

ROSALIND M. ROLLAND D.V.M.

Anderson Cabot Center for Ocean Life
New England Aquarium
Central Wharf
Boston, Massachusetts 02110
Tel: (617) 973-6587
E-mail: rrolland@neaq.org

PROFESSIONAL EXPERIENCE (20 years)

- 2013-present **Director of Ocean Health**
Anderson Cabot Center for Ocean Life, New England Aquarium
Boston, Massachusetts
- 2008-present **Senior Scientist**
John H. Prescott Marine Laboratory, Research Department
New England Aquarium
Boston, Massachusetts
- 2000-2007 **Senior Conservation Fellow**
Global Marine Programs, New England Aquarium
Boston, Massachusetts
- 1998-2000 **Science Director, Center for Conservation Medicine**
Assistant Professor, Department of Environmental and Population Health, Tufts University School of Veterinary Medicine
North Grafton, Massachusetts
- 1996-2001 **Senior Fellow**
Wildlife and Contaminants Program, World Wildlife Fund
Washington, D.C.
- 1994-1996 **Conservation Scientist**
Wildlife and Contaminants Program, World Wildlife Fund
Washington, D.C.

ACADEMIC APPOINTMENTS

- 2013- present **Research Faculty**
School for the Environment
University of Massachusetts-Boston
Boston, MA
- 2006-2009 **Adjunct Graduate Faculty**
Department of Biology and Marine Biology
University of North Carolina Wilmington
Wilmington, North Carolina
- 2000-2002 **Clinical Assistant Professor**
Department of Environmental and Population Health
Tufts University School of Veterinary Medicine
North Grafton, Massachusetts

1990-1998 **Clinical Assistant Professor**
Department of Medicine, Tufts University School of Veterinary Medicine
North Grafton, Massachusetts

EDUCATION

1974-1976 University of New Hampshire-Durham
Pre-veterinary Medicine
1978-B.S. University of Wisconsin-Madison
Natural Sciences
1984-D.V.M. Tufts University School of Veterinary Medicine
Doctor of Veterinary Medicine
1984-1985 Internship-Small Animal Medicine and Surgery
Angell Memorial Animal Hospital, Boston, Massachusetts

AWARD AND HONORS

1981 Davis-McClure Microscope Award
1984 Student Research Day Award
1984 American Association of Feline Practitioners Senior Student Award
1995 National Association of Physicians for the Environment Commendation
1997 Society of Technical Communications Florida Chapter Merit Award for
 “Chemically- Induced Alterations in Functional Development and
 Reproduction of Fishes.”
2007 #10 of the “Ten Worst Jobs in Science”, Popular Science
2007 American Zoo and Aquarium Association “Top 10 Wildlife Conservation
 Success Stories of 2007.”

PROFESSIONAL AFFILIATIONS AND APPOINTMENTS

2016-present Board Member, North Atlantic Right Whale Consortium
2013-present International Association of Aquatic Animal Medicine
2000-2003 Board Member, North Atlantic Right Whale Consortium
1999-present Member, North Atlantic Right Whale Consortium
1999-present Society of Marine Mammalogy
1984-present American Veterinary Medical Association

LICENSURE AND CERTIFICATION

1984 Massachusetts Veterinary License
2002 PADI Open Water Scuba Diver Certification
2004 Certified Conservation Detector Dog Handler
Current Heartsaver Aid/CPR/ AED Certification

SELECTED PROFESSIONAL ACTIVITIES:

- Session Chair:** “Health” 2017 Biennial Conference of the Society of Marine Mammalogy. 27 October, 2017, Halifax, Nova Scotia, Canada.
- Invited Panelist:** Student Affairs Workshop, Society of Marine Mammalogy Biennial Conference, 16 December 2015, San Francisco, California.
- Invited Participant:** Workshop on population-level effects of sound on North Atlantic right whales, 17-18 June 2014, Durham, North Carolina.
- Invited Participant:** Workshop on Southern Right Whale Mortality. 23 April 2013, Sausalito, CA.
- Session Chair:** “Health Assessment.” International Association of Aquatic Animal Medicine, 24 April 2013, Sausalito, California.
- Invited Presentation/Participant:** “Effects of Stress on Marine Mammals Exposed to Sound.” Office of Naval Research, November 4-5, 2009, Arlington, VA.
- Organizing Committee:** “Strategic Planning for the Development of a Collaborative Disease Center for Marine Mammals.” Marine Mammal Commission Workshop, May 19-20, 2008, Calistoga, CA.
- Invited Participant:** “Large Whale Health Assessment.” Cascadia Research Collaborative, Olympia, Washington, December 7-8, 2006.
- Invited Participant:** “Review of the Right Whale Research Program.” Marine Mammal Commission, Woods Hole, Massachusetts, 2006.
- Invited Participant:** “Large Whale Immobilization Workshop.” Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, February 7-8, 2006.
- Organizing Committee/Host:** “Bowhead/Right Whale Comparative Health and Physiology Workshop.” New England Aquarium, Boston, Massachusetts, March 25-26, 2003.
- Chair, Steering Committee:** Workshop on “Causes of Reproductive Failure in North Atlantic Right Whales: New Avenues of Research.” Marine Biological Laboratories, Woods Hole, Massachusetts, April 26-28, 2000.
- Steering Committee:** “A Workshop on Large Whales Medical Intervention-Indications and Technology Development.” Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, February 7, 2000.
- Invited Participant:** “Workshop to Assess the Physiological Effects of Tagging on North Atlantic Right Whales and to Develop Recommendations for Future Studies.” New England Aquarium, Edgerton Research Laboratory, Boston, Massachusetts, October 23, 1999.
- Invited Participant:** NOAA Strategic Planning Workshop: A Vision for 2005. National Oceanic and Atmospheric Administration, United States Department of Commerce, February 17-18, 1999.
- Advisor:** Marine Ecosystems-Emerging Diseases as Indicators of Change. Health Ecological and Economic Dimensions (HEED) of Global Change Program. Paul R. Epstein (PI), Center for Health and the Global Environment, Harvard Medical School, 1998.
- Invited Participant:** Marine Mammals and Persistent Ocean Contaminants: Identification and Determination of the Most Effective Means for Resolving Critical Uncertainties. Marine Mammal Commission Workshop, Keystone, Colorado, October 12-15, 1998.

