Darren J. Lee, Ph.D.
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Education: Darren received his B.S. in Genetics from the University of California, Davis and his Ph.D. in Genetics from the University of New Hampshire, Durham in 2007. His doctoral research focused on gene regulation, specifically mRNA transcript stability of the poly(A) tail. Following graduation Darren began his postdoctoral fellowship at Schepens Eye Research Institute and Harvard Medical School in the lab of Dr. Andrew Taylor. Darren's postdoctoral research focused on understanding how antigen presenting cells and Treg cells suppress autoimmune disease. In 2010, Dr. Taylor moved the lab to Boston University School of Medicine, where Darren continued the project.

Professional Experience: In 2013 he was promoted to Instructor in the Department of Ophthalmology at Boston University School of Medicine and in 2015 he joined the faculty at the University of Oklahoma Health Sciences Center in the Department of Ophthalmology as an Assistant Professor and the Department of Microbiology and Immunology. In 2022 Darren moved to the University of Massachusetts Chan Medical School with appointments in the Department of Ophthalmology and Visual Sciences, Immunology and Microbiology Program, and NeuroNexus Institute.

Research Interests: For the past 15 years, Darren has been interested in regulatory immunity that suppresses autoimmune disease, specifically autoimmune disease that targets the eye, or autoimmune uveitis. His current research program is focused on how the ocular immune response can be utilized to suppress inflammation. Using a mouse model of autoimmune uveitis he has identified a systemic regulatory immune response that provides resistance to relapsing uveitis. This regulatory immunity requires a suppressor macrophage and regulatory T cells to function. His group has further demonstrated that the suppressor macrophages require the melanocortin 5 receptor to express CD39 and CD73 that allows for the conversion of ATP into adenosine. This adenosine stimulates T cells through the adenosine 2A receptor to induce regulatory activity. Importantly, he has shown that these receptors are present on PBMCs from human uveitis patients but only a subset of these patients can induce regulatory T cells through stimulation of this novel pathway. He has received local funding and been continuously funded by NIH/NEI.

Education and training is also important to Darren. He has trained medical students, residents, undergraduates, and Ph.D. students in his Department and in his lab. He has organized the

Vision Club seminar series in his Department and served on the Members-in-Training Committee for the Association for Research in Vision and Ophthalmology.

Statement of Interest: Darren has been a member of SLB since 2013 and attended every meeting since then. From his first SLB meeting Darren has established collaborations and networked amongst immunologists from all around the world. He immediately joined the website committee and assisted with the organization of the new website in 2014. As Chair of the website committee he was able to encourage the implementation of Whova, the conference app, and accomplish another redesign of the website, so understands the importance for SLB to have a virtual presence and how to lobby for the implementation of new technologies. He has also had the opportunity as a Program co-chair of the 2018 meeting to plan and organize the annual meeting in Chandler, Arizona, so understands the mechanics of putting together a meeting.

As a Councilor for SLB he would like to accomplish several goals. First, to help with the continued growth of SLB membership and meeting attendance. Second, to expand his knowledge about the decision-making process that goes into SLB. Third, to educate the public on the importance and benefits of science, and importantly, the need to continue to support scientific research. Finally, he would like to assist in promoting the Society at local, national, and international levels.