

CURRICULUM VITAE

Date of Revision: September 25, 2019
Name: Albert R. Powers III, M.D., Ph.D.
Position: Assistant Professor, Department of Psychiatry
Term: July 1, 2018 to June 30, 2021
School: Yale University School of Medicine

Education:

B.A. Yale College (Cognitive Science), August 2000 – May 2004
M.D., Ph.D. Vanderbilt University School of Medicine (Neuroscience) June 2005 – May 2012

Career/Academic Appointments:

June 2012 – June 2013 Intern, Internal Medicine and Psychiatry, Yale-New Haven Hospital, New Haven, CT
June 2013 – June 2016 Assistant and Senior Resident, Psychiatry, Yale-New Haven Hospital, New Haven, CT
June 2015 – June 2016 Chief Resident, Neuroscience Research Training Program, Yale-New Haven Hospital, New Haven, CT
June 2016 – June 2018 Schizophrenia Research Fellow, VA Special Fellowship in Schizophrenia Research, VA Connecticut Healthcare System, West Haven, CT
June 2017 – June 2018 Clinical Instructor, Department of Psychiatry

Administrative Positions:

May 2017 – present Medical Director, PRIME Prodromal Research Clinic, Department of Psychiatry, Yale University School of Medicine, New Haven, CT

Board Certification:

American Board of Psychiatry and Neurology, Psychiatry, 2017

Professional Honors & Recognition:

Klerman Prize for Exceptional Clinical Research, Brain & Behavior Research Foundation (BBRF)	2018
Burroughs-Wellcome Fund Career Award for Medical Scientists	2018
Participation in the Career Development Institute for Psychiatry, UPMC	2018
New Investigator Award, American Society of Clinical Psychopharmacology (ASCP)	2018
Future Leader Award, International Early Psychosis Association (IEPA)	2018

Participant, APA Research Colloquium for Junior Investigators, American Psychiatric Association	2015
Society of Biological Psychiatry Travel Fellowship, Society of Biological Psychiatry	2016
NARSAD Young Investigator Award, Brain and Behavior Research Foundation	2016 - 2018
Seymour L. Lustman Award for Resident Research, Department of Psychiatry, Yale University School of Medicine	2016
Detre Fellowship Award for Translational Neuroscience	2014
Beauchamp Award for Excellence in Psychiatry	2012
Ruth L. Kirschstein Pre-Doctoral National Research Service Award (F30) Awarded by the National Institute for Deafness and Other Communication Disorders (NIDCD)	2009 - 2012
Vanderbilt Kennedy Center Travel Award	2008 - 2010
NIMH / ACNP Training Fellowship / Travel Award	2008
International Multisensory Research Forum Travel Award	2008

Grant History:

Current Grants

Agency: NIH / NIMH

I.D.#: K23 MH115252

Title: "A Hearing Test for Hallucinations: Toward Development of Computational Markers for Early Diagnosis"

P.I.: Albert R. Powers III, M.D., Ph.D.

Percent effort: 75%

Direct costs per year: \$182,300

Total costs for project period: \$982,664

Project period: 07/01/2018 - 06/30/2023

Agency: Burroughs-Wellcome Fund

I.D.#: Career Award for Medical Scientists

Title: "Computational markers for psychosis: toward early diagnosis and intervention"

P.I.: Albert R. Powers III, M.D., Ph.D.

Percent effort: Unspecified

Direct costs per year: \$140,000

Total costs for project period: \$700,000

Project period: 09/01/2018 - 08/31/2023

Past Grants

Agency: Brain and Behavior Research Foundation

I.D.# NA.R.SAD Young Investigator Award

Title: “Conditioning Illusory Percepts: Testing a Predictive Coding Model of Hallucinations”

P.I.: Albert R. Powers III, M.D., Ph.D.

Percent effort: 0%

Direct costs per year: \$35,000

Total costs for project period: \$70,000

Project period: 01/15/16 - 01/15/19

Agency: NIH / NIDCD

I.D.# F30 DC009759-01A2

Title: “Psychophysics & Neuroimaging Studies of the Multisensory Temporal Binding Window”

P.I.: Albert R. Powers III, M.D., Ph.D.