Steering Committee: Endocrine Disruption in Invertebrates: Endocrinology, Testing and Assessment. Joint OECD/Society of Environmental Toxicology and Chemistry Workshop, Netherlands, December 12-15, 1998.

Member: U.S. EPA Federal Environmental Laboratory Advisory Board, 1995-1996.

Organizer: Chemically-Induced Alterations of Functional Development and Reproduction in Fishes. Wingspread Conference Center, Racine, Wisconsin, July 21-23, 1995.

Invited Participant: Ecological Effects of Endocrine Disruptors Workshop. U.S. Environmental Protection Agency, Duluth, Minnesota, June 12-14, 1995.

Organizing Committee and Rapporteur: Endocrine Disruptor Research Needs Workshop. U.S. Environmental Protection Agency, Raleigh, NC. April 10-13, 1995.

PUBLICATIONS:

Books/Journal Supplements (edited)

Kraus SD and **Rolland RM**. 2007. *The Urban Whale: North Atlantic Right Whales at the Crossroads*. Harvard University Press, Cambridge, Massachusetts.

Rolland RM, Gilbertson M, Peterson R (eds.). 1997. *Chemically-Induced Alterations in Functional Development and Reproduction of Fishes*. SETAC Press, 194pp.

Rolland RM, Gilbertson MR, Colborn TC, editors. 1995. Environmentally-Induced Alterations in Development: A Focus on Wildlife. *Environmental Health Perspectives* volume 3, supplement 4.

Book Chapters

Rolland RM and Moore MJ. In press. Health assessment of large whales. Pages 819-832 in: Dierauf LA and Gulland FMD, (eds.) *CRC Handbook of Marine Mammal Medicine*, 3rd edition. CRC Press, Boca Raton, Florida.

Schick RS, Kraus SD, **Rolland RM**, Knowlton AR, Hamilton PK, Pettis HM, Thomas L, Harwood J, Clark JS. 2015. Effects of model formulation on estimates of health in individual right whales (*Eubalaena glacialis*). In: Popper AN, Hawkins A (eds). *The Effects of Noise on Aquatic Life II*. Advances in Medicine and Experimental Biology 875:977-985. Springer Science + Business Media, LLC, NY.

Kraus SD and **Rolland RM**. 2007. Right whales in the urban ocean. Pages 1-38 in: Kraus SD and Rolland RM (eds.). *The Urban Whale: North Atlantic Right Whales at the Crossroads*. Harvard University Press, Cambridge, Massachusetts.

Kraus, SD and **Rolland, RM**. 2007. The urban whale syndrome. Pages 488-513 in: Kraus SD and Rolland RM, (eds.). *The Urban Whale: North Atlantic Right Whales at the Crossroads*. Harvard University Press, Cambridge, Massachusetts.

Rolland RM, Hunt KE, Doucette GJ, Rickard LG, Wasser SK. 2007. The inner whale: hormones, biotoxins and parasites. Pages 232-272 in: Kraus SD and Rolland RM, (eds.). *The Urban Whale: North Atlantic Right Whales at the Crossroads*. Harvard University Press, Cambridge, Massachusetts.

Rolland, RM, Hamilton, PK, Marx, MK, Pettis, HM, Angell, CM, Moore, MJ. 2007. External perspectives on right whale health. Pages 273-309 in: Kraus, SD and Rolland, RM (eds.). *The Urban Whale: North Atlantic Right Whales at the Crossroads*. Harvard University Press, Cambridge, Massachusetts.

