

# 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

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## Education

- 2022 – 2026 **University of Virginia**, Charlottesville, VA.  
B.A. 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

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## Research Experience

- Summer 2023 **Barrow Neurological Institute**, Phoenix, AZ.  
Research Intern, Dept. of Translational Neuroscience, Advisor: [Richard Dortch, Ph.D.](#)
- 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.
- 2022 – 2023 **UVA Schools of Medicine**, Charlottesville, VA.  
Undergraduate Researcher, Dept. of Pharmacology, Advisor: [Julius Zhu, Ph.D.](#)
- Optimized a genetically encoded sensor-based image visualization and analysis algorithm for rendering nanoscopic images of neuromodulatory synaptic transmission and neurotransmitter properties.
- 2021 – 2022 **Hampton University**, Hampton, VA.  
Research Intern, Dept of Chemistry & Biochemistry, Advisor: [Peter Njoki, Ph.D.](#)
- 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.

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## 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](#)].

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## 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](#)].

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## Teaching Experience

- Fall 2023 Teaching Assistant, CHEM 1811: Principles of Chemical Structure Lab (Accelerated), UVA.  
Fall 2023 Teaching Assistant, CHEM 2311/2411: Organic Chemistry Lab I, UVA.

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## Awards & Grants

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

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## 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.

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## Affiliations

- 2022 – Pres. Undergraduate Research Network.

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## Skills

- Programming MATLAB, R  
Languages English, Mandarin