

Merrill Garnett

Director, Garnett McKeen Laboratory, Inc
7 Shirley Street, Bohemia, NY 11716-1735

March 12, 2009

Curriculum Vitae

B.A., D.D.S., New York University, 1955

Internship: U.S.Naval Hospital, St. Albans

Graduate Studies: Biochemistry, New York University, Brooklyn College

Advanced Courses: Impedance Spectroscopy (University of Virginia and University of Twente, Holland); Infrared Spectroscopy (University of Connecticut); HPLC (Seton Hall University)

Principal Investigator: Damon Runyon Memorial Fund

Senior Research Chemist: Waldemar Medical Research Foundation

Distinguished Teacher Award: Westinghouse National Science Competitions, 1967

Lecturer: Federated Licensing Examination for Physicians

(Biochemistry)- Central Islip State Hospital

Head, Institutional Research Review Board: Central Islip State Hospital

Research Chemist: Northport Veterans' Medical Center- Hematology, Oncology

Director: Garnett McKeen Laboratory, Inc., High Technology Incubator, State University of New York at Stony Brook

Award of Excellence: Pan American Conference- Aging in America, 1999

Publications

1. M.Garnett, C.V.Krishnan, B.Jones, Paramagnetic Doping of DNA Forms Spin Lattice
..... Films, 315th Meeting Electrochem.Soc. I3, #1403 (2009)
-2. M.Garnett, C.Krishnan, B.Jones, Electronic Oscillation of DNA Induced by Palladium-
. Lipoic Acid (PLA), Meet.Abstr. Electrochem.Soc. **801**, 497 (2008)
3. O.Corduneanu, A.-M. Chiorcea-Paquim, M.Garnett, A.M.Oliveira-Brett, Lipoic acid-
. palladium complex interaction with DNA, voltammetric, AFM characterization, *Talanta*
(2008), doi:10.1016/j.talanta.2008.10.046
4. C.V.Krishnan, M.Garnett, B.Chu, Int.J.Electrochem.Sci., 3, 854 (2008)
5. C.V.Krishnan, M.Garnett,, B.Chu, Int.J.Electrochem.Sci., 3, 873 (2008)
6. O.Cordeanu, M.Garnett, A.M.O.Brett, Anodic Oxidation of Alpha-Lipoic Acid at a
. Glassy carbon Electrode and its Determination in Dietary Supplements, *Analytic letters*,
. 40:1763-1778 (2007)
7. O.Corduneanu, M.Garnett, A.M.O.Brett, Electroanalysis of alpha-lipoic acid in dietary
..... supplements, SPQ-Analitica '06, 6^o Encontro da Divisao de Quimica Analitica de
.....Sociedade Portuguesa de Quimica, Lisbon, Portugal, March 2007.
8. M.Garnett, C.Krishnan, B.Jones, Digoxin-Nucleic Acid Oscillations, Meet. Abstr.
.....Electrochem.Soc. **701**, 457 (2007)

9. M.Garnett, C.V.Krishnan, B.Jones, Low Frequency Molecular Oscillator, 57th Ann. Meeting Int'l Soc.Electrochem., Ab. S8P22, (2007)
10. C.V.Krishnan, M.Garnett, B.Chu, Solute-Solvent Interactions from Admittance Measurements: Potential Induced and Water Structure Enforced Ion-Pair Formation, Int'l J. Electrochem.Sci., 2, 958 (2007)
11. C.V.Krishnan, M.Garnett, B.Hsaio, B.Chu, Electrochemical Measurements of Isopoly-oxomolybdates: 1. pH Dependent behavior of Sodium Molybdate, Int.J.Electrochem.Sci. 2, 29 (2007)
12. C.V.Krishnan, M.Garnett,B.Chu, Spatiotemporal Oscillations in Peroxo-Molybdate Complexes in Acidic Solutions: Impedance Measurements of $H_2Mo_2O_3(O-O)_4(H_2O)_2$, Int.J.Electrochem.Sci., 2,444 (2007)
13. C.V.Krishnan, M.Garnett, Spatio-temporal Oscillations in Biological Molecules: 3. Histidine, 58th Ann.Meeting Int'l.Soc.Electrochem., Banff,, Canada (2007)
14. C.V.Krishnan, M.Garnett, B.Chu, Solute-Solvent Interactions Near the Double Layer from Admittance measurements, 7th Int'l Symp. Electrochem.. Impedance Spectroscopy, France (2007)
15. C.V.Krishnan, M.Garnett, Examining Solute-Solvent Interactions at the Electrode Double layer by Impedance Measurements of Tetraalkylammonium Ions, 211th Meeting Electrochem.Soc., Chicago (2007)
16. C.V.Krishnan, M.Garnett, New Insight into the Double Layer Structure from Impedance Measurements: Implications for Biological Systems, Electrochimica Acta , 51-1541 (2006)
17. C.V.Krishnan, M.Garnett, Liquid crystal behavior in solutions, electrode passivation, and impedance loci in four quadrants, in: Passivation of Metals and Semiconductors, and Properties of Thin Oxide layers, P.Marcus & V.Maurice, (Eds.) Elsevier, Amsterdam, 389-394 (2006)
18. C.V.Krishnan, M.Garnett, Examining Solute-Solvent Interactions at the Electrode Double Layer by Impedance Measurements of Proteins: 1. Collagen, Int.J.Electrochem. Sci., 1, 215 (2006)
19. C.V.Krishnan, M.Garnett, B.Chu, Spatio-temporal Oscillations in Biological Molecules: 4.Molybdate-Flavin Adenine Dinucleotide Interaction, 210th meeting Electrochem.Soc., Cancun Mexico, (2006)
20. C.V.Krishnan, M.Garnett, Spatio-temporal Oscillations in Biological Molecules: 3. Lysine and its Electronic influence on Gene Expression, 57th Ann.meeting Int.Soc. Electrochem., Edinburgh (2006)
21. M. Garnett, C. V. Krishnan, and B. Chu, The Role of Hydrogen Peroxide in Evolution Evidence from Impedance Measurements, 209th Meeting of Electrochemical Society, Denver, Colorado, (2006)
22. C. V. Krishnan, M. Garnett, and B. Chu, Spatio-temporal Oscillations in Biological Molecules: 2. Hydrogen Peroxide and Parkinson's Disease, 209th Meeting of Electrochemical Society, Denver, 2006
23. C. V. Krishnan, M. Garnett, and B. Chu, Spatiotemporal Oscillations in Peroxo-Molybdate Complexes: 1. Impedance Measurements of $H_2Mo_2O_3(O-O)_4(H_2O)_2$, 54th Meeting, International Society of Electrochemistry, Singapore, 2006

