

Brendon Omar Watson, MD-PhD, Assistant Professor, University of Michigan
 Department of Psychiatry 109 Zina Pitcher Place, Ann Arbor, MI 48109 •
 brendonw@med.umich.edu

EDUCATION AND TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Cornell University, Ithaca, NY	B.A.	08/96-07/00	Biology
Columbia University, New York, NY	Ph.D.	08/00-06/09	Neurobiology and Behavior
Columbia Univ. College of Physicians & Surgeons, New York, NY	M.D.	08/00-06/09	Medicine
Weill Cornell Medical College / New York Presbyterian Hospital, New York, NY	Residency	06/09-06/13	Psychiatry
Weill Cornell Medical College Department of Psychiatry	Research Fellowship	07/13-07/17	Psychiatry/ Neurobiology
New York University Neuroscience Institute Laboratory of Dr. Gyorgy Buzsaki, New York, NY	Postdoctoral Fellowship	07/11-07/17	Neurobiology

CERTIFICATION AND LICENSURE

NPI Number: 1104050269

DEA Number: FW2337740, Expires 5/31/2019

State of Michigan medical license: 4301113513, Expires 1/31/2018f

American Board of Psychiatry and Neurology Psychiatry Board License Number: 189448

ACADEMIC, ADMINISTRATIVE AND CLINICAL APPOINTMENTS

INSTITUTION AND LOCATION	MM/YY	TITLE/DESCRIPTION
Lenox Hill Hospital, New York, NY	07/12 – 12/14	Staff Psychiatrist
Department of Psychiatry, Weill Cornell Medical College, New York, NY	06/13 – 06/16	Instructor in Psychiatry
Department of Psychiatry, Weill Cornell Medical College, New York, NY	07/16 – 07/17	Assistant Professor in Psychiatry

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New York Presbyterian Hospital, New
York, NY

06/13 – 07/17

Assistant Attending Physician

RESEARCH INTERESTS

- 1) Mechanisms of cerebral cortical function and regulation
- 2) Role of sleep in regulation of cortical circuits
- 3) Role of ketamine and antidepressants in cerebral cortical network signaling

GRANTS

PRESENT AND ACTIVE

- NARSAD Young Investigator Award
Role: PI
Title: *How are Cortical and Hippocampal Networks Altered by Antidepressant Doses of Ketamine?: Electrophysiological Studies Using High-Density Silicon Probes*
January 2015 – January 2018
Funding: \$65,000 total
- NIMH K08 Award - MH107662
Role: PI
Title: *Role of Waking Activity in Determining Sleep-Based Modification of Cortical Circuits*
July 2015-April 2019
Funding: \$155,315/year

PREVIOUS GRANTS AND FUNDED FELLOWSHIPS

- Leon Levy Neuroscience Fellowship
Role: Fellow
Title: *Electrophysiologic Characterization of Homeostatic Changes During Sleep in Rats*
February 2015-January 2016
Funding: \$125,000
- American Psychiatric Association -Lilly Research Fellowship
Role: Fellow
Title: *N/A*
July 2013-June 2014
Funding: \$45,000
- NINDS Ruth L. Kirschstein National Research Service Award for Individual
Predoctoral MD/PhD Fellows (F30 award).
Role: Fellow
Title: *Circuit Mechanisms of Cortical Synchronization*
March 2005-June 2009
Funding: \$128,408

HONORS AND AWARDS

- 2011 Outstanding Resident Award – National Institute of Mental Health
- 2012 Invited Attendee to National Institute of Mental Health Brain Camp 2012
- 2013 Invited participant in American Psychiatric Association Research Colloquium for Junior Investigators
- 2013 Samuel W. Perry III, M.D. Distinguished Award in Psychiatric Medicine
- 2017 American Society for Clinical Investigation - Young Physician-Scientist Award

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

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- 1998-2000 Mind Brain Behavior Society Cornell University – Member, Journal Contributor and Editor
- 2001- Society for Neuroscience – Member
- 2010-13 New York State Psychiatric Association – Member in Training
- 2012-13 Temporal Dynamics of Learning Center - Fellow
- 2013-2015 American Psychiatric Association – Member

EDITORIAL POSITIONS, BOARDS AND PEER-REVIEW SERVICE

- Assisted in peer-reviewing many papers for postdoctoral and doctoral mentors
- Peer reviewed one manuscript for the journal Neural Plasticity

TEACHING

- August 2012: Lectured about substance use disorders to PGY1 residents at Weill Cornell Medical College
- May 2015: Gave lecture on brain dynamics in medical student research course at Weill Cornell Medical College

COMMITTEE, ORGANIZATIONAL AND VOLUNTEER SERVICE

- None

CONSULTING POSITIONS

- Member of Cornell and Columbia Think Tank on Borderline Personality Disorder – June 2015

VISITING PROFESSORSHIPS, SEMINARS AND EXTRAMURAL INVITED PRESENTATIONS

VISITING PROFESSORSHIPS

- None

SEMINARS

- None

EXTRAMURAL INVITED PRESENTATIONS

- Leon Levy Fellowship Presentation, New York University, New York, NY, April 30, 2015
- International Conference on Advanced Neurotechnology – Freiburg Germany June 29, 2017

