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Current Positions

Vice Provost for Graduate and Postdoctoral Affairs and Dean of the Graduate School,
Texas Tech University, Lubbock, TX
Professor, Department of Biological Sciences, Texas Tech University, Lubbock, TX

Education

Ph.D. University of California—Berkeley (Zoology)
M.A. Humboldt State University, Arcata, CA (Biology)
A.B. Humboldt State University, Arcata, CA (Zoology)

Faculty Appointments

2014-present Professor of Biology, Texas Tech University, Lubbock, TX
2009-2014 Jordan A. Engberg Presidential Professor, North Dakota State University, Fargo, ND
1999-2014 James A. Meier Professor, North Dakota State University, Fargo, ND
1997-2014 Professor of Zoology, North Dakota State University, Fargo, ND
1991-1997 Associate Professor of Zoology, North Dakota State University, Fargo, ND.
1985-1991 Assistant Professor of Zoology, North Dakota State University, Fargo, ND

Administrative Appointments

**2014-present Vice Provost for Graduate and Postdoctoral Affairs and Dean of the Graduate School,
Texas Tech University, Lubbock, TX**

Responsibilities:

- **University leadership.** Serve as a member of the senior management team of a large (ca. 41,000 students), comprehensive, Hispanic-serving Carnegie very high research (R1) engaged university (one of only 20 HSI R1s). Work collaboratively with other members of the leadership team to set institutional goals and priorities and to establish and implement strategic initiatives to accomplish identified goals. Devise/refine and conduct annual analyses of all academic departments/programs (based on various metrics of faculty productivity, program productivity, alignment with workforce demands, etc.) and make recommendations to executive leadership team for resource allocation based on program performance.
- **Leadership of graduate and postdoctoral education.** Provide overall leadership for graduate and postdoctoral education and related reporting units: The Graduate School, The Graduate Center, The Graduate Writing Center, The Office of Graduate and Postdoctoral Fellowships, The Office of Postdoctoral Affairs. The Graduate School is the home college (degree/certificate conferring) for all graduate students (100+ master's programs, 60+ doctoral programs, and 60+ certificate programs); develop and implement relevant policies and procedures for graduate students and postdoctorals.
 - Advocate to governmental officials (local, state, and federal) and to the general public about the importance of graduate education/higher education and their connectedness to workforce development, research and innovation, and economic development.
 - Lead institutional strategic planning of the graduate and postdoctoral enterprises that expand the

- size, scope, and quality of these enterprises and ensure that they are aligned and coordinated with the university's strategic and research plans.
 - Advance professional and career development of postdoctoral scholars and non-faculty doctoral researchers
 - Work collaboratively with other branches of TTU (Cleburne, El Paso, Fredericksburg, Marble Falls, McKinney, Junction, Waco, and San Jose, Costa Rica) as well as with other universities in the TTU system to expand access and opportunity to TTU academic programs; liaison with TTU system office on academic and other matters (e.g., government relations).
 - Lead state-mandated review and evaluation (including external evaluators) of all graduate programs
 - Work collaboratively to develop and implement measures to improve graduate program quality
- **Leadership of graduate interdisciplinary programs.** Provide academic leadership/administrative management for the university's graduate interdisciplinary programs--effectively a "college of interdisciplinary studies." Currently, there are ten graduate interdisciplinary programs (Arid Land Studies; Biotechnology; Cross Cultural Studies; Heritage and Museum Sciences; Interdisciplinary Studies/Sciences; International Affairs; Land Use, Management & Design; Renewable Energy; Wind Science and Engineering; Women and Gender Studies) that function like departments, each led by a director/chair, with distinct budgets, faculty (a combination of direct line reports to the Graduate School and affiliated faculty attached to other units, depending on program), staff, and courses. Chief responsibilities include the following:
 - Lead strategic planning for interdisciplinary programs
 - Foster the success of the teaching, research, and service/outreach/engagement activities of interdisciplinary programs through strategic allocation of resources, infrastructure enhancement, and support programs
 - Faculty & staff recruitment, development, and evaluation; continuous program review and assessment.
 - Lead and support enrollment and student success initiatives, including funding of assistantships/fellowships
 - Support, facilitate, and incentivize research and other scholarly activity, with emphasis on increasing extramurally-supported research of line-report faculty.
- **Strategic enrollment planning.** Develop and implement strategic graduate enrollment management plan; work collaboratively with senior leadership team to integrate graduate enrollment plan into overall university enrollment management plan for undergraduate, graduate, and international students with emphasis on increasing access and opportunity and participation by members of underrepresented groups.
 - Lead efforts to increase the diversity of the graduate student and postdoctoral populations
 - Cultivate community of inclusiveness and belonging among graduate students and postdoctorals
- **Academic innovation and program development.** Facilitate the development of new graduate programs (degree and certificate; delivered by all modes) that align with the strategic priorities of the university and with workforce demands; develop new ways to increase access to academic programs; facilitate the development of inter-institutional articulation and other agreements; cultivate and facilitate development of sponsor (government and NGO) agreements; Liaison with Texas Higher Education Coordinating Board staff on academic program matters
- **Faculty Success.** Review and make formal recommendations on all faculty dossiers for promotion and tenure (as part of university's formal P&T process); support and facilitate the development of external funding proposals by faculty, including training and multi-investigator inter/multi-/transdisciplinary grants; work collaboratively with the Office of the Provost to conduct new faculty orientation, chair academy, and other faculty development programs; create and implement programs that develop and hone mentoring skills of faculty; manage graduate faculty credentialing; review and approve applications for adjunct graduate faculty status
- **Student success.** Advance and support research and creative activity of graduate students in all disciplines; expand funding opportunities for graduate students; develop and implement programs and services that increase the success (program progression, degree completion) and wellness of graduate students; work collaboratively with the Office of the Provost, Vice Provost for Student Affairs, and others

to development, implement, and review effectiveness of student support services and initiatives for both graduate and undergraduate students (includes efforts aimed at increasing undergraduate retention and graduation rates); work collaboratively with the director of athletics and other athletics staff to enhance academic success of student athletes; work with athletes to expand vision of post-graduation career plans.

- **Community relations.** Foster community, corporate, and foundation relationships that benefit graduate and postdoctoral education
- **Alumni/Donor relations.** Lead alumni/donor relations and philanthropic efforts to support graduate education at the university.
- **Fiscal and personnel matters.** Manage all fiscal matters of the Division of Graduate and Postdoctoral Affairs (including state, federal, and private gift funds); supervise and facilitate review and professional development of division personnel (faculty, staff, students); review and approve all graduate student appointments; manage recruitment and hiring process for postdocs and non-faculty Ph.D researchers.

2011-2014 Associate Dean, College of Graduate and Interdisciplinary Studies, North Dakota State University, Fargo, ND

Responsibilities:

- Advocate graduate education at NDSU to US and foreign government officials, the general public, and prospective students; assist the dean with management of graduate and interdisciplinary programs (graduate and undergraduate)
- Lead domestic and international graduate student recruitment activities
- Foster alumni relations
- Manage all student affairs matters, including academic standing, misconduct, and appeals
- Devise and implement faculty and graduate student professional development programming; mentor faculty on career development, particularly development of their research programs and student/postdoc mentoring skills
- Plan, write/coordinate writing, and implement institution-based grants in support of graduate education
- Identify extramural graduate fellowship opportunities and facilitate applications
- Direct undergraduate research programs; serve as liaison to NCUR

2006-2014 Director/Chair, Cellular & Molecular Biology Program, NDSU, Fargo, ND

Responsibilities:

- Advocate program to internal and external constituents
- Coordinate recruitment and admission of students
- Manage program activities (course assignments, seminars, workshops, etc.)
- Lead curriculum development/revision
- Recruit, mentor, and evaluate faculty
- Evaluate student progress
- Work collaboratively with faculty and others to prepare and submit external applications to support interdisciplinary research in cell & molecular biology
- Manage program budget
- Develop and implement policies/procedures; prepare reports (program reviews, assessment reports, etc.)

1999-2003 State Director, North Dakota Experimental Program to Stimulate Competitive Research

Responsibilities:

- Lead state-wide research development program involving 11 North Dakota University System (NDUS) institutions and 5 tribally-controlled community colleges to enhance research infrastructure and to increase competitiveness for federal research grants; serve as advisor to ND governor for research development

- Serve as a spokesperson for basic scientific and engineering research in North Dakota to the Federal Executive Branch and Congress as well as to the State Legislature, State Board of Higher Education, NDUS System Office, and general public
- Consult regularly with DOD, DOE, EPA, NASA, NIH, NSF, USDA and other federal research agencies regarding research infrastructure development and research opportunities for ND scientists
- Plan, write/coordinate writing, and implement state-based infrastructure grants (DOE, EPA, NASA, NIH, NSF) and coordinate state activity for agency-based infrastructure programs (DOD, DOE)
- Work collaboratively with university administrations (presidents, vice presidents, deans) to review assets and identify areas of potential strength to develop into competitive thematic research areas and to develop human resources
- Facilitate recruitment of top-quality faculty (review applications, interview finalists, approve hiring recommendations for EPSCoR-supported faculty); conduct annual review of EPSCoR-supported faculty
- Foster development of faculty research programs and capabilities of students to conduct research in science, engineering, and mathematics; lead faculty development program for EPSCoR-supported researchers; mentor new faculty regarding career development and grant development
- Review productivity of thematic research clusters and faculty; adjust resource allocation as needed to maintain maximum productivity
- Develop partnerships with ND businesses and industries
- Facilitate transfer of university-developed technology to private sector
- Manage all fiscal matters of the program (including state, federal, and private sector funds); supervise and facilitate professional development of support personnel
- Build and maintain a comprehensive database of all ND-EPSCoR activities and participants
- Coordinate evaluations and recommendations regarding ND-EPSCoR programs; prepare reports for agencies, legislators, policy makers, and university constituents

1997-1999 Director, Biotechnology Program (interdisciplinary B.S.), NDSU, Fargo, ND

Responsibilities:

- Advocate program to internal and external constituents
- Coordinate recruitment and admission process of undergraduate students
- Recruit participating faculty
- Manage curricular (course development/revision) and program activities (course assignments, seminars, workshops, etc.)
- Arrange required student research activity; review and approve research plans
- Advise students; evaluate progress
- Work collaboratively with participating faculty to prepare and submit applications to support instructional and research activities in biotechnology
- Manage program budget
- Develop and implement policies/procedures; prepare reports (program reviews, assessment reports, etc.)

1991-1999 Director, Regulatory Biosciences Center, NDSU, Fargo, ND.

Responsibilities:

- Advocate center to internal and external constituents
- Lead and direct multi-investigator research center; coordinate research activities of participating faculty
- Plan, write/coordinate writing, and implement research/infrastructure grants
- Mentor junior faculty regarding career development, graduate student supervision, and grant writing
- Supervise support personnel and foster their professional development
- Manage all fiscal matters of the project; strategically allocate resources expand research capacity;

- supervise support personnel; coordinate multiuser instrument facility
- Coordinate program evaluations and prepare reports

1986-1990 Graduate Program Coordinator, Department of Zoology, NDSU, Fargo, ND

Responsibilities:

- Coordinate recruitment and admission process of graduate students
- Evaluate student progress
- Administer exams (e.g., master's comprehensive, doctoral qualifying)
- Develop policies and procedures for graduate programs
- Prepare reports (program reviews, etc.)

Special Initiatives

Co-led inaugural application for the Ronald E. McNair Postbaccalaureate Achievement Program from NDSU (one of the original 14 institutions funded upon the program's inception in 1989)

Co-led establishment of undergraduate biotechnology interdisciplinary program at NDSU (1988)

Member, NDSU General Education re-design committee (1992-1994); developed a framework that integrated cultural diversity, global perspectives, and writing across the curriculum into undergraduate general education (still in use)

Member, NDSU Student Success Task Force (2005-2006); led to a comprehensive initiative involving a first-year experience program, midterm reports/early intervention for students at risk, intensive transfer advising, introduction of professional advisors into academic programs, senior capstone experience, integration of living learning communities into dormitories, and dormitory faculty mentors.

Member, NDSU Strategic Plan Committee, 1999; 2009

Member, NDSU reaffirmation (HLC) report writing team (2003-2005; 2013-2014); TTU reaffirmation (SACSCOC) response writing team (2015) and midterm report committee (2019-2020)

Expanded Women in Science, Math, and Technology (WISMET) groups at NDSU and UND to foster a sense of community and collegiality and to increase understanding of climate issues and collect preliminary data to support applications to NSF ADVANCE program

Co-created and co-led implicit bias training and faculty and staff search committee training (NDSU)

Directed and expanded Nurturing American Tribal Undergraduate Research and Education (NATURE) Program to develop research infrastructure and research capacity at ND's five tribal colleges and to provide research and career development opportunities to tribal college students

Directed and expanded Science Bound Program aimed at providing summer research experience to advanced high school students and at expanding their vision of career options

Directed and expanded Advanced Undergraduate Research Award (AURA) Program aimed at providing undergraduates with research experience and at expanding their vision of career options

Member, NDSU NSF ADVANCE advisory committee; led to NDSU's successful ADVANCE grant that focused on 1) policy, 2) climate, and 3) recruitment.

