Avraham Bayer, Ph.D.

Patent Scientist

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Industries

Health & Life Sciences

Medical & Surgical Devices

Avi Bayer is a Patent Scientist/Engineer who focuses on patent prosecution related to life sciences, biotechnology, and pharmaceutical matters. He has expertise across various fields including molecular biology, microbiology, gene editing, virology, immunotherapies, cellular therapies, pharmaceuticals, immunology, genomics, sequencing, developmental biology, and evolutionary biology.

Prior to joining the firm, Avi worked for nearly 14 years as a post-graduate researcher, including eight years as a postdoctoral research fellow, at a major cancer research institution. Avi's postdoctoral work focused on the evolution of the human immune system to block viral infection. In particular, his work revealed human adaptation to inhibit herpesvirus infections, unique among primates. Through various research projects, Avi gained expertise in broad molecular biology techniques including gene editing with CRISPR/CAS systems and lentiviral vectors. His doctoral work focused on host-pathogen interactions at the maternal-fetal interface and understanding the molecular mechanisms by which the placenta and maternal immune system protect the developing fetus from viral infections. This included constitutive expression of type III interferons and secretion of microRNAs packaged into exosomes.

Education

Pitzer College B.A., Religious Studies (2007)

State University of New York at Purchase B.S., Cell and Molecular Biology (2011)

University of Pittsburgh School of Medicine Ph.D., Molecular Virology and Microbiology (2016)

Insights

Publication

A single polymorphic residue in humans underlies species-specific restriction of HSV-1 by the antiviral protein MxB

October 1, 2023

Publication

Exposing the invader

May 30, 2022

Publication

Adaptation by copy number variation in monopartite viruses

December 1, 2018

Publication

Chromosome 19 microRNAs exert antiviral activity independent from type III interferon signaling

January 1, 2018

Publication

Antagonism of the protein kinase R pathway in human cells by rhesus cytomegalovirus

December 20, 2017