

CAMERON S. CARTER, M.D.

CURRICULUM VITAE

Home Address: Davis, CA 95618
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EDUCATION and TRAINING

UNDERGRADUATE

1973-1979 University of Western Australia School of Medicine, MBBS (MD, Medicine)
1975 National Health and Medical Research Council Fellow, University of Western Australia. Bachelor of Medical Science (honors). Functional Neuroanatomy
1973 Matriculated to University of Western Australia with Commonwealth Scholarship

POSTGRADUATE

1985-1989 Psychiatry Resident University of California at Davis Medical Center and the Veterans Administration Medical Center at Martinez, California
1982 Resident Medical Officer, Flinders Medical Center, Adelaide, South Australia
1981-1982 Intern, Flinders Medical Center, Adelaide, South Australia

APPOINTMENTS and POSITIONS

ACADEMIC

2016-2018 Interim Vice Chancellor for Research, University of California, Davis
2014-present Director, Behavioral Health Center of Excellence, University of California, Davis
2011-2016 Director, Center for Neuroscience, University of California, Davis
2009-2011 Interim Director, Center for Neuroscience, University of California at Davis
2006-2011 Chair, Graduate Group in Clinical and Translational Research, University of California, Davis
2006-present Endowed Chair in Schizophrenia Research, Department of Psychiatry & Behavioral Sciences, University of California, Davis
2004-present Director, EDAPT (Early Diagnosis and Preventive Treatment of Psychosis) Clinic, UC Davis Medical Center
2003-present Founding Director, Imaging Research Center, University of California, Davis
2003-present Professor of Psychiatry and Psychology, University of California, Davis
2001-2003 Director, Cognitive and Affective Neuroimaging, UPMC MR Research Center, and Cognitive and Affective Neuroscience Program, Department of Psychiatry, University of Pittsburgh

- 1999-2003 Associate Professor of Psychiatry, Psychology and Neuroscience, University of Pittsburgh
- 1998-2003 Associate Professor of Psychiatry and Psychology, University of Pittsburgh
- 1998-2003 Co-Director Clinical Cognitive Neurosciences Laboratory, University of Pittsburgh
- 1997-2003 Associate Director, Clinical Services Core, Conte Center for Neuroscience and Mental Disorders, Department of Psychiatry, University of Pittsburgh.
Director, Ambulatory Services, STEP (First Episode Psychosis) Clinic, WPIC
- 1995-1996 Associate Director, Office of Medical Student Education, Department of Psychiatry, University Pittsburgh, Western Psychiatric Institute and Clinic
- 1993-1999 Assistant Professor of Psychiatry, University of Pittsburgh, Western Psychiatric Institute and Clinic, Pittsburgh, PA
Attending Psychiatrist, Schizophrenia Treatment and Research Center, Western Psychiatric Institute and Clinic, Pittsburgh, PA
- 1991-1993 Director, Medical Student Education, Department of Psychiatry, University of California at Davis
- 1989-1991 Assistant Director of Residency Training, Department of Psychiatry, University of California at Davis
- 1989-1993 Assistant Professor of Psychiatry, University of California, Davis

NON-ACADEMIC

- 1987-1989 Psychiatrist, Crisis Unit, Contra Costa County Division of Mental Health and Substance Abuse, Merrithew Memorial Hospital, Martinez, California
- 1984-1985 General Practice, Tacoma, Washington
- 1982-1984 General Practice, Elizabeth, South Australia

CERTIFICATION and LICENSURE

SPECIALTY CERTIFICATION

Certified in Psychiatry by the American Board of Psychiatry and Neurology, June 1992, ABPN# 35765

MEDICAL or OTHER PROFESSIONAL LICENSURE

California License A43389

MEMBERSHIPS in PROFESSIONAL and SCIENTIFIC SOCIETIES

- American Psychiatric Association, 1989-present, Fellow 2012
- Society for Biological Psychiatry, 1995-present
- Society for Cognitive Neuroscience, 1993-present
- Society for Neuroscience, 1999-present
- Organization for Human Brain Mapping, 2001-present
- American College of Neuropsychopharmacology, Member 2003-present, Fellow 2010

HONORS

- Best Doctors in Sacramento, Sacramento Magazine 2013-Present
- Thompson-Reuters Highly Cited Scholar (top 1% in Psychiatry and Psychology) 2014
- Mental Health Board of Sacramento, "Mental Health Hero" 2014
- Dean's Award for Excellence in Community Engagement, 2008

