

## CURRICULUM VITAE

**Lawrence K. Duffy**

July 2015

### **CURRENT POSITION:**

Director, Resilience and Adaptation Program  
Professor of Chemistry & Biochemistry  
Department of Chemistry & Biochemistry  
University of Alaska Fairbanks  
Fairbanks, Alaska 99775-6160

### **BIOGRAPHICAL:**

Date & Place of Birth: February 1, 1948  
Brooklyn, New York

Marital Status & Children:

Wife: Geraldine A. Sheridan  
Children: Anne Marie  
Kevin Michael  
Ryan Sheridan

Address: 2712 Tall Spruce  
Fairbanks, AK 99708

Military Status: Lieutenant USNR  
Active Duty: 1971-1973

### **EDUCATION:**

Fordham University, Bronx, New York	1969	Chemistry	B.S.
University of Alaska, Fairbanks, Alaska	1971	Organic Chemistry	M.S.
University of Alaska Fairbanks, Institute of Arctic Biology	1977	Biochemistry	Ph.D.

### **HONORS:**

Allied-Signal Corporation and ADRDA Faculty Scholar Award, 1987  
ACS Analytical Chemistry Award, Fordham University, 1969  
NSF Summer Traineeship, Department of Chemistry, University of Alaska, 1971  
J.W. McLaughlin Fellow, 1980-82  
Sigma Xi  
Phi Lambda Upsilon  
Who's Who in America (53<sup>rd</sup> Edition)  
W.F. Milton Scholar, 1983  
UAF Carol Feist Outstanding Advisor Award 1993-94, 1996-97, 2004-05  
NIDCD Minority Research Mentoring Award 1996  
Certified Professional Chemist, American Institute of Chemists, 1997  
Fellow, American Institute of Chemists, 1998  
US Army, Navy and Air Force's Faculty Award for Excellence in Scientific Instruction, 1998  
North Star Borough School District Award for Outstanding Service, 1998  
Member, Editorial Board "The Science of the Total Environment", 1999  
UAF Alumni Award for Professional Achievement, 1999  
Associate Editor, Journal of Alzheimer's Disease, 2000

Emil Usibelli Distinguished Research Award, 2002  
 President, American Institute of Chemists, 2004  
 Wildlife Society, Wildlife Publications Award – Outstanding Monography, 2004  
 Who's Who in Science Higher Education (WWSHE), 2006  
 Sigma Xi, Alaska Chapter, Exemplary Service Award, 2006  
 Sven Ebbesson Award for Excellence in Neuroscience, 2007  
 Fellow, Arctic Institute of North America, 2007  
 Honorary Member Golden Key Society, 2007  
 Member, Editorial Advisory Board, Journal of Biochemical Technology  
 Science Leadership Fellow, National Center for Science and Civic Engagement, 2008  
 President, American Society for Circumpolar Health, 2008-2009  
 Effie Kokrine FFA Chapter Supporter Award, 2011  
 University of Alaska Chancellor's Diversity Award, 2011  
 Excellence in Interdisciplinary Science Award, WAISC, 2012  
 Ambassador Award, Fairbanks Convention and Visitors Bureau, 2013  
 Irish Education 100 Award, 2013  
 Faculty Awards.org, Most Helpful to Students Award  
 Diversity Award from American Chemical Society, 2016

#### **ADDITIONAL STUDIES:**

FEBS Adv. Course in Protein Sequencing, Prague, Czechoslovakia (1980)  
 Molecular Approaches to the Nervous System. Society for Neuroscience Short Course, Boston, MA (1983)  
 LKB Workshop on Isoelectric Focusing, Framingham, MA (1984)  
 Hybridomas in Biotechnology and Medicine, Harvard Medical School (1986)  
 Beckman Amino Acid Workshop, Palo Alto, CA (1987)  
 Chemical Challenges in Immunology, ACS Short Course (1992)  
 Pharmacology for Chemists, ACS Short Course (1994)  
 Toxicology for Chemists, ACS Short Course (1996)  
 Workshop on Teaching Research Ethics, Indiana University (1997)  
 Statistical Analysis of Laboratory Data, ACS Short Course (1998)  
 Ethics of Research with Humans: Past, Present and Future (2000), UW Short Course  
 Workshop on Teaching Survival Skills and Ethics (2001), Snowmass, CO  
 Guidelines for the Assessment of Microbiological Contamination in Indoor Environments, AIHA, Fairbanks, AK (2002)  
 How to Supervise People, Fred Pryor Seminars, Fairbanks, AK (2002)  
 IRB 101 By Public Responsibility in Medicine and Research (2002)  
 How to Edit, Fred Pryor Seminars (2003)  
 IACUC Workshop, Fairbanks, AK (2004)  
 Responsible Conduct in Research Workshop, Fairbanks, AK (2004)  
 Ethical Issues in International Health Research, Harvard School of Public Health (2006)  
 IRB 101, University of Alaska Fairbanks, Fairbanks, AK (8/2012)

#### **RECENT ADMINISTRATIVE EXPERIENCE**

##### As Department Head (Chemistry and Biochemistry)

Developed and initiated approval of an undergraduate minor in Biochemistry.  
 Initiated and coordinated ACS approval of an undergraduate Environmental Chemistry Option for UAF Chemistry majors.  
 Assumed direct responsibility for the staffing and offering of summer programs in Chemistry and Biochemistry.  
 Coordinated the development of assessment protocols and standards for Chemistry and Biochemistry undergraduate majors.  
 Managed Environmental Chemistry Ph.D. program. Approved by Board of Regents.

Assumed responsibility and managed 5 year ACS re-accreditation for B.S. program in the Department of Chemistry and Biochemistry  
 Broadened the Chemistry and Biochemistry Department's focus by hiring new faculty  
 Increased private donations to the Department.

#### As Associate Dean (CSEM/CNSM)

Assisted in the development of the CSEM Partners in Science Component of the Rural Systemic Initiative.  
 Initiated the placement of the Howard Luke Science Fair at CSEM, UAF.  
 Assisted in the development of the CSEM Summer Science Camp, ASRA.  
 Developed a Survival Skills and Ethics Program for CSEM and UAF  
 Directed initiation of Alaska Basic Neuroscience Program  
 Established Outstanding Graduate Student Advisor Awards  
 Developed CSEM Graduate Student Dismissal Policy  
 Led development of CSEM TA training and orientation program  
 Director Engineering, Science and Technology Experiment Station (ESTES), 2004-2007  
 Director, Special Neuroscience Research Project (SNRP), 2000-present  
 Worked to develop Amchitka Consortium, 2007- 2010

#### As Interim Dean of the Graduate School

Revised the strategic plan for the growth of the graduate school and the interdisciplinary program, resulting in increased staffing, budget and PhD graduates.  
 Acted as to establish graduate studies area for UARCTIC as UAF increased its effort to internationalize its programs, and formed a graduate association for international students at UAF.  
 Expanded graduate student recruitment efforts, especially for minority students, both statewide and nationally.  
 Worked to improve compliance training program and courses for graduate students.  
 Worked to establish the Graduate School as the "home base" for post doctoral fellows in regard to career development.  
 Aided the development of Indigenous Studies PhD program and Construction Management program.  
 Co-organized ODNI Center of Excellence Forum  
 Initiated Peace Corps Fellow/USA Program at UAF and created Office of Peace Corps graduate programs.  
 Assisted in expanding Interdisciplinary Programs with a general studies option and minor.

#### As Director of the Resilience and Adaptation Program

Developed a Graduate Certificate Program for RAP (under review)  
 Initiated an NSF funded undergraduate fellowship program (RAVENS)

### **TEACHING EXPERIENCE:**

#### **1. University of Alaska Fairbanks**

1987-89	Fall	General Biochemistry (Chem 451) 3 credits
1995,97,98,99, 01,02,03, 13	Fall	General Biochemistry (Chem 451) 3 credits
1988-1989	Spring	Biochemistry Lab. (Chem 452) 1 hr lecture with 6 hours lab. 4 credits.
1993-1996	Spring	Biochemistry Lab. (Chem 452) 1 hr lecture with 6 hours lab. 4 credits.
1998-2000	Spring	Biochemistry Lab. (Chem 452) 1 hr lecture with 6 hours lab. 4 credits.
1989	Spring	Advanced Biochemistry Course (Chem 652) 3 credits. 15 lectures on proteins.
1989	Fall	General Chemistry (Chem 105) 4 credits
1998	Spring	General Chemistry (Chem 105) 4 credits
2007	Summer	General Chemistry (Chem 106) 4 credits
1990-96, 01, 02, 06	Spring	Introduction to Biochemistry (Chem 104) 4 credits.

2000, 2015	Summer	Introduction to Biochemistry (Chem 104) 4 credits
2011, 2012	Fall	Macromolecules (Chem 450).
1990,92,94	Fall	Protein Structure and Function (Chem 654) 3 credits
1991-96, 00, 01, 13,14,15	Fall/Spring	Basic General Chemistry (Chem 103) 4 credits.
2000	Summer	Basic General Chemistry (Chem 103) 4 credits.
1993	Spring	Comparative Biochemistry (Chem 693) 1 credit
1994, 95, 97	Spring	Environmental Biochemistry and Biotechnology
00, 02, 04	Fall	Environmental Biochemistry and Biotechnology (Chem 655) 3 credits. Also as independent study
1996, 97, 98, 03, 04, 05, 06	Spring	Chemistry in Complex Systems (Chem 100) 4 credits.
10,11, 12, 14		
1998, 99, 02, 03, 05, 08, 09	Fall	Developed on-line course 2012, offered also as a FHS section
11, 12		
1996	Fall	Introduction to Toxicology (Chem 293) 1 credit
1997	Spring	Research Ethics (Biol 493) 3 credits
1998	Spring	Research Ethics (Chem 300) 3 credits
2001, 03, 05	Fall	Research Ethics (Chem/Biol 300) 3 credits
2004, 05, 07	Fall,	Natural Resources, Land and Environment, (Chem 393, BCS 312, LAS
	Summer	393) 3 credits
2015	Summer	Undergraduate Research (URSA 195)
2007, 2008	Fall	Environmental Radioactivity, Stewardship and People of the North (Chem
	Spring	493)
2009	Winter	Demystifying Biotechnology (LAS 293, 2 credits)
2009, 2010, 2011, 13,14,15	Summer	Chem 100 RAHI
2010, 2011		Independent Study courses: Global Environmental Health; Water Chemistry; Environmental Justice
2011, 2012, 2013, 2014	Fall/Spring	Responsible Conduct of Research (LAS 601)

## 2. **Harvard Medical School**

1983-1986 Medical School Advanced Biochemistry Course (700B) 1 Conference  
Section/week.

### 1. **Roxbury Community College (Evening Division)**

1984 Fall Organic Chemistry (Chem 210) 3 hours of lecture and 2 hours of lab/week.  
1985-1987 Fall Organic Chemistry (Chem 210) 3 hours of lecture and 2 hours of lab/week.

### 4. **Middlesex Community College (Continuing Education Division)**

1983 Fall . General Chemistry I and Laboratory (Chem SC150). 3 hours of lecturer and 3  
hours of lab/week.

### 5. **University of Texas Medical Branch**

1980 - 1982 Interdisciplinary laboratory for first year medical students: Human Genetics  
Counseling lab. 2 lectures.  
1981 Spring Graduate Course BIOC 6305. Advance Amino Acids and Proteins. 2  
Lectures/Course.  
1981- 1982 Fall Medical School Biochemistry Course. 3 Lectures/Course.  
1982 Fall Biochemical Methods BIOC 6304. Supervised one week of experiments

### 6. **Galveston College**

1982 Fall General Chemistry and Laboratory. 3 hours of lecture and 3 hours of lab per

week.

## 7. **University of Alaska**

1969 - 1976

Laboratory Sections in General Chemistry, Contemporary Chemistry, Organic Chemistry and Biochemistry.

### **Graduate Students Supervised:**

Lars Ebbesson	MS	1994
Joe Boger	MA	1994
Xiaohong Zhao	PhD	1994
Sandip Vyas	PhD	1995
Sherri Smith	MS	1996
Yancy Bodenstein	MS	1997
Ying Xu	MA	1998
Jon Menough	MS	1998
Christopher Taylor	MS	1999
Kim Clapp-Lilly	PhD	2000
Jane LeBlond	MS	2000
Peggy Crane	MAT	2000
Janet Ricker	MS	2000
Kerrie Beckett	MA	2000
Margaret Isbell	PhD	2000
Xiaoming Zhang	MS	2001
Lars Hansen	MAT	2002
Shelli Stewart	MS	2003 (co-Chair)
Anna Godduhn	MA	2003
Kriya Dunlap	MS	2003
Catherine Humphries	MS	2003 (co-Chair)
Nicole South	MA	2003
Anne Whitehead	MA	2004
Bing Shi	PhD	2004 (co-Chair)
Scott Kemp	MS	2005
Roger Rothschild	MS	2005
Kryia Dunlap	PhD	2007
Richard Hallock	MA	2007
Emma Flores Mayfield	MA	2009
Linda Nicholas-Figueroa	MA	2009
Greg Van Doren	PhD	2010
Anna Godduhn	PhD	2011
Dinara Tamabayeva	MS	2012
Jinghui Zheng	MS	2013
Seetha Murugesan	PhD	2013
Lisa Schwarzburg	PhD	2014
Theresa Vertigan	MS	2015

### **PROFESSIONAL EXPERIENCE:**

1969 - 1971    Laboratory Instructor, Department of Chemistry, University of Alaska, Fairbanks, Alaska.  
                     Research: Photochemistry of organic pesticides. Supervisor, Dr. G. W. Smith.

1974 - 1976	Research Assistant, Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, Alaska. Research: Function and Structure of Hemoglobins from Arctic Animals. Supervisors, Dr. C. T. Genaux and Dr. P R. Morrison.
1977 - 1978	Post-doctoral Fellow, Boston University, Boston, Massachusetts with Dr. R. A. Laursen. Research: Structure of EF-Tu.
1978 - 1980	Post-doctoral Fellow, Department of Physiological Chemistry, Roche Institute of Molecular Biology, Nutley, New Jersey with Dr. C. Y. Lai. Research: Chemical Modification of Cholera Toxin.
1980 - 1981	James W. McLaughlin Fellow, Department of Human Biological Chemistry and Genetics, The University of Texas Medical Branch, Galveston, Texas.
1982 - 1983	Research Assistant Professor, Department of Biological Chemistry and Genetics, The University of Texas Medical Branch, Galveston, Texas.
1983 - 1984	Instructor of Chemical Sciences, Middlesex Community College, Division of Continuing Education.
1983 - 1985	Assistant Biochemist, McLean Hospital, Belmont, MA.
1983 - 1987	Assistant Professor of Biochemistry (Neurology), Harvard Medical School.
1984 - 1987	Science and Organic Chemistry Instructor, Roxbury Community College, Division of Continuing Education.
1985 - 1987	Associate Biochemist, Brigham and Women's Hospital.
1986 - 1987	Research Associate, Duke University Center for the Study of Primate Biology and History.
1987 - Present	Professor of Chemistry and Biochemistry, University of Alaska Fairbanks.
1987 - 1990 1992 - 1993	Coordinator, Program in Biochemistry and Molecular Biology.
1988 - 1998	Coordinator, Summer Undergraduate Research Intern Program in Chemistry and Biochemistry, University of Alaska Fairbanks.
1987 - 1990	Adjunct Researcher, Center for Neurologic Diseases, Brigham and Women's Hospital, Boston, MA.
1995 - 1998	Affiliate Professor, Center for Alcohol Addiction Studies, UAA
1994 - 1999	Head, Department of Chemistry and Biochemistry.
1996 - 2000	Coordinator of the RSI Scientist-in-Residence Program (CSEM)
1999 (Summer)	Instructor, Rural Alaska Honors Institute (RAHI)
2000 – 2007	Assoc. Dean for Graduate Programs and Outreach (CSEM/CNSM)
2000 – Present	Director, Alaska Basic Neuroscience Program

2004 – 2007	Director, CNSM Engineering, Science and Technology Experiment Station
2007 - 2012	Interim Dean, Graduate School, University of Alaska Fairbanks
2012- Present	Director, UAF Resilience and Adaptation Program

#### **MEMBERSHIP IN SCIENTIFIC SOCIETIES:**

American Society of Biological Chemists & Molecular Biologists  
 American Chemical Society  
 American Society of Zoologists  
 American Society for Circumpolar Health  
 New York Academy of Sciences  
 International Society of Toxicology  
 Massachusetts Association of Adult and Continuing Education  
 Fellow, American Institute of Chemists  
 American Society for Neurochemistry  
 Academie M.I.D.I.  
 International Society for the Study of Xenobiotics (ISSX)  
 Society of Environmental Toxicology and Chemistry  
 American Aging Association  
 Sigma Xi  
 American Association for the Advancement in Science  
 Association for Environmental Studies and Sciences

#### **PROFESSIONAL SERVICE:**

Program Committee, American Chemical Society, Southeastern Section (1982)  
 Membership Committee, ACS, Northeastern Section (1983)  
 Chairman, Membership Committee, ACS, Northeastern Section (1985)  
 ACS Congressional Advisor, District 5, MA (1983)  
 Chemical Education Committee (Norris Summer Scholars), ACS, Northeastern Section (1984)  
 Public Affair Committee, ACS, Northeastern Section (1985)  
 Fellow, Professional Program Committee, American Institute of Chemists (1988)  
 Secretary/Treasurer, Sigma Xi Alaska Club (1988-90, 1994-01) President, Sigma Xi Alaska (1991-92)  
 Counselor, Alaska Section, 1991: (1989-1990)  
 AIC-Non AIC Award Nomination Committee (1991)  
 OxyFuel Task Force, Fairbanks North Star Borough (1992)  
 Program Chair, 1994 Northwest Regional ACS meeting, Anchorage, AK.  
 AFAR National Scientific Advisory Council (1995-present)  
 Member, Regional Sigma Xi Nominating Committee (1998-2001)  
 Member, Board of Directors, American Society for Circumpolar Health (1999-00, 2003)  
 National Chemistry Olimpiad Alaska Coordinator (2000-01)  
 Associate Regional Director, Sigma Xi Board of Governors (2000-03)  
 AIC Board of Directors (2001- 2005); Board Secretary (2003); President-Elect (2004)  
 North Star Borough Schools Curriculum Advisory Committee (2002-04)  
 AMAP METALS Working Group (2001-03)  
 Amchitka Stewardship Policy Oversight Committee (CRFSP) (2003)  
 Executive Director Arctic division AAAS (2004 – Present)  
 AIC Representative to AAAS Section on Societal Impacts of Science and Engineering (2004)  
 North Star Borough, Pollution Control Commission (2003-05)  
 Program Chair, 60<sup>th</sup> Northwest Regional ACS Meeting (2005)  
 Co-Chair of Ethics Committee, Council of Science Society Presidents (2006)  
 Alaska State Advisory Committee on Fish Consumption (2006 – 2013)  
 Leadership Council SENCER Center of Innovation – West (2008)  
 President, American Society for Circumpolar Health (2008)

