

Curriculum Vitae

Anna-Liisa Nieminen

Biographical:

Address: Mail: Department of Drug Discovery and Biomedical Sciences, College of Pharmacy, Medical University of South Carolina, Charleston, South Carolina.

Office: DD505 Drug Discovery Building, 70 President Street, MSC 140, Charleston, SC 29425.

Phone: (843) 876-2361 Fax: (843) 876-2353 E-mail: nieminen@musc.edu

Academic Education:

University of Turku, Turku, Finland, 1975, B.S. Chemistry

University of Turku, Turku, Finland, 1978, M.S. Chemistry

University of Kuopio, Kuopio, Finland, 1991, Ph.D. Biochemistry

Professional Experience:

- | | |
|----------------|---|
| 2007 – present | Associate Professor (with tenure), Department of Pharmaceutical and Biomedical Sciences, College of Pharmacy, Medical University of South Carolina, Charleston, South Carolina. |
| 2007 – present | Co-Director, Cell and Molecular Imaging Shared Resource, Hollings Cancer Center, Medical University of South Carolina, Charleston, South Carolina. |
| 2001 – 2007 | Associate Professor (with tenure), Department of Anatomy, School of Medicine, Case Western Reserve University, Cleveland, Ohio. |
| 2003 – 2007 | Associate Professor, Secondary Appointment, Division of General Medical Sciences (Oncology), School of Medicine, Case Western Reserve University, Cleveland, Ohio. |
| 1994 - 2001 | Assistant Professor, Department of Anatomy, School of Medicine, Case Western Reserve University, Cleveland, Ohio. |
| 2000 – 2007 | Director, Confocal Microscopy Core Facility, Case Comprehensive Cancer Center, Case Western Reserve University. |
| 1998 – 2003 | Assistant Professor, Secondary Appointment, Division of General Medical Sciences (Oncology), School of Medicine, Case Western Reserve University, Cleveland, Ohio. |

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- 1993 - 1994 Member, Center for Gastrointestinal Biology and Disease, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.
- 1993 – 1994 Research Assistant Professor, Department of Cell Biology & Anatomy, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.
- 1992 - 1993 Research Instructor, Department of Cell Biology and Anatomy, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.
- 1986 - 1992 Visiting Scientist, Department of Cell Biology & Anatomy, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.
- 1984 - 1986 Research Scientist, Eflab Ltd., Helsinki, Finland.
- 1979 - 1984 Research Scientist, Cancer Research Laboratory, Farnos Group Ltd., Research Center, Turku, Finland.
- 1978 - 1979 Research Scientist, Department of Pharmacology, Farnos Group Ltd., Turku, Finland.

Past grants:

- NIH DK34987, Center for Gastrointestinal Biology and Disease, "Mechanisms of bile acid-induced hepatocellular injury", Principal Investigator, 12/01/1992 – 11/30/1993, TDC \$9,319.
- NIH R29 AG13318, "Mitochondrial function in oxidative injury", Principal Investigator, 01/01/1995 – 12/31/1999, TDC \$350,000.
- American Heart Association Grant-in-Aid 96011440, "Role of mitochondria in NMDA-induced injury to cortical neurons", Principal Investigator, 07/01/1996 – 06/30/1999, TDC \$120,000.
- American Heart Association (Northeast Ohio Affiliate) Grant-in-Aid 231-BG, "Mitochondrial function in ischemic injury in cortical neurons", Principal Investigator, 07/01/1996 – 06/30/1998, TDC \$30,000.
- American Heart Association (Northeast Ohio Affiliate) Postdoctoral Fellowship 9804565 for Dr. Kaisa M. Heiskanen, "Anoxia/reoxygenation induced neuronal apoptosis", Sponsor, 07/01/1998 – 06/30/2000, TDC \$49,200.
- NIH P01 CA48735, "Phthalocyanine photodynamic therapy: mechanistic studies", Director of Core A (Light Source and Confocal Microscopy Facility), 07/15/1999 – 04/30/2003, TDC \$316,410.
- NIH R01 NS39469, "Mechanisms of apoptotic death in dopaminergic neurons", Principal Investigator, 12/25/1999 – 11/30/2003, TDC \$549,273.

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NIH R13 NS40156, "Mitochondria in Pathogenesis", Conference grant for Keystone Symposium, Co-Investigator, 2000, TDC \$15,000.

NIH S10 RR14690, "Laser Scanning Confocal Microscope", Principal Investigator, 04/01/2000 – 03/31/2001, TDC \$420,228.

NIH R01 NS41309, "Mitochondria and regulation of HIF-1", (Principal Investigator Faton Agani) Co-Investigator, 2/15/02 – 6/30/04.

NIH 1R13 AA/CA13453, "Mitochondrial Dysfunction in Pathogenesis", This application is to support a Keystone Conference in 2002, Co-Investigator, 01/01/02 - 12/31/02, TDC \$40,000.

Cancer Center Developmental Funds "Antisense helical nucleopeptides. A new and versatile molecular platform for cancer therapeutics" (Principal Investigator Philip Garner), Co-Investigator, 2004.

NIH R01 HL065314, "Cardiac outflow tract remodeling by myocyte apoptosis" (Principal Investigator Steven Fisher), Co-Investigator, 07/01/05 – 06/30/06.

National Pancreas Foundation, "Redox Regulation of Hypoxic Apoptosis in Pancreatic Cancer", Principal Investigator, 06/01/05 – 05/31/06, TDC \$25,000.

NIH R01 DK54213, "The extracellular matrix in inflammatory bowel disease" (Principal Investigator Alan Levine), Co-Investigator, 8/01/02 – 1/31/07.

NIH R01 AI53188, Mucosal T Cells: Is Tolerance Floating on Lipid Rafts? (Principal Investigator Alan Levine), Co-Investigator, 1/15/03 – 1/31/07.

NSF Academic Careers in Engineering and Science "Redox regulation of hypoxic apoptosis" Principal Investigator, 1/15/05 – 1/15/07, TDC \$12,000.

NIH P30 CA43703, "CWRU Cancer Center Grant", This grant provides administrative, development, and core support for the Case Comprehensive Cancer Center. A.-L. Nieminen as Director of the Confocal Microscopy Core, 8/1/01 – 3/31/07, TDC for the Confocal Microscopy Core \$288,380.

NIH P30 CA43703, "Case Comprehensive Cancer Center Support Grant" (Principal Investigator Stanton Gerson), 4/01/07 – 3/31/12, TDC \$19,608,712. Project: Confocal Microscopy Core (Director), TDC \$297,776.

NIH U54 CA116867, "Case Center for Transdisciplinary Research on Energetics and Cancer", Project: VDAC Control of Cancer Cell Energetics", Principal Investigator, 11/01/06 – 10/31/07, TDC \$50,000.

