Brief Bio – Laura J. Balcer, MD, MSCE
October 30, 2024

Laura J. Balcer, MD, M.S.C.E., is a neurologist, neuro-ophthalmologist and epidemiologist at the NYU Grossman School of Medicine. Dr. Balcer is Professor and Vice Chair of Neurology, Population Health and Ophthalmology. In her role as Vice Chair, Dr. Balcer has led departmental efforts in Neurology for faculty appointments and promotions as well as faculty mentoring. Since arrival at NYU, she has received the Distinguished Educator Award from the School of Medicine as well as the Distinguished Faculty Mentor Award at Dean's Honors Day in 2023.

Dr. Balcer and her colleagues have led national and international collaborative research efforts in the neuro-ophthalmology of multiple sclerosis (MS), concussion and other neurologic disorders. Most recently, Dr. Balcer is the multi-PI for a newly funded $1.6 million award from the National Institutes of Health (NIH) to investigate changes in the eye that may indicate early signs of Alzheimer's and Parkinson's diseases using visible-light optical coherence tomography (OCT) imaging. This award is part of the NIH Common Fund Venture Program's new Oculomics Initiative and is co-funded by the National Eye Institute.

During the past 25 years, Dr. Balcer's research has been trainee-focused, and she has led numerous collaborative research projects that have been focused not only on testing of visual outcome measures but on research mentoring and trainee development. She has mentored >100 research trainees to date at all levels and has served as PI of a T32 grant for training in neurologic clinical epidemiology while at the University of Pennsylvania. Many of Dr. Balcer's trainees have received national awards for their work. Dr. Balcer is currently a co-director and mentor for T32AG052909-01A1, Postdoctoral Research Training in Neurodegenerative Disorders and the Aging Brain.

Dr. Balcer's collaborative research, funded by NEI and the National MS Society, has centered on identification of effective clinical vision tests, including low-contrast letter acuity, for clinical trials in MS. Vision in MS and other disorders has the unique distinction of enabling structure-function correlations thanks to the emergence of OCT as a structural marker of axonal and neuronal loss. In 2015, Dr. Balcer's collaborative team received the Barancik Prize for Innovation in MS Research. As part of what is now an international effort, the International MS Visual System Consortium (IMSVISUAL), Dr. Balcer's team of trainees and faculty at NYU (including one PhD graduate) participate in data collection, analyses and publication with some of the world's foremost experts while engaging in one of the most important aspects of mentoring, team science.

Paradigms from the studies of vision in MS have been carried forward to develop vision-based tools for the diagnosis and follow-up of concussion. The Mobile Universal Lexicon Evaluation System (MULES, rapid picture naming) and Staggered Uneven Number (SUN) test were developed by Dr. Balcer's colleagues and trainees at NYU as freely available measures suitable for all ages. Work with MULES and SUN, including applications beyond concussion (MS, Alzheimer's disease/ mild cognitive impairment, and Parkinson's disease), has provided an instructive as well as fun platform for teaching research fundamentals and writing across generations.