For Immediate Release:

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Inaugural Winners Selected for the 2021 McKnight Brain Research Foundation Innovator Awards in Cognitive Aging and Memory Loss

Lindsay De Biase (UCLA) *and* ***Saul Villeda (UCSF)*** *receive $750,000 each to lead transformative research in the field of cognitive aging*

NEW YORK and ORLANDO— The American Federation for Aging Research (AFAR) and the McKnight Brain Research Foundation (MBRF) are pleased to announce the 2021 recipients of **The McKnight Brain Research Foundation Innovator Awards in Cognitive Aging and Memory Loss: Lindsay De Biase, PhD,** of the University of California Los Angeles (UCLA) and **Saul Villeda, PhD,** of the University of California San Francisco (UCSF).

Aiming to build a cadre of outstanding research scientists across the United States to lead transformative research in the field of cognitive aging, 2021 marked the inaugural year of the grant collaboration between AFAR and MBRF.

Lindsay De Biase, PhD is an Assistant Professor in the Department of Physiology in the David Geffen School of Medicine at UCLA. With the support of this award, Dr. De Biase will investigate the possibility that microglia shape synapse health during aging via modification of the extracellular matrix (ECM). The ECM is a meshwork of proteins and sugars woven tightly around neurons that potently regulates synapse stability. Recent studies and Dr. De Biase's preliminary data show that microglia express numerous genes involved in building up and breaking down the ECM and that they can engulf ECM components. Dr. De Biase will use multiple technical approaches to elucidate links between microglial-ECM interactions, synapse stability, and cognitive performance in aging mice and rats. The overarching goal of her research is to identify molecular pathways for therapeutic modulation of microglial-ECM interactions to preserve cognition.

Saul Villeda, PhD, is an Associate Professor in the Department of Anatomy in the Eli and Edythe Broad Center of Regeneration Medicine and Stem Cell Research at the University of California San Francisco. With the support of this award, Dr. Villeda will investigate the rejuvenating potential of caloric restriction-induced blood factors on the aged brain at the cellular, molecular, and cognitive level. Caloric restriction counters age-related impairments in cognitive function in the aged brain. Dr. Villeda's lab and others have shown that systemic interventions, including administration of blood plasma derived from young or exercised aged animals rejuvenates cognition at old age. The rejuvenating effects of caloric restriction mirror those observed with a youthful circulation, raising the possibility that caloric restriction similarly functions through blood factors to exert its beneficial effects. The proposed studies aim to identify molecular mechanisms that can be targeted to promote cognitive rejuvenation at old age, with the potential for therapeutic implications in neurodegenerative disorders.

“I am honored to receive this support and very excited by the potential of this new line of investigation to expand our understanding of how non-neuronal cells shape cognitive aging,” notes Dr. De Biase. “This new source of support from the McKnight Brain Research Foundation and AFAR allows us to launch novel lines of CNS aging research and use cutting edge approaches to link our cellular and molecular-level findings with cognitive performance and behavior.”

“This award provides a mechanism in which innovative and often times high-risk high-reward research is supported at the very early stages,” states Dr. Villeda. “This new AFAR-MBRF program provides validation and encouragement to pursue areas of research in which we seek to develop therapeutics that can treat cognitive decline in the aging brain by targeting molecular mechanisms of aging in blood independent of the brain itself.”

The MBRF Innovator Awards in Cognitive Aging and Memory Loss are supported by a $4.5 million grant from the McKnight Brain Research Foundation and will support six investigators over a period of five years.

"With our new Innovator Awards in Cognitive Aging and Memory Loss, MBRF is extending its mission of supporting research in the field of cognitive aging and memory loss by targeting outstanding mid-career scientists who have already demonstrated a firm commitment to cognitive aging research and shown the potential to become leaders in the field," says Michael Dockery, MD, Chair of the McKnight Brain Research Foundation board of trustees. "We look forward to seeing the impact of Dr. De Biase and Dr. Villeda's research."

AFAR has long supported the careers of talented investigators and research on cognitive health. “By providing research funding, AFAR and MRBF are building a cadre of outstanding research scientists across the United States who have the potential to lead transformative research in the field of cognitive aging,” says Stephanie Lederman, EdM, Executive Director, AFAR.

Learn more about **The McKnight Brain Research Foundation Innovator Awards in Cognitive Aging and Memory Loss here.**

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About AFAR
The American Federation for Aging Research (AFAR) is a national non-profit organization that supports and advances pioneering biomedical research that is revolutionizing how we live healthier and longer. For four decades, AFAR has served as the field’s talent incubator, providing more than $184 million to more than 4,200 investigators at premier research institutions nationwide. A trusted leader and strategist, AFAR also works with public and private funders to steer high quality grant programs and interdisciplinary research networks. AFAR-funded researchers are finding that modifying basic cellular processes can delay—or even prevent—many chronic diseases, often at the same time. They are discovering that it is never too late—or too early—to improve health. This groundbreaking science is paving the way for innovative new therapies that promise to improve and extend our quality of life—at any age. Learn more at www.afar.org or follow AFARorg on Twitter and Facebook.

About the McKnight Brain Research Foundation
Founded in 1999, the McKnight Brain Research Foundation is the nation’s only private foundation devoted exclusively to discovering the mysteries of the aging brain. Over the past two decades, the Foundation has funded more than $180 million in research specifically targeting cognitive aging and age-related cognitive decline and memory loss through direct contributions and strategic initiatives in partnership with the four McKnight Brain Institutes and the National Institute on Aging through the Foundation for the National Institutes of Health, With this funding, we’re supporting research and investigation to better understand and alleviate the effects of age-related cognitive decline and memory loss. Learn more about the Foundation at: www.mcknightbrain.org or follow McKnight Brain on Twitter and Facebook.