Founding Advocate, Focus on Resources for Women's Advancement, Recruitment/Retention, and Development (FORWARD), funded by NSF ADVANCE (2009-2014); a training program aimed at improving campus climate that became a national model for ADVANCE

Member, TTU Strategic Plan Committee 2014 (led to development of the 2015-2020 university strategic plan), 2019 (led to development of the 2020-2025 university strategic plan); chair, research subcommittee 2019 (led to identification of the research themes, priorities, and development strategies in the university 2020-2025 strategic plan and in the research strategic plan)

Member, TTU Institute for Inclusive Excellence aimed at promoting an inclusive university community through workshops and other events; also advised the development of TTU's successful NSF ADVANCE grant

Member, state-wide Graduate Education Strategic Plan committee (THECB); developed Texas Graduate Education Strategic Plan

Member, student success task force (TTU)—a comprehensive effort aimed at improving undergraduate student success through predictive analytics, advising, intervention, devising alternate pathways, support services, and financial support.
Co-initiated department chair training (TTU)

Concurrent Visiting/Courtesy Appointments

2018	Visiting Professor, National Central University, Taiwan
2017	Visiting Professor, The Hebrew University of Jerusalem, Israel
2012	Visiting Professor, Sun Yat-Sen University, Guangzhou PRC
2012	Visiting Professor, Huazhong Agricultural University, Wuhan PRC
2011	Visiting professor, National Central University, Taiwan
2010	Visiting Professor, University of Denver
2009	Visiting Professor, Memorial University of Newfoundland, St. John's
2007, 2017	Visiting Professor, University of Bergen, Bergen, Norway
1998, 2013	Visiting Professor, University of São Paulo, São Paulo, Brazil
1996, 2004	Visiting Professor, University of Göteborg, Göteborg, Sweden
1994	Visiting Professor, University of Tokyo, Ocean Research Institute, Japan
1991	Visiting Scientist, National Institute of Aquaculture, Japan.
1991	Visiting Scientist, Humboldt State University, Arcata, CA.
1986, 1988	Visiting Scientist, National Marine Fisheries Service, Seattle, WA.
1985	Visiting Scientist, University of Washington, Seattle, WA

Honors and Awards

2011	Fellow, National Science Council, Taiwan
2010	Marisco Scholar, University of Denver
2009	Jordan A Engberg Endowed Presidential Professorship, NDSU
2008-present	Who's Who in America
2007	49 th Faculty Lectureship (university's highest faculty honor), NDSU
2007-present	Who's Who in the World
2006-present	Who's Who in Medicine and Healthcare
2003-present	Who's Who in Sciences Higher Education
2000, 2005	Who's Who Among America's Teachers
1999	James A. Meier Endowed Senior Professorship, NDSU
1998	James A. Meier Faculty Achievement Award, NDSU
1998	Fellow, Programa de Intercâmbio Internacional em Pesquisa e Pós-Graduação, Brazil
1996	Excellence in Research Award, NDSU College of Science and Mathematics
1994	Fellow, Japan Society for the Promotion of Science (JSPS)
1991-present	American Men and Women of Science
1991, 1994, 1995, 1998	Preferred Professor, NDSU Mortar Board
1983	Aubrey Gorbman Best Paper Award, American Society of Zoologists
1981-1985	California Sea Grant College Program Traineeship
1981	Humboldt State University, Biology Graduate Student Association Scholarship

Professional Development

Activities organized/led/presented

“Effective Advocacy” panelist, Council of Graduate Schools New Dean Institute, 2017, 2022
 “Advocacy Strategies: Graduate Education and the Public Good,” panel leader/panelist, Council of Graduate Schools Annual Meeting, 2014, 2021
 Building Research Infrastructure (panelist)
 Care and use of vertebrate animals (co-leader)
 Department Chair Training (co-leader)
 Developing human resources capabilities in science, mathematics, and engineering (leader)
 Engaging graduate students in advocacy,” panelist, Council of Graduate Schools Annual Meeting, Washington, DC, December 6, 2018
 “Futurists thinking in graduate education,” discussion moderator, Council of Graduate Schools Annual Meeting (virtual), December 2020
 Graduate centers: A hub for professional and career development and student/postdoctoral life activities, Big 12 Dean’s Conference, Fort Worth, TX, May 2015
 “Hot topic: Academic Integrity,” co-facilitator, Council of Graduate Schools Summer Workshop, Ottawa, Canada, 2015
 “Hot topic: Value and cost of graduate education,” co-facilitator, Council of Graduate Schools Summer Workshop, San Diego, CA, 2019
 “Hot topic: Preparing for the election,” co-facilitator, Council of Graduate Schools Summer Workshop, Boston, MA, 2024
 How to apply to graduate school (presenter)
 How to write a fellowship application (panelist; presenter)
 How to write a scientific paper (co-leader)
 How to prepare an oral presentation/poster for a professional conference (co-leader)
 How to write a grant (co-leader)
 Managing day-to-day operations, New Deans Institute, Council of Graduate Schools, Savannah, GA, July 2016
 “Public and private value of master’s education,” leader/panelist, Council of Graduate Schools Annual Meeting, Washington, DC., Dec 7-10, 2016
 Research and economic development (organizer)
 Research scientists and federal policy (panelist)
 Search committee training (Co-leader)
 Technology transfer (organizer)
 The role of research in universities (organizer)
 Why get a graduate education? (presenter)

Participant

Academic Leadership Summit
 Advanced Development for Deans and Academic Leaders
 Alumni relations and development
 Cooperative learning
 Development for Deans and Academic Leaders
 Effective Negotiation
 Interacting with the media
 International Advancement: Global Strategies for Alumni Relations and Fundraising
 Leadership training/goals and planning
 Legal issues in higher education
 New Dean Institute, Council of Graduate School
 Promotion, tenure, and evaluation
 Safe Zone
 Strategic planning
 Undergraduate research strategies, new curricula, and technologies
 University accreditation issues and best practices-HLC

Use of multimedia in the classroom
Use of unconventional vertebrates as models for biomedical research
Working with students with disabilities

Legislative Testimony

ND House Appropriations Committee (2000, 2002)
ND Senate Appropriations Committee (2000, 2002)

Media Appearances

FOX 34 (multiple occasions, 2014-present)
KAMC (multiple occasions, 2014-present)
KDSU (multiple occasions, 1996-2013)
KLBK (multiple occasions, 2014-present)
ND Public Radio (multiple occasions, 1999-2007)
NDSU Extension Radio (multiple occasions, 1992-2013)
PBS Campus News (1992)

Professional Affiliations and Activities

Professional Society Memberships/Affiliations

American Fisheries Society
Association of Texas Graduate Schools
Big XII Graduate Deans Council
Conference of Southern Graduate Schools
Council of Graduate Schools
Endocrine Society
Hispanic-serving Research Universities, graduate deans' affinity group
International Federation of Comparative Endocrinological Societies, Council member, 2009-present
International Society for Fish Endocrinology
North American Society of Comparative Endocrinology (Council member, 2017-present)
North Dakota Academy of Science (President, 1999-2000)
Society for Integrative and Comparative Biology (formerly American Society of Zoologists)[Chair, Graduate Student/Post-doctoral Affairs Committee, 1994-1996; Divisions of Comparative Endocrinology (nominating committee 1990-1991; chair, nominating committee, 1994, 2006; chair, Best Student Paper Award Committee, 1991-1993, 2006-7; program officer, 1996-1999; divisional chair elect, 2008-10; divisional chair, 2010-2012) and Comparative Physiology/Biochemistry]
Sigma Xi (NDSU Chapter President, 1993)

Professional Boards/Task Forces

American Society of Zoologists, Endocrine Disruptors Task Force (member)
Coalition of EPSCoR States (state representative, 1999-2003)
Council of Graduate Schools, Advisory Committee on Advocacy and Public Policy (member, 2016-2020; chair, 2021-2023; chair emeritus 2024-present)
Great Plains IDEA educational consortium (Board of Directors, 2021-2023)
International Committee on Salmonid Smoltification Nomenclature (member)

Liaison EDU (advisory board member, 2016-2018)
National Academy of Sciences/National Research Council, US National Committee for the International Union of Biological Sciences (member, 1997-2000)
Society for Integrative and Comparative Biology, “Grand Challenges” in endocrinology working group (member, 2010-2012)
Science Advisory Board, BioInformatics (member, 2016-present)
WindU (Board of Directors, 2020-present)

Grant Panelist

NIH-BSRG (NDSU, 1990-1993)
National Science Foundation, Integrative Animal Biology (1996-2002), Functional and Regulatory Systems (2005-2007), Integrative Organismal Systems (2008-2010; 2014, 2016), Graduate Research Fellowship Program (2013), NSF Research Traineeship (2020, 2021)
ND EPSCoR (1996-2003)
NDSU Research Council (1990-1993)
South Dakota Board of Regents (2009-2020)
US Department of Agriculture, Animal Growth (2001, 2003, 2007)
US Department of Education, Innovations, and Improvements (2005)

Grant Reviewer (ad hoc)

Hong Kong Research Grants Council
Israel Science Foundation
Maine Technology Institute
Medical Research Council of Canada
National Institutes of Health (NIH)
National Science and Engineering Research Council (Canada)
National Science Foundation (USA)
NDSU Grant-in-Aid Program
Norwegian Research Council
Sea Grant College Programs (California, Hawaii, Maryland, New Hampshire, Ohio, Oregon, and Texas)
US Department of Agriculture
US-Israel Binational Science Foundation

Editor/Editorial Board Member

Co-Editor-in-Chief, General and Comparative Endocrinology (2017-present)
Associate Editor, General and Comparative Endocrinology (2001-2016)
Associate Editor, Comparative Biochemistry and Physiology (2001-2014)
Associate Editor, Frontiers in Endocrinology (2010-2016)
Editorial Board, Biochemistry and Molecular Biology (2015-present)
Editorial Board, International Journal of Endocrinology (2008-present)

Journal Referee (ad hoc)

American Journal of Physiology
Aquaculture
Aquatic Living Resources
Biochemistry
Biological Bulletin
Canadian Journal of Zoology
Canadian Journal of Fisheries and Aquatic Sciences
Comparative Biochemistry and Physiology

Endocrinology
 Environmental Science and Technology
 Fish Physiology and Biochemistry
 Frontiers in Endocrinology
 Functional Ecology
 General and Comparative Endocrinology
 Hormones and Behavior
 International Journal of Biochemistry and Cell Biology
 Journal of Agricultural and Food Chemistry
 Journal of Comparative Neurology
 Journal of Comparative Physiology
 Journal of Endocrinology
 Journal of Experimental Biology
 Journal of Experimental Zoology
 Journal of Fish Biology
 Journal of Molecular Endocrinology
 Life Sciences
 Lipids
 Molecular and Cellular Endocrinology
 Neuroendocrinology
 Oecologica
 Physiological and Biochemical Zoology
 Proceedings of the National Academy of Sciences, USA
 Philosophical Transactions of the Royal Society
 Plos One
 Scientific Reports (a Nature research journal)
 The Progressive Fish-Culturist
 Transactions of the American Fisheries Society
 Veterinary Research Communication

Book/Chapter Reviewer (ad hoc)

Benjamin-Cummings
 Harcourt College Publishers
 McGraw-Hill
 Prentice-Hall
 Saunders College Publishing
 Times/Mirror-Mosby
 Thomson-Brooks/Cole
 Wadsworth/Thomson Learning
 W. C. Brown

Program Reviewer/Consultant

Aquaculture Program, North Dakota State University
 Biology Program, Texas A&M University, Corpus Christi
 Biotechnology Program, Humboldt State University
 Graduate Program, Department of Biology, Chinese University of Hong Kong
 Graduate Program, Department of Physiology, University of São Paulo, Brazil
 Graduate Programs (CGS consultation), Georgia State University
 Graduate Programs (CGS consultation), Louisiana State University
 Graduate Programs (CGS consultation), St. Louis University
 National Science Foundation, Directorate for Biological Science, Committee of Visitors
 SACS-COC (on-site review team): Florida State University, University of Tennessee

South Dakota Experimental Program to Stimulate Competitive Research (EPSCoR)

Professional Meeting (Co)Organizer

Midwest Regional Conference on Comparative Endocrinology, April 14, 1989 (Sponsored by the American Society of Zoologists).

Frontiers in Regulatory Biology, an NDSU Centennial Symposium, April 20, 1990

Physiology of Migratory Fish, International Congress on the Biology of Fishes, San Francisco, CA, July 1996.

A Tribute to Erika Plisetskaya: New Insights on the Function and Evolution of gastroenteropancreatic Hormones, organized for the Society of Integrative and Comparative Biology, Denver, CO, January 3-6, 1999.

Special Session in Honor of Howard A. Bern, organized for the Society of Integrative and Comparative biology, San Francisco, CA, January 3-7, 2013

17th International Congress of Comparative Endocrinology, Barcelona, Spain, 2013, International Program Committee Member

Third North American Society of Comparative Endocrinology Conference, Ottawa, Canada 2015, program committee member

18th International Congress of Comparative Endocrinology, Banff National Park, Alberta, Canada, 2017, International Program Committee Member

Western Association of Graduate Schools, Fargo, ND, March 30-April 2, 2014.

Big 12 Graduate Dean's conference, Fort Worth, TX, May 1-2, 2015

8th International Symposium on Fish Endocrinology: "Endocrinology of Growth," and "Endocrinology of Energy Balance," Gothenburg, Sweden, June 28-July 2, 2016.

