

September 28, 2022

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**EDWARD CHOUCANI, PHD (DANA-FARBER) AND ÖMER YILMAZ, MD, PHD (MIT)
RECEIVE 2022 BREAKTHROUGHS IN GERONTOLOGY (BIG) AWARDS
FROM THE GLENN FOUNDATION FOR MEDICAL RESEARCH AND AFAR**

*Major awards will support research working toward novel therapeutics
addressing metabolism, stem cells, and aging biology to
target human aging and healthspan*

NEW YORK, NY— The Glenn Foundation for Medical Research and the American Federation for Aging Research have announced the recipients of the 2022 Breakthroughs in Gerontology (BIG) Awards: **Edward Chouchani, PhD**, of Dana-Farber Cancer Institute, and **Ömer Yilmaz, MD, PhD**, of the Massachusetts Institute of Technology (MIT.) The three-year BIG award provides \$300,000 for research projects aimed at discoveries that address human aging and healthspan.

[Edward Chouchani, PhD](#), is an Associate Professor at Dana-Farber Cancer Institute and Harvard Medical School. With the support of the award, Dr. Chouchani seeks to systematically define the functional targets of reactive oxygen species that contribute to longevity and age.

Since their identification in tissues nearly 70 years ago, redox active metabolites (reactive oxygen species and related molecules) have been considered as undesirable and unregulated byproducts of dysfunctional metabolism that contribute to the aging process by damaging the cell. Dr. Chouchani's work has contributed to a fundamental reconsideration of this concept, showing that regulated production of reactive oxygen species is an essential signal that controls a diverse range of physiological adaptations. Most significantly, his lab has now developed a new technology to systematically map the signaling targets of redox active metabolites in living tissues for the first time. This has helped Dr. Chouchani to begin to establish first general principles for this mode of biological and physiological regulation, and its relationship with aging.

"My lab uses new technologies to precisely map how the metabolites in our cells control young healthy tissue, and in diseases of aging," notes Dr. Chouchani. "Understanding how and where these metabolites exert their function will give us new opportunities to target diseases of aging therapeutically. The BIG Award will help us work toward these promising therapeutics."

[Ömer Yilmaz, MD, PhD](#), is an Associate Professor of Biology at Koch Institute for Integrative Cancer Research at Massachusetts Institute of Technology (MIT). The support of this award will advance Dr. Yilmaz' research that seeks to understand how diverse diets, such as dietary restriction (DR) and high fat diets, influence the regeneration, aging, and development of cancers in the intestine.

Intestinal stem cells often require signals from their cellular neighborhood or "niche". The intestine with age undergoes progressive loss of tissue function, such as a reduced ability to regenerate after injury. Dr. Yilmaz will investigate the molecular mechanism(s) of how the aged niche contributes to the age-related decline in intestinal stem cell function and how dietary interventions can reverse some of these changes.

"The adult intestine is a rapidly renewing organ that is maintained by stem cells; however, it is unknown how much of the age-related decline in intestinal repair is due to the aging of the niche or the aging of the stem cells themselves," notes Dr. Yilmaz. "The novel tools and questions that we develop through the support of the BIG Award will permit us and others to answer some of these questions."

“The BIG awards were created to engage researchers in bolder research pursuits that offer the potential to yield transformative discoveries to benefit human aging and healthspan,” notes Mark R. Collins, President of The Glenn Foundation for Medical Research. “Dr. Chouchani and Dr. Yilmaz have demonstrated great commitment in applying our understanding of the basic biological processes of aging toward potential therapeutics.

Since the inception of the award in 2005, the Breakthroughs in Gerontology (BIG) Awards have provided \$8.8 million to 40 investigators nationwide. Awardees are selected by a committee of distinguished scientists working in the field of aging research.

“We are pleased to collaborate with the Glenn Foundation for Medical Research to translate the knowledge in the basic biology of aging into therapies and interventions that will help us all live healthier and longer as we grow older,” notes Stephanie Lederman, EdM, Executive Director, AFAR.

Learn more about Dr. Chouchani's AFAR-supported research [here](#).

Learn more about Dr. Yilmaz' AFAR-supported research [here](#).

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GLENN FOUNDATION FOR MEDICAL RESEARCH



About the Glenn Foundation for Medical Research - Founded by Paul F. Glenn in 1965, the mission of the Glenn Foundation for Medical Research is to extend the healthy years of life through research on mechanisms of biology that govern normal human aging and its related physiological decline, with the objective of translating research into interventions that will extend healthspan with lifespan. Learn more at glennfoundation.org.

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 more than four decades, AFAR has served as the field's talent incubator, providing more than \$189 million to more than 4,300 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 and American Federation for Aging Research on LinkedIn.