Member, Strategies to Increase Participation of Diverse Populations (NICHD, 2009)  
 AAAS Council Delegate (2009-Present)  
 Member, Ilisagvik Tribal College Science Advisory Committee (2011- 2013)  
 Instructor, summer Climate Change Camp, Ilisagvik Tribal College (2011- 2014)

#### **UNIVERSITY SERVICE AND GOVERNANCE:**

UAF Faculty Senate, Representative (1988-21, 1993-95, 1997-01)  
 UAF Faculty Senate Curriculum Affairs Committee (1989-92)  
 UAF Faculty Senate Curriculum Review Committee, chair (1991-92)  
 UAF Faculty Senate Graduate Council, Chair (1993-94)  
 UAF Faculty Senate Administrative Committee, chair (1999-01)  
 Graduate Admissions Committee, Department of Chemistry, UAF (1988-89)  
 UAF Human Experimentation Review Committee (1988-89), IRB (1999-01)  
 IAB Safety Committee (1992), Chairman, IAB Research Advisory Committee (1992)  
 UAF Student Success Committee (1992)  
 CSEM, New College Administration Organization Committee (1995)  
 UAF Student Support Services Advisory Board (1996)  
 UAF Graduate Student Travel Committee, Chairman (1997)  
 UAF Graduate School Advisory Committee, Chairman (1998-99)  
 UAF Center for Global Change Steering Committee (1998)  
 UAF Faculty Senate, President (2000-01)  
 UA Faculty Alliance, Chair (2000-03)  
 CSEM Accreditation Writing Team (2000-01)  
 UAF Standard Four (Faculty) Accreditation Working Group, Chair (2000-01)  
 Task Force on Department Chairpersons, Chair (1989-91)  
 Ad Hoc Committee on Compensation & Workload (1994-95)  
 Committee to Nominate Commencement Speaker & Honorary Degree Recipients (1996-2008), Chair (2003-2007)  
 Chair, UAF Biosafety Committee (2001-2003)  
 Chair, UAF Chemical Safety Committee (2002-04)  
 UAF Task Force on Joint PhD degrees between MAUs (2001)  
 College of Fellows of the University of Alaska Foundation (2001)  
 Science Steering Committee, Center for Global Change (2000-2004)  
 UAF University of Arctic Steering Committee (2004-05)  
 UAF Interdisciplinary Programs Review Committee (2003-2004)  
 UAF BICS User Committee (2001)  
 UAF BIOS Research/Teaching User Committee (2004)  
 UAF Chair Faculty Senate Appeals and Oversight Committee (2005)  
 UAF Search Committee for Vice Chancellor for Research (2006)  
 IUCH 2012 Local Organizing Committee Member (2007- 2012)  
 CANHR Internal Advisory Committee (2008)  
 Member, UAF Appeals Board (2008 alternate, 2009 member)  
 Member INRA Board of Directors (2009-2010)  
 Member, UA Biomedical Summit (2010)  
 Member UA Pharmacy Education Committee (2010)  
 Representative for UAF for the Murdock Foundation's "Partners in Science" Program (2011)  
 Member, UAF Director of Diversity and EEO Search Committee (2011)  
 Member, Chancellor's Academic Sub-cabinet (2011)  
 Member, UAF Strategic Plan Committee (2012)  
 Member, UAF Interdisciplinary Admissions and Education Committee (2013)  
 Member UAF Sustainability Master Plan Committee (2014 – present)  
 Member UAF Faculty Senate Core Curriculum Review Committee (2014-15)

#### **CIVIC and COMMUNITY SERVICE**



Alzheimer's Association of Alaska  
 Fairbanks Community Homes Board of Directors (2011 - 2014)  
 Fairbanks Community Behavioral Health Center (Secretary, 2011- 2014)  
 Member, North Star Borough Air Pollution Control Commission (2009-present)

#### **RESEARCH FUNDING:**

Over 30 years in research, funding for both research and students has been obtained from NSF, NIH, NOAA, USDA, various foundations and industry, totaling over 20 million dollars.

#### **RESEARCH ACTIVITIES (Selected):**

##### Principal Investigator

"Characteristics of Alaskan Microtus Hemoglobins," Grant by U.S. Center for Disease Control (administered by the University of Alaska, 1976)

James W. McLaughlin Foundation. "Bacterial Toxins and their Mechanism of Action," 9/1/80-8/31/82

American Cancer Society Institutional Research Grant. "Monoclonal Antibodies to Vinculin as a Probe to the Interaction of Fibronectin and Vinculin," 6/15/82-12/14/82

American Philosophical Society. "Structure of Lemur Hemoglobins," 12/1/82-12/1/83

William F. Milton Fund. "Antigenic Structure of Alzheimer Brain 200K Neurofilament," 2/1/84-2/1/85

RO-1, NIH Grant, "Structural Studies of Alzheimer 200K Neurofilament," 8/1/84-7/31/87

American Federation for Aging Research Grant. "Monoclonal Antibodies to Age Related Abnormal Proteins," 7/1/86-6/31/87

NSF Grant. "Aging & Biochemistry of a New Receptor Protein in the Brain," 3/1/88-2/27/90

Whitehall Foundation. "Molecular Investigation of the Phylogenetic Position of the Cheirogaleidae," 1988-89

NSF Grant. "A Chemistry and Biochemistry Summer Undergraduate Intern Program in Alaska," 5/1/88-4/30/93.

NSF Grant. "Purchase of an Amino Acid Analyzer for Research in Alaska," 7/1/89

WRC-UAF. "Environmental Biotechnology Studies on the Use of Monoclonal Antibodies to Detect Toxins and Pollutants in Water Systems," 7/1/89-8/30/91

NIH Grant. "Aging and Alzheimer Amyloid Protein Chemistry." 4/1/90 - 3/31/93

Murdock Charitable Trust. "Biopolymer Facility." 5/1/91 - 4/30/92

UAF Mellon Faculty Development Award "Rural Science Education." 10/1/92-5/1/92

ACS Project Seed. Biochemistry Research for High School Students. 6/1/92

Monitoring Oxyfuel in Fairbanks, OFA, 9/1/93-6/30/94

Biomonitors of Environmental Pollution, CMI-MMS, 6/1/94-5/30/96

NSF Grant, "Environmental Chemistry and Biochemistry in Alaska." 5/1/95-4/30/98

K-12, NIDCD Grant, "Olfactory Degeneration: A Salmon Model." 9/1/96-8/30/99

NIEHS Grant, "Mercury Analysis laboratory Equipment." 10/1/97-9/30/98

AZUR Grant, "Linkage of Microtox Chronic Toxicity Assay to Heat Shock protein in Grayling Eggs after Fertilization" 8/1/98-8/30/99

Water Research Center, "Mercury Levels in Alaskan Rivers" 3/1/00-8/1/01

NINDS Grant, "Alaska Basic Neuroscience Program" 8/30/00-9/01/05; 9/01/05-8/30/10

University of Alaska Foundation Lecturer Funding 3/1/02-3/10/02 and 5/1/04-9/1/04

DOE Subcontract, "CRESP II Research on Amchitka" 3/1/04-2/15/05

Burroughs Wellcome Fund, "6th Annual Special Neuroscience Research Conference" 1/1/06-12/30/06

Murdock Charitable Trust, Partners in Science, "Climate Change, Mercury and Reindeer Production", 4/1/06-3/30/07

NSF grant, "IPY: Adapting SENCER to the Arctic" 3/1/07-2/28/09

Murdock Charitable Trust, Partners in Science, "Effect of Exercise and Diet on Circulating VEGF", 4/1/-08 – 3/31/10

NSF grant, Doctoral Dissertation Improvement Grant: "Special Delivery: Transporting Inupiat Mothers and Babies in Northeast Alaska." 9/15/09-9/14/10.

NSF S-STEM grant "Resilience and Adaptation in Environmental and Natural Sciences" 4/1/14 – 3/31/19.

URSA ITE Award "Ethnobotany Tool Box" 4/13/15 – 9/3/15

#### Co-Investigator

Grant GM19039 NIH. "Human Fibronectin. Structure and Function." A. Kurosky - Principal Investigator, 4/1/81-3/31/82

Alzheimer Society Grant. "Monoclonal Antibodies to PHF". D. Selkoe - Principal Investigator - 6/1/83-6/1/84

NIH Grant. "Molecular Pathology of Alzheimer Disease". D. Selkoe - Principal Investigator - 12/1/83-11/30/85

NIH Grant. "Measurement of A Brain Protein by A Novel Microsensor". G. Bastians - Principal Investigator - 4/1/86

Whitaker Health Science Fund, "Alzheimer Amyloid and Plasma Proteins". Vernon Ingram - Co-Investigator

NIH Grant. Biopolymer Facility Equipment. E. Braunwald - Principal Investigator - 4/1/88

U of A Siberian/Alaskan Medical Research Program. "Addictive Behavior and Genetic Predisposition". Bernard Segal, Principal Investigator - 09/01/89

American Society for Biochemistry and Molecular Biology "High School Science Teacher Summer Research". Terry Krohe - Principal Investigator - 6/1/92

EVOS, "Nearshore Vertebrates". D. Roby - Principal Investigator - 7/1/95

"Nearshore Vertebrates." L. Duffy - Principal Investigator - 1996-97

"Responses of River Otters to Oil Contamination". Merau Ben-David – Principle Investigator – 11/1/97-9/30/99

Research Corporation. "Benzene and Carbon Monoxide as Air Pollutants in Fairbanks, AK". D. Jaffe – Principal Investigator – 3/3/97-9/30/98

CIFAR, "Human and Chemical Ecology of Arctic Pathways by Marine Pollutants". David W. Norton – Principal Investigator – 3/3/98-3/2/00

North Pacific Marine Research Program. "Concentrations of Mercury and Its Pathways in Marine Organisms of Eastern Bering Sea." A. Sathy Naidu – Principal Investigator – 7/1/99-6/30/02.

Natural Resources Fund. "Wetlands as Sources of Toxic Hg Compounds." Mark Hines - Principal Investigator – 5/1/2000 – 4/30/2002.

Natural Resources Fund. "Noninvasive Environmental Monitoring of natural resources development in Alaska." 5/1/2001-4/30/2002.

NIH Minority Supplemental Grant. "The Function of AVP and PKC beta1 in the SCN of Mice." 4/1/2001-5/1/2002.

NSF "Sustainability and Stewardship in Alaska" C. Gerlack – Principal Investigator - 09/01/04-08/31/05.

NSF "Subsistence Choices, Mercury Bioaccumulation and Ecosystem Change" M. Murray – Principal Investigator – 9/01/05-08/31/07.

USDA "AK Blueberries Bioassay Development" C. Lewis – Principal Investigator – 9/01/05-08/31/07

NIH- NCRR "Alaska BioPREP" G. Happ – Principal Investigator 9/01/08 – 08/31/11

A.W. Mellon Foundation "Dissertation Fellowship Program for Alaska Natives Committed to Advancement of Indigenous Studies" S. Henrichs – Principal Investigator 7/01/08 – 6/30/11

Murdock Trust "Supplement to Climate Change" J. Lokken – Principal Investigator – 6/01/08 – 5/30/09  
USDA "Screens to Nature Workshop" M. Lila – Principal Investigator – 9/1/11 – 8/30/12

CLA Collaborative Arts Council "Sub Arctic Haze: Visualizing". Anne Duffy, Principal Investigator. 12/1/14 – 3/30/15.

#### **Consultant:**

Integrated Chemical Sensors, 1985-86  
Athena Neurosciences, 1986-87  
Interior Alaska Beekeepers Association, 1989

Alaska Biotechnology Consultants, 1989  
 Jenson, Harris and Ross, 1989  
 Neuromedical Inc., 1991  
 North Coast Natural Resources Consultants Inc, 1998  
 Saylor Foundation, 2013  
 Bridgeport Education, 2014

#### **Reviewer:**

##### Journals:

Biochemistry  
 The Chemist  
 Neuroscience  
 Journal of Chemical Education  
 Archives of Biochemistry and Biophysics  
 Journal of Mammology  
 Proceed. 8th International Cold Regions Eng.  
 Journal of Alzheimer's Disease, (Editorial Board, 2001)  
 Journal of Neurochemistry  
 Journal of Neuroscience Research  
 Comparative Biochemistry and Physiology  
 Dirasat  
 Science of the Total Environment (Editorial Board)  
 Environmental Monitoring and Assessment  
 International Journal of Circumpolar Health  
 Mediterranean Journal of Chemistry (Editorial Board)  
 Journal of Functional Biomaterials  
 Journal of Biotech Research  
 International Journal of Ecosystems  
 Journal of Environment International

##### Textbooks:

Chemistry 2004, a high school text (published by Holt)  
 ACS Symposium Series: "Sustainability in Chemistry Curriculum"

##### Proposals:

Alzheimer Society  
 American Federation of Aging Research  
 Alaska Science and Technology Foundation  
 NSF - OSTI/ARI Facilities Panel, also Arctic Division/Contaminants Proposals  
 Center for Indoor Air Research  
 Philip Morris External Research Program  
 NSF – Biocomplexity Program  
 International FSU Research Proposals  
 Global Change Center, UAF Student Proposals  
 King Abdulaziz City for Science and Technology (KACST) Proposals (AAAS)  
 Program Reviewer for AAAS 2012 - 2014 annual meetings

#### **INVITED LECTURES:**

1. Roche Institute of Molecular Biology, Nutley, NJ, May, 1981
2. IV International Conference on Methods in Protein Sequence Analysis, Brookhaven National Laboratory September, 1981
3. LaFayette College, Department of Chemistry, Easton, PA, April, 1982
4. Mini-Symposium on HPLC Applications at UTMB, Galveston, TX, May, 1982

5. FEBS "Hemoglobin Symposium," Brussels, Belgium, July, 1983
6. University of Alaska, Institute of Arctic Biology, Fairbanks, AK, October, 1984
7. Harvard Medical School, Department of Biochemistry, Boston, MA, October, 1985
8. Boston Glycoprotein Group, Boston, May, 1987
9. Southeastern Mass. Univ., Department of Chemistry, Fall River, January 26, 1988
10. Alaskan-Siberian Exchange, Inst. of Clinical and Experimental Medicine, Novosibirsk, USSR, October, 1988
11. Palmer Agricultural Research Station, UAF, March, 1989
12. Institute of Marine Science, UAF, September, 1989
13. Alzheimer Society Workshop, September, 1990
14. Department of Chemistry, University of Alaska Anchorage, March, 1991
15. Regional Center for Alcoholism, Fairbanks, AK, July, 1991
16. Department of Chemistry and Biochemistry, Cal. State Fullerton, March, 1992
17. Workshop on Arctic Contamination, IARPC, Anchorage, AK, May, 1993
18. Symposium on Human Ecology in Extreme Environments, Vladivostok, September, 1994
19. NIDCD Partnership Program for Research in Human Communication, Rockville, MD, September, 1996.
20. Community Forum on Environmental Research, YKHC Bethel, AK. August, 1997.
21. "Research Ethics" to Polaris Group: Project on Leading Alaska Restructuring in Science, October 3-4, 1997, Anchorage, AK.
22. Kachemak Bay Conference, "Developing Sentinel Species and Biomarkers for Kachemak Bay" April 25, 1998, Homer, AK.
23. "Mercury and Health Risks in Western Alaska" to Y-K Health Corp., OEHE and Hospital Staff, March 31, 1999.
24. Pathways to Aging Meeting. "The Role of Amyloid Beta Protein in Progressive Neurodegeneration" April 22-23, 1999, Egan Convention Center, Anchorage, AK.
25. 1999 Fall Forum for Alzheimer's Disease. "Alaska's Role in Current Alzheimer's Disease Research," Nov 1999, Juneau, Fairbanks and Anchorage.
26. "A Case Study of Community Directed Research on Mercury in Western Alaska," Alaska Pacific University, Dec. 8, 1999.
27. Arctic Council Panel on "Contaminants in the North," April 2000.
28. US EPA International workshop on "Trends and Effects of Heavy Metals in the Arctic," McLean, VA June 2001.
29. NOAA Workshop on Steller Sea Lions, Anchorage, AK September 2001
30. AISES, Alaska Chapter "Salmon, Mercury and Neurobiology" November 2001
31. YKHC Bethel Hospital Grand Rounds "Antioxidants, Mercury and Nutrition", July 2003
32. UA Leadership Seminar Series: "The Art of Leadership Exercised by Department Chairs", Oct 2003
33. ADAK Community Meeting "Radioactivity and Amchitka," June 2004
34. Chemical Heritage Foundation, "Robert McNeil, Jr. and Tylenol," June 2005
35. AKDPH Subsistence Foods and Contaminants Meeting, "Mercury in Wildlife", May 2006
36. Alaska, Food, Mercury and Neurogenesis, Univ. of Rochester Environ Health Seminar, Nov. 2006
37. Monitoring for Changes in Environmental and Human Health, NPRB Contaminants Panel, Jan 2007
38. Research Ethics and Professionalism, student section AADE, Nov. 2007,
39. Alaska Health Summit on Impact of Climate Change, "Climate and Mental Health", Dec 2007
40. Adapt and Adopt: Developing a New SENCER Course, WAISC, April 2008
41. North Pacific Exposure: Neuroscience, Melatonin, and Behavioral Health in the North Pacific, AAAS Pacific Division, June 2008
42. The Responsible Conduct of Research Involving Indigenous Cultures. Western Association of Graduate Deans, March 2009
43. Approaches to Community Engagement: The Northway Project. Council of Graduate Schools, December 2009.
44. Shared Interests: The UARCTIC Graduate Area. Western Association of Graduate Schools, March 2010.
45. Using culture and Traditional Knowledge to Improve Engagement in Science Courses (2012). SENCER

Summer Institute, Santa Clara, University of California

46. Relating Traditional Knowledge to Biochemistry and Health (2013). Iisagvik Tribal College.
47. Using Climate Change to broaden chemistry curriculum boundaries: An Arctic example. (2014) ACS National Meeting, San Francisco.

