### **CONLEY ROSE**

#### INTELLECTUAL PROPERTY LAW





Madalina Ciobanu,
Ph.D.
Technical Advisor

#### MADALINA CIOBANU, PH.D. - Technical Advisor

720-570-5030 Phone 972-731-2289 Fax

Plano Office Granite Park Three 5601 Granite Parkway, Suite 500 Plano, TX 75024-6608

#### **Biography**

Dr. Madalina Ciobanu has expertise in the areas of analytical and bio-analytical chemistry, electrochemistry, surface modification, corrosion, geochemistry, scanning electrochemical microscopy, photovoltaics, biosensors, biotechnology, microfluidics, metabolomics, biochemistry, translational medicine, molecular biology, cancer biology, polymer chemistry, synthetic organic chemistry, and chemical engineering.

Prior to joining the firm, Dr. Ciobanu was a research associate in the Division of Medical Oncology at the University of Colorado Denver. Specifically, her researched focused on investigating the mechanism of action of a combination of mTOR and HSP90 inhibitors in pancreatic cancer. Dr. Ciobanu was also a Research Assistant Professor at Vanderbilt University in the Department of Chemistry. At Vanderbilt, her research spanned a multitude of projects, such as studying live cells and live pancreatic islets metabolomics via multianalyte microphysiometry; utilizing scanning electrochemical microscopy for exploring the metabolism of single live cells, single live pancreatic islets, and electron transfer proteins assembled on inorganic substrates with the purpose of building photovoltaic devices; and investigating the mechanism of pyrite oxidation and of C8-arylamine adducts of 2'-deoxyguanosine oxidation by electrochemical means. As a graduate student, Dr. Ciobanu designed miniaturized reference electrodes based on Ag/AgiX internal reference elements enclosed in hydrogels, and optimized the polymer/hydrogel composition for long term stability of the electrodes. Dr. Ciobanu received the high distinction of being named the Valedictorian (Highest GPA) of her 1996 graduating undergraduate class, won scientific poster competitions during her graduate studies and postdoctoral years, and received travel awards for attending international conferences. Dr. Ciobanu speaks fluent English as well as Romanian.

#### **Education**

Ph.D., Analytical Chemistry, 2002 The University of Memphis, Memphis, TN B.Ch.E., Chemical Engineering, 1996 Politehnica University, Bucharest, Romania Bahmed, K.; Henry, C.; Holliday, M.; Redzic, J.S.; Ciobanu, Madalina; Zhang, F.; Weekes, C.; Sclafani; R.A.; DeGregori; J.; Eisenmesser, E.Z. "Extracellular cyclophilin-A stimulates ERK1/2 phosphorylation in a cell-dependent manner but broadly stimulates nuclear factor kappa B." Cancer Cell International, 12(19), 2012, pp 13.

Hinow, P.; Gerlee, P.; McCawley, L.J.; Quaranta, V.; Ciobanu, Madalina; Wang, S.; Graham, J.M.; Ayati, B.P.; Claridge, J.; Swanson, K.R.; Loveless, M.; Anderson, A.R.A. "A Spatial Model of Tumor-Host Interaction: Application of Chemotherapy." Math. Biosci. Eng., 6(3), 2009, pp 521-546.

Wilburn, J.P.; Durham, C.; Ciobanu, Madalina; Patrut, A.; Lowy, D.A. "Competing Electrochemical and Chemical Dissolution of Aluminum in Photopolymerized Acrylic Hydrogels." Studia Univ. Babes-Bolyai Chemia, 54(4), 2009, pp 321-328.

Ciobanu, Madalina; Taylor, D.E.; Wilburn, J.P.; Cliffel, D.E. "Glucose and Lactate Biosensors for Scanning Electrochemical Microscopy Imaging of Single Live Cells." Analytical Chemistry, 80(8), 2008, pp 2717-2727.

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Lehner, S.; Savage, K.; Ciobanu, Madalina; Cliffel, D.E. "The effect of As, Co and Ni impurities on pyrite oxidation kinetics: An electrochemical study of synthetic pyrite." Geochimica et Cosmochimica Acta, 71(10), 2007, pp 2491-2509.

Stover, J.S.; Ciobanu, Madalina; Cliffel, D.E.; Rizzo, C.J. "Redox Chemistry of C8-arylamine Adducts of 2'-deoxyguanosine." J. Am. Chem. Soc., 129, 2007, pp 2074-2081.

Ciobanu, Madalina; Wilburn, J.P.; Krim, M.; Cliffel D.E. "Chapter 1: Fundamentals." in "Handbook of Electrochemistry.", edited by C.G. Zoski, Elsevier Science, 2007, pp 934.

