

CURRICULUM VITAE

NAME: Michael Angelo Castellini

EDUCATION:

B.A. Biology 1975 University of California, San Diego, *summa cum laude*

Ph.D. Marine Biology 1981 Scripps Institution of Oceanography

Thesis: Biochemical adaptations for diving in marine mammals

Drs. G.L. Kooyman and G.N. Somero, chairmen

EMPLOYMENT RECORD:

1976-80 Research assistant, University of California, San Diego

1981 Postdoctoral research fellow, Scripps Institution of Oceanography

1982 NATO postdoctoral fellow, University of British Columbia, Vancouver

1983-86 NIH postdoctoral fellow, University of British Columbia, Vancouver

1986-87 Visiting assistant research physiologist, University of California, San Diego

1987 Adjunct lecturer, Department of Biology, University of California, San Diego

1987-89 Assistant research biologist, University of California, Santa Cruz

1990-92 Research associate in Marine Sciences, University of California, Santa Cruz

1989-93 Assistant Professor, marine biology, School of Fisheries and Ocean Sciences, University of Alaska Fairbanks

1993-98 Associate Professor, marine biology, SFOS, University of Alaska Fairbanks

1995-99 Science director, Alaska Sea Life Center, Seward

6/99-9/99 Interim Executive Director, Alaska SeaLife Center, Seward

1998-present Professor marine biology, SFOS, University of Alaska Fairbanks

2002-2005 Director, Institute of Marine Science, SFOS, University of Alaska Fairbanks

2005-present Associate Dean, SFOS, University of Alaska Fairbanks

ACADEMIC AWARDS DURING GRADUATE TRAINING:

1975 B.A. Biology, Highest Honors, *summa cum laude*

1976 University of California Regents Fellow

1976 ARCS Foundation Fellow

1980 Southern California Academy of Science Award in Vertebrate Zoology

FACULTY AWARDS AND HONORS:

1997 Nomination University of Alaska Usibelli Award in Research

1998 UAF Faculty Achievement Recruiting Brochure Biography

2000 Viennese and International Clinical Experimental Research Biology Award for Scientific Contributions to Marine Biology, Austria.

SOCIETY MEMBERSHIPS:

1981-1987 American Association for the Advancement of Science

1983 -present American Physiological Society

1984 -present Society for Marine Mammalogy (Charter member)

1987-1993 American Society of Zoologists.

1988-1992 Comparative Respiratory Society

SERVICE OUTSIDE OF THE UNIVERSITY:

1988 Scholander Award Panel Judge, FASEB meetings, Las Vegas

1989 Scholander Award Keynote Address, FASEB meetings, New Orleans

1989 Student Award Panel Judge, Eighth Biennial Conference on the Biology of Marine Mammals, California.

1989 Chair and Organizer, Symposium on Diving Physiology, Eighth Biennial Conference on the Biology of Marine Mammals, California.

1990 Scholander Award Panel Judge, FASEB meetings, Wash, DC

1990 Chair and Organizer, Symposium on Field Physiology, American Physiological Society Meetings, Florida

1991 Student Award Chairman, Ninth Biennial Conference on the Biology of Marine Mammals, Chicago.

1992 Chair, Comparative Physiology Session. Federation of American Societies of Experimental Biologists. Anaheim, CA.

1992 Chair and Organizer, Symposium on Natural Diving Physiology. Society of Experimental Biology meetings. Cambridge, England

1993 Co-Organizer and chair, Symposium on Hypometabolism and Diving, International Union of Physiological Sciences, Glasgow, Scotland.

1994 Organizer and chair, Symposium on medical applications of marine mammal physiology. American Physiological Society, San Diego, CA.

1994-96 National committee member, Career Opportunities in Physiology, American Physiological Society.

1994-97 National program officer, Comparative Section, American Physiological Society.

1995 Organizer and chair, Symposium on development of diving in seals. Marine Mammal Society meetings, Orlando, FL.

1997-1999 Anchorage Museum of History and Art. Program design consultant

1998-1999 EVOS Trustee Council. 10th Anniversary Program Development

1998-2000 Scientific Advisor. Alaskan Ocean, Seas and Fisheries Research Foundation, Kodiak, AK.

1999 Co-organizer and co-chair, Symposium on the biochemistry of lipids in marine mammals. Marine Mammal Society meetings, Maui, Hawaii.

