

Robert M. Layne, PhD

Senior Consultant

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Quandary Peak Research

Washington D.C.

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I am an accomplished Scientific Advisor, Patent Agent, and Scientist with over 15 years of experience translating intricate scientific concepts and cutting-edge technologies for diverse audiences, including attorneys, scientists, physicians, and students. My career highlights encompass advising trial teams that secured over \$3.5 billion in judgments for infringement of microprocessor and wireless communication technologies. Additionally, I have successfully prosecuted PCT and US patent applications covering a broad spectrum of life science and analytical chemistry innovations. I achieved registration to practice in patent matters before the USPTO in 2023.

Before embarking on my career in intellectual property law, I earned a Ph.D. in Cell & Molecular Biology from the University of Toledo. I contributed to diabetes research at Michigan Medicine and conducted neuroscience research at the University of Maryland. These experiences have provided a strong foundation for my ability to navigate complex scientific subjects and contribute meaningfully to the protection and advancement of innovative ideas.

USPTO Recognition

Acknowledged by the USPTO for meeting the stringent qualifications required for the role of a Patent Agent, showcasing expertise in patent prosecution and proceedings before the Patent Trial and Appeal Board. Proficient in preparing, filing, and prosecuting patent applications before the USPTO, ensuring compliance with legal requirements and advocating for the protection of intellectual property rights.

Education

Ph.D. in Cell and Molecular Biology

University of Toledo, Ohio | Sept 2015

- Won the University Fellowship Award
- Published and presented research on neuromodulation and synaptic integration
- Contributed to National Institute of Health and Whitehall Foundation grants
- Doctoral Teaching Assistant for Cell Biology, Introduction to Biology Lab 1, Human Physiology Lab, and Anatomy Lab
- Graduate Student Association Representative

B.S. with Majors in Neuroscience and Philosophy, Minor in Chemistry

University of Pittsburgh, Pennsylvania | Apr 2008

- Performed research on vestibular pathways that regulate blood pressure at the University of Pittsburgh Medical Center Eye and Ear Institute
- Undergraduate Teaching Assistant for Organic Chemistry 1
- Resident Student Association Senator
- Completed the Emerging Leaders Program

Employment

Senior Consultant

Quandary Peak Research | Washington D.C. | Sept 2023–Present

- Helping develop expert opinion evidence of circumstances at issue in legal matters
- Navigating and identifying pertinent discovery materials within document management systems
- Coordinating with attorneys and support personnel to compose, edit, and submit final work product to clients
- Assisting with interviews of parties involved in legal disputes

Scientific Advisor

Kramer Levin Naftalis & Frankel | New York, NY | Apr 2022–Mar 2023

- Drafted patent applications for intricate life sciences and analytical chemistry technologies
- Responded to office actions from various patent offices (e.g., USPTO, EPO, CIPO, JPO, IPOS, etc.)
- Discerned novel and innovative technologies from confidential research and development disclosures
- Coordinated with inventors and in-house legal teams to serve the interests of clients

Technology Specialist

Irell & Manella | Los Angeles, CA | Jan 2020–Jul 2021

- Provided scientific technical support for trial teams that won judgments in high-stakes court cases, including VLSI Technologies v. Intel and Optis Wireless Technology LLC et al. v. Apple Inc.
- Elucidated the underlying technology of complex inventions for non-technical attorneys
- Devised and rebutted patent infringement arguments and invalidity contentions
- Identified claims and claim elements for construction at Markman hearings
- Helped attorneys prepare for expert witness depositions
- Assisted with client-development matters

Teacher – Technology and Engineering Education

Old Mill High School | Millersville, MD | Sept 2019–Jan 2020

- Created engaging and structured learning environments in classes of 15-30 students
- Assessed the academic performance and progress of more than 200 students
- Addressed the unique educational need of each student with tailored instruction
- Utilized optional soft skills training programs

Postdoctoral Associate

University of Maryland | College Park, MD | Jul 2016–Oct 2018

- Published research on retina-brain pathways that mediate the effects of light on mood and learning
- Presented research on the control of cross-modal sensory plasticity by intrinsically photosensitive retinal ganglion cells
- Contributed to an internal grant