- Colborn T, Smolen M, **Rolland R**. 1998. Environmental neurotoxic effects: the search for new protocols in functional teratology. In: Colborn T, vom Saal F, Short P (eds.). Environmental Endocrine-Disrupting Chemicals: Neural, Endocrine and Behavioral Effects. *Toxicology and Industrial Health* 14(1/2):9-23.
- Ludwig JP, Summer LC, Auman HJ, Gauger V, Bromley D, Flint E, Giesy JP, **Rolland R**, and Colborn T. 1997. The roles of fishing by-catch and contaminants in recent population changes of black-footed and Laysan albatrosses of the North Pacific. In: Robinson G and Gales R (eds). *Albatross Biology and Conservation*. Surrey Beatty and Sons, Chipping Norton, pp 225-238.
- Kavlock RJ, Daston GP, DeRosa C, Fenner-Crisp P, Gray LG, Kaatter S, Lucier G, Luster M, Mac M, Maczka C, Miller R, Moore J, **Rolland R**, Scott G, Sheehan D, Sinks T, Tilson HA. 1996. Research needs for assessment of health and environmental effects of endocrine disruptors: A report of the US EPA sponsored workshop. Environmental Health Perspectives, Volume 3, Supplement 4.

Journal Publications

- Rolland RM**, McLellan WA, Moore MJ, Harms CA, Burgess EA, Hunt KE. In press. Fecal glucocorticoids and anthropogenic injury and mortality in North Atlantic right whales (*Eubalaena glacialis*). *Endangered Species Research*.
- Hunt KE, Lysiak NS, Moore M, **Rolland RM**. 2017. Multi-year longitudinal profiles of cortisol and corticosterone recovered from baleen of North Atlantic right whales (*Eubalaena glacialis*). *General and Comparative Endocrinology* 254: 50-59.
- Burgess, EA, Hunt, KE, Kraus, SD, **Rolland, RM**. 2017. Adrenal responses of large whales: integrating aldosterone as a complementary biomarker. *General and Comparative Endocrinology* 252: 103-110.
- Corkeron P, **Rolland RM**, Hunt KE, Kraus SD. 2017. A right whale pootree: Fecal hormones and classification trees identify reproductive states in North Atlantic right whales (*Eubalaena glacialis*). *Conservation Physiology* 5: doi 10.1093/conphys/cox006.
- Pettis HM, **Rolland RM**, Hamilton PK, Knowlton AR, Burgess EA, Kraus SD. 2017. Body condition changes arising from natural factors and fishing gear entanglements in North Atlantic right whales (*Eubalaena glacialis*). *Endangered Species Research* 32: 237-249.
- Hunt KE, Lysiak NS, Moore M, **Rolland RM**. 2016. Longitudinal progesterone profiles in baleen from female North Atlantic right whales (*Eubalaena glacialis*) match known calving history. *Conservation Physiology* 4: doi 10.1093/conphys/cow014.
- Hunt KE, Innis C, Merigo C, **Rolland RM**. 2016. Endocrine responses to diverse stressors of capture, entanglement and stranding in leatherback turtles (*Dermochelys coriacea*). *Conservation Physiology* 4: doi: 10.1093/conphys/cow022
- Burgess EA, Hunt, KE, Kraus SD, **Rolland RM**. 2016. Get the most out of blow hormones: validation of sampling materials, field storage, and extraction techniques for whale respiratory vapour samples. *Conservation Physiology* 4 doi: 0.1093/conphys/cow024.
- Rolland RM**, Schick RS, Pettis HM, Knowlton AR, Hamilton PK, Clark JS, Kraus SD. 2016. Health in North Atlantic right whales (*Eubalaena glacialis*) over three

