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THE UNIVERSITY OF MICHIGAN
REGENTS COMMUNICATION

Item for Information

Subject: Henry Russel Awards for 2020

I am pleased to inform you that the Henry Russel Awards Faculty Advisory Committee, chaired by Dean Michael J. Solomon, met recently and selected four faculty members to receive Henry Russel Awards for 2020. This award, which recognizes both exceptional scholarship and conspicuous ability as a teacher, is one of the highest honors the University bestows upon junior faculty members. The awards will be presented on the occasion of the Henry Russel Lecture, to be delivered in the Winter Term of 2020.

The faculty members selected to receive this award are:

Carrie R. Ferrario, Assistant Professor of Pharmacology, Medical School

Xianzhe Jia, Associate Professor of Climate and Space Sciences and Engineering, College of Engineering

Corinna S. Schindler, Associate Professor of Chemistry, College of Literature, Science, and the Arts

Megan E. Tompkins-Stange, Assistant Professor of Public Policy, Gerald R. Ford School of Public Policy

Respectfully submitted:

Mark S. Schlissel
President

June 2019

Attachment

Carrie R. Ferrario

Carrie R. Ferrario received her B.A. degree in psychology and English from Indiana University (2001) and her Ph.D. degree in neuroscience from the University of Michigan (2006). She was a postdoctoral fellow at the Rosalind Franklin University of Science and Medicine and the University of Michigan before her appointment in 2013 as an Assistant Professor in the Department of Pharmacology at the University of Michigan.

As a graduate student and postdoctoral fellow, Professor Ferrario investigated the drug-induced neurochemical mechanisms that underlie the motivational behaviors in drug abuse. In recent years, she has used insights gleaned from this research into examining the neurobiological processes that underlie behaviors associated with obesity. While much research on obesity focuses on metabolism and the homeostatic regulation of nutritional physiological systems, Professor Ferrario has directed research in a new area, seeking to understand how neurobehavioral changes produce motivational responses that override satiety signals which would otherwise curb over-eating, particularly in the early stages of weight gain. Through her research, Professor Ferrario is opening new understandings of how the neural mechanisms underlying obesity compare with those that drive drug addiction, and what similarities and differences of neurobiological processes that drive these motivations may tell us about finding pathways for successful clinical treatments for these conditions. She has published 34 widely-cited peer-reviewed papers in leading journals in the fields of neuroscience and pharmacology. The significance of her contributions has earned Professor Ferrario numerous prestigious awards, including an Early Career Independent Investigator Award from the American Society of Pharmacology and Experimental Therapeutics and a NARSAD Young Investigator Award from the Brain and Behavior Research Foundation, one of the highest distinctions in mental health research, which supports the development of independent research careers. She has established an extraordinary record of funding for her research, including current support as a principal or co-principal investigator on three NIH research project grants (R01) and an NIH grant (R21) for early-stage exploratory research. She is also the co-principal leader of an NIH grant for postdoctoral training (T32) in the neurobiology of addiction treatment and prevention.

Professor Ferrario is an exceptional and highly committed teacher. She helped design a new upper-level course for undergraduates interested in careers in biomedicine where students learn how to apply basic biosciences to understand how human diseases arise and are treated pharmacologically. She established a highly popular seminar series, Interdisciplinary Drugs of Abuse, for graduate students and postdoctoral fellows, which hosts leading scientists from around the U.S. to present their research. Her work inspired students to form a group of interdisciplinary addiction scientists that provides addiction research outreach to the community. To date she has chaired or co-chaired two dissertation committees and serves on seven others, and has mentored five postdoctoral fellows.

Professor Ferrario's accomplishments as an outstanding scientist, teacher, and mentor bring distinction to the University of Michigan and the Department of Pharmacology, and make her exceptionally qualified to receive the Henry Russel Award.

Xianzhe Jia

Xianzhe Jia received his B.S. (1999) and M.S. (2002) degrees from the University of Science and Technology of China. He went on to earn his M.S. (2004) and Ph.D. (2009) degrees in earth and space sciences from the University of California, Los Angeles. He came to the University of Michigan as a research fellow in 2009 and then became an assistant research scientist in 2010. In 2015, he was appointed as an associate professor in the Department of Climate and Space Sciences and Engineering.

