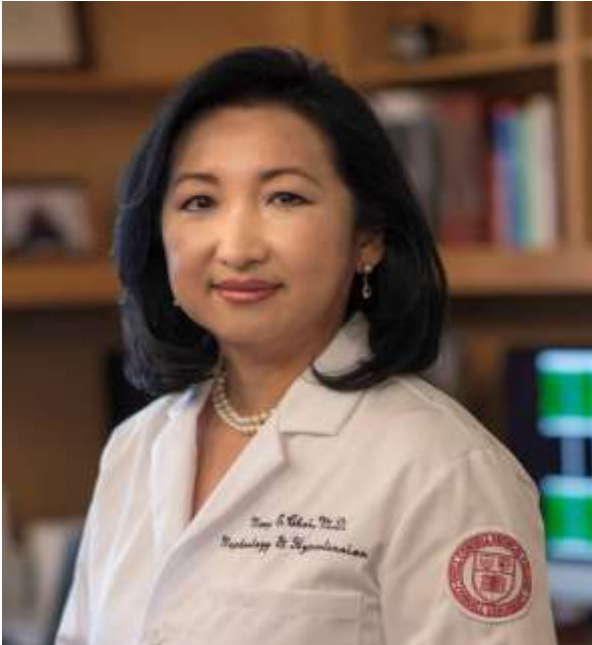


Mentor-Postdoc Spotlights Series 2020



Mary E. Choi, M.D.

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Dr. Choi is Professor of Medicine at Weill Cornell Medicine and Attending Physician at the NewYork-Presbyterian Hospital Weill Cornell. Dr. Choi received her B.A. with Distinction, and M.D. from the University of Kansas School of Medicine. She completed her Internal Medicine residency at Duke, and her Nephrology fellowship at Johns Hopkins. Subsequently, she was a faculty member in the Division of Nephrology at Johns Hopkins, Yale, and University of Pittsburgh.

Prior to her move to Weill Cornell, she was on the faculty of Harvard Medical School as an Associate Professor and a full-time physician at the Brigham and Women's Hospital. During her tenure at Harvard, she served as the Course Director of the Interhospital Clinical Elective & Advanced Seminar in Renal Pathophysiology. Dr. Choi is a physician-scientist and an established investigator in the field of cell signal transduction and kidney pathobiology. Dr. Choi's research centers on understanding the molecular mechanisms of acute and chronic kidney injury, including mitochondrial dysfunction, inflammation, and fibrosis in the pathogenesis of acute kidney injury (AKI) and chronic kidney disease (CKD). Her research program has longstanding support by the National Institute of Health (NIH) and current investigations are focused on the mechanisms of regulation and function of autophagy/mitophagy and necroptosis in various models of organ injury, including the kidney, lung, and cardiac fibrosis, and sepsis. The ultimate goal of research in Dr. Choi's laboratory is to identify novel therapeutic targets that will provide cytoprotection against tissue injury and the development of progressive fibrotic diseases. Her additional contributions to the scientific community have included serving on numerous grant review committees, including the NIH study sections and the Wellcome Trust, and membership of the Editorial Board of journals such as the Journal of the American Society of Nephrology, American Journal of Physiology, Kidney Research, and Clinical Practice, and Physiological Reports, as well as several key committees including the National Kidney Foundation, American Heart Association, and American Society of Nephrology. Dr. Choi currently is also the President-Elect of the Korean American Medical Association.

Dr. Choi is committed to training and mentoring young researchers (students and postdoctoral/research fellows) and currently serves on the Executive committee of NIH T32 grant on Multidisciplinary approach training in respiratory research, and she is the Director of Training Unit in lung and vascular injury. Dr. Choi has also served as the mentor and sponsor for the NIH K08 grant and Physician-Scientist Postdoctoral Fellowship Awards of trainees who have gone on to secure academic faculty positions.