7th World Congress on Molecular and Cell Biology, Xian, China, April 25-27, 2017, Scientific Advisory Committee

Big 12 Graduate Dean's conference, Lubbock, TX, April 13-14, 2023

19th International Congress of Comparative Endocrinology, Sendai, Japan, TBA, 2024, International Program Committee Member

Other

School (elementary, Jr. and Sr. High) and Girl/Boy Scout science demonstrations/presentations
State Science Fair, Judge (1987, 1989, 1992, 1996, 2004, 2005, 2006)

Provide advice to government natural resources agencies (e.g., Minnesota Dept. Natural Resources, ND Dept. Game and Fish, SD Dept. Game, Fish, and Parks, US Fish and Wildlife Service, US Geological Service) and to the general public on various issues related to nutrition/metabolism and to fish growth/aquaculture.

External reviewer for promotion/tenure (Canada, China, Japan, US, Taiwan)

University Governance and Service

Texas/Texas Tech University

National:

Great Plains IDEA Network (an educational consortium), Board Member, 2020-2024

WindU (an educational consortium), Board Member, 2018-present

State:

Graduate Education Advisory Committee, Texas Higher Education Coordinating Board, 2015-2021

Graduate Education Strategic Planning Subcommittee, Texas Higher Education Coordinating Board, 2016-2018

University:

Academic Partnerships Committee, 2017-present
Building Committee, Experimental Sciences Building II, Chair 2016-2019
Chair's Academy, discussion leader 2018-present
Dean's Council, 2014-present
Dean Search Committee (Library), chair 2020
Facilities Council, member 2022-present
Faculty Success Task Force, 2018-present
Fulbright Coordinating Committee, 2014-present
Graduate Council, chair 2014-present
International Advisory Committee, 2014-present
Library Committee, 2019-present
President's Ad hoc Honorary Degree Committee, 2015
President's Cabinet, 2015-present
Provost's Council, 2014-present
Research Advisory Council, 2014-present
SACS-COC Response Writing Committee, 2015, 2019, 2023
Undergraduate Strategic Enrollment Planning Committee, 2016-present
Undergraduate Student Success Task Force, 2016-present
University Strategic Planning Committee, 2014-2015; 2019-2020, chair, research subcommittee
Undergraduate Research Council, 2017-present

North Dakota/North Dakota State University

State:

Biomedical Research Infrastructure Network (BRIN) Steering Committee, 2000-2004
IDeA Network of Biomedical Research Excellence (INBRE) Steering Committee, 2004-2009
EPSCoR Steering Committee, 1996-2003
R&D Showcase Coordinating Committee, 2002, 2003

University:

Ad hoc (Provost's) Committee on Academic Integrity, member 2007, 2009
Ad hoc (Provost's) Committee on Promotion, Tenure, and Evaluation, member 1997-1998, 2009-2010
Assessment Committee, 2005-2009
Biotechnology undergraduate interdisciplinary program, steering committee member, 1991-1999; director, 1997-1999
Cell and Molecular Biology Program Steering Committee, member 1988-1990; 1995-1999; Chair, 2006-2014
Dean Review Committee, 2009-2010 (Human Development), 2012-2013 (Graduate School)
Dean Search Committee (Science and Math), member 1998-1999
Dean Search Committee (Science and Math), Chair 1999-2000; 2005-2006
Genomics Graduate Program Steering Committee, member 2004-2013
Graduate Council, member 1997-2000; 2011-2014
Internal Advisory Committee, NSF ADVANCE Program, 2009-2014
International Advisory Council, 2011-2014
Institutional Animal Care and Use Committee, member 2005-2013
Institution Biosafety Committee, 1997-2013
Radiation Safety Committee, 1991-1993
Research Council, member 1990-1993
Search Committee Training, Co-leader, 2010-2014
Space and Facilities Committee, member 1994-1997; 2008-2013

Standing Committee on Faculty Rights, member 2007-2014
Steinhaus-Rhinehart Scholarship Committee, chair 1996-2001
President's Council, 2001-2003
University Senate, 1991-1993

College:

Editor, College of Science and Mathematics Newsletter, 1989-2001
Facilities and Instrument Committee, member 1992-1995
Promotion, Tenure, and Evaluation Committee, member 1995-1997; chair 1997
Science Building Planning Committee, member 2007-2014
STEM classroom planning committee, 2009-2012
Student-Faculty Relations Committee, chair 1989-2001
Student Progress Committee, member 1991-1992

Department:

Assessment committee, 2005-2009
Cell/Developmental Biologist Search Committee, chair 1996-1997; 2005-2006; 2007-2008
Curriculum committee, Chair 1987-1990 (chief architect of undergraduate curriculum used for three tracks of zoology majors used 1987-2012; led semester conversion and undergraduate & graduate program reviews)
Executive Committee, 2007-2008
Graduate Program Review Committee, 2000-2001
Integrative Physiologist Search Committee, member 2006-2007
Planning Committee, member 2005
Physiological Genomicist Search Committee, chair 2008-2009
Promotion, Tenure, and Evaluation policy development committee (*ad hoc*), chair 2005-2006
Promotion, Tenure, and Evaluation Committee, chair 2006-2008; 2011
Public Affairs Committee, 2012-2014
Regulatory Biologist Search Committee, chair 2011-2012
Stevens Hall Renovation Committee, chair 1998

Other:

Co-developer and co-presenter, Faculty Search Committee Training, NDSU, 2009-2013
FORWARD (Focus on Resources for Women's Advancement, Recruitment/Retention, and Development, funded by NSF ADVANCE) Advocate, 2009-2017
FORWARD Ally Trainer, NDSU, 2009-2013
Safe Zone (LGBTQ+) Ally, 1999-2013

Community Service

Babe Ruth Baseball, coach 1998-2003
Boy Scouts of America--*Northern Lights Council*: Cubmaster Pack 235, 1996-1998; Merit Badge Councilor, 1997-2014; Assistant Scoutmaster Troop 214, 1998-2009; Day Camp Director, Two Rivers District, 1997-1998; Co-chair District Training Committee, 1998-2000; Chair, District Finance Committee, 1999-2001; District Friends of Scouting Committee, 1999-2009; District Award of Merit, 2000; Unit Commissioner, 2001-2009; *South Plains Council*: Merit Badge Councilor, 2014-present
Fargo Park District, baseball coach, 1991-2001
Fargo-Moorhead Athletics, football coach, 1999-2002
Fargo-Moorhead Soccer Association, coach, 1994-1999
Fargo-Moorhead YMCA, basketball coach, 1996-1999

Fargo North Raiders (Fargo Youth Hockey affiliate), Board of Directors, member, 2003-2005
Fargo Zoo Planning Project, Education Committee, member, 1993-1994
River Keepers (Red River), 1997-2014

Teaching Interests and Philosophy

My central teaching interests were in the areas of animal physiology, endocrinology, and biochemistry/molecular biology. I emphasized the experimental bases of fundamental concepts and strived to develop analytical and critical thinking in all courses. I have taught the following courses, which ranged from large introductory courses to small graduate topical seminars:

Animal Physiology
Cell Physiology
Endocrinology
General Biology
Graduate Seminar (topics: “chemical ecology,” “environmental endocrinology”)
Molecular Endocrinology
Physiological Ecology
Senior seminar (capstone experience)
Skills for Academic Success (first-year experience)

Research Interests

My area of research is comparative animal physiology/biochemistry and endocrinology. My laboratory uses integrative approaches (e.g., physiological, cellular, biochemical, genomic) to investigate regulatory phenomena. Current work examines the structure, biosynthesis, function, mechanism(s) of action, and evolution of hormones (and their receptors) involved with the regulation of growth, development, and metabolism of vertebrate animals. Recent work also examined the endocrine disrupting effects of environmental estrogens on growth and development.

Advising, Mentoring, and Research Education

Undergraduate Advising and Recruiting Activities (NDSU)

College of Science and Mathematics, new and transfer student advisor, 1999-2013
Academic Advisor for undergraduate majors in Biological Science, Biotechnology,
Zoology/pre-med/pre-dent/other pre-professional (ca. 60 students per year)
Biotechnology Program, undergraduate student research supervisor
Pre-dentistry Club, faculty advisor
Prospective student/student-athlete visits (met with 20-30 students and families per year)
Residence Hall Learning Community, faculty mentor 2011-2013
Safe Zone ally/contact

Student Mentoring Programs (served as mentor)

McNair Post-Baccalaureate Achievement Program (NDSU), mentor, 1990-1993;1997;
2004-2007
MentorTech (TTU), mentor, 2015-present
North Dakota EPSCoR Science Bound Program (NDSU), mentor 1995-2013
North Dakota EPSCoR AURA Program (NDSU), mentor 1996-2013
North Dakota Governor’s School in Science and Mathematics (NDSU), mentor 1991-2013
North Dakota Science Teacher Education Program (NDSU), mentor 1997-2003

Nurturing American Tribal Undergraduate Research and Education—NATURE (NDSU),
mentor, 2008-2013

Summary of Sheridan Lab Mentees

Visiting scientists hosted: 5

Post-doctorals: 8

Graduate students supervised: 12 M.S., 13 Ph.D.

(NDSU: Heather Bergan, Ph.D.; Michael Caruso, Ph.D.; David Cole, M.S., Darrin Cowley, M.S.; Mary Davorak, M.S.; Sondra Dubowsky, Ph.D.; Carmen Eilertson, Ph.D.; Elizabeth Ellens, M.S.; Alison Hagemeister, M.S.; Andrea Hanson, Ph.D.; Jamie Harmon, Ph.D.; Yung-hsi Kao, Ph.D.; Jeff Kittilson, M.S., Sarah Klein, M.S., Lincoln Martin, M.S.; Kim Michelson, Ph.D.; Craig Moore, Ph.D.; Laura Nelson, M.S.; Lindsey Norbeck, Ph.D.; Marty Pesek, M.S.; Jason Poppinga, M.S.; Bart Slagter, Ph.D.; Beverly Triebold, Ph.D.; Nicole Very, Ph.D.; Chad Walock, Ph.D.)

Graduate student committees (domestic): 19 M.S., 32 Ph.D.

Graduate Student committees (international/external examiner): 3 M.S., 7 Ph.D

Undergraduates research students supervised: 139

High School teachers: 9

High School Students: 28

Faculty Mentor Programs (served as mentor)

Provost's faculty mentor program: mentee Dr. Seth Rasmussen (1999-2005)

Dean's faculty mentor program: mentee Dr. Lisa Montplaisir (2005-2013)

COBRE (NIH) faculty mentor: mentees: Dr. Jane Schuh (2005-2010), Dr. Wendy Reed (2006-2009), Dr. Christopher Cobert (2011-2013), Dr. Stephen Vetter (2012-2013)

Extramural Grants Received (ca. \$34M in research and research infrastructure support)

US DoEd-Title V, 10/22-9/27, \$3,000,000, "Sirviendo estudiantes: Moving Texas Tech from Hispanic-enrolling to a Hispanic-Serving Institution"

NSF (DGE), 8/21-present, \$938,970, Graduate Research Fellowships (TTU)

NSF, 4/16-3/21, \$389,318, Collaborative Research: "The evolution of endocrine function; discovering the hormonal control of osmoregulation in basal vertebrates" (Co-PI S. McCormick)

NSF (DGE), 8/13-7/20, \$320,000, Graduate Research Fellowships (TTU)

NSF (DGE), 12/09-11/16, \$429,877, Graduate Research Fellowships (TTU)

NSF (DGE), 1/11-3/14, \$218,000, Graduate Research Fellowships (NDSU)

NSF/ND-EPSCoR, 7/13-6/15, \$38,000, Doctoral Dissertation Improvement Award

NSF/ND-EPSCoR, 8/11, \$500,000, Department New Faculty Start-up

USGS/ND Water Commission, 3/10-2/12, \$16,770, "Uptake and effects of environmental estrogens on growth of fish."

USDA, 10/09-9/13, \$91,978, "Cankdeska Cikana Community College Aquaculture Project," (Co-PI A. Hennessey)

NSF, 7/09-6/16, \$771,668, "Resolving the growth-promoting and lipid catabolic actions of growth hormone."

NSF/ND-EPSCoR, 8/09-7/11, \$41,000, Doctoral Dissertation Improvement Award.

NDSU Development Foundation, 6/09-6/10, \$4,530, "Effects of environmental contaminants on animal growth."

NSF/ND-EPSCoR, 8/08, \$200,000, Department New Faculty Start-up

NSF/ND-EPSCoR, 8/06, \$450,000, Department New Faculty Start-up

NSF, 4/05-3/10, \$610,250, "Extrapituitary role of somatostatins in growth."

NDSU Research Foundation, 2/05-2/06, \$10,000. "Direct effects of somatostatins on cell proliferation"

NSF, 5/03-5/06, \$100,000 (with match), "Purchase of confocal microscope," (Co-PIs A. Grazul-Bilska, L. Reynolds, D. Redmer)

NSF/ND-EPSCoR, 1/03-12/05, \$33,000, Doctoral Dissertation Improvement Award

NSF, 12/99-4/02, \$5,000,000 (with state match), "Advancing Science Excellence in North Dakota."

