

MARY KATHERINE KAFOGLIS LOCKWOOD

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EDUCATION:

University of California, Los Angeles

Ph.D., Public Health, Nutritional Science and Biological Chemistry

School of Public Health, College of Medicine, 1989

Pennsylvania State University, University Park

M.S., Physiology, Department of Poultry Science, 1980

Davidson College, Davidson, North Carolina

B.S., Biology, 1977

PROFESSIONAL EXPERIENCE:

1994-present University of New Hampshire,

Department Agriculture, Nutrition, and Food Systems

Durham, New Hampshire

Clinical Associate Professor

Pre-professional Health Committee, chair

1988-present AEMT, McGregor Memorial EMS, NREMT, NH licensed

Emergency Medicine Instructor, NH licensed EMS I/C

AHA CPR and first aid, instructor

1990-1993 Adjunct Faculty, St. Anselm College Department of Biology,

Manchester, New Hampshire

Biochemistry, lecture and laboratory

Chemistry laboratory

Animal physiology laboratory

Chemistry for Nursing students

1989-1993 Instructor, Rivier College Department of Biology,

Nashua, New Hampshire

Genetics, Microbiology, lecture and laboratory

Anatomy and Physiology, lecture and laboratory

Pathophysiology, Cellular Physiology

Pathophysiology for MS/nurse practitioner program

1993 Postdoctoral fellowship

University of Florida College of Medicine, Department of Ophthalmology

Gainesville, Florida

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- 1989-1990 Adjunct Faculty, Hesser College, Manchester, New Hampshire
Anatomy and Physiology
Medical Terminology
Human Growth and Development
Nutrition and Disease
- 1983-1988 Graduate Teaching Associate, School of Public Health, UCLA
Clinical Nutrition, lecture and laboratory
Nutrition and Health
Child and Maternal Health
College of Medicine, UCLA
Biochemistry , laboratory
Staff Research Associate, School of Public Health
Division of Nutritional Science, UCLA
- 1980-1983 Research Specialist, Department of Physiology
Emory University College of Medicine, Atlanta, Georgia
- 1977-1980 Graduate Research/Teaching Assistant, Department of Poultry Science
Pennsylvania State University
General Biology, Laboratory

RESEARCH:

Current: University of New Hampshire

Use of capnography in prehospital care of respiratory distress
Workplace safety for volunteer and career EMS providers
Risks of metabolic syndrome in EMS personnel
Use of lights and sirens in response to emergencies

1993 University of Florida

Topographical expression of IRBP, Rhodopsin, and beta-actin genes during bovine retinal development.

In situ hybridization of Rhodopsin and cone opsins

Immunocytochemical detection of retinol dehydrogenase during development

1983-1988 University of California

Cell culture of retinal pigment epithelium

Protective effect of selenium against diabetic complications in a high sucrose model for non-insulin dependent diabetes

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Effect of water selenium levels on the development of progressive retinopathy in pregnant diabetics

Prevention of cataract formation by verapamil

Cardiac contractile protein ATPase activity in diet induced noninsulin dependent diabetes

1980-1983 Emory University

Effects of inhibitors and stimulators of acid secretions and ion pumps on membrane potential and specific ion activity

1977-1980 Pennsylvania State University

Injection and infusion of parathyroid hormone on tissue carbonic anhydrase activity and tissue blood volume

PUBLICATIONS:

Books:

M.K. Lockwood and K. M Fuda, Laboratory Manual for Human Anatomy and Physiology, Fountainhead Press, Southlake, TX, 2018

M.K. Lockwood, Clinical Correlates for Anatomy and Physiology, Cognella, New Haven, CT, 2017.

Articles:

P. M. Halpin and M. K Lockwood, "The Use of Twitter and Zoom Videoconferencing in Healthcare Professions Seminar Course Benefits Students at a Commuter College" Advanced in Physiology Education, 2019, accepted.

L.E. DesJardin, M.K. Lockwood, and W. W. Hauswirth, Bovine opsin gene expression a late fetal to adult switch in the retina, Journal of Neuroscience Research, 1997.

M. K. Lockwood, C.D. Eckhert, and B. Shen, Influence of selenium on the microvasculature of the retina, Microvascular Research 45:74-82 , 1993.

C.D. Eckhert, M.K. Lockwood, M.H. Hsu, and R. Kang, Microvascular changes in rat glomeruli as a consequence of small differences in selenium exposure. Experimental and Molecular Pathology 57: 222-234 , 1992

M.K. Lockwood and C.D. Eckhert, Sucrose-induced lipid, glucose, and insulin elevations, microvascular injury, and selenium. American Journal of Physiology 262: R144-R149, 1992.

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- G.N. Pierce, N. Afzal, E.A. Kroegar, P.S. Sekton, M.K. Lockwood, M.J.B. Kutryk, C.D. Eckhert, and N.S. Dhalla, Cataract formation and retinal microvascular damage in prevented by administration of verapamil to diabetic rats. Endocrinology 79:234-258, 1989.
- G.N. Pierce, M.K. Lockwood, and C.D. Eckhert, Cardiac contractile protein ATPase activity in a diet-induced model of non-insulin dependent diabetes mellitus. Canadian J. Cardiology 5:117-120, 1989.
- M.K. Kafoglis, S.J. Hersey, and J.F. White, Microelectrode measurements of K⁺ activity and pH in isolated gastric glands: effects of histamine, American J Physiol 246:G443-455, 1984.

