WAI T. WONG, MD PHD

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PHYSICIAN-SCIENTIST BIOPHARMA CONSULTANT

- **Strategic Biopharma Consultant and Board-certified Retinal Specialist with 25+ years of experience transforming preclinical discovery into high-value clinical assets. Proven track record in guiding small and large molecule programs through IND-enabling studies.**
- **Recognized KOL with >160 publications, >17K citations, h-index 69, and >100 invited lectures worldwide.**
- **Expert at bridging the gap between bench science and global regulatory/commercial success for emerging biotech entities. Advisor to pharma, biotech, and investors on preclinical and clinical drug development strategy, clinical trial design, investment strategy, and asset evaluation/due diligence.**

PROFESSIONAL EXPERIENCE

TIRESIAS BIOPHARMA CONSULTING, LLC, Half Moon Bay, CA, **www.Tiresiasbio.com** **2024 – present**
Founder and Principal Consultant for ophthalmology biopharma drug development.

- **Consulting Pillars:**
  - ✓ **Target and Platform Validation:** Prioritizing novel therapeutic targets for Retinal Disease using optimal drug delivery platforms
  - ✓ **Strategic advisory**: End-to-end drug development strategy in ophthalmology (preclinical → IND → Phase 1/2 → Phase 3)
  - ✓ **Competitive landscaping:** Expert advice for retinal indications, drug-delivery platforms, and individual programs/assets
  - ✓ **Fundraising Support:** Developing scientific pitch decks and communications for licensing and Series A/B/C rounds.
  - ✓ **Clinical perspective**: Practitioner perspective as experienced ophthalmologist and retinal specialist
- Expertise derived from >25 years of experience in eye research spanning preclinical and clinical spheres, experience as independent investigator and tenured faculty at the NIH, VP-level leader in drug development in pharma, and >20 years of experience as clinical practitioner (retinal specialist and ophthalmologist).
- Recognized KOL with >160 publications, >17K citations, h-index 69, and >100 invited lectures worldwide.
- Current consulting clientele includes large pharma and publicly listed biotech, academic/incubator startups, and venture capital companies.

JOHNSON AND JOHNSON (J&J), INNOVATIVE MEDICINE, Brisbane, CA 2020 – 2024
Fortune 500, US multinational, pharmaceutical, and medical technologies corporation.

Vice President (VP), Head of Retinal Discovery **2020 – 2024**

- Created new comprehensive preclinical strategy, aligned with company R&D objectives. Identified and prioritized novel therapeutic targets and drug delivery platforms. Initiated and advanced 10+ programs on diverse platforms (small and large molecules, oligonucleotides, and gene therapy), generating multiple-modality preclinical pipeline in ophthalmology.
- Shaped scientific and strategic direction for external partnership and investment opportunities for JNJ Innovative Medicine, including guiding due-diligence activities, serving as primary in-house scientific/clinical expert in retina.
  - Mentored start-up companies in JNJ incubator ecosystem (JLABS) as designated JPAL mentor / liaison.
  - Supported strategic company acquisitions and investments in external partnerships for retina indications.
- Built research team *de novo* in new disease area and geographical location. Established custom-designed research facility with full in vivo and in vitro research capabilities (2022), driving rapid pipeline advancement.
- Strategically expanded IP portfolios by identifying patentable innovations within pipeline programs, ensuring global protection for internal assets and platform technologies

- Elevated company profile in the retina space by leveraging established KOL status to build high-impact scientific networks, positioning the organization as a recognized leader in new therapeutic indications.

Interim Retina Disease Area Stronghold (DAS) Strategy Leader Jan 2021– Aug 2021

- Led end-to-end strategy in retina diseases, including preclinical and clinical development, external collaborations, and business development, while concurrently serving as Head of Retinal Discovery. Led Retinal division on formulating / presenting combined strategy to higher management, gaining approval.

NATIONAL EYE INSTITUTE (NEI), NATIONAL INSTITUTES OF HEALTH (NIH), Bethesda, MD 2005 – 2020

Primary agency of US government responsible for biomedical and public health research in eye health and vision research.

Senior Investigator (with Tenure), Section on Neuron-Glia Interactions in Retinal Disease (NGIRD) **2007 – 2020**

Tenured faculty in NIH intramural program and attending retinal specialist physician at NIH Clinical Center, world's largest research hospital. Member of physician-scientist faculty, leading independent translational research program and team.