Notable publications from Dr. Choi's lab that made significant contributions in the field of autophagy and its role in the kidney and lung diseases are:

1. Pabón MA, Patino E, Bhatia D, Rojas-Quintero J, Ma KC, Finkelsztejn EJ, Osorio JC, Malick F, Polverino F, Owen CA, Ryter SW, Choi AMK, Cloonan SM, Choi ME. Beclin 1 Regulates Cigarette Smoke-Induced Kidney Injury in a Murine Model Of Chronic Obstructive Pulmonary Disease. *JCI Insight* 2018 Sep 20;3(18). pii: 99592. doi: 10.1172/jci.insight.99592. PMID: 30232271. PMCID: PMC6237223
2. Chung KP, Hsu CL, Fan LC, Huang Z, Bhatia D, Chen YJ, Hisata S, Cho SJ, Nakahira K, Imamura M, Choi ME, Yu CJ, Cloonan SM, Choi AMK. Mitofusins Regulate Lipid Metabolism to Mediate the Development of Lung Fibrosis. *Nat Commun.* 2019 Jul 29;10(1)3390. PMCID: PMC6662701
3. Barry DM, McMillan EA, Kunar B, Lis R, Zhang T, Lu T, Daniel E, Yokoyama M, Gomez-Salinerio JM, Sureshbabu A, Cleaver O, Di Lorenzo A, Choi ME, Xiang J, Redmond D, Rabbany SY, Muthukumar T, Rafii S. Molecular determinants of nephron vascular specialization in the kidney. *Nat Commun.* 2019. Dec 13;10(1):5705. PMCID: PMC6910926
4. Bhatia D, Chung KP, Nakahira K, Patino E, Rice MC, Torres LK, Muthukumar T, Choi AMK, Akchurin O, Choi ME. Mitophagy Dependent Macrophage Reprogramming Protects against Kidney Fibrosis 2019. *JCI Insight* 2019 Dec 5;4(23). doi: 10.1172/jci.insight.132826. PMID: 31639106
5. Zhang WZ, Rice MC, Hoffman KL, Oromendia C, Barjaktarevic I, Wells JM, Hastie AT, Labaki WW, Cooper CB, Cornelias AP, Criner G, Krishnan J, Paine R, Hansel NN, Bowler RP, Barr RG, Peters SP, Woodruff PG, Curtis JL, Han MK, Ballman KV, Martinez FJ, Choi AMK, Nakahira K, Cloonan SM, Choi ME. Association of urine mitochondrial DNA with clinical measures of COPD in the SPRIOMICS cohort. *JCI Insight* 2020 Jan 2. pii: 133984. doi: 10.1172/jci.insight.133984. [Epub ahead of print] PMID: 31895696

Learn more about Dr. Choi's research: <http://vivo.med.cornell.edu/display/cwid-mec2025>



Dr. Divya Bhatia obtained her Master's degree in Medical Biotechnology from M.D. University and subsequently M.Phil. in Biotechnology from V.M.U., India. She received her Ph.D. degree from All India Institute of Medical Sciences, New Delhi under the mentorship of Professor Arvind Bagga. Her doctoral thesis work entitled “*Effect of Rituximab on Lymphocyte Subsets and Urinary CD80 excretion in Patients with Steroid Dependent Nephrotic Syndrome*” was featured on the cover page of *Pediatric Research* (Volume 84, Issue 4). During her Ph.D., she received fellowships from the Indian Council of Medical Research, British Council and University of Bristol, United Kingdom. She also qualified the National Eligibility Test for Lecturership as awarded by the Council of Scientific & Industrial Research, India. After completing her Ph.D., Dr. Bhatia joined Professor Mary E. Choi’s lab at Weill Cornell Medicine, where she started her research on the role of mitophagy in kidney fibrosis.

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With almost a decade worth of research experience, Dr. Bhatia has 12 publications and more than 15 abstract presentations in renowned journals to her credit. She has presented her work in several national and international meetings. She is in the editorial board of journals, including *CPQ Medicine* and *Journal of Nephrology Advances*. She regularly reviews manuscripts and served as a reviewer at least 30 times for different academic journals, including *Frontiers in Medicine (Nephrology)*, *Aging*, *Oncotarget*, *American Journal of Nephrology*, and *Scientific Reports* (www.publons.com/researcher/1512241/divya-bhatia/).

Please read the Bhatia and Choi manuscript titled “***The Emerging Role of Mitophagy in Kidney Diseases***” published in the December 2019 issue of [JoLS](#), *Journal of Life Sciences*.