NSF, 5/02-4/05, \$11,837,584 (with state match), "Advancing Science Excellence in North Dakota."

NIH, 9/01-8/04, \$6,200,000, "Building biomedical research infrastructure in North Dakota," (Co-PI J. Shabb)

NSF, 8/00-8/05, \$481,000, "Differential expression of somatostatin receptors."

ND Agricultural Products Utilization Commission, 5/00-5/01, \$10,000, "Alternative protein sources for yellow perch," (co-PI P. Jarvis).

USDA-NCRAC, 9/99-8/00, \$42,500, "Culture technology of sunfish," (co-PI B. Schatz).

NDSU Research Foundation, 12/99-11/00, \$5000, "Evaluation of somatostatin-receptor interactions."

NSF/ND-EPSCoR, 7/99-2/01, \$30,000, Doctoral Dissertation Improvement Award

USDA-NRICGP, 9/98-8/00, \$150,000, "Role of Somatostatins in regulating growth of teleost fish."

NIH-IDeA, 5/98-9/98, \$6000, "Role of somatostatin in regulating growth."

NSF, 9/98-8/99, \$6000, to support the symposium entitled "Function and evolution of enteropancreatic hormones."

Merck Foundation, 9/98, \$5000, to support the symposium "Function and evolution of enteropancreatic hormones."

NSF, 9/97-8/00, \$280,000, "Differential expression of somatostatin genes."

NSF, 9/94-8/97, \$260,640, "Physiology of somatostatin."

Great Lakes Fishery Commission (subcontract from Univ. Toronto), 9/93- 8/97, \$40,000, "Changes in lipid metabolism associated with lamprey metamorphosis."

NSF, 9/93-8/94, \$61,000, "Hormonal Regulation of Lipid Metabolism in Fish."

NSF/ND-EPSCoR, 10/95-9/00, ca. \$80,000, Regulatory Biosciences Infrastructure Support

NSF/ND-EPSCoR, 10/92-9/95, \$279,250, "Establishment of a Regulatory Sciences Cluster."

NSF/ND-EPSCoR 6/91-5/92, \$7560, research experience for undergraduates

American Diabetes Association (ND affiliate)/Edgar Haunz Foundation, 1991, \$1800.

Japan Zoological Institute, 1991, \$500, travel grant.

American Society of Zoologists, 1991, \$1785, travel grant to 3rd International Congress on Comparative Physiology and Biochemistry.

NSF, 8/89-9/93, \$241,000, "Hormonal Control of Lipid Metabolism."

NSF/ND-EPSCoR, 10/89-9/90, \$25,425, Regulatory Biosciences program development.

National Research Council (USA), 1/89, \$800, travel grant to XXXIth International Physiology Conference, Helsinki, Finland.

NSF/ND-EPSCoR, 10/87-9/90, \$63,500, "Hormonal Regulation of Lipid Metabolism in Fish."

Norwegian Research Council, 7/88, \$1000, travel grant to International Smoltification Conference, Trondheim, Norway

NSF, 10/88 - 9/91, \$54,398, "Purchase of centrifuges," (Co-PI with M. Fawley and M. Duysen).

NIH-BSRG/NDSU, 7/88- 6/89, \$20,000, "Physiology of Pancreatic Hormones"

U.S. Department of Education, 1/87-6/88, \$104,500, "Acquisition of physiological/biotechnical instrumentation," (Co-PI with M. Duysen and J. Gerst).

NSF/ND-EPSCoR, 10/86-9/91, \$236,194, Regulatory Biosciences Cluster (Co-PI with B. Gladue, D. Redmer, and L. Reynolds)

Other External Grants Managed

DOD-EPSCoR, 12/99-12/03 (ND State Program Coordinator)
DOE-EPSCoR, 12/99-12/10 (ND State Program Coordinator)
EPA-EPSCoR, 12/99-12/03 (institution PD/PI)
NASA-EPSCoR, 12/99-12/03 (institution PD/PI)

External Grants Facilitated (funded)

NSF ADVANCE, 10/09-9/12, \$2,000,000
NSF I-Corps
NSF-IGE, 10/22-9/25, \$475,000
NSF-IGE, 8/18-7/21, \$497,856
USDA National Needs Graduate Training Grant, 2012, 2021
US DoEd-GAANN, 10/18-9/21, \$746,000
US DoEd-McNair, 1988, 1990, 1992, 1994, 1996, 2018, 2022

Patents

Novel somatostatins and methods, US patent number 6818739

Publications

Books

Sheridan, M.A. 1999. *Instructor's Guide for Campbell's Biology*, 5th Edition. Benjamin-Cummings, Menlo Park, CA.

Bunde, C., Kroll, W., Sheridan, M.A., and Wagle, J. 2008. *Study Guide for Biology: The Dynamic Science by Russell, Wolfe, Hertz, Starr and McMillan*. Thomson/Books-Cole, Belmont, CA.

Symposium Proceedings

McCormick, S., M. Sheridan, R. Patino and D. MacKinlay (editors). 1996. *The Physiology of Migratory Fish*. American Fisheries Society.

Sheridan, M.A. and Sower, S.A. (editors). 2000. *A Tribute to Erika M. Plisetskaya: New Insights on the Function and Evolution of Gastroenteropancreatic Hormone*. American Zoologist, Vol 40.

Sower, S.A., Sheridan, M.A. (editors). 2018. *Stacia Sower: Profiles in Comparative Endocrinology, Origins of Vertebrate Neuroendocrine Circuits*. Gen. Comp. Endocrinol., Vol 264

Book Chapters

Sheridan, M.A. and Harmon, J.S. 1994. Adipose tissue. In, *Biochemistry and Molecular Biology of Fishes*, Vol. 3 (edited by P. W. Hochachka and T. P. Mommsen), pp. 305-311. Elsevier, Amsterdam-New York.

Sheridan, M.A., Kittilson, J.D., Ehrman, M.M., and Moore, C.A. 1997. Polygenic expression of somatostatin in rainbow trout. In *Advances in Comparative Endocrinology* (S. Kawashima and S. Kikuyama, eds), pp291-294. Monduzzi Editore, Bologna.

Sheridan, M.A., Ehrman, M.M., Melroe, G.T., and Kittilson, J.D. 2001. Regulation of somatostatin expression. In *Perspectives in Comparative Endocrinology: Unity and Diversity* (H.J.Th. Goos, R.K. Rastogi, H. Vaudry, and R. Pierantoni, eds), pp133-137. Monduzzi Editore, Bologna.

- Sheridan, M.A. and Caruso, M.A. 2011. The Pancreas. In *Fish Physiology: From Genome to Environment* (S. Holmgren and C. Olsson, section eds), pp. 1276-1283. Elsevier, New York.
- Sheridan, M.A. 2011. Endocrinology of Fish Growth. In *Fish Physiology: From Genome to Environment* (A.P. Farrell and E.D. Stevens, section eds), pp. 1483-1489. Elsevier, New York.
- Ellens, E.R. and Sheridan, M.A. 2012. Molecular evolution and regulation of growth hormone signaling: Toward a highly integrated control system of growth. In *Trout: From Physiology to Conservation* (S. Polakof and T.W. Moon, eds), pp 269-306, Nova Science, New York.
- Sheridan, M.A. 2016. Evolution of the Growth Hormone Receptor Family. In *Evolution and Diversity of Life* (eLS Series), DOI: 10.1002/9780470015902.a0026413, John Wiley and Sons, NY
- Sheridan, M.A. 2024. Hormonal Control of Growth. In *Encyclopedia of Fish Physiology*, 2nd edition (Alderman, S.L., Gillis, T.E., eds), pp 272-280, Elsevier, New York.
- Sheridan, M.A. 2024. Structure and Function of the Pancreas and Liver. In *Encyclopedia of Fish Physiology*, 2nd edition (Alderman, S.L., Gillis, T.E., eds), pp 348-359, Elsevier, New York.

Essays

- Sheridan, M.A., 2001. Round Not Flat, *NDSU Magazine*, Spring 2001, pp 46-47.
- Sheridan, M.A., 2013. Unanswered Questions: Animal Nutrition (Chapter 47). In, *Biology: The Dynamic Science*, 3rd Edition by Peter Russell, Paul Hertz, and Beverly McMillan, Cengage, New York.
- Sheridan, M.A., 2017. Unanswered Questions: Animal Nutrition (Chapter 47). In, *Biology: The Dynamic Science*, 4th Edition by Peter Russell, Paul Hertz, and Beverly McMillan, Cengage, New York.
- Sheridan, M.A., 2018. The Advocate Dean: Tell the story, but target your message to your audience. In, *GradEdge*, Vol 7, Number 3, Council of Graduate Schools, pp 7-8.
- Sheridan, M.A., 2019. Unanswered Questions: Animal Nutrition. In, *Biology: The Dynamic Science*, 5th Edition by Peter Russell, Paul Hertz, and Beverly McMillan, Cengage, New York, in press.

Book Reviews

- Sheridan, M.A. 1990. The Comparative Physiology of Regulatory Peptides (S. Holmgren, ed), Chapman-Hall, London/New York. *Am. Zool.* 31:757.
- Sheridan, M.A. 1999. Basic and Clinical Endocrinology (F Greenspan and G Strewler, eds), Appleton & Lang, Stamford, CT. *Trends in Endocrinology and Metabolism* 10:117-118.

Refereed Journal (H index 44, i10 index 118, Stanford University/Elsevier top 1% world cited researcher)

- Sheridan, M. A. and Allen, W. V. 1982. Wax esters in the serum and liver of steelhead trout, *Salmo gairdneri*. *Comp. Biochem. Physiol.* 74B: 251-255.
- Sheridan, M. A., Allen, W. V. and Kerstetter, T. H. 1983. Seasonal variations in the lipid composition of steelhead trout, *Salmo gairdneri* Richardson, associated with the parr-smolt transformation. *J. Fish Biol.* 23: 125-134.
- Sheridan, M. A. and Allen, W. V. 1984. Partial purification of a triacylglycerol lipase from steelhead

- trout, *Salmo gairdneri*, adipose tissue. *Lipids* 19: 347-352.
- Sheridan, M. A. 1985. Changes in the lipid composition of juvenile salmonids associated with smoltification and premature transfer to seawater. *Aquaculture* 45: 387-388.
- Sheridan, M. A., Allen, W. V. and Kerstetter, T. H. 1985. Changes in the fatty acid composition of steelhead trout, *Salmo gairdneri*, associated with parr-smolt transformation. *Comp. Biochem. Physiol.* 80B: 671-676.
- Sheridan, M. A., Friedlander, J. K. L., and Allen, W. V. 1985. Chylomicra in the serum of postprandial steelhead trout, *Salmo gairdneri*. *Comp. Biochem. Physiol.* 81B: 281-284.
- Sheridan, M. A., Woo, N. Y. S. and Bern, H. A. 1985. Biochemical basis of smoltification-associated lipid and carbohydrate depletion. *Aquaculture* 45: 388-389.
- Sheridan, M. A., Woo, N. Y. S. and Bern, H. A. 1985. Changes in the rates of glycogenesis, glycogenolysis, lipogenesis and lipolysis in selected tissues of the coho salmon, *Oncorhynchus kisutch*, associated with parr-smolt transformation. *J. Exp. Zool.* 236: 35-44.
- Sheridan, M. A. and Bern, H. A. 1986. Both somatostatin and the caudal neuropeptide, urotensin II, stimulate lipid mobilization from coho salmon liver incubated *in vitro*. *Reg. Peptides.* 14: 333-341.
- Sheridan, M. A. 1986. Effects of thyroxine, cortisol, growth hormone, and prolactin on lipid metabolism of coho salmon, *Oncorhynchus kisutch*, during smoltification. *Gen. Comp. Endocrinol.* 64: 220-231.
- Sheridan, M. A., Plisetskaya, E., Bern, H. A., and Gorbman, A. 1987. Effects of somatostatin-25 and urotensin II on lipid and carbohydrate metabolism of coho salmon, *Oncorhynchus kisutch*. *Gen. Comp. Endocrinol.* 66: 405-414.
- Sheridan, M. A. 1987. Effects of epinephrine and norepinephrine on lipid mobilization from coho salmon liver incubated *in vitro*. *Endocrinology* 120: 2234-2239.
- Sheridan, M. A. 1988. Lipid dynamics in fish: Aspects of absorption, deposition, transport and mobilization. *Comp. Biochem. Physiol.* 90B: 679-690.
- Sheridan, M. A. 1988. Exposure to seawater stimulates lipid mobilization in juvenile salmon. *Fish. Biochem. Physiol.* 5: 173-180.
- Sheridan, M.A., Muir, N.M. 1988. Effects of catecholamines on glucose mobilization from chinook salmon, *Oncorhynchus tshawytscha*, liver incubated *in vitro*. *J. Exp. Zool.* 284: 155-159.
- Plisetskaya, E., Ottolenghi, C., Sheridan, M.A., Mommsen, T.P. and Gorbman, A. 1989. Metabolic effects of glucagon and glucagon-like peptide on coho salmon (*Oncorhynchus kisutch*) and chinook salmon (*O. tshawytscha*). *Gen. Comp. Endocrinol.* 73: 205-216.
- Plisetskaya, E., Sheridan, M.A. and Mommsen, T.P. 1989. Metabolic changes in coho (*Oncorhynchus kisutch*) and chinook (*O. tshawytscha*) salmon resulting from acute insufficiency of pancreatic hormones. *J. Exp. Zool.* 249:158-164
- Sheridan M.A. 1989. Alterations in lipid metabolism accompanying smoltification and seawater