### **Community Activities:**

Civil Defense Coordinator, Warren County, NJ, 1979  
 Youth Commission, Treasurer, Town of Acton, 1984  
 Community Education Advisory Committee, Town of Acton, 1986  
 Fairbanks Alzheimer Support Group, 1988-1998  
 Institutional Review Board, Fairbanks Memorial Hospital Foundation, 1990  
 Member of Board of Directors, Alzheimer's Disease Association of Alaska (Vice President - 1993; President-1995, 1998- 99; 00-04).  
 Regional Delegation to Alzheimer Society 1995  
 Member, Ft. Wainwright Restoration Advisory Board, 1998-2000  
 Corp of Engineers Working Group on Dredging Standards in Alaska, 2000-2003  
 AMAP Working Group on Metals in the Arctic, 2000-03  
 NSB Board of Education Curriculum Advisory Committee (2002-2004)  
 NSB Pollution Control Commission (2004 - present )  
 Board Member, Fairbanks Community Homes Board (HUD) (2007 to present), Secretary 2011-2014

### **BIBLIOGRAPHY:**

#### **A. Theses:**

1. Duffy, L.K. 1972. Photo-hydrolysis of chlorophenoxyacetic acid compounds, M.S. Thesis. University of Alaska Fairbanks, AK.
2. Duffy, L.K. 1977. A comparison of the primary structure of hemoglobins from two microtine tribes. Microtini and Lemnini, Ph.D. Dissertation. Institute of Arctic Biology, University of Alaska Fairbanks, AK.

#### **B. Articles in Journals: (peer reviewed; superscript 1 indicates undergraduate or high school author)**

1. Stratton, L.P. and Duffy, L.K. 1976. Hemoglobin polymorphism in *microtus pennsylvanicus*. *Comp. Biochem. Physiol.* 54B:413-419.
2. Duffy, L.K., Genaux, C.T. and Stratton, L.P. 1976. Amino acid differences between the  $\beta$ -chains from two hemoglobins of the yellow-cheeked vole. *Biochem. Genetics.* 14:809-821.
3. Stratton, L.P., Duffy, L.K. and Porchet, A.L. 1977. Comparative solubilities and electrophoresis of microtine hemoglobin. *Comp. Biochem. Physiol.* 56B:321-327.
4. Duffy, L.K. and Genaux, C.T. 1977. The primary structure of the hemoglobin  $\beta$ -chain of *microtus xanthognathus*. *Comp. Biochem. Physiol.* 56B:143-146.
5. Morrison, P.R., Duffy, L.K., Ramakrishnan, P. and Genaux, C.T. 1977. Comparison to the tryptic peptides from two cricetid genera. *Peromyscus* and *Calomys*. *Biochem. Systematics and Ecology.* 5:309 317.

6. Duffy, L.K., Genaux, C.T. and Morrison, P.R. 1978. Amino acid differences between major and minor hemoglobins from lemmings (*Lemmus* and *Dicrostonyx*). *Comp. Biochem. Physiol.* 61B:521-532.
7. Laursen, R.A. and Duffy, L.K. 1978. The evolution of elongation factors Tu and G by gene duplication. *FEBS Lett.* 92:200-202.
8. Duffy, L.K. and Lai, C.Y. 1979. Involvement of arginine residues in the binding site of cholera toxin subunit B. *Biochem. Biophys. Res. Commun.* 91:1005-1010.
9. Ara, K., Clark, B.F.C., Duffy, L., Jones, M.D., Kaziro, Y., Laursen, R.A., L'Italien, J., Miller, D.L., Nagarkatti, S., Nakamura, S., Nielson, K.M., Peterson, T.E., Takahasis, K. and Wade, M. 1980. Primary structure of elongation factor Tu from *Escherichia coli*. *Proc. Natl. Acad. Sci. USA.* 77:1326-1330.
10. Duffy, L.K., Gerger, L., Johnson, A.E. and Miller, D.L. 1981. Identification of a histidine residue near the amino acyl-tRNA binding site of elongation factor Tu. *Biochemistry.* 20:4663-4666.
11. Duffy, L.K., Kurosky, A. and Peterson, J.W. 1981. Characterization of cholera toxin precursor. *FEBS Lett.* 126:187-190.
12. Lai, C.Y., Cancedda, F. and Duffy, L.K. 1981. ADP-ribosyl transferase activity of cholera toxin polypeptide A1, and the effect of limited trypsinolysis. *Biochem. Biophys. Res. Commun.* 102:1021-1027.
13. Duffy, L.K., Kurosky, A. and Peterson, J.W. 1981. Covalent structure of the  $\beta$ -chain of the A subunit of cholera toxin. *J. Biol. Chem.* 256:12252-12256.
14. Fader, R.C., Duffy, L.K., Davis, C.P. and Kurosky, A. 1982. Purification and chemical characterization of Type 1 Pili Isolated from *Klebsiella Pneumoniae*. *J. Biol. Chem.* 257:3301-3305.
15. Duffy, L.K., McDonel, J.S., McClane, B.A. and Kurosky, A. 1982. *Clostridium Perfringens* Type A Enterotoxin: Characterization of the amino terminal region. *Infection and Immunity.* pp386-388.
16. Coppenhaver, D.H., Dixon, J.D. and Duffy, L.K. 1983. Prosimian hemoglobins I. The primary structure of the  $\beta$ -globin chain of *Lemur Catta*. *Hemoglobin.* 7:1-14.
17. Lett-Brown, M.A., Thueson, D.O., Plank, D.E., Duffy, L.K. and Grant, J.A. 1984. Histamine releasing activity (HRA) V. Characterization and purification using HPLC. *Cellular Immunol.* 87:445-451.
18. Duffy, L.K. and Coppenhaver, D.H. 1984. Citrate agar electrophoresis of Lemur hemoglobins: Relationship to DPG binding. *Hemoglobin.* 8:427-432.
19. Kosik, K.S., Duffy, L.K., Dowling, M., Abraham, C., McCluskey, A. and Selkoe, D.J. 1984. Monoclonal antibody against MAP2 recognizes Alzheimer neurofibrillary tangles. *Proc. Natl. Acad. Sci. USA.* 81:7941-7945.
20. Selkoe, D.J., Abraham, C., Rassol, C.G., McCluskey, A., Kosik, K.S. and Duffy, L.K. 1985. Paired helical filaments in human neurons: Relationship to neurofilaments. In: *Intermediate filaments* (Wang, E., ed.), Ann. N.Y. Acad. Sci. 445:583-596.

21. Duffy, L.K., Kurosky, A. and Lai, C.Y. 1985. Predicted secondary structure of cholera toxin "A" subunit. *Arch. Biochem. Biophys.* 239:549-555.
22. Duffy, L.K. and Lai, C.Y. 1986. A Note on the predicted secondary structures of the active chains of cholera and diphtheria toxins. *Toxicon.* 24:204-206.
23. Duffy, L.K., Genaux, C.T. and Florant, G.L. 1986. A Reinvestigation of hemoglobin Alterations in ground squirrels while in various hibernation activity states. *Comp. Biochem. Physiol.* 83B:797-800.
24. Selkoe, D.J., Abraham, C.R., Podlisny, M.B. and Duffy, L.K. 1986. Isolation of low molecular weight proteins from amyloid plaque fibers in Alzheimer's Disease. *J. Neurochem.* 46:1820-1834.
25. Kosik, K.S., Bakalis, S.F.<sup>1</sup>, Selkoe, D.J., Pierce, M.W. and Duffy, L.K. 1986. High molecular weight microtubule associated proteins: Purification by electro-elution and amino-acid compositions. *J. Neurosci. Res.* 15:543-553.
26. Duffy, L.K., Ehrhardt, M.M., Buettner-Janusk, J. and Coppenhaver, D.H. 1986. Prosimian Hemoglobins III. The structural difference responsible for the hemoglobin phenotype of Lemur Catta. *Amer. J. Primat.* 13:187-193.
27. Coppenhaver, D.H., Buettner-Janusk, J., Ehrhardt, M.M. and Duffy, L.K. 1986. Prosimian hemoglobin IV: The primary structures of the Lemur variegatus duplicated  $\beta$ -globin chains. *Biochem. Biophys. Acta.* 873:372-378.
28. Duffy, L.K., Ehrhardt, M.M., Genaux, C.T. and Florant, G.L. 1987. The primary structure of arctic ground squirrel hemoglobin  $\beta$ -chain. *Comp. Biochem. Physiol.* 87B:189-193.
29. Roth, M.M., Drovin, G.L. and Duffy, L.K. 1987. Isolation of human ferrochelatase. *Arch. Dermat.* 123:429-430.
30. Duffy, L.K., Ehrhardt, M.M., \*Romano, M.<sup>1</sup>, Florant, G.L. 1987. A note comparing the primary structure of hemoglobin  $\beta$ -chains of the arctic ground squirrel and the yellow-bellied marmot. *Can. J. Zoology.* 65:3197-3200.
31. Kirschner, D.A., Inouye, H., Duffy, L.K., Sinclair, A., Lind, M. and Selkoe, D.J. 1987. Synthetic  $\beta$ -peptide of Alzheimer Disease forms amyloid-like fibrils in vitro. *Proc. Nat. Acad. Sci.* 84:6953-6957.
32. Chapman, H.A., Ehrhardt, M.M., Grombie, G. and Duffy, L.K. 1988. Assay of extracellular matrix elastin degradation based on cation exchange HPLC determined release of tritiated desmosine and isodesmosine. *J. Biochem. Biophys. Meth.* 15:283-290.
33. Duffy, L.K. and Ehrhardt, M.M. 1988. The primary structure of the hemoglobin  $\beta$ -chain of the Turkish hamster (M. Brandt ed.), *Hemoglobin.* 12:91-93.
34. Kosik, K.S., Orecchio, L.D., Bakalis, S.<sup>1</sup>, Duffy, L.K. and Neve, R.L. 1988. MAP2: The microtubule-binding domain, potential phosphorylation sites and Alzheimer neurofibrillary tangle epitope. *J. Neurochem.* 51:587-598.
35. Joachim, L.L., Duffy, L.K., Morris, J.H. and Selkoe, D.J. 1989. Protein chemical and immunocytochemical studies of meningeovascular  $\beta$ -amyloid in Alzheimer's Disease and normal aging. *Brain Res.* 474:100-111.



36. Duffy, L.K., \*Reynolds, R.<sup>1</sup> and Harrington, J.P. 1990. Partial amino acid sequences of several globin chains from the sockeye salmon. *O. nerka*. *J Comp. Biochem. Physiol.* 96B:41-45, 1990.
37. Duffy, L.K., \*Reynolds, R.<sup>1</sup> and Harrington, J.P. 1990. HPLC Separation of the  $\alpha$  and  $\beta$ -chains of Alaskan sockeye salmon hemoglobin. *J. Chromat.* 512:292-297.
38. Duffy, L.K., \*Luick, J.<sup>1</sup> and Coppenhaver, D.H. 1990. Prosimian hemoglobins V: The primary structure of the  $\alpha$ -I,  $\alpha$ -II and  $\beta$ -hemoglobin chains of hapalemur griseus with a note on the classification of microcebus. *Comp. Biochem. Physiol.* 97B:261-267.
39. \*Luick, J.<sup>1</sup> and Duffy, L.K. 1990. Microcebus hemoglobin chain chromatographic separation. *J. Chromatog. Sci.* 28:335.
40. Yankner, B.A., Duffy, L.K. and Kirschner, D.A. 1990. Neurotrophic and neurotoxic effects of  $\beta$ -amyloid: Reversal by tachykinin neuropeptides. *Science.* 250:279-282.
41. Yankner, B.A., Caceres, A. and Duffy, L.K. 1990. Nerve growth factor potentiates the neurotoxicity of  $\beta$ -amyloid. *Proc. Natl. Acad. Sci. USA.* 87:9020-9023.
42. Fraser, P.E., Duffy, L.K., O'Malley, M.B., Nguyen, J., Inouye, H. and Kirschner, D.A. 1991. Morphology and antibody recognition of synthetic  $\beta$ -amyloid peptides. *J. Neuroscience Res.* 28:474-485.
43. Zhao, X., Schoenheit, C.<sup>1</sup> and Duffy L.K. 1991. A heparin-binding protein from neuroblastoma cells: Immunological comparison to  $\beta$ -amyloid precursor protein, *Comp. Biochem. Physiol.* 100A(3):7115-7118.
44. Kowall, N.W., Beal, M.F., Busciglio, J., Duffy, L.K. and Yankner, B.A. 1991. An in vivo model for the neurodegenerative effects of  $\beta$ -amyloid and protection by substance P. *Proc. Natl. Acad. Sci (USA).* 88:7247-7251.
45. Duffy, L.K. and Segal, B. 1991. Haptoglobin levels among alcoholics in Alaska. *Arct. Med. Res.* 50:166-169.
46. Zhao, X. and Duffy, L.K. 1991. On the interaction of a synthetic  $\beta$ -amyloid peptide with NB41A3 cells. *Neurosci. Res. Comm.* 9(3):159-166.
47. Segal, B. and Duffy, L.K. 1992. Ethanol elimination among different racial groups. *Alcohol: Clinical and Exp Res.* 9:213-217.
48. Wahl, S.M.<sup>1</sup>, Boger, J.K., \*Michael, V.<sup>1</sup> and Duffy, L. K. 1992. Identification of a haptoglobin-hemoglobin complex in the Alaskan Least Cisco. *Appl. Theor. Electropho.* 3:17-20.
49. Borgese, T.A., Harrington, J.P., Duffy, L.K. and Bourke, S. 1992. Function studies on goosefish hemoglobin. *Comp. Biochem. Physiol.* 101B:535-539.
50. Duffy, L. K., Testa, J. W., Bowyer, R. T. and Faro, J. B. 1993. Differences in blood haptoglobin and length-mass relationships in river otter (*Lutra canadensis*) from oiled and nonoiled areas of PWS. *J. Wildlife Dis.* 29:353-359.
51. Zhao, X., Valantas, J.A.<sup>1</sup>, Vyas, S. and Duffy, L.K. 1993. Comparative toxicity of amyloid  $\beta$ -peptides in neuroblastoma cell lines: Effects of albumin and physalaemin. *Comp. Biochem. Physiol.* 106C:165-170.

52. Levine, M.E., Milliron, A.N. and Duffy, L.K. 1994. Diurnal and seasonal rhythms of melatonin, cortisol and testosterone in interior Alaska. *Arct. Med. Res.* 53:25-34.
53. Duffy, L.K., Bowyer, R.T., Testa, J.W. and Faro, J.B. 1994. Chronic effects of the Exxon Valdez oil spill on blood and enzyme chemistry of river otters. *Environ. Toxicol. Chem.* 13:643-647.
54. Duffy, L.K. 1994. Oxyfuel in Alaska: Use of interleukins to monitor effects on the immune system. *Sci Total. Environ.*, 151(3):253-256.
55. Duffy, L.K., Bowyer, R.T., Testa, J.W. and Faro, J.B. 1994. Evidence for recovery of body mass and haptoglobin values of river otters following the Exxon Valdez oil spill. *J. Wildlife Dis.* 30(3):421-425.
56. Danilenko, K.V., Putilov, A.A., Russkikh, G.S., Duffy, L.K., Barnes, B.M. and Ebbesson, S.O.E. 1994. Diurnal and seasonal variations of melatonin and serotonin in women with seasonal affective disorder. *Arct. Med. Res.*, 53:137-145.
57. Levine, M.E., Duffy, L.K. and Bowyer, R.T. 1994. Fatigue, sleep and seasonal hormone levels: Implications for drinking behavior in northern climates. *Drugs and Society*, 8:61-70.
58. Vyas, S.B. and Duffy, L.K. 1995. Stabilization of secondary structure of Alzheimer  $\beta$ -protein by aluminum (III) ions and D-aspartic acid substitutions. *Biochem. Biophys. Res. Commun.*, 206(2):718-723.
59. Levine, M.E., Duffy, L.K., Moore, D. and Matej, L. 1995. Acclimation of a non-indigenous sub-arctic population: Seasonal variation in thyroid function in interior Alaska. *Comp. Biochem. Physiol.* 111A:209-214.
60. Smith, S.L. and Duffy, L.K. 1995. Odor and Health Complaints with Alaskan Gasolines. *Chemical Health and Safety* 2:32-38.
61. Avksentyuk, A.V., Kurilovich, S.A., Duffy, L.K., Segal, B., Voevoda, M.I. and Nikitin, Y.P. 1995. Alcohol consumption and flushing response in Chukotka. *Journal of Studies on Alcohol*, 56:194-201.
62. Vyas, S.B. and Duffy, L.K., 1995. Interaction of synthetic Alzheimer  $\beta$ -protein derived analogs with aqueous aluminum: A low field  $^{27}\text{Al}$  NMR investigation. *J. Protein Chem.* 14:633-644.
63. Zhao, X., Smith, S.L. and Duffy, L.K. 1995. Effects of ethanol as an additive on odor detection thresholds of Alaskan gasolines at sub-Arctic temperatures. *Chemosphere* 31:4531-4540.
64. Zhao, X. and Duffy, L.K. 1996. Ultrastructural studies on the interaction of  $\beta$ -amyloid peptide and mouse neuroblastoma cells NB41A3. *Neurosci. Res. Comm.* 18:39-46.
65. Duffy, L.K., Bowyer, R.T., Testa, J.W. and Faro, J.B. 1996. Acute phase proteins and cytokines in Alaskan mammals as markers of chronic exposure to environmental pollutants. *Amer. Fish. Soc. Symposium* 18:809-813.
66. Vyas, S.B. and Duffy, L.K. 1996. Equilibration of a synthetic Alzheimer  $\beta$ -protein analog during RP-HPLC. *Protein and Peptide Ltrs.* 3:89-94.
67. Blajeski, A.<sup>1</sup>, Duffy, L.K. and Bowyer, R.T. 1996. Differences in fecal profiles of prophyrrins among river otters exposed to the Exxon Valdez oil spill. *Biomarkers*, 1:262-266.

