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Lisa E. Geary, Ph.D.

PATENT AGENT

Lisa Geary, a seasoned registered patent agent in the Intellectual Property Group, brings a wealth of experience to her practice. Her specialization lies in patent prosecution and IP due diligence, encompassing the drafting and prosecuting domestic and foreign patent applications, providing invalidity and non-infringement opinions, and conducting due diligence and freedom to operate analyses. Lisa's extensive experience in a diverse range of intellectual property matters in various technology areas instills confidence in her clients and colleagues.

Lisa holds a B.S. in Chemistry from Carnegie Mellon University and earned a Ph.D. in Molecular and Structural Biophysics from the University of Pittsburgh. Much of her research focused on specificity in protein-DNA interactions, with emphasis on the links between high-resolution structural information and thermodynamic behavior. Lisa's broad scientific background spans a range of topics, including molecular biology and biochemistry, small animal physiology and surgery, biophysical analysis and high-resolution protein structure determination, and computational modeling.

REPRESENTATIVE MATTERS

While Lisa's training and research focused primarily on biochemistry and biophysics, she has accrued extensive experience in a wide range of technology areas through her patent practice, which includes:

- Drafting and prosecuting patents in the areas of pharmaceuticals, life sciences, nanotechnology, tissue engineering, chemistry, medical devices, photoconductors, environmental monitoring systems, robotic systems, computer software, and mechanical devices;
- Conducting prior art searches and preparing patentability opinions on national and international patent applications;
- Preparing non-infringement and freedom to operate opinions on U.S. and international inventions;
- Preparing invalidity opinions for U.S. and international patents.

PROFESSIONAL AFFILIATIONS

- Pittsburgh Intellectual Property Law Association, Member
- American Association for the Advancement of Science, Member

PRACTICE AREAS:

Intellectual Property

COURT ADMISSIONS:

US Patent and Trademark Office

EDUCATION:

Ph.D., Molecular and Structural Biophysics, University of Pittsburgh, 1998

B.S., Chemistry, Carnegie Mellon University, 1987

COMMUNITY INVOLVEMENT

- Chair, Judge Advisory Committee (JAC) for the Pittsburgh Regional Science and Engineering Fair and judging committee member, regional applications to the International Science and Engineering Fair
- Judge, International Science and Engineering Fair (Pittsburgh, Dallas, Los Angeles)

NEWS AND INSIGHTS

PUBLICATIONS

- "AI in Software as Medical Devices (SaMD): Navigating Patent and Regulatory Challenges in the US, Europe," co-author, The Legal Intelligencer, April 14, 2025.
- "Platelet bioenergetic screen in sickle cell patients reveals mitochondrial Complex V inhibition which contributes to platelet activation," Blood. 123(18):2864-72, 2014
- "Nitrite activates protein kinase A in normoxia to mediate mitochondrial fusion and tolerance to ischaemia/reperfusion," Cardiovasc Research, 101:57-68, 2014
- "P43: Nitrite activates protein kinase A in normoxia to promote mitochondrial fusion and confer delayed tolerance to ischemia/reperfusion," Nitric Oxide 31:S32, 2013
- "Nitrite activates AMP kinase to stimulate mitochondrial biogenesis independent of soluble guanylatecyclase," Free Radical Biology & Medicine, 53:1440-1450, 2012
- "Nitrite Activates Protein Kinase A in Normoxia to Increase Mitochondrial Fusion and Confer Delayed Cytoprotection After Ischemia/Reperfusion," Free Radical Biology and Medicine, 53:S165, 2012
- "Nitrite and Ischemic Preconditioning: A Common Mechanism of Protection Dependent on Myoglobin?," Free Radical Biology and Medicine 53:S173, 2012
- "Oxygen regulates tissue nitrite metabolism," Antioxidants & Redox Signaling, 17:951-961, 2012
- "Human neuroglobin functions as a redox-regulated nitrite reductase," Journal of Biological Chemistry, 286:18277-18289, 2011
- "Nitrite Oxidase Activities of Cytochrome P450 and Mitochondria," Blood 118(21):5310-5310, 2011
- "Oxygen Regulates Tissue Nitrite Metabolism," Antioxidants and Redox Signaling 17(7):951-61, 2011
- "Nitrite Differentially Regulates Mitochondrial Dynamics in Hypoxia and Normoxia," Free Radical Biology and Medicine 51, 2011
- "Measurement of Mitochondrial Function in Human Platelets," Free Radical Biology and Medicine 51, 2011
- "P44. Nitrite stimulates mitochondrial biogenesis in hypoxia," Nitric Oxide 24, 2011
- "Human neuroglobin functions as a redox regulated nitrite reductase," The FASEB Journal 25(S1), 2011

- “Human Neuroglobin Functions as a Redox-regulated Nitrite Reductase,” Journal of Biological Chemistry 286(20):18277-89, 2011
- “Measurement of Bioenergetics in Human Platelets,” Free Radical Biology and Medicine 49, 2010
- “Nitrite Stimulates Mitochondrial Biogenesis in Hypoxia,” Free Radical Biology and Medicine 49, 2010
- “Heme Coordination and Nitrite Reductase Activity of Human Neuroglobin,” Free Radical Biology and Medicine 49, 2010
- “Nitrite protects against morbidity and mortality associated with TNF- or LPS-induced shock in a soluble guanylate cyclase-dependent manner,” Journal of Experimental Medicine, 206:2915-2924, 2009
- “Mechanisms of coupling between DNA recognition specificity and catalysis in EcoRI endonuclease,” Structure, 12:1775-1788, 2004
- “The energetics of the interaction of BamHI endonuclease with its recognition site GGATCC,” Journal of Molecular Biology, 307:619-636, 2001
- “Assay of restriction endonucleases using oligonucleotides,” Methods in Molecular Biology, 148:465-490, 2001
- “Structural and thermodynamic strategies for site-specific DNA binding proteins,” Structure Folding and Design, 8:1015-1023, 2000
- “Thermodynamic parameters of specific and nonspecific protein-DNA binding,” Supramolecular Chemistry, 12:143-160, 2000
- “Energetics of the interaction of BamHI endonuclease with its recognition site,” Invited speaker at New England Biolabs, Beverly, MA, July 1998
- “Specific binding by EcoRV endonuclease to its DNA recognition site GATATC,” Journal of Molecular Biology, 269:82-101, 1997
- “Structural adaptations in the interaction of EcoRI endonuclease with methylated GAATTC sites,” EMBO Journal, 15:2870-2882, 1996