Percent effort: 100%

Total costs for project period: N/A

Project period: 06/01/2009 – 05/31/2013

Invited Speaking Engagements, Presentations, Symposia & Workshops Not Affiliated With Yale:

Powers, A.R. (2020). Sensory and Perceptual Alterations Giving Rise to Psychotic Symptoms in Health and Disorder. Talk to be presented at the NCCR Conference on The Neurobiology of Mental Health February 26th-28th, 2020, Geneva, Switzerland.

Powers, A.R. (2019). Hallucinations and Psychosis: Phenomenology, Computation, and Risk. Invited Grand Rounds speaker, University of Connecticut Department of Psychiatry, December 13, 2019.

Powers, A.R. (2019). Hallucinations in Psychosis and in Non-Psychotic Voice Hearers: A New Perspective. Invited speaker at the 14th Annual Psychotic Disorders Conference, University of California, Davis, Monday, December 2, 2019; hosted by Dr. Cameron Carter and Dr. Thomas Insel.

Powers, A.R. (2019). Hallucinations, Inference, and the Psychosis Spectrum. Invited talk to the faculty of the Laureate Institute for Brain Research (LIBR), Tulsa, OK, hosted by Dr. Martin Paulus.

Computational Psychiatry Workshop (2019), The Banbury Center, Lloyd Harbor, New York. Invitation-only meeting on the future of Computational Psychiatry

Powers, A.R. (2019). Conditioned Hallucinations: Toward Development of Computational Markers for Early Diagnosis and Personalized Treatment. Invited talk for the Bio-Imagining Research Center University of Georgia Speaker Series, hosted by Dr. Brett Clementz.

Powers, A.R. (2018). Conditioned Hallucinations: Toward Development of Computational Markers for Early Diagnosis and Personalized Treatment. Invited talk to the faculty of the Mount Sinai School of Medicine Department of Psychiatry.

Powers, A.R. (2017). Prescribing in Early Psychosis: Make Haste Slowly. Psychosis Symposium, OnTrackNY, Northern Rivers Family of Services

Powers, A.R. (2017). Early Intervention in Mental Illness. NAMI Fairfield.

Peer-Reviewed Presentations & Symposia Given at Meetings Not Affiliated With Yale:

International/National

Quagan, B.M., Mourgues, C., **Powers, A.R.** (2019). Voluntary Control of Voice-Hearing: An Alliance to Move Phenomenology to New Therapeutic Approaches. Symposium chaired and organized by Dr. Powers for the 18th annual meeting of The International Society for Psychological and Social Approaches to Psychosis (ISPS-US), November 1-3, 2019.

Powers, A.R. (2018). Computation as translation: modeling of behavior provides insight into latent neural processes. Talk given as part of study group, Dueling Computational Approaches to Big Biomarker Data in Psychosis: Four Experts Reveal Gems in the B-Snip Database, at the 57th meeting of the American College of Neuropsychopharmacology (ACNP), Hollywood, FL.

Powers, A.R. (2018). Conditioned Hallucinations: Toward Development of Computational Markers for Early Diagnosis and Personalized Treatment. Abstract accepted for a talk presented at the 2018 meeting of the International Early Psychosis Association, Boston, MA.

Powers, A.R., Mathys, C., Corlett, P.R. (2018). A Computational Approach to Psychosis Detection and Personalized Treatment. Abstract accepted for a talk presented at the 2018 meeting of the American Society for Clinical Psychopharmacology (ASCP), Miami, FL.

Powers, A.R., Mathys, C., Corlett, P.R. (2017). Hallucinations result from overweighting of perceptual priors. Abstract accepted for a talk as part of a symposium entitled, "Disordered prediction in psychosis: from neurobiology to phenomenology" at the 2017 meeting of the Society for Research in Psychopathology (SRP) conference, Denver, Colorado.

Powers, A.R., Mathys, C., Corlett, P.R. (2017). Hallucinations result from overweighting of perceptual priors. Abstract accepted for a talk presented at the 2017 meeting of the International Multisensory Research Forum (IMRF), Nashville, TN.

