

CURRICULUM VITAE

NAME: Michael Angelo Castellini

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 at UAF

1989-93 Assistant Professor, marine biology, School of Fisheries and Ocean Sciences (SFOS)
University of Alaska Fairbanks
1993-98 Associate Professor, marine biology, SFOS, University of Alaska Fairbanks
1995-99 Science director, Alaska SeaLife Center, Seward
6/99-9/99 Interim Executive Director, Alaska SeaLife Center, Seward
1998-2015 Professor marine biology, SFOS, University of Alaska Fairbanks
2002-2005 Director, Institute of Marine Science, SFOS, University of Alaska Fairbanks
2007-2012 Director, Coastal Marine Institute, University of Alaska, Minerals Management
Service
1/10-3/10 Interim Director, Fisheries Division, SFOS
2005-2010 Associate Dean, SFOS, University of Alaska Fairbanks
2010-2011 Interim Dean, SFOS, University of Alaska Fairbanks
2011-2014 Dean, SFOS
2015-2016 Associate Dean, Graduate School, University of Alaska Fairbanks
2015-2016 Senior Faculty, Center for Arctic Policy Studies, UAF
2016-2017 Director, Global Change Student Research Grant Competition
2016-2019 Co-Director, Research Enrichment Core, NIH, BLaST, UAF.
2016-2020 Interim Dean, Graduate School, University of Alaska Fairbanks
2017-2020 Vice President, Academics, University of the Arctic
2019-2020 Co-Principal Investigator, Research Enrichment Core, NIH, BLaST, UAF.

AWARDS, HONORS @ UAF

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.
2008-present Fellow, American Association for the Advancement of Science
2009 William S. Hoar Memorial Award in Comparative Physiology, University of British
Columbia, Canada.
2016-present National Associate, National Academies of Sciences, National Research Council

RECENT (last 10 yr) SERVICE OUTSIDE OF THE UNIVERSITY

2004-2010	Co-chair, Life Sciences, National Research Council Postdoctoral Program
2008-2010	Member, National Science and Engineering Council Grants Selection Committee, Canada
2008-2011	Contributing Editor, Marine Ecology Progress Series
2010-2012	Associate Editor, Frontiers in Aquatic Physiology
2012	Review Member, Office of Naval Research, Marine Mammal Research Program.
2010-2020	Chair, Life Sciences, National Research Council Postdoctoral Program
2011-2015	Alaska Ocean Observing System Board of Directors
2011-2016	North Pacific Research Board of Directors; BOD Arctic Science Committee
2011-2016	Alaska SeaLife Center Board of Directors
2015-2016	Chair, Alaska SeaLife Center Science Advisory Committee
2013-2016	Member, NOAA Ecosystems Sciences Management Working Group.
2018-2021	Co-chair, NOAA Ecosystems Sciences Management Working Group

MAJOR SERVICE (last 10 yr) TO THE UNIVERSITY:

2011-2014	Dean, SFOS, Various boards, committees, working groups.
2009-2010	Member, Chancellors Committee on Integration of Research and Teaching in Sciences.
1989-2015	Member, Chancellor's Institutional Animal Use and Care Committee
1990-present	Member, Irving-Scholander Award Lecture committee
2010-2011	Chair, Chancellors Task Force on eLearning and distance education
2011	Chair, UA Office of Information Technology Executive Director Search
2011-present	Multiple task forces, committees, program reviews and working groups.

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
11. 2010- 2016 Member, ASLC Board of Directors, appointed by Pres. Gamble
12. 2011-2017 Member, ASLC Science Advisory Committee
13. 2016-2017 Chair, ASLC Science Advisory Committee

FUNDING HISTORY

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	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
2007-2009	North Pacific Research Board. Development of Condition Indices for pollock \$52,000
2008-2014	National Science Foundation: Centers for Ocean Science Education Excellence. Co-PI: Total grant award: \$743,646.
2008-2011	Minerals Management Service Coastal Marine Institute Administration Total budget: \$890,000
2011-2015	As Dean, PI for a suite of administrative and SFOS research program budgets
2015-2020	As Interim Graduate Dean: NSF Graduate Fellowships, Mellon Foundation Graduate Completion Awards; Global Change Student Grant Competition.

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

- 2008 Spring semester. Physiology of Marine Organisms. MSL 615.
Enrollment: 3 graduate
- 2010 Spring semester. Biology of Marine Mammals. MSL 619.
Substitute instructor mid-semester due to emergency leave of assigned instructor.
Enrollment: 6 graduate.

