BIOGRAPHICAL SKETCH

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NAME: Zhou, Yujia

eRA COMMONS USER NAME (credential, e.g., agency login) N/A

POSITION TITLE: Heed Fellowship

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE	Start Date	Completion Date	FIELD OF STUDY
University of Miami	BS/BA	06/2014	05/2018	Neuroscience/Chemistry
University of Florida College of Medicine	MD	07/2018	05/2022	Medicine
Massachusetts Eye Research and Surgery Institute Research Fellowship	N/A	6/2022	5/2023	Uveitis
University of Florida Department of Ophthalmology Residency Program	N/A	5/2023	5/2027	Ophthalmology

A. Personal Statement

I was fascinated with the brain and planned to be a neurologist for most of medical school, until I took care of a young boy with a unique airsoft eye injury I met in the emergency department. I later wrote about him in a case report, as he demonstrated to me how precious and fragile the gift of sight is. Ocular trauma and neuro-ophthalmology became my primary interests as I studied open-globe injury prognosis, repair, and inflammatory sequelae with support from mentors. Between medical school and residency, I completed a research fellowship in uveitis and learned the basics of pathology that would complement my background in programming and photochemistry. These experiences also gave me exposure to unique cohorts with sympathetic ophthalmia, Behçets disease, and ocular cicatricial pemphigoid from whom I learned their clinical treatments. I continued working with my medical school mentors on clinical trials involving the ocular microbiome and pain control after refractive surgery. My scientific pursuits are to improve access to open-source tools in ophthalmology and the rescue of eyes in severe acute vision loss or ocular trauma.

B. Positions, Scientific Appointments and Honors

Lawrence M. Goodman Trust Award, University of Florida	2020
Medical Student Experience at the Annual Meeting Scholarship, American Academy of Neurology	2020
Elected to Phi Beta Kappa, University of Miami	2017
Third Place Physical Sciences at RCIF Poster Presentation, University of Miami	2017
Barry Goldwater Scholarship, University of Miami	2016
Beyond the Book Scholarship, University of Miami	2016

C. Contributions to Science

a. My interest in the brain began before medical school, then I fell in love with neuro-ophthalmology when I realized the eyes were one of its most important and accessible extensions. The clinical practice deeply rooted in patient education and interdisciplinary hospital setting also appealed to me. Taking the opportunity of having a large uveitis population in Boston, I served as co-principal investigator to evaluate symptomatology and potential MRI guidelines for neuro-Behçet's disease. My ongoing work includes a suite of open-source HTML tools for co-analysis of kinetic and static visual fields, along with a few interesting neuro-ophthalmology cases to be presented later in 2026.

1. Borelli, A., Behr, J., Ruggeri, M., Han, M., **Zhou, Y.**, & Foster, C. S. Indications for Magnetic Resonance Imaging in Patients with Behcet Uveitis. *Journal of Neuro-Ophthalmology*, 2024-12.
2. Ho, S. S., **Zhou, Y.**, & Rajderkar, D. Intracranial Imaging of Preterm Infants with Suspected Hypoxic Ischemic Encephalopathy: Comparing MRI and Ultrasound. *Current Pediatric Reviews*, 2023-05.
3. **Zhou, Y**., Iyer, S. S., Osuji, E., & Buchowicz, B. E. Idiopathic Orbital Inflammation in the Postpartum Period Associated With Preeclampsia. *Journal of Neuro-Ophthalmology*, 2022-04.

