60,000 USD

 2. NIMH R44 MH068077-02

 June 2006-June 2008

 **Computerized Antipsychotic Evaluation System**

This was a subcontract to collect normative data for a computerized cognitive battery designed to be used to track cognitive change following antipsychotic medication administration.

 *Role: Local Principal Investigator*

Total Direct Costs: 17,380 USD

3. NIMH MH 36692

June 2007-May 2012

**Silvio Conte Neuroscience Center: White Matter Abnormalities in Schizophrenia**

This was a Conte Neuroscience Center grant that supported research on clinical characteristics and post-mortem neuropathology of schizophrenia.

*Role: Co-Investigator, Lead for Clinical Assessment*

Total Direct Costs: 7,560,505 USD

4. NIMH MH 63116

April 2003-March 2009

**Course of Functional Deficits in Elderly Schizophrenics**

 This was a study of the course of functional deficits in older community dwelling patients with schizophrenia. Older patients were followed with performance-based measures of functional skills and cognitive assessments.

*Role: Co-Investigator*

Total Direct Costs: 1,125,000 USD

5. United States Department of Defense GW060048

June 2007-June 2011

**A randomized, double-blind, placebo-controlled crossover trial of mifepristone in gulf war veterans with chronic multisymptom illness.**

Changes in cognitive, behavioral, and medical symptoms were examined with the use of a glucocorticoid receptor antagonist in gulf war veterans with chronic multisymptom illness.

*Role: Co-Investigator*

Total Direct Costs: 680,000 USD

6 . NARSAD

June 2007-June 2010

**Specificity and Generalizability of Cognitive Remediation and Functional Skills Acquisition Training in Schizophrenia**

The goal of this project was to assess whether improvement from two behavioral treatments are restricted to the domain they target or generalize to other areas of functioning, as well as to determine whether they are more effective when used sequentially.

*Role: Principal Investigator*

Total Direct Costs: 60,000 USD

7. NIMH MH

May 2007-April 2013

**Chronic Psychiatric Disorders: Linking Genes to Functional Outcomes**

The goal of this study was to identify associations among candidate genes in bipolar disorder and schizophrenia with impairments in functional capacity and functional outcomes.

*Role: Local Principal Investigator*

Total Direct Costs: 128,650 USD

8. Canadian Foundation for Innovation

December 2008-December 2016

**Leaders Opportunity Fund**

*Role: Principal Investigator*

Total Direct Costs: 74,500 CAD

9. Ontario Ministry of Research and Innovation

May 2009-May 2010

**Leader’s Opportunity Fund**

*Role: Principal Investigator*

Total Direct Costs: 74,500 CAD

1. Queen’s University Senate Advisory Committee Research Award

April 2014-March 2016

**Neurocognitive Engagement in Depression**

*Role: Principal Investigator*

Total Direct Costs: 8,310 CAD

11. Ontario Ministry of Research and Innovation

March 2011-March 2016

**Early Researcher Award**

*Role: Principal Investigator*

This award supported graduate student stipend and conference travel costs.

Total Direct Costs: 150,000 CAD

12. Brain and Behavior Foundation, NARSAD Independent Investigator

Sept 2013-Sept 2016

**Remote Cognitive Remediation for Schizophrenia**

This study examined the efficacy of delivering cognitive remediation to people with schizophrenia in their homes.

*Role: Principal Investigator*

Total Direct Costs: 100,000 USD

 13. Canadian Foundation for Innovation

 April 2014-March 2017

**Infrastructure Operating Fund**

*Role: Principal Investigator*

Total Direct Costs: 22,350 CAD

 14. Queen’s University Department of Psychiatry Internal Grant

 June 2017-June-2018

**Indecisiveness in Major Depressive Disorder: Examining the Causes, Consequences, and Options for Treatment of Indecision**

This study used novel experimental paradigms to explore indecision in depression and its relationship to functioning.

 *Role: Co-Investigator (Principal Investigator: Michela David)*

 Total Direct Costs: 8,180 CAD

 15. Canadian Institutes of Health Research Patient-Oriented Research Collaboration Grants Feb 2018-Feb 2019

**Flourish student mental health research: Pathways to mental health and academic outcomes in undergraduate university students**

This study is investigating the development of academic and mental health issues during first year of University.

 Role: Principal Investigator (with Anne Duffy, Co-PI)

 Total Direct Costs: 79,890

 16. Takeda/Lundbeck Investigator Initiated Sponsored Research

 September 2015-September 2019

 **Remediation of Age-Related Cognitive Decline: Vortioxetine and Cognitive Training**

This study aims to examine whether computerized cognitive training in combination with vortioxetine improves cognitive abilities in older individuals.

