

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF PSYCHIATRY

Mary M. Heitzeg, Ph.D., associate professor of psychiatry, with tenure, Department of Psychiatry, Medical School, is recommended for promotion to professor of psychiatry, with tenure, Department of Psychiatry, Medical School.

Academic Record:

Ph.D.	1999	University of Michigan
B.S.	1990	General Motors Institute Engineering and Management Institute

Professional Record:

2016 – present	Associate Professor of Psychiatry, with tenure, University of Michigan
2016 – present	Adjunct Associate Professor of Psychology, University of Michigan
2015-2016	Adjunct Assistant Professor of Psychology, University of Michigan
2012-2016	Assistant Professor of Psychiatry, University of Michigan
2010-2012	Research Assistant Professor of Psychiatry, University of Michigan
2004-2010	Research Investigator of Psychiatry, University of Michigan
1999-1999	Lecturer of Psychology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Heitzeg mentors undergraduate, graduate and post-doctoral trainees. As a direct result of her mentorship, trainees in her research group have published 22 first author publications, with several in high-impact journals, and four who received NIH career development awards. Dr. Heitzeg practices an apprenticeship model giving trainees hands-on laboratory experience, and significant time spent one-on-one instruction with Dr. Heitzeg, or in small group meetings. She mentors undergraduate students from the psychology program in her laboratory each semester, and gives lectures and seminars to undergraduate and graduate students on neuroimaging techniques and neural mechanisms of risk for substance use on the developing brain. In 2016, Dr. Heitzeg served as a committee member on one dissertation committee.

Research: Dr. Heitzeg has developed an outstanding program of research using developmental neuroimaging to investigate two related themes relevant to adolescent substance use and abuse: 1) how individual differences in brain function relate to susceptibility to substance use problems; and 2) the effects of substance use on the developing brain, and how this impacts risk trajectories. This work has been funded continuously for 15 years, and she has been the principal investigator of eight NIH funded grants. Dr. Heitzeg has published 73 peer-reviewed articles, and her work has been published in high-impact journals. Her research establishes her as a leader in the field both nationally and internationally. She is a research site investigator in the Adolescent Brain Cognitive Development (ABCD) study. This study is an NIH initiative to recruit over 11,800 youth ages nine and ten years old, and follows them over a ten-year period to track, neural, physical, cognitive and emotional development. A major focus is the prospective examination of neurodevelopmental and behavioral effects of substance use.

Dr. Heitzeg has given 35 research talks on these topics in national and international conference symposia and invited lectures. She was invited to speak at the prestigious fourth International Conference on Applications of Neuroimaging to Alcoholism. She provides ad hoc service to several international and NIH study sections including the NIH Addiction Risks and Mechanisms Study Section. Dr. Heitzeg is a section editor of *Adolescent/Young Adult Addiction, Current Addiction Reports*.

#### Recent and Significant Publications:

Sripada C, Rutherford S, Angstadt M, Thompson WK, Luciana M, Weigard A, Hyde LH, Heitzeg MM: Prediction of neurocognition in youth from resting state fMRI. *Molecular Psychiatry*. (In Press).

Cope LM, Hardee JE, Martz ME, Zucker RA, Nichols TE, Heitzeg MM: Developmental maturation of inhibitory control circuitry in a high-risk sample: A longitudinal fMRI study. *Developmental Cognitive Neuroscience (DCN)*: Published online Apr 25, 2020.

Weigard A, Soules M, Ferris B, Zucker RA, Sripada C, Heitzeg MM: Cognitive Modeling Informs Interpretation of Go/No-Go Task-Related Neural Activations and Their Links to Externalizing Psychopathology. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*: 5(5):530-541, 2020.

Hardee JE, Cope LM, Munier EC, Welsh RC, Zucker RA, Heitzeg MM: Sex differences in the development of emotion circuitry in adolescents at risk for substance abuse: A longitudinal fMRI study. *Social Cognitive Affective Neuroscience (SCAN)*: 12(6):965-975, 2017.

Martz ME, Trucco EM, Cope LM, Hardee JE, Jester JM, Zucker RA, Heitzeg MM: Association of Marijuana Use with Blunted Nucleus Accumbens Response to Reward Anticipation. *JAMA Psychiatry*: 73(8):838-44, 2016.

Service: Dr. Heitzeg has a regional, national and international reputation, through committee service. Internationally, she is a member of the Program Committee for the Society of Biological Psychiatry. Nationally, she is a chair of the Substance Use Assessment Workgroup of Adolescent Brain Cognitive Development Study. Since 2018, she has served as the chair of the Community Liaison Board, Adolescent Brain Cognitive Development Study, Michigan site, and institutionally, she serves as a member of several committees, including the University of Michigan functional MRI laboratory Executive Advisory Committee and the FMRI Neuroimaging Committee. She has previously served on the Department of Psychiatry's Research Council, Grand Rounds Committee, and instructional track Faculty Search Committee.

#### External Reviewers:

Reviewer A: "Another remarkable and very recent paper by Dr. Heitzeg (Sripada et al., Prediction of neurocognition in youth from resting state fMRI. *Molecular Psychiatry*, in press) reports on the first study that used data from the ABCD consortium to identify resting connectome predictors of neurocognition in children...She is already one of the most accomplished scientists in the area of alcohol research and I have no doubts whatsoever that she will become an absolute leader in the

field...her academic profile would meet the requirement for promotion to Professor at any high-ranking research university in the world, none excluded.”

Reviewer B: “Mary is not only the PI for the University of Michigan data collection site but also a key leader in several national assessment workgroups of ABCD. She has been a stellar leader in this context and critical contributor to the unfolding success of this landmark NIH effort to study youth across the United States for 10 years...in addition to her consistent high-quality publications in the area of brain mechanisms of adolescent and young adult substance use, her group published one of the first ABCD imaging papers. They used cutting-edge methods...We anticipate this to be a standard in the field for years to come.”

Reviewer C: “...There are several indicators that Dr. Heitzeg is held in high regard by her peers. She has been asked to join several NIH Study Sections on an ad hoc basis and currently is a member of the Addiction Risks and Mechanisms (ARM) Study Section...Publications of the work they have done while in Dr. Heitzeg's lab shows she provides superior mentoring...She has demonstrated all the necessary requirements for scholarship, mentoring, service and the ability to obtain impressive amounts of NIH grant support.”

Reviewer D: “Dr. Heitzeg is a clear communicator, a careful scientist and a leader who readily collaborates with others in a collegial manner. Her greatest impact is in a series of studies under the conceptual umbrella of longitudinal neuroimaging assessment in youth, often in well-documented pre-existing cohorts, in order to investigate risk factors for subsequent alcohol and drug problems.”

Reviewer E: “Dr. Heitzeg has made a major impact in the field by serving as a Principal Investigator on the ABCD-USA Consortium Study. It is in this area that his work has the potential to have a very large and sustaining impact on the field...Her list of submitted grants is also impressive...Dr. Heitzeg is a sought after and influential scientist who is a leader in her area of research...”

Summary of Recommendations:

Dr. Heitzeg has established an independent research program in developmental neuroimaging. She is an outstanding research scholar and a highly valued research collaborator, and an exceptional mentor and teacher. I am pleased to recommend Mary M. Heitzeg, Ph.D. for promotion to professor of psychiatry, with tenure, Department of Psychiatry, Medical School.



Marschall S. Runge, M.D., Ph.D.  
Executive Vice President for Medical Affairs  
Dean, Medical School

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