Ciobanu, Madalina; Kincaid, H.A.; Lo, V.; Dukes, A.D.; Jennings, G.K.; Cliffel, D.E. "Electrochemistry and Photoelectrochemistry of Photosystem I Adsorbed on Hydroxyl-Terminated Monolayers." Journal of Electroanalytical Chemistry, 599, 2007, pp 72-78.

Kincaid, H.A.; Niedringhaus, T.; Ciobanu, Madalina; Cliffel, D.E.; Jennings, G.K. "Entrapment of Photosystem I within Self-Assembled Films." Langmuir, 22, 2006, pp 8114-8120.

Ciobanu, Madalina; Kincaid, H.A.; Jennings, G.K.; Cliffel, D.E. "Photosystem I Patterning Imaged by Scanning Electrochemical Microscopy." Langmuir, 21, 2005, pp 692-698.

Ciobanu, Madalina; Wilburn, J.P.; Lowy, D.A. "Miniaturized Reference Electrodes. II. Use in Corrosive, Biological, and Organic Media." Electroanalysis, 16, 2004, pp 1351-1358.

Wilburn, J.P.; Ciobanu, Madalina; Lowy, D.Á. "Characterization of Acrylic Hydrogels by Open Circuit Potential Monitoring." Journal of Applied Electrochemistry, 34, 2004, pp 729-734.

Wilburn, J.P.; Ciobanu, Madalina; Buss, N.I.; Franceschetti, D.R.; Lowy, D.A. "Miniaturized Reference Electrodes with Stainless Steel Internal Reference Elements." Analytica Chimica Acta, 511, 2004, pp 83-80

Ciobanu, Madalina; Wilburn, J.P.; Buss, N.I.; Ditavong, P.; Lowy, D.A. "Miniaturized Reference Electrodes Based on Ag/AgiX Internal Reference Elements. I. Manufacturing and Performance." Electroanalysis, 14, 2002, pp 989-997.

Ciobanu, Madalina; Wilburn, J.P.; Lowy, D.A. "Miniaturized reference electrodes based on UV-cured acrylic-type polymer gels." Proc. - Electrochem. Soc. 99-23, 1999 (Chemical Sensors IV), pp 62-68. Georgescu, O.; Sandu, A.; Stoica, M.; Branzoi, V.; Ciobanu, Madalina "Mechanism of Anticor®-type Corrosion Inhibitors Applied to Metallic Equipment for Petroleum Refineries." Conferinta de Chimie si Inginerie Chimica – Proceedings Vol. V-11, 1997, Bucharest, Romania, pp 199-204. Award-Winning Presentations

"Glucose and Lactate Biosensors for SECM Imaging of Single Live Cells." Ciobanu, M.; Taylor, D.E.; Cliffel, D.E. The 4th Workshop on Scanning Electrochemical Microscopy, Falcade (BL), Italy, September 3-6, 2006.

"Miniaturized Reference Electrodes with Ag/AgiX Internal Reference Element Imbedded in a Hydrogel-Type Electrolyte." Ciobanu, M.; Wilburn, J.P.; Lowy, D.A. The 197th Meeting of The Electrochemical Society, Toronto, Canada, May 14-18, 2000.

## CONLEY ROSE INTELLECTUAL PROPERTY LAW





#### JERRY C. HARRIS, JR.- Shareholder/Director

972.731.2288 Phone 972-731.2289 Fax Plano Office Granite Park Three 5601 Granite Parkway, Suite 500 Plano, TX 75024-6608

#### **Biography**

Mr. Harris practices all aspects of intellectual property, with a specialization in patent law. His patent practice expertise includes invalidity opinions, non-infringement opinions, freedom to operate opinions, domestic and foreign patent preparation and prosecution, and client counseling related to patent issues. Mr. Harris's experience spans such diverse arts as polymer compositions, catalysts, and processing; pharmaceutical compositions and methods of treatment; petroleum exploration and refining; computer software, frameworks, and methods; mechanical devices, including oilfield tools, electromechanical devices, and medical devices; and business methods. Mr. Harris has also provided negotiation and counseling services as an N.F.L.P.A. registered contract advisor.

Prior to joining the Firm, Mr. Harris worked as a litigator for the Wilmington, Delaware firm, Morris, Nichols, Arsht, and Tunnell, LLP, where he participated in numerous patent litigation matters concerning the representation of both patentees and alleged infringers. Mr. Harris also actively represented boards of directors, special committees, and shareholders of Delaware corporations in litigation involving direct and derivative shareholder actions, challenges to corporate control, and other actions involving the Delaware General Corporation Law.

