

**Science Advisory Board Nomination Package:  
Dr. Michael Castellini**

**(1) The nominee's full name, title, institutional affiliation, and contact information**

Dr. Michael Castellini  
Dean, School of Fisheries and Ocean Sciences  
University of Alaska Fairbanks  
[907 474 7210](tel:9074747210) [macastellini@alaska.edu](mailto:macastellini@alaska.edu)

**(2) the nominee's area(s) of expertise**

Polar marine science  
Marine mammal biology

**(3) a short description of his/her qualifications relative to the kinds of advice being solicited**

Faculty member at UAF since 1989 working in polar (Arctic and Antarctic) programs.  
Academic specialization: Marine mammal biology, health, nutrition and diving physiology biochemistry.  
Extensive outreach and teaching history in polar issues, biology, policy, and education  
On multiple research panels and boards dealing with northern marine and biology issues  
Extensive national level panels and boards on agency scientific overview, research directions and education programs.  
Dean, SFOS with faculty, ship, outreach, research, student, operations and board membership throughout Alaska.

**(4) Inclusion of a (maximum length four [4] pages) resume or curriculum vitae is recommended, but not required.**

Attached

## 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:

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  
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-present Dean, SFOS

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### SERVICE OUTSIDE OF THE UNIVERSITY (2000-Present)

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  
2002-2008 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  
2004-2008 Chair, US Mineral Management Service Alaska Research Sub-Committee  
2004-2008 Editorial Board, Polar Biology  
2005 Member, NSF Polar Program Postdoctoral Review Panel  
2005 Referee, Jefferson Science Fellows, National Academy Fellowship Program  
2007-2009 Member, NSF/NASA "Polar Palooza" Stories from A Changing Planet  
This is a multi-city International Polar Year public outreach program featuring scientific talks, multi-media presentations, teacher education, and University lectures.  
2007: Albuquerque, Oakland, Berkeley, Atlanta, Baton Rouge.  
2008: Washington DC, Anchorage, Fairbanks, Chicago, Denver  
2009: Anchorage, New York, Baltimore, Australia (Perth, Canberra, Sydney)  
2008-2010 Member, National Science and Engineering Council Grants Selection Committee, Canada  
2008-2011 Contributing Editor, Marine Ecology Progress Series  
2010-present Associate Editor, Frontiers in Aquatic Physiology  
2010-present Chair, Life Sciences, National Research Council Postdoctoral Program

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#### GRADUATE STUDENT COMMITTEES:

Completed committees:

Chair or co-chair: 12

Committees: 28

Outside of UAF examiner: 8

Postdoctoral advisor: 4

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#### BIBLIOGRAPHY (\* Student author)

Total journal articles: 72

Total Book chapters: 11

Listed since 2000:

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 <sup>13</sup>C and <sup>15</sup>N 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., \*Lorrie 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 measurements of Antarctic pack-ice seals: Implications for the control of body condition and blubber regulation. *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*. In press.

#### BOOK CHAPTERS since 2000

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.

#### FUNDING HISTORY

Over 50 funded research projects from NSF, NIH, NOAA, BOEM, Alaska State, NGO's and Private Foundations.

Total amount over \$4 million.

#### REFEREE

Over 36 scientific journal titles and hundreds of articles

Over 50 National, State and Local agencies and organizations