GUEST UAF TEACHING LECTURES:

1991	Polar Marine Science. MSL 621	2000	Marine Biology MSL 692
1992	Current Topics Oceanography. MSL 411	2000	Marine Mammals Seminar
1992	Polar Marine Science. MSL 621	2000	Biology and Wildlife Telemetry class
1993	Animal care and welfare. BIO 693	2001	Marine policy
1994	Animal care and Welfare. BIO 693	2001	Marine Biology
1994	Marine Biology. MSL 610	2003	Biotelemetry. WLF 603
1994	Medical health student program. IAB.	2004	Biotelemetry. WLF 603
1994	Polar Marine Science. MSL 621	2006	Biotelemetry. WLF 603
1994	Biotelemetry. WLF 603	2008	Polar Marine Science MSL 621
1995	Animal care and Welfare BIO 693	2009	Marine Physiology, MSL 615
1996	Animal care and Welfare BIO 693	2011	Marine Physiology, MSL 615
1996	Marine Biology. MSL 610	2012	Polar Marine Science, MSL 621
1996	Biotelemetry. WLF 603	2018	Veterinary Medicine: One Health
1996	Polar Marine Science. MSL 621	2019	Veterinary Medicine: One Health
1997	Animal care and Welfare BIO 693	2020	Veterinary Medicine: One Health
1998	Marine Biology MSL 611	2020	Kenai College: Science and Policy
1999	Marine Biology MSL 692A	2020	Kenai College: Ocean seminar
1999	Marine Biology MSL 692B		

GRADUATE STUDENT COMMITTEES:

Current committees:

2018-present	Co-chair, PhD	Troy Bouffard, UAF
2020-present	Member, MS.	EmmaLi Tsai, Texas Tech University

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
2001-2019	Chair, PhD	Susan Inglis
1995-2000	Co-chair, Ph.D.	Michael Simpkins
1992-1997	Co-chair, MS.	Gay Sheffield
1997-2000	Co-chair, MS	Grace Abromaitis
2006-2011	Co-chair, PhD	Jason Waite

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
2007-2011	Member, PhD	Mandy Keogh

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
2005-2014	Member, MS	Allison Banks
2006-2008	Member, MS	Beate Litz
2007-2009	Member, MS	Jeanette Nienaber
2009-2013	Member, MS	Elena Fernandez

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	PhD. Geoffrey Dutton, University of Sydney, Australia
2005	PhD. Natalie Miller, University of Adelaide, Australia
2009	PhD. Jeremy Goldbogen, University of British Columbia, Canada

Postdoctoral advisor:

2002-2004	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. Bharmha 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.
35. Castellini, M.A., *L.D. Rea, *J.L. Sanders, J.M. Castellini and *T. Zenteno-Savin. Developmental changes in cardiorespiratory patterns of sleep associated apnea in northern elephant seals. *American Journal of Physiology*. 267: R1294-R1301. 1994.
36. Ponganis, P.J., G.L. Kooyman and M.A. Castellini. Multiple sightings of Arnoux's beaked whales along the Victoria Land Coast. *Marine Mammal Science*. 11:247-250. 1995.
37. Castellini, J.M., H.J. Meiselman and M.A. Castellini. Understanding and interpreting hematocrit measurements in pinnipeds. *Marine Mammal Science*. 12:251-264. 1996.
38. Castellini, M.A. Dreaming about diving: Sleep apnea in seals. *News in Physiological Sciences, American Journal of Physiology*. 11:208-214. 1996.