NIH R01 CA119079, "Mechanisms of Cell Death after Photodynamic Therapy", Principal Investigator, 09/14/07 – 10/31/12, TDC \$711,632.

NIH 3R01 CA119079-03SM1, "Mechanisms of Cell Death after Photodynamic Therapy", Principal Investigator, 08/01/09 – 07/31/10, TDC \$91,564.

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Active grants:

NIH P30 CA138313, "Medical University of South Carolina-Cancer Center Support Grant" (Principal Investigator Andrew Kraft), 04/01/09 – 03/31/14. Project: Cell and Molecular Imaging Shared Resource (Co-Director).

NIH P30 GM103331, "Mitoferrin2 protein as a diagnostic marker to predict the efficacy of oxidative damage-based treatment in head and neck cancers", Center for Oral Health Research Pilot and Feasibility Project Program, Principal Investigator, 01/22/13 -05/31/14.

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TEACHING

Medical:

Histology, Homeostasis I Committee, Laboratory, First Year Medical Students, Case Western Reserve University, 1996-2004.

Histology, Endocrine/Reproductive Biology Committee, Laboratory, Second Year Medical Students, Case Western Reserve University, 1995-2004.

Histology, Gastrointestinal Committee, Laboratory, First Year Medical Students, Case Western Reserve University, 1996-2006.

Histology, Gastrointestinal Committee, First Year Medical Students, Case Western Reserve University, lecture Liver, Gallbladder and Pancreas, lecture and lab, 1997-2006. Review session on Liver, Gallbladder and Pancreas, 1997-2006.

Graduate:

Human Histology, University of North Carolina at Chapel Hill, Teaching Assistant, 1993.

Anatomy 498, Seminar speaker (1 hour/semester), Department of Anatomy, Case Western Reserve University, 1995-1998.

Anatomy 425, Microscopic Techniques Course: Introduction to Laser Scanning Confocal Microscopy, Lecture (1 hr), Laboratory (2 hr), 2000-2001, 2003.

Anatomy 517/PHOL 517 (2 credits), Optical Microscopy and Imaging for Biologists, Course Director, 2003-2005.

Anatomy 400 (1-6 credit), Research Rotations, Course Director, 2005-2007.

Anatomy 417 (2 credit), Cell and Molecular Biology Techniques, Lecture (1 hr) and Lab (3 h), 2006-2007.

PHMSC-715, Environmental Stress Signaling and Cellular Consequences (3 credits), Lectures (2), Spring 2008-2010.

Journal Club, Cell Death, Signaling and Regeneration Group (once a week), Organizer, 2008-2011.

Pharmacology III (SCCP 721), MUSC Campus Coordinator, 2009-2011.

Pharmacology III (SCCP 721), Cancer Chemotherapy (4 lectures), 2010-2011.

Pathophysiology/Pharmacology IV (SCCP 823) and Pharmacotherapy IV (SCCP 874) (6 lectures), 2014

Pathophysiology/Pharmacology IV (SCCP 823) and Pharmacotherapy IV (SCCP 874), Course Coordinator, 2014.

Undergraduate:

Endocrinology Section of Physiology Laboratory, Department of Biology, University of North Carolina at Chapel Hill, Instructor, 1992-1993.

"Light & Glass; Bones & Stones", Summer Program in Undergraduate Research, SPUR, Special tour and demonstration of the Laser Scanning Confocal Microscopy to students (3 hours), 1995.

Specialty Courses:

Carolina Workshop on Light Microscopy for the Biomedical Sciences, Program in Molecular Biology, University of North Carolina at Chapel Hill, Teaching Assistant, 1993.

Carolina Workshop on Light Microscopy for the Biomedical Sciences, Program in Molecular Biology, University of North Carolina at Chapel Hill, July 9-14, 1995, Teaching Faculty.

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Carolina Workshop on Light Microscopy for the Biomedical Sciences, Program in Molecular Biology, University of North Carolina at Chapel Hill, April 9-14, 2000, Teaching Faculty.

Charleston Workshop on Light Microscopy for the Biomedical Sciences, Medical University of South Carolina, Charleston, June 3-8, 2007. Teaching Faculty.

Qualifying Examination Committees:

Christie Luca, Ph.D., Physiology and Biophysics, 1995.

Leila S. Onderak, Ph.D., Anatomy, 1998.

Juan Carlos Chavez, Ph.D., Anatomy, 2000.

Paola Pichiule, Ph.D., Anatomy, 2000.

Zhenyu Dai, Ph.D., Biochemistry, 2004.

Yinong Zhou, M.S., Anatomy, 1998.

Jamie Wikenheiser, Ph.D., Anatomy, 2005.

Ganga Karunamuni, Ph.D., Anatomy, 2006

Leah Anderson, Ph.D., Anatomy, 2007

Thesis Committees:

Niraj S. Trivedi, M.S., Biomedical Engineering, 1997-1999.

Jonne Naarala, Ph.D., Pharmacology and Toxicology, University of Kuopio, Finland, 1997.

Douglas Pennington, Ph.D., Anatomy, 2000-2004.

Makoto Yoshida, Ph.D., Biomedical Engineering, 2000-2003.

Paola Pichiule, Ph.D., Anatomy, 2001-2003.

Melissa Bentle, Ph.D., Pharmacology, 2003-2007.

Michael Thomenius, Ph.D., Pharmacology, 2004.

Kui Xu, Ph.D., Anatomy, 2005-2007 (resigned due to move to MUSC)

Jamie Wikenheiser, Ph.D., Anatomy, 2005-2007 (resigned due to move to MUSC)

Leah Anderson, M.S., Anatomy, 2007

Yee-Hsee Hsieh, Ph.D., Pharmacology, 2007

Peng Gao, Ph.D., Pharmaceutical and Biomedical Sciences, 2008-2011

Matthew Allen Smith, Ph.D., Pharmaceutical and Biomedical Sciences, 2010-2012

Hsin-I Hung, Ph.D. Pharmaceutical and Biomedical Sciences (Molecular and Cellular Biology and Pathobiology Program), 2009- 2012

Clayton Scott Lewis, Ph.D., Drug Discovery and Biomedical Sciences, 2012-

David Oliver, Ph.D., Drug Discovery and Biomedical Sciences 2013-

Jiangting Hu, Ph.D., Drug Discovery and Biomedical Sciences 2013-

Mentoring Committee:

Ann-Marie Broome, Assistant Professor, Biomedical Engineering, K01 Award, 2007-2012.

Danyelle Townsend, Assistant Professor, COBRE, 2011-2013.