1999 Nomination. Scientific Advisor to U.S. Marine Mammal Commission.

1999 Nomination. Scientific Committee Minerals Management Service.

2000 Co-organizer and co-chair, International Institute of Fisheries Economics and Trade, Annual Meeting, Oregon State University.

2000-present Member, National Research Council Postdoctoral Fellowship Program.

2001 Organizer and chair, Symposium on Diving Physiology. Second International Conference on Comparative Physiology and Biochemistry. Botswana. Africa.

2001 Co-organizer and chair. Symposium on fatty acid signature analysis. Marine Mammal Society meetings, Vancouver, Canada

2001 Nomination. North Pacific Marine Research Board Academic Member

2002 Chair, Symposium on Diving behavior and physiology. American Physiological Society, San Diego.

2001- present Editorial Board, Physiological and Biochemical Zoology

2001-2002 National Research Council Steller sea lion Advisory Panel

2002-present Member, Scientific Committee U.S. Minerals Management Service

2003-2004 Member, Alaska Sea Grant Wakefield Symposium Organizing Committee

2004-present Co-chair, life sciences, National Research Council Postdoctoral Program

2004-present Chair, US Mineral Management Service Arctic Research Sub-Committee

2004-present Editorial Board, Polar Biology

2005- Member, NSF Polar Program Postdoctoral Review Panel

2005- Referee, Jefferson Science Fellows, National Academy Fellowship Program

REVIEWER AND REFEREE:

JOURNALS

American Journal of Physiology

American Midland Naturalist

Aquatic Mammals

American Midland Naturalist

Australian Journal of Zoology

Canadian Journal of Zoology

Comparative Biochemistry and Physiology

Deep Sea Research

Ecological Society of America

Ecosystems

Fishery Bulletin

Journal of Applied Physiology

Journal of Comparative Physiology

Journal of Comp Physiology and Biochemistry

Journal of Experimental Biology

Journal of Experimental Zoology

Journal of Mammalogy

Journal of Zoology

Lipids

Mammalogy

Marine Biology

Marine Mammal Science

Marine Ecology Progress Series

Physiological Reviews

Physiological and Biochemical Zoology

Physiological Zoology

Polar Biology

Translations Royal Society

Science

AGENCIES, PROGRAMS, BOOKS, SCHOLARSHIPS, PROMOTION

American Society of Engineering Education, Office of Naval Technology; Panel member

Anchorage Museum

Arctic Institute of North America

Australian Research Council

California Sea Grant

Canada Council for the Arts

Cornell University Press

Dalhousie University, Canada. Promotion and tenure external referee.

Idaho State Board of Education

International Centre for Antarctic Information and Research

National Fish and Wildlife Foundation

National Geographic Society, Research and Exploration

National Oceanic and Atmospheric Association.

National Science Foundation, Biological Oceanography

National Science Foundation, Office of Polar Programs; Referee and Panel member

National Science Foundation, Polar Postdoctoral Program Review Panel Member

National Science Foundation, Division of Cellular Biosciences

National Science Foundation, Integrative Animal Biology

National Science Foundation, Integrative Biology and Neuroscience

National Science Foundation, Instrumentation Development

National Science Foundation, Ocean Sciences

National Science Foundation, Major Research Instrumentation

Natural Environment Research Council

National Research Council, Postdoctoral Fellowship Program

National Research Council, Member, Steller sea lion program review

National Research Council, Referee, Oil Spill Recovery Institute review

Natural Sciences and Engineering Research Council of Canada.

North Pacific Marine Science Foundation

Memorial University of Newfoundland, St. John=s, Newfoundland, Canada

Oiled Wildlife Care Network, University of California, Davis

Oxford University Press

Princeton University Press

Texas A&M University, Galveston. Promotion and tenure external referee

UAF Alaska Cooperative Fish & Wildlife Research Unit

University of Alaska Press

University of British Columbia, Vancouver, Canada. Committee on Animal Care.

University of California, San Diego. Promotion and tenure external referee.