b. A unique pediatric injury I encountered and published in 2022 on the inadequacy of mesh ocular protection introduced me to ophthalmology. It led me to review the literature on repair strategies and a retrospective analysis of globe repair outcomes. During uveitis research fellowship, I conducted time-series analysis indicating superiority of steroid-sparing treatment for sympathetic ophthalmia. The fragmentation and emergency nature of ophthalmic trauma data limits understanding of injury prognosis and sympathetic ophthalmia, thus my ongoing work focuses on data sharing projects like IGATES and a multicenter retrospective comparison of intraocular foreign body repair methods, in press.
1. **Zhou, Y.**, Zhou, A., Philip, A. M., Margolis, M., Babiker, F., Chang, P. Y., Anesi, S. D., & Foster, C. S. Vision Outcomes of Long-Term Immunomodulatory and Steroid Therapy in Sympathetic Ophthalmia. *American Journal of Ophthalmology*, 2023-09.
2. **Zhou, Y.**, Chang, P., Abdelmalik, B., Mayer, Z., Shah, A., & Steigleman, W. A. Prognosis of Open Globe Injuries at a Tertiary Referral Center: The Modified Florida Ocular Trauma Score. *American Journal of Ophthalmology*, 2022-12.
3. **Zhou, Y.**, DiSclafani, M., Jeang, L., & Shah, A. A. Open Globe Injuries: Review of Evaluation, Management, and Surgical Pearls. *Clinical Ophthalmology*, 2022-08.
4. **Zhou, Y.**, Osuji, E., & Beal, C. Ocular injury from plastic airsoft bullet through protective steel mesh mask. *American Journal of Ophthalmology Case Reports*, 2022-06.

c. I gained exposure in uveitis and ocular immunology with Dr. C. Stephen Foster during a 1-year research fellowship, learning pathology techniques, finishing ongoing research, and practicing the art of immunomodulatory therapy. At the same time, I led a randomized trial evaluating basic characteristics of the ocular microbiome under artificial tears using next generation sequencing and mentoring two medical students in the project. Later in residency I mentored another medical student evaluating outcomes of endophthalmitis in the modern hospital setting. My overarching ambition to serve as a versatile ocular hospitalist is directly informed by my interest in ocular immunology.
1. Carpenter, E., **Zhou, Y.**, Wilson, M., Gilberstadt, N., Bowman, L., & Hu, J. Cohort Validation of the Endophthalmitis Vitrectomy Study for Generalized Etiologies. *Clinical Ophthalmology*, 2026-01.
2. **Zhou, Y.**, Sidhu, G. S., Whitlock, J. A., Abdelmalik, B., Mayer, Z., Li, Y., Wang, G. P., & Steigleman, W. A. Effects of Carboxymethylcellulose Artificial Tears on Ocular Surface Microbiome Diversity and Composition, A Randomized Controlled Trial. *Translational Vision Science and Technology*, 2023-08.
3. Rujkorakarn, P., Margolis, M. J., Morvey, D., **Zhou, Y.**, & Foster, C. S. Limited Clinical Value of Anti-Retinal Antibody Titers and Numbers in Autoimmune Retinopathy. *Clinical Ophthalmology*, 2023-03.
4. **Zhou, Y.**, Philip, A. M., Chikovsky, M. N., Nolan, J., & Anesi, S. D. Implantation of XEN gel stent in a patient with ocular cicatricial pemphigoid. *American Journal of Ophthalmology Case Reports*, 2023-03.

d. My research is built on measuring phenomena and building mathematical models, with a wide focus on photochemistry and in-silico techniques. I originally developed these skills for a laboratory career but now find clinical education a more fulfilling and reliable activity. In my academic career, I intend to serve as a source of research experience and statistical guidance for my colleagues and resident doctors. I am currently running a two-stage randomized controlled trial on pain control after refractive surgery.
1. Shah A, Disclafani M, **Zhou Y**, eds. *Establishing a Wetlab for Cataract Surgery Training.* Springer; 2026. ISBN: 978-3032205735.
2. **Zhou, Y.**, Wang, T., Tuli, S. S., Steigleman, W. A., & Shah, A. A. Overview of Corneal Transplantation for the Nonophthalmologist. *Transplantation Direct*, 2023.
3. **Zhou, Y.**, Takacs, G. P., Lamba, J. K., Vulpe, C., & Cogle, C. R. Functional Dependency Analysis Identifies Potential Druggable Targets in Acute Myeloid Leukemia. *Cancers*, 2020-12-10.
4. **Zhou, Y.,** Guzman, C. X., Helguero-Kelley, L. C., Liu, C., Peurifoy, S. R., Captain, B., & Braunschweig, A. B. Diketopyrrolopyrrole assembly into J-aggregates. *Journal of Physical Organic Chemistry*, 2016-12.