- decades: from individual health to demographic and population health trends. *Marine Ecology Progress Series* 542: 265-282.
- Hunt KE, **Rolland RM**, Kraus SD. 2015. Conservation physiology of an uncatchable animal: The North Atlantic right whale (*Eubalaena glacialis*). *Integrative and Comparative Biology* doi:10.1093/icb/icv071, pp. 1-10.
- Hunt KE, Stimmelmayer R, George C, Hanns C, Suydam R, Brower H Jr, **Rolland RM**. 2014. Baleen hormones: a novel tool for retrospective assessment of stress and reproduction in bowhead whales (*Balaena mysticetus*). *Conservation Physiology* 2: doi:10.1093/conphys/cou030.
- Hunt KE, **Rolland RM**, Kraus SD. 2014. Detection of steroid and thyroid hormones via immunoassay of North Atlantic right whale (*Eubalaena glacialis*) respiratory vapor. *Marine Mammal Science* 30(2):796-809. Doi: 10.1111/mms.12073.
- Hunt KE, Moore MJ, **Rolland RM**, Kellar NM, Hall AJ, Kershaw J, Raverty SA, Davis CE, Yeates LC, Fauquier DA, Rowles TK, Kraus SD. 2013. Overcoming the challenges of studying conservation physiology in large whales: a review of available methods. *Conservation Physiology*: Doi: 10.1093/conphys/cot006
- Schick RS, Kraus SD, **Rolland RM**, Knowlton AR, Hamilton PK, Pettis HM, Kenney RD, Clark JS. 2013. Using hierarchical bayes to understand movement, health, and survival in the endangered North Atlantic right whale. *PLoSOne* 8(6): e64166. Doi:10.1371/journal.pone.0064166
- Hunt KE, Innis C and **Rolland RM**. 2012. Corticosterone and thyroxine in cold-stunned Kemp's Ridley sea turtles (*Lepidochelys kempii*). *Journal of Zoo and Wildlife Medicine* 43(3):479-493.
- Rolland RM**, Parks SE, Hunt KE, Castellote M, Corkeron PJ, Nowacek DP, Wasser SK and Kraus SD. 2012. Evidence that ship noise increases stress in right whales. *Proceedings of the Royal Academy B* 279: 2363-2368. Published online 8 February 2012, doi: 10.1098/rspb.2011.2429.
- Doucette GJ, Mikulski CM, King KL, Roth PB, Wang Z, Leandro LF, DeGrasse SL, White KD, De Biase D, Gillett RM and **Rolland RM**. 2012. Endangered North Atlantic right whales (*Eubalaena glacialis*) experience repeated, concurrent exposure to multiple environmental neurotoxins produced by marine algae. *Environmental Research* 112: 67-76. Doi:10.1016/j.envres.2011.09.010
- Gillett RM, Frasier TR, **Rolland RM**, White BN. 2010. Molecular identification of individual North Atlantic right whales (*Eubalaena glacialis*) using free-floating feces. *Marine Mammal Science* 26(4): 917-936. Doi:10.1111/j.1748-7692.2010.00380.x
- Browning CL, **Rolland RM**, Kraus SD. 2010. Estimated annual calf and perinatal mortality in North Atlantic right whales (*Eubalaena glacialis*). *Marine Mammal Science* 26(3): 648-662. Doi:10.1111/j.1748-7692.2009.00361.x
- Leandro L, **Rolland RM**, Roth PB, Lundholm N, Wang Z, Doucette GD. 2010. Exposure of the North Atlantic right whale *Eubalaena glacialis* to the marine algal biotoxin, domoic acid. *Marine Ecology Progress Series* 398:287-303.
- Swaim ZT, Westgate AJ, Koopman HN, **Rolland RM**, Kraus SD. 2009. Lipid metabolism by right whales: using fecal samples to assess assimilation of copepod triacylglycerols and wax esters. *Endangered Species Research* 6:259-271. Doi:10.3354/esr00163

- Gillett RM, White BN, **Rolland RM**. 2008. Quantification and genetic profiling of DNA isolated from free-floating feces of the North Atlantic right whale (*Eubalaena glacialis*). *Marine Mammal Science* 24 (2):341-355.
- Rolland RM**, Hamilton PK, Kraus SD, Davenport B, Bower RM, Wasser SK. 2006. Faecal sampling using detection dogs to study reproduction and health in North Atlantic right whales (*Eubalaena glacialis*). *Journal of Cetacean Research and Management* 8(2):121-125.
- Hunt KE, **Rolland RM**, Kraus SD, Wasser SK. 2006. Analysis of fecal glucocorticoids in the North Atlantic right whale (*Eubalaena glacialis*). *General and Comparative Endocrinology* 148:260-272. Doi:10.1016/j.ygcen.2006.03.012
- Doucette GJ, **Rolland RM**, Cembella AD, Martin JL, Michaud J, Cole TVN. 2006. PSP toxins in North Atlantic right whales (*Eubalaena glacialis*) and their zooplankton prey in the Bay of Fundy, Canada. *Marine Ecology Progress Series* 306:303-313.
- Kraus SD, Brown MW, Clark CW, Hamilton PK, Kenney RD, Knowlton AR, Landry,S, Mayo CA, McLellan WA, Moore MJ, Nowacek DP, Pabst DA, Read RJ, **Rolland RM**. 2005. Response to Sayles and Green. *Science* 310:1616-1618.
- Kraus SD, Brown MW, Caswell H, Clark CW, Fujiwara M, Hamilton PK, Kenney RD, Knowlton AR, Landry,S, Mayo CA, McLellan WA, Moore MJ, Nowacek DP, Pabst DA, Reed RJ, **Rolland RM**. 2005. North Atlantic right whales in crisis. *Science* 309:561-562.
- Hughes-Hanks JM, Rickard LG, Panuska C, Saucier JR, O'Hara TM, Dehn L, **Rolland, RM**. 2005. Prevalence of *Cryptosporidium* and *Giardia* Spp. in five marine mammal species. *Journal of Parasitology* 91(5):1225-1228.
- Rolland RM**, Hunt KE, Kraus SD, Wasser SK. 2005. Assessing reproductive status of right whales (*Eubalaena glacialis*) using fecal hormone metabolites. *General and Comparative Endocrinology* 142:308-317. Doi:10.1016/j.ygcen.2005.02.002
- Pettis HM, **Rolland RM**, Hamilton PK, Brault S, Knowlton AR, Kraus SD. 2004. Visual health assessment of endangered North Atlantic right whales (*Eubalaena glacialis*) using photographs. *Canadian Journal of Zoology* 82:8-19.
- Fort DJ, Rogers RL, Paul RR, Miller MF, Clark P, Stover EL, Yoshioko J, Quimby F, Sower SA, Reed KL, Babbitt KJ, **Rolland RM**. 2001. Effects of pond water, sediment, and sediment extract samples from New Hampshire, USA, on early *Xenopus* development and metamorphosis: comparison to native species. *Journal of Applied Toxicology* 21:199-209.
- Rolland RM**. 2000. Ecoepidemiology of pollution effects on reproduction and survival of early life stages in teleosts. *Fish and Fisheries* 1:41-72.
- Rolland RM**. 2000. A review of chemically-induced alterations in thyroid and vitamin A status from field studies of wildlife and fish. *Journal of Wildlife Diseases* 36(4):615-635.