University of Manitoba, Canada. Promotion and tenure external referee

West Coast National Undersea Research Center

SERVICE TO THE UNIVERSITY:

Department or SFOS:

1. 1989 Member, IMS Merit Award Committee
2. 1989 Member, IMS Concurrent Research Faculty Rank Committee
3. 1990 Chair, Invertebrate Zoologist search committee
4. 1990 Member, SFOS Long Range Planning Committee
5. 1994 Member, Capital Plan and Facilities Development Committee
5. 1990-1995 Scientific Advisor. Alaska SeaLife Center.
6. 1992 Member, MAP marine mammal specialist search committee
7. 1994-1995 Chair, IMS weekly faculty meetings
8. 1993-1999 Member, GPMS&L graduate applications committee
9. 1995 Member, SFOS Capital planning committee
10. 1995-1999 Science Director, Alaska SeaLife Center

11. 1999-2001 Peer Review sub-Committee for Promotion/Tenure
12. 2000-2001 Member, Marine Biology search committee
13. 2000 Chair, IMS weekly faculty meetings
14. 2000-2001 Member, ASLC Research Faculty search committee
15. 2000-2001 Faculty Mentor program member
16. 2000-2004 Chair, Marine Biology Masters Comprehensive Exam Committee
17. 2001-2002 Chair, Stable isotope faculty search committee
18. 2001-2002 Chair, peer review sub-committee for promotion/tenure
19. 2002-2005 Director, Institute of Marine Science
20. 2004-present Member, Marine Biology Masters Comprehensive Exam Committee

21. 2005- Member, NURP Director search committee

22. 2005-present Associate Dean, SFOS

23. 2006-2007 Chair, Seward Marine Center Search Committee

24. 2006 Chair, Undergraduate Fisheries Program Coordinator Search Committee

University Wide:

1. 1989-Present Member, Chancellor's Institutional Animal Use and Care Committee
2. 1990-Present Member, Irving-Scholander Award Lecture committee
3. 1990-Present Member, Biological Papers of the University of Alaska Board.

4. 1991 Member, Wilson Scholarship Committee, U of A Foundation
5. 1994-1996 Member, University-wide Promotion and Tenure Committee
6. 1995-1996 Member, Usibelli Research Award Selection Committee
7. 1995-1996 Interim chair, Irving-Scholander Award Lecture committee
8. 1995-1997 Member, American Heart Association Graduate Fellowship Committee
9. 2000-2001 Member, IAB Director search committee
10. 2002 Member, IAB Integrative Physiology search committee
11. 2001-present Member, NSF UAF EPSCOR graduate fellowship committee
12. 2002-2003 Acting Chair, Chancellor's Institutional Animal Use and Care Committee
13. 2002-2005 UAF Provost's Council
14. 2003-present Member, NIH BRIN state wide committee.
15. 2005 Member, Vice Chancellor for Research Search Committee
16. 2007 Member, Provost Search Committee

Alaska SeaLife Center:

1. 1990-1995 Member, scientific design team
2. 1995-1999 Science Director
3. 1998-1999 Member, Institutional Animal Care and Use Committee

4. 1997-2003 Member, ASLC Scientific Advisory Committee
5. 1997-1999 Director, Research Department
6. 1997-1999 Chief Scientist, Marine Mammal Protection Act Permit
7. 1999 Member, Husbandry Director search committee
8. 1999 Member, Science Director search committee
9. 1999 Member, Executive Director search committee
10. June-Sept 1999 Interim Executive Director / ASLC Program Coordinator

FUNDING HISTORY

External Travel Grants:

1983 American Physiological Society travel grant IUPS meetings, Sydney, Australia

1984 American Society of Zoology travel grant IUCPB meetings, Liege, Belgium

1985 International Union of Biochemistry travel grant, IUB meetings, Amsterdam

1989 American Physiological Society travel grant IUPS meetings, Helsinki, Finland

1993 American Physiological Society travel grant, IUPS meetings, Glasgow, Scotland

Research Funding Grants

1982-1983 NSF-NATO. The biochemistry of extended breath-hold diving. \$14,980

1983-1986 NIH Individual Research Award. Diving metabolism in marine mammals. \$52,512

1986 NSF Symposium Support: Current methods in pinniped energetics. Co-PI. \$8,000

1987-1989 American Heart Association. Apo-lipoprotein E Deficiency in harbor seals.

Co-PI. \$39,880

1987-1992 NIH FIRST Award. Sleep apnea in seals: Metabolic Implications. \$349,581

1990-1991 UAF Faculty Grant. Metabolic consequences of long term fasting in seals. \$4,934

1990 American Physiological Society Symposium Support Award. American

Physiological Society meetings, Orlando, Fl. \$2,900

1991 UAF Biomedical Research Equipment Grant. Portable field centrifuge. \$1,641.

1991-1992 University of Alaska Natural Resources Council. Marine mammal and fisheries

interactions in Alaska waters. \$4,030

1991-1992 American Heart Association, Alaska Chapter. Cardiac responses to prolonged

sleep apnea: Marine Mammal Models. \$16,307

1991-1992 National Marine Fisheries Service Contract. Physiological studies on Steller sea lions and northern fur seals. \$43,669

1992-1993 Alaska Sea Grant. Physiological health status of Steller sea lions. \$45,817

1992-1993 Presidents Special Projects. \$2,500. Fisheries and Marine mammals in Alaska

1992-1995. National Science Foundation. Polar Programs. Testa and Castellini, Co-PI. Physiological development and survival of juvenile Weddell seals. OPP-9119885. \$600,534.