Mr. Harris is a member of the Texas State Bar, the Delaware State Bar, and is admitted to practice before the United States District Court for the District of Delaware and the United States Court of Appeals for the Third Circuit. Mr. Harris is also registered to practice before the U.S. Patent and Trademark Office.

#### **Practice Areas**

**Patents** 

Trademarks & Domain Disputes

Intellectual Property Agreements Counseling, Opinions & Diligence

#### **Education**

J.D., cum laude, 2002
The Pennsylvania State University Dickinson School of Law Order of Barristers
The Penn State International Law Review, Senior Editor National Appellate Moot Court Team, Captain

M.Ed., Educational Administration, 1998 University of North Texas

B.A., Biology, 1992 Texas A&M University

#### Memberships

- American Bar Association
- Delaware State Bar Association

#### Publications/Presentations

- Geoffrey R. Scott, et al., Rising to the Challenge: The Transition From College to Professional Football (2005)
- The lakovos Tsakalidis Dispute Between the Phoenix Suns and Greek AEK Before the Court of Arbitration for Sport,19 Dick. J. Int'l. L. 531

# CONLEY ROSE INTELLECTUAL PROPERTY LAW





#### JERRY V. WALKER, PH.D. - Technical Advisor

972.731.2288 Phone 972-731.2289 Fax

Plano Office Granite Park Three 5601 Granite Parkway, Suite 500 Plano, TX 75024-6608

#### **Biography**

Jerry V. Walker has expertise in the areas of inorganic and bioinorganic chemistry, molecular biology, enzymology, protein purification, computational biology, gene therapy and structural biology.

Before joining the firm, Dr. Walker was a postdoctoral research associate in the Department of Molecular Pharmacology at St. Jude Children's Research Hospital where her research centered on elucidating mechanisms of drug action with an aim of designing new and more therapeutically effective anticancer and antibacterial agents. Specifically, Dr. Walker's research focused on the mechanism of action of antitopoisomerase targeting drugs by evaluating mutations in topoisomerase II utilizing yeast model systems. Dr. Walker's graduate research was in the area of marine bioinorganic chemistry with an emphasis on transition metal catalysts. Dr. Walker was also a UNCF-MERCK postdoctoral research award recipient.

#### Education

Ph.D., Chemistry, 1998 University of California, Santa Barbara (Chemistry)

B.S., Chemistry, 1989 California State University, Bakersfield

#### Publications/Presentations

- 1. Vaughn J, Huang S, Wessel I, Sorensen TK, Hsieh T, Jensen LH, Jensen PB, Sehested M, Nitiss JLL. "Stability of the topoisomerase II closed clamp conformation may influence DNA stimulated ATP hydrolysis," J Biol Chem. 2005, Jan 12.
- 2. Walker J, Nitiss KC, Jensen L, Mayne C, Hu T, Jensen PB, Sehested M, Hsieh T, Nitiss JL. "A mutation human topoisomerase II a whose expression is lethal in DNA repair deficient yeast cells," J Biol Chem. 2004 Jun 18; 279(25): 25947-54.
- 3. Strumberg, D. Nitiss, JL. Dong, J. Walker, J. Nicklaus, MC. Kohn, KW., Heddle, JG. Maxwell, A. Pommier, Y. "Importance of the fourth alpha-helix within the cap homology domain of type II topoisomerase for DNA cleavage site recognition and quinolone action," Antimicrob. Agents Chemother. 46:2735-2746,2002.
- 4. Walker, JV. and Nitiss, JL. "DNA Topoiosmerase II as a target for cancer chemotherapy," Cancer Investigation. 240:570-89,2002.
- 5. Dong, J. Walker, J. Nitiss, JL. "A mutation in yeast topoisomerase II that confers hypersensitivity to multiple classes of topoisomerase II poisons," J. Biol. Chem. 2000 275: 7980-7987.
- 6. Walker JV, Morey M, Carlsson H, Davidson A, Stucky GD, Butler A. " *Peroxidative halogenation catalyzed by transition-metal-ion-grafted mesoporous silicate materials*," J Am Chem Soc 119:6921-6922, 1997.
- 7. Walker JV, Butler A. "Vanadium bromoperoxidase catalyzed oxidation of thiocyanate," Inorgan Chim Acta 243:201-206, 1996.
- 8. Sodejak HS, Walker JV, Butler A. "Inhibition and inactivation of vanadium bromoperoxidase by the substrate hydrogen peroxide and further mechanistic studies of vanadium bromoperoxidase,"Biochemistry 34:12689-12696, 1995.
- 9. Butler A, Walker JV. "Marine haloperoxidases,"Chem. Rev 93:1937-1944, 1993.