Abstracts:

- P.A. Halpin and M.K. Lockwood, Online Video Tutors improve outcomes in anatomy and physiology class, Federation Proceedings, abstract, 2014.
- C.D. Eckhert and M.K. Lockwood, Selenium: a protective agent against retinal microvascular damage. Federation Proceedings, abstract, 1989.
- M.K. Lockwood, C.D. Eckhert, and J.N. Ho, Evaluation of the importance of selenium in progressive sucrose-induced renal microangiopathy. Federation Proceedings, abstract, 1989.
- C.D. Eckhert, M.K. Lockwood, J.N. Ho, and R. Kang, Development of retinal and renal microvascular complications in rats fed a high sucrose, low Se diet, Investigative Ophthalmol. Vis. Sci. 29:2(s):157, 1988.
- M.K. Lockwood and C.D. Eckhert, Development of retinal and renal microvascular complications in rats fed a high sucrose, low Se diet. Diabetes 37:247a, 1987.
- M.K. Lockwood and C.D. Eckhert, Effects of selenium on pericyte dropout and retinal integrity in a rat model for Type II diabetes, Investigative Ophthalmol Vis Sci 28(3s):259, 1987.
- C.D. Eckhert and M.K. Lockwood, Evaluation of retinal microvascular damage in a rat model for type II diabetes, Investigative Ophthalmol Vis Sci 28(3s):123, 1987.
- M.K. Lockwood and C.D. Eckhert, A high sucrose low Se model for non-insulin dependent (type II) diabetic retinopathy, Federation Proceedings 46:1154, 1987.
- M.K. Kafoglis, S.J. Hersey, and J.F. White, Effect of histamine on K⁺ activity and pH in isolated rabbit gastric glands, Federation Proceedings 42:1483, 1983.

Presentations:

- M.K. Lockwood, Emergency Medical Response to Inborn Errors of Metabolism, North Country EMS Conference, North Conway, NH, October 2017.

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- M.K. Lockwood, Taking Care of Mom and Dad , North Country EMS Conference, North Conway, NH, October 2017.
- M. K. Lockwood, Course and Curriculum Development, New Hampshire Fire Academy, March, 2017.
- M.K. Lockwood, Hematological Emergencies, North Country EMS Conference, Bartlett, NH, October 2016.
- M. K. Lockwood, Autonomic Autopilot, North Country EMS Conference, Bartlett, NH, October 2016.
- M.K. Lockwood, The A Word, Understanding Addition as a Chronic Disease, Littleton (NH) Hospital Nursing Conference, October 2015
- M. K. Lockwood, Endocrine Emergencies, North Country EMS Conference, Bartlett, NH, October 2015.
- M.K. Lockwood, Investigative Pharmacology, North Country EMS Conference, Bartlett, NH, October 2014
- M.K. Lockwood, AEMT Transition Program, Lakes Region General Hospital, Laconia, NH, July, 2014
- M.K. Lockwood, AEMT Transition for Instructors, New Hampshire Fire Academy, Concord, NH, June, 2014
- M.K. Lockwood, Diabetic Cardiomyopathy and Pre-Hospital Care, FOCUS EMS Conference, Portsmouth, NH, January, 2014
- M.K. Lockwood, Anatomy and Physiology for the EMS Professional, North Country EMS Conference, Bartlett, NH, October, 2013
- C. Lemelin and M.K. Lockwood, NH Use of Lights and Sirens in Emergency Response
New Hampshire Public Health Forum, 2012

Theses:

- M.K. Lockwood, Evaluation of the importance of selenium in sucrose-induced microangiopathy, Ph.D. thesis, University of California, Los Angeles. 1989.
- M.K. Kafoglis, Effect of injection and continuous infusion of parathyroid hormone on tissue carbonic anhydrase activity, tissue blood volume, and egg production characteristics of laying hens, Master's thesis, The Pennsylvania State University

AWARDS:

American Institute of Nutrition/Proctor and Gamble Graduate Research Award
(12 nationally), 1987

Gladys Emerson Memorial Scholarship for excellence in research and academics (1 at
UCLA, School of Public Health), 1987

MARY KATHERINE KAFOGLIS LOCKWOOD

Outstanding UCLA Graduate Student (nominated), 1989

Class I Medal of Valor, NH Fire and EMS Awards, for extreme bravery, 2010

McGregor Memorial EMS unsung hero award for dedication to the program, 2016

MEMBERSHIPS:

Sigma Xi, Alpha Zeta, Omicron Delta
National Registry of Emergency Medical Technicians

LICENSES:

Advanced Emergency Medical Technician, NREMT, NH license
NH Dept of Safety Fire/EMS Instructor/ Coordinator (I/C US DOT)
American Heart Association CPR (BLS/AED/first aid) instructor
Emergency Care and Safety Institute, instructor
Brain Trauma Institute, instructor

COMMUNITY ACTIVITIES:

McGregor Memorial EMS volunteer AEMT
Fourth of July Community Events Coordinator (Amherst, NH)