1993-1995 Office of Naval Research. Biochemical indices of high pressure tolerance in marine mammals. # N00014-93-1-0457. \$180,723.

1993-1996 NIH. Academic Research Enhancement Award. \$109,224

1993 University of Alaska Faculty Grant. Computer work station. \$5,000

1993-1995 Research Service Agreement. Alaska Department of Fish and Game. Fitness indices for Alaskan marine mammals. \$15,000

1995-1996 North Pacific Marine Mammals Consortium. Health of Steller sea lions. \$10,000

1996 Office of Polar Programs, NSF. Student stipend award. \$8,350

1996 Alaska Dept. Fish and Game. Health of Alaska Harbor seals. \$5,000

1993-1996 Office of Naval Research. Augmentation Award for Science and Engineering Research Training. N00014-93-1-1404. \$73,496.

1995-1996 Exxon Valdez Oil Spill Trustee Council grant. Recovery of harbor seals from EVOS: Condition and health status. \$153,800

1995-1996 Exxon Valdez Oil Spill Trustee Council grant. Harbor seals and EVOS: Blubber and lipids as indices of food limitation. \$82,948

1996-1997 Shedd Aquarium Aquatic Sciences Grant. Physiological and medical status of wild Steller sea lions: Implications for endangered species legislation and captive care.

\$1,475

1996-1998 Exxon Valdez Oil Spill Trustee Council grant. Recovery of harbor seals from EVOS: Condition and health status. \$248,000

1997-2000 Exxon Valdez Oil Spill Trustee Council grant. Harbor seal recovery: Phase II: Controlled studies of health and diet. \$248,800

1997-1999 University of Alaska Sea Grant: Condition and health of Alaskan seals and sea lions. \$117,106.

1997-2001 Environmental Protection Agency. Biochemical responses of marine mammals to external contaminants: Metals and inflammatory agents. \$301,171

1998-2000 Cooperative Institute for Arctic Research. Spatial aspects of organochlorine contamination in northern fur seal tissues. \$10,296

1998-2001 Cooperative Institute for Arctic Research. Bowhead whale blubber analyses.

\$72,900

1998-1999 National Science Foundation. Office of Polar Programs. Co-PI with L.D. Rea.

Blood lipid alterations with development and fasting in Weddell seal pups. OPP-9725859. \$33,042

1999-2002 National Science Foundation. Office of Polar Programs.

Nutritional physiology and body condition of seals. \$231,225

1999-2000 Reproductive endocrinology of Steller sea lions. National Fish and Wildlife Federation. \$39,000.

2001-2002. Pollock Conservation Cooperative Research Center. Co-PI with Dr. Shannon Atkinson. Capture and Holding of Transient Juvenile Steller sea lions. \$34,000

2002-2004 Alaska SeaLife Center Steller sea lion program. Metabolic aspects of survival.

\$250,000.

2002-2005 Alaska Sea Grant. Pollock as food items for Alaskan pinnipeds.

\$160,000.

2002-2006 National Science Foundation: Lipid chemistry in naturally foraging Weddell seals. \$650,000.

2002 North Pacific Research Board: Alaskan fish as food for predators. Equipment to measure the nutritional quality of fish

\$25,000

2002-2003 Morphometric indices of fitness and hydrodynamic profile in juvenile Steller sea lions. NOAA contract. \$23,614

2003 The Biochemistry of extreme aging in the bowhead whale. EPSCOR. \$20,000

2003 Continuous wavelength, temperature controlled microplate spectrophotometer. EPSCOR. \$12,000

2004 BRIN. Extreme aging in bowhead whales. \$20,000

2004-2005 Alaska SeaLife Center. Metabolic Demands of Steller sea lions. Wild fish as food. \$15,000

TEACHING

1987 Comparative Physiology. University of California, San Diego

Enrollment: 200 upper division undergraduates

1990 Fall semester. Physiology of Marine Organisms. MSL 615

Enrollment: 10 graduate

1990 Fall semester. Marine mammals: life in the sea. Graduate seminar. SFOS/IMS

Enrollment: 10 graduate

1991 Fall semester. Advanced topics in physiology. Graduate Seminar. SFOS/IMS

Enrollment: 6 graduate

1992 Oregon State University Marine Biology Intensive Course in Marine Mammals.

April 27 - May 1. Enrollment: 23 undergraduates.