 *Role: Co-Investigator; Site Principal Investigator (Study Principal Investigator: Eric Lenze)*

 Total Direct Costs: 600,000 USD

17. Healthy Minds Canada/Sun Life Financial/Pfizer Canada Research Grant

May 2014-May 2018

**Action-Based Cognitive Remediation to Improve Vocational Outcomes in Depression**

This study examines the effects of a novel cognitive remediation treatment that combines simulated work situations with cognitive activation and strategy development.

*Role: Principal Investigator*

Total Direct Costs: 98,400 CAD

 18. Canadian Institutes of Health Research: Operating Grant

 May 2014-May 2019

**A Randomized Controlled Trial on Group CBT for Social Anxiety in People with a First Episode of Psychosis**

This study examines a group based treatment on social anxiety and uses my cognitive remediation treatment as a comparison group.

 *Role: Co-Investigator (PI: Martin LePage)*

 Total Direct Costs: 753,875 CAD

19. University of Manitoba University Research Grants Program

February 2017- March 2020

**Examining the Effectiveness of Action-Based Cognitive Remediation for the First-Episode Psychosis**

*Role: Co-Investigator (PI: Colleen Murphy)*

Total Direct Costs: 7,500 CAD

20. Lundbeck Foundation

October 2016-October 2020
**Prefrontal target engagement as a neuroimaging biomarker model for cognitive enhancement (PRETEC Marker)**

This study will examine a combination of pharmacotherapy and Action-Based Cognitive Remediation in Bipolar disorder patients and their unaffected relatives.

*Role: Collaborator*

*Principal Investigator: Kamilla Woznica Miskowiak*

Total Direct Costs: 1,980,000 CAD

21. Innovation Fund of the Alternative Funding Plan for the Academic Health Sciences Centres of Ontario

March 2018- March 2020

**Cognitive Remediation Therapy for Late Life Schizophrenia**

This study will examine the effects of cognitive remediation on cognition and functioning in patients 65 or older with schizophrenia.

*Role: Co-Investigator (Principal Investigator: Angela Golas)*

Total Direct Costs: 118,484 CAD

22. St. Michael’s Foundation

April 2018-March 2020

**Cognitive Remediation for Suicide**

This study will use my cognitive remediation techniques to address suicidal ideation.

*Role: Co-Investigator (Principal Investigator: Sakina Rizvi)*

Total Direct Costs: 20,000 CAD

23. Canadian Institutes of Health Research

September 2015-September 2020

**Remote Cognitive Remediation for Acute Depression**

This study will examine whether cognitive remediation for patients with depression will help offset relapse rates and improve daily functions after an acute episode.

*Role: Principal Investigator*

Total Direct Costs: 271,206 CAD

24. Dr. Ian and Shirley Rowe Research Fund

July 2019-July 2021

**Psychotic Symptoms in Borderline Personality Disorder: An Examination of Acuity and Piloting of a Novel Treatment to Improve Functional Outcomes in Community Living**

*Role: Co-Investigator (Katherine Holshausen, PI)*

Total Direct Costs: 25,000 CAD

25. Health Research Council of New Zealand

November 2018-June 2021

**Treating Cognitive Impairment in Severe Depression**

This study will examine the combination of our cognitive remediation program in a hospitalized sample.

*Role: Co-Investigator (Principal Investigator: Richard Porter)*

Total Direct Costs: 1,151,916 NZD

26. Canadian Institutes of Health Research – Evaluation Grants – On-Campus Post-Secondary Mental Health Services

February 2019-February 2020

**U-Flourish student mental health research: Transitions to mental health care**

This study will examine longitudinal health and mental health outcomes of university students.

*Role: Co-Investigator (Principal Investigator: Anne Duffy)*

Total Direct Costs: 99,909 CAD

27. Canadian Institutes of Health Research

Operating Grant: Knowledge Synthesis: COVID-19 in Mental Health & Substance Abuse

May 2020-November 2020

**Examining the Efficacy of Evidence-Based Psychosocial Interventions for Schizophrenia-Spectrum Disorders Delivered through Virtual Care**

*Role: Co-Investigator (PI: Michael Best)*

Total Direct Costs: 50,000 CAD

28. Canadian Institutes of Health Research

Operating Grant: Knowledge Synthesis: COVID-19 in Mental Health & Substance Abuse

May 2020-November 2020

**Remote cognitive assessment in severe mental illness: A scoping review**

*Role: Co-Investigator (PI: Martin Lepage)*

Total Direct Costs: 50,000 CAD

🡪[Top of Page](#Top)