- adaptation of salmonid fish. *Aquaculture* 82: 191-203.
- Klee, M., Eilertson, C. D. and Sheridan, M.A. 1990. Effects of nutritional state on hormone-mediated hepatic glycogenolysis. *J. Exp. Zool.* 254: 202-206.
- Michelsen, K. and Sheridan, M.A. 1990. Influence of cAMP and calcium on epinephrine-stimulated glycogenolysis in rainbow trout. *Comp. Biochem. Physiol.* 97C: 329-332.
- Sheridan, M.A., Eilertson, C. D. and Plisetskaya, E. M. 1991. Radioimmunoassay of pancreatic somatostatin-25. *Gen. Comp. Endocrinol.* 81: 365-372.
- Sheridan, M.A. and Mommsen, T.P. 1991. Effects of nutritional state on *in vivo* lipid and carbohydrate metabolism of coho salmon, *Oncorhynchus kisutch*. *Gen. Comp. Endocrinol.* 81: 473-483.
- Eilertson, C.D., O'Connor, P. and Sheridan, M.A. 1991. Somatostatin-14 and somatostatin-25 stimulate glycogenolysis in rainbow trout, *Oncorhynchus mykiss*, liver incubated *in vitro*: A systemic role of somatostatins. *Gen Comp. Endocrinol.* 81:473-483.
- Harmon, J.S., C.D. Eilertson, M.A. Sheridan and E. M. Plisetskaya. 1991. Insulin suppression and enhanced lipid mobilization are associated with hypersomatostatinemia and hyperglucagonemia in glucose-injected rainbow trout. *Am. J. Physiol.* 261:R609-R613.
- Harmon, J.S., Michelsen, K.G. and Sheridan, M.A. 1991. Purification and characterization of hepatic triacylglycerol lipase isolated from rainbow trout, *Oncorhynchus mykiss*. *Fish. Physiol. Biochem.* 9:361-368.
- Harmon, J.S. and Sheridan, M.A. 1992. Effects of nutritional state, insulin and glucagon on lipid metabolism of rainbow trout, *Oncorhynchus mykiss*. *Gen. Comp. Endocrinol.* 87:214-221.
- Harmon, J.S. and Sheridan, M.A. 1992. Previous nutritional state and glucose modulate glucagon-mediated hepatic lipolysis in rainbow trout, *Oncorhynchus mykiss*. *Zool. Sci.* 9:274-281
- Harmon, J.S. and Sheridan, M.A. 1992. Glucose-stimulated lipolysis in rainbow trout, *Oncorhynchus mykiss*, liver. *Fish Physiol. Biochem.* 10:189-200.
- Cowley, D. and Sheridan, M.A. 1993. Insulin stimulates hepatic lipogenesis in rainbow trout, *Oncorhynchus mykiss*. *Fish Physiol. Biochem.* 11:421-428.
- Harmon, J.S., Rieniets, L.M., and Sheridan, M.A. 1993. Glucagon and insulin regulate hepatic lipolysis of rainbow trout, *Oncorhynchus mykiss*, by phosphorylation of triacylglycerol lipase. *Am. J. Physiol.* 265:R255-R265.
- O'Connor, P.K., Reich, B., Sheridan, M.A. 1993. Growth hormone stimulates hepatic lipid mobilization in rainbow trout, *Oncorhynchus mykiss*. *J. Comp. Physiol. B* 163:427-431.
- Eilertson, C.D. and Sheridan, M.A. 1993. Differential effects of somatostatin-14 and somatostatin-25 on carbohydrate and lipid metabolism in rainbow trout *Oncorhynchus mykiss*. *Gen. Comp. Endocrinol.* 92:62-70.
- Cowley, D., Sheridan, M.A. Hoffnagle, T., Fivizzani, A.J., Barton, B.A. and Eilertson, C. 1994. Changes in lipid metabolism and plasma concentrations of thyroxine, cortisol, and somatostatin of land-locked chinook salmon. *Aquaculture* 121:147-155.

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- Sheridan, M.A. 1994. Regulation of lipid metabolism in poikilothermic vertebrates. *Comp. Biochem. Physiol.* 107B:495-508.
- Eilertson, C.D. and Sheridan, M.A. 1994. Effects of somatostatin-25 on lipid mobilization from rainbow trout, *Oncorhynchus mykiss*, liver and adipose tissue incubated *in vitro*. Comparison with somatostatin-14. *J. Comp. Physiol. B* 164:256-260.
- Holloway, A.C., Reddy, P.K., Sheridan, M.A., and Leatherland, J.F. 1994. Diurnal rhythms of plasma growth hormone, somatostatin, thyroid hormones, cortisol and glucose concentrations in rainbow trout, *Oncorhynchus mykiss*, during progressive food deprivation. *Biol. Rhythm. Res.* 24:415-432.
- Eilertson, C.D., Kittilson, J.D. and Sheridan, M.A. 1995. Effects of insulin, glucagon, and somatostatin on the release of somatostatin-25 and somatostatin-14 from rainbow trout, *Oncorhynchus mykiss*, pancreatic islets *in vitro*. *Gen. Comp. Endocrinol.* 99:211-220.
- Moore, C.A., Kittilson, J.D., Dahl, S.K., and Sheridan, M.A. 1995. Isolation and characterization of a cDNA encoding for preprosomatostatin containing (Tyr⁷Gly¹⁰)-somatostatin-14 from the endocrine pancreas of rainbow trout, *Oncorhynchus mykiss*. *Gen. Comp. Endocrinol.* 98:253-261.
- Eilertson, C. D. and Sheridan, M. A. 1995. Pancreatic somatostatin-14 and somatostatin-25 release in rainbow trout is stimulated by glucose and arginine. *Am. J. Physiol.* 269:R1017-R1023
- Dubowsky, S. and Sheridan, M.A. 1995. Chronic ovine growth hormone exposure to rainbow trout, *Oncorhynchus mykiss*, reduces plasma insulin concentration, elevates plasma somatostatin-14 concentration, and reduces hepatic growth hormone binding capacity. *Experimental and Clinical Endocrinology*, 14:107-111.
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- Eilertson, C. D., Carneiro, N. M., Kittilson, J. D., Comely, C., and Sheridan, M. A. 1996. Cholecystokinin, neuropeptide Y, and galanin modulate the release of pancreatic somatostatin-25 and somatostatin-14 *in vitro*. *Reg. Peptides*, 63:105-112
- Carneiro, N.M., Eilertson, C. D., and Sheridan, M.A. 1996. Lipid stimulated somatostatin secretion in rainbow trout, *Oncorhynchus mykiss*. *Fish Physiol. Biochem.*, 15:447-452.
- Pesek, M. J. and Sheridan, M. A. 1996. Fasting alters somatostatin binding to liver membranes of rainbow trout, *Oncorhynchus mykiss*. *J. Endocrinol.*, 150:179-186.
- Holloway, A.C., Sheridan, M.A. and Leatherland, J.F. 1997. Estradiol inhibits plasma somatostatin 14 (SRIF-14) levels and inhibits the response of somatotrophic cells to SRIF-14 challenge *in vitro* in rainbow trout, *Oncorhynchus mykiss*. *Gen. Comp. Endocrinol.* 106:407-414.

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- Kao, Y.-H., Youson, J.H., Holmes, J.A., and Sheridan, M.A. 1997. Changes in lipolysis and lipogenesis in selected tissues of land locked lamprey, *Petromyzon marinus*, during metamorphosis. *J. Exp. Zool.* 207:301-312.
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Scholarly Presentations

Invited papers

Sheridan, M. A., Bern, H. A., Allen, W. V. and Kerstetter, T. H. 1984. Changes in lipid metabolism accompanying smoltification of salmonid fish. International Conference on Biology of Pacific Salmon, September 4-12, Victoria/Agassiz, British Columbia.

Sheridan, M.A. 1986. Hormonal regulation of lipid metabolism in fish. Thirteenth Conference of European Comparative Endocrinologists, September 7-12, Belgrade, Yugoslavia.

Sheridan, M.A. 1988. Alterations in lipid metabolism associated with smoltification and seawater adaptation of juvenile salmonid fish. Third International Salmonid Smoltification Workshop June 27-July 1, Trondhiem, Norway.

Sheridan, M.A. 1989. Effects of catecholamines on lipid and carbohydrate metabolism of fish. XIth International Symposium on Comparative Endocrinology, May 14-20, Malaga, Spain.

Sheridan, M.A. 1990. Comparative aspects of regulation of lipid metabolism in heterothermic vertebrates. American Physiological Society Fall Meeting, Oct. 7-10, Orlando, FL.

Sheridan, M.A. 1991. Effects of growth hormone on lipid metabolism of fish. Ocean Research Institute Symposium on Fish Endocrinology, Sept. 2-3, Tokyo, Japan.

Sheridan, M.A. 1992. Effects of insulin on hepatic lipid synthesis. 2nd International Congress on Fish Endocrinology, May 31-June 4, St. Malo, France.

Sheridan, M.A. 1992. Changes in lipid metabolism in land-locked salmon. IVth International Salmonid Smoltification Workshop, Oct. 18-23. St. Andrews, New Brunswick, Canada

McCormick, S.D., Björnsson, Th.B., Sheridan, M.A., Carey, J.B. and O'Dea, M. 1993. Increased day length stimulates plasma growth hormone and gill Na⁺, K⁺-ATPase but not somatostatin-25 in juvenile Atlantic salmon. XIIth International Congress of Comparative Endocrinology, May 16-21, Toronto.

- Sheridan, M.A. and Eilertson, C.D. 1993. Regulation of somatostatin-25 secretion from isolated rainbow trout pancreatic islets. XIIth International Congress of Comparative Endocrinology, May 16-21, Toronto.
- Kao, Y-H., Youson, J.H., Holmes, J.A., and Sheridan, M.A. 1996. Alterations in lipid metabolism during metamorphosis of land-locked sea lamprey. International Congress on the Biology of Fish, July 1996, San Francisco, CA.
- Sheridan, M.A., Eilertson, C.D., and Kerstetter, T.H. 1996. Changes in plasma somatostatin concentration associated with seawater adaptation and stunting of coho salmon. Vth International Salmonid Smoltification Workshop, Dec. 1996, Muonio, Finland.
- Sheridan, M.A. 1996. Regulation of development-associated changes in the lipid metabolism of vertebrates. *The Biology of Lipids: Integration of Structure and Function*, a symposium for the Society for Integrative and Comparative Biology, Dec. 1996, Albuquerque, NM.
- Sheridan, M.A. 1997. Regulation of somatostatin gene expression in fish. International Symposium on the Reproductive Endocrinology and Growth Physiology of Fish, National Taiwan University, Nov. 13-14, Keelung, Taiwan
- Sheridan, M.A., Kittilson, J.D., and Moore, C.A. 1997. Polygenic expression of somatostatin in rainbow trout. XIIIth International Congress of Comparative Endocrinology, Nov. 16-21, Yokohama, Japan.
- Sheridan, M.A. 1999. Evolution of the somatostatin gene family. *A Tribute to Erika Plisetskaya: New Insights on the Function and Evolution of Enteropancreatic Hormones*, A symposium for the Society for Integrative and Comparative Biology, Denver, CO, Jan. 6-10, 1999.
- Sheridan, M.A., Howe, N., Knutson, D., and Kittilson, J.D. 2000. Somatostatin modulates the growth of salmonid fish. IVth International Congress on the Biology of Fish, Aberdeen, Scotland, July 23-27, 2000.
- Alexander, L., Knutson, D., Kittilson, J.D. and Sheridan, M.A. 2000. Localization of somatostatin mRNAs in the brain and pancreas of rainbow trout. 5th International Symposium of Fish Endocrinology, Seattle, WA., July 30-August 2, 2000.
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- Sheridan, M.A., Gong, J.-Y., Nelson, L.E., Kittilson, J.D. 2006. Use of the Chinese hamster ovary cell

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- Sheridan, M.A. 2009. The role of somatostatin in the regulation of somatic growth. 2nd International Symposium on Fish Growth and Reproduction, Hong Kong, June 20-21, 2009.
- Norbeck, L., Hagemeister, A., and Kittilson, J., and Sheridan, M.A. 2009. Evolution of growth hormone receptors and their functional interaction with growth hormone family peptides. 16th International Congress on Comparative Endocrinology, Hong Kong, June 22-26, 2009.
- Hanson, A. and Sheridan, M.A. 2009. Effects of xenoestrogens on growth and seawater adaptation of rainbow trout. 8th International Workshop on Salmonid Smoltification, Corvallis, OR, September 20-24, 2009.
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- Sheridan, M.A. 2010. Peripheral regulation of the growth hormone (GH)-insulin-like growth factor-1 (IGF-1) system in fish. 9th International on the Biology of Fish, Barcelona, Spain, July 5-9, 2010.
- Sheridan, M.A. 2011. Resolving the growth-promoting and lipid catabolic actions of growth hormone. 1st North American Society of Comparative Endocrinology, Ann Arbor, MI, July 13-16, 2011.
- Sheridan, M.A. 2012. Rainbow trout hepatocytes: A model for elucidating the molecular mechanisms of growth hormone. 10th International Congress on the Biology of Fish, Madison, WI, July 15-19, 2012.
- Hanson, A.M. and Sheridan, M.A. 2012. Effects of environmental estrogens on organismal growth and the growth hormone-insulin-like growth factor system of rainbow trout. 10th International Congress on the Biology of Fish, Madison, WI, July 15-19, 2012.
- Sheridan, M.A. 2012. Peripheral regulation of the growth hormone-insulin-like growth factor system of fish. 7th International Symposium on Fish Endocrinology, Buenos Aires, Argentina. September 3-6, 2012.
- Ellens, E.R., Kittilson, J.D., Sower, S.A., and Sheridan, M.A. 2012. Evolution of the growth hormone receptor family. 7th International Symposium on Fish Endocrinology, Buenos Aires Argentina, September 3-6, 2012.