Technical Documents & Reports

- Rolland RM**, Kraus SD, Wasser SK, Hunt KE, Doucette G, Ballweber L, Panuska C, Gillett R, White B. 2007. Studies of Reproductive Failure and Health in North Atlantic Right Whales. Final Report to the National Marine Fisheries Service Contract no. DG133F04CN0056.

- Rowles T, Bradford LA, Calambokidis J, Falcone EA, Gabrielle CM, Gaydos JK, Krahn MM, Mattila DK, Norberg B, Raverty S, Robbins J, Rojas-Brachos L, **Rolland RM**, Rosa C, Rotstein DS, Urban J, Weller DW, Yamaguchi Manami. 2007. Draft report of the NOAA Large Whale Health Assessment Workshop held in Olympia, Washington on 8-9 December 2006. International Whaling Commission Document SC/59/DW2.
- Pettis HM, **Rolland RM**, Hamilton PK, Knowlton AR, Kraus SD. 2006. Visual assessment of North Atlantic right whale (*Eubalaena glacialis*) health and its relationship to reproduction and survival. Final report submitted to National Marine Fisheries Service. Contract #NAO3NMF4720464, April 28 2006.
- O'Hara TM, **Rolland RM**, Reeves RR (eds.). 2003. Bowhead/Right Whale Comparative Health and Physiology Workshop. Report of a Workshop held March 25-26, 2003, New England Aquarium, Boston, Massachusetts.
- Reeves RR, **Rolland RM**, Clapham PJ (eds). 2001. Causes of Reproductive Failure in North Atlantic Right Whales: New Avenues of Research. Report of a Workshop held 26-28 April 2000, Falmouth, Massachusetts. Northeast Fisheries Science Center Reference Document 01-16. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, Massachusetts.
- Multiple Stressors in Ecological Assessments: Proceedings from the Pellston Workshop on Multiple Stressors in Ecological Risk and Impact Assessment, 13-18 September 1997, Pellston, Michigan. 1999. Society of Environmental Toxicology and Chemistry.
- Marine Mammals and Persistent Ocean Contaminants. 1998. Proceedings of a workshop held in Keystone, Colorado, October 12-15, 1998. Marine Mammal Commission, Washington, D.C.

SCIENTIFIC PRESENTATIONS

- Rolland RM**, Graham KM, Lysiak NS, Hunt KE, Stimmelmayer R, Suydam RE, Hannigan R, Fuller R, George JC. 2017. *Baleen progesterone documents over a decade of calving history in bowhead whales (Balaena mysticetus)*. Society of Marine Mammalogy Biennial Conference, 22-27 October, Halifax, Nova Scotia, Canada.
- Rolland RM**. 2017. *50-ton patients: Adventures of a whale veterinarian at sea*. Nantucket Historical Association Whaling Museum, Nantucket, MA, 26 June 2017.
- Rolland RM**, McLellan WA, Moore MJ, Harms CA, Burgess EA, Hunt KE. 2017. *Fecal glucocorticoids and anthropogenic injury and mortality in North Atlantic right whales (Eubalaena glacialis)*. International Association of Aquatic Animal Medicine Annual Conference, 20-24 May, 2017, Cancun, Mexico.
- Rolland RM**. 2016. *Diagnosing leviathan: Adventures of a whale veterinarian*. Lowell Lecture Series, 9 June 2016, New England Aquarium, Boston MA.
- Rolland RM**, McClellan WA, Moore MJ, Harms CA, Hunt KE. 2016. *Fecal stress hormones and anthropogenic injury and mortality in North Atlantic right whales*