39. Milsom, W., M. Castellini, *M. Harris, J. Castellini, D. Jones, R. Berger, *S. Bahrma, *L. Rea and D. Costa. Effects of hypoxia and hypercapnia on patterns of sleep-associated apnea in elephant seal pups. *American Journal of Physiology*. R271:1996. 1996.
40. *Burns, J.M. and M.A. Castellini. Physiological and behavioral determinants of the aerobic dive limit in Weddell seal pups (Leptonychotes weddellii). *Journal of Comparative Physiology B*. 166:473-483. 1996.
41. Castellini, M.A. and *T. Zenteno-Savin. Heart rate scaling with body mass in pinnipeds. *Marine Mammal Science*. 13(1):149-155. 1997.
42. *Zenteno-Savin, T., M.A. Castellini, *L.D. Rea and *B.S. Fadely. Plasma haptoglobin levels in threatened Alaskan pinniped populations. *Journal Wildlife Diseases*. 33(1):64-71. 1997.
43. *Rea, L.D., Groscolas, R, Mioskowski, E., and M. Castellini. Changes in fatty acids indicate change in nutritional status in developing Weddell seal pups. *Polar Biology*. 18:351-357. 1997.
44. *Burns, J.M., *J.F. Schreer and M.A. Castellini. Physiological effects on individual dive patterns and foraging strategies in yearling Weddell seals. *Canadian Journal of Zoology*. 75: 1796-1810. 1997.
45. *Zenteno-Savin, T., M.A. Castellini. Plasma angiotensin II, arginine vasopressin and atrial natriuretic peptide in free ranging and captive seals and sea lions. *Comparative Biochemistry and Physiology*. 119C:1-6. 1998.
46. *Zenteno-Savin, T., and M.A. Castellini. Changes in the plasma levels of vasoactive hormones during apnea in seals. *Comparative Biochemistry and Physiology*. 119C: 7-12. 1998.
47. *Rea, L.D., M.A. Castellini, *B.S. Fadely and T.R. Loughlin. Health status of young Alaska Steller sea lion pups as indicated by blood chemistry and hematology. *Comparative Biochemistry and Physiology*. 120 A: 617-623. 1998.
48. *Burns, J.M., *S.J. Trumble, M.A. Castellini and J.W. Testa. The diet of Weddell seals in McMurdo Sound, Antarctica, as determined from scat collections and stable isotope analysis. *Polar Biology*. 19:272-282. 1998.
49. *Burns, J.M. and M.A. Castellini. Dive data from satellite tags and time depth recorders: A comparison in Weddell seal pups. *Marine Mammal Science*. 14(4): 750-764. 1998.
50. *Burns, J.M., J.W. Testa and M.A. Castellini. Movements and diving behavior of weaned Weddell seal pups. *Polar Biology*. 21:23-36. 1999.
51. Castellini, M.A. History of polar whaling: insights into the physiology of the great whales. *Comparative Biochemistry and Physiology*. 126A:153-159. 2000.
52. Castellini, M.A., J.M. Castellini and *P.M. Rivera. Adaptations to Pressure in the RBC Metabolism of Diving Mammals. *Comparative Biochemistry and Physiology*. 129(4): 751-757. 2001.
53. Castellini, M.A., P.M. Yochem and J.M. Castellini. Differential concentration of glucose in red blood cells and plasma of a rehabilitating gray whale calf. *Aquatic Mammals*. 27(3):277-278. 2001.
54. *Trumble, S.J. and M.A. Castellini. Blood chemistry, hematology and morphology values of wild harbor seal pups from declining and stable populations in Alaska. *Journal of Wildlife Management*. 66(4):1197-1207. 2002.
55. Castellini, M.A., P. M. *Rivera and J.M. Castellini. Biochemical aspects of pressure tolerance in marine mammals. *Comparative Biochemistry and Physiology*. 133A:893-899. 2002.
56. Loughlin, T. R., M.A. Castellini, and G. Ylitalo. Spatial aspects of organochlorine contamination in northern fur seal tissues. *Marine Pollution bulletin*. 44:1024-1034. 2002.