- Sheridan, M.A. 2013. Control of animal growth: Where are we and where do we go from here? Special session in honor of Howard A. Bern. Society for Integrative and Comparative Biology, San Francisco, CA, Jan 3-7, 2013.
- Sheridan, M.A. 2013. Growth hormone: An integrator of growth and metabolism. 17th International Congress on Comparative Endocrinology, Barcelona, Spain, July 15-19, 2013.
- Sheridan, M.A. 2013. G-protein coupled receptors: Beyond the Nobel Prize. G-protein couple receptors activate multiple cellular effector pathways. 17th International Congress on Comparative Endocrinology, Barcelona, Spain, July 15-19, 2013.
- Sheridan, MA. Martin, L. Kittilson, J, and McCormick, S.D. 2013. Changes in expression of osmoregulatory genes during smoltification and seawater adaptation of Atlantic salmon are associated with alterations in the ERK, PI3K-Akt, JAK-STAT signaling pathways. 9th International Workshop on Salmonid Smoltification, Reykjavik, Iceland, August 12-16, 2013.
- Sheridan, M.A. 2014. Rainbow trout hepatocytes: A model for resolving the growth-promoting and lipid catabolic actions of growth hormone. 11th International Congress on the Biology of Fish, Edinburgh, Scotland, August 3-7, 2014.
- Sheridan, M.A. 2016. Graduate Education: Where we are and where we need to go. 15th Transdisciplinary-Translational-Transcultural International Conference. Suzhou, China, May 29-June 2, 2016.
- Sheridan, MA. 2016. Mechanisms that underlie nutrition-associated “metabolic shifting” of growth hormone. 28th Conference of European Comparative Endocrinologists, Leuven, Belgium, August 21-25, 2016
- Sheridan, M.A. 2017. Differential Activation of Signal Pathways Underlies the Multi-Functionality of Growth Hormone, 7th Annual World Congress on Cell and Molecular Biology, Xian, China, April 23-27.
- Sheridan, M.A. 2017. Integration of feeding, growth, and metabolism: Insights from studies in fish. 18th International Congress on Comparative Endocrinology, Lake Louise, Alberta, Canada, June 4-9.
- Sheridan, M.A. 2017. Mechanisms underlying the multiple actions of growth hormone: Lessons from rainbow trout. FASEB Science Research Conference: The Growth Hormone/Prolactin Family in Biology and Disease, Steamboat Springs, CO, July 23-28, 2017.
- Sheridan, M.A. 2018. The future of graduate education. XXI Cátedra Europa, Universidad del Norte, Barranquilla, Colombia, March 12-16, 2018.
- Gong, N., McCormick, S.D., Sheridan, M.A. 2018. Early evolution of growth hormone receptor/prolactin receptor in sea lamprey and its functional role in metamorphosis and seawater exposure. 29th Conference of European Comparative Endocrinologists, Glasgow, UK, August 18-22, 2018.
- Gong, N, Sheridan, M.A., Björnsson, B. Th. 2018. Rainbow trout leptin signaling system and its impact on the GH-IGFs axis during long-term fasting. 29th Conference of European Comparative Endocrinologists, Glasgow, UK, August 18-22, 2018.

- Gong N, Sheridan M.A., Ferreira-Martins D., McCormick, S.D. 2019. Divergent receptors for growth hormone and prolactin discovered in Agnathans: gene sequences and tissue expression patterns at different life stages of sea lamprey. 5th Biennial North America Society of Comparative Endocrinology, Gainesville, Florida, May 24-28, 2019.
- Sheridan, M.A. 2019. Environmental contaminants disrupt cell signaling processes associated with animal growth. 9th World Congress of Mol. & Cell Biology, Singapore, October 25-27, 2019.
- Gong, N., McCormick, S.D. Sheridan M.A. 2021. Characterization of a leptin receptor ortholog in a jawless vertebrate (Agnatha). 6th Biennial North America Society of Comparative Endocrinology, virtual, May 25-27, 2021.
- Ferreira-Martins, D., Walton, E., Sheridan, M.A., McCormick, S.D. 2022. Role of growth hormone and insulin-like growth factor in metamorphosis and osmoregulation of sea lamprey (*Petromyzon marinus*). 14th International Congress on the Biology of Fish, Montpellier, France, June 28-July 1, 2022.
- Gong, N., Ferreira-Martins, D., Norstog, J., McCormick, S.D., Sheridan, M.A. 2022. Evolution of the hormonal control of osmoregulation: Insights from studies in sea lamprey. 14th International Congress on the Biology of Fish, Montpellier, France, June 28-July 1, 2022.
- Gong, N., Ferreira-Martins, D., Norstog, J., McCormick, S.D., Sheridan, M.A. 2022. Discovery of prolactin-like in lamprey reveals the divergence of prolactin and growth hormone in jawless vertebrates. 30th Conference of European Comparative Endocrinology/ 9th International Symposium on Fish Endocrinology, Faro, Portugal, September 4-8, 2022.
- Sheridan, M.A. State-of-the-Art Lecture: Environmental estrogens interact with the growth hormone-insulin-like growth factor system to reduce seawater adaptation and retard growth of rainbow trout. 30th Conference of European Comparative Endocrinology/9th International Symposium on Fish Endocrinology, Faro, Portugal, September 4-8, 2022.
- Gong, N., Ferreira-Martins, D., Norstog, J., McCormick, S.D., Sheridan, M.A. 2023. Strategies of anadromous sea lamprey for coping with salinity challenges by regulating hormone signaling systems and ion transporters in the gill. 7th Biennial Meeting of the North American Society for Comparative Endocrinology, Queretaro, Mexico, May 28-June 1, 2023.
- Sheridan, M.A. 2023. State-of-the-Art Lecture: Integration of feeding with the control of growth and metabolism: Insights from studies in fish. 7th Biennial Meeting of the North American Society for Comparative Endocrinology, Queretaro, Mexico, May 28-June 1, 2023.
- Sheridan, M.A. 2023. Cell signaling pathways that transduce growth hormone action on ion transporters and seawater adaptation of euryhaline fish. 11th International Smoltification Workshop, Sapporo/Hakodate, Japan, September 19-23, 2023.
- Sheridan, M.A., Gong, N., 2024. New insights into the integration of feeding with the control of growth and metabolism. 15th International Congress on the Biology of Fish, Ann Arbor, MI, June 23-27, 2024.
- Sheridan, M.A., 2024. Growth hormone effects on seawater adaptation of euryhaline fish are mediated by JAK-STAT and PI3K-AKT. 15th International Congress on the Biology of Fish, Ann Arbor, MI, June 23-27, 2024.

Sheridan, M.A., 2024. State-of-the-Art Lecture: Reflections on the regulation of growth and coordination with the control of feeding and metabolism. 10th International Symposium on Fish Endocrinology, Baltimore, MD, September 15-19, 2024.

Contributed papers

Sheridan, M. A. and Allen, W. V. 1982. Changes in the lipid composition of steelhead trout associated with smoltification. *Physiologist* 25: 273.

Sheridan, M. A. 1982. Studies of lipid metabolism in smoltifying coho salmon and steelhead trout. Sixth Annual West Coast Smoltification Workshop, November 19-20, Bremerton, WA.

Sheridan, M. A. 1983. Direct measurement of fatty acid release from coho salmon liver slices by pH-stat titration. Western Regional Conference on Comparative Endocrinology, March 25-26, Berkeley, CA.

Sheridan, M. A. 1983. Biochemical basis of body lipid depletion in coho salmon undergoing smoltification. Seventh Annual West Coast Smoltification Workshop, November 11-12, Arcata, CA.

Sheridan, M. A. 1983. Hormonal regulation of lipid mobilization in fish: Effects of epinephrine and norepinephrine on fatty acid release from coho salmon, *Oncorhynchus kisutch*, liver incubated *in vitro*. *Am. Zool.* 23:1010. (M. Sheridan awarded best paper)

Sheridan, M. A., Plisetskaya, E., Bern, H.A. and Gorbman, A. 1985. Effects of somatostatin and urotensin II on lipid and carbohydrate metabolism of coho salmon. *Fed. Proc.* 44: 632.

Sheridan, M. A. and Bern, H. A. 1985. Effects of insulin and glucagon on lipid mobilization from coho salmon liver slices incubated *in vitro*. Western Regional Conference on Comparative Endocrinology, April 25-27, Corvallis, OR.

Sheridan, M. A. 1985. Effects of thyroxin and cortisol on the lipid metabolism of developing coho salmon. Eighth West Coast Smoltification Workshop, November 15-16, Corvallis, OR.

Sheridan, M. A. 1987. Effects of saline water on growth and development of juvenile salmon. Twenty-third Annual Meeting of the Upper Missouri River Chapter, American Fisheries Society, February, 16-18, Bismarck, ND.

Sheridan M. A. 1987. Exposure to seawater stimulates lipid mobilization in juvenile salmon. Tenth Smoltification Workshop, Oct. 16-17, Berkeley, CA.

Sheridan, M. A. 1987. Effects of catecholamines on glucose release from king salmon liver incubated *in vitro*. *Am. Zool.* 27: 97A.

Sheridan, M.A. 1988. Hormone-mediated glycogenolysis in salmon liver. Twenty-third Annual Meeting of the Dakotas Chapter, American Fisheries Society. February 29-March 2, Aberdeen, S.D.

Plisetskaya, E.M., Sheridan, M.A. and Mommsen, T.P. 1988. Effects of glucagon and glucagon-like peptide on metabolism of coho salmon. Western Regional Conference on Comparative Endocrinology, April 25-27, Seattle, WA.

- Sheridan, M.A. 1988. Use of salmon as a model in metabolic endocrinology. Symposium on Use of Unconventional Vertebrates as Models in Endocrine Research. December 5-6, Bethesda, MD.
- Sheridan, M.A. and Plisetskaya, E. 1988. Effects of nutritional state on *in vivo* lipid and carbohydrate metabolism of salmon. *Am. Zool.* 28: 56A.
- Eilertson, C., Klee, M and Sheridan, M.A. 1989. Nutritional state modulates hormone-mediated glycogenolysis. Twenty-fourth Annual Meeting of the Dakotas Chapter, American Fisheries Society, February 22-24, Bismarck, ND.
- Eilertson, C., Sheridan, M.A. and Plisetskaya, E. 1989. Development of salmon somatostatin-25 radioimmunoassay. Midwest Regional Conference on Comparative Endocrinology, April 14, Fargo, ND.
- Harmon, J., O'Connor, P., Kennedy, L., Michelsen, K., Eilertson, C. and Sheridan, M.A. 1989. Effects of glucose loading on metabolism of salmon. Midwest Conference on Comparative Endocrinology, April 14, Fargo, ND.
- Klee, M., Eilertson, C., O'Connor, P., Michelsen, K. and Sheridan, M.A. 1989. Effects of fasting and refeeding on metabolism of salmon. Midwest Conference on Comparative Endocrinology, April 14, Fargo, ND.
- Michelsen, K. and Sheridan, M.A. 1989. Role of calcium and cAMP on hormone-mediated glycogenolysis in salmon. Midwest Conference on Comparative Endocrinology, April 14, Fargo, ND.
- Sheridan, M.A. and Plisetskaya, E. 1989. Effects of pancreatic hormone on lipid metabolism of fish. XIth International Symposium on Comparative Endocrinology. May 14-20, Malaga, Spain.
- Sheridan, M.A. Eilertson, C.D. and Plisetskaya, E. 1989. Radioimmunoassay for somatostatin-25 in coho salmon, *Oncorhynchus kisutch*. XIth International Symposium on Comparative Endocrinology, May 14-20, Malaga, Spain.
- Harmon, J. S. and Sheridan, M.A. 1989. Effects of glucose loading on metabolism of rainbow trout. *Am. Zool.* 29: 19A.
- Eilertson, C. D. and Sheridan, M.A. 1989. Effects of somatostatin on lipid and carbohydrate metabolism of salmonids. *Am. Zool.* 29:19A.
- Klee, M., Eilertson, C.D., and Sheridan, M.A. 1989. Effects of nutritional state on hormone-mediated hepatic glycogenolysis. *Am. Zool.* 29: 47A.
- Sheridan, M.A., Plisetskaya, E, and Michelsen, K. 1990. Effects of acute immunosuppression of pancreatic hormones on metabolism of rainbow trout. Annual Meeting of the Dakota Chapter, American Fisheries Society. Feb. 28-March 2. Pierre. SD.
- Cowley, D., Sheridan, M., Hoffnagle, T. and Fivizzani, A. 1990. Metabolic changes during smoltification of landlocked chinook salmon. Annual Meeting of the Dakota Chapter, American Fisheries Society. Feb. 28-March 2. Pierre, SD.
- Harmon, J.S. and Sheridan, M.A. 1990. Effects of nutritional state, insulin and glucagon on lipid metabolism of rainbow trout. Western Regional Conference on Comparative Endocrinology.

