HENRY SAMUELI SCHOOL OF ENGINEERING AND APPLIED SCIENCE

BIOENGINEERING AND APPLIED SCIENCE

PRESENTS "Cardiometabolic Risk in COVID 19: Challenges and Therapeutic Opportunities"



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ABSTRACT:

COVID19 is impacting on the lives and livelihood with an unprecedented scale and speed. Much of the current efforts in developing therapeutics of the disease have been focusing on interrupting the life-cycle of the SARS-COV2 virus infection or the ensuing systemic inflammatory injury. However, it is now clear that the adverse outcome of COVID19 occurs in only a selected subpopulation of the infected patients who have certain re-existing conditions, in particular hypertension and metabolic disorders. Yet, the underlying mechanisms for their contribution remain poorly understood, and the therapeutic impact of alleviating the cardiometabolic risk for COVID19 remains to be demonstrated. In recent retrospective studies led by a consortium of investigators based on a large clinical cohort of hospitalized COVID-19 patients in Hubei, China, it is uncovered that medications used for blood pressure management (angiotensin-converting enzyme inhibitor or angiotensin-receptor blockers), or hyperlipidemia (statins), or controlling blood glucose levels are associated with significant reductions in COVID-19 related deaths and other adverse outcomes. The underlying mechanisms for the observed benefits from these therapies may go beyond the targeted amelioration for the underlying conditions such as hypertension, hyperlipidemia or hyperglycemia. If proven true, the application of these medications may be expanded to general populations of COVID-19 patients in order to reduce death and severity of the disease.

BIOGRAPHY:

Dr. Yibin Wang is currently a full Professor of Molecular Medicine in the in the Department of Anesthesiology and Perioperative Medicine at David Geffen School of Medicine, UCLA. Dr. Wang received his Ph.D. in molecular genetics and cell biology from Baylor College of Medicine and post-doctoral training in neurobiology and molecular cardiology at The Scripps Research Institute and University of California at San Diego. Dr. Wang's research mainly focuses on genetic and molecular mechanisms of heart failure and metabolic disorders, with 230 peer-reviewed publications in many of leading journals. Dr. Wang received an Established Investigator Award from American Heart Association and was the recipient of Thomas Smith Memorial Lecture award at 2016 American Heart Association Scientific Session. He currently serves as an Associate Editor for Journal of Molecular and Cellular Cardiology, a guest Associate Editor for Circulation, and a member of the editorial board for Circulation Research and Journal of Biological Chemistry. He has supervised more than 20 Ph.D. students and is currently the course director and Vice

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