Powers, A.R., Mathys, C., Corlett, P.R. (2017). Conditioned Hallucinations: Over-Influential Priors Lead to Aberrant Percepts. Abstract accepted for poster presented at 2017 meeting of the International Congress of Schizophrenia Research (ICOSR), San Diego, CA.

Powers, A.R., Mathys, C., Corlett, P.R. (2016). Sensory Conditioning: Testing a Top-Down Predictive-Coding Model of Hallucinations. Abstract accepted for poster

presented at 2016 meeting of the Society of Biological Psychiatry (SoBP), Atlanta, GA.

Powers, A.R., Corlett, P.R. (2015). Conditioning Illusory Percepts: Testing a Predictive Coding Model of Hallucinations. Abstract accepted for poster presented at 2015 meeting of the American College of Neuropsychopharmacology (ACNP), Hollywood, FL.

Corlett, P.R. (2015) Pavlovian to Instrumental Transfer: Tracking the Transition from Goal-directed to Habitual Behaviour. Talk given on behalf of Philip Corlett, Ph.D. as part of the symposium entitled “Computational Modeling of Learning and Decision Making in Schizophrenia” at the Society of Biological Psychiatry annual meeting, Toronto, Canada.

Powers, A.R., Hevey, M.A., and Wallace, M.T. (2010) The Neural Correlates of Multisensory Perceptual Training. Abstract accepted for a poster presented at the 2010 meeting of the International Multisensory Research Forum, Liverpool, U.K.

Powers, A.R., Hevey, M.A., and Wallace, M.T. (2010) The Neural Correlates of Multisensory Perceptual Training. Abstract accepted for a poster presented at the 2010 meeting of the Organization for Human Brain Mapping (OHBM), Barcelona, Spain.

Powers A.R., Hillock A.R., Wallace M.T. (2009). Multiple Modes of Perceptual Training Induce a Narrowing in the Multisensory Temporal Binding Window. Abstract accepted for a poster presented at the 2009 meeting of the International Multisensory Research Forum, New York, NY.

Powers A.R., Hillock A.R., Wallace M.T. (2008). Perceptual training can narrow the temporal window multisensory integration. Abstract accepted for poster presentation at 2008 meeting of the American College of Neuropsychopharmacology (ACNP), Scottsdale, AZ.

Powers A.R., Hillock A.R., Wallace M.T. (2008). Narrowing of the multisensory temporal binding window via perceptual training. Abstract accepted for poster presentation at 2008 meeting of the Society for Neuroscience (SfN), Washington, D.C.

Hillock, A.R., **Powers, A.R.**, Krueger, J., Key, A.P.F., Wallace, M.T. (2008). Electrophysiological correlates of auditory-visual perceptual simultaneity. Abstract accepted for poster presentation at 2008 meeting of the Society for Neuroscience (SfN), Washington, D.C.

Powers A.R., Hillock A.R., Wallace M.T. (2008). Perceptual Training-Induced Narrowing of the Multisensory Temporal Binding Window. Abstract accepted for a talk given at 2008 meeting of the International Multisensory Research Forum, Hamburg, Germany.

Professional Service

Journal Service:

2012-present Ad-Hoc Reviewer: JAMA Psychiatry, American Journal of Psychiatry, Proceedings of the National Academy of Sciences (PNAS), Molecular Psychiatry, Brain and Behavior, Consciousness and Cognition, Biological Psychiatry, Acta Psychiatrica Scandinavica, Schizophrenia Bulletin, Schizophrenia Research, Neuropsychologia, Frontiers in Psychiatry, Multisensory Research, Consciousness and Cognition, Journal of Abnormal Psychology, Brain Research, Neuroimage, PLoS One, British Journal of Psychiatry.

Other Academic Service:

2016- present Featured Expert and Consultant, Bublup, Inc.