68. Putilov, A.A., Danilenko, K.V., Russkikh, G.S. and Duffy, L.K. 1996. Phase typing of patients with seasonal affective disorder: A test for the phase shift hypothesis. *Biol. Rhythm Res.* 27:1-21.
69. Vyas, S.B. and Duffy, L.K. 1997. Characterization of the minor impurities during synthesis of Alzheimer  $\beta$ -protein. *Protein and Peptide Lettrs*, 4:99-106.
70. Prichard, A.K., Roby, D.D., Bowyers, R.T. and Duffy, L.K. 1997. Pigeon guillemots as a sentinel species: A dose response experiment with weathered oil in the field. *Chemosphere*, 35:1531-1548.
71. Bodenstein, Y. and Duffy, L.K. 1998. Expression of HSP60, a stress protein, in human nasal septa cells after exposure to MTBE. *Environ. Toxicol. Pharmacol.*, 5:79-83.
72. Ben-David, M., Bowyer, R.T., Duffy, L.K., Roby, D.D. and Schell, D.M. 1998. Social behavior and ecosystem processes: Effects of river otters latrine sites on nutrient dynamics of terrestrial vegetation. *Ecology*, 79:2567-2571.
73. Duffy, L.K., Hecker, M.K.<sup>1</sup>, Blundell, G.M., and Bowyer, R.T. 1999. An analysis of the fur of river otters in Prince William Sound, Alaska: Oil related hydrocarbons 8 years after the Exxon Valdez oil spill. *Polar Biology*, *Polar Biol.* 21:56-58.
74. Scofield, E.<sup>1</sup>, Bowyer, R.T. and Duffy, L.K. 1999. Baseline levels of Hsp 70, a stress protein and biomarker in halibut from the Cook Inlet Region of Alaska. *Science of the Total Environment*, 226:85-88.
75. Duffy, L.K., Rodgers, T.<sup>1</sup>, and Patton, M. 1998. Regional health assessment relating to mercury content of fish caught in the Y-K Delta rivers system. *Alaska Medicine*, 40:75-77.
76. Blundell, G.M., Kern, J.W., Bowyer, R.T. and Duffy, L.K. 1999. Capturing river otter: A comparison of Hancock and leg-hold traps. *Wildlife Soc. Bull.*, 27:184-192.
77. Clapp, K.L., Roberts, R.C., Duffy, L.K., Hu, Y., Drew, K.L. 1999. An ultrastructural analysis of tissue surrounding a microdialysis probe, *J. Neurosci. Methods*, 90:129-142.
78. Duffy, L.K., Rodgers, T., Patton, M., Scofield, E.<sup>1</sup> and Bowyer, R.T. 1999. Baseline levels of mercury, Hsp 70 and Hsp 60 in subsistence fish from the Yukon-Kuskokwim Delta Region of Alaska. *Comp. Biochem. Physiol.*, 124:181-186.
79. Isbell, M., Ricker, J., Gordian, M.E. and Duffy, L.K. 1999. Use of biomarkers in an indoor air study: lack of correlation between aromatic VOCs with respective urinary biomarkers. *Science of the Total Environment*, 241:151-159.
80. Seiser, P.E., Duffy, L.K., McGuire, A.D., Roby, D.D., Golet, G. and Litzow, M.A. 2000. Comparison of pigeon guillemot, *Cephus columba*, blood parameters from oiled and unoled areas of Alaska eight years after the Exxon Valdez oil spill. *Marine Pollution Bull.*, 40(2):152-164.
81. Taylor, C., Bowyer, R.T. and Duffy, L.K. 2000. Profiles of fecal porphyrins in river otters. *Marine Pollut. Bull.*, 40:1132-1138.

82. Taylor, C., Duffy, L.K., Plumley, F.G. and Bowyer, R.T. 2000. Comparison of spectrofluorometric and HPLC methods for the characterization of fecal porphyrins in river otters. *Environ. Research*, 84:56-63.
83. Duffy, L.K. and Mease, R.A.<sup>1</sup> 2000. Amino acid concentrations in the regenerating planaria. *The Chemist*, 77:7-10.
84. Clapp-Lilly, K.L. and Duffy, L.K. 2000. Commentary: Amyloid fibril toxicity, still unresolved. *J. Alzheimer's Disease*, 2:133-135.
85. Whittle, C.L., Bowyer, R.T., Clausen, T.P. and Duffy, L.K. 2000. Putative pheromones in urine of rutting male moose (*Alces alces*): Evolution of honest advertisement? *J. Chem. Ecol.* 26(12):2747-2762.
86. Ben-David, M., Duffy, L.K. and Bowyer, R.T. (2001) Biomarker responses of river otters to exposed oil contamination. *J. Wild. Disease*, 37:489-508.
87. Ben-David, M., Duffy, L.K., Blundell, G.M. and R.T. Bowyer. (2001) Natural exposure to mercury in coastal river otters: age, diet and survival. *Environ. Toxicol. Chem*, 20:1986-1992.
88. LeBlond, J. and Duffy, L.K. (2001) Toxicity assessment of total dissolved solids in effluent of Alaskan mines using 22-hour chronic microtox and selenastrum capricornutum assays. *Sci. Total Environ.*, 271:49-59.
89. Taylor, C., Ben-David, M., Bowyer, R.T. and Duffy, L.K. (2001) Response of river otters to experimental exposure of weathered crude oil: Fecal porphyrin profiles. *Environ. Sci. and Technol.*, 35:747-752.
90. Clapp-Lilly, K.L., Smith, M.A., Perry, G. and Duffy, L.K. (2001) Melatonin reduces interleukin secretion in amyloid-beta stressed mouse brain slices. *Chemico-Biological Interactions*, 134:101-107.
91. Duffy, L.K., Kaiser, C.<sup>1</sup>, Ackley, C.<sup>1</sup>, and Richter, K.S.<sup>1</sup> (2001) Mercury in hair of large Alaskan herbivores: Routes of exposure. *Alces*, 37:293-302.
92. Clapp-Lilly, K.L., Smith, M.A., Perry, G., Harris, P.L., Zhu, X., and Duffy, L.K. (2001) Melatonin acts as anti-oxidant and pro-oxidant in an organotypic slice culture model of Alzheimer's Disease. *Neuroreport*, 12:1277-1280.
93. Bowyer, R.T., Pierce, B.M., Duffy, L.K. and Haggstrom, D.A. (2001) Sexual segregation in moose: effects of habitat manipulation. *Alces*, 37:109-122.
94. Isbell, M., Gordian, M.E. and Duffy, L.K. (2002) Winter indoor air pollution in Alaska: Identifying a myth. *Environ. Pollution*, 117:69-75.
95. Clapp-Lily, K.L., Smith, M.A., Perry, G., Drew, K. and Duffy, L.K. (2002) Melatonin exhibits anti-oxidant properties in a mouse brain slice model of excitotoxins. *Intern. J. Circumpolar Health*, 61:32-40.

96. Zhang, X., Naidu, A.S., Kelley, J.J., Jewett, S.C., Dasher, D., and Duffy, L.K. (2001) Baseline concentrations of total mercury and methylmercury in salmon returning via the Bering Sea (1999-2000). *Mar. Pollution Bulletin*, 42:993-997.
97. Rothschild, R.F.N<sup>1</sup>. and Duffy, L.K. (2002) Methylmercury in the hair of subsistence food users in a rural Alaskan village. *Alaska Medicine*, 44:2-8.
98. Beckett, K.J., Aulerich, R.J., Duffy, L.K., Patterson, J.S., and Bursian, S.J. (2002) Effects of dietary exposure to environmentally relevant concentrations of weathered Prudhoe Bay crude oil in ranch-raised mink. *Bullet. Environ. Contamin. & Toxicol.*, 69:593-600.
99. Beckmen, K., Duffy, L.K., Zhang, X. and Pritcher, K.W. (2002) Mercury concentrations in the fur of Steller sea lions and northern fur seals from Alaska. *Mar. Pollution Bulletin*, 44:1130-1135.
100. Beckmen, K.B., Duffy, L.K., Pritcher, K.W., and McDermott, K.<sup>1</sup> (2002) Fecal porphyrins in free-ranging Steller sea lions as a potential biomarker of health status. *The Chemist*, 79:6-9.
101. Jewett, S.C., Zhang, X., Naidu, A.S., Kelley, J.J., Dasher, D., and Duffy, L.K. (2003) Comparison of mercury and methylmercury in Northern Pike and Arctic Grayling from Western Alaska rivers. *Chemosphere*, 50:383-392.
102. Rothschild, R.F.N<sup>1</sup>. and Duffy, L.K. (2002) Preliminary study on total mercury in the common prepared subsistence foods of a rural Alaskan village. *Alaska Medicine*, 44:89-93.
103. Godduhn, A. and Duffy, L.K. (2003) Multi-generational health risks of persistent organic pollution in the Far North. *Environ. Sci. & Policy*, 6(4):341-353.
104. Bowyer, R.T., Blundell, G.M., Ben-David, M., Jewett, S.C., Dean, T.A., and Duffy, L.K. (2003) Effects of the Exxon Valdez oil spill on river otters: injury and recovery of a sentinel species. *Wildlife Monographs*, 153:1-53.
105. Burger, J., Gochfeld, M., Kosson, D., Powers, C.W., Friedlander, B., Eichelberger, J., Barnes, D., Duffy, L., Jewett, S., and Volz, C. (2005) Science, policy and stakeholders: developing a consensus science plan for Amchitka. *Environ. Management* 35:557-568.
106. Isbell, M., Stolzberg, R., and Duffy, L.K. (2005) Indoor climate in interior Alaska: simultaneous measurements of ventilation, benzene and toluene in residential indoor air of two homes. *Sci. Total Environ.* 345:31-40.
107. Duffy, L.K., Duffy, R.S., Finstad, G. and Gerlack, C. (2005) A note on mercury levels in the hair of Alaskan reindeer. *Sci. Total Environ.* 339:273-276.
108. Dehn, L.A., Sheffield, G.G., Follmann, E.H., Duffy, L.K., Thomas, D.L., Bratton, G.R., Taylor, R.J., and O'Hara, T.M. (2005) Trace elements in tissues of phocid seals harvested in the Alaskan and Canadian Arctic – Influence of age and feeding ecology. *Can. J. Zoology* 83:726-746.
109. Rothschild, R.F.N. and Duffy, L.K. (2005) Mercury concentrations in muscle, brain and bone of western Alaska waterfowl. *Sci. Total Environ.* 349:277-283.

110. Kemp, S.W., Reynolds, A.J. and Duffy, L.K. (2005) Gender differences in baseline levels of VEGF in the plasma of Alaskan sled dogs. *Amer. J. Biochem. Biotech.* 1:111-114.
111. Dunlap, K.L., Reynolds, A.J. and Duffy, L.K. (2006) Total antioxidant power in sled dogs supplemented with blueberries and the comparison of blood parameters associated with exercise. *Comp. Biochem. Physiol.*, 143: 429-434.
112. Dehn, L-A., Follman, E.H., Rosa, C., Duffy, L.K., Thomas, D.L., Bratton, G.R., Taylor, R.J., and O'Hara, T.M. (2006) Stable isotope and trace element. *Mar. Pollut. Bull.*, 52:301-319.
113. Dehn, L-A., Follman, E.H., Thomas, D.L., Sheffield, G.G., Rosa, C., Duffy, L.K., and O'Hara, T.M. (2006) Trophic relationships in an Arctic food web and implications for trace metal transfer. *Sci. Total Environ.*, 362:103-123.
114. Dehn, L-A., Sheffield, G.G., Follmann, E.H., Duffy, L.K., Thomas, D.L., and O'Hara, D.M. (2007) Feeding ecology of phocid seals and some walrus in the Alaskan and Canadian Arctic as determined by stomach contents and stable isotope analysis. *Polar Biol.*, 30: 167-181.
115. Shi, B., Liang, H., Kuhn T.B., and Duffy, L.K. (2006) Surface properties of cell-treated polyethylene terephthalate. *Amer. J. Biochem. Biotech* 2: 170-174.
116. Duffy, L.K., Hallock, R.J., Finstad, G. and Bowyer, R.T. (2005) Noninvasive Environmental Monitoring of Mercury in Alaskan Reindeer. *Amer. J. Environ. Sci.* 1:249-253.
117. Gerlach, S.C., Duffy, L.K., Murray, M.S., Bowers, P.M., Adams, R., and Verbrugge, D.A. (2006) An exploratory study of total mercury levels in archaeological caribou hair from northwest Alaska. *Chemosphere* 65: 1909-1914.
118. Weber-Scannell, P.K. and Duffy, L.K. (2007) Effects of total solids on aquatic organisms: a review of literature and recommendation for salmonid species. *Amer. J. Environ. Sci.*, 3:1-6.
119. Burger, J., Gochfeld, M., Powers, C.W., Kosson, D.S., Halverson, J., Siekaniek, G., Morkill, A., Patrick, R., Duffy, L.K. and Barnes, D. (2007) Scientific research, stakeholders, and policy: continuing dialogue during research on radionuclides on Amchitka Island, Alaska. *J. Environ. Mgmt.* 85: 232-244.
120. Dunlap, K.L., Reynolds, A.J., Tosini, G., Kerr, G.W. and Duffy, L.K. (2007) Season and diurnal melatonin production in exercising sled dogs. *Comp. Biochem. Physiol.* 147:863-867.
121. Duffy, L., Bult-Ito, A., Castillo, M., Drew, K., Harris, M., Kuhn, T., Ma, Y., Schulte, M., Taylor, B. and van Muelken, M. (2007) Arctic peoples and beyond: research opportunities in neuroscience and behavior. *Intern. J. Circumpolar Health*, 66(3):264-75.
122. Shi, B., Kuhn, T.B., Liang, H. and Duffy, L.K. (2007) Tribochemical performance of cell-treated nickel matrix. *Amer. J. Biotech. Biochem.* 3: 141-144.
123. Dunlap, K.L., Reynolds, A.J., Bowers, P.M. and Duffy, L.K. (2007) Hair analysis in sled dogs illustrates linkage of mercury exposure along the Yukon river with human subsistence food system. *Sci Total Environ.* 385: 80-85.

124. Jewett, S.C., Duffy, L.K. (2007) Mercury in fishes of Alaska, with emphasis on subsistence species. *Sci Total Environ.*, 387: 3-27.
125. Dunlap, K.L., Reynolds, A.J., Refsal, K.R., Kerr, W.W. and Duffy, L.K. (2008) Cross latitudinal, seasonal and diurnal comparisons in thyroid hormone concentrations in sled dogs. *Amer. J. Vet. Sci.*, 3: 73-80.
126. Lokken, J.A., Finstad, .GL., Dunlap, K.L., and Duffy L.K. 2009 Mercury in lichens and reindeer hair from Alaska: 2005-2007 pilot survey. *Polar Record*. 45(235):368-374.
127. Duffy L.K., Oehler, M.W., Bowyer, R.T. and Bleich, V.C. (2009) Mountain Sheep: An environmental epidemiological survey of variation in metal exposure and physiological biomarkers following mine development. *Amer J. Environ Sci* 5:296-303.
128. Ma, Y., Wu, S., Rasley, B and Duffy, L.K. (2009) Adaptive response of brain tissue oxygenation to environmental hypoxia in non-sedated, non-anesthetized Arctic ground squirrels. *Comp Biochem Physiol*, 154 (3): 315-22.
129. Duffy, L.K., Middlecamp, C.H., Godduhn, A. and Fabbri, C.E. (2009). Using Culture, Policy and Traditional Knowledge to Improve Engagement in Science Courses. *Amer. Journ. Applied Sciences*, 6(8): 1560-1566.
130. Loring, P.A., Duffy, L.K., Murray, M.S. (2010) A risk benefit-analysis of wild fish consumption for various species in Alaska reveals shortcomings in data and monitoring needs. *Sci Tot Environ* 408:4532-4541.
131. Duffy, LK, Godduhn, A, Nicholas-Figueroa, L, Fabbri, CE and Middlecamp, CH, van Muelken, M. (2011). Engaging Students in Science Courses: Lessons of Change from the Arctic. *Interchange*. 42: 105-136. DOI:10.107/510780-011-9151-6
132. Dunlap KL, Reynolds AJ, Duffy L, Gerlach, S., Loring, P, Cleroux, M, and Godin, J. (2011) Selected plasma fatty acid levels in subsistence fed sled dogs along the Yukon river: a pilot study for biomonitoring. *Polar Record*; 48(2): 177-83. DOI: <http://dx.doi.org/10.1017/S0032247411000350>.
133. Ma, Y., S. Wu and L. .Duffy, (2011). Effects of hyperoxia on brain tissue oxygen tension in non-sedated, non-anesthetized arctic ground squirrels: An animal model of hyperoxic stress. *American J. Anim Vet. Sci.*, 6:7-17. DOI: 10.384/ajavsp.2011.7.17. URL: <http://www.thescipub.com/abstract/10.3844/ajavsp.2011.7.17>
134. Loring, PA, Duffy, LK. (2011) Managing environmental risks: the benefits of a place-based approach. *Rural and Remote Health*. 11:1800-1808.
135. Duffy, LK, Nicholas-Figueroa, L, and Dunlap, KL (2011). Involvement of Cytokine IL-1Ra in regulating the secretion of VEGF in SH-SY5Y cells. *J.Bioinform and Biotech*. 1:1-5.
136. Dunlap, KL Reynolds, AJ, Gerlach, SC and Duffy LK (2011). Mercury interferes with endogenous antioxidant level in Yukon River subsistence-fed sled dogs. *Environ Res Lett*. 6 pp.1-5. 044015 doi:10.1088/1748-9326/6/4/044015.