March 28-30. Berkeley, CA.

- Cowley, D., Sheridan, M., Hoffnagle, T. and Fivizzani, A. 1990. Thyroid hormone-metabolism interactions during smoltification of landlocked chinook salmon. Midwest Regional Conference on Comparative Endocrinology, May 3-4. Omaha, NE.
- Eilertson, C.D. and Sheridan, M.A. 1990. Glucose, arginine and palmitic acid stimulate somatostatin-25 secretion from isolated rainbow trout Brockmann bodies. Midwest Regional Conference on Comparative Endocrinology. May 3-4. Omaha., NE.
- Harmon, J.S. and Sheridan, M.A. 1990. Effects of nutritional state, insulin and glucagon on lipid metabolism of rainbow trout. Midwest Regional Conference on Comparative Endocrinology. May 3-4. Omaha, NE.
- O'Connor, P., Eilertson, C.D. and Sheridan, M.A. 1990. Somatostatin-14 and somatostatin-25 stimulate lipolysis in rainbow trout adipose tissue and liver incubated *in vitro*. Midwest Regional Conference on Comparative Endocrinology. May 3-4. Omaha, NE.
- Eilertson, C.D. and Sheridan, M.A. 1990. Glucose, arginine, palmitic acid and oleic acid stimulate somatostatin-25 secretion from isolated rainbow trout Brockmann bodies. *Physiologist* 33: A109.
- Harmon, J.S. and Sheridan, M.A. 1990. Hepatic lipid mobilization is modulated by both glucagon and insulin. *Physiologist* 33: A109.
- Eilertson, C.D. and Sheridan, M.A. 1990. Intraislet regulation of somatostatin-25 secretion from isolated rainbow trout Brockmann bodies. *Am. Zool.* 30: 24A.
- Kerstetter, T.H., Sheridan, M.A., and Eilertson, C.D. 1990. Relationship between stunting and plasma concentrations of somatostatin in coho salmon. 13th Annual Smoltification Workshop, September 28-29, Seattle, WA.
- Harmon, J.S. and Sheridan, M.A. 1990. Hepatic lipid mobilization: partial characterization and hormonal activation. *Am. Zool.* 30: 2A.
- Cowley, D. and Sheridan, M.A. 1991. Role of pancreatic hormones in the regulation of lipid synthesis. 27th Annual Meeting Dakota Chapter, American Fisheries Society. Feb. 21-22. Bismarck, ND
- Heese, J., Eilertson, C.D., and Sheridan, M.A. 1991. Salmonid pancreas as a model for studying the regulation of somatostatin secretion. 27th Annual Meeting Dakota Chapter, American Fisheries Society. Feb. 21-22. Bismarck, ND.
- Harmon, J.S., Eilertson, C.D., Sheridan, M.A. and Plisetskaya, E.M. 1991. The glucose intolerance of rainbow trout is associated with somatostatin-induced depression of insulin. 27th Annual Meeting Dakota Chapter, American Fisheries Society. Feb. 21-22. Bismarck, ND.
- Sheridan, M.A. 1991. Endocrinology for aquaculture. 27th Annual Meeting Dakota Chapter, American Fisheries Society. Feb. 21-22. Bismarck, ND.
- Eilertson, C.D., Sheridan, M.A., and Kerstetter, T.H. 1991. Changes in plasma levels of pancreatic hormones associated with growth retardation of coho salmon. 27th Annual Meeting

- Dakota Chapter, American Fisheries Society. Feb. 21-22. Bismarck, ND.
- Sheridan, M.A. 1991. Regulation of lipid metabolism in the liver of fish. 3rd International Congress of comparative Physiology and Biochemistry, August 25-30. Tokyo, Japan.
- Harmon, J.S. and Sheridan, M.A. 1991. Glucose-stimulated lipolysis in rainbow trout, *Oncorhynchus mykiss*, liver. Am. Zool. 31:116A.
- Sheridan, M.A. and Harmon, J.S. 1991. Previous nutritional state and glucose modulate glucagon-mediated hepatic lipolysis in rainbow trout, *Oncorhynchus mykiss*. Am Zool. 31:65A.
- Cowley, D. and Sheridan, M.A. 1991. Insulin and glucagon regulate hepatic lipid biosynthesis in rainbow trout. Am. Zool. 31:55A.
- O'Connor, P.K. and Sheridan, M.A. 1991. Effects of growth hormone on lipid mobilization in rainbow trout liver. Am. Zool. 31:55A.
- Rieniets, L.M. and Sheridan, M.A. 1992. Development of an enzyme-linked immunosorbant assay (ELISA) for salmon glucagon. Midwest Regional Endocrinology Conference, May 15-16. Normal, IL.
- Youson, J.H., Leatherland, J.F., Plisetskaya, E. and Sheridan, M.A. 1992. Metabolic and hormonal changes in larval lampreys following acute neutralization with anti-insulin and anti-somatostatin. 2nd International Congress on Fish Endocrinology, May 31-June 4, St. Malo, France.
- Eilertson, C.D., Davis, K., Kittilson, J.D., Sheridan, M.A. 1992. Effects of 5'-dbcAMP on pancreatic somatostatin release from cultured islets. Am. Zool., 32:23A.
- Harmon, J.S., Rieniets, L.M., and Sheridan, M.A. 1992. Glucagon and insulin regulate lipolysis in rainbow trout by phosphorylation of triacylglycerol lipase. Am. Zool., 32:14A. (J. Harmon awarded best paper)
- O'Connor, P.K., Reich, B. J., and Sheridan, M.A. 1992. Effects of growth hormone on hepatic carbohydrate metabolism in rainbow trout. Am. Zool., 32:18A.
- Eilertson, C.D., Dubowsky, S., Dahl, S. and Sheridan, M.A. 1993. Effects of salmon and ovine growth hormone on somatostatin release from rainbow trout pancreas. Annual Meeting of the American Society of Zoologists, Dec. 26-30, Los Angeles, CA.
- Moore, C.A., Dahl, S., Kittilson, J., and Sheridan, M.A. 1993. Nucleotide sequence of two non-allelic genes that encode for pancreatic preprosomatostatin in rainbow trout. Annual Meeting of the American Society of Zoologists, Dec. 26-30, Los Angeles, CA.
- Dubowsky, S., Sax, R., and Sheridan, M.A. 1993. Growth hormone-stimulated growth effects in rainbow trout. Annual Meeting of the American Society of Zoologists, Dec. 26-30, Los Angeles, CA.
- Carneiro, N.M., Eilertson, C.D., and Sheridan, M.A. 1995. Somatostatin, a modulator of insulin and glucagon, secretion is regulated by lipid and carbohydrate in salmonid fish. Amer. Zool. 34:27A.
- Kao, Y.H., Youson, J.H., and Sheridan M.A. 1995. Changes in the lipid composition of lamprey,

- Petromyzon marinus*, during metamorphosis. *Amer. Zool.*, 34:30A.
- Moore, C.A., Kittilson, J.D., and Sheridan, M.A. 1995. Differential expression of two non-allelic somatostatin genes. 77th Annual Meeting of the Endocrine Society, June 14-17, 1995, Washington, D.C.
- Pesek, M.J. and Sheridan, M.A. 1996. Fasting alters somatostatin binding characteristics in rainbow trout, *Oncorhynchus mykiss*. *Am. Zool.* 35:24A
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- Kittilson, J.D., Moore, C.A., and Sheridan, M.A. 1996. Polygenic expression of somatostatin in trout pancreas: evidence of a preprosomatostatin encoding somatostatin-14. *Am. Zool.* 36:29A.
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- Ehrman, M.M., Moore, C.A., Kittilson, J.D., Boser, J.E., and Sheridan, M.A. 1997. Nutritional state affects somatostatin gene expression in rainbow trout. 79th Meeting of the Endocrine Society, June 11-14, 1997. Minneapolis, MN.
- Kao, Y.-H., Youson, J.H., Holmes, J.A., and Sheridan, M.A. 1997. Role of pancreatic hormones on lipid metabolism of lamprey, *Petromyzon marinus*, associated with metamorphosis. XIIIth International Congress of Comparative Endocrinology, Nov. 16-21. Yokohama, Japan.
- Howe, N., Pesek, M., and Sheridan, M.A. 1997. Insulin and glucagon modulate somatostatin binding to hepatocytes isolated from rainbow trout. *Amer. Zool.* 37: 161A.
- Lacy, E.L., Sheridan, M.A. and Moore, M.A. 1998. The role of sex-steroid hormones in sex differences in lipid metabolism in the tree lizard, *Urosaurus ornatus*. Western Regional Conference on Comparative Endocrinology, March 24-25, Berkeley, CA.
- Pesek, M.J., Joss, J., and Sheridan, M.A. 1999. Evolution of the somatostatin gene family: Insight from the Australian lungfish, *Neoceratodus forsteri*. *Amer. Zool.* 38:26A.
- Ehrman, M.M., Melroe, G., Kittilson, J.D., and Sheridan, M.A. 2000. Glucose regulates somatostatin gene expression in rainbow trout. Annual Meeting of the Society of Integrative and Comparative Biology, January 4-8, 2000, Atlanta, GA.
- Slagter, B.A. and Sheridan, M.A. 2000. Isolation and characterization of cDNAs encoding for somatostatin receptor from rainbow trout. *Amer. Zool.* 39:30A.
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- Slagter, B.A. and Sheridan, M.A. 2002. Differential expression of somatostatin receptors. 84th Annual meeting of the Endocrine Society, San Francisco, CA, June 19-22, 2002.
- Very, N.M. and Sheridan, M.A. 2002. Somatostatin alters hepatic growth hormone sensitivity in

- rainbow trout. 84th Annual meeting of the Endocrine Society, San Francisco, CA, June 19-22, 2002.
- Slagter, B.A. and Sheridan, M.A. 2002. Regulation of somatostatin receptor expression. Annual EPSCoR Conference, Grand Forks, ND, October 26, 2002.
- Very, N.M. and Sheridan, M.A. 2003. Somatostatin alters hepatic expression of insulin-like growth factor-1 in rainbow trout. ND-SD Joint EPSCoR Conference, Fargo, ND, September 5, 2003.
- Slagter, B.A. and Sheridan, M.A. 2003. A quantitative real-time RT-PCR assay for rainbow trout somatostatin subtype 1 receptor (sst1) mRNAs and its application in the study of nutritional regulation of sst1 gene expression. ND-SD Joint EPSCoR Conference, Fargo, ND, September 5, 2003.
- Norbeck, L., Very, N.M., and Sheridan, M.A. 2004. Isolation and characterization of trout growth hormone receptors. Annual ND EPSCoR Conference, Grand Forks, ND, August 2004.
- Gong, J.-Y., Kittilson, J.D., Slagter, B.A., and Sheridan, M.A. 2004. Ligand binding and agonist-induced regulation features of subtype 1 somatostatin receptors in rainbow trout. 5th International Congress of Fish Endocrinology, Castellon, Spain, September 5-9, 2004.
- Nelson, L.E. and Sheridan, M.A. 2005. Insulin and growth hormone regulate the expression of somatostatin receptors. J. Exp. Zool. 305A:161.
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- Blaufuss, P., Caruso, M., and Sheridan, M.A. 2006. Isolation and characterization of two distinct insulin-encoding mRNAs in rainbow trout. ND EPSCoR State Conference, Grand Forks, ND, September 29, 2006.
- Hagemeister, A.L. and Sheridan, M.A. 2007. Somatostatin inhibits hepatic growth hormone sensitivity by activating the MAPK signaling pathway. Annual Meeting of the Society for Integrative and Comparative Biology, Phoenix, AR, January 4-7, 2007. (A Hagemeister awarded best paper)
- Caruso, M.A. and Sheridan, M.A. 2007. Rainbow trout possess two proinsulin-encoding mRNAs that are differentially expressed. Annual Meeting of the Society for Integrative and Comparative Biology, Phoenix, AR, January 4-7, 2007.
- Poudyal, D., Hanson, A., Reindl, K., Hagmeister, A., Kittilson, J., and Sheridan, M.A., 2007. Somatostatin-14 Inhibits the Expression of Insulin-like Growth Factor-I through the MAPK and

AKT/PI3KPathways. ND/SD Biennial Joint EPSCoR Conference, Fargo, ND, September 7, 2007.

Reindl, K.M. and Sheridan, M.A. 2008. Growth hormone receptor signal transduction in rainbow trout hepatocytes. Annual Meeting of the Society for Integrative and Comparative Biology, San Antonio, TX, January 2-6, 2008.

Very, N.M., Poudyal, D., Hanson, A., and Sheridan, M.A. 2008. Somatostatin inhibits the expression of insulin-like growth factor-I receptors. Annual Meeting of the Society for Integrative and Comparative Biology, San Antonio, TX, January 2-6, 2008.