NARSAD Distinguished Investigator Award, 2007
Dean's Excellence in Mentoring Award, UC Davis School of Medicine, 2006
Elected to the American College of Neuropsychopharmacology, 2003
NARSAD Klerman Award for Outstanding Clinical Research Achievement, 2001
NIMH Independent Scientist Career Award (K02), 2001-2006
Burroughs Wellcome Fund Clinical Scientist Award in Translational Research, 2001-2006
Honorable Mention, Klerman Award for Outstanding Clinical Research by a NARSAD Young Investigator, 1998
NARSAD Young Investigator Award, 1997
NIMH Mentored Scientist Development Award for Clinicians (K08), 1996-2001
NARSAD Young Investigator Award, 1994
NIMH NCDEU Young Investigator Travel Award, 1993
Northern California Psychiatric Association Resident Recognition Award for Clinical Excellence in Psychiatry, 1989
Friendly Societies Prize for Medicine, 1973
Convocation Prize for Medicine, 1973

NATIONAL and INTERNATIONAL COMMITTEES

Member, Scientific Council-Brain and Behavior Foundation (NARSAD), 2005-Present
Deputy Editor, Biological Psychiatry, 2006-present
Founding Editor-in-Chief Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2015-present
Scientific Advisory Committee, Organization for Human Brain Mapping Annual Meeting, 2001-present
Editorial Board, Biological Psychiatry, 2000-2006
Editorial Board Neuropsychopharmacology, 2003-2014
Editorial Board, Schizophrenia Bulletin, 2005-2009
Editorial Board, Psychiatry Research: Neuroimaging, 2005-present
Charter Member IRG IFCN 7 Learning and Memory LAM, 2002-2005
Ad Hoc Reviewer, VA Merit Program and National Science Foundation, 2000-present
Ad Hoc Member IRG BDCN6, 2001
Chair ZMH1-NRB-Q 06, SEP Translational Research Center Awards, 2003-2006
Charter Member, NPAS Study Section, 2008-2011
Member, ZMH1 ERB-S (03), Special Emphasis Panel, Conte Centers for Schizophrenia, National Institutes of Mental Health, 2004-2006
Organizer, New Advances Conference, MATRICS, NIMH, 2004
Member, Neuropharmacology Committee, MATRICS, NIMH, 2004
Advocacy Group Committee, American College of Neuropsychopharmacology, 2004-11, Chair, 2010-2011
Member, Ad Hoc Committee, Board of Scientific Counselors, Director's Office, National Institutes of Mental Health, 2005, 2006, 2017 Ad Hoc member BSC, NIDA 2016
Ad Hoc Reviewer NHMRC UK Neurosciences Centers 2008
Ad Hoc Reviewer Austrian Science Foundation Special Research Programs 20014, 2017
NIMH Council Workgroup on RDoC measures: Chair, Cognition Working Group, 2016
PhexX/NIMH Working Group on Common Data Elements for Early Psychosis Research, 2016

Program Committee International Cognitive Neuroscience (ICON) 2017
Program Committee Schizophrenia International Research Society 2017
Program Committee American College of Neuropsychopharmacology 2017-20
Ad Hoc Reviewer Nature, Nature Neuroscience, PNAS, Neuron, J Neuroscience
Ad Hoc Editor PNAS 2012-present