57. Ackley, S.F., J.L. Bengston, P. Boveng, M. Castellini, K.L. Daly, S. Jacobs, G.L. Kooyman, J. Laake, L. Quetin, R. Ross, D.B. Siniff, B.S. Stewart, I. Stirling, J. Torres and P.K. Yochem. A top-down, multidisciplinary study of the pressure and function of the pack ice ecosystem in the eastern Ross Sea, Antarctica. *Polar Record*. 39 (210): 219-230. 2003.
58. * Trumble, S.J., P.S. Barboza and M.A. Castellini. Digestive constraints on an aquatic carnivore: effects of feeding frequency and prey composition on harbor seals. *Journal of Comparative Physiology B*. 173:501-509. 2003.
59. Zhao, L. Y., M. A. Castellini, T. L. Mau*, S. J. Trumble*. Trophic Interactions of Antarctic Seals as Determined by Stable Isotope Signatures. *Polar Biology* 27(6): 368-373.2004.
60. Castellini, M.A. and J.M. Castellini. Defining the limits of diving biochemistry in marine mammals. *Journal of Comparative Biochemistry and Physiology*. 139(3): 509-518. 2004.
61. *Trumble, S.J. and M.A. Castellini. Diet mixing in an aquatic carnivore, the harbour seal. *Canadian Journal of Zoology*. 83:851-859. 2005.
62. *Trumble, S.J., M.A. Castellini, T.M. Mau and J.M. Castellini. Dietary and seasonal influences on blood chemistry and hematology in captive harbor seals. *Marine Mammal Science*. 22(1):104-123. 2006.
63. Castellini, M.A., R. Elsner, O.K. Baskurt, R.B. Wenby and H.J. Meiselman. Blood rheology of Weddell seals and bowhead whales. *Biorheology*. 43: 57-69. 2006.
64. Burns, J.M., Williams, T.M., Secor, S.M., Owen-Smith, N., Bargmann, N.A., and M.A. Castellini. New Insights into the physiology of natural foraging. *Physiological and Biochemical Zoology*. 79(2): 242-249. 2006.
65. *Zhao, L.Y., Schell, D.M. and M.A. Castellini. Dietary macronutrients influence ¹³C and ¹⁵N signatures of pinnipeds: Captive feeding studies with harbor seals (*Phoca vitulina*). *Comparative Physiology and Biochemistry. Part A*. 143: 469-478. 2006.
66. *Zhao, L.Y., Schell, D.M. and M.A. Castellini. Metabolic Adjustments to Varying Protein Intake in Harbor Seals (*Phoca vitulina*): Evidence from Serum Free Amino Acids. *Physiological and Biochemical Zoology*. 79(5):965–976. 2006.
67. Atkinson, S., Calkins, D., Burkanov, V., Castellini, M., Hennen, D., and *S. Inglis. Impact of changing diet regimes on steller sea lion body condition. *Marine Mammal Science*. 24(2): 276-289. 2008.
68. Trillmich, F., * Rea., L., Castellini, M. and J.B.W. Wolf. Age-related changes in hematocrit in the Galápagos sea lion (*Zalophus wollebaeki*) and the Weddell seal (*Leptonychotes weddellii*). *Marine Mammal Science*. 24(2): 290-302. 2008.
69. Castellini, M.A., *Trumble, S.J., *Mau, T.L., Yochem, P.K., Stewart, B.S., and M.A.Koski. Body and blubber relationships in antarctic pack ice seals: implications for blubber depth patterns. *Physiological and Biochemical Zoology*. 82:113-120.2009.
70. Castellini, M.A., Baskurt, O., Castellini, J.M. and H.J. Meiselman. Blood rheology in marine mammals. *Frontiers in Aquatic Physiology*. 1:1-8. 2010.
71. Castellini M. Life Under Water: Physiological Adaptations to Diving and Living at Sea. *Comprehensive Physiology* 2:1889-1919. 2012.
72. *Trumble, S.J., * O'Neil, D., Cornick, L.A., Gulland, F.M.D.,Castellini, M.A., and S.A.Atkinson. Endocrine changes in harbor seal (*Phoca vitulina*) pups undergoing rehabilitation. *Zoo Biology*. 32(2):132-141: 2013.

