SOUTH ASIAN UNIVERSITY

Faculty of Life Sciences and Biotechnology

organizes

INTERNATIONAL WEBINAR

Title of the Talk

MicroRNA at the Heart of Diabetes

Speaker

Dr. Paras Kumar Mishra

Associate Professor

Department of Cellular and Integrative Physiology

University of Nebraska Medical Center

Omaha, USA

Date: 26th August 2021, Thursday

Time:9:30 am (India Time)

Google meet Link: meet.google.com/qmy-wdnh-uzj

Organizer: **Dr. Rinkoo D Gupta,** Contact: rdgupta@sau.ac.in

MicroRNA at the Heart of Diabetes

Abstract

Diabetes mellitus (DM) increases the risk of heart failure. Although high blood glucose levels instigate heart failure in DM, intensive glycemic control failed to decrease the risk of heart failure in diabetic patients in several clinical trials. Thus, DM-mediated heart dysfunction is an important clinical problem with no cure. How DM induces adverse remodeling in the heart and how to prevent progression of DM-induced cardiac dysfunction are critical questions that warrant investigation at the regulatory levels. MicroRNAs (miRNAs) are endogenous, non-coding regulatory RNAs that modulate gene expression by either translational repression or mRNA degradation. They regulate several genes in a biological pathway to maintain cellular homeostasis. As DM deregulates several genes and pathways, we investigated the role of a miRNA, which is abundantly expressed in the heart but downregulated in the DM heart. Our findings suggest that this miRNA has potential to mitigate adverse cardiac remodeling and ameliorate DM-induced cardiac dysfunction.

Biography

Paras Kumar Mishra, Ph.D. is Associate Professor in the Department of Cellular and Integrative Physiology at the University of Nebraska Medical Center, USA. He is a Fellow of American Heart Association (AHA), and American Physiological Society (APS) Cardiovascular Section, and currently the President of Midland Society of Physiological Sciences. After receiving his Ph.D. from the Banaras Hindu University in 2006, he did postdoctoral training before transitioning to Assistant Professor in 2010 in the University of Lousville, Kentucky. His laboratory is dedicated to performing cardiovascular research with major focus on metabolic remodeling, mitochondrial dysfunction, and cell death in the diabetic heart and developing novel therapeutics targeting miRNA, MMP9, and H_2S. He has mentored several students at undergraduate, graduate and postdoctoral levels, who has successfully transitioned to their next levels. He has served as reviewer of several national and international grants. He is currently Associate Editor of Frontiers in Integrative Physiology, and Consulting Editor of American Journal of Physiology- Heart and Circulatory Physiology.