PUBLICATIONS

Citations 60,163; H Factor 104

REFEREED ARTICLES

1. Yoon JH, Cui E, Minzenberg MJ, **Carter CS**. Subthalamic Nucleus Activation Occurs Early during Stopping and Is Associated with Trait Impulsivity. *J Cogn Neurosci*. 2019 Jan 3:1-12. doi: 10.1162/jocn_a_01370. [Epub ahead of print] PMID: 30605003
2. Boudewyn M, Roberts BM, Mizrak E, Ranganath C, **Carter CS**. Prefrontal Transcranial Direct Current Stimulation (tDCS) Enhances Behavioral and EEG Markers of Proactive Control. *Cogn Neurosci*. 2018 Nov 22. doi: 10.1080/17588928.2018.1551869. [Epub ahead of print] PMID: 30465636
3. Boudewyn MA, **Carter CS**. Evolving Concepts in Brain Oscillations and Cognitive Control in Schizophrenia. *Biol Psychiatry*. 2018 Nov 1;84(9):632-633. doi: 10.1016/j.biopsych.2018.08.017. PMID: 30297022
4. Niendam TA, Ray KL, Iosif AM, Lesh TA, Ashby SR, Patel PK, Smucny J, Ferrer E, Solomon M, Ragland JD, **Carter CS**. Association of Age at Onset and Longitudinal Course of Prefrontal Function in Youth With Schizophrenia. *JAMA Psychiatry*. 2018 Dec 1;75(12):1252-1260. doi: 10.1001/jamapsychiatry.2018.2538. PMID: 30285056
5. Gold JM, Barch DM, Feuerstahler LM, **Carter CS**, MacDonald AW 3rd, Ragland JD, Silverstein SM, Strauss ME, Luck SJ. Working Memory impairment Across Psychotic Disorders *Schizophr Bull*. 2018 Sep 26. PMID: 302604
6. First MB, Drevets WC, **Carter C**, Dickstein DP, Kasoff L, Kim KL, McConathy J, Rauch S, Saad ZS, Savitz J, Seymour KE, Sheline YI, Zubieta JK. Clinical applications of Neuroimaging in Psychiatric Disorders. *Am J Psychiatry*. 2018 Sep 1;175(9):915-916.
7. Mizrak E, Kim K, Roberts B, Ragland JD, **Carter CS**, Ranganath C, in press. Impact of oscillatory tDCS targeting left prefrontal cortex on source memory retrieval. *Cognitive Neuroscience*
8. Boudewyn MA, **Carter CS**. I must have missed that: Alpha-band oscillations track attention to spoken language. *Neuropsychologia*. 2018 May 26;117:148-155. doi: 10.1016/j.neuropsychologia.2018.05.024. [Epub ahead of print] PMID: 29842859
9. Lesh TA, Careaga M, Rose DR, McAllister AK, Van de Water J, **Carter CS**, Ashwood P. Cytokine alterations in first-episode schizophrenia and bipolar disorder: relationships to brain structure and symptoms. *J Neuroinflammation*. 2018 May 26;15(1):165. doi: 10.1186/s12974-018-1197-2. PMID 29803226
10. Smucny J, Lesh TA, Iosif AM, Niendam TA, Tully LM, **Carter CS**. Longitudinal stability of cognitive control in early psychosis: Nondegenerative deficits across diagnoses. *J Abnorm Psychol*. 2018 May 21. doi: 10.1037/abn0000356. [Epub ahead of print]
11. Hogeveen J, Krug MK, Elliott MV, **Carter CS**, Solomon M. Proactive control as a double-edged sword in autism spectrum disorder. *J Abnorm Psychol*. 2018 May;127(4):429-435. doi: 10.1037/abn0000345. PMID: 29745707
12. Minzenberg MJ, Yoon JH, Soosman SK, **Carter CS**. Altered brainstem responses to modafinil in schizophrenia: implications for adjunctive treatment of cognition. *Transl Psychiatry*. 2018 Mar 6;8(1):58. doi: 10.1038/s41398-018-0104-z. PMID 29507283