BOOKS and BOOK CHAPTERS

1. Kooyman, G.L., R.W. Davis and M.A. Castellini. Thermal conductance of immersed pinniped and sea otter pelts before and after oiling with Prudhoe Bay Crude. In: Fate and Effects of petroleum hydrocarbons in marine organisms and ecosystems. NOAA symposium, 151-157. D. A. Wolfe, ed. Pergammon Press, NY. 478 pp. 1977.
2. Castellini, M.A. Closed systems: Resolving potentially conflicting demands of diving and exercise in marine mammals. In: Circulation, Respiration and Metabolism. Current Comparative Approaches. 219-226. R. Gilles, ed. Springer-Verlag, Berlin. 568 pp. 1985.
3. Castellini, M.A. Fuel homeostasis and organ function using single injection tracer techniques in marine mammals. In: Marine Mammal Energetics. Marine Mammal Society special publication No. 1, A.C. Huntley, D.P Costa, G.A.J. Worthy and M.A. Castellini eds. Alan Press, Kansas. pp 1-13. 1987.
4. Castellini, M.A. Apnea tolerance in the elephant seal during sleeping and diving: Physiological mechanisms and correlations. In: Elephant seals - Population ecology, behavior and physiology. University of California Press, Berkeley. pp 343-353. 1994.
5. Castellini, M.A. The thermoregulation of marine mammals. Encyclopedia of Marine Mammals. Academic Press. Pages 1245-1250, 2002.
6. Castellini, M.A. Sleep in Aquatic Mammals. In: Animal Models of Sleep Related Breathing Disorder. Carley, D and Radulovacki, eds. Lung Biology in Health and Disease. Marcel-Dekker. Volume 171. Pages 317-335. 2003.
7. Castellini, M.A. Marine Mammals. Chapter 3. In: Environment, Resources and People in the North. University of Alaska Press. Accepted. In final edit.
8. Castellini, M.A. Diving : Marine Mammals. In: Encyclopedia of the Antarctic, 2 vols., ed. Beau Riffenburgh. New York: Routledge. Pp 336-339. 2007.
9. Castellini, M.A. The thermoregulation of marine mammals. Encyclopedia of Marine Mammals. Academic Press. Second Edition. Pages 1166-1171. 2009.
10. Castellini, M.A. Pressure tolerance in diving birds and mammals. In: Comparative High Pressure Biology (Sebert, P., ed). Science Publishers, Enfield, NH, USA. Pages 379-398. 2010.
11. Castellini, M.A. Marine Mammals and Climate Change. In: Cold Adaptation and Climate Change. K. Tanino and K. Storey, eds. CABI international, publishers, Oxford, UK. Pages 131-144. 2012.
12. Castellini and Mellish, editors. CRC Press. ISBN 9781482242676. Marine Mammal Physiology: Requisites for Ocean Living. ” (M.A. Castellini and J.A.E. Mellish, eds.). CRC Press, Boca Raton, Fl. 2016.
13. Castellini, M.A, and Mellish, J.A.E. Thermoregulation. In “Marine Mammal Physiology: Requisites for Ocean Living” (M.A. Castellini and J.A.E. Mellish, eds.), pp. 193-216. CRC Press, Boca Raton, Fl. 2016.
14. Castellini, M.A. Marine Mammals: At the intersection of ice, climate change and human interactions. Encyclopedia of the Anthropocene. First Edition. Elsevier. Pages 1-7. 2018.
15. Castellini, M.A. The thermoregulation of marine mammals. Encyclopedia of Marine Mammals. Academic Press. Third Edition. Pages 990-994. 2018
16. Castellini, M.A and Ponganis, P. Cardiopulmonry systems in the bowhead whale. The Bowhead Whale. Editors: J.C. George and J. Theswissen. Elsevier. 2020.

MISCELLANEOUS PUBLICATIONS

- Castellini, M.A. and L. Peart. Research and Education: The Alaska SeaLife Center, Seward, Alaska. Current: Journal of Marine Education. 15(3): 49-52. 1999.
- Castellini, MA. Review: Principles of integrative environmental physiology. Arctic 53(2): 10-12. 2000 .
- Evans, D. H., Axelsson, M., Beltz, B., Burggren, W., Castellini, M., Clements, K. D., Crockett, L., Gilmour, K. M., Henry, R. P., Hirose, S., Ip, A. Y., Londraville, R., Lucu, C., Poertner, H. O., Summers, A., and Wright, P., Frontiers in Aquatic Physiology - grand challenge. Frontiers in Physiology. 1: 6. 2010.
- Castellini, M.A. Marine Mammals and Fisheries. In: Land and Environment in the North. Duffy, A., Duffy, L., Kelley, J. and K. Erickson, eds. Arctic Division of the American Association for the Advancement of Science. Center Cross Cultural Studies, Publishers, UAF. Pages 87-104. (Textbook) 2011.

ABSTRACTS and PRESENTATIONS

Abstracts: Over 100 meeting and talk abstracts from years 1979-2005. The last ten as following:

95. Castellini, M.A., Marine Mammals: Field and regulatory issues: Permits, regulations and public relations. National Intuitional Animal Care and Use Committee presentation. Fairbanks, AK 2004.
96. Trumble, S.J. and M.A. Castellini. Does diet mixing benefit an aquatic carnivore? Experimental Biology. San Diego, 2005.
97. Castellini, M.A., Rea, L.D., Castellini, J.M., Cornick, L., Trumble, S., Mau, T., Haase, T., Inglis, S., Stegall, V. and Harper, S. Lipid, protein and carbohydrate metabolism during diving, resting and meal digestion in wild Weddell seals, Antarctica. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA 2005.
98. Atkinson, S., Calkins, D., Castellini, M., Burkanov, V., Inglis, S., and D. Hennen. Impact of changing diet regimes on Steller sea lion body condition. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA 2005.
99. Harper, S., and M. Castellini. Intra and interindividual variability of plasma chemistries in the adult female Weddell seal. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA 2005.
100. Inglis, S., Castellini, M., and C.F. Adams. Seasonal patterns in nutritional quality of pelagic prey at a Steller sea lion rookery in Alaska. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA 2005.
101. Mau, T., and M. Castellini. Post-absorptive plasma of harbor seals. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA 2005.
102. Stegall, V., Rea, L., and M. Castellini. Pectoral muscle development in free ranging Steller sea lions. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA 2005.
103. Castellini, M.A., and J.M. Castellini. The regulation of hematocrit in diving mammals: adaptation or problem? 2006 Comparative Physiology Conference: Integrating Diversity. Virginia Beach, VA. October 2006.
104. Inglis, S., Castellini, M., Rea, L., and P. Barboza. Tracking protein turnover in adult female Antarctic Weddell seals (*Leptonychotes weddellii*) with the stable isotope labelled amino acid ¹⁵N glycine. 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia. December 2017.

PUBLISHED REPORTS:

1. Kooyman, G.L., J.O. Billups, R.W. Davis and M.A. Castellini. Diving behavior of fur seals, Arctocephalus gazella and King penguins, Aptenodytes patagonia, near South Georgia Island. Antarctic Journal of the United States. XII:8. 1978.
2. Kooyman, G.L., M.A. Castellini and R.W. Davis. Blood characteristics related to oxygen carrying capacity in birds from South Georgia Island. Antarctic Journal of the United States. XII: 158. 1978.
3. Kooyman, G.L., M.A. Castellini, D.P. Costa, J.O. Billups and S.C. Piper. Diving characteristics of free-ranging Weddell seals. Antarctic Journal of the United States. XIV(5):176. 1979.
4. Kooyman, G.L., M.A. Castellini and R.W. Davis. Late summer dives of Weddell seals. Antarctic Journal of the United States. XVI(5):153-154. 1981.
5. Davis, R.W., M.A. Castellini, M. Horning, M. Davis and G.L. Kooyman. Winter ecology of Weddell seals at White Island. Antarctic Journal of the United States. XVII(5):183-184. 1982.
6. Kooyman, G.L., Ponganis, P.J., Castellini, M.A., Ponganis, E., Ponganis, K. and P.T. Thorson. Physiology of diving in Weddell seals and emperor penguins. Antarctic Journal of the United States. XXIII(5): 145-146. 1988.
7. Kooyman, G.L., Ponganis, P.J., Castellini, M.A., Ponganis E., Eckert, S., and Le Maho, Y. Physiology of diving in emperor penguins and Weddell seals. Ant. J. United States. xxiv(5):204. 1989.
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.
9. Castellini, M.A., J.W. Testa, L.D. Rea, J.M. Moss and K.K. Hastings. Diving development and survivorship in Weddell seals pups. Antarctic Journal of the United States. XXIX (5): 171-172. 1994.
10. Burns, J.M., M.A. Castellini, K.K. Hastings, T. Zenteno-Savin. Development in Juvenile Weddell seals: diving behavior, physiology, nutritional status, and survivorship. Antarctic Journal U.S. XXXI (2): 109-110. 1996.
11. Fadely, B.S., J.M. Castellini and M.A. Castellini. Recovery of harbor seals from EVOS: Condition and Health Status, *Exxon Valdez* Oil Spill Restoration Project Final Report (97001), Alaska Department of Fish and Game, Anchorage, AK. 1998.
12. Loughlin, T.R., Castellini, M.A. and G. Ylitalo. Spatial aspects of organochlorine contamination in northern fur seal tissues. Annual Report. Cooperative Institute for Arctic Research. University of Alaska Fairbanks. 96-114. 2000.
13. Castellini, M.A., J.M. Castellini and S.J. Trumble. Recovery of harbor seals. Phase II: Controlled Studies of Health and Diet, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 01341), Alaska Department of Fish and Game, Anchorage, Alaska. 2002.
14. Castellini, M.A. Captive studies with Steller sea lions at the Alaska SeaLife Center. In: Steller sea lion decline: Is it Food II. DeMaster, D. and S. Atkinson (eds). Alaska Sea Grant, AK-SG-02-02. 80 pp. 2002.
15. Paine, R.T., Bromley, D.W., Castellini, M.A., Crowder, L.B., Grebmeier, J.M., Gulland, F.M., Kruse, G.H., Mantua, N.J., Schumaker, J.D., Siniff, D.B. and C.J. Walters. National Research Council. Decline of the Steller Sea Lion in Alaskan Waters: Untangling Food Webs and Fishing Nets. National Academy Press, Washington, D.C. 2003.