1993 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 15 graduate

1993 Spring semester. Biology of Marine Mammals (co-taught with W. Testa) MSL 693.

Enrollment: 17 graduate

1994 Fall semester. Seals, sea lions and walruses (co-taught with S. Hills) MSL 693.

Enrollment: 5 graduate.

1995 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 7 graduate.

1995 Fall semester. Marine Biology Seminar. MSL 692

Enrollment: 8 graduate.

1996 Fall semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 6 graduate

1996 Fall semester. Teaching methods seminar. Co-taught with S. Henrichs. MSL 692

Enrollment: 5 graduate

1996 Fall semester. Marine Biology Seminar. MSL 692.

Enrollment: 7 graduate

1997 Spring semester. Marine Biology Seminar. MSL 692.

Enrollment: 8 graduate

1997 Fall semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 11 graduate

1999 Fall semester. Physiology of Marine Organisms. MSL 615

Enrollment: 11 graduate; 1 undergraduate

2001 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 9 graduate

2001 Spring semester. Biology of Marine Mammals, MSL 619. Co-taught with B. Kelley.

Enrollment: 14 graduate

2002 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 8 graduate

2003 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 9 graduate

2004 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 10 graduate

2005 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 12 graduate

2006 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 9 graduate

2007 Spring semester. Physiology of Marine Organisms. MSL 615.

Enrollment: 9 graduate

GUEST UAF TEACHING LECTURES:

1991 Polar Marine Science. MSL 621

1992 Current Topics Oceanography. MSL 411

1992 Polar Marine Science. MSL 621

1993 Animal care and welfare. BIO 693

1994 Animal care and Welfare. BIO 693

1994 Marine Biology. MSL 610

1994 Medical health student program. IAB.

1994 Polar Marine Science. MSL 621

1994 Biotelemetry. WLF 603

1995 Animal care and Welfare BIO 693

1996 Animal care and Welfare BIO 693

1996 Marine Biology. MSL 610

1996 Biotelemetry. WLF 603

1996 Polar Marine Science. MSL 621

1997 Animal care and Welfare BIO 693

1998 Marine Biology MSL 611

1999 Marine Biology MSL 692A

1999 Marine Biology MSL 692B

2000 Marine Biology MSL 692

2000 Marine Mammals Seminar

2000 Biology and Wildlife Telemetry class

2001 Marine policy

2001 Marine Biology

2003 Biotelemetry. WLF 603

2004 Biotelemetry. WLF 603

2006 Biotelemetry. WLF 603

GRADUATE STUDENT COMMITTEES:

Current UAF committees:

- 2001. Chair, PhD Susan Inglis
- 2001. Chair, MS Shawn Harper
- 2004- Chair, PhD Vicki Stegall
- 2006- Co-chair, PhD Jason Waite
- 1998. Member, MS Stephanie Haverlack
- 2005- Member, PhD Allison Banks
- 2006- Member, MS Beate Litz
- 2007- Member, PhD Mandy Keogh
- 2007- Member, MS Jeanette Nienaber

Completed committees:

- 1990-1995 Chair, Ph.D. Lorrie Rea
- 1992-1996 Chair, MS. Amal Ajmi
- 1992-1997 Chair, MS. Pat Rivera
- 1992-1997 Chair, Ph.D. Tania Zenteno-Savin
- 1993-1997 Chair, Ph.D. Jennifer Moss
- 1992-1997 Chair, Ph.D. Brian Fadely
- 1996-2003 Chair, PhD. Steve Trumble

1997-2001 Chair, MS Heather Harmon

1997-2004 Chair, PhD. Tami Mau

1995-2000 Co-chair, Ph.D. Michael Simpkins

1992-1997 Co-chair, MS. Gay Sheffield

1997-2000 Co-chair, MS Grace Abromaitis

1992-1993 Member, Ph.D. Vicky Kirby (Univ of Calif)

1992-1996 Member, Ph.D. Susanna Blackwell (Univ of Calif)

1994-1999 Member, Ph.D. Kimberly Beckmen (IAB)