13. **Carter CS** Clusters, Dimensions, and Hierarchies: Finding a Path Forward for the Neuroscience of Mental Disorders? *Biol Psychiatry Cogn Neurosci Neuroimaging*. 2018 Jan;3(1):2-3. doi: 10.1016/j.bpsc.2017.11.006. Epub 2017 Nov 24 PMID: 29397075
14. Scangos KW, **Carter CS**, Gurkoff G, Zhang L, Shahlaie K, A pilot study of subthalamic theta frequency deep brain stimulation for cognitive dysfunction in Parkinson's disease. *Brain Stimulation* 2018 Mar - Apr;11(2):456-458. doi: 10.1016/j.brs.2017.11.014
15. Javitt DC, **Carter CS**, Krystal JH, Kantrowitz JT, Girgis RR, Kegeles LS, Ragland JD, Maddock RJ, Lesh TA, Tanase C, Corlett PR, Rothman DL, Mason G, Qiu M, Robinson J, Potter WZ, Carlson M, Wall MM, Choo TH, Grinband J, Lieberman JA (2017). Utility of Imaging-Based Biomarkers for Glutamate-Targeted Drug Development in Psychotic Disorders: A Random Clinical Trial. *JAMA Psychiatry*. 2018 Jan 1;75(1):11-19. doi: 10.1001/jamapsychiatry.2017.3572. PMID 29167877
16. Ramsay IS, Ma S, Fisher M, Loewy RL, Ragland JD, Niendam T, **Carter CS**, Vinogradov S (2017). Model selection and prediction of outcomes in recent onset schizophrenia patients who undergo cognitive training. *Schizophr Res Cogn*. 2017 Nov 8;11:1-5. doi: 10.1016/j.scog.2017.10.001. eCollection 2018 Mar. PMID 29159134
17. Carrión RE, Walder DJ, Auther AM, McLaughlin D, Zyla HO, Adelsheim S, Calkins R, **Carter CS**, McFarland B, Melton R, Niendam T, Ragland JD, Sale TG, Taylor SF, McFarlane WR, Cornblatt BA (2017). From the psychosis prodrome to the first episode of psychosis: No evidence of a cognitive decline. *J Psychiatr Res*. 2017 Oct 19;96:231-238. doi: 10.1016. PMID: 29121595
18. Smuncy J, Lesh TA, Newton T, Ragland JD, **Carter CS** (2017). Levels of Cognitive Control: A Functional Magnetic Resonance Imaging-Based Test of an RDoC Domain Across Bipolar Disorder and Schizophrenia. *Neuropsychopharmacology*. 2017 Sept 26. doi: 10.1038/npp.2017.233. PMID: 28948978
19. Bartoli E, Conner CR, Kadipasaoglu CM, Yellapantula S, Roll MJ, **Carter CS**, Tandon N (2017). Temporal dynamics of human frontal and cingulate neural activity during conflict and cognitive control. *Cerebral Cortex*. Sep 28:1-15
20. Ermel J, **Carter CS**, Gold JM, MacDonald AW 3rd, Daniel Ragland J, Silverstein SM, Strauss ME, Barch DM (2017). Self versus informant reports on the specific levels of functioning scale: Relationships to depression and cognition in schizophrenia and schizoaffective disorder. *Schizophr Res Cogn*. 2017 May 9;9:1-7. doi:10.1016/j.scog.2017.04.001. eCollection 2017 Sept. PMID: 28740827
21. Boudewyn MA, **Carter CS** (2017). Electrophysiological correlates of adaptive control and attentional engagement in patients with first episode schizophrenia and healthy young adults. *Psychophysiology*. 2017 Mar 15. doi: 10.1111/psyp.12820. [Epub ahead of print] PMID: 28295391
22. Boudewyn MA, **Carter CS**, Long DL, Traxler MJ, Lesh TA, Mangun GR, Swaab TY (2017). Language context processing deficits in schizophrenia: The role of attentional engagement. *Neuropsychologia*. 2017 Feb;96:262-273. doi: 10.1016/j.neuropsychologia.2017.01.024. [Epub 2017 Jan 23] PMID: 28126626
23. Barch DM, **Carter CS**, Gold JM, Johnson SL, Kring AM, MacDonald AW, Pizzagalli DA, Ragland JD, Silverstein SM, Strauss ME (2017). Explicit and Implicit Reinforcement Learning Across the Psychosis Spectrum. *J Abnorm Psychol* 2017 Jul;126(5):694-711 PMID: 2840666
24. Ray KL, Lesh TA, Howell AM, Salo T, Ragland JD, MacDonald AW 3rd, Gold JM, Silverstein SM, Barch DM, **Carter CS** (2017). Functional network changes and cognitive control in schizophrenia. *Neuroimage: Clinical*. May 2;15:161-170. doi: 10.1016/j.nicl.2017.05.001.
25. Greenland-White SE, Ragland JD, Niendam TA, Ferrer E, **Carter CS** (2017). Episodic memory functions in first episode psychosis and clinical high risk individuals. *Schizophr Res*. 2017 Oct;188:151-157. doi: 10.1016/j.schres.2017.01.035. PMID: 28143678
26. **Carter CS**, Bearden CE, Bullmore ET, Geschwind DH, Glahn DC, Gur RE, Meyer-Lindenberg A, Weinberger DR (2017). Enhancing the Informativeness and Replicability of Imaging Genomics Studies. *Biological Psychiatry*. Aug 1;82(3):157-164. doi: 10.1016/j.biopsych.2016.08.019. Epub 2016 Aug 20. Review.
27. Ragland JD, Layher E, Hannula DE, Niendam TA, Lesh TA, Solomon J, **Carter CS**, Ranganath C (2016). Impact of schizophrenia on anterior and posterior hippocampus during memory for complex scenes. *Neuroimage Clin*. 2016 Nov 17;13:82-88. eCollection 2017. PMID 27942450.