137. Ihl, C, Bowyer, RT, Dunlap, KL and Duffy, LK (2012). Mercury in hair of musk ox on the Seward Peninsula. *Amer J Environ Sci* 8: 176-178..
138. Ma, Y, Wu, S and Duffy, LK (2012). Fluctuation of brain tissue oxygen partial pressure: a biochemical landmark in the Arctic ground squirrel's spontaneous arousal. *Amer J. Biochem.* 7: 163-171.
139. Jinka, TR and LK Duffy (2013) Ethical Considerations in Hibernation Research. *Lab Animal* 42:248-252.
140. Tamabayeva, D, Duffy, LK, Loring, PA, Barnes, D (2013) Mitigation history of the industrial Hg contamination in the Nura River watershed of the Republic of Kazakhstan: Evolution of an Adaptive Management Approach. *Environ Manage. Sustain. Develop.* 2:187-194.
141. Godduhn, A, Northway Health Study Team and LK Duffy (2013) Addressing environmental exposures along the Alaska Highway. *Int J Circumpolar Health* 72:21187 doi org 10.3402/ijchh v72io.21187. Supplement 1:787-795.
142. Duffy, LK, Dunlap, KL, Reynolds, A and Gerlach, SC. (2013) Sled dogs as indicators of climate change and resultant contaminant fate and transport along the Yukon River. *Int J Circumpolar Health*. Supplement 1:508-510. doi org 10.3402/ijchh v72io.21555.
143. Schnurr, TM, Reynolds, AJ, Duffy, LK, DunlapKL. (2014) Glucose Transporter 4 expressions in white blood cells of young and old sled dogs. *Polar Record*.  
<http://dx.doi.org/10.1017/S0032247413000831>.
144. Zheng, J, Schnurr, T, Dunlap, K, Das, D, Duffy, L (2014) Effect of Zinc Oxide Nanoparticles on neuroblastoma SH-SY5Y Cells. *American Journal of Biochemistry and Biotechnology* 10 (2) 116- 124. Doi:10.3844/ajbbbsp.2014.116.124
145. Schnurr, T., Reynolds, A., Gustafson, S, Duffy, L and Dunlap, K (2014) Conditioning causes an increase in Glucose Transporter-4 levels on mononuclear cells in sled dogs. *Intern J Biochem. Cell Biol.* 55:227-231. <http://dx.doi.org/10.1016/j.biocel.2014.09.009>
146. Duffy, LK, Dunlap, KL and Godduhn, AR. (2014) Bias, complexity and uncertainty in ecosystem risk assessment: Pharmaceuticals, a new challenge in scale and perspective. *Environ. Res. Lett.* 9:091004 <http://dx.doi.org/10.1088/1748-9326/9/9/091004>
147. Murray, MS, McRoy, CP, Duffy, LK, Hiron, AC, Trocine, RP, and Trefry, J. (2015) Biogeochemical analysis of ancient Pacific Cod bone suggests Hg bioaccumulation was linked to paleo sea level rise and climate change. *Front. Environ. Sci.*3:8. doi: 10.3389/fenvs.2015.00008
148. Dainowski, BH, Duffy, LK, McIntyre, J and Jones,P. (2015) Hair and bone as predictors of tissular mercury concentrations in the Western Alaska red fox *Vulpes vulpes*. *Sci Total Environ*, 518-519: 526-533.
149. Schnurr, TM, Reynolds, AJ, Komac, AM, Duffy, LK and Dunlap, KL (2015). The effect of acute exercise on GLUT 4 translocation in peripheral blood mononuclear cells of sled dogs.



Biochemistry and Biophysics Reports 2 pp 45-49. Doi  
<http://dx.doi.org/10.1016/j.bbrep.2015.05.002>

150. Nicholas-Figueroa, L, Barnhardt, R, Duffy, L, Dunlap, K, van Muelken, M and Middlecamp, C. (2015) Delivering Post-secondary STEM education on the North Slope, Alaska: Resilience and Adaptation. *International Research in Education* 3,no 2 pp80-92.

**C. Proceedings/Books/Chapters/Reviews:**

1. Genaux, C.T., Duffy, L.K. and Morrison, P.R. 1977. Evolution and systematics of hemoglobins from microtine rodents of Alaska. *Proc. Intern. Symposium on Evolution of Protein Molecules*, (Matsubara, H. and Yamanaka, T., eds.), Japan Scientific Press, Tokyo, pp187-197.
2. Kurosky, A., Duffy, L.K. and Denney, R.M. 1981. Antigenic characterization of cholera and its subunits with monoclonal subunit A antibodies. *29th Protides of the Biological Fluids*, (Peeters, H., ed.), Pergamon Press, Oxford. 29:755-759.
3. Duffy, L.K. and Kurosky, A. 1982. Application of monoclonal antibodies to the microsequencing of proteins. In: *IV International Conference of Methods in Protein Sequence Analysis* (Elzinga, M., ed.), Humana Press, NJ, pp149-156.
4. Duffy, L.K. 1983. Determination of covalent structure of Lemur hemoglobin chains. *American Philosophical Society Year Book*, p127.
5. Duffy, L.K. and Coppenhaver, D.H. 1984. Prosimian hemoglobins II. Comparison of hemoglobin  $\beta$ -chain primary structure in the genus Lemur. In: (Schnek, A.G. and Paul, C., eds.), *Hemoglobins Brussels University Press*. pp377-392. Duffy, L.K. and Coppenhaver, D.H. 1984. Molecular evolution of prosimian hemoglobins. In: *Biological Colloquium* (Strand, F. and Scott, W., eds.), *Ann. N.Y. Acad. Sci.* 435:254-257.
6. Coppenhaver, D.H., Mark, J.E. and Duffy, L.K. 1984. Use of HPLC techniques and monoclonal antibodies in the study of Lemur hemoglobins. *32nd Protides of the Biological Fluids*. (Peeters, H., ed.), Pergamon Press, Oxford. 32:1037-1040.
7. Coppenhaver, D.H., Mark, J.E. and Duffy, L.K. 1984. Prosimian hemoglobins II. Comparison of hemoglobin  $\beta$ -chain primary structure in the genus Lemur. In: (Schenk, AG and Paul, C eds), *Hemoglobins Brussels University Press*. Pp. 377-392.
8. Selkoe, D.J., Abraham, C., Rasool, C.G., McCluskey, A. and Duffy, L.K. 1984. Characterization of monoclonal antibodies to Alzheimer paired helical filaments. In: *Intermediate Filaments* (Wang, E., ed.), *Ann. N.Y. Acad. Sci.* 455:774-778.
9. Kosik, K.S., Duffy, L.K., Bakalis, S., Abraham, C., and Selkoe, D.J. 1985. Structural and chemical studies of pathological fibers in human neurofibrillary degeneration. *Proc. 43rd Electron Microscop. Soc. Amer.* (Bailey, G., ed.), San Francisco Press. pp726-729.
10. Duffy, L.K., McCluskey, A., Kosik, K. and Selkoe, D.J. 1985. Studies on the analysis of brain structural proteins by HPLC. *33rd Protides of the Biological Fluids* (Peeters, H., ed.), Pergamon Press, Oxford. 33:559-562
11. Duffy, L.K. and Coppenhaver, D.H. 1986. Electrophoretic characterization and chromatofocusing of Lemur Hemoglobins. *N.Y. Acad. Sci.* 463:179-182.

12. Kosik, K.S., Bakalis, S., \*Galibert, L., Selkoe, D.J. and Duffy, L.K. 1986. Age-related modifications of MAP2. In: Dynamics aspects of microtubule biology (Soifer, D., ed.), Ann. N.Y. Acad. Sci. 466:420-426.
13. Duffy, L.K., Kates, J., Podlisny, M.B., Walsh, R., Galibert, L. and Selkoe, D.J. 1986. Cross-reactivity of synthetic peptide antibodies: A clue for the pathogenesis of Alzheimer's Disease. *Protides of the biological fluids* (Peeters, H., ed.), Pergamon Press. 34:193-196.
14. Duffy, L.K., Abraham, C.R., Berman-Podlisny, M., Walsh, R.L. and Selkoe, D.J. 1987. HPLC analysis of proteins from Alzheimer paired helical filaments. In: 3rd Biological Colloquium N.Y. Acad. Sci., Ann. N.Y. Acad. Sci. 494:369-371.
15. Coppenhaver, D.H., Hopkins, P., Ehrhardt, M.M. and Duffy, L.K. 1987. Lemur systematics and hemoglobin phylogeny. Ann. N.Y. Acad. Sci. 529:141-144.
16. Duffy, L.K., Rassol, C.G., Walsh, R.L., Podlisny, M.B. and Selkoe, D.J. 1987. Studies on the relationship between plasma proteins and amyloid fibers found in Alzheimer's Disease. Ann. N.Y. Acad. Sci. 529:233-235.
17. Duffy, L.K., Kirschner, D.A., Joachim, C.L., Sinclair, A., Inouye, H. and Selkoe, D.J. 1987. Comparison of amyloid from Alzheimer's Disease with synthetic peptide. In: *Peptides, Chemistry and Biology* (Marshall, G.R., ed.), Escom Science Pub. Netherlands. pp604-607.
18. Selkoe, D.J., Duffy, L.K., Nukina, N., Joachim, C.L., Podlisny, M.B. and Kosik, K.S. 1987. Biochemical analysis of amyloid filaments and paired helical filaments and their respective contributions to neuronal degeneration. In: *Banbury Reports 27: Molecular Neuropathology of Aging*. pp235-252.
19. Selkoe, D.J., Duffy, L.K., Nukima, N., Podlisny, M.B., Abraham, C. and Kosik, K.S. 1989. Molecular pathology of intra and extraneuronal filaments in brain aging and Alzheimer's Disease. In: *Familial Alzheimer's Disease* (Miner, L.A., eds.), Marcel Dekker, Inc., New York. pp137-151.
20. Duffy, L.K. (editor) 1989. Themes in biochemistry and molecular biology in Alaska. *Proceedings of the Biochemistry and Molecular Biology Symposium, 39th Arctic Science Conference, October, 1988*, 48p.
21. Duffy, L.K. (editor) 1989. Improvement of undergraduate science education in Alaska. *Proceedings of Sigma Xi Alaska Advisory Board on Undergraduate Education, August*, UAA Press, Anchorage, AK 30p.
22. Segal, B., Duffy, L.K., Kurilovitch, S.A. and Avksentyuk, A.V. 1991. Alaskan and Siberian studies on alcoholic behavior and genetic predisposition. In: *Proceedings of the 8th International Congress on Circumpolar Health: Circumpolar Health*. 90, Arc. Med. Res. Suppl. 5:474-478.
23. Fraser, P.E., Inouye, H., Hguyen, J., Havlerson, K., Landbury, P.T., Duffy L.K. and Kirschner, D.A. 1991. Morphology, conformation and stability of Alzheimer  $\beta$ -amyloid peptide fibrils. In: *Proteins* (Renvogopalakrishnan, V. et al., eds.) Escom Press, Leiden pp309-315.
24. Avysentyuk, A.V., Jurilovich, S.A., Kurshinov, V.N., Duffy, L.K., Segal, B., Yakuschenko, I.A., Nomokonova, N.Y. and Voevoda, M.I. 1992. Prevalence of atypical alcohol and aldehyde dehydrogenase among Chukotka Natives. In: *Human Genetics and Pathology*. Tomsk University Press, pp 48-50.

25. Vyas, S., Zhao, X., \*Luick, T.J. and Duffy, L.K., 1992.  $\beta$ -amyloid peptides, aluminum and albumin in treatment of dementias. *Advances in Behavior Biology* (Meyer, E.M., Simpkins, J.W., Yamamoto, J. and Crews, F.T., eds.), PLENUM Press, London. 40:503-514.
26. Putilov, A.A., Danilenko, K.V., Russkikh G.S., Schergin, S.M., Duffy, L.K. and Ebbesson, S.O.E. 1993. Melatonin relates to immune system in Seasonal Affective Disorder. In: *Advances in Pineal Research* (Maestroni et al, eds.), 7:173-177.
27. Putilov, A.A., Danilenko, K.V., Russkikh, G.S., Duffy, L.K. and Ebbesson, S.O.E. 1994. Melatonin in Seasonal Affective Disorder. In: *Proceedings of the 9th International Congress on Circumpolar Health*. *Circumpolar Health* 93, *Arc. Med. Res.* 53: Suppl. 2:480-482.
28. Segal, B., Duffy, L.K., Avksentyuk, A.V. and Thomasson, H.R. 1994. Biobehavioral factors and drinking among Alaskan and Siberian Natives: cross cultural collaborative research. In: *Proceedings of the 9th International Congress on Circumpolar Health*, *Circumpolar Health* 93, *Arc. Med Res* 53: Suppl. 2:568-572.
29. Kurilovich, S.A., Avksentyuk, A.V., Segal, B., Galaktionov, O.K., Yakushenko, I.A. and Duffy, L.K. 1994. Specific features of alcohol consumption and mitochondrial aldehyde dehydrogenase genotype in male natives of Chukotka. *Vestn Ross AMN*, N2, pp28-30.
30. Avksentyuk, A.V., Nikitin, Y.P., Kurilovich, S.A., Segal, B., Duffy, L.K., Astakhova, T.I., Khramtsova, L.A. and Voevoda, M.I. 1994. Drinking and genetic factors among Russians and Chukotka Natives in Siberia. *Drugs and Society*, 8(2):3-48.
31. Duffy, L.K., Segal, B., Avksentyuk, A.V., Thomasson, H.R. and Levine, M.E. 1994. Genetics, Neuroimmune Interactions and alcoholism at high latitudes like Alaska. In: *Bridges of Science between North America and the Russian Far East: Proceedings of the 45th Arctic Science Conference*, Anchorage. Vladivostok Ed Meekan, R.H., Sergienko and Weller, G. Geophysical Institute Press, pp283-291.
32. Vyas, S.B. and Duffy, L.K. 1996. Evaluation of structural changes for synthetic Alzheimer's  $\beta$ -peptide solutions on coordination with Al(III) ions. In: *Peptides: Chemistry Structure and Biology* (Kaumaya, P.T.P. and Hodges, R.S., eds.), Mayflower Scientific Ltd., pp519-520.
33. Levine, M.E. and Duffy, L.K. 1996. Seasonal variation of the amino acid, L-tryptophan, in Interior Alaska. In: *Proceedings of the 10th International Congress on Circumpolar Health*, in press
34. Hecker, M.K., Duffy, L.K., Blundell, G.M. and Bowyer, R.T. 1997. River otters as sentinel species. *Proceeding 5<sup>th</sup> International Conference: Effects of Oil on Wildlife*, pp100-102.
35. Levine, M.E. and Duffy, L.K. 1998. Seasonal variation of the amino acid, L-tryptophan, in Interior Alaska. In: *Proceedings 10<sup>th</sup> International Congress on Circumpolar Health* (Fortuine, et al., eds.) pp386-388.
36. Ricker, J.E., Duffy, L.K. and Isbell, M. 1999. Benzene as an indoor air pollutant in Fairbanks, Alaska. *Partners in Science conf.*, Research Corp.
37. Duffy, L.K. and Hecker, M.K. 1999. Baseline levels of atmospheric mercury in Alaska. Pp. 1-11 in: P. Dayal (ed.). *Proceedings of the Electric Utilities Environmental Conference: Science*,

regulation and impacts of SO<sub>2</sub>, CO<sub>2</sub>, O<sub>3</sub>, Nox and mercury. Communication Design, Tucson, AZ (CD-ROM format).

38. Duffy, L.K. 2000. Mercury in Alaska: The Need for Monitoring. *Global Glimpses*, 8:1-3.
39. Duffy, L.K., Rodgers, T. and Paul, S. 2000. Environmental justice: A case study of community directed assessment of Hg in freshwater fish in western Alaska. Intern. Conf. On Heavy Metals in the Environment, U. Michigan, Ann Arbor (CD-ROM format).
40. Fraser, P.E., Inouye, H., Hguyen, J., Halverson, K., Landbury, P.T., Duffy, L.K. and Kirschner, D.A. 1991. Morphology, conformation and stability of Alzheimer  $\beta$ -amyloid peptide fibrils. In: *Proteins* (Renvogopalakrishnan, V. et al., eds.) Escom Press, Leiden pp309-315.
41. Vyas, S., Zhao, X., \*Luick, T.J. and Duffy, L.K., 1992.  $\beta$ -amyloid peptides, aluminum and albumin in treatment of dentias. *Advances in Behavior Biology* (Meyer, E.M., Simpkins, J.W., Yamamoto, J. and Crews, F.T., eds.), PLENUM Press, London. 40:503-514.
42. Putilov, A.A., Danilenko, K.V., Russkikn, G.S., Schergin, S.M., Duffy, L.K. and Ebbesson, S.O.E. 1993. Melatonin relates to immune system in Seasonal Affective Disorder. In: *Advances in Pineal Research* (Maestroni et al, eds.) 7:173-177.
43. Segal, B. and Duffy, L.K. 1996. Biobehavioral effects of psychoactive drugs. In: *Neurobehavioral toxicology and addiction: food, drugs and environment* (Boobis, S. ed.) Chapter 16, pp451-487 Open University of the Netherlands Pub., Heerlen.
44. Duffy, L.K. 1996. Review of "Basic Chemical Principles," 2nd Edition by E.I. Peters and R.C. Kowerski, Harcourt Brace and Co., Orlando, FL in *J. Chem. Educ.* 73:A46.
45. Duffy, L.K. 1997. Review of "The Maillard Reaction: Consequences for the chemical and life sciences," edited by Raphael Ikan, *The Chemist*, 74:45.
46. Segal, B. and Duffy, L.K. 1999. Biobehavioral effects of psychoactive drugs. In: *Neurobehavioral toxicology and addiction: food, drugs and environment.* (Niesink, R.J.M., Jaspers, R.M.A., Karnet, L.M.W. and van Ree, J.M.) Chapter 2, pp25-60, CRC Press.
47. Duffy, L.K. 1999. Review of "A guide to phospholipid chemistry," by Donald J. Hanahan. Oxford Univ. Press: N.Y. in *J. Chem. Educ.* 76:326.
48. Marcy, S., Dasher, D., Dietz, R., Duffy, L., Evans, M., Juntto, S., Lindberg, S., Lockhart, L., Naidu, S., O'Haro, T., Pacyna, J., Robertson, A., Yngvadottir, E. and Asmund, G. 2000. Mercury in the Arctic: An update. In *AMAP Report on Issues of concern*, AMAP Report 2000:4.
49. Duffy, L.K., Zhang, X., Naidu, A.S., Kelley, J.J., Jewett, S.C. and Dasher, A. (2001) Assessment of the inhaled and ingested contribution to mercury exposure in Alaskan river otters. *Proceeds of the Electric Utilities Environmental Conference: Global Contaminants*, Tucson, AZ (CD-ROM format).
50. Beckmen, K.B., Burek, K.A., Pitcher, K.W., Ylitalo, G.M. and Duffy, L.K. (2001) Toxicology studies in Steller sea lions, *Eumetopias jubatus*. *Proceedings of Amer. Assoc. Zoo Veterinarians*, pp1-5.
51. Duffy, L.K. (2001) Environmental Chemistry, Ecotoxicology, Chemical Education and Public Policy. *The Chemist*, 77:4-5.