Trainees

Research Assistant Professors:

Suparna Qanungo, Ph.D., 01/2010 – 07/15/12

Research Associates:

Minh Lam, Ph.D., 8/2001 – 6/2007

Current Position: Instructor, Case Comprehensive Cancer Center, Cleveland, OH.

Suparna Qanungo, Ph.D., 5/2003 – 12/31/07

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Current Position: Research Assistant Professor, Medical University of South Carolina.

Postdoctoral Fellows:

Kaisa M. Heiskanen, Ph.D., 8/1997 – 5/2000

Current position: Assistant Professor, Department of Cell and Molecular Biology, University of Turku, Finland.

Lin Li, Ph.D., 2/1999 – 1/2002

Current position: Research Assistant Professor of Pathology, Associate Director, Northwestern University Research Histology and Phenotyping Lab, Feinberg School of Medicine, Northwestern University, Chicago, IL.

Minh Lam, Ph.D., 9/1999 – 7/2001

Current Position: Research Assistant Professor, Department of Dermatology, Case Western Reserve University, Cleveland, OH

Shalini Saggi, Ph.D., 2/2009-10/2010

Current position: Staff Scientist, Department of Neurosciences, MUSC

Graduate Students:

Grace Mo, M.S., 6/1999 – 8/2000

Katja Sirviö, M.S., Visiting Research Fellow, Department of Pharmacology and Toxicology, University of Kuopio, Kuopio, Finland, 2/2000 – 5/2000.

Current position: Ph.D. Student, Department of Pharmacology and Toxicology, University of Kuopio, Finland.

Johanna Valila, M.S. Student, University of Kuopio, Finland, 4/2000 – 7/2000

Current position: Pharmacist, Finland

Mi Wang, M.S., 9/2001 – 5/2005

Thomas Lang, M.S., 6/2005 - 5/2006

Current position: M.D. Student, Medical School, Boston University, Boston.

Hsin-I Hung, Ph.D., 2009 – 2012

Current position: Postdoctoral Fellow, Harvard Medical School/Massachusetts General Hospital, Boston.

Megan Duperreault, Ph.D., 2015-

Medical Students:

Smita Agarwal, M.D. Student, 1999 – 2000

Current position: Dermatologist, private practice, New Jersey.

Lab Rotations:

Grace Mo, 7/1998 – 8/1998

Paola Pichiule, 9/1998 – 10/1998

Mi Wang, 8/2001 – 10/2001

Jamie Wikenheiser, 2/2005 – 4/2005

Hsin-I Hung, 3/2009 – 4/2009

Kathryn Appleton, 10/2010 - 11/2010

Megan Duperreault, 5/2012 - 6/2012, 5/2013 – 7/2013

Undergraduate Research Students:

Suman Tandra (Case Western Reserve University), 7/1996 – 5/1997

Melissa Huang (Case Western Reserve University), 8/2000 – 5/2001

Kashif Azizuddin (Case Western Reserve University), 1/2001 – 5/2001

Jennifer Frye (Cleveland State University), 6/2005 – 2/2007

Hunter Moss (College of Charleston), spring 2013.

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Alexander Cattran (College of Charleston), spring 2013 (3 credits), 6/2013 – 5/2014.

Summer Programs in Undergraduate Research:

Danielle K. Smith, Summer Program in Undergraduate Research, funded by a grant from the Howard Huges Medical Institute, 1995.

YoVonda D. Jones, Summer Program in Undergraduate Research, funded by a grant from the Howard Huges Medical Institute, 1997.

Sara R. Rohr, Summer Program in Undergraduate Research, funded by a grant from the Howard Huges Medical Institute, 1998.

Michelle Glaser, Summer Program in Undergraduate Research, funded by a grant from the Howard Huges Medical Institute, 2002.

Jourdan Saree Bowe, Academic Careers in Engineering & Science (ACES) Summer Undergraduate Research Program, 2005.

Tamesha McKnight, Summer Undergraduate Research Program (SURP), MUSC, 2009.

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ACADEMIC SERVICE

DEPARTMENT:

Committee on Appointments, Promotions, and Tenure, Department of Anatomy, 1996-1998.

Committee on Appointments, Promotions, and Tenure, Department of Anatomy, 2001-2007.

Chair, Graduate Research Executive Council, Department of Anatomy, 2004-2007.

Director of Graduate Studies Program, Department of Anatomy, 2004-2007.

SCCP Scholastic Standing and Petitions Committee, 2009-

UNIVERSITY:

Organizer, "A Program on Cell Death", sponsored by Case Western Reserve University and Ireland Cancer Center, Manakiki Country Club, Cleveland, Ohio, July 9, 1996.

Faculty Judge, *Annual Michelson-Morley Undergraduate Research Competition in Biological Sciences*, sponsored by a grant from the Howard Hughes Medical Institute, April 22, 1998.

Faculty Judge, *Annual Graduate Student Symposium, CWRU*, Poster Competition, May 11, 2000.

Departmental representative to Faculty Council, Case Western Reserve, 1998-2001.

Biophotonics Workshop Steering Committee, 2000. The purpose of this committee was to plan a workshop for Biophotonics Center at Case Western Reserve, September 22-23, 2000.

Member, Biophotonics Education Committee, Case Western Reserve, 2001-2003.

Member, Internal Advisory Committee, Cystic Fibrosis Imaging Core, Case Western Reserve, School of Medicine, 2004-2007.

Member, Laboratory Safety Committee, Case Western Reserve, 2005-2007.

Departmental representative to Graduate Students Admissions Committee, MUSC, 2008-present.

Steering Committee for the John R. Raymond Fellowship Women Scholars Initiative, MUSC, 2013-2014.

Women Scholars Advancing Women Faculty Award Selection Committee, MUSC, 2013.

NATIONAL AND INTERNATIONAL:

Council (elected officer)

American Society for Photobiology, Council, 2011-2014

Member, Mentoring Committee, Council, American Society for Photobiology, 2011-2014

Editorial Boards:

Toxicology Letters (1996 - 1999)

Mitochondrion (2000 - 2007)

Cell Calcium (2003 - 2006)

Study Sections:

NIH Study Section ZRG1 SSS-I 02S, 2000.

NIH Study Section ZNS1 SRB-S 01 1, 2000.