28. Solomon M, McCauley JB, Iosif AM, **Carter CS**, Ragland JD (2016). Cognitive control and episodic memory in adolescents with autism spectrum disorders. *Neuropsychologia*. 2016 Aug;89:31-41. doi: 10.1016/j.neuropsychologia.2016.05.013. [Epub 2016 May 13]. PMID: 27184119
29. Carrión RE, Cornblatt BA, Burton CZ, Tso IF, Auther AM, Adelsheim S, Calkins R, **Carter CS**, Niendam T, Sale TG, Taylor SF, McFarlane WR (2016). Personalized Prediction of Psychosis: External Validation of the NAPLS-2 Psychosis Risk Calculator With the EDIPPP Project. *Am J Psychiatry*. 2016 Oct 1;173(10):989-996. PMID: 27363511
30. Barch DM, **Carter CS** (2016). Functional and Structural Brain Connectivity in Psychopathology. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. Volume 1, Issue 3, May 2016, Pages 196-198.
31. Poppe AB, Barch DM, **Carter CS**, Gold JM, Ragland JD, Silverstein SM, MacDonal AW 3rd (2016). Reduced Frontoparietal Activity in Schizophrenia Is Linked to a Specific Deficit in Goal Maintenance: A Multisite Functional Imaging Study. *Schizophrenia Bulletin*. 2016 Sep;42(5):1149-57. doi: 10.1093/schbul/sbw036. [Epub 2016 Apr 8]. PMID: 27060129
32. Minzenberg MJ, Lesh TA, Niendam TA, Cheng Y, **Carter CS** (2016). Conflict-Related Anterior Cingulate Functional Connectivity Is Associated With Past Suicidal Ideation and Behavior in Recent-Onset Psychotic Major Mood Disorders. *J Neuropsychiatry Clin Neurosci*. 2016 Apr 8;appineuropsych15120422. [Epub ahead of print]. PMID: 27056021
33. **Carter CS**, Lesh TA, Barch DA (2016). Thresholds, Power, and Sample Sizes in Clinical Neuroimaging. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. Volume 1, Issue 2, March 2016, Pages 99-100.
34. Girgis RR, Van Snellenberg JX, Glass A, Kegeles LS, Thompson JL, Wall M, Cho RY, **Carter CS**, Slifstein M, Abi-Dargham A, Lieberman JA (2016). A proof-of-concept, randomized controlled trial of DAR-0100A, a dopamine-1 receptor agonist, for cognitive enhancement in schizophrenia. *J Psychopharmacol*. 2016 May;30(5):428-35. doi: 10.1177/0269881116636120. [Epub 2016 Mar 10]. PMID: 26966119
35. Lynch S, McFarlane WR, Joly B, Adelsheim S, Auther A, Cornblatt BA, Migliorati M, Ragland JD, Sale T, Spring E, Calkins R, **Carter CS**, Jaynes R, Taylor SF, Downing D (2016). Early Detection, Intervention and Prevention of Psychosis Program: Community Outreach and Early Identification at Six U.S. Sites. *Psychiatric Services*. 2016 May 1;67(5):510-6. doi: 10.1176/appi.ps.201300236. [Epub 2016 Jan 14].
36. Ragland JD, Ranganath C, Phillips J, Boudewyn MA, Kring AM, Lesh TA, Long DL, Luck SJ, Niendam TA, Solomon M, Swaab TY, **Carter CS** (2015). Cognitive Control of Episodic Memory in Schizophrenia: Differential Role of Dorsolateral and Ventrolateral Prefrontal Cortex. *Front Hum Neurosci*. 2015 Nov 10;9:604. doi: 10.3389/fnhum.2015.00603. eCollecton 2015.
37. Ragland JD, Ranganath C, Harms MP, Barch DM, Gold JM, Layher E, Lesh TA, MacDonald AW 3rd, Niendam TA, Phillips J, Silverstein SM, Yonelinas AP, **Carter CS** (2015). Functional and Neuroanatomic Specificity of Episodic Memory Dysfunction in Schizophrenia: A Functional Magnetic Resonance Imaging Study of the Relational and Item-Specific Encoding Task. *JAMA Psychiatry*. 72(9):909-16.
38. Solomon M, Ragland JD, Niendam TA, Lesh TA, Beck JS, Matter JC, Frank MJ, **Carter CS** [Epub 2015]. Atypical Learning in Autism Spectrum Disorders: A Functional Magnetic Resonance Imaging Study of Transitive Inference. *J Am Acad Child Adolesc Psychiatry*. 2015 Nov;54(11):947-55.
39. Minzenberg MJ, Lesh T, Niendam T, Yoon JH, Cheng Y, Rhoades R, **Carter CS** (2015). Conflict-related anterior cingulate functional connectivity is associated with past suicidal ideation and behavior in recent-onset schizophrenia. *J Psychiatry Res*. 2015 June;65:95-101. Doi: 10.1016/j.jpsychires.2015.04.002.
40. Minzenberg MJ, Lesh T, Niendam T, Yoon JH, Cheng Y, Rhoades RN, **Carter CS**. (2015) Frontal Motor Cortex Activity During Reactive Control Is Associated With Past Suicidal Behavior in Recent-Onset Schizophrenia. *Crisis*. 2015 Sep;36(5):363-70.
41. Phillips RC, Salo T, **Carter CS**. (2015) Distinct neural correlates for attention lapses in patients with schizophrenia and healthy participants. *Front Hum Neurosci*. 2015 Oct 6;9:502.
42. Lopez-Garcia P, Lesh TA, Salo T, Barch DM, MacDonald AW 3rd, Gold JM, Ragland JD, Strauss M, Silverstein SM, **Carter CS**. (2015) The neural circuitry supporting goal maintenance during cognitive control: a comparison of expectancy AX-CPT and dot probe expectancy paradigms. *Cogn Affect Behav Neurosci*. 2015 Oct 22. [Epub ahead of print].
43. Sheffield JM, Repovs G, Harms MP, **Carter CS**, Gold JM, MacDonald AW 3rd, Ragland JD, Silverstein SM, Godwin D, Barch DM. (2015) Evidence for Accelerated Decline of Functional Brain Network Efficiency in Schizophrenia. *Schizophr Bull*. 2016 May;42(3):753-61. doi: 10.1093/schbul/sbv148. Epub 2015 Oct 15.
44. **Carter CS** (2015). Rectifying disordered brain dynamics to improve cognition in schizophrenia. *Proceedings of the National Academy of Sciences of the United States of America*. 2015 Jul 28;112(30):9152-3. Doi: 10.1073/pnas.1511091112. [Epub 2015 Jul 8].

