



Virginia Hargest, Ph.D.

Patent Agent

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Virginia Hargest, Ph.D. employs her technical prowess in life sciences patent practice to support the development and protection of innovative therapeutics. She conducts due diligence, patentability, and freedom-to-operate analyses. Virginia also prepares and prosecutes domestic and international patent applications.

Prior to her career in intellectual property, Virginia contributed to cutting-edge research as a molecular biologist and virologist. She authored multiple peer-reviewed publications and presented her research to scientific audiences across disciplines. Her doctoral research focused on elucidated cellular and viral mechanisms of the regulation and induction of epithelial-mesenchymal transition during human astrovirus infection. As a postdoctoral fellow and a lead researcher at St. Jude Children's Research Hospital, Virginia collaborated with multi-institutional teams to scale protein production for vaccine clinical trials.

Virginia is licensed to practice patent law exclusively before the United States Patent and Trademark Office (USPTO) and represents both foreign and domestic clients before the USPTO in the area of patent prosecution. Virginia is not licensed to practice before state and federal court.

Education

- University of Tennessee, Knoxville (B.S., *summa cum laude*, 2014)
 - Biological Science – Microbiology
- University of Tennessee Health Science Center (Ph.D, 2020)
 - Biomedical Science, Microbiology, Immunology, and Biochemistry

Admissions

- United States Patent and Trademark Office

Services & Industries

- Intellectual Property
- IP Litigation
- Life Sciences & Biotechnology
- Patents

Published In

- Co-Author, "Diet-induced obesity affects influenza disease severity and transmission dynamics in ferrets," *Science Advances*, 2024
- Co-Author, "Diet switch pre-vaccination improves immune response and metabolic status in formerly obese mice," *Nature Microbiology*, 2024
- Co-Author, "Astrovirus replication is dependent on induction of double membrane vesicles through a PI3K-dependent, LC3-independent pathway," *Journal of Virology*, 2023
- Co-Author, "Indoleamine 2,3 Dioxygenase-1 Regulates Cell Permissivity to Astrovirus Infection," *Mucosal Immunology*, 2023
- Co-Author, "Human Astrovirus VA1 Encephalitis in Pediatric Patients With Cancer: Report of 2 Cases and Review of the Literature," *Journal of Pediatric Infectious Disease Society*, 2022
- Author, "Astrovirus-Induced Epithelial-Mesenchymal Transition via Activated TGF- β Increases Viral Replication," *PLOS Pathogens*, 2022
- Co-Author, "Human Astroviruses: A Tale of Two Strains," *Viruses*, 2021
- Author, "Nitazoxanide Inhibits Astrovirus Replication In Vitro and In Vivo," *Journal of Virology*, 2020
- Co-Author, "Astroviruses (Astroviridae) in the Encyclopedia of Virology Fourth Edition," *Elsevier*, 2018
- Co-Author, "Astrovirus Biology and Pathogenesis," *Annual Review of Virology*, 2017
- Co-Author, "Astrovirus Pathogenesis," *MDPI – Viruses*, 2017

Speaking Engagements

- Speaker, "The Effects of COBRA Vaccination on Influenza Transmission Dynamics in the DIO Ferret Model," Collaborative Influenza Vaccine Innovation Centers, Bethesda, MD, 2022
- Speaker, "Astrovirus-Induced Epithelial-Mesenchymal Transition via Activated TGF- β Increases Viral Replication," American Society of Virology, Madison, WI, 2022
- Speaker, "Live Attenuated Influenza Vaccination in Models of Obesity," Center for Influenza Vaccine Research for High-Risk Populations, Athens, GA, 2022
- Poster, "Human Astrovirus Induced Epithelial-Mesenchymal Transition Is Regulated by MicroRNA-487A," Viruses and Cells Gordon Research Conference and Seminar, Lucca, Tuscany, Italy, 2019