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American Heart Association Southern and Ohio Valley Research Consortium Peer Review Committee (Committee 4: Cell Transport and Metabolism), 2000-2002.
North Carolina Biotechnology Center, Science and Technology Development Program Grant Review, 2001-2002.
The AAAS site visit – Imaging Core Facilities, University of Mississippi Medical Center, Jackson, Mississippi, November 19, 2001.
Veterans Administration Merit Review Subcommittee (Neurobiology D), 2002-2003.
The Wellcome Trust, England, Grant Review, 2003.
The Medical Research Council Clinician Scientist Fellowship, England, Grant Review, 2004.
NIH Special Emphasis Panel Review SSS-U(02)M, 2004.
Biomedical Research Council & National Medical Research Council, Singapore, Grant Review, 2004.
NIH Study Section ZRG1 CB F, 2006.
NIH Study Section ZRG1 CB B 30, 2007.
NIH Study Section ZCA1 GRB-PO1 P, 2008
NIH Study Section ZRG1 CB-D (30) M, 2008
Research Grants Council-Hong Kong, 2009
NIH Study Section ZRG1 CB-Q (30) P, 2009
Research Grants Council-Hong Kong, 2010
NIH Study Section 10 ZGM1 MBRS-9 (SC), 2011
Dutch Cancer Society, 2011
Research Grants Council-Hong Kong, 2011-2013
NIH Study Section ZCA1 RPRB-C (O1) P (Discussion Leader), 2013
NIH Study Section ZDK1-GRB-8-(J2) Digestive Diseases P30 Centers, 2013
NIH Study Section ZDK1-GRB-8-(M2) Digestive Diseases P30 Centers, 2014

Meeting Organizer:

Organizer and Chair, Symposium “Mitochondrial permeability changes in necrotic and apoptotic cell death”, *The 37th Annual Meeting of Society of Toxicology*, Seattle, Washington, March 1-5, 1998.
Chair, Poster Discussion Session “Mitochondria and Apoptosis”, *The 38th Annual Meeting of Society of Toxicology*, New Orleans, Louisiana, March 14-18, 1999.
Organizer, “Mitochondrial Dysfunction in Pathogenesis”, *Keystone Symposium*, Santa Fe, New Mexico, January 15-20, 2000.
Organizer and Chair, Symposium “Necrotic and Apoptotic Cell Death”, American Association of Anatomists, *Experimental Biology 2001*, Orlando, Florida, March 31-April 4, 2001.
Organizer and Chair, Symposium “Mitochondrial Toxicity: Clinical Importance, Models and Mechanisms”, Society of Toxicology, *The 41st Annual Meeting of Society of Toxicology*, Nashville, Tennessee, March 17-22, 2002.
Organizer, “Mitochondria and Pathogenesis”, *Keystone Symposium*, Copper Mountain Resort, Copper Mountain, Colorado, April 6-11, 2002.
Chair, Poster Session “Apoptosis II”, *The 43rd Annual Meeting of Society of Toxicology*, Baltimore, Maryland, March 21-25, 2004.
Session Chair, “PDT Dosimetry”, *International Photodynamic Association World Congress*, Seattle, Washington, June 11-15, 2009.

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Journal Referee Service:

American Journal of Physiology
Antioxidants & Redox Signaling
Apoptosis
Archives of Biochemistry and Biophysics
Biochimica Biophysica Acta
Biochemical Pharmacology
Bioorganic and Medicinal Chemistry
Brazilian Journal of Biomedical Engineering
British Journal of Pharmacology
Canadian Journal of Physiology and Pharmacology
Cancer Research
Cell Calcium
Cell Death and Differentiation
Cell and Tissue Research
Chemical Research in Toxicology
Cytometry A
Faseb Journal
Free Radical Biology & Medicine
Gastroenterology
Hepatology
International Journal of Cell Biology
Investigative Ophthalmology and Visual Science
Journal of Biological Chemistry
Journal of Neurochemistry
Journal of Neuroscience
Journal of Neuroscience Methods
Journal of Pharmacology and Experimental Therapeutics
Lasers in Surgery & Medicine
Mitochondrion
Molecular Cancer
Molecular Cancer Therapeutics
Molecular Endocrinology
Molecular Pharmacology
Neuroscience
Photochemistry and Photobiology
Revista Brasileira de Engenharia Biomédica
Toxicology and Applied Pharmacology
Toxicological Sciences
Toxicology Letters
Toxicology in Vitro

Society Affiliates:

American Society for Photobiology
Biophysical Society

BIBLIOGRAPHY

Book:

1. Mitochondria in Pathogenesis (2001) J.J. Lemasters and A.-L. Nieminen, Eds., Kluwer Academic/Plenum Publishers, 529 pages.

Journal Articles:

1. Kosonen, P.O., Salonen, A.-M., and Nieminen, A.-L. (1978) Determination of manganese, copper, cobalt, iron and molybdenum in multi-vitamin mineral tablets by flameless atomic absorption spectrophotometry. *Finn. Chem. Lett.* **4**, 136-141.
2. Sairio, E., Kasanen, A., Kangas, L., Nieminen, A.-L., and Nieminen, L. (1978) The nephrotoxicity and renal accumulation of amikacin, tobramycin and gentamycin in rats, rabbits and quinea pigs. *Exp. Path. Bd.* **15**, 370-375.
3. Nieminen, A.-L., Kangas, L., Anttila, M., and Hautoniemi, L. (1980) Determination of methenamine in human plasma and urine. *J. Chromatography* **181**, 11-16.
4. Haataja, M., Nieminen, A.-L., Makisara, P., and Kalliomaki, J.L. (1982) Prostaglandin precursors in rheumatoid arthritis. *J. Rheumatol.* **9**, 91-93.
5. Haataja, M., Gronroos, M., Honkonen, E., Paul, R., Nieminen, A.-L., and Anttila, M. (1982) Serum levels of free fatty acids in the first trimester of pregnancy: Effect of acetylsalicylic acid. *Prostaglandins and Leukotrienes in Medicine* **9**, 61-69.
6. Jauhiainen, K., Kangas, L., Nieminen, A.-L., Kapyla, H., and Alfthan, O. (1983) Optimizing the mitomycin C activity during intravesical installation. *Urol. Res.* **11**, 59-69.
7. Erkkola, R., Gronroos, M., Ekblad, U., Haataja, M., and Nieminen, A.-L. (1984) Serum prostaglandin precursors after vaginal examination and amniotomy. *Prostaglandins and Leukotrienes in Medicine* **13**, 307-310.
8. Erkkola, R., Gronroos, M., Ekblad, U., Haataja, M., and Nieminen, A.-L. (1984) Composition of free fatty acids at the end of pregnancy and inducibility of labor. *Prostaglandins and Leukotrienes in Medicine* **13**, 311-314.
9. Haataja, M., Paul, R., Gronroos, M., Erkkola, R., Punnonen, R., Rauramo, L., and Nieminen, A.-L. (1984) The effect of prostaglandin inhibitor and estrogen on climacteric symptoms and serum free fatty acids. *Maturitas* **5**, 263-269.
10. Gronroos, M., Kangas, L., Maenpaa, J., Vanharanta, R., and Nieminen, A.-L. (1984) Steroid receptors and response of ovarian cancer to hormones in vitro. *Br. J. Obstet. Gynaecol.* **91**, 472-478.
11. Kangas, L., Gronroos, M., and Nieminen, A.-L. (1984) Bioluminescence of cellular ATP: A new method for evaluating cytotoxic agents in vitro. *Medical Biology* **62**, 338-343.