At an early stage of his career, Professor Jia has already established himself as a world leader in planetary physics who has mastered data analysis techniques, engineering concepts, and theoretical modeling necessary for examining and interpreting the data accumulating from recent space missions to explore the planets and moons of the Earth's solar system. Using sophisticated 3-D modeling techniques that he developed, Professor Jia analyzed data gathered by the Galileo spacecraft and identified a water vapor plume emanating from the icy surface of Europa, one of Jupiter's moons. This landmark discovery proves the existence of a subsurface ocean, and represents the closest point in discovering environments that may support life outside our planet. He has made other breakthrough discoveries about other moons of Saturn, including identifying a subsurface ocean on Ganymede and a global magma ocean on Io. Professor Jia has also made major contributions to understanding planetary magnetospheres and their interactions with solar winds. He has published 74 frequently cited articles in leading peer-reviewed journals, including landmark papers in *Nature* and *Science*, and his discoveries have been widely reported by major news media worldwide. NASA and NSF have recognized the importance of his research by awarding major grants of over $10 million to support his investigations, which is a truly exceptional level of grant support for an early-stage scientist. In recognition of his seminal contributions, Professor Jia is a member of the leadership team for NASA's upcoming Europa Clipper mission. He is the co-investigator and modeling lead for two science instruments that will characterize the thickness of Europa's icy shell and the salinity and depth of its subsurface lakes, which are essential for determining if Europa could harbor extraterrestrial life. In recognition of his accomplishments, Professor Jia received a prestigious NASA Early Career Fellowship, which is awarded to outstanding scientists at an early stage in their careers.

Professor Jia is an exceptional and highly committed teacher who is inspiring and shaping a new generation of planetary scientists. His impact on students is extraordinary. To date, his students have published 22 research papers for which they are first authors. He has mentored graduate students who have won highly competitive national and university research awards, including NASA's prestigious Earth and Space Science Fellowship. He is an inspirational and innovative teacher of undergraduates, and has led them on a Europa CubeSat project funded by NASA/JPL. In one highly popular class, he introduces students to the leading space weather forecasting tool and teaches them to run large-scale simulations with cutting-edge modeling tools. He has graduated two Ph.D. students, and is chair or co-chair for six others.

Professor Jia's accomplishments as an outstanding scientist, teacher, and mentor bring distinction to the University of Michigan and the Department of Climate and Space Sciences and Engineering, and make him exceptionally qualified to receive the Henry Russel Award.

Corinna S. Schindler

Corinna S. Schindler received her B.S. degree in chemistry (1999) and her diploma (2004) at the Technical University of Munich. She earned her Ph.D. degree at ETH Zurich (2010), and was a postdoctoral fellow at Harvard University until she came to the University of Michigan in 2013 as an assistant professor in the Department of Chemistry. In 2019, she was promoted to associate professor of chemistry.

Professor Schindler is an internationally recognized synthetic chemist who has made breakthrough discoveries in metathesis catalysis, an important class of chemical reactions in which double bonds are broken and made between carbon atoms, causing atom groups to change places. Metathesis is more efficient than other synthesis methods and easier to use. Her pioneering work on carbonyl-olefin metathesis reactions using iron as an abundant and benign catalyst created a green-reaction platform that has great significance for the creation of new molecules for medicine and other industries. Her creative insights and approach challenged assumptions about these catalytic reactions, which had eluded the use of other state-of-the-art methods. Her research group has developed new avenues for tuning the reactivity and selectivity of these catalysts to expand the scope of carbonyl-olefin metathesis reactions and to apply these to the synthesis of complex bioactive molecules. She has published her research in 28 widely cited articles in peer-reviewed journals, including an article in *Nature* that was highlighted in other leading journals. She has been recognized with an impressive list of prestigious honors and awards, including an NSF Career Award (2016), a Packard Foundation Fellowship (2016), an Alfred P. Sloan Foundation Fellowship (2017), and an Eli Lilly Grantee Award (2019). She has delivered over 95 invited lectures, including at leading universities and major international conferences. Professor Schindler's groundbreaking discoveries will influence research for years to come.

