

James L. Kirkland, M.D., Ph.D., is the Noaber Foundation Professor of Aging Research at Mayo Clinic. Dr. Kirkland's research is on the contribution of fundamental aging processes, particularly cellular senescence, to age-related and chronic diseases and development of gerotherapeutics: agents and strategies for targeting fundamental aging mechanisms to treat age- and chronic disease-related conditions. Additional research areas include molecular and physiological mechanisms of age-related adipose tissue and metabolic dysfunction, frailty, and loss of resilience to infections and acute diseases in old age. Dr. Kirkland's laboratory published the first article about agents that selectively eliminate senescent cells - senolytic drugs. Dr. Kirkland demonstrated that senolytic agents enhance healthspan and delay, prevent, or alleviate multiple age-related disorders and diseases in mouse models. He published the first composite biomarker gerodiagnostic score of senescent cell burden that is sensitive to drug interventions in humans and the first clinical trials of senolytic drugs. He is preparing or conducting clinical studies of senolytics, including for COVID-19, frailty in elderly women, Alzheimer's disease, diabetes/obesity, osteoporosis, childhood cancer survivors, restoring function of organs from old donors to enable transplantation, idiopathic pulmonary fibrosis, pre-eclampsia, glioblastoma, and others. He has more than 285 publications (H index: 97) and holds over 80 patents. Dr. Kirkland is Principal Investigator of the Translational Geroscience Network (TGN; R33 AG061456), which brings together multiple academic institutions to translate healthspan interventions, including senolytics and other drugs that target fundamental aging processes, from bench to bedside, and is currently involved in 68 interventional and observational geroscience clinical trials. He has been a scientific advisory board member for several companies and academic organizations. He is President of the American Federation for Aging Research, a past member of the National Advisory Council on Aging of the National Institutes of Health, past chair of the Biological Sciences Section of the Gerontological Society of America, and past member of the Clinical Trials Advisory Panel of the National Institute on Aging. He is a board-certified specialist in internal medicine, geriatrics, and endocrinology and metabolism. Dr. Kirkland is the 2020 recipient of the Irving S. Wright Award of Distinction from the American Federation for Aging Research.