- (*Eubalaena glacialis*). International Association of Aquatic Animal Medicine, Virginia Beach, VA, 21-26 May, 2016.
- Rolland RM.** 2016. *Ocean noise and marine mammals*. Art Making Workshop: Celebrating the Music of the Oceans. W₂0 (Women Working for the Oceans), March 3, 2016, Westwood, MA.
- Rolland RM, Hunt KE, Kraus SD, Dunn CA, Claridge DE.** 2015. *Assessing stress responses in beaked and sperm whales in the Bahamas*. Office of Naval Research Annual Stress Group Meeting 13 December 2015, San Francisco, CA.
- Rolland RM, Schick RS, Pettis HM, Knowlton AR, Hamilton PK, Clark JS, Kraus SD.** 2015. *Health of North Atlantic right whales (*Eubalaena glacialis*) over three decades: from individual health to the population level*. Society for Marine Mammalogy Biennial Conference, 13-18 December 2015, San Francisco, California.
- Rolland RM, McLellan WA, Hunt KE, Harms CA, Moore MJ.** 2015. *Fecal stress hormones and anthropogenic injury and mortality in North Atlantic right whales (*Eubalaena glacialis*)*. North Atlantic Right Whale Consortium, November 4-5, 2015, New Bedford, MA.
- Rolland RM and Kraus SD.** 2015. *Impaired reproduction in North Atlantic right whales: Assessing sub-lethal anthropogenic influences*. Florida Marine Mammal Health Conference, 3 June 2015, University of Florida, Gainesville, Florida.
- Rolland RM, Hunt KE, Kraus SD, Dunn CA, Claridge DE.** 2014. *Assessing stress responses in beaked and sperm whales in the Bahamas*. Office of Naval Research Program Review, 12-13 May 2014, Arlington, VA.
- Rolland, RM.** 2014. *3 Sniffs to the wind: Training detection dogs for whale conservation*. International Association of Marine Animal Trainers, Northeast Regional Meeting, 29 April, 2014, New England Aquarium, Boston MA.
- Rolland RM, Claridge DE, Hunt KE, Dunn CA, Kraus SD.** 2013. *Physiologic studies of Blainville's beaked whales (*Mesoplodon densirostris*) using fecal hormone measures*. 20th Biennial Conference on the Biology of Marine Mammals, 9-13 December 2013, Dunedin, New Zealand.
- Rolland, RM.** 2013. *Health assessments in North Atlantic right whales*. Biology and Conservation of Right Whales Workshop at the 20th Biennial Conference on the Biology of Marine Mammals). 7 December 2013, Dunedin, New Zealand.
- Rolland, RM and Kraus SK.** 2013. *The challenges of living in an urban ocean: right whales in the North Atlantic*. ENERNOC, 22 November 2013, Boston, MA.
- Rolland RM, Pettis HM, Hamilton PK, Schick RS, Clark JS, Corkeron PJ, Kenney RD, Kraus SD.** 2013. *Linking individual whale health with population biology and conservation*. International Association of Aquatic Animal Medicine, 21-26 April 2013, Sausalito, CA.
- Rolland RM, Hunt KE, Kraus SD, Dunn C, Claridge DE.** 2012. *Assessing stress responses in beaked and sperm whales in the Bahamas: Year 2*. Office of Naval Research Marine Mammal Stress Program Review, October 10, 2012, Arlington, VA.
- Rolland RM, Parks SE, Hunt KE, Castellote M, Corkeron PJ, Wasser SK, Kraus SD.** 2012. *Evidence that ship noise increases baseline fecal glucocorticoid metabolites*