Professor Schindler is an exceptional teacher and mentor. She has earned the highest accolades for her inspired teaching of the Department of Chemistry's large and very challenging service course in organic chemistry. She developed new study tools, revamped the structure of discussion sessions, and regularly stays long after lecture to answer questions. In recognition of her excellence and commitment, students have three times nominated her for the Golden Apple Award. She has mentored 10 undergraduate researchers, seven of whom are now pursuing doctoral studies in leading chemistry programs. Her mentorship of graduate students, seven of whom have won highly competitive NSF Graduate Fellowships, is exemplary. She has chaired or co-chaired 13 dissertation committees. Two of her students have secured postdoctoral positions at Princeton and Caltech, and three others are research scientists in leading pharmaceutical companies. She implemented a scientific writing workshop for all of the Department of Chemistry's incoming graduate students, which has had a great impact on student success in applications for competitive grants and fellowship. In recognition of her excellence as teacher and mentor, in 2018 Professor Schindler won a Camille Dreyfus Teacher-Scholar Award, a national recognition of talented young faculty in the chemical sciences.

Professor Schindler's accomplishments as an outstanding scientist, teacher, and mentor bring distinction to the University of Michigan and the Department of Chemistry, and make her exceptionally qualified to receive the Henry Russel Award.

Megan E. Tompkins-Stange

Megan E. Tompkins-Stange received her B.A. degree in history, literature, and the arts from Stanford University (2000), her Ed.M. degree in administration, planning, and social policy from Harvard University's Graduate School of Education (2004), and her Ph.D. degree in education policy and organizational studies from Stanford University (2013). She came to the University of Michigan in 2011 as a lecturer III in the Gerald R. Ford School of Public Policy, and in 2014 was promoted to lecturer IV. In 2015 she was appointed assistant professor of public policy.

Professor Tompkins-Stange is a pioneering scholar of the impact of philanthropy on public policy. Through close analysis of extensive interviews with decision-makers in the largest private U.S. philanthropic foundations, her work reveals the impact that leading charitable non-profits are having on K-12 education policy. She examines the impact that private charitable foundations have on public education policy by aligning funding decisions with their policy preferences, and raises urgent questions about the institutional behavior of these organizations in which decision-making that takes place behind closed doors sets priorities and privatizes the policy-setting process of public institutions. Professor Tompkins-Stange's recent award-winning book published by Harvard, *Policy Patrons: Philanthropy, Education Reform, and the Politics of Influence*, posits important questions about the influence of philanthropic investment on public education reform, and considers the consequences this influence has for a liberal democracy in which commitment to public education is a central tenet. Her forthcoming book, *Value Added: How Teacher Evaluation Became A Big Idea*, extends this examination of the emergence of private charitable grant-makers as policy entrepreneurs and their impact on public institutions. In these monographs, as well as in her numerous articles in leading journals, Professor Tompkins-Stange has brought widespread attention to both the impact of "big philanthropy" on normative democratic standards and the efficacy of its well-funded interventions. Her groundbreaking work is a major contribution to the institutionalization of policy practices and has received extensive media attention and provoked discussion and debate on the influence of education philanthropy. She has given numerous talks as an invited lecturer in the U.S., Europe, and Asia, and recently completed a visitorship as the philanthropy chair at the École Supérieure des Sciences Economiques et Commerciales in Paris.

Professor Tompkins-Stange is an inspirational and creative teacher. Her students examine the sociology of philanthropic organizations, think about the changing role of philanthropy in society, and study the ways that morals and values shape the process of developing public policy. In recognition of her brilliance as a teacher, students selected her as the 2018 Ford School Faculty Commencement Speaker. She also received the Provost's Teaching Innovation Prize for her experiential class that allows master's students to work in teams and engage in hands-on grant-making while analyzing the historically controversial relationship between institutional philanthropy and public policy.

Professor Tompkins-Stange's accomplishments as an outstanding scientist, teacher, and mentor bring distinction to the University of Michigan and the Gerald R. Ford School of Public Policy, and make her exceptionally qualified to receive the Henry Russel Award.