45. Minzenberg MJ, Yoon JH, Cheng Y, **Carter CS** (2015). Sustained Modafinil Treatment Effects on Control-Related Gamma Oscillatory Power in Schizophrenia. *Neuropsychopharmacology*. 2015 Sep 2. Doi: 10.1038/npp.2015.271. [Epub ahead of print].
46. Minzenberg MJ, Lesh TA, Niendam TA, Yoon JH, Cheng Y, Rhoades RN, **Carter CS** (2015). Control-Related Frontal-Striatal Function is Associated with Past Suicidal Ideation and Behavior in Patients with Recent-Onset Psychotic Major Mood Disorders. *Journal of Affective Disorders*. 188:202-9.
47. Solomon M, Ragland JD, Niendam TA, Lesh TA, Beck JS, Matter JC, Frank MJ, **Carter CS** (2015). Atypical Learning in Autism Spectrum Disorders: An fMRI Study of Transitive Inference. *Journal of the American Academy of Child and Adolescent Psychiatry*. 54(11):947-55.
48. Sheffield JM, Repovs G, Harms MP, **Carter CS**, Gold JM, MacDonald III AW, Ragland JD, Silverstein SM, Godwin D, Barch DM (2015). Fronto-parietal and cingulo-opercular network integrity and cognition in health and schizophrenia. *Neuropsychologia*. 73:82-93.
49. Boudewyn MA, Long D, Traxler M, Lesh TA, Dave S, Mangun GR, **Carter CS**, Swaab TY (2015). Sensitivity to Referential Ambiguity in Discourse: the Role of Attention, Working Memory and Verbal Ability. *Journal of Cognitive Neuroscience*. 27(12):2309-23.
50. Jarskog LF, Lowy MT, Grove RA, Keefe RSE, Horrigan JP, Ball MP, Breier A, Buchanan RW, **Carter CS**, Csernansky JG, Goff DC, Green MF, Kantrowitz JT, Keshavan MS, Laurell M, Lieberman JA, Marder SR, Maruff P, McMahon RP, Seidman LJ, Peckham MA (2015). A Phase II study of a histamine H3 receptor antagonist GSK239512 for cognitive impairment in stable schizophrenia subjects on antipsychotic therapy. *Schizophrenia Research*. 164(1-3):136-42.
51. Kappenman ES, Luck SJ, Kring AM, Lesh TA, Mangun GR, Niendam TA, Ragland JD, Ranganath C, Solomon M, Swaab TY, **Carter CS** (2014). Electrophysiological evidence for impaired control of motor output in schizophrenia. *Cerebral Cortex*. Jan 24. pii: bh329. [Epub ahead of print].
52. Poppe AB, **Carter CS**, Minzenberg MJ, MacDonald AW 3rd (2014). Task-based functional connectivity as an indicator of genetic liability. *Schizophrenia Research*. 162(1-3):118-23.
53. Lesh TA, Tanase C, Geib BR, Niendam TA, Yoon JHY, Minzenberg MJ, Ragland JD, Solomon M, **Carter CS** (2014). A Multi-modal Analysis of Antipsychotic Effects on Brain Structure and Function in First-Episode Schizophrenia. *Jama Psychiatry*. 72(3):226-3.
54. Solomon M, Frank MJ, Ragland JD, Smith AC, Niendam TA, Lesh TA, Grayson DS, Beck JS, Matter JC, **Carter CS** (2014). Feedback-Driven Trial-by-Trial Learning in Autism Spectrum Disorders. *American Journal of Psychiatry*. 2014 Aug 26. [Epub ahead of print].
55. Fisher M, Loewy R, **Carter CS**, Lee A, Ragland JD, Niendam TA, Schlosser D, Pham L, Miskovich T, Vinogradov S (2014). Neuroplasticity-Based Auditory Training Via Laptop Computer Improves Cognition in Young Individuals With Recent Onset Schizophrenia. *Schizophrenia Bulletin* 2014 Jan 20. [Epub ahead of print].
56. Minzenberg MJ, Lesh TA, Niendam TA, Yoon JH, Rhoades RN, **Carter CS** (2014). Frontal cortex control dysfunction related to long-term suicide risk in recent-onset schizophrenia. *Schizophrenia Research* Aug;157(1-3):19-25.
57. Mote, J, Minzenberg MJ, **Carter CS**, Kring AM (2014). Deficits in anticipatory but not consummatory pleasure in people with recent-onset schizophrenia spectrum disorders. *Schizophrenia Research*. 159(1):76-9.
58. Minzenberg MJ, Yoon JH, Cheng YA, **Carter CS** (2014). Modafinil Effects on Middle-Frequency Oscillatory Power During Rule Selection in Schizophrenia. *Neuropsychopharmacology*. [Epub ahead of print].
59. McFarlane WR, Levin B, Travis L, Lucas FL, Lynch S, Verdi M, Williams D, Adelsheim S, Calkins R, **Carter CS**, Cornblatt B, Taylor SF, Author AM, McFarland B, Melton R, Migliorati M, Niendam T, Ragland JD, Sale T, Salvador M, Spring L (2014). Clinical and functional outcomes after 2 years in the Early Detection and Intervention for the Prevention of Psychosis multisite effectiveness trial. *Schizophrenia Bulletin*. 41(1):30-43.
60. Caldwell JG, Krug MK, **Carter CS**, Minzenberg MJ (2014). Cognitive Control in the Face of Fear: Reduced Cognitive-Emotional Flexibility in Women with a History of Child Abuse. *Journal of Aggression, Maltreatment & Trauma*, 23:5, 454-472.
61. Fassbender C, Scangos K, Lesh TA, **Carter CS** (2014). RT Distributional Analysis of Cognitive Control-Related Brain Activity in First Episode Schizophrenia. *Cognitive, Affective & Behavioral Neuroscience* 14(1):175-88.
62. Pakyurek M, Yarnal R, **Carter CS** (2013). Treatment of psychosis in children and adolescents: a review. *Adolesc Med State Art Rev* Aug;24(2):420-32, ix.

