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April 11, 2026

Society of Heed Fellows Trustees
Re: Elaine Liu, MD, PhD

Dear Colleagues,

It is a great pleasure to nominate **Dr. Elaine Liu, MD, PhD** for the **2026 Heed Ophthalmic Foundation Resident Retreat**. Dr. Liu is an outstanding clinician-scientist whose intellectual rigor, compassion, and commitment to advancing ophthalmic care distinguish her as a future leader in academic ophthalmology.

Dr. Liu graduated with highest distinction in Molecular and Cell Biology from the University of California, Berkeley before she completed her MD/PhD training at the University of Michigan. Inspired by the experience of Dr. Sanduk Ruit, an ophthalmologist who provided sight-saving treatments to under-resourced communities, she chose to pursue a career using research to improve the health and vision of underserved patients. Her doctoral research focused on mechanisms of lysosomal dysfunction and neurodegeneration in Niemann-Pick type C, where she identified key pathways regulating lysophagy and neuronal integrity and worked to develop synthetic high-density lipoprotein nanoparticles to treat Niemann-Pick disease. This work advanced understanding of neurodegenerative disease and exemplifies her ability to connect molecular mechanisms with clinically relevant questions .

In medical school and residency, Dr. Liu has continued to build an impressive research portfolio spanning basic, translational, and clinical investigation. Her work clinical and epidemiologic studies of ophthalmic disease, including stroke-related visual deficits and healthcare delivery during the COVID-19 pandemic. More recently, she has focused on longitudinal retinal microvascular and neurodegenerative changes in patients with diabetic retinopathy who receive care at a large urban safety-net hospital, integrating imaging, biomarker discovery, and large-scale clinical datasets to better understand disease progression and identify therapeutic targets. She is analyzing the relationship between aqueous proteins and microvascular disease in clinical OCTA images, and using electronic health records to evaluate systemic exposures and risk of developing age-related macular degeneration. This body of work reflects a clear and sustained commitment to bridging mechanistic insight with clinical impact.

Now a resident physician in Ophthalmology at UCSF, Dr. Liu continues to distinguish herself through both her clinical excellence and her dedication to underserved populations. Her personal statement highlights her deep empathy for patients and her commitment to delivering thoughtful, patient-centered care even in the most challenging clinical circumstances. Her experiences caring for patients with vision-threatening disease, particularly in safety-net settings, have reinforced her mission to improve outcomes through both scientific discovery and equitable care delivery.

Dr. Liu has articulated a compelling vision for her career as a clinician-scientist and educator. She aims to leverage her MD/PhD training to bridge mechanistic understanding of disease with clinical research to improve outcomes in ocular



disease and plans to pursue fellowship training followed by a career in academic medicine supported by career development funding through a K award. Her dedication to mentorship, teaching, and service further underscores her potential to contribute meaningfully to the academic community.

Given her outstanding talent, motivation, and clarity of purpose, Dr. Liu will benefit greatly from participation in the Heed Resident Retreat. Meeting leaders in academic ophthalmology and networking with peers will further accelerate her development as a clinician-scientist. She will also contribute meaningfully to the retreat through her thoughtful perspective, intellectual curiosity, and commitment to advancing the field.

In summary, I am pleased to provide my most enthusiastic recommendation for Dr. Elaine Liu's participation in the 2026 Heed Ophthalmic Foundation Resident Retreat. She is an exceptional physician-scientist with the potential to make lasting contributions to vision research and patient care.

Sincerely,

A handwritten signature in cursive script that reads "Jacquie Duncan".

Jacquie L. Duncan, M.D.
Wayne and Gladys Valley Foundation Distinguished Professor of Ophthalmology
University of California, San Francisco