2018- present Reviewer for The Netherlands Organisation for Health Research and Development

Bibliography:

Peer-Reviewed Original Research

1. **Powers A.R. 3rd**, Hillock A.R., Wallace MT. Perceptual training narrows the temporal window of multisensory binding. *The Journal of neuroscience : the official journal of the Society for Neuroscience*. 2009; 29(39):12265-74. NIHMSID: NIHMS153346 PubMed [journal] PMID: 19793985, PMCID: PMC2771316
2. Hillock A.R., **Powers A.R.**, Wallace MT. Binding of sights and sounds: age-related changes in multisensory temporal processing. *Neuropsychologia*. 2011; 49(3):461-7. NIHMSID: NIHMS300458 PubMed [journal] PMID: 21134385, PMCID: PMC3140703
3. **Powers A.R. 3rd**, Hevey MA, Wallace MT. Neural correlates of multisensory perceptual learning. *The Journal of neuroscience : the official journal of the Society for Neuroscience*. 2012; 32(18):6263-74. NIHMSID: NIHMS375206 PubMed [journal] PMID: 22553032, PMCID: PMC3366559
4. Stevenson RA, Wilson MM, **Powers A.R.**, Wallace MT. The effects of visual training on multisensory temporal processing. *Experimental brain research*. 2013; 225(4):479-89. NIHMSID: NIHMS434878 PubMed [journal] PMID: 23307155, PMCID: PMC3606590
5. **Powers A.R. 3rd**, Gancsos MG, Finn ES, Morgan PT, Corlett PR. Ketamine-Induced Hallucinations. *Psychopathology*. 2015; 48(6):376-85. NIHMSID: NIHMS710883 PubMed [journal] PMID: 26361209, PMCID: PMC4684980
6. **Powers III A.R.**, Hillock-Dunn A, Wallace MT. Generalization of multisensory perceptual learning. *Nature Scientific Reports*. 2016; 6:23374. PubMed [journal] PMID: 27000988, PMCID: PMC4802214
7. **Powers A.R. 3rd**, Kelley MS, Corlett PR. Varieties of Voice-Hearing: Psychics and the Psychosis Continuum. *Schizophrenia bulletin*. 2017; 43(1):84-98. PubMed [journal] PMID: 28053132, PMCID: PMC5216860
8. **Powers A.R.**, Mathys C, Corlett PR. Pavlovian conditioning-induced hallucinations result from overweighting of perceptual priors. *Science*. 2017 Aug 11;357(6351):596-600. PubMed PMID: [28798131](https://pubmed.ncbi.nlm.nih.gov/28798131/).

9. Woods SW, **Powers A.R. 3rd**, Taylor JH, Davidson CA, Johannesen JK, Addington J, Perkins DO, Bearden CE, Cadenhead KS, Cannon TD, et al. Lack of Diagnostic Pluripotentiality in Patients at Clinical High Risk for Psychosis: Specificity of Comorbidity Persistence and Search for Pluripotential Subgroups. *Schizophr Bull.* 2018 Feb 15;44(2):254-263. doi: 10.1093/schbul/sbx138. PubMed PMID: 29036402; PubMed Central PMCID: PMC5814797.
10. Niles HF, Walsh BC, Woods SW, **Powers A.R. 3rd**. Does hallucination perceptual modality impact psychosis risk? *Acta Psychiatr Scand.* 2019 Oct;140(4):360-370. doi: 10.1111/acps.13078. Epub 2019 Aug 16. PubMed PMID: 31355420; PubMed Central PMCID: PMC6752971.