- Key opinion leader (KOL) consultant and subject matter expert (SME) to large pharma, including Roche and Novartis.
- Scientific expert in the area of microglia and neuroinflammation in retinal disease.
- Built and led preclinical and translational research teams, generating track record of key advances and high-impact articles and patents (see Google scholar link)
- Directed clinical research activities as primary and lead investigator; oversaw design, operation, and analysis of Ph1-3 clinical trials. Accountable investigator for medical monitoring, oversight, review, and interpretation of trial data.
- Established academic leader involved in grant review committees, organization of international meetings and scientific symposia. Invited lecturer at Grand Rounds in ophthalmology departments of major institutions and delivered named lectures (100+ speaking engagements).
- Clinical care provider as board-certified attending physician and retinal specialist to patients at NIH Clinical Center. Clinical preceptor and teacher to 20+ clinical retinal fellows, many now current retinal specialists and KOLs.
- Received awards, including:
  - 10th Sayer Vision Research Lecture and Award, from NEI, for research advances in vision science (2017).
  - TransAmerica Lectureship, from Department of Ophthalmology, University of California at San Francisco (UCSF), for research advances in ophthalmology (2015).
  - Young Investigator Award, from Macula Society, for advances in clinical treatment of eye disorders (2014).

Medical Retina Fellow **2005 – 2007**

Obtained clinical and research training in medical retina with leaders in clinical research (Drs. Frederick Ferris, Emily Chew).

EDUCATION & TRAINING

- **MD & PhD** (Neuroscience), Washington University School of Medicine, St. Louis, MO
- **Residency in Ophthalmology**, University of Pennsylvania
- **Postdoctoral Training** (Jean Bennett Lab), University of Pennsylvania
- **BS Biology & BS Chemical Engineering**, Massachusetts Institute of Technology (MIT)

CERTIFICATION / LICENCES

- Full License, Medical Physician and Surgeon, State of Pennsylvania (2005 – Present)
- Diplomate (Board Certification), American Board of Ophthalmology (ABO) (2007 – Present)
- Member, Macula Society (2009 – Present)

PATENTS / PUBLICATIONS

Selected from >160 patents, articles and reviews /Citations >17K, h-index = 69; Google scholar link

Patents

- Emily Ying Chew, Zhiyong Lu, Tiarnan Keenan, **Wai T Wong**, Yifan Peng, Chen Qingyu, Elvira Agrón. "*Methods and systems for predicting rates of progression of age-related macular degeneration*." US20230093471A1, filed Feb 18, 2021, patent pending.
- **Wong, Wai. T.,** Xu Wang, Lian Zhao, Wenxin Ma. "Selective estrogen-receptor modulators (SERMs) confer protection against photoreceptor degeneration." U.S. Patent Filed: U.S. Patent Application Number PCT / US2017/046359, Filed 10 Aug 2017, issued 22 Jun 2021.

Publications

- Ma W, Zhao L, Xu B, Fariss RN, Redmond TM, Zou J, **Wong WT***, Li W. Human-induced pluripotent stem cell-derived microglia integrate into mouse retina and recapitulate features of endogenous microglia. ***Elife***, 2024, doi: 10.7554/eLife.90695.
- Keenan TDL, Bailey C, Abraham M, Orndahl C, Menezes S, Bellur S, Arunachalam T, Kangale-Whitney C, Srinivas S, Karamat A, Nittala M, Cunningham D, Jeffrey BG, Wiley HE, Thavikulwat AT, Sadda S, Cukras CA, Chew EY, **Wong WT.** Phase 2 Trial Evaluating Minocycline for Geographic Atrophy in Age-Related Macular Degeneration: A Nonrandomized Controlled Trial. ***JAMA Ophthalmol.*** 2024; 142:345-355.
- Fleckenstein M, Keenan TDL, Guymer RH, Chakravarthy U, Schmitz-Valckenberg S, Klaver CC, **Wong WT,** Chew EY. Age-related macular degeneration. ***Nat Rev Dis Primers***. 2021; 7:31.
- Silverman, SM, Ma, W, Wang, X, Zhao, L, **Wong. WT.** C3- and CR3-dependent microglial clearance protects photoreceptors in retinitis pigmentosa. ***J. Exp. Med*.,** 2019,216:1925-1943.
- Silverman, S. M., **Wong, W.T**. Microglia in the Retina: Roles in Development, Maturity, and Disease. ***Annual Reviews in Vision Science***, 2018; 4:45-77. doi: 10.1146/annurev-vision-091517-034425.
- Zhang, Y, Zhao, L, Wang, X, Ma, W, Lazere, A, Qian, H.-h, Zhang, J, Abu-Asab, M., Fariss, R.N., Roger, J.E., **Wong, WT**. Repopulating microglia restore endogenous organization and function under CX3CL1-CX3CR1 regulation. ***Science Advances***, 2018, 21;4:eaap8492.