1992-2000 Member, Ph.D. Amy Hirons

1992-2001 Member, Ph.D. Dave Person (IAB)

1998-2002 Member, PhD. LiYang Zhao

1999-2005 Member, PhD Cara Fields (University of California)

2000-2006 Member, PhD Cheryl Rosa (IAB)

2000-2007 Member, PhD Matt Myers

1990-1992 Member, MS. Jon Bishop (IAB)

1989-1993 Member, MS. Eva Saulitis

1992-1994 Member, MS. Jason Schreer

1989-1995 Member, MS Jill Anthony

1993-1996 Member, MS. Kelly Hastings (IAB)

1993-1996 Member, MS. Michael Williams (IAB)

1994-1997 Member, MS. Laurie Jemison

1997-1999 Member, MS Carrie Talus

1997-1999 Member, MS Christopher Taylor, Interdisciplinary

1998-2002 Member, MS Monica Bando

2001-2004 Member, MS Danielle O'Neill

2003-2006 Member, MS Janet Doherty

2003-2006 Member, MS Mette Nielsen

2005-2006 Member, MS Shannon Hanna

2005-2007 Member, MS John Brewer

Outside examiner:

1989 Ph.D. Michael Davis. Universite Laval, Quebec

1990 Ms. Sean Adams. University of California, Santa Cruz.

1992 Ph.D. Jane Reed. Birmingham University, England.

1999 Ph.D. Russell Andrews. University of British Columbia

2000 Ph.D. Sylvia Brunner. University of Sydney, Australia

2003 Ph.D. Geoffrey Dutton, University of Sydney, Australia

2005 Ph.D. Natalie Miller, University of Adelaide, Australia

Committees not completed.

1989-1991 Chair, MS committee. Lynn Lessard. Student left graduate school.

1989-1994 Member, MS committee. Leanne Lipton. Failed comprehensives. Left UAF

1990-1996 Member, MS. Tammy Adams. Left UAF to start Ph.D. elsewhere.

1995-1997 Chair, MS. Richard Lindemann. Failed comprehensives. Switched committee.

1997-1998 Chair, MS. Kerrie Becket. Switched programs.

1997-2001 Chair, Ph.D. Wendy Dunlap. Left graduate school for outside employment

Postdoctoral advisor:

2004. Dr. Leslie Cornick. NSF Postdoctoral Fellow

2002-2004 Dr. Liying Zhao

2003-2004 Dr. Lori Polasek

2005-2006 Dr. Tami Haase

BIBLIOGRAPHY (* Student author)

1. Kooyman, G.L., E.A. Wahrenbrock, M.A. Castellini, R.W. Davis and E.E. Sinnett. Aerobic and anaerobic metabolism during voluntary diving in Weddell seals: evidence of preferred pathways from blood chemistry and behavior. *Journal Comparative Physiology*. 138: 335-346. 1980.
2. Kooyman, G.L., M.A. Castellini and R.W. Davis. Physiology of diving in marine mammals. *Annual Review Physiology*. 43:343-356. 1981.
3. Castellini, M.A. and G.N. Somero. Buffering capacity of vertebrate muscle: Correlations with potentials for anaerobic function. *Journal of Comparative Physiology*. 143:191-198. 1981.
4. Castellini, M.A., G.N. Somero and G.L. Kooyman. Glycolytic enzymes activities in tissues of marine and terrestrial mammals. *Physiological Zoology*. 54(2):242-252. 1981.
5. Kooyman, G.L., M.A. Castellini, R.W. Davis and R.A. Maue. Aerobic diving limits of immature Weddell seals. *Journal of Comparative Physiology*. 151:171-174. 1983.
6. Davis, R.W., M.A. Castellini, G.L. Kooyman and R.A. Maue. Renal glomerular filtration rate and hepatic blood flow during voluntary diving in Weddell seals. *American Journal of Physiology*. 245 R743-R748. 1983.
7. Castellini, M.A., R.W. Davis, M. Davis and M. Horning. Antarctic marine life under the McMurdo ice shelf at White Island: A link between nutrient influx and seal population. *Polar Biology*. 2:229-231. 1984.
8. Castellini, M.A., B.J. Murphy, M. Fedak, K. Ronald, N. Gofton and P.W. Hochachka. Potentially conflicting demands of diving and exercise in seals. *Journal of Applied Physiology*. 58(2):392-399. 1985.
9. Castellini, M.A. Metabolic depression in tissues and organs of marine mammals during diving: Living longer with less oxygen. *Molecular Physiology*. 8(3):427-437. 1985.
10. Castellini, M.A., D.P. Costa and A.C. Huntley. Hematocrit variation during sleep apnea in elephant seal pups. *American Journal of Physiology*. 251:R429-R431. 1986.