Chapters, Books, and Reviews

11. Sarko, D.K., Nidiffer, A.R., **Powers, A.R.**, Ghose, D., Hillock-Dunn, A., Fister, M.C., Krueger, J., and Wallace, M.T. (2011). Spatial and temporal features of multisensory processes: bridging between animal and human studies. Book Chapter. In: *Frontiers in the Neural Bases of Multisensory Processes*, MM Murray and MT Wallace (eds) Taylor-Francis
12. **Powers III A.R.**, Kelley M, Corlett PR. Hallucinations as top-down effects on perception *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging.* 2016 September 01; 1(5).
13. Corlett, P.R., Horga, G., Fletcher, F., Alderson-Day, B., Schmack, K., **Powers, A.R.** Hallucinations and Strong Priors. *Trends Cogn Sci.* 2019 Feb;23(2):114-127. doi: 10.1016/j.tics.2018.12.001. Epub 2018 Dec 21. Review. PubMed PMID: 30583945; PubMed Central PMCID: PMC6368358.
14. Luhrmann, T.M., Alderson-Day, B., Bell, V., Bless, J., Corlett., P.R., Hugdahl., Kenneth., Jones, N., Laroi, F., Moseley, P., Padmavati, R., Peters, E., **Powers., A.R.**, Waters, F. Beyond Trauma: A Multiple Pathways Approach to Auditory Hallucinations in Clinical and Nonclinical Populations. *Schizophrenia Bulletin.* 45:S24-S31.
15. Humpston CS, Adams RA, Benrimoh D, Broome MR, Corlett PR, Gerrans P, Horga G, Parr T, Pienkos E, **Powers A.R. 3rd**, Raballo A, Rosen C, Linden DEJ. From Computation to the First-Person: Auditory-Verbal Hallucinations and Delusions of Thought Interference in Schizophrenia-Spectrum Psychoses. *Schizophr Bull.* 2019 Feb 1;45(45 Suppl 1):S56-S66. doi: 10.1093/schbul/sby073. PubMed PMID: 30715542; PubMed Central PMCID: PMC6357975.
16. Walsh, B.C., Woods, S.W., **Powers, A.R.** Integration of Literature Across Countries: Challenges, Opportunities, and Implications for Future Research. (In Press)
17. Heslin, K., Shaffer, J., **Powers, A.**, Andreasen, N., Parker, K. The Cerebellum in Psychosis. Chapter in *Psychotic Disorders: Comprehensive Conceptualization and Treatments*, Tamminga, C.A., Ivleva, E.I., Reininghaus, U., van Os, J., editors. (In Press).
18. Woods, S.W., Walsh, B.C., **Powers, A.R.**, McGlashan, T.H. Reliability, Validity, Epidemiology, and Cultural Variation of the Structured Interview for Psychosis-risk Syndromes (SIPS) and the Scale Of Psychosis-risk Symptoms (SOPS). Chapter in *Psychotic Disorders: Comprehensive*

Conceptualization and Treatments, Tamminga, C.A., Ivleva, E.I., Reininghaus, U., van Os, J., editors. (In Press).

19. **Powers, A.R.**, McGlashan, T.H., Woods, S. W. Clinical Phenomenology of the Prodrome for Psychosis. Chapter in *Psychotic Disorders: Comprehensive Conceptualization and Treatments*, Tamminga, C.A., Ivleva, E.I., Reininghaus, U., van Os, J., editors. (In Press).

Invited Editorials and Commentaries

20. Gorrindo P, Tedeschi SK, **Powers A.R.**, Niswender K. A piece of my mind. Fulfilling our leadership responsibility. *JAMA*. 2013; 309(2):147-8. PubMed [journal] PMID: 23299605
21. **Powers A.R.**, Bien C, Corlett PR. Aligning Computational Psychiatry With the Hearing Voices Movement: Hearing Their Voices. *JAMA Psychiatry*. 2018;75(6):640–641. doi:10.1001/jamapsychiatry.2018.0509
22. **Powers, A.R.**, & Corlett, P. R. Shamanism and psychosis: Shared mechanisms? *Behavioral and Brain Sciences*, 41. 2018.
23. Corlett PR, **Powers A.R.**. Conditioned hallucinations: historic insights and future directions. *World Psychiatry*. 2018 Oct;17(3):361-362. doi: 10.1002/wps.20557. PubMed PMID: 30192086; PubMed Central PMCID: PMC6127761.
24. **Powers A.R.**, Corlett PR, Ross DA. Aligning Computational Psychiatry With the Hearing Voices Movement: Hearing Their Voices. *JAMA Psychiatry*. 2018 Jun 1;75(6):640-641. doi: 10.1001/jamapsychiatry.2018.0509. PubMed PMID: 29801029; PubMed Central PMCID: PMC6129977.
25. **Powers, A.R.** Psychotic Experiences in the General Population: Symptom Specificity and the Role of Distress and Dysfunction. *JAMA Psychiatry*. Published online September 25, 2019. doi:10.1001/jamapsychiatry.2019.2391