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12. Kangas, L., Nieminen, A.-L., and Cantell, K. (1985) Additive and synergistic effects of a novel antiestrogen, toremifene (FC-1157a), and human interferons on MCF-7 cells in vitro. *Medical Biology* **63**, 187-190.
13. Kangas, L., Nieminen, A.-L., Blanco, G., Gronroos, M., Kallio, S., Karjalainen, A., Perila, M., Soderwall, M., and Toivola, R. (1986) A new triphenylethylene compound, FC-1157a, II antitumor effects. *Cancer Chemother. Pharmacol.* **17**, 109-113.
14. Lemasters, J.J., DiGuseppi, J., Nieminen, A.-L., and Herman, B. (1987) Blebbing, free Ca⁺⁺ and mitochondrial membrane potential preceding cell death in hepatocytes. *Nature* **325**, 78-81.
15. Herman, B., Nieminen, A.-L., Gores, G.J., and Lemasters, J.J. (1988) Irreversible injury in anoxic hepatocytes precipitated by an abrupt increase in plasma membrane permeability. *FASEB J.* **2**, 146-151.
16. Gores, G.J., Nieminen, A.-L., Fleishman, K.E., Dawson, T.L., Herman, B., and Lemasters, J.J. (1988) Extracellular acidosis delays the onset of cell death in ATP-depleted hepatocytes. *Am. J. Physiol.* **255**, C315-C322.
17. Nieminen, A.-L., Gores, G.J., Wray, B.E., Tanaka, Y., Herman, B., and Lemasters, J.J. (1988) Calcium dependence of bleb formation and cell death in hepatocytes. *Cell Calcium* **9**, 237-246.
18. Gores, G.J., Nieminen, A.-L., Wray, B.E., Herman, B., and Lemasters, J.J. (1989) Intracellular pH during 'chemical hypoxia' in cultured rat hepatocytes: protection by intracellular acidosis against the onset of cell death. *J. Clin. Invest.*, **83**, 386-396.
19. Gores, G.J., Flarsheim, C.E., Dawson, T.L., Nieminen, A.-L., Herman, B., and Lemasters, J.J. (1989) Swelling, reductive stress and cell death during chemical hypoxia in hepatocytes. *Am. J. Physiol.* **257**, C347-C354.
20. Lemasters, J.J., Gores, G.J., Nieminen, A.-L., Dawson, T.L., Wray, B.E., and Herman, B. (1990) Multiparameter digitized video microscopy of toxic and hypoxic injury in single cells. *Environmental Health Perspectives* **84**, 83-94.
21. Nieminen, A.-L., Gores, G.J., Dawson, T.L., Herman, B., and Lemasters, J.J. (1990) Toxic injury from mercuric chloride in rat hepatocytes. *J. Biol. Chem.* **265**, 2399-2408.
22. Nieminen, A.-L., Dawson, T.L., Gores, G.J., Kawanishi, T., Herman, B., and Lemasters, J.J. (1990) Protection by acidotic pH and fructose against lethal injury to rat hepatocytes by mitochondrial inhibitors, ionophores, and oxidant chemicals. *Biochem. Biophys. Res. Commun.* **167**, 600-606.
23. Harman, A., Nieminen, A.-L., Lemasters, J.J., and Herman, B. (1990) Cytosolic free magnesium, ATP, and blebbing during chemical hypoxia. *Biochem. Biophys. Res. Commun.* **170**, 477-483.