63. Lesh TA, Westphal AJ, Niendam TA, Yoon JH, Minzenberg MJ, Ragland JD, Solomon M, **Carter CS** (2013). Proactive and reactive cognitive control and dorsolateral prefrontal cortex dysfunction in first episode schizophrenia. *Neuroimage: Clinical* 2:590-599.
64. Swaab T, Boudewyn M, Long D, Luck S, Kring A, Ragland JD, Ranganath C, Lesh TA, Niendam TA, Solomon M, Mangun GR, **Carter CS** (2013). Spared and Impaired Spoken Discourse Processing in Schizophrenia: Effects of Local and Global Language Context. *Journal of Neuroscience* 33(39):15578-87.
65. Niendam TA, Lesh TA, Yoon J, Westphal AJ, Hutchison N, Ragland JD, Solomon M, Minzenberg M, **Carter CS** (2013). Impaired context processing as a potential marker of psychosis risk state. *Psychiatry Research* 221(1):13-20.
66. **Carter CS**, Bullmore, E.T., Harrison, P. Is there a Flame in the Brain in Psychosis? *Biological Psychiatry* 75(4):258-9.
67. Minzenberg MJ, Gomes GC, Yoon JH, Swaab TY, **Carter CS** (2013). Disrupted action monitoring in recent-onset psychosis patients with schizophrenia and bipolar disorder. *Psychiatry Research: Neuroimaging* 221(1):114-21.
68. Moore H, Geyer, MA, **Carter CS**, Barch DM (2013). Harnessing cognitive neuroscience to develop new treatments for improving cognition in schizophrenia: CNTRICS selected cognitive paradigms for animal models. *Neuroscience & Biobehavioral Reviews* 37(9):2087-91.
69. Sheffield JM, Gold JM, Strauss ME, **Carter CS**, Macdonald AW 3rd, Ragland JD, Silverstein SM, Barch DM (2013). Common and specific cognitive deficits in schizophrenia: relationships to function. *Cognitive, Affective & Behavioral Neuroscience*. [Epub ahead of print].
70. Tryon MS, **Carter CS**, Decant R, Laugero KD (2013). Chronic stress exposure may affect the brain's response to high calorie food cues and predispose to obesogenic eating habits. *Physiology & Behavior* 120:233-42.
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BOOKS