11. Castellini, M.A., D.P. Costa and A.C. Huntley. Fatty acid metabolism in fasting elephant seal pups. *Journal of Comparative Physiology B*.157(4):445-449.1987.
12. Castellini, M.A., R.W. Davis and G.L. Kooyman. Blood chemistry regulation during repetitive diving in Weddell seals. *Physiological Zoology*. 61(5):379-386.1988.
13. Castellini, M.A. Visualizing metabolic transitions in aquatic mammals: Does apnea plus exercise equal "diving"? *Canadian Journal of Zoology*. 66(1):40-44. 1988.
14. Castellini, M.A. and J.M. Castellini. Influence of hematocrit on whole blood glucose levels: new evidence from marine mammals. *American Journal of Physiology*. 256:R1220-R1224. 1989.
15. Castellini, M.A. and G.L. Kooyman. Behavior of freely diving animals. *Undersea Biomedical Research*.16(5):355-362.1989.
16. Castellini, M.A. and G.L. Kooyman. Length, girth, and mass relationships in Weddell seals (*Leptonychotes weddellii*). *Marine Mammal Science*. 6(1):75-77.1990.
17. Ponganis, P.J., Kooyman, G.L., Zornow, M.H., Castellini, M.A. and D.A. Croll. Cardiac output and stroke volume in swimming harbor seals. *Journal of Comparative Physiology B*. 160(5):473-482. 1990.
18. Castellini, J.M., Castellini, M.A. and *M.B. Kretzmann. Circulatory water balance in suckling and fasting northern elephant seal pups. *Journal of Comparative Physiology B*. 160(5):537-542. 1990.
19. Castellini, M.A. and D.P. Costa. Relationships between plasma ketones and fasting duration in neonatal elephant seals. *American Journal of Physiology*. 259:R1089-R1090. 1990.
20. Davis, R.W., M.A. Castellini, T.M. Williams and G.L. Kooyman. Fuel homeostasis in the harbor seal during submerged swimming. *Journal of Comparative Physiology B*. 160:627-635. 1991.
21. Castellini, M.A. The biology of diving: biochemical, physiological and behavioral limits. In: *Advances in Comparative and Environmental Physiology*. Vol 8. R. Gilles, ed. Springer-Verlag, Berlin. pp 105-134.1991.
22. Kooyman, G.L., P.J. Ponganis, M.A. Castellini, E.P. Ponganis, K.V. Ponganis, P.H. Thorson, S.A. Eckert and Y. LeMaho. Heart rates and swim speeds of emperor penguins

diving under sea ice. *Journal of Experimental Biology*. 165:161-180. 1992.

23. Castellini, M.A., G.L. Kooyman and P.J. Ponganis. Metabolic rates of freely diving Weddell seals: Correlations with oxygen stores, swim velocity and diving duration.

Journal of Experimental Biology. 165:181-194. 1992.

24. Castellini, M.A., J.M. Castellini and *V.L. Kirby. Blood glucose handling methods can compromise analytical results: Evidence from marine mammals. *Journal of the American Veterinary Association*. 201(1):145-148.1992.

25. Castellini, M.A., D.P. Costa and J.M. Castellini. Blood glucose distribution, brain size and diving in small odontocetes. *Marine Mammal Science*. 8(3):294-298. 1992.

26. Castellini, M.A. and *L.D. Rea. The biochemistry of natural fasting at its limits. *Experientia*. 48:575-582. 1992.

27. Castellini, M.A., R.W. Davis and G.L. Kooyman. Diving behavior and ecology of the Weddell seal: Annual cycles. *Bulletin of the Scripps Institution of Oceanography*. University of California Press. Volume 28. 1992.

28. Meiselman, H.J., M.A. Castellini and R. Elsner. Hemorheological behavior of seal blood. *Clinical Hemorheology*. 12:657-675. 1992.

29. Castellini, M. and D. Calkins. Mass estimates using body morphology in Steller sea lions. *Marine Mammal Science*. 9:48-54. 1993.

30. Castellini, M.A., R.W. Davis, T.R. Loughlin and T.M. Williams. Blood chemistries and body condition of Steller sea lion pups at Marmot Island, Alaska. *Marine Mammal Science*. 2:202-208. 1993.