Research Consultant

Sapien Labs | Arlington, VA | Jun 2016–Dec 2016

- Helped develop a database of clinical EEG findings for a medical device startup company

Postdoctoral Associate

Michigan Medicine | Ann Arbor, MI | Sept 2015–Jul 2016

- Presented research on glucose-sensitive hypothalamic neurons involved in type 2 diabetes

Litigation Consulting

- **Robotic Vision Technologies Inc v. ABB Inc** | Feb 2024–Present

Jurisdiction: Delaware District Court

Case Number: 1:22-cv-01257

Counsel: Sterne Kessler Goldstein & Fox PLLC

Nature of Suit: Patent, Trade Secret and Copyright Infringement

Technology: Robotic computer vision, gripper targeting, feature selection and identification

- **iSpot.TV, Inc v. Nadya Teyfukova, and Entertainment Data Oracle, Inc** | Jan 2023–Present

Jurisdiction: US District Court, Central California

Case Number: 2:21-cv-06815

Counsel: Holwell Shuster & Goldberg LLP

Nature of Suit: Patent

- **MaddenCo, Inc v. HG AutoTech LLC** | Jan 2023–Present

Jurisdiction: S.D. Indiana

Case Number: 3:22-cv-00173-RLY-MPB (filed 10/31/22)

Counsel: Delk McNally LLP | Breazeale, Sachse & Wilson, LLP

Nature of Suit: Copyright; Third-party Neutral

- **William J. Van Kirk v. West Virginia United Health System, WVU Medicine, and University Health Associates** | Nov 2023–Present

Jurisdiction: Circuit Court of Monongalia County, West Virginia

Case Number: 23-C-281

Counsel: Thomas Combs & Spann, PLLC

Nature of Suit: Medical Malpractice

- **K+S Potash Canada General Partnership v. Veolia Water Technologies Inc. et al.** | Sept 2023–Present

Jurisdiction: Court Of Queen's Bench For Saskatchewan

Case Number: QB No. 817 (filed 2018)

Counsel: Stikeman Elliott LLP

Nature of Suit: Breach of Contract

Technology: Plant Design Management Systems (PDMS), Clash Detection, Database synchronization

Role: Served as Consulting Expert

- **AbCellera Biologics, Inc. v. Berkeley Lights, Inc** | Oct 2020–Jul 2021
Jurisdiction: United States District Court for the Northern District of California
Case Number: 3:20-cv-08627; 5:20-cv-08626; 5:20-cv08624
Counsel: Irell & Manella LLP
Nature of Suit: Patent
Technology: U.S. Patent 10,087,408 - System and method for microfluidic cell culture; U.S. Patent 10,421,936 - System and method for microfluidic cell culture; U.S. Patent 10,704,018 - System and method for microfluidic cell culture; U.S. Patent 10,087,408 - System and method for microfluidic cell culture
Role: Served as Technology Specialist
- **VLSI Technology LLC v. Intel Corporation** | Jan 2020–Jul 2021
Jurisdiction: United States District Court for the Western District of Texas
Case Number: 6:19-cv-00256; 6:19-cv-00255; 6:19-cv-00254
Counsel: Irell & Manella LLP
Nature of Suit: Patent
Technology: U.S. Patent 7,606,983 - Sequential ordering of transactions in digital systems with multiple requestors
Role: Served as Technology Specialist
- **VLSI Technology LLC v. Intel Corporation** | Jan 2020–Apr 2021
Jurisdiction: United States District Court for the Western District of Texas
Case Number: 6:21-cv-00299
Counsel: Irell & Manella LLP
Nature of Suit: Patent
Technology: U.S. Patent 6,366,522 - Method and apparatus for controlling power consumption in an integrated circuit; U.S. Patent 6,633,187 - Method and apparatus for enabling a stand alone integrated circuit
Role: Served as Technology Specialist
- **VLSI Technology LLC v. Intel Corporation** | Jan 2020–Mar 2021
Jurisdiction: United States District Court for the Western District of Texas
Case Number: 6:21-cv-00057
Counsel: Irell & Manella LLP
Nature of Suit: Patent
Technology: U.S. Patent 8,156,357 - Voltage-based memory size scaling in a data processing system; U.S. Patent 7,725,759 - System and method of managing clock speed in an electronic device; U.S. Patent 7,523,373 - Minimum memory operating voltage technique
Role: Served as Technology Specialist
- **Optis Wireless Technology, LLC et al v. Apple Inc** | Jan 2020–Apr 2020
Jurisdiction: United States District Court for the Eastern District of Texas
Case Number: 2:19-cv-00066
Counsel: Irell & Manella LLP
Nature of Suit: Patent
Technology: US 8,005,154 - Method and Apparatus for Transmitting and Receiving Shared Control Channel Message in a wireless communication system using orthogonal frequency division multiple access
Role: Served as Technology Specialist

