Kelvin Chen

Contact Information	University of Virginia College of Arts & Sciences Charlottesville, VA 22904	Phone: (+1) 929-377-0923 Email: ddw4hp@virginia.edu Homepage: k9chen.github.io

Research Interests

Clinical and translational neuroscience, nervous system disorders, neural stem cell biology, neuroimaging, machine learning, applied neuroethics

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Education

University of Virginia, Charlottesville, VA   2022 – 2026 (Expected)
- B.A., Neuroscience & Cognitive Science; Minor, Bioethics

New Horizons Governor's School for Science & Technology, Hampton, VA   2020 – 2022
- Dual Enrollment, Biological Sciences & Mathematics

Woodside High School, Newport News VA   2018 – 2022
- Advanced Studies Diploma

Research Experience

UVA School of Medicine, Charlottesville, VA   2023 – Present
Undergraduate Researcher, Department of Neuroscience
Advisor: Lulu Jiang, M.D., Ph.D.
- *Current project*: Investigating the molecular mechanism underlying nuclear membrane disruption and nucleocytoplasmic translocation of proteins and transcripts triggered by tau pathology in Alzheimer's disease.

Barrow Neurological Institute, Phoenix, AZ   Summer 2023
Research Intern, Department of Translational Neuroscience
Advisor: Richard Dortch, Ph.D.
- Modeled multi-compartmental diffusion MRI signals in pre-clinical rat models of peripheral nerve trauma to derive diffusion tensor imaging and spherical mean technique-based metrics for monitoring axonal re/degeneration.

UVA School of Medicine, Charlottesville, VA   2022 – 2023
Undergraduate Researcher, Department 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 activities.

Hampton University, Hampton, VA   2021 – 2022
Research Intern, Department of Chemistry & Biochemistry
Advisor: Peter Njoki, Ph.D.
- Explored the role of gold nanoparticles for COVID-19 diagnosis and its mediating effect with antiviral drugs to target the SARS-CoV-2 RdRp gene.

Publications

Editorials

[E.1]   **Chen, K.**, *Towards a Brave New World: The Huxleyan Reality of Using Pharmacological Neuroenhancement* Grounds: The Virginia Journal of Bioethics, 2023 [HTML]

[E.2] **Chen, K.**, *The Inadvertent Consequences of Scanning the Human Brain* Grounds: The Virginia Journal of Bioethics, 2023 [HTML]

[E.3] **Chen, K.**, *Moral Status in Cerebral Organoids, Gastruloids, and Chimeras* Grounds: The Virginia Journal of Bioethics, 2023 [HTML]

[E.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]

[E.5] **Chen, K.**, *Therapeutic Nihilism in Disorders of Consciousness Care and the Right to Live* Grounds: The Virginia Journal of Bioethics, 2023 [HTML]

[E.6] **Chen, K.**, *A Neuroethical Discourse on the Application of Optogenetics for Memory Modification* Grounds: The Virginia Journal of Bioethics, 2023 [HTML]

PRESENTATIONS

Posters

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

TEACHING EXPERIENCE

University of Virginia, Charlottesville, VA
Undergraduate Teaching Assistant, Department of Chemistry
- CHEM 2321: Organic Chemistry Laboratory II (for Non-Chemistry Majors)   Spring 2024
- CHEM 1811: Principles of Chemical Structure Laboratory (Accelerated)   Fall 2023
- CHEM 2311: Organic Chemistry Laboratory I (for Non-Chemistry Majors)   Fall 2023

HONORS & AWARDS

- Echols Scholarship, UVA   2023
- University Achievement Award Scholarship ($\sim$\$80,000), UVA   2022 – 2026
- Distinguished Research Mentorship Award, NHGSST   2022
- Valedictorian, WHS   2022

TECHNICAL SKILLS

- Programming Languages: MATLAB, R
- Softwares: LaTeX, Microsoft Offices

SERVICE & OUTREACH

- The Cavalier Daily, Senior Translator   2023 – Present
- The Oculus: The Virginia Journal of Undergraduate Research, Copy Editor   2022 – Present
- Grounds: The Virginia Journal of Bioethics, Editor   2022 – Present
- University Judiciary Committee, Investigator   2022 – Present
- The Blosson Together Association, Senior Associate   2022 – Present

- Madison House, Medical Services Volunteer   2022 – 2023

REFERENCES

Lulu Jiang, M.D., Ph.D.
Assistant Professor of Neuroscience
UVA School of Medicine
wpm5vs@virginia.edu

Richard Dortch, Ph.D.
Associate Professor of Imaging Research
Barrow Neurological Institute
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