16. Castellini, M.A., Zhao, L., and S. Inglis. Metabolic demands of Steller sea lion survival. In: Synopsis of Research on Steller sea lion: 2001-2005. Loughlin, T.R., Calkins, D.G. and S. Atkinson, eds. Pages 68-76. ASLC NOAA Steller Sea Lion Research Program Report. Sea Script Press, Seattle. 2005.
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 SCIENTIFIC LECTURES

Lectures 1-74 encompass the years 1983 to 2009. The following list begins in 2010.

75. Do marine biologists need to be Lawyers? Sitka WhaleFest, November, 2010
76. West Valley High School, Fairbanks. Climate change and marine mammals. April 2010
77. High Latitude marine research in the next 10 years: Issues, opportunities and risks. Science for Alaska Series. Anchorage, May, 2011.
78. Science from Pole to Pole: Science in the Arctic and Antarctic. UAF Undergraduate Seminar Series. Fall, 2011.
79. One world, One ocean, Many users. Sitka Whalefest, November, 2011.
80. West Valley High School, Fairbanks. Climate change and marine mammals. April 2012.
81. R/V Sikuliaq...38 days to launch. Fairbanks Chamber of Commerce, September 2012
82. Marine Focus for the North. Fairbanks Rotary, November 2012
83. Marine Science in Alaska. Fairbanks Toastmasters, March 2013
84. On Thin Ice: Marine Mammals Challenged by Climate Change. West Valley High School April 2013
85. Marine Arctic 2020. At the Intersection of Science, Education, Policy and Environment. AAAS Alaska Region, Kodiak, Sept 2013.
86. What is ahead for the changing Arctic? Sitka WhaleFest, November 2013
87. Alaska Sea Life Center: Science History: ASLC Gala, Anchorage, Jan 2014.
88. Polar marine science. Capitol Hill Ocean Week. Washington DC. June 2014.
89. Marine Arctic 2020: At the Intersection of Science, Education, Policy and Environment PEC Regional Conference, Fairbanks, Sept 2014.
90. What is ahead for the changing Arctic? Faibanks Rotary, October 2014
91. Marine Science in the Arctic. College Rotary, November 2014
92. Polar Exploration in the 20th Century: From Arctic to Antarctic. Fairbanks Concert Association, Fairbanks, November 2014
93. The Art of Collaboration and Leadership: Shackleton at the Edge. Fairbanks Concert Association, Fairbanks, November 2014
94. What makes Pinnipeds Tick: Gadgets and diving Gizmos. Sitka WhaleFest, November 2014
95. To the edge of the Earth: Three Decades of Antarctic Expeditions. Research Discovery Series, UAF, Fairbanks, January 2015.
96. Polar Adventures: The Voyages of the Research Vessel Sikuliaq. Science for Alaska Series. Fairbanks, February 2015.
97. To the ends of the Earth:35 years of Antarctic adventures in Research and Teaching. Institute of Marine Science seminar. Fairbanks, March 2015.
98. Polar Operations: NSF-UAF Research Vessel Sikuliaq. Oil Spill Technology and Response. Alaska DEC, Fairbanks, April 2015.
99. Marine Mammals on the Edge. Sitka Whalefest, November 2015.

100. Marine Science and the Arctic: Where Research, Medicine and Policy Intersect. UAF Veterinary Medical One Health Seminar. Fairbanks, March 2016.
101. Marine Science and the Arctic: Where Research, Medicine and Policy Intersect. Denali Oncology Seminar series, Anchorage, March 2016.
102. Marine Arctic 2020. Intersection of Science, Education, Policy and Environment. Woods Hole Oceanographic Seminar Series. March 2016.
103. Whale Fest 2036: Topics and Talks. Sitka Whalefest, November 2016.
104. Marine Monsters at Home: The Beauty of Life in the Sea. Sitka Whalefest, November 2018.
105. One World-One Ocean-One You. Sitka WhaleFest, November 2019.