

Kelvin Chen

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Research Goals: My research concerns the characterization of neurological disease biomarkers and the underpinning neuropathological mechanisms of diseased conditions at the molecular level. I explore the translatability of such findings for the novel development of ethical clinical applications to improve patient care.

Areas of Interest: Translational neuroscience, nervous system disorders, neural stem cell biology, neuroimaging, applied neuroethics

Education

- 2022 – 2026 **University of Virginia**, Charlottesville, VA.
Bachelor of Arts, Neuroscience & Cognitive Science
- 2020 – 2022 **New Horizons Governor's School for Science & Technology**, Hampton, VA.
Dual Enrollment, Biological Sciences
- 2018 – 2022 **Woodside High School**, Newport News, VA.
Advanced Studies Diploma

Research Experience

- 2023 – Pres. **UVA Schools of Medicine**, Charlottesville, VA.
Undergraduate Researcher, Dept. of Neuroscience, Advisor: [Lulu Jiang, MD, PhD](#).
◦ *Current project:* Utilizing iPSC-induced brain organoid models for the study of Alzheimer's disease pathology.
- 2022 – 2023 Undergraduate Researcher, Dept. of Pharmacology, Advisor: [Julius Zhu, PhD](#).
◦ Optimized a genetically encoded sensor-based image visualization and analysis algorithm for rendering nanoscopic images of neuromodulatory synaptic transmission and neurotransmitter properties.
- Summer 2023 **Barrow Neurological Institute**, Phoenix, AZ.
Research Intern, Dept. of Translational Neuroscience, Advisor: [Richard Dortch, PhD](#).
◦ Modeled multi-compartmental diffusion MRI signals in rat models of peripheral nerve trauma to derive diffusion tensor imaging and spherical mean technique-based metrics for monitoring axonal re/degeneration.
- 2021 – 2022 **Hampton University**, Hampton, VA.
Research Intern, Dept. of Chemistry & Biochemistry, Advisor: [Dr. Peter Njoki](#).
◦ Explored the role of gold nanoparticle for COVID-19 diagnosis and its mediating effect with antiviral drugs to target the SARS-CoV-2 RdRp gene.

Publications

Editorials

- [4] Chen, K., *On the Psychological Disembodiment of Autonomy and Agency in Patients with Brain-Computer Interface Implants*, Grounds: The Virginia Journal of Bioethics, 2023 [[HTML](#)].
- [3] Chen, K., *Moral Status in Cerebral Organoids, Gastruloids, and Chimeras*, Grounds: The Virginia Journal of Bioethics, 2023 [[HTML](#)].

- [2] Chen, K., *The Inadvertent Consequences of Scanning the Human Brain*, Grounds: The Virginia Journal of Bioethics, 2023 [\[HTML\]](#).
- [1] Chen, K., *Towards a Brave New World: The Huxleyan Reality of Using Pharmacological Neuroenhancement*, Grounds: The Virginia Journal of Bioethics, 2023 [\[HTML\]](#).

Presentations

Poster

- [1] Chen, K., Sadrabadi, M.S., Dortch, R.D., *Geometry-Informed Multi-Compartmental Diffusion MRI Modeling of Injured Peripheral Nerves*, Barrow Neurological Institute REU Symposium, Phoenix, AZ, 2023 [\[PDF\]](#).

Teaching Experience

UVA

- Fall 2023 Teaching Assistant, CHEM 1811: Principles of Chemical Structure Lab (Accelerated).
- Fall 2023 Teaching Assistant, CHEM 2311: Organic Chemistry Lab I (for Non-Chemistry Majors).

Awards & Grants

- 2023 – 2026 Echols Scholarship, UVA.
- 2022 – 2026 University Achievement Award Scholarship, UVA.
- 2022 Distinguished Research Mentorship Award, NHGSST.
- 2022 Valedictorian, WHS.

Services & Outreach

- 2023 – Pres. Editor, Grounds: The Virginia Journal of Bioethics.
- 2023 – Pres. Senior Translator, The Cavalier Daily.
- 2022 – Pres. Copy Editor, The Oculus: The Virginia Journal of Undergraduate Research.
- 2022 – Pres. Investigator, University Judiciary Committee.
- 2022 – Pres. Senior Associate, The Blosson Together Association.
- 2022 – Pres. Medical Services Volunteer, Madison House.

Affiliations

- 2022 – Pres. Undergraduate Research Network.

Skills

- Programming MATLAB, R
- Languages English, Mandarin