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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

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

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