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24. Lemasters, J.J., Nieminen, A.-L., and Herman, B. (1990) Is there release of mitochondrial calcium in toxic injury? [letter to the editor]. *Hepatology* **11**, 902-903.
25. Herman, B., Gores, G.J., Nieminen, A.-L., Kawanishi, T., Harman, A., and Lemasters, J.J. (1990) Calcium and pH in anoxic and toxic injury. In *CRC Critical Reviews in Toxicology* **21**, 127-148.
26. Kawanishi, T., Nieminen, A.-L., Herman, B., and Lemasters, J.J. (1991) Suppression of Ca²⁺ oscillations in cultured rat hepatocytes by chemical hypoxia. *J. Biol. Chem.* **266**, 20062-20069.
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120. Oleinick, N.L., Chiu, S., Lam, M., Nieminen, A.-L., Usuda, J., and Xue, L. (2002) How photodynamic therapy kills cells. *Abstract Book*.
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123. Glaser, M. and Nieminen, A.-L. (2002) Hypoxia induces necrotic cell death independent of p53 in human colon carcinoma cells. 8th Annual Poster Presentation on *Summer Program in Undergraduate Research*, Abstract Book #16.
124. Nieminen, A.-L., Schneider, E., and Agani, F. (2003) p53 phosphorylation regulates hypoxia-mediated apoptotic death in tumor cells. *Toxicol. Sci.* **72** (Suppl.), 356.
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130. Qanungo, S., Wang, M., and Nieminen, A.-L. (2004) N-acetyl-L-cysteine enhances apoptosis through inhibition of NF κ B in hypoxic murine embryonic fibroblasts. *Fifth ESH-MD Anderson Cancer Center International Conference on Mechanisms of Cell Death and Disease: Advances in Therapeutic Intervention and Drug Development*, Cascais, Portugal, October 22-25, 2004, Abstract Book.
131. Oleinick, N.L., Xue, L.-Y., Chiu, S.-M., Azizuddin, K., Morris, R.L., and Nieminen, A.-L. (2005) Molecular targets of photodynamic therapy and cell death pathways: Traditional vs. novel linkages between them. *11th Congress of the European Society for Photobiology*, Aix-les-Bains, France, September 3-8, 2005, Abstract Book.
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133. Oleinick, N.L., Xue, L.-Y., Chiu, S.-M., Azizuddin, K., Nieminen, A.-L., Kenney, M., Baron, E.D., and Cooper, K.D. (2005) Differential responses of anti-apoptotic Bcl-2 family proteins: The story of Mcl-1 and its possible role in the enhanced photosensitivity of lymphoid cells. *SPIE Proceedings*.
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138. Nieminen, A.-L., Azizuddin, K., Zhang, P., Kenney, M.E., Padiaditakis, P., Lemasters, J.J., and Oleinick, N.L. (2008) Contribution of mitochondria and lysosomes to PDT-induced death in cancer cells. *SPIE Photonics West 2008*, #6845-05.
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140. Nieminen, A.-L., Frye, J.A., Quiogue, G., Rodriguez, M.E., Azizuddin, K., Zhang, P., Kenney, M.E., Padiaditakis, P., Lemasters, J.J., and Oleinick, N.L. (2008) Mechanisms underlying lysosome-targeted PDT damage in cancer cells. *The 29th Annual Meeting of the Southeastern Pharmacology Society*, Charleston, South Carolina, October 13-14, 2008.
141. Qanungo, S., Starke, D.W., Pai, H.V., Mieyal, J.J., and Nieminen, A.-L. (2008) Glutathione supplementation potentiates hypoxic apoptosis by S-glutathionylation of NF κ B in pancreatic cancer cells. *The 29th Annual Meeting of the Southeastern Pharmacology Society*, Charleston, South Carolina, October 13-14, 2008.
142. Quiogue, G., Saggi, S., Lemasters, J.J., and Nieminen, A.-L. (2009) Signaling from lysosomes enhances mitochondria-mediated photodynamic therapy in cancer cells. *International Photodynamic Association World Congress*, Seattle, Washington, June 11-15, 2009. Abstract Book # 7380-196.
143. Saggi, S., Quiogue, G., Hung, Hsin-I, Lemasters, J.J., and Nieminen, A.-L. (2009) Lysosomal iron release enhances efficacy of photodynamic therapy mediated by mitochondria-targeted photosensitizer in cancer cells. *First International Conference on Metal Chelation in Biology & Medicine, Bath, United Kingdom*, December 11-14, 2009, Abstract Book #.
144. Saggi, S., Quiogue, G., Hung, H-I, Lemasters, J.J., and Nieminen, A.-L. (2010) Lysosomal iron release enhances cell killing after photodynamic therapy mediated by a mitochondria-targeted photosensitizer in cancer cells. *The Annual Meeting of the Society of Toxicology*.
145. Hung, H-I, Quiogue, G., Lemasters, J.J., and Nieminen, A.-L. (2011) Signaling from lysosomes to mitochondria sensitizes head and neck cancer cells to photodynamic treatment: role of mitoferrin 2. *SPIE Photonics West 2011*, #7886-11.
146. Qanungo, S., Townsend, D.M., Distler, A., Uys, J., Lemasters, J.J., Mieyal, J.J., and Nieminen, A.-L. (2012) N-acetyl-L-cysteine sensitizes pancreatic cancer therapy by targeting NF κ B pathway: Translation into animal model. *Cancer Res.* 72: Supplement 1, 1316.
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- photodynamic treatment: Role of Mitoferrin 2. *Cancer Res.* 72: Supplement 1, 2281.
148. Hung, H-I., Schwartz, J.M., Maldonado, E.N, Lemasters, J.J., and Nieminen, A.-L. (2012) Mitochondrial iron uptake through mitoferrin2 sensitizes head and neck cancer cells to photodynamic therapy. *The 36th Meeting of the American Society for Photobiology*, Montreal, Canada. June 23-28, 2012. Abstract Book #SU3-3.
 149. Jetty, R., Bandera, Y.P., Ramshesh, V.K., Hung, H-I., Nieminen, A.-L., Lemasters, J.J., and Foulger, S.H. (2012) Routes to achieving “bright” near-infrared fluorescing nanoparticles: Controlling chromophore aggregation. *The 36th Meeting of the American Society for Photobiology*, Montreal, Canada. June 23-28, 2012. Abstract Book #POS1-21.
 150. He, H., Cattran, A.W., Nieminen, A.-L., and Xu, P. Targeted triple responsive nanogel for enhanced photodynamic therapy of head and neck cancer. *Gordon Research Conference: Cancer Nanotechnology*, Mount Snow Resort, West Dover, VT. July 14-19, 2013. Abstract Book.
 151. Nieminen, A.-L., He, H., Cattran, A.W., and Xu, P. (2013) Dual responsive nanoparticles coupled with phthalocyanine Pc 4 enhance photodynamic therapy by signaling from lysosomes to mitochondria. *The 15th Congress of the European Society for Photobiology*, Liege, Belgium. September 2-6, 2013. Abstract Book #OC433.
 152. Nieminen, A.-L., Schwartz, J., Hung, H-I., Blocker, E.R., Gooz, M., and Lemasters, J.J. (2014) Mitoferrin-2 (Mfrn2) regulates the electrogenic mitochondrial calcium uniporter and interacts physically with MCU. *Biophys. J.* 2939-Pos.
 153. Hung, H-I., Schwartz, J.M., He, H., Xu, P., Lemasters, J.J., and Nieminen, A.-L. (2014) Enhanced efficacy of photodynamic therapy (PDT) via an iron-lysosome-mitochondria connection: studies with Pc 4 and dual responsive nanoparticles. *The 37th Meeting of the American Society for Photobiology*, San Diego, California. June 14-19, 2014. Abstract Book.
 154. Nieminen, A.-L., Schwartz, J.M., Hung, H-I., Blocker, E.R., Gooz, M., and Lemasters, J.J. (2014) Mitochondrial iron regulation: Interaction of mitoferrin-2 (Mfrn2) and the electrogenic mitochondrial calcium uniporter (MCU). *The 18th European BioEnergetics Conference*, Lisbon, Portugal. July 12-17, 2014.

PRESENTATIONS

National and International Organized Meetings:

“Assessment of cell death in hypoxic cell injury”, *Satellite Meeting of the World Gastrointestinal Congress, Mechanisms of Injury, Protection and Repair of the Upper Gastrointestinal Tract*, Cairns, Queensland, Australia, August 23-24, 1990.

“The role of mitochondrial injury during oxidative injury to hepatocytes: Evidence of a mitochondrial permeability transition”, *A Workshop on the Cell Biology of Trauma*, Chapel Hill, North Carolina, June 18-20, 1993.

“Contribution of the mitochondrial permeability transition to lethal oxidative injury to hepatocytes: A laser scanning confocal microscopy study”, *The 15th Anniversary Meeting of the Finnish Society of Toxicology*, Kuopio, Finland, April 22-23, 1994.

“Mitochondria as a target in toxic cell injury: Role of the permeability transition”, *The 8th European Bioenergetics Conference*, Valencia, Spain, September 12-17, 1994.

“Role of mitochondrial permeability transition during oxidative stress in hepatocytes: confocal microscopic studies”, *ISOTT 95 Satellite Symposium Adaptation to hypoxia*, Case Western Reserve University, School of Medicine, Cleveland, Ohio, August 27-29, 1995.