52. Holland-Bartels, L., Ballachey, B., Bishop, M.A., Bodkins, J., Bowyer, T., Dean, T., Duffy, L., Esler, D., Jewett, S., McDonald, L., McGuire, D., O'Clair, C., Rebar, A., Snyder, P. and VanBlaricom, G. (1999) Mechanisms of impact and potential recovery of nearshore vertebrate predators. "Exxon Valdez" Oil Spill Restoration Project Final Report (Restoration Project 98025). US Geological Survey, Biological Resources Division, Anchorage, Alaska.
53. Duffy, L.K. (2002) Mercury and environmental health in Alaska: Need for biomarkers of effect. Proceeds. of Electric Utilities Environmental Conference, Tucson, AZ (CD-ROM format).
54. Duffy, L.K, Gerlach, C. and Murray, M. (2003) Preliminary comparison of mercury in ancient and modern Alaskan arctic caribou. Proceeds. of Electric Utilities Environmental Conference, Tucson, AZ.
55. Rothschild, R.F.N. and Duffy, L.K. (2004) Hg levels from the brains of birds used as subsistence foods in western Alaska. Proceeds. of Electric Utilities Environmental Conference, Tucson, AZ (CD-ROM format).
56. Shi, B., Kuhn, T., Duffy, L., and Liang, H. (2005) Tribochemical performance of cell-treated nickel matrix. Proceedings of World Tribology Congress III: WTC2005-63694, Sep 12-16, 2005, Washington Hilton, Washington, D.C.
57. Duffy, L.K. (2006) The Gathering Storm. *The Chemist*, 82:1.
58. Duffy, L.K. and Erickson, K. (2006) Enlarging SENCER Programs in Alaska. *SENCER Newsletter*, Vol 6, Issue 3, p10.
59. Trainor, S.F., Godduhn, A., Duffy, L.K., Chapin, F.S., Natcher, D.C., Kofinas, G., Huntington, H.P., (2009) Environmental Injustice in the Canadian Far North: Persistent Organic Pollutants and Arctic Climate Impacts. In *Speaking for Ourselves* (Agyeman J, Cole P, Haluza – DeLay R. and O'Riley, P. editors) UBC Press, pp. 144-162.
60. Duffy, L.K., Godduhn, A., Trainor, S., Gerlach, C. and Murray, M. (2007) UAF Researchers seek to understand effects of climate change and pollutants on the North and its peoples. *Shared Voices* (Snellman, O. ed) pp. 21-22. University of Arctic Press.
61. Duffy, L.K. (2008) Disease. In *Encyclopedia of Global Warming and Climate Change* (Philander, S.G. editor) SAGE Press, Thousand Oaks, CA.
62. Duffy, L.K. (2010) Gaia Hypothesis In *The Green Series: Green Politics* (Philander, S. G. ed.) SAGE Press, Thousand Oaks, CA.
63. Duffy, L.K. (2010) Exposure Assessment. In *Green Series: Green Business* (Philander, S. G., et.al eds.) SAGE Press, Thousand Oaks, CA.
64. Duffy, L.K. (2010) Industrial Ecology. In *Green Series: Green Business* (Philander S. G. et al, eds.) SAGE Press. Thousand Oaks, CA.
65. Duffy, LK Graduate Students from across the Arctic Meet at UAF, *CNSM Newsletter*, 11:6.
66. Duffy, LK (2011) Environmental Justice. In *Green Series, Green Issues and Debates, an A-Z Guide*. pp 216-222. SAGE Press. Thousand Oaks, CA.

67. Duffy, LK (2011) Ecofacism. In Green Series, Green Issues and Debates, an A-Z Guide. pp160-163. SAGE Press. Thousand Oaks, CA
68. Duffy, LK, Godduhn, A., Dunlap, KL, van Muelken, M, Middlecamp, CH (2011) Sustainability and Chemistry: Key concepts in an Arctic focused interdisciplinary course. In Sustainability in the Chemistry Curriculum, (Middlecamp, C and Jorgenson, A eds) American Chemical Society Symposium, 1087 pp. 98-112. Washington, DC.
69. Duffy, A., Duffy, L., Erickson, K., and Kelly, J. (eds). (2011) Land and Environment in the North. Center for Cross Cultural Studies Publisher. Fairbanks. (ISBN 978-1-877962-46-2) 284 pp.
70. Duffy, LK (2014) UARCTIC. In: Antarctica and the Arctic Circle: A Geographic Encyclopedia of the Earth's Polar Regions (A. Hund, ed) ABC-CLIO Press. pp. 719-720.
71. Duffy, LK (2013) Grasshopper Effect. In: Antarctica and the Arctic Circle: A Geographic Encyclopedia of the Earth's Polar Regions (A. Hund, ed) ABC-CLIO Press. p.306.
72. Duffy, LK. (2014). Yukon River. In: Antarctica and the Arctic Circle: A Geographic Encyclopedia of the Earth's Polar Regions (A. Hund, ed) ABC-CLIO Press p.777-779

#### **D. Abstracts:**

1. Duffy, L.K., Morrison, P.R. and Genaux, C.T. 1976. Hemoglobin structure in a northern vole and two species of lemmings. ACS Rocky Mountain Section Meeting, Abstr. 106.
2. Laursen, R.S., L'Italien, J., Duffy, L.K., Nagarkatti, S. and Miller, D.L. 1979. Amino acid sequence of elongation factor Tu. XIth International Congress of Biochemistry, Toronto, Canada, Abstr. 03-6-S96, p225, July.
3. Duffy, L.K. and Lai, C.Y. 1979. Chemical modification of the binding subunit of cholera toxin. Feb. Proc. Abstr. 3124, April.
4. Lai, C.Y., Cancedda, F. and Duffy, L.K. 1979. Cholera toxin subunit A1. Gross structure and active site. XIth International Congress of Biochemistry, Toronto, Canada, Abst. 03-4-S173, p207, July.
5. Duffy, L.K. and Lai, C.Y. 1980. Assembly of cholera toxin binding subunits (cholergenoid) -A crosslinking study. Fed. Proc. 39:2179.
6. Duffy, L.K., Kurosky, A., Lai, C.Y., Chang, D. and Peterson, J.W. 1981. Structural characterization of cholera toxin A subunit and its precursor. Fed. Proc. 40:1581.
7. Duffy, L.K. and Coppenhaver, D. 1981. Studies on the evolution of fibronectin. Comparison of amino acid compositions from vertebrate taxa. Amer. Zoologist 21:1041.
8. Fader, R.C., Duffy, L., Davis, C.P. and Kurosky, A. 1982. Purification and chemical characterization of type 1 pili isolated from *Krebsiella pneumoniae*. Amer. Soc. for Microbiology, Abstr. J4.

9. Coppenhaver, D.H., Buettner-Janusk, J., Dixon, J.D. and Duffy, L.K. 1982. Evolution of primate hemoglobins. Covalent structure of the  $\beta$ -globin chain of *L. Catta*. Fed. Proc. 41:2223.
10. Kurosky, A., Duffy, L.K. and Denney, R.M. 1982. Monoclonal antibodies to the "A" subunit of cholera toxin. Fed. Proc. 41:6548.
11. Thueson, D.O., Grant, J.A., Lett-Brown, M.A., Plank, D.E. and Duffy, L.K. 1983. Histamine releasing activity: Characterization and purification using HPLC. Fed. Proc. 42:2457.
12. Duffy, L.K. and Coppenhaver, D.H. 1983. Evolution of prosimian hemoglobins: Amino acid sequence of the  $\beta$ -globin chain of *Lemur variegatus*. Genetics. 104:523.
13. Duffy, L.K., Abraham, C.R., Rassol, C.G., McCluskey, A.H. and Selkoe, D.J. 1983. Chemical modification studies of paired helical filaments. Biochemistry. 22:4A, Abstr. 100.
14. Selkoe, D.J., Abraham, C., Duffy, L.K. and Rassol, C.G. 1983. Unconventional properties of paired helical filaments in human neurons in aging and Alzheimer's Disease. Soc. for Neuroscience. 9(1):592, Abstr. 172.3.
15. Duffy, L.K., Abraham, C., Selkoe, D.J. and Kosik, K.S. 1983. Partial isolation and characterization of neurofilament from the pilot whale, *Globicephala melaena*. Amer. Zool. 23:904, Abstr. 140.
16. Kosik, K.S., Duffy, L.K., Dowling, M., Abraham, C., McCluskey, A. and Selkoe, D.J. 1984. A monoclonal antibody against MAP2 recognizes Alzheimer neurofibrillary tangles in situ, but not after isolation. Neurology. 34:124.
17. Selkoe, D.J., Abraham, C., Rassol, C.G., McCluskey, A. and Duffy, L.K. 1984. Monoclonal antibodies to Alzheimer paired helical filaments produced by rat-mouse hybridomas. Amer. Assoc. Neuropath. Abstr. 161.
18. Duffy, L.K., Kurosky, A. and Lai, C.Y. 1984. Predicted structure of cholera toxin A subunit: Functional areas defined by helical regions. Biochemistry 23:3355, Abstr. 49.
19. Lai, C.Y., Duffy, L.K., Xia, Q.C. and Chang, D. 1984. The primary structure of the cholera toxin active subunit A1. Fed. Proc. 43:1867.
20. Kosik, K.S., Bakalis, S., Galibert, L., Selkoe, D.J. and Duffy, L.K. 1984. Age-related modifications in MAP2. (Soifer, C., ed) Ann. N.Y. Acad. Sci.
21. Selkoe, D.J., Abraham, C.R. and Duffy, L.K. 1985. Purification by flow cytometry of amyloid fibers in Alzheimer's Disease. Transactions of the Amer. Soc of Neurochemistry. 16:165.
22. Kosik, K.S., Selkoe, D.J., Pierce, M. and Duffy, L.K. 1985. Electroelution and amino acid composition of microtubule-associated protein 2. Transactions of the Amer. Soc. for Neurochemistry. 16:167.
23. Selkoe, D.J., Abraham, C., Kosik, K. and Duffy, L.K. 1985. Aging of brain structural proteins. Intern. Soc. of Neurol. Abstr. 25.
24. Kosik, K.S., Selkoe, J.J. and Duffy, L.K. 1985. A hydrophobic domain of microtubule-associated protein 2 shares antigens with Alzheimer neurofibrillary tangles. Soc. for Neuroscience Abstr. 11, Abstr. 4.3.

25. Selkoe, D., Abraham, C. and Duffy, L.K. 1985. Comparative protein chemical studies of senile plaque amyloid fibers and paired helical filaments in Alzheimer's Disease. Soc. for Neuroscience Abstr. 11, Abstr. 4.4.
26. Duffy, L.K. and Lai, C.Y. Comparison of the predicted secondary structure of cholera toxin A subunit and fragment A of diphtheria toxin. Biochemistry. 24:3360, Abstr. 30.
27. Duffy, L.K., Genaux, C.T. and Florant, G.L. 1985. Characterization of the hemoglobins isolated from hibernators. Amer. Zool. 25:48A, Abstr. 2.53.
28. Duffy, L.K. 1986. Increasing student participation in the DCE's General Chemistry Course. R.C.C.'s Teaching From Strengths in Conference, May 29-30.
29. Selkoe, D., Berman, M., Abraham, C., \*Galibert, C., Kates, J. and Duffy, L.K. 1986. Low MW proteins isolated from senile plaque amyloid in Alzheimer's Disease. Transactions of the Amer. Soc. for Neurochemistry. 17:288, Abstr. 392.
30. Selkoe, D.J., Berman, M., \*Galibert, C., Abraham, C. and Duffy, L.K. 1986. Comparative protein analysis of senile plaque amyloid and paired helical filaments in Alzheimer's Disease. Neurology. 36:224.
31. Pearson, S.D., Merryman, C.S., Duffy, L.K. and Kurosky, A. 1986. Cholera toxin A subunit: Monoclonal antibodies and biological activity. 8th ACS Rocky Mountain Regional Meeting.
32. Selkoe, D.J., \*Galibert, L., Podlisny, M. and Duffy, L. 1986. Normal human plasma proteins share antigenic amyloid fibrils in Alzheimer Disease. Soc. for Neuroscience, Abstr. 3.5.
33. Selkoe, D.J., Kosik, K., German, M., \*Galibert, L., Abraham, C. and Duffy, L. 1986. Comparative studies of extracellular amyloid fibers and intraneuronal paired helical filaments in Alzheimer's Disease. Massachusetts Alzheimer Disease Research Center Forum, May 14.
34. Selkoe, D.J., Podlisny, M.B., Saperstein, A. and Duffy, L.K. 1987. Antibodies to senile plaque amyloid in Alzheimer's Disease recognize specific proteins in normal human plasma. Neurology. 37:224.
35. Duffy, L.K., Ehrhardt, M.M., Buettner-Janusk, J. and Coppenhaver, D.H. 1987. Structural differences responsible for the hemoglobin phenotype of the gentle lemur, *Haplorhina gresius* show a two component hemoglobin phenotype after alkaline electrophoresis. Fed. Proc. Abstr.
36. Joachim, C.L., Duffy, L.K. and Selkoe, D.J. 1987. Isolation and characterization of cerebrovascular amyloid (CVA) proteins in Alzheimer's Disease. J. Neuropath and Exp. Neurol. 47:396.
37. Kirschner, D.A., Inouye, H., Duffy, L.K., Sinclair, A. and Selkoe, D.J. 1987. X-ray diffraction analysis of synthetic polypeptide homologues of  $\beta$ -protein (A4) of Alzheimer's Disease. 9th Intern. Biophysics Congress, Israel.
38. Duffy, L.K. 1987. Molecular and protein chemical approaches to understanding the molecular pathology of Alzheimer's Disease. 38th Arctic Science Conference, Frontiers of Molecular Biology Symposium.
39. Sinclair, A., Duffy, L.K., Inouye, H., Gray, D., Rothschild, K.J., Selkoe, D.J. and Kirschner, D.A. 1987. Physical studies on synthetic polypeptide homologues of  $\beta$ -protein of Alzheimer's Disease. First Symposium of the Protein Society.



40. Selkoe, D.J., Saperstein, A., Podlisny, M., and Duffy, L.K. 1987. Antibodies to the amyloid  $\beta$ -protein detect a 80KD brain protein at higher levels in Alzheimer than normal cortex. Soc. For Neuroscience. p41.
41. Harrington, J.P., Florant, G., \*Reynolds, R. and Duffy, L.K. 1988. Comparative studies on the oxygen binding properties and the primary structure of ground squirrel hemoglobins. FASEB Abstr.
42. \*Luick, T.J., Feist, D., Porchet, A. and Duffy, L. 1988. 2-[125I]-Iodomelatonin labels Arctic rodent central nervous system melatonin receptors. 39th Arctic Science Conference Proc. p245.
43. \*Reynolds, R., Sauer, J., Duffy, L. and Harrington, J. 1988. Preliminary isoelectric focusing and amino acid analysis of salmon hemoglobins. 39th Arctic Science Conference Proc. p253.
44. Kirschner, D.A., Inouye, H., Fraser, P.E., Sinclair, A., Karthigasov, J., Rothschild, K.J., Frangione, B. and Duffy, L.K. 1988. Macromolecular assemblies of Alzheimer  $\beta$ -amyloid peptides. 46th Amer. Gerontol. Soc. Meeting. Abstr. A6.
45. O'Malley, M.V. and Duffy, L.K. 1988. Monoclonal antibodies against a synthetic peptide as a tool to study brain amyloid. 10th American Federation for Aging Research Meeting.
46. Duffy, L.K., \*Ping, S.W. O'Malley, M., Joachim, C.L. and Kirschner, D. 1989. Comparative immunochemical and protein biochemical studies of Alzheimer's amyloid  $\beta$ -protein and analogue peptides, ASBMB, J. Cell Biol. 107, Abstr. 3629.
47. Fraser, P., Inouye, H., Karthigasan, J., Duffy, L.K., Surewicz, W. and Kirschner, D.A. 1989. Biophysical studies on macromolecular assemblies of Alzheimer  $\beta$ -Amyloid peptides. Third Symposium of the Protein Society.
48. Vyas, S.B., Kirschner, D. and Duffy, L.K. 1989. Chemical modification of histidines in Alzheimer amyloid. Third Symposium of the Protein Society.
49. Duffy, L.K., \*Schoenheit, C., Luick, K., O'Malley, M. and Krohe, T. 1989. Fish Brains, Alzheimer Disease and depression, 40th Arctic Science Conference. Abstr. 35.
50. Duffy, L.K. 1989. Importance of Undergraduate Summer Research in Alaskan Education, 40th Arctic Science Conference. Abstr. 6.
51. Segal, B. Duffy, L.K., Kurilovitch, S.A., and Avksentyuk A. Alcoholic behavior and genetic predisposition. 8th Internat. Congress of Circumpolar Health.
52. Nguyen, J., Inouye, H., Halverson, K., Lansbury, P.T. and Duffy L.K. 1990. Twist and sheet: structural motifs of Alzheimer  $\beta$ -amyloid peptide, 10th International Biophysics Congress.
53. Vyas, S.B. and Duffy, L.K. 1990. Synthesis and characterization of a 20-residue analogue peptide of the  $\beta$ -sheet region of Alzheimer  $\beta$ -protein. 4th Symposium of the Protein Society, San Diego, CA. Abstr. T27.
54. Kirschner, D. A., Fraser, P. E. Nguyen, J., Inouye, H., Halverson, Lansbury P.T. and Duffy, L.K. 1990. Structure of Alzheimer amyloid peptide assemblies in vitro. Trans. Amer. Soc. for Neurochem. 21, Abstr. 51.