Carter CS and Dalley JW, Brain Imaging in Behavioral Science, Springer 2014

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04/01/2015 - 03/31/2020

UC Davis Conte Center Neuroimmune Mechanisms of Psychiatric Disorders

The goal of the Conte Center is to test the hypothesis that maternal immune activation contributes to schizophrenia by altering immune molecules in the brains of offspring, which, in turn, alters cortical connectivity, function, and behavior during development. Four Projects and 2 cores are conducting linked, translational research across species (mouse, non-human primate, humans with a psychotic illness) and scales of analysis (cellular, molecular, circuits, symptoms and behavior) to address this hypothesis.

5R01MH104235-02 (Carter) NIMH

09/01/2014 - 09/01/2019

Reducing Duration of Untreated Psychosis through Rapid Identification and Engagement

In a controlled study across 20 community treatment settings in the Sacramento region we will use a novel hand held device based screening approach as well as telemedicine enabled community based interventions with goal of reduce the duration of untreated psychosis and improving treatment outcomes in young people undergoing a first episode of psychotic illness.

U01MH105258 (PI McGorry, University of Melbourne) subcontract to UC Davis (PI Carter)

4/01/2016-3/31. 2021

Building the Evidence Base for Adaptive Treatment Sequences in Clinical High Risk

This is a proof of concept pilot study of staged treatment interventions for adolescents and young adults at very high risk for developing a psychotic illness to test the feasibility of this approach within the United States Health Care System.

5R01MH084826-05 (Carter) NIMH

10/12/2013 - 10/01/2017 (NCE)

Cognitive Neuroscience Task Reliability and Clinical Application Consortium

Behavioral tasks measuring the RDoC constructs of reward sensitivity and working memory capacity will be validated, optimized, and characterized psychometrically. Optimized measures and their psychometric characteristics will then be publically available for use in treatment development studies.

5R01MH059883-11 (Carter) NIMH

06/01/2013 - 06/01/2018 (NCE)

Pathophysiology of Cognitive Disability in Schizophrenia:

Using fMRI and two cognitive tasks evaluating unique aspects of cognitive control and approach motivation we will test the hypothesis that during a first episode of psychosis both schizophrenia that bipolar disorder patients will show cognitive control deficits that in schizophrenia will remain as stable trait deficits during the first year of illness but that in Bipolar disorder will show substantial improvement with clinical remission. In contrast Bipolar Disorder patients will show an enhanced sensitivity to repeated rewards that will be stable across clinical states, while schizophrenia patients will show intact or reduced responses to incentives across the course

of the first year of illness.

PENDING

RO1MH084826-05 (Carter) NIMH

9/30/2018 - 6/30/2023

Cognitive Neurocomputational Task Reliability and Clinical Application Consortium.

Computational model based analyses of behavioral tasks measuring the RDoC constructs of reinforcement learning, working and episodic memory will be validated against brain based measures (EEG), optimized, and characterized psychometrically in a broad range of psychopathology as well as at scale using on line testing in the general population. Optimized measures and their psychometric characteristics will then be publically available for use in genetic, treatment development and other mental health research studies.

RO1MH119546 (Carter) NIMH

4/1/2019-3/31/2024

Effects of tDCS on Cognition, Oscillations and GABA Levels in Schizophrenia.

Using non-invasive brain stimulation we will test the hypothesis that reduced oscillatory activity in dorsolateral prefrontal cortex underlies impaired cognitive control in schizophrenia and that reductions in GABA neurotransmission underlies this deficit.