“Role of mitochondria in lethal cell injury”, *A Program on Cell Death*, sponsored by Case Western Reserve University and Ireland Cancer Center, Manakiki Country Club, Cleveland, Ohio, July 9, 1996.

“Confocal microscopic studies of the mitochondrial permeability transition in intact cells”, *The 9th European Bioenergetics Conference*, Louvain-la-Neuve, Belgium, August 17-22, 1996.

“Calcium mediates onset of the mitochondrial permeability transition during oxidative stress to rat hepatocytes”, *The 36th Annual Meeting of the Society of Toxicology*, Cincinnati, Ohio, March 9-13, 1997.

“Confocal microscopic studies of oxidative stress in hepatocytes”, *Focus on Multidimensional Microscopy 1997, A Joint Meeting of the 10th International Conference on 3D Image Processing in Microscopy and 9th International Conference on Confocal Microscopy*, Buffalo, New York, April 27-30, 1997.

“Mitochondria and cell death”, *Regulation of Cell Growth and Cell Death, CWRU/UH Ireland Cancer Center Conference*, Mohican State Park Conference Center, Perrysville, Ohio, September 25-26, 1997.

“Mitochondria: achilles choice for eucaryotes?”, *Panel, The 31st Annual Winter Conference on Brain Research*, Snowbird, Utah, January 24-31, 1998.

“Mitochondrial injury in oxidative stress and excitotoxicity”, Symposium “Mitochondrial permeability changes in necrotic and apoptotic cell death”, *The 37th Annual Meeting of Society of Toxicology*, Seattle, Washington, March 1-5, 1998.

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"Mitochondrial depolarization accompanies cytochrome *c* release during apoptosis in PC6 cells" (presented by Dr. K.M. Heiskanen), *The 28th Annual Meeting of Society for Neuroscience*, Los Angeles, California, November 7-12, 1998.

"Confocal microscopy of living cells in pathophysiology", Mini-Symposium "Advanced Technologies in Pathobiology Research and Diagnostics", *The 49th Annual Meeting of American College of Veterinary Pathologists*, St.Louis, Missouri, November 17-20, 1998.

"Mitochondria and oxidative stress", Confocal microscopy of mitochondrial metabolism and oxidative stress", *Workshop: Evaluating mitochondrial function in living cells and tissues. Keystone Symposium on Mitochondrial Dysfunction in Pathogenesis*, Santa Fe, New Mexico, January 15-20, 2000.

"Mitochondrial swelling, depolarization, and permeability transition during Bax-induced apoptosis in hepatocytes", *The 3rd Albany Conference on Frontiers of Mitochondrial Research*, Rensselaerville, New York, September 14-17, 2000.

"Role of mitochondria in apoptosis and necrosis", Symposium "Apoptosis and Necrosis in Health and Disease", *FASEB Experimental Biology*, Orlando, Florida, March 31-April 4, 2001.

"Oxidative stress and mitochondria", Symposium "Consequences of Oxidative Stress: Reactive Oxygen-Mediated Signalling Processes", *The 29th Annual Meeting of the American Society for Photobiology*, Chicago, Illinois, July 7-12, 2001.

"Characterization of mitochondrial function during cell injury", Symposium "Apoptosis in Health and Disease: Techniques and Biological Importance", *The Annual Meeting of the Microscopy Society of America*, Long Beach, California, August 5-9, 2001.

"Mitochondria in apoptotic and necrotic cell death", Symposium "Redox Regulation of Cellular Functions", *The 11th Annual BioCity Symposium*, Turku, Finland, August 30-31, 2001.

"Pathophysiological implications of mitochondrial function", Symposium "Mitochondrial Toxicity: Clinical Importance, Models and Mechanisms", *The 41st Annual Meeting of the Society of Toxicology*, Nashville, Tennessee, March 17-22, 2002.

"Activation of the Ras/MAPK pathway protects hypoxic tumor cells against p53-dependent apoptosis", Platform Session "Apoptosis", *The 41st Annual Meeting of the Society of Toxicology*, Nashville, Tennessee, March 17-22, 2002.

"Mitochondria in apoptosis induced by photodynamic and hypoxic stress", *Keystone Symposium on Mitochondria and Pathogenesis*, Copper Mountain, Colorado, April 6-11, 2002.

"Characterization of mitochondrial function during cell injury", Session "Advanced Microscopy Imaging", *Great Lakes Photonics Symposium*, Cleveland, Ohio, June 7-11, 2004.

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“Contribution of mitochondria and lysosomes to PDT-induced death in cancer cells”, Light-Activated Tissue Regeneration and Therapy II, *Engineering Conferences International Consortium*, Tomar, Portugal, June 24-29, 2007.

“Contribution of mitochondria and lysosomes to PDT-induced death in cancer cells”, Optical Methods for Tumor Treatment and Detection: Mechanisms and Techniques in Photodynamic Therapy XVII, *SPIE Photonics West 2008*, San Jose, California, January 19-24, 2008.

“Interplay of lysosomes and mitochondria in photodynamic therapy-induced death of cancer cells”. *The 34th Meeting of the American Society for Photobiology*, San Francisco, California. June 20-25, 2008.

“Mechanisms underlying lysosome-targeted PDT damage in cancer cells”. *The 29th Annual Meeting of the Southeastern Pharmacology Society*, Charleston, South Carolina, October 13-14, 2008.

“Signaling from lysosomes enhances mitochondria-mediated photodynamic therapy in cancer cells”. *International Photodynamic Association World Congress*, Seattle, Washington, June 11-15, 2009.

“Lysosomal iron release enhances efficacy of photodynamic therapy mediated by mitochondria-targeted photosensitizer in cancer cells”. *The 1st International Conference on Metal Chelation in Biology & Medicine*, Bath, United Kingdom, December 11-14, 2009.

“Signaling from lysosomes to mitochondria sensitizes head and neck cancer cells to photodynamic treatment: role of mitoferrin 2”. Optical Methods for Tumor Treatment and Detection: Mechanisms and Techniques in Photodynamic Therapy XVII, *SPIE Photonics West 2011*, San Francisco, California, January 21-26, 2011.

“Mitochondrial iron uptake through mitoferrin2 sensitizes head and neck cancer cells to photodynamic therapy”. *The 36th Meeting of American Society for Photobiology*, Montreal, Canada, June 23-28, 2012.

“Dual responsive nanoparticles coupled with phthalocyanine Pc 4 enhance photodynamic therapy by signaling from lysosomes to mitochondria”. Session: Drug delivery and nanotechnology in PDT. *The 15th Congress of the European Society for Photobiology*, Liege, Belgium, September 2-6, 2013.