55. Ebbesson, S.O.E., Ostholm, T. Baskin, D., \*Ebbesson, L.O.E. and Duffy, L.K. 1990. Quantitative autoradiographic studies of T3 and IGF receptor binding and protein synthesis in the brains and pineal of Coho Salmon during smolt transformation. Soc. Neuroscience Abstr.
56. Duffy, L.K., \*Cascio, E, Porchet, A., Avksentyuk, A. and Segal, B. 1990. Biochemical profile of a northern alcohol abusing population. 40th Arctic Science Conf., AAAS.
57. Duffy, L.K. \*Luick, T.J., Vyas, S. and Zhao, X. 1991. Albumin binds to amyloid  $\beta$ -protein. 2nd Suncoast Workshop on the Neurobiology of Aging, April.
58. Vyas, S. and Duffy L.K. 1991. Characterization of aggregation in Alzheimer  $\beta$ -protein using synthetic peptide fragments on reverse-phase matrix peptide. 12th Amer. Peptide Symposium, Boston, MA. Abstr. 137.
59. Segal, B., Duffy, L.K., Kurilovitch, S.A. and Avksentyuk, A.V. 1991. Alaskan and Siberian studies on alcoholic behavior and genetic predisposition. Proc. 8th Intl. Congr. on Circumpolar Health.
60. Trask, S.L. and Duffy, L.K. 1992. Interleukin changes in Alaskan salmon brain: An Alzheimer's Disease model. 23rd American Society of Neurochem., Houston, March.
61. Duffy, L.K. 1992. North to Alaska: Undergraduate Summer Research at UAF. ACS Meeting, San Francisco, April 1992, Abstr. Nr. CHED-338.
62. Danilenko, K.V., Putilov, A.A., Russkikh, G.S. and Duffy, L.K. 1992. Daytime melatonin and serotonin in Seasonal Affective Disorder (SAD), 4th Annual Meeting Society for Light Treatment and Biological Rhythms, Bethesda, M.D. 4:23.
63. Levine, M.E. and Duffy, L.K. 1992. Melatonin and cortisol secretion in the Arctic: Effects of photoperiod on circadian rhythms and mood. 4th Annual Meeting Society for Light Treatment and Biological Rhythms, Bethesda, M.D. 4:27.
64. Thomasson, H.R., Khartonik, A.M., Avksentyuk, A., Duffy, L.K., Segal, B. and Li, T.K. 1992. Alcohol and aldehyde dehydrogenase frequencies in Eskimo, Native American and Siberian peoples. Alcohol. Clin. Exp. Res. 16:506.
65. Avksentyuk, A., Kurilovick, S., Segal, B., Duffy, L., Voevoda, M. and Thomasson, H. 1992. In: Medical Research, Russian Academy of Medical Sciences Siberian Branch, p11.
66. Vyas, S.B. and Duffy, L.K. 1993. Synthetic Alzheimer amyloid beta-peptides: Characterizing the role of synthesis fragments in in vitro aggregation. 13th Amer. Peptide Symposium Edmonton, Alberta, p758.
67. Zenteno-Savin, T., Castellini, M.A. and Duffy, L.K. 1993. Haptoglobin concentration in plasma from steller sea lions at Forrester Island and the Aleutian Islands, Alaska. Marine Mammal Meeting, Galveston, Texas, October.
68. Segal, B., Duffy, L., Avksentyuk, A. and Thomasson, H.R. 1993. Biobehavioral factors and drinking among Alaskan and Siberian Natives: Cross cultural collaborative research. Paper presented at the IX International Congress on Circumpolar Health, Reykjavik, Iceland, June.
69. Segal, B., Duffy, L., Avksentyuk, A. and Thomasson, H.R. 1993. Alcohol and aldehyde genotypes among Alaskan and Siberian Natives. Paper presented at the annual meeting of the American Public Health Association, San Francisco, CA, October.

70. Simons, C.M., Johnson, B., Duffy, L.K., Follman, E. and Kelley, J. 1993. Biochemical monitoring of bowhead whales caught off Barrow, Alaska: Serum protein and PCB levels. Presented at Environmental Protection of the Pacific - 4th International Symposium of the Conference APAUP.
71. Duffy, L.K., Segal, B., Avksentyuk, A. and Thomasson, H.R. 1994. Current studies on alcohol and aldehyde genotypes among Alaskan and Siberian Natives. 49th Northwest Regional Meeting of ACS, Abstr. 107.
72. Morrow, C. and Duffy, L.K. 1994. Preliminary studies on the characterization of cadmium binding proteins from arctic mammals. 49th Northwest Regional Meeting of ACS. Abstr. 150.
73. Duffy, L.K., Segal, B., Thomasson, H., Avksentyuk, A. and Putilov, A. 1994. In 45th Arctic Science Conf. Book 2, Abstr. 185.
74. Avksentyuk, A.V., Kurilovick, S.A., Nomolonova, N.Y., Ryabikov, A.N., Duffy, L.K., Segal, B. and Voevoda, M.I. 1994. Drinking, flushing, liver damage and ADH3 genotype in Chukota Natives (Siberia). *Alcoholism: Clin. Exp. Research* 18, N2-P. 58A.
75. Prichard, A.K., Roby, D.D., Duffy, L.K. and Bowyer, R.T. 1995. Pigeon Guillemots as bioindicators of nearshore ecosystem health. *Pacific Seabird Assoc.*
76. Bowyer, R.T., Duffy, L.K., Testa, J.W. and Faro, J.B. 1995. Effects of the Exxon Valdez Oil Spill on River Otters in Prince William Sound, Alaska. 8th Northern Furbearer Conference, Anchorage, Alaska, May 5.
77. Vyas, S.B. and Duffy, L.K. 1995. Evaluation of structural changes for synthetic  $\alpha$ -peptide solutions on coordination with aluminum (III) ions - a low field AL27 NMR and UV-CD spectroscopic study. Fourteenth American Peptide Symposium, Columbus, Ohio.
78. Duffy, L.K., Blajeski, A. and Bifelt, J. 1995. Porphyrins as comparative biomarkers to evaluate ecological effects of environmental contaminants. 46th Arctic Science Conference, AAA, Abstr. 208.
79. Zhao, X., Smith, S. and Duffy, L.K. 1995. Gasohol in Alaska: Odor detection with ethanol as an additive to Alaskan gasolines. 46th Arctic Science Conference, AAAS Abstr. 210.
80. Russkikh, G.S., Putilov, A.A., Danilenko, K.V. and Duffy, L.K. 1995. Relations between the pretreatment pattern of melatonin and reduction of self-rated depressive symptoms by light therapy. *Eur. J. Psychol. Assessment* 11, Suppl. 1:90.
81. Bodenstein, Y., Lim, D. and Duffy, L.K. 1996. Improved isolation of a 62KD glycoprotein from stereocilia using ponderosa pine pitch. *NIDCD Abstr.*
82. Duffy, L.K., Bowyer, R.T., Prichard, A. and Huffman, J. 1996. Global change: assessment and development of biomarkers for sentinel species in arctic and subarctic Alaska. 47th Arctic Science Conference, AAAS, Girdwood, AK p13.
83. Duffy, L.K. and Levine, M.E. 1996. Adaptation to high latitudes by man: Melatonin, tryptophan and behavior. Workshop on Response and Adaptation to the Environment. Research Triangle Park, NC, p32.

84. Prichard, A.K., Duffy, L.K., Bowyers, R.T. and Roby, D.D. 1997. Evaluation of pigeon guillemot nestlings as sentinels of nearshore oil pollution: Results of a controlled dose-response experiment. Pacific Seabird Association.
85. Duffy, L.K. and Bowyer, R.T. 1997. River otters in Alaska: Sentinel species for the measurement of effects of environmental contaminants. 4th Wildlife Society Conference, Aspen, CO, p97.
86. Ballackey, B., Bodkin, J., Bowyer, R.T., Dean, T., Duffy, L.K., Esler, D., Bartels, L., Jewett, S., McDonald, L., McGuire, D., O'Clair, C., Rebar, A., Snyder, P. and Van Blaricom, G. 1997. Mechanisms of Impact and potential recovery of nearshore vertebrate predators. Exxon Valdez Oil Spill Trustee Council, Restoration Workshop, Abstr. 025.
87. Bowyer, R.T., Duffy, L.K., Blundell, G.M., Dean, T.A., Jewett, S.C. and Stegeman, J. 1997. Continued exposure and physiological damage to river otters seven years after the Exxon Vandez oil spill. Amer. soc. Mammalogists Meetings Abstr.
88. Duffy, L.K., Prichard, A.K., Seiser, P., Blajeski, A., Bowyer, R.T., McGuire, D. and Roby, D.D. 1997. Assessment of haptoglobin as a biomarker for the health of pigeon guillemots in Kachemak Bay. Watersheds '97: Cook Inlet Symposium.
89. Hecker, M.K., Duffy, L.K., Blundell, G.M. and Bowyer, R.T. 1997. Preliminary studies on river otter fur as an indicator of pollution in Alaska. 48<sup>th</sup> Arctic Science Conference, AAAS, Valdez, AK.
90. Bodenstein, Y.A. and Duffy, L.K. 1997. Heat shock protein induction in nasal septum and bronchial epithelium of the human respiratory system after MTBE exposure. Pacific Conference on Chemistry and Spectroscopy, Riverside, CA.
91. Whittle, C.L., Clausen, T., Duffy, L.K. and Bowyer, R.T. 1997. Characterization of urinary pheromones in moose (*Alces alces gigus*). 48<sup>th</sup> Arctic Science Conference, AAAS, Valdez, AK.
92. Blundell, G.M., Bowyer, R.T., Duffy, L.K. and Kern, J.W. 1997. Comparison of research trapping techniques for the river otter (*Lutra canadensis*). 4<sup>th</sup> Wildlife Society Conference, Aspen, CO.
93. Clapp, K.L., Roberts, R.C., Duffy, L.K., Hu, Y., Irons, K. and Drew, K.L. 1998. Ultrastructural analysis of microdialysis-induced trauma in rat brain. J. Neurochem. 70, Abstr. 528C.
94. Drew, K.L., Osborne, P.G., Hu, Y., Covey, D.N., Katz, Z., Duffy, L.K. and Barnes, B.M. 1998. Determination of extracellular GABA during homeothermy and hibernation in striatum of arctic ground squirrels using quantitative microdialysis. J. Neurochem. 70, Abstr. 563A.
95. Bowyer, R.T., Blundell, G.M., Duffy, L.K., Dean, T.A., Jewett, S., Stegeman, J.J. and Ben-David, M. 1998. Chronic effects of the Exxon Valdez oil spill on river otters: Is recovery complete? Euro-American Mammal Congress, "Challenges in Holarctic Mammalogy", Spain 1998.
96. Bowyer, R.T., Blundell, G.M., Duffy, L.K., Dean, T.A., Jewett, S., Stegeman, J.J. and Ben-David, M. 1998. Chronic effects of the Exxon Valdez oil spill on river otters: Is recovery complete? Restoration Workshop of the Exxon Valdez Oil Spill Trustee Council, Feb., Anchorage, AK.
97. Ben-David, M., Bowyer, R.T., Duffy, L.K., Roby, D.D. and Schell, D.M. 1998. Social behavior and ecosystem processes: Effects of river otters' latrine sites on nutrient dynamics of terrestrial vegetation. Annual Meeting of the Northwest Section of The Wildlife Society, Spokane, WA.

98. Whittle, C.L., Clausen, T., Duffy, L.K. and Bowyer, R.T. 1998. Characterization of urinary pheromones in moose. ACEMS (Association of Chemoreception Science).
99. Scofield, E., Duffy, L.K., Patton, M. and Bowyer, R.T. 1998. Heat shock proteins as indicators of stress in Alaskan fish. Abst 135, p67. Norm 98: 53<sup>rd</sup> Northwest Regional ACS meeting, Paseo WA.
100. Isbell, M. Duffy, L.K., Ricker, J. and Gordian, M.E. 1998. Measurement of benzene and toluene in indoor air in the Alaskan arctic and correlation to urinary biomarkers for non-occupational exposures. 1<sup>st</sup> International Symposium on Issues in Environmental Pollution, Denver, CO Aug 23-26, 1998.
101. Bowyer, R.T., Blundell, G.M., Duffy, L.K., Dean, T.A., Jewett, S., Stegeman, J.J. and Ben-David, M. 1998. Chronic effects of the Exxon Valdez oil spill on river otters: Is recovery complete? 5<sup>th</sup> Annual Conference of the Wildlife Society, Buffalo, NY.
102. Ben-David, M., Bowyer, R.T., Duffy, L.K., Roby, D.D. and Schnell, D.M. 1998. Social behavior and ecosystem processes: effects of river otters' latrine sites on nutrient dynamics of terrestrial vegetation. Annual meeting of The Northwest Seciton of The Wildlife Society, Spokane, WA.
103. Blundell, G.M., Bowyer, R.T., Kern, J.W. and Duffy, L.K. 1998. Capturing river otters: a comparison of Hancock and leg-hold traps. 78<sup>th</sup> Annual Meeting of the American Society of Mammalogists, Virginia Tech University, Blacksburg, VA.
104. Ben-David, M., Bowyer, R.T., and Duffy, L.K. 1998. Responses of river otters to oil contamination: a controlled study of biological stress markers, diving physiology, and foraging success. Restoration Worksshop of the Exxon Valdex Oil Spill Trustee Council, Anchorage, AK Nov 4-6, 1998.
105. Duffy, L.K., Scofield, E., Rodgers, T., Patton, M. and Bowyer, R.T. 1998. Baseline levels of mercury and the stress protein Hsp 70 for fish from the Yukon-Kuskokwim Delta Region of Western Alaska. 216<sup>th</sup> ACS National meeting, Abst. 065, Boston, MA August 23-27.
106. Duffy, L.K., Ackley, C.J., Crane, P.J. and Hecker, M.K. 1999. Baseline levels of atmospheric mercury in Alaska. Electric Utilities Environmental Conference, Tucson, AZ Jan 11-13.
107. Clapp, K.L., Smith, M.A., Perry, G. and Duffy, L.K. 1999. Melatonin has both antioxidant and pro-oxidant properties in the mouse brown slice model of ischemia. Amer. Soc. Neurochemists meeting, New Orleans March, 1999.
108. Bowyer, R.T., Blundell, G.M., Duffy, L.K., Dean, T.A., Jewett, S.C., Stegeman, J.J. and Be-David, M. 1999. Chronic effects of the Exxon Valdez oil spill on river otters: Is recovery complete? Legacy of an Oil Spill: 10 Years After the Exxon Valdez. EVOS meeting, Anchorage, AK March 24-26.
109. Duffy, L. 1999. Partnerships with high school teachers in environmental sciences: a research and educational opportunity in Alaska. Partners in Science Conference (Sponsor: Research Corp.) Tucson, AZ January 15, 1999.
110. Ben-David M., Bowyer, R.T. and Duffy, L.K. 1999. Responses of river otters to oil contamination: A controlled study of biological stress markers and foraging success. Legacy of an Oil Spill – 10 years after Exxon Valdez, March 24-2, 1999 Anchorage, AK.