Hagemeister, A.L., Gong, J.-Y., and Sheridan, M.A. 2008. Somatostatin isoforms selectively activate the MAPK pathway through somatostatin receptor subtype one. Annual Meeting of the Society for Integrative and Comparative Biology, San Antonio, TX, January 2-6, 2008.

Norbeck, L. and Sheridan, M.A. 2008. Effects of 17 β -estradiol and testosterone on the expression of growth hormone receptors, insulin-like growth factor-1, and insulin-like growth type 1 receptors in rainbow trout. 6th International Symposium on Fish Endocrinology, Calgary, Alberta, Canada, June 22-27, 2008.

Reindl, K.M., Kittilson, J.D., and Sheridan, M.A. 2009. Ligand binding, agonist-induced regulation, and signaling characteristics of trout growth hormone receptors in transfected cells. Annual Meeting of the Society for Integrative and Comparative Biology, Boston, MA, January 3-7, 2009.

Caruso, M.A., Kittilson, J.D., Blaufuss, P. and Sheridan, M.A. 2009. Rainbow trout insulin receptors: Cloning, patterns of mRNA expression, and regulation by fasting. Annual Meeting of the Society for Integrative and Comparative Biology, Boston, MA, January 3-7, 2009.

Hanson, A.M. and Sheridan, M.A. 2010. Effects of environmental estrogens on the growth hormone-insulin-like-growth factor system and seawater adaptation of rainbow trout. Annual Meeting of the Society for Integrative and Comparative Biology, Seattle, WA, January 3-7, 2010.

Norbeck, L. and Sheridan, M.A. 2010. Regulation of the growth hormone-insulin-like growth factor system by cortisol and thyroxin in rainbow trout. Annual Meeting of the Society for Integrative and Comparative Biology, Seattle, WA, January 3-7, 2010.

Caruso, M.A. and Sheridan, M.A. 2010. Expression of insulin and insulin receptor mRNAs is regulated by growth hormone and somatostatin in rainbow trout. Annual Meeting of the Society for Integrative and Comparative Biology, Seattle, WA, January 3-7, 2010.

Kittilson, J., Reindl, K., and Sheridan, M.A. 2010. Rainbow trout possess two hormone sensitive lipase-encoding mRNAs that are differentially expressed and differentially regulated by fasting. Annual Meeting of the Society for Integrative and Comparative Biology, Seattle, WA, January 3-7, 2010.

Reindl, K., Kittilson, J. Jones, E. and Sheridan, M.A. 2010. The hepatic growth hormone receptors of rainbow trout differentially link to signal transduction pathways. 9th International on the Biology of Fish, Barcelona, Spain, July 5-9, 2010.

Hanson, A. M. and Sheridan, M.A. 2011. Effects of Environmental Estrogens on Organismal Growth and the Growth Hormone-Insulin-Like-Growth Factor System of Rainbow Trout. Annual

Meeting of the Society for Integrative and Comparative Biology, Salt Lake City, UT January 4-7, 2010.

Walock, C., Martin, L., Kittilson, J. and Sheridan, M.A. 2011. Differential Effects of Growth Hormone on the Expression of Insulin-like Growth Factors 1 and 2. Annual Meeting of the Society for Integrative and Comparative Biology, Salt Lake City, UT January 4-7, 2011.

Reindl, K.M., Kittilson, J.D. Jones, E. Bergan, H. and Sheridan, M.A. 2011. The Hepatic Growth Hormone Receptors of Rainbow Trout Differentially Link to Signal Transduction Pathways. Annual Meeting of the Society for Integrative and Comparative Biology, Salt Lake City, UT January 4-7, 2011.

Poursaeid, S., Falahatkar, B., and Sheridan, M.A. 2011. Growth hormone stimulates growth responses in Siberian sturgeon, *Acipenser baerii*; Preliminary results. Aquaculture America 2011, New Orleans, LA, March 1-3, 2011.

Bergan, H.E. and Sheridan, M.A. 2011. Growth hormone-stimulated lipolysis in the liver of rainbow trout is mediated by the PI3K-Akt pathway. 1st North American Society of Comparative Endocrinology, Ann Arbor, MI, July 13-16, 2011.

Walock, C., Martin, L., Kittilson, J., and Sheridan, M.A. 2011. Differential effects of growth hormone family peptides on the expression of insulin-like growth factor 1 and 2 mRNAs. 1st North American Society of Comparative Endocrinology, Ann Arbor, MI, July 13-16, 2011.

Hanson, A.M. and Sheridan, M.A. 2012. Environmental estrogens inhibit the expression of insulin-like growth factors 1 and 2 in the liver and gill of rainbow trout. Annual Meeting of the Society for Integrative and Comparative Biology, Charleston, SC, January 3-7, 2012.

Ellens, E.R., Kittilson, J.D., Sower, S.A., and Sheridan, M.A. 2012. Evolutionary Origin and Divergence of the Growth Hormone/Prolactin/Somatomedin Receptor Family: Insights from Studies in Sea Lamprey. Annual Meeting of the Society for Integrative and Comparative Biology, Charleston, SC, January 3-7, 2012.

Bergan, H.E. and Sheridan, M.A. 2012. Mechanisms that underlie fasting-associated growth cessation and lipid catabolism in rainbow trout (*Oncorhynchus mykiss*). Annual Meeting of the Society for Integrative and Comparative Biology, Charleston, SC, January 3-7, 2012.

Ellens, E.R., and Sheridan, M.A. 2012. Evolution of the growth hormone family peptides and their receptors. Northern Plains Biological Symposium, Fargo, ND, April 19, 2012.

Bergan, H.E. and Sheridan, M.A. 2012. Growth hormone-stimulated hormone sensitive lipase expression in rainbow trout is mediated by ERK and PKC. Northern Plains Biological Symposium, Fargo, ND, April 19, 2012.

Norbeck, L. and Sheridan, M.A. 2012. Effects of cortisol and thyroxine on the expression of growth hormone receptors, insulin-like growth factor-1, and insulin-like growth factor type 1 receptors in rainbow trout. Northern Plains Biological Symposium, Fargo, ND, April 19, 2012.

Walock, C.N., Martin, L., Kittilson, J., and Sheridan, M.A. 2012. Differential effects of growth hormone Family peptides on the expression of insulin-like growth factor 1 and 2 mRNAs. Northern Plains Biological Symposium, Fargo, ND, April 19, 2012.

- Bergan, H.E., Walock, C.N., and Sheridan, M.A. 2012. Nutritional state modulates the growth hormone-stimulated insulin-like growth factor and hormone sensitive lipase mRNA expression. 10th International on the Biology of Fish, Madison, WI, July 15-19, 2012. (H. Bergan and C. Walock co-awarded best paper)
- Walock, C., Bergan, H., Kittilson, J., and Sheridan, M.A. Differential effects of growth hormone family peptides on the expression of insulin-like growth factor 1 and 2 mRNAs and modulation of their expression by nutritional state. World Aquaculture, Nashville, TN, Feb 21-25, 2013.
- Bergan, H.E. and Sheridan, M.A. Nutritional state modulates the effects of growth hormone on lipid catabolism. Northern Plains Biological Symposium, Grand Forks, ND, April 12, 2013.

Invited Seminars and Colloquia

- “Alterations in the metabolism of smolting salmonid fish,” April 1984, Bodega Marine Laboratory, University of California, Bodega Bay, CA.
- “Hormonal regulation of lipid metabolism: A tale from the fish tail,” May 1985, Department of Zoology, North Dakota State University, Fargo, ND.
- “Hormonal control of lipid metabolism in fish,” November 1986, Department of Biology, Wichita State University, Wichita, KS.
- “Hormonal control of lipid metabolism in fish,” January 1987, Biology Department, University of North Dakota, Grand Forks, ND.
- “Alterations in metabolism accompanying smoltification and seawater adaptation of salmon,” April, 1987; Canada-Department of Fisheries and Oceans, West Vancouver Laboratory, West Vancouver, British Columbia, Canada.
- “Fish lipid dynamics,” Oct. 1987, Department of Biological Sciences, Humboldt State University, Arcata, CA.
- “Hormonal control of metabolism,” April 1989, Department of Biology, California State University-Fresno, Fresno, CA.
- “Effects of catecholamines on lipid metabolism of poikilothermic vertebrates,” May 17; XI International Conference on Comparative Endocrinology, Malaga, Spain.
- “King salmon: a model metabolic endocrine system,” September 1989, Department of Zoology, University of New Hampshire, Durham, NH
- “Fish as a model metabolic endocrine system,” January 1990, NDSU Chapter Phi Sigma Annual Plenary Lecture.
- “Fish as a model diabetic system,” August 1990, National Institute of Diabetes and Digestive and Kidney Diseases, NIH, Bethesda, MD.
- “Endocrinology for aquaculture,” April 1991, Humboldt State University, Arcata, CA.
- “Regulation of hepatic lipid metabolism,” May, 1991. NDSU Department of Biochemistry.

- “Fish as model metabolic system,” August 1991, Hiroshima University, Hokkaido University and Ocean Research Institute, University of Tokyo, Japan.
- “Endocrinology for aquaculture of fishes,” August, 1991. National Institute of Aquaculture, Nikko Station and Tamaka Station.
- “Pancreatic physiology,” September 1991. Department of Biology, Moorhead State University, MN.
- “Hormonal control of lipid metabolism in fish,” September 1992, Department of Zoology, University of Manitoba.
- “Structure and expression of pancreatic somatostatin in fish,” October 1993, Department of Biomedical Sciences, Creighton University, Omaha, NE.
- “Somatostatin: Is it a hormone?” October 1993, Department of Pharmaceutical Sciences, NDSU.
- “Fish as a model system for studying animal growth,” November 1993, Bioscience Research Laboratory, USDA-ARS, Fargo, ND.
- “Physiology of somatostatin,” September 1994, Department of Biology, University of South Dakota, Vermillion, SD.
- “Regulation of somatostatin gene expression,” November 1994, Department of Biochemistry, NDSU.
- “Fish as a model for the study of gene expression,” March 1995, Sigma Xi lecture, University of North Dakota, Grand Forks, ND
- “Regulation of somatostatin gene expression,” October 1995, Department of Biological Sciences, Humboldt State University, Arcata, CA.
- “Emerging concepts in growth and development,” NDSU Science and Theology Colloquium, March 1996.
- “Use of fish as a model for the study of growth, development, and metabolism,” December 1996, University of Göteborg, Göteborg, Sweden.
- “Hormonal regulation of growth, development, and metabolism of Fish,” November 1997, Department of Biology, National Taiwan Ocean University, Taiwan
- “Regulation of somatostatin gene expression,” November, 1997, Academia Sinica, Taiwan
- “Use of fish as a model for the study of growth, development, and metabolism,” February 1998, University of Guelph, Guelph, OT, Canada.
- “Hormonal regulation of growth, development, and metabolism of Fish,” June 1998, Department of Physiology, University of São Paulo, Brazil
- “Regulation of somatostatin gene expression,” June 1998, Department of Physiology, University of São Paulo, Brazil
- “Structure-function relationships of the signaling system for the somatostatin peptide hormone family,”

March 1999, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada.

“Growing pains: The search for how animal growth is controlled,” November 2000, Department of Biological Sciences, Minnesota State University, Mankato.

“Control of Animal Growth,” November 2001, Department of Biological Sciences, Humboldt State University, Arcata, CA

“Regulation of growth in fish,” August 2003, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada.

“Role of somatostatins in regulation of animal growth,” October 2004, Department of Zoophysiology, University of Göteborg, Göteborg, Sweden

“Growing pains: fish, frogs, and folks like us,” April 2007, 49th Faculty Lecture, North Dakota State University, Fargo

“Regulation of vertebrate growth,” November 2007, Department of Biology, University of Bergen, Bergen, Norway

“Peripheral regulation of fish growth,” February 2009, Department of Biology, Memorial University of Newfoundland, St. John’s, Newfoundland, Canada

“Regulation of animal growth,” May 2010, Department of Biology, University of Denver, Denver, CO

“Growth hormone signaling,” April 2011, Department of Biology, National Central University, Taiwan

“Organismal Lipid Dynamics in Fish: Aspects of Absorption, Transport, Deposition, and Mobilization,” June 2012, College of Fisheries, Huazhong Agricultural University, Wuhan PRC

“Regulation of lipid metabolism,” May 2012, College of Fisheries, Huazhong Agricultural University, Wuhan PRC

“Methods of lipid Analysis,” May 2012, June 2012, College of Fisheries, Huazhong Agricultural University, Wuhan PRC

“Regulation of growth in fish,” May 2012, Chinese Academy of Science, Institute of Hydrobiology, Wuhan PRC

“Regulation of growth in fish,” May 2012, College of Biological Sciences, Sun Yat-Sen University, Guangzhou PRC

“Integration of growth and metabolism in animals,” March 2013, Institute of Physiology, University of Sao Paulo, Sao Paulo, Brazil

“Integration of feeding, growth, and metabolism,” September 2017, Hebrew University of Jerusalem

“Regulation of feeding, growth, and metabolism,” February 2018, Texas A&M University

“Endocrine disruption of growth,” April 2018, National Central University, Taipei, Taiwan

“Environmental contaminants disrupt animal growth,” May 2019, American University in Cairo, Egypt

“Reflections on the regulation of growth and the control of feeding and metabolism,” Institute of Physiology, University of Sao Paulo, Sao Paulo, Brazil