PATENTS

- 1) United States Patent 9,846,313

Granted December 19, 2017

V. Nikolenko, B.O, Watson, D. S. Peterka, R. Yuste. Device, Apparatus and Method for Providing Photostimulation and Imaging of Structures.
Filed September 25, 2009

BIBLIOGRAPHY

Peer-Reviewed Journals and Publications

- 1) Watson, B., Meng, F., and Akil, H. (1996). A chimeric analysis of the opioid receptor domains critical for the binding selectivity of mu opioid ligands. *Neurobiology of Disease*, 3: 87–96, 1996.
- 2) Watson, B.O., Vilinsky, I., and Deitcher, D.L. (2001). Generation of a semi-dominant mutation with temperature sensitive effects on both locomotion and phototransduction in *Drosophila melanogaster*. *Journal of Neurogenetics*, 15: 75-95.
- 3) Rao S.S., Stewart B.A., Rivlin P.K., Vilinsky I., Watson B.O., Lang C., Boulianne G., Salpeter M.M., Deitcher D.L. (2001). Two distinct effects on neurotransmission in a temperature-sensitive SNAP-25 mutant. *EMBO Journal*, 20(23) 6761-71.
- 4) Fernandez, J.M., Watson, B., and Qian, N. (2002). Computing relief structure from motion with a distributed velocity and disparity representation. *Vision Research*, 42: 883-898.
- 5) MacLean, J.N., Watson, B.O., Aaron, G.B., and Yuste, R. (2005). Internal dynamics determine the cortical response to thalamic stimulation. *Neuron*, 48: 811-823.
- 6) MacLean, J.N., Fenstermaker, V., Watson, B.O., and Yuste, R. (2006). A visual thalamocortical slice. *Nature Methods*, 3: 129-34.
- 7) Trevelyan, A.J., Sussillo, D., Watson, B.O., and Yuste R (2006). Modular propagation of epileptiform activity: Evidence for an inhibitory veto in neocortex. *Journal of Neuroscience* 2006 Nov 29;26(48):12447-55.
- 8) Watson, B.O., MacLean, J.N., and Yuste, R.. (2008). UP states protect cortical dynamics from thalamic inputs. *PLoS One* 3(12):e3971. Epub 2008 Dec 18.
- 9) Nikolenko, V., Watson B.O., Araya, R., Woodruff, A., Peterka, D.S., and Yuste, R. (2008). SLM Microscopy: Scanless Two-photon Imaging and Photostimulation with Spatial Light Modulators. *Frontiers in Neural Circuits*. 2:5. Epub 2008 Dec 19.
- 10) Vogelstein, J., Watson, B.O., Packer, A.M., Yuste, R., Jedyank, B. and Paninski, L. (2009). Spike inference from calcium imaging using sequential Monte Carlo methods. *Biophysical Journal* 97(2):636-55..
- 11) Cohen, S.M., Ma, H., Kuchibhotla, K., Watson, B.O., Buzsaki, G., Froemke, R., Tsien, R.W. (2016). Excitation-transcription coupling in parvalbumin-positive interneurons employs a novel CaM Kinase-dependent pathway distinct from excitatory neurons. *Neuron* 90(2): 292-307.
- 12) Watson, B.O., Levenstein, D., Greene, J.P., Gelinas, J.N., Buzsaki, G (2016). Network homeostasis and state dynamics of neocortical sleep. *Neuron* 90(4): 839-852.
- 13) Watson, B.O., Ding M., Buzsaki, G. (2018). Temporal coupling of field potentials and action potentials in the neocortex. *Eur J Neurosci*. DOI: 10.1111/ejn.13807

EDITORIALY REVIEWED PUBLICATIONS

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- 1) Watson, B.O., Nikolenko, V., Yuste, R. (2009). Two photon imaging with diffractive optical elements. *Frontiers in Neural Circuits* 3:6. Epub 2009 Jul 6.
- 2) Vandecasteele, M., Royer, S., Belluscio, M., Diba, K., Fujisawa, S., Grosmark, A., Mao, D., Mizuseki, K., Patel, J., Stark, E., Sullivan, D., Watson, B., Buzsaki, G. (2012). Large-scale Recording of Neurons by Movable Silicon Probes in Behaving Rodents. *J Vis Exp* 61 pii: 3568. doi: 10.3791/3568
- 3) Buzsaki, G., Watson, B.O. (2012). Brain rhythms and neural syntax: implications for efficient coding of cognitive content and neuropsychiatric disease. *Dialogues in Clinical Neuroscience* 14(4):345-67. Review
- 4) Watson, B.O., Michels R.M. (2014). Neuroscience in the Residency Curriculum: The Psychoanalytic Psychotherapy Perspective. *Academic Psychiatry*, 2015.
- 5) Watson, B.O., Buzsaki, G. (2014). Sleep, Memory and Brain Rhythms. *Daedalus* 141.1 (2015): 67-82. Review
- 6) Levenstein, D., Watson B.O., Rinzel, J., Buzsaki, G. (2017). Sleep regulation of the distribution of cortical firing rates. *Current Opinion in Neurobiology* 44:34-42. Review