111. Duffy, L.K., Bowyer, R.T., Prichard, A., Seiser, P., McGuire, D. and Roby, D. 1999. Development and assessment of haptoglobin for a sentinel species, the pigeon guillemot (*cepheus columba*). In: Focus on the Future: Alaska Environmental Studies. Proceeding of the MMS Seventh Information Transfer Meeting, Jan. 19-21, 1999, p38.
112. Drew, K.K., Clapp-Lilly, K.L., Roberts, R.C., Duffy, L.K., Irons, K.P. and Hui, Y. 1999. An ultrastructural analysis of tissue surrounding a microdialysis probe. Hibernational Conference, Colorado.
113. Horrell, S. and Duffy, L.K. 1999. An environmental monitoring experiment: detection of mercury in feathers of Alaskan birds. 50<sup>th</sup> Arctic Science Conference "Science in the North: 50 Years of Change." Denali, AK Sept. 19-22, 1999.
114. Taylor, C., Duffy, L.K., Plumley, F.G. and Bowyer, R.T. 1999. Comparison of spectro-fluorometric and HPLC methods for the characterization of faecal prophyrin profiles in river otters (*Lutra canadensis*). 20<sup>th</sup> Annual SETAC Meeting, Philadelphia, PA Nov 14-18, 1999.
115. Duffy, L.K. and Clausen, T. 1999. Graduate student involvemenet in chemical education outreach at the University of Alaska Fairbanks.
116. O'Hara, T., Norton, D., Kassam, K-A, Muir, D., Follmann, E., Dehn, L., Hoekstra, P. and Duffy, L.K. 1999. Human and Chemical Ecology of Arctic Pathways by Marine Pollutants. CIFAR Arctic Research Workshop, PMEL. Seattle, WA.
117. Isbell, M., Duffy, L.K., Ricker, J., and Gordian, M.E. 2000. Environmental Chemistry, Indoor Engine Storage and Benzene Above the 64<sup>th</sup> Latitude. 219<sup>th</sup> ACS Meeting, San Francisco, , March 28-30, 2000.
118. LeBlond, J.B. and Duffy, L.K. 2000. Comparison of Microtox Chronic Assay with a Algal Assay for the Toxicity Assessment of Exposure to Total Dissolved Solids in Freshwater Systems. 219<sup>th</sup> ACS Meeting, San Francisco, March 28-30, 2000.
119. Taylor, C., Duffy, L.K. and Bowyer, R.T. 2000. Profiles of Fecal Porphyrins in River Otters Following the Exxon Valdez Oil Spill. Mammalogy Society meeting, University of New Hampshire, June, 2000.
120. Clapp-Lilly, K.L., Smith, M.A., Perry, G. and Duffy, L.K. 2000. The Effects of Melatonin on Oxidative Stress in a Brain Slice Model of Stroke and Alzheimer's Disease. Amer. Soc. Neurochemists meeting, Chicago, March, 2000.
121. Dehn, L.A., Follmann, E.H., Duffy, L.K., Hoekstra, P.F. and O'Hara, T.M. 2000. Heavy metal concentration in ringed seal, bowhead and beluga whale tissues compared by trophic level as determined by carbon and nitrogen isotope ratios. 21<sup>st</sup> Annual SETAC Meeting, Nashville, TN, November, 2000.
122. Rothschild, R.F.N. and Duffy, L.K. 2001. Methylmercury in Alaskan Yup'ik Eskimo. Abst 616, 221 ACS National Meeting, San Diego, CA, April 1-5, 2001.
123. Duffy, L.K. 2001. National Certification of Chemists and Chemical Engineers: Why it's not working in colleges and universities. Abst 19; 221 ACS National Meeting, San Diego, CA, April 1-5, 2001.
124. Dehn, L.A., Follmann, E.H., Duffy, L.K., Bratton, G.R., Woshner, V.M., Haekstra, P.F. and O'Hara, T. 2001. Heavy metal concentration in ringed seal, bowhead and beluga whale tissues

- composed by trophic level as determined by carbon and nitrogen isotope ratios. AMAP Workshop on Heavy Metals, McLean, VA June 2001.
125. Naidu, A.S., Kelley, J.J., Zhang, X., Jewett, S.C., Duffy, L.K., Dasher, D. and Kennish, J.M. 2001. Total and methylmercury in adult salmon and selected freshwater fish from rivers opening into the East Bering Sea, Alaska. AMAP Workshop on Heavy Metals, McLean, VA June 2001.
  126. Beckett, K.J., Bursian, S.J., Duffy, L.K., Patterson, J.S., and Aulerich, R.J. 2001. Effects of dietary exposure to weathered Prudhoe Bay crude oil in ranch-raised mink (*Mustela vison*). 22<sup>nd</sup> Annual SETAC Meeting, Baltimore, MD November 2001.
  127. Godduhn, A. and Duffy, L.K. 2002. Health related research in the Yukon River water-shed: a bibliography and overview of research and research needs. AMAP Meeting TROMSOE, Norway January 2002.
  128. Rothschild, R.F.N. and Duffy, L.K. 2002. Comparison of mercury in selected subsistence foods from Western Alaska. 53<sup>rd</sup> Arctic Science Conference, September 2002.
  129. Godduhn, A.R. and Duffy, L.K. 2002. Environmental and human health related research in the Yukon River watershed: A bibliography and overview of research with suggestions for research needs related to discovering endocrine disruption. 53<sup>rd</sup> Arctic Science Conference, September 2002.
  130. Dunlap, K.L., Creed, M., Ma, D., Mathews, E., Tirrell, P. and Duffy, L.K. 2002. Comparison of total antioxidant studies in berries and sled dogs. 53<sup>rd</sup> Arctic Science Conference, September 2002.
  131. Duffy, L.K. 2002. Building an environmental chemistry educational program at a small university. AIC meeting: The Future of Chemistry, Boston, Nov 2002.
  132. Dehn, L.A., Sheffield, G., Follmann, E.H., Duffy, L.K., Bentzen, T.W., Bratton, G.R., Woshner, V.M., Hoekstra, P.F., and O'Hara, T.M. 2002. Feeding ecology of Arctic phocids – implications for heavy metal dynamics. 53<sup>rd</sup> Arctic Science Conference, American Association for the Advancement of Science (Arctic Division), Fairbanks, Alaska, Sept 18-21, 2002.
  133. Whittle, C.L., Bowyer, R.T., Drew, K., Preti, G. and Clausen, T. 2003. Responses of female moose to fractionated urine of rutting male moose. Abst. 78897, ACHEM, Florida, April 2003.
  134. Gerlach, S.C., Duffy, L.K., and Murray, M.S. 2003. Assessing mercury level in ancient and modern caribou: Implications for community and ecosystem health. Canadian Archaeological Assoc.
  135. Dunlap, K.L., Reynolds, A.J. and Duffy, L.K. 2003. Attenuation of oxidative stress in sled dogs supplemented with blueberries. 32<sup>nd</sup> AGE Meeting: Nutritional Modulation of Aging and Age-Related Diseases. Abst 53 p22.
  136. Dehn, L.A., Sheffield, G., Follmann, E.H., Duffy, L.K., Woshner, V.M. and O'Hara, T.M. 2003. Age and diet related distribution of heavy metals in renal and hepatic tissues of ringed bearded and spotted seals harvested in Alaska. Marine Mammal Conference, Greensboro, NC.
  137. Duffy, L.K., Gerlach, C., and Murray, M. 2003. Preliminary comparison of Hg levels in ancient and modern Alaskan arctic caribou. 6<sup>th</sup> EUEC, Abst. F, page 20, Tucson, AZ.

138. Whittle, C.L., Bowyer, R.T., Duffy, L.K., Preti, G. and Clausen, T.P. 2003. Solid phase microextraction headspace analysis of urinary volatiles from adult male moose. American Soc. of Mammalogists, June 2003.
139. Beckett, K.J., Duffy, L.K. and Bursian, S.J. 2003. Weathered crude oil causes reproductive dysfunction in mink (*Mustela vison*). 24<sup>th</sup> Annual SETAC Meeting, Austin, TX, October 2003.
140. Schamel, D., Gordon, L., Drake, J., D'Auria, J., Duffy, L., and Stroup, B. 2003. Inspiring the next generation of elementary teachers using layer cakes, gumdrops and owl pellets. 54<sup>th</sup> Arctic Science Conference, Fairbanks, AK September 2003.
141. Whittle, C.L., Bowyer, R.T., Drew, K., Duffy, L.K., Preti, G. and Clausen, T.P. 2004. Responses of femal moose to fractionated urine of rutting male moose. Wildlife Society Conference, May 2004.
142. Duffy, L.K. and Bowyer, R.T. 2004. Biomarkers of crude oil contaminants in sentinel species in cold regions. Fairbanks, AK, May 2004.
143. Erickson, K., Kelley, J., Duffy, L.K., and Mahootian, F. 2004. Engagement and UAF SENCER Project. Bridging the Poles Workshop, New York, June 2004.
144. Griffeth, L., Soboleff, J., Kelley, J., Sonwalkar, V., Barnes, D., Duffy, L., and Dasher, D. 2003. Potential of an "Electronic Nose" to detect and monitor environmental contaminants. 54<sup>th</sup> Arctic Science Conference, Fairbanks, AK September 2003.
145. Duffy, Lawrence K. 2003. Use of an integrated food-web bioindicator based design for environmental monitoring of the Exxon Valdez oil spill. 54<sup>th</sup> Arctic Science Conference, Fairbanks, AK, September 2003.
146. Rothschild, R. and Duffy, L.K. 2003. Mercury levels from the brains and muscle of birds which are used as subsistence foods in Western Alaska. 54<sup>th</sup> Arctic Science Conference, Fairbanks, AK, September 2003.
147. Dehn, L., Rosa, C., Follman, E.H., Duffy, L.K., Bratton, G.R., and O'Hara, T.M. 2004. Stable isotope and heavy metal status of Inuit hunted bowhead and beluga whales in Alaska and gray whales in Chukotka. Arctic Science Conference, September 2004.
148. Murray, M.S., Duffy, L.K., Gerlach, S.C., and Hirons, A.C. 2005. Linking the past to the present and planning for the future: human and ecosystem health in the Gulf of Alaska. International GLOBEC Symposium, Climate Variability and Sub-Arctic Marine Ecosystems, Victoria, B.C., Canada, May 2005.
149. Murray, M.S., Gerlach, S.C., and Duffy, L.K. 2005. Climate change, marine systems and community health in the Gulf of Alaska: Bridging gaps between the North and South and the past and future. Intern. Human Dimensions Conf, Bonn, Germany 2005.
150. Duffy, L.K. 2005. Mercury and Food: Natural persistence in the Alaskan food web. NORM-ACS 2005, Abst 28
151. Duffy, L.K., Murray, M. and Gerlach, S.C. 2005. Mercury, Alaska and archaeological chemistry. NORM-ACS 2005, Abst 58.



152. Dunlap, K., Reynolds, A. and Duffy, L. 2005. Cholesterol, triglycerides and aging in sled dogs in aging: Mechanisms and prevention. 34<sup>th</sup> American Aging Assoc., Oakland, CA June 2005.
153. Volz, C., Powers, C., Barger, J., Kossen, D., Goehfeld, M., Barnes, D., Duffy, L., Jewett, S., Johnson, M., Unsworth, M. and Vyas, V. 2005. The CRESP Amchitka Expedition: A model for multi- and inter-disciplinary research into radionuclide contamination of the marine environment. NATO Advanced Research Scientific Research Workshop, Scientific Networking and The Global Health Supercourse for the Prevention of Threat from Man-Made and Natural Disasters, August 8-10, Kaunas, Lithuania.
154. Duffy, L.K., Erickson K. and Kelley, J.J. 2005. Bringing science education for new civic engagements and responsibilities to UAF. 56<sup>th</sup> Arctic Science Conference, Kodiak, AK, Abst 16
155. Shi, B., Duffy, L.K., Liang, H. and Kuhn, T. 2005. Study on the scaffolds of artificial joints. 56<sup>th</sup> Arctic Science Conference, Kodiak, AK, Abst 43.
156. Burger, J., Duffy, L., Gochfeld, M. and Kasson, D. 2005. Radionuclides in marine biota around Amchitka Island. 56<sup>th</sup> Arctic Science Conference, Kodiak, AK, Abst 4.
157. Hirons, A.C., Murray, M.S., Duffy, L.K., and Schaof, J. 2006. Using stable isotopes and mercury as tracers of paleoenvironmental change in the Gulf of Alaska. EOS Trans. AGU, 87(36) Ocean Sci. Meet. Suppl, Abst OS425-04 Honolulu, HI Feb 2006.
158. Duffy, L.K., Ebbesson, S., Harris, M., and Swazo, N. 2006. Bioethics and research ethics in the far north. IUH 13, Novosibirsk, Russia, June 2006.
159. Dunlap, K.L., Reynolds, A.J., Barnett, B., Tosini, G., Zanghi, B.M., and Duffy, L.K. 2006. Effect of latitude and exercise on diurnal and seasonal variations in melatonin. AGE meeting, Boston, June 2006.
160. Duffy, L.K. 2006. Noninvasive Environmental Monitoring of Hg as a global pollutant in Alaskan reindeer. 8<sup>th</sup> International Conf on Mercury as a Global Pollutant, Madison, WI S-160, p 508.
161. Ebbesson, S., Duffy L.K. 2007. Building Biomedical Research in Alaska: Focus on Diet and Nutrition. 57<sup>th</sup> Arctic Science Conference, Anchorage, AK abstract 29, September, Anchorage, Alaska.
162. Duffy, L.K., Dunlap, K., and Godduhn, A. 2007 Effect of climate on mental health: seasonality, diets, contaminants and exercise. 25<sup>th</sup> Alaska Health Summit, December, Anchorage, Alaska.
163. Duffy, L.K., Dunlap, K., Reynolds, A., Bult-Ito, A., Clapp, K., and Tosini, G. 2008 North Pacific Exposure: Neuroscience, Melatonin, and Behavioral Health in the North Pacific. Pacific Division AAAS Meeting, June 2008, Hilo, Hawaii.
164. Duffy, L.K., Godduhn, A., Fabbri, C and Middlecamp, C.H. 2008 Adapt and Adopt: an Interdisciplinary Nuclear Science Course. Western Alaska Interdisciplinary Science Conference. April 2008, Dillingham, Alaska.
165. Godduhn A., Duffy, L.K. and Hyslop, P. 2007 The Northway Harvest and Health Project. Arctic Health Science Conference, Anchorage, Alaska, September 2008.

166. Ehnert, W., Duffy, L.K., Reynolds, A.J. 2008 A search for biochemical indicators of adaptation to exercise in Alaskan sled dogs. Arctic Science Conference, Fairbanks, Alaska, September 2008.
167. Duffy, L.K., The Responsible Conduct of Research Involving Indigenous Cultures, 2009, WAGS Meeting, Las Cruces, New Mexico, March 2009.
168. Duffy, L.K., Ihl, C. 2009 Mining, Metals and Baseline Monitoring: The Environmental Health of Reindeer and Muskox. WAISC 2, Nome, AK.
169. Duffy, L.K., Middlecamp, C.H., Godduhn A., Nicholas-Figueroa, L. and Fabbri, C.E. 2009. Because Science matters: engaging students in chemistry using traditional knowledge in Proceedings of "Lessons from continuity and change in the fourth international polar year", Fairbanks, AK.
170. Murray, M.S., Hiron, A.C., Duffy, L.K., Schaaf, J.M. 2010. Proxies for Marine Ecosystem Change in the North Pacific. Ocean Sciences 2010, February, Portland, OR.
171. Duffy, LK, Middlecamp, CH, Godduhn, A, Nicholas-Figueroa, L and Fabri, CE. 2009. Because Science matters: Engaging students in chemistry using traditional knowledge in Proceedings of "Lessons from Continuity and Change in the Fourth International Polar Year, Fairbanks, AK.
172. Duffy, LK, Nicholas-Figueroa, L, Dunlap, KL. 2010. Involvement of cytokine IL-1ra in regulating the secretion of VEGF in SH-SY5Y neuroblastoma cells. Society for Neuroscience annual meeting.
173. Ma, Y, Wu, S, Duffy, LK (2010) Effects of hyperoxia on brain tissue oxygen tension in non-sedated, non-anesthetized Arctic ground squirrels. Society for Neuroscience annual meeting.
174. Duffy, LK, Nicholas-Figueroa, L, Dunlap, KL. (2010) Involvement of cytokine IL-1ra in regulating the secretion of VEGF in SH-SY5Y neuroblastoma cells. AAAS Arctic Division Arctic Science Conference
175. Duffy, LK and Van Doren, G. (2011) Science Education in rural America: SENCER-related learning outcomes and attitudes in Chemistry courses for non-majors. AAAS Pacific Division, AAAS, San Diego, CA.
176. Duffy LK and Ihl, C (2011) Vulnerability and Stewardship: Monitoring the Legacy of Mining in the Arctic. AAAS Arctic Division Arctic Science Conference. Dillingham, AK.
177. Duffy, LK (2012) Biocomplexity of Ecosystems in the North as a Framework for Place-based Education. WAISC, Dillingham, AK.
178. Loring, P, Duffy, LK (2012). Managing Environmental Risks: MeHg Contamination in Subsistence Fish and the Case for a place-Based Approach. 15<sup>th</sup> International Congress on Circumpolar Health, Fairbanks, AK.
179. Duffy, L, Dunlap, K, Reynolds, A, Gerlach, C. (2012) Sled Dogs as Indicators of Climate Change and resultant Contaminant Fate and Transport Along the Yukon River. 15<sup>th</sup> International Congress on Circumpolar Health, Fairbanks, AK.

180. A Godduhn, Marunde, C, Hyslop, P, Gallen, R, Fix, J, Duffy, L (2012). The Northway Wild Food and health project: a Pilot Study of Local Resources, Their Uses, and health Along the Alaska Highway. 15th International Congress on Circumpolar Health, Fairbanks, AK.
181. L. Duffy, P Loring, K Dunlap, A Reynolds (2013) Resilience and Adaptability: Weighing the risks and benefits of fish consumption in rural Alaska. Energy, Utilities and Environment Conference (EUEC, 2013) Phoenix, AZ.
182. L.Duffy, B. Taylor, T. Raddenbaugh, L Nicholas-Figueroa, L Hoferkamp, MA Lila, K Dunlap, A Godduhn, C Middlecamp. Arctic Environmental Science and Biology Education. Vision and Change Conference, Washington DC. August 2013.
183. L. Duffy. Improving Science Education in Rural America: Screens to Nature. Bioexploration Beyond the Field Laboratory, Curriculum, Clinical and Commercial (USDA Higher Education Challenge Workshop) Kannapolis, NC July 2013.
184. L Duffy, P Loring, K Dunlap, S. C. Gerlach, and D. Tamabayeva. Biocomplexity & Resilience along the Yukon Watershed: a case study testing the new integrated framework for environmental health and security. Alaska Forum on the Environment. Anchorage, AK. February 2014.
185. L Duffy. Estuaries as Complex Watershed Systems: two case studies. Alaska Forum on the Environment. Anchorage, AK. February 2014.
186. L Duffy, K Dunlap, L Nicholas-Figueroa, C Middlecamp. Sustainability in the chemistry curriculum: Using climate change to broaden boundaries. American Chemical Society. San Francisco, CA. August 2014. ACS Meeting August 2014.
187. L Duffy, UArctic as a Research and Education Partnership, Western Association of Graduate Schools, Anchorage, AK 2015.
188. L Duffy, Disadvantaged Students: Mentoring and Place-based Engagement in Alaska ACS Meeting, Denver, CO, 2015.
189. L Duffy, Complexity and Uncertainty in Ecosystem Risk Assessment, Alaska Forum on the Environment, Anchorage, AK 2015