24. C.V. Krishnan and M.Garnett, Spatiotemporal Oscillations in Biological Molecules:1. DNA-Lysine, The 56th Annual Meeting of the International Society ofElectrochemistry, Busan, Korea, 2005
25. M.Garnett, C.V.Krishnan, Biological Nano-Circulation By Radical Induced DualPolarization, 207th Meet. Ab. Electrochem.Soc. 501, 1654 (2006)
26. C. V. Krishnan and M. Garnett, Electrochemical impedance measurements forstudying biological oscillations, 230th American Chemical Society National Meeting,Washington D.C., 2005
27. C. V. Krishnan and M. Garnett, Liquid Crystal Behavior in Solutions, ElectrodePassivation, and Impedance Locus in Four Quadrants, Abstract #67, 9th InternationalSymposium on the Passivation of Metals and Semiconductors, and the Properties of ThinOxide Layers, Paris 2005
28. C. V. Krishnan and M.Garnett, Impedance Measurements of Liquid CrystalProteins: 1. Collagen, XVIIIth International Symposium on Bioelectrochemistryand Bioenergetics and 3rd Spring Meeting of Bioelectrochemistry, Coimbra,Portugal, 2005
29. C. V. Krishnan and M.Garnett, Impedance Measurements of Liquid CrystalProteins: 2. Prothrombin, XVIIIth International Symposium on Bioelectrochemistry andBioenergetics and 3rd Spring Meeting of Bioelectrochemistry, Coimbra, Portugal, 2005
30. C. V. Krishnan and M.Garnett, Modulation of Impedance in DNA Solutions byIons and Molecules: 2. Effect of Tetraalkyl Ammonium Ions, 207th Meeting ofElectrochemical Society, Quebec, Canada, 2005
31. M. Garnett and C. V. Krishnan, Biologiocal Nano-Circulation by Radical InducedDual Polarization, 207th Meeting of Electrochemical Society, Quebec, Canada, 2005
32. M.Garnett, C.V.Krishnan, B.Jones, Periodicity measurements in liquid crystal lattices,American Physical Society Meeting, Abstract U13.00006, Tampa, Florida, April 2005
33. C. V. Krishnan and M.Garnett, submitted : Molybdate-small molecule interactions:1. Impedance measurements of molybdate-EDTA complexes, 229th American ChemicalSociety National Meeting, SanDiego, Abstract No. Inor, 2005.
34. M. Garnett and C. V. Krishnan, Bioinorganic Complexes as NutritionalSupplements and as Chemotherapy Agents, 29th Annual Meeting of the AmericanSociety of Preventive Oncology, Abstract 65, San Francisco, 2005
35. M. Garnett and C. V. Krishnan, Liquid Crystal Signaling Routes to Drug Discoveryand Therapy, Molecular Targets for Cancer Therapy, Third Biennial Meeting of H. LeeMoffitt Cancer Center & Research Institute, St. Petersburg Beach, Florida, Abstract No.22, 2004
36. C. V. Krishnan, M. Garnett, B. Hsiao, and B. Chu: Electrochemical measurements ofisopolyoxomolybdates 1. pH dependent behavior of sodium molybdate, 228th AmericanChemical Society National Meeting, Philadelphia, Abstract No. Inor 485, 2004.
37. C. V. Krishnan, M. Garnett, J. Chen, C. Burger, B. Hsiao, and B. Chu, Electrochemicaland X-ray measurements of isopolyoxomolybdates: 2. Mono, di, andheptaoxymolybdates, 228th American Chemical Society National Meeting, Philadelphia,Abstract No. Inor 742, 2004
38. C.V. Krishnan, and M. Garnett, Enhancement of the DNA π -way by intercalation,228th American Chemical Society National Meeting, Philadelphia, Abstract No. Biol 46,2004

