## Johanna M. Seddon, MD, ScM, FARVO, is Professor of Ophthalmology at the University of Massachusetts Medical School (UMMS), Director of Retina and Founding Director of the Macular Degeneration Center of Excellence in the Department of Ophthalmology and Visual Sciences at UMMS. Dr. Seddon pioneered the field of epidemiology in ophthalmology and initiated studies of genetics in macular degeneration. She has an MD degree from the University of Pittsburgh School of Medicine, a Master of Science degree in Epidemiology from the Harvard School of Public Health, and she completed Harvard fellowships in Ophthalmic Pathology and Vitreoretinal Surgery. She also founded and directed Ophthalmic Epidemiology and Genetics Services at Harvard and Tufts in Boston. Dr. Seddon specializes in the evaluation and treatment of patients with retinal dystrophies and degenerations, including macular degeneration, Stargardt Disease, Best Disease, high myopia as well as other macular disorders. She also specializes in family studies of these disorders. Dr. Seddon is recognized for her groundbreaking research on lifestyle factors (smoking, body mass index, abdominal adiposity, exercise), nutrition (dietary lutein, zeaxanthin, omega-3 fatty acids) and the associations of these modifiable factors with macular degeneration. The advice to eat green, leafy vegetables, increase lutein and zeaxanthin intake, and adhere to healthy habits like not smoking and getting exercise, evolved from her early work which has changed the management of macular degeneration.

Dr. Seddon and her research team have also made novel discoveries regarding genetic, biologic, and genetic-environmental biomarkers associated with both onset and progression of macular degeneration. Breakthroughs in the Seddon Laboratory include the discovery of several of the known genetic variants associated with macular degeneration, including the discovery of the first genetic variants in the HDL pathway, VEGF pathway, collagen extracellular matrix pathway, and the first confirmed rare genetic variants in the complement pathway with high impact on the disease. These variants can lead to high risk of disease in families and are now targets for new treatments. Her work demonstrated that eating a healthy diet can help modify this genetic susceptibility for AMD and she co-authored a book *“Eat Right for Your Sight”,* based on scientific studies of the impact of nutrition on eye disease, which is available on amazon.com. Dr. Seddon and her team initiated and developed predictive algorithms which combine genes and lifestyle factors to estimate the probability of progressing from intermediate to advanced subtypes of macular degeneration and visual loss. These models are being used in clinical research studies, and are useful for precision medicine.

[www.seddonamdriskscore.org](http://www.seddonamdriskscore.org) and AJO-American Ophthalmological Society Thesis, 2019.

Dr. Seddon has investigator-initiated NIH funding and has published over 250 articles in peer-reviewed journals, chapters and reviews. She has received numerous awards including the Research Award of Merit from Service d'Ophtalmologie, Hôpital Intercommunal de Créteil, “Prix Soubrane de la Recherche en Ophtalmologie”, Paris, France, the Mildred Weisenfeld Award from the Association for Research in Vision and Ophthalmology (ARVO) for Excellence in Ophthalmology, the inaugural ARVO Gold Fellow Award (FARVO), inaugural member of the Retina Hall of Fame, the Lucien Howe Medal Award, Distinguished Alumni Award from the University of Pittsburgh School of Medicine, the Women in Ophthalmology Honor and Mentoring Awards, the Kreissig Award from the European Retina, Macular and Vitreous Society, and the 2018 American Academy of Ophthalmology Lifetime Achievement Award.