THOMAS J. SIEPMANN, J.D., PH.D.

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PROFESSIONAL EXPERIENCE

Siepmann IP, PLLC, Springfield, VA
Owner 05/2016 – Present

- Intellectual property legal services practice dedicated to providing quality and experienced intellectual property law counseling services and management of patent portfolio development and term extension.
- Providing patent prosecution management and strategic global patent portfolio guidance that is individualized, competent, efficient, and flexible to fit the needs of companies of any size or stage of development.
- Of Counsel/Independent Contractor services also available; representative arrangements:
    - **Intellectual Property Counsel with BioPharma Law Group, PLLC** in Rochester, NY (05/2016 – Present) – In a collaborative and synergistic manner, working virtually with clients to address corporate and intellectual property legal needs in a flexible and responsive manner. Responsibilities include management of global patent prosecution for large or small patent portfolios in the biotech, biopharma, biologics, and pharmaceutical sciences.
    - **Patent Attorney with Ottesen, PA** in North Potomac, MD (11/2016 – Present) – Responsible for developing and implementing strategy for U.S. patent prosecution in the fields of polymer and resin chemistry, natural rubber compositions, optical coatings, water treatment systems, mechanical-chemical interface technologies, organic and inorganic chemistry, lithium battery chemistry, and similar technologies.
    - **Of Counsel with Hathaway & Kunz, LLP** in Cheyenne, WY (01/2019 – Present) – Working virtually and remotely to counsel start-up companies and venture firms regarding intellectual property law in a flexible and responsive manner. Advising clients on the role of patents, patent application strategy, and management of IP flow within businesses.
    - **Of Counsel with IPro, PLLC** in Sterling, VA (08/2019 – Present) – providing "fit to purpose" legal counseling in biotechnology patent preparation and prosecution.
    - **Patent Attorney with MH2 Technology Law Group LLP** in Tysons Corner, VA (05/2016 – 01/2019) – Responsible for managing global patent portfolio prosecution in the chemistry and biotechnology fields, including mAb technology and process chemistry, drafting patent applications, and providing fit-to-purpose legal opinions on infringement and freedom-to-operate.

Axogen, Inc., Alachua, FL 06/2019 – 12/2019
Consulting Patent Counsel

- Acting as part-time, interim, in-house patent counsel for small biotechnology company focused on nerve graft technology to treat nerve damage.
- Prepare draft patent applications and counsel C-level executives concerning innovation capture and protection, as well as inventorship and filing strategy options.
- Advise patent committee on best practices for identifying, rewarding, and stimulating quality invention disclosure activity from employees.

LeClairRyan, LLP, Alexandria, VA
Officer 12/2015 – 05/2016

- Responsible for managing global patent portfolio prosecution in the chemistry and biotechnology/immunology fields, including mAb technology and process chemistry, drafting patent applications, drafting and negotiating licensing agreements, and assisting in drafting patent invalidity opinions and conducting prior art searches.
- Assist in developing strategy for post-grant proceedings including Ex Parte Reexamination.

Thompson Coburn, LLP, Washington, DC
Counsel 11/2014 – 12/2015

- Responsible for managing global patent portfolio prosecution in the chemistry and biotechnology/immunology fields (mAb technology), drafting patent applications, drafting and

negotiating licensing agreements, and assisting in drafting patent invalidity opinions and due diligence projects.

Birch, Stewart, Kolasch & Birch, LLP, Falls Church, VA
Associate Attorney 08/2005 – 11/2008; 08/2012 – 11/2014

- Integral member of patent interference team on three parallel winning interferences (immunology).
- Responsible for US patent prosecution, drafting patent applications, advising clients on US patent prosecution strategy in the chemical and biotechnology fields, including chemistry, genetics, pharmaceuticals, immunology.
- Responsible for global patent prosecution in chemistry, small molecule pharma, biologics, immunology, molecular biology, genetics, Dx, and polymers.
- Drafted patent applications in small molecule chemistry.
- Advised clients on US prosecution strategy, patent licensing, and opinion drafting/validity analysis.
- Conducted Examiner interviews, drafted patent invalidity opinions, lectured at internal seminars on written description and enablement.
- Managed junior attorneys.

Affymetrix, Inc., Santa Clara, CA
IP Counsel, Director 11/2008 – 08/2012

- Global management of prosecution and growth of patent portfolios, including drafting 30-40 patent applications in genetics, DNA microarray technology, bioinformatics, label detection, robotics, optics, silicon chips, organic chemistry and label probe technology, and negotiated and drafted agreements including licensing, MTA, NDA/CDA, and collaborations.
- Provided "fit-to-purpose" infringement and FTO analyses.
- Advised product development groups and Business Development team, counseled client on export compliance, trademarks, and invention identification.
- Markedly improved patent quality and received the highest company award for completing a large legal project with few resources.

TraskBritt, P.C., Salt Lake City, UT
Associate Attorney 05/2004 – 08/2005

- Prosecuted patent applications in the biotechnology, virology, and chemistry fields.
- Prepared PCT national stage applications, counseled clients in US patent prosecution strategy, drafted patent applications, and assisted in due diligence projects.
- Conducted legal research as litigation support and drafted memoranda, motions, orders, and memoranda in support of motions.