39. C.V.Krishnan, and M.Garnett, New Insight Into the Double Layer Structure fromImpedance Measurements: Implications for Biological Systems, Presented at the 6thInternational Symposium on Electrochemical Impedance Spectroscopy, Session TB2,Biomedical and Biological Systems, Cocoa Beach, Florida, 2004
40. M.Garnett, and C.V.Krishnan, DNA Tunnel Diode Behavior, Presented at the 205thMeeting of Electrochemical Society, San Antonio, Texas, Abstract No. 740(2004)
41. C.V.Krishnan, and M.Garnett, Solute-Solvent Interactions from ImpedanceMeasurements: Concentration Dependence of DNA, Presented at the 205th Meeting ofElectrochemical Society, San Antonio, Texas, Abstract No. 739(2004)
42. M.Garnett, and C.V.Krishnan, Peroxide Doping of DNA Enables Dissipative Impedance,204th Meeting of Electrochemical Society, Orlando, Florida, Abstract No. 1379(2003)
43. C.V.Krishnan, and M.Garnett, Modulation of Impedance in DNA Solutions by Ions andMolecules: 1. Effect of Alkali Metal Ions, 204th Meeting of Electrochemical Society,Orlando, Abstract No. 1378(2003)
44. M.Garnett, and C.V.Krishnan, A New Model For DNA Charge Transfer: VariableElectronic Circuitry, 204th Meeting of Electrochemical Society, Orlando, Abstract No. ... 1377(2003)
45. C.V.Krishnan, and M.Garnett, Duplex semiconductor behavior of mercury electrode in .. aqueous solutions, 226th American Chemical Society National Meeting, Abstract No. ... Inor. 0028(2003)
46. C.V.Krishnan, and M.Garnett, Dopant Catalyzed Charge Dissipation In A LiquidCrystal, 203rd Meeting of Electrochemical Society, Paris, Abstract No. 2703(2003)
47. C.V.Krishnan, and M.Garnett, Dissipative Impedance in a Doped Liquid Crystal, 1stSpring Meeting of the International Society of Electrochemistry, Spain, Abstract No.P06(2003)
48. M.Garnett, and C.V.Krishnan, Pulsed Electrospinning of Biopolymers, 201st Meeting ofElectrochemical Society, Philadelphia, Abstract No. 78(2002)
49. M.Garnett, and J.L.Remo, Mesophase Interaction Between Biological Polymers, 200th Meeting of Electrochemical Society, San Francisco, Abstract No. 1132(2001)
50. M.Garnett and J.L.Remo, DNA Reductase: A Synthetic Enzyme with OpportunistClinical Activity Against Radiation Sickness, International Symposium on AppliedEnzymes in Chemical and Biological Defense, DARPA, p.41(2001)
51. M.Garnett, and J.L. Remo, Increased Pseudoinductance in Paired Mixtures ofBiopolymers is a Model for Twin Wire Mutual Inductance in RNA and DNA, 198thMeeting of Electrochemical Society, Phoenix, Abstract No. 1152(2000)
52. M. Garnett and J.L.Remo, Soluble Sensors of Telephonic Signals, in: MicrofabricatedSystems and Mems V, Electrochemical Society proceedings, 185(2000)
53. M. Garnett, and W. Garnett, Impedance Spectroscopy of DNA, The 9thInternational Conference on Biological Inorganic Chemistry, Minneapolis, Minnesota, July(1999), Journal of Inorganic Biochemistry, **74**, 136(1999)
54. W. Garnett, and M. Garnett, Charge relay from Molybdate Oxyradical to Palladium-Lipoic Complex to DNA, University of Minnesota Conference on Oxygen Intermediates in Nonheme Metallobiochemistry, 81(1996)
55. M.Garnett, Synthetic DNA Reductase, J.Inorg. Biochem, **59**, 231(1995)
56. M. Garnett, Electrogenic Effect of a Synthetic Oxygen Carrier, J.Cell Biol., **43**,42a(1969)

57. M. Garnett, A Laboratory Model for Heterochromatin, J.Cell Biol., **35**, 44(1967)

Patents

1. M. Garnett, Palladium Complexes and Methods for Using same in the Treatment of Psoriasis, U.S.Patent, No. 5,776,973, July7, (1998)
2. M. Garnett, Palladium Complexes and Methods for Using same in the Treatment of Tumors, U.S.Patent, No. 5,679,697, Oct.21, (1997)
3. M. Garnett, Palladium Complexes and Methods for Using Same in the Treatment of Tumors and Psoriasis, U.S.Patent, No. 5,463,093, Oct.31(1995)

Monograph

1. M. Garnett, "FIRST PULSE", A Personal Journey In Cancer Research, First Pulse Projects, Inc, New York, 2nd edition, (2001); 1st Edition (1998)