“Enhanced efficacy of photodynamic therapy (PDT) via an iron-lysosome-mitochondria connection: studies with Pc 4 and dual responsive nanoparticles”. Symposium: Death Pathways in Photodynamic Therapy. *The 37th Meeting of American Society for Photobiology*, San Diego, California, June 14-19, 2014.

Invited Seminars:

“Mechanisms of hypoxic and toxic injury in isolated rat hepatocytes: Role of free Ca²⁺, intracellular pH and mitochondrial energization”, *Environmental Health Sciences Department, School of Public Health, University of California in Los Angeles*, Los Angeles, California, March 25, 1993.

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“Contribution of the mitochondrial permeability transition to lethal oxidative injury to hepatocytes: A laser scanning confocal microscopy study”, *Department of Biochemistry and Pharmacy, Abo Akademi University, Turku, Finland, April 21, 1994.*

“Role of mitochondrial permeability transition during oxidative stress in hepatocytes: Confocal microscopic studies”, *Department of Neurology, Center for the Study of Nervous System Injury, School of Medicine, Washington University, St. Louis, Missouri, September 25, 1995.*

“Role of mitochondrial permeability transition in cell injury: Confocal microscopic studies”, *Department of Biochemistry and Biophysics, Oregon State University, Corvallis, Oregon, May 10, 1996.*

“Do mitochondria ultimately dictate fate of cell death: apoptosis or necrosis”, *University of Pennsylvania Medical Center, Institute for Environmental Medicine, A Center for Lung Biology and Baromedicine, Philadelphia, Pennsylvania, February 18, 2000.*

“Mitochondria in Apoptotic and Necrotic Cell Death”, *University of Texas Health Science Center, Department of Cellular and Structural Biology, San Antonio, Texas, November 28, 2001.*

“Oxidative stress in NF κ B signaling and photodynamic therapy”. *Department of Pharmacology, Universidade Federal de Sao Paulo, Escola Paulista de Medicina, Sao Paulo, Brazil, June 8, 2006.*

“Oxidative stress in NF κ B signaling and photodynamic therapy”. *Systems Biology Research Program, Turku Centre for Biotechnology, BioCity, Turku, Finland, August 1, 2006.*

“Cell death and survival pathways during oxidative stress”. *Medical University of South Carolina, Department of Pharmaceutical Sciences, College of Pharmacy, Charleston, South Carolina, January 5, 2007.*

“Iron and mitoferrin-2 in sensitizing head and neck cancer to oxidative damage”. *Medical University of South Carolina, Department of Craniofacial Biology, College of Dentistry, Charleston, South Carolina, January 8, 2014.*

“Dissecting the death pathways during oxidative damage with confocal/multiphoton microscopy”. *The Center for Biomedical Imaging, Medical University of South Carolina, Charleston, South Carolina, May 6, 2014.*

Invited talks at Case:

“Light & Glass; Bones & Stones”, *Special tour and lecture, Case Western Reserve University Summer Program for Undergraduate Research, funded by a grant from the Howard Hughes Medical Institute, June 16, 1995.*

“Role of mitochondria in NMDA-induced injury in cortical neurons”, *Anatomy 498, Departmental Seminar Series, March 26, 1996.*

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"Hypoxic injury in neurons", *Anatomy 498, Departmental Seminar Series*, December 3, 1996.

"Mechanisms of oxidative stress in hepatocytes", *Anatomy 498, Departmental Seminar Series*, April 1, 1997.

"Role of the mitochondrial permeability transition in cell injury", *Ions and Apoptosis Discussion Group, School of Medicine*, May 20, 1997.

"Mitochondria and cell death", *Apoptosis Discussion Group, School of Medicine*, September 17, 1997.

"Research in Progress", *Anatomy 498, Departmental Seminar Series*, November 4, 1997.

"Confocal Microscopy of Living Cells", *Imaging Club, Cystic Fibrosis Imaging Core, School of Medicine*, February 26, 1998.

"Mitochondrial membrane permeability changes in necrotic and apoptotic cell death", *Anatomy 498, Departmental Seminar Series*, March 24, 1998.

"Mitochondrial permeability transition: Implications in necrotic and apoptotic cell death", *Department of Physiology and Biophysics, Departmental Seminar Series*, June 1, 1998.

"Visualization of mitochondrial events during apoptosis with confocal microscopy", *Anatomy 498, Departmental Seminar Series*, November 24, 1998. (presented by Dr. Kaisa M. Heiskanen).

"Do mitochondria ultimately dictate the fate of cell death: Apoptosis versus necrosis", *Ions and Apoptosis Discussion Group, School of Medicine*, November 24, 1998.

"Molecular characterization of mitochondrial apoptosis-inducing factor", *Cancer Genetics and Cancer Biology Journal Club, School of Medicine*, May 18, 1999.

"Confocal Cell Imaging", *Hormone Responsive Malignancy Retreat, Squire Valleevue Manor House*, February 15, 2000.

"Do mitochondria ultimately determine the mode of cell death: apoptosis or necrosis", *Cancer Center/Blood Club seminar, Cancer Center Program in Molecular Oncogenesis and Hormonal Responsive Malignancies*. May 19, 2000.

"Overview of Confocal Microscopy Core Facility at the Cancer Center", *Cancer Genetics and Cancer Biology Journal Club, School of Medicine*. May 14, 2001.

"One-photon and two-photon confocal microscopy", *Journal Club, Department of Physics*, July 5, 2001.

"Mitochondrial Mechanisms of Apoptosis: Photodynamic Therapy and Hypoxia", *Department of Pathology, Departmental Seminar Series*, November 15, 2001.

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“Mitochondria in Apoptosis”, *Center for Diabetes Research, Seminar Series*, December 4, 2001.

“MAPK inhibition and p53-induced apoptosis”, *p53 Journal Club*, Case Comprehensive Cancer Center, September 3, 2004.

“Redox regulation of hypoxic apoptosis”, *Apoptosis/Cell Proliferation Discussion Group*, Case Comprehensive Cancer Center, October 14, 2004.

“Redox regulation of hypoxic apoptosis”, *Apoptosis/Cell Proliferation Discussion Group*, Case Comprehensive Cancer Center, July 19, 2005.

“Studies with new Pc 4 derivatives”, *Retreat on Photodynamic Therapy*, April 27, 2006.

“Mechanisms of cell death with new Pc 4 derivatives”, *Apoptosis/Cell Proliferation Discussion Group*, Case Comprehensive Cancer Center, October 3, 2006.

Invited talks at MUSC:

“Mechanisms of cell death after photodynamic therapy”, *Developmental Cancer Therapeutics Program*, Hollings Cancer Center, June 16, 2010.

“Redox regulation of pancreatic cancer chemotherapy”, *Developmental Cancer Therapeutics Program*, Hollings Cancer Center, June 27, 2011.