Awards

- **Knudra Grand Expressions Poster Prize** | 2014

- **University Fellowship Award** | 2010

For entering Ph.D. students or those in the first year of their Ph.D. program who have exceptional academic records. It is the highest student award the University of Toledo College of Graduate Studies offers.

Publications

- Fernandez, D. C., Fogerson, P. M., Lazzerini Ospri, L., Thomsen, M. B., Layne, R. M., Severin, D., Zhan, J., Singer, J. H., Kirkwood, A., Zhao, H., Berson, D. M., & Hattar, S. | 2018
Light Affects Mood and Learning through Distinct Retina-Brain Pathways
Cell, 175(1), 71–84.e18. <https://doi.org/10.1016/j.cell.2018.08.004>
- Layne, R. M. (2015)
The AIB interneurons are modulated by excitatory and inhibitory signaling pathways to shape aversive behaviors in response to 1-octanol
Doctoral dissertation, University of Toledo. OhioLINK Electronic Theses and Dissertations Center.
http://rave.ohiolink.edu/etdc/view?acc_num=toledo1445452178
- Summers, P. J., Layne, R. M., Ortega, A. C., Harris, G. P., Bamber, B. A., & Komuniecki, R. W. | 2015
Multiple Sensory Inputs Are Extensively Integrated to Modulate Nociception in C. elegans
The Journal of Neuroscience: the official journal of the Society for Neuroscience, 35(28), 10331–10342.
P.J.S. and R.M.L. are co-first authors.
<https://doi.org/10.1523/JNEUROSCI.0225-15.2015>

Presentations

- Layne, R., Singer, J., & Kanold, P. | 2017
Control of cross-modal sensory plasticity by intrinsically photosensitive retinal ganglion cells
Talk presented at: Brain and Behavior Initiative Symposium, College Park, MD.
- Layne, R., Flak, J., Olson, D., Martin Myers, J., & Goforth, P. | 2016
Regulation of neuronal subpopulations in the ventromedial hypothalamus that influence glucose homeostasis
Poster presented at: The Michigan Diabetes Research Center Symposium, Ann Arbor, MI.
- Layne, R. and Bamber, B. | 2014
Excitatory and inhibitory signaling regulate the AIB interneurons in C. elegans
Poster presented at: Biological Sciences Graduate Student's Research Symposium, Toledo, OH.
- Layne, R., Sturt, B., Davis, K., & Bamber, B. | 2010
Investigation of Signaling Pathways that Regulate GABA Receptor Trafficking
Poster presented at: the Neuronal Development, Synaptic Function & Behavior C. elegans Topic Meeting, Madison, WI.

Skills

- Evaluating the underlying technology of inventions
- Conducting prior art database searches for patentability and freedom to operate analyses
- Establishing and maintaining effective working relationships
- Managing a variety of tasks simultaneously
- Analyzing and performing scientific research

- Excellent written and oral communication skills
- Strong problem-solving skills
- Secret clearance (requires sponsorship)
- Extensive experience with a variety of cell and molecular biology techniques, including genetic engineering (e.g., CRISPR/Cas9, RNAi, TALENs, etc.), PCR, molecular cloning, DNA sequencing, gel electrophoresis, immunohistochemistry, transduction, transfection, patch clamp electrophysiology and calcium imaging