SCIENTIFIC EXPERIENCE

Department of Chemistry, University of Utah, Salt Lake City, UT
Postdoctoral Research Associate 06/1998 – 04/2001

- Organic synthetic chemistry was employed to generate radiolabelled enzyme substrate analogs for use in the enzymological study of diterpene synthases.
- The synthesized diterpene substrate analogs of geranylgeranyl diphosphate and other isoprenes were used as short-circuit inhibitors in millisecond rapid-quench experiments designed to characterize the enzyme reaction kinetics of abietadiene synthase, taxadiene synthase, and bornyl diphosphate synthase.
- Various analytical chemistry techniques were learned and applied in these studies, including HPLC, TLC, NMR and MS.

Department of Biochemistry, Medical College of Wisconsin, Milwaukee, WI
Graduate Student 06/1992 – 05/1998

- Conducted a multi-disciplinary study of the enzymatic mechanisms of enzymes E1, E2 and E3 of the ATP-dependent, eukaryotic ubiqutination system. Enzyme reactions employed recombinant ^{125}I- ubiquitin and E2 cloned, expressed and purified using standard recombinant techniques, allowing quantification of the enzyme reaction kinetics of the enzymes. E1 and E3 were isolated from primary sources using

standard protein purification methodologies. Extensive phylogenetic analyses of the E2 family of ubiquitin enzymes were performed, revealing several highly conserved E2 domains further characterized by engineering, expressing, purifying and studying truncation and single-site E2 mutants. Cytosolic activities of E1 and E2 were quantitated *in vivo*. Protein cross-linking experiments were performed to detect E1-E2-E3 complexes. Other techniques employed included DNA mutation engineering and sequencing, PCR, SDS-PAGE and native-gel electrophoresis, CD, ELISA, FPLC, tissue culture and standard immunological techniques including preparation of polyclonal antibodies.

Department of Biochemistry, University of Illinois, Champaign-Urbana, IL
Undergraduate 05/1990 – 05/1992

- Senior thesis in biochemistry involved study of the chemotaxis of *Bacillus Subtilis*, by isolation and characterization of a putative membrane-bound proline receptor and cytosolic calcium binding receptor. Classical chromatographic and ultra-centrifugation techniques were employed to generate bacterial membrane protein fractions. Enzymatic activity was quantified using calcium isotopes. Due to excellence in organic chemistry coursework, I was hired as Teaching Assistant for undergraduate introductory chemistry laboratories and an advanced biochemistry laboratory course. My biochemistry degree is an American Chemical Society-certified chemistry degree.

ACADEMIC EXPERIENCE

University of Dayton School of Law, Dayton, OH
J.D., 2004

- CALI Award recipient in International IP, Creditor's Rights, and IP Seminar
- VP and President UDSL IP Law Society
- 1st Place, UD Law Review, Technology Law Writing Competition

University of Utah, Dept. of Chemistry, Salt Lake City, UT
Postdoctoral Fellow

- U.S. Department of Defense, Breast Cancer Postdoctoral Fellowship Award

Medical College of Wisconsin, Milwaukee, WI
Ph.D. in Biochemistry

- Accepted into the Interdisciplinary Program in Biomedical Sciences
- ASMBM/IUBMB International Young Scientist Program Award

University of Illinois, Champaign-Urbana, IL
B.S. in Biochemistry

PROFESSIONAL LICENSES

- U.S. Patent & Trademark Office, Registered Patent Attorney, 2004 – present
- Member of the District of Columbia (DC) Bar, 2012 – present
- Member of the Utah State Bar, 2004 – present
- Member of the State Bar of California, Multijurisdictional Practice Program, 2009 – 2012

SELECTED PUBLICATIONS

- Elizabeth Haanes, Benjamin L. Volk, Thomas J. Siepmann, "USPTO Publishes New (and Largely Improved) Guidance for Subject Matter Eligibility," Dec. 16, 2014, Thompson Coburn, Internet
- Zeynep Tokgöz, Thomas J. Siepmann, Frederick C., Streich, Jr., Brajesh Kumar, Jennifer M. Klein, and Arthur L. Haas, "E1-E2 Interactions In the Ubiquitin and Nedd8 Ligation Pathways: The E1β-Grasp Domain is an E2 Specificity Filter," *J. Biological Chemistry*, 287(1):311-321, 2012.
- Thomas J. Siepmann, "The Global Exportation of the Bayh-Dole Act," 30 *U. Dayton L. Rev.* 209, 2004.
- Thomas J. Siepmann, Richard N. Bohnsack, Zeynep Tokgöz, Olga V. Baboshina & Arthur L. Haas, "Protein Interactions Within the N-End Rule Ubiquitin Ligation Pathway," *J. Biological Chemistry*, 278(11):9448-9457, 2003.
- Olga V. Baboshina, Rita Crinelli, Thomas J. Siepmann & Arthur L. Haas, "N-End Rule Specificity Within the Ubiquitin/Proteasome Pathway is Not an Affinity Effect," *J. Biological Chemistry*, 276(42):39428-39437, 2001.
- Arthur L. Haas & Thomas J. Siepmann, "Pathways of Ubiquitin Conjugation," *FASEB J.* 11(14):1257- 1268, 1997.