31. Castellini, J.M. and M.A. Castellini. Estimation of splenic volume and its relationship to long duration apnea in seals. *Physiological Zoology*. 66(4):619-627. 1993.

32. Ponganis, P.J., G.L. Kooyman and M.A. Castellini. Determinants of the aerobic dive limit of Weddell seals: Analysis of diving metabolic rates, postdive end tidal PO₂'s, and blood and muscle oxygen stores. *Physiological Zoology*. 66(5):732-749. 1993.

33. Ponganis, P.J., G.L. Kooyman, M.A. Castellini, E.P. Ponganis and K.V. Ponganis.

Muscle temperature and swim velocity profiles during diving in a Weddell seal, Leptonychotes weddellii. *Journal of Experimental Biology*. 183:341-346. 1993.

34. Castellini, M., W. Milsom, R. Berger, D. Costa, D. Jones, J. Castellini, *L. Rea, *S. Bharma and *M. Harris. Patterns of respiration and heart rate during wakefulness and sleep in elephant seal pups. *American Journal of Physiology*. 266:R863-R869. 1994.

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94. Castellini, M.A. Institute of Marine Science Arctic and Polar Programs. Arctic Research Commission Presentation. Fairbanks, AK. 2004.
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Virginia Beach, VA. October 2006.

104. Castellini, M.A. Doing aerobics while holding your breath: How seals dive. Sitka WhaleFest. November, 2006.

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8. Testa, J.W., M.A. Castellini and L.D. Rea. Physiological and behavioral ecology of juvenile Weddell seals. *Antarctic Journal of the United States*. XXVIII (5) 155-156. 1993.
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Report (Restoration Project 01341), Alaska Department of Fish and Game, Anchorage, Alaska. 2002.

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17. Calkins, D., Castellini, M., Burkanov, V., Atkinson S., Inglis, S. and D. Hennen. Impact of changing diet regimes on Steller sea lion body condition. In: Synopsis of Research on Steller sea lion: 2001-2005. Loughlin, T.R., Calkins, D.G. and S. Atkinson, eds. Pages 6-18. ASLC NOAA Steller Sea Lion Research Program Report. Sea Script Press, Seattle. 2005.

INVITED LECTURES

Lectures 1-30 encompass the years 1983 to 1996. The following list begins in 1997.

31. Is the aerobic diving limit theory still valid?

Marine mammals in Alaska: Mixing politics with biology.

Texas A&M University, Marine biology Dept., 1997.

32. Management issues of marine mammals in Alaska, USA. Sea Fisheries Research Institute, Capetown, South Africa

Taking physiology to the field: studies of diving physiology in marine mammals.

33. Biological, cultural and political issues with marine mammals in Alaska .

Rhodes University, Zoology Department, Grahamstown, South Africa, 1997.

34. Are there unique biochemical pathways necessary for diving in marine mammals? International conference on Comparative Physiology and Biochemistry. Kruger National Park, South Africa, 1997.

35. Harbor seal population health program

Exxon Valdez Trustee Council Program Update, Anchorage. November 1997

36. Harbor seal tissue program.

Alaska Native Harbor Seal Commission Meetings, Kodiak, March 1998

37. Marine Mammal Research at the Alaska SeaLife Center

Kodiak Whalefest. National Marine Fisheries Service, March 1998.

38. Marine mammal research at the Alaska SeaLife Center

National Association of Marine Educators, Northwest Chapter. Seward, June 1998.

39. Research programs at the Alaska SeaLife Center

Arctic Research Commission Meetings. Seward, AK. August. 1998

40. Arctic Resource Issues

Arctic Research Commission of the United States, Wash DC. Sept, 1998

41. Alaska SeaLife Center Marine Mammal Program

Marine Mammal Commission, Fairbanks, Nov, 1998

42. Harbor seal tissue program.

Alaska Native Harbor Seal Commission Meetings, Anchorage, January, 1999

43. Steller sea lion recovery team physiology review

Seattle, WA. February, 1999

44. Anatomy of whales provides insight to their diving physiology: Past methods and future technologies. American Physiological Society. Wash DC, April 1999.

45. Science at the Alaska SeaLife Center. Alaska Research Development Council. September, 1999.

46. The role of blubber in condition assessment. 13th Biennial Conference on the Biology of Marine Mammals. November, 1999.

47. The diving and nutritional physiology of the great whales. Sitka Whale Festival. November, 1999.

48. The biology of marine mammals. Sitka Whale Festival. November, 2000.

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