- in right whales (Eubalaena glacialis)*. International Association for Aquatic Animal Medicine Annual Meeting, 12-16 May, Atlanta, Georgia.
- Rolland RM**, Parks SE, Hunt KE, Castellote M, Corkeron PJ, Wasser SK, Kraus SD. 2011. *Evidence that ship noise causes chronic stress in right whales*. Society for Marine Mammalogy Biennial Meeting, 29 November 2011, Tampa, Florida.
- Rolland RM**, Hunt KE, Kraus SD, Corkeron PJ, Claridge DE. 2011. *Assessing stress responses in beaked and sperm whales in the Bahamas*. ONR Marine Mammal Stress Program Kick-Off Meeting, 20 July 2011, Arlington, VA.
- Rolland RM**. 2011. *Health assessment, disease and red tides in North Atlantic right whales*. Population Consequences of Acoustic Disturbance on Right Whales Workshop. 1-2 June, 2011, New England Aquarium, Boston, MA.
- Rolland RM**, Kraus SD. 2011. *Comparison of health and human impacts in North Atlantic right whales and southern right whales in the Auckland Islands*. International Association of Aquatic Animal Medicine 2011 Conference, 11 May 2011, Las Vegas, Nevada.
- Rolland RM**. 2010. *Whale health and conservation in an urban ocean*. American Cetacean Society Annual Meeting, 12-14 November, 2010, Monterey, California.
- Rolland RM**. *Assessing stress and stressors in North Atlantic right whales*. 2009. Office of Naval Research Workshop titled "Effects of Stress on Marine Mammals Exposed to Sound", November 4-5, 2009, Arlington, VA.
- Rolland RM**, Panuska C, Peters I, Best PB, Thornton M, Gillett R, Ballweber LR. *Giardia and cryptosporidium in North Atlantic and southern right whales (Eubalaena glacialis and E. australis)*. 2009. Society for Marine Mammalogy, October 10-16, 2009, Quebec City, Quebec, Canada.
- Rolland RM**, Panuska C, Peters I, Best PB, Ballweber LR. *Giardia and Cryptosporidium in North and South Atlantic right whales (Eubalaena sp.)*. 2009. International Association of Aquatic Animal Medicine Annual Meeting, May 6, 2009, San Antonio, Texas.
- Rolland RM**, Doucette GJ, Leandro LF, Rickard LG, Panuska C., Gillett RM, Hunt KE, Wasser SK, Kraus SD. 2008. *Integrated health assessment of North Atlantic right whales using fecal samples*. Florida Marine Mammal Health Conference III, April 22-25, 2008, St. Augustine Beach, Florida.
- Rolland RM**, Doucette GJ, Leandro LF, Rickard LG, Panuska C, Gillett RM, Hunt KE, Wasser SK, Kraus SD. 2007. *Health assessment of North Atlantic right whales using fecal samples*. Marine Mammal Society Biennial, November 29-December 3, 2007, Cape Town, South Africa.
- Rolland RM** and Kraus SD. 2007. *Visual assessment of health and human impacts for Eubalaena australis at the Auckland Islands*. North Atlantic Right Whale Consortium Annual Meeting, November 2, 2007, New Bedford, Massachusetts.
- Rolland RM**. 2007. *Right whales, detection dogs and the urban ocean*. Lowell Lecture Series, June 12, New England Aquarium, Boston, MA.
- Rolland RM**. 2006. *Studies of health and reproduction in North Atlantic right whales*. Large Whale Health Assessment Workshop, Cascadia Research Collaborative, December 7-8, Olympia, Washington.

- Rolland RM.** 2006. *Scatology in North Atlantic right whales: Studies of health and reproduction.* NOAA Charleston Laboratory, June 13, 2006, Charleston, South Carolina.
- Rolland RM, Hunt KE, Kraus SD, Wasser SK.** 2005. *Determining reproductive status of right whales (*Eubalaena glacialis*) using fecal hormone metabolites.* Marine Mammal Society Biennial Meeting, December 12-16, 2005, San Diego, California.
- Rolland RM.** 2004. *Studies of right whale health and reproduction.* 25th Right Whale Research Reunion. June 19-20, 2004, Bar Harbor, Maine.
- Rolland RM.** 2003. *Reproductive endocrinology, biotoxins and health.* An Ocean Forum on the Endangered North Atlantic Right Whale, November 6, 2003, Woods Hole Oceanographic Institution, Woods Hole, MA.
www.whoi.edu/institutes/oli/activities/rwforum_rolland.html
- Rolland RM, Hunt KE, Wasser SK, Kraus SD.** 2003. *Reproductive and stress hormones in right whales.* Right Whale Consortium Annual Meeting, November 4-5, 2003, New Bedford, Massachusetts.
- Rolland RM, Hunt KE, Kraus SD, O'Hara TM, Wasser SK.** 2003. *Reproductive and stress hormones in right whales: Comparative studies of bowhead whales.* Bowhead/Right Whale Comparative Health and Physiology Workshop. 25-26 March 2003. New England Aquarium, Boston, Massachusetts.
- Rolland RM, Hunt KE, Kraus SD, Wasser SK.** 2003. *Sex and stress: Endocrinology in right whales (*Eubalaena glacialis*).* University of Massachusetts Graduate Seminar Series, February 28, 2003, Boston, Massachusetts.
- Rolland RM, Hunt KE, Kraus SD, Wasser SK.** 2003. *Non-invasive measurement of reproductive and stress hormones in right whales.* Department of Fisheries and Oceans Bay of Fundy Right Whale Research Coordination Meeting, February 25-26, 2003, St. Andrews, New Brunswick..
- Rolland RM and Kraus SD.** *The bowhead's ugly cousin: Biology and conservation of North Atlantic right whales.* Barrow Arctic Science Consortium Outreach Series, October 2, 2002. Inupiat Heritage Center, Barrow, Alaska.
- Rolland RM, Hunt KE, Wasser SK, O'Hara TM, Kraus SD.** 2002. *Development of fecal steroid hormone metabolite analysis to study reproductive dysfunction and stress in the western North Atlantic right whale.* Florida Marine Mammal Health Conference, April 4-7, 2002, University of Florida, Gainesville, Florida.
- Rolland RM, Hunt KE, Kraus SD, Wasser SK.** 2002. *Reproductive and stress hormones in right whales.* North Atlantic Right Whale Consortium Annual Meeting, October 29-30, 2002, New Bedford, Massachusetts.
- Rolland RM, Hunt K, Kraus S, O'Hara T, Wasser S.** 2001. *Studying North Atlantic right whale reproduction using fecal steroid hormones: An update.* North Atlantic Right Whale Consortium Annual Meeting, October 25-26, 2001, New England Aquarium, Boston, Massachusetts.
- Rolland RM, Hunt KE, Kraus SD, O'Hara TM, Wasser SK.** 2001. *Determining reproductive status in right whales: The bowhead whale as the model for confirmation of "new" technologies and applications.* Bowhead Whale Health and Physiology Workshop, October 1-2, 2001, Barrow, Alaska.

- Rolland RM**, Wasser S, Hunt K, Kraus S, O'Hara T. 2000. *Investigating reproductive dysfunction in the western North Atlantic right whale: Measuring steroid hormones in free-ranging whales*. North Atlantic Right Whale Consortium Meeting, October 26-27, 2000, New England Aquarium, Boston, Massachusetts.
- Rolland RM**, Wasser S, Hunt K, Kraus S. 1999. *Use of fecal steroid hormone metabolites to study the reproductive status of North Atlantic right whales*. Right Whale Consortium Meeting, October 21-22, 1999, New England Aquarium, Boston, Massachusetts.
- Rolland R**, Kaufman G, Pokras M, Tabor G. *Conservation medicine: an emerging approach to protection of biodiversity*. Proceedings of the Eastern Regional Association of Zoos and Aquaria Annual Meeting, 1998.
- Rolland RM** and Colborn T. 1996. *Transgenerational loss of function: a threat to biodiversity of marine ecosystems*. Supplement to Bulletin of the Ecological Society of America, 1996.
- Rolland RM**. *Endocrine-disrupting chemicals in the aquatic environment: reproductive and developmental effects in fishes*. Fisheries and Pollution 1996: The Second Annual Conference on Population-Level Effects of Marine Contamination, 1996.
- Rolland R**, Colborn T, Giesy JP, Jones PD, Summer CL, Ludwig JP. *Albatross as sentinels of organochlorine pollution in the North Pacific*. Wildlife Disease Association Conference Proceedings, 1995.

NEWSLETTERS:

- Rolland RM**. 2010. In Memoriam FARGO 2000-2010. Right Whale Research News 19(2):3.
- Rolland RM** and Kraus SD. 2007. *A lesson from the primal ocean: right whales in the Auckland Islands*. Right Whale Research News, volume 16 (2), Fall 2007.
- Rolland RM**. 2007. *Right whales, detection dogs and the urban ocean*. Right Whale Research News, volume 16, no. 1, May 2007.
- Rolland RM**. 2000. *Investigating reproductive dysfunction in the western North Atlantic right whale: measuring steroid hormones in fecal samples from free-ranging whales*. Right Whale Research News, 2000.

MEDIA COVERAGE:

Newspapers and Magazines

- To save endangered whales, look to the poop*. Kate Baggaley. Popular Science July 11, 2017.
- 50-Ton Patient*. Genevieve Rajewski. Cummings Veterinary School Magazine. Spring 2017.
- Written in Baleen*. Rebecca Kessler. Aeon. October 2016.
- A Whale's Life Inscribed in Baleen* by Rebecca Kessler. Science Magazine vol350(6266):1300-1301, 11 December 2015.
- The Whale Savers*, by Doug Struck. Christian Science Monitor Magazine (front page), October 12, 2014.

- People helping whales* Amy Sutherland. Downeast Magazine. August 2010. Amy Sutherland.
- Whale Call. Can our scientists save the whales?* Saltscapes. Nova Scotia. By Darcy Rhyno, September/October 2009.
- Waterwork. Conservation dogs on the trail of whale scat.* Bark Magazine. Amy Sutherland. July/August 2009.
- Sniffing for Whales.* Joe Roman. Muse Magazine. February 2009.
- Letting the dogs out (to sea).* Phil McKenna. National Wildlife Magazine, April/May vol. 47 no. 3, 2009.
- Right Whales on the brink on the rebound.* Douglas Chadwick. National Geographic Magazine, October 2008.
- Mithilfe eines ausgemusterten Drogenspürhunds sammelt Rosalind Rolland im Nordatlantik Wal-Kot. Ihre Forschung soll einer bedrohten Art helfen zu überleben.* Sz Wissen 20 December 15, 2007, Munich, Germany.
- Whale tales. Georgetown couple discover whale "nirvana" in New Zealand.* Julie Kirkwood. Published in: Gloucester Dailey Times, The Salem News, The Eagle-Tribune. August 17, 2007.
- The Worst Jobs in Science: #10 Whale-Feces Researcher.* Jason Daley. Popular Science, July 2007.
- Sniffing out whale's doo-doo.* Joe Roman. New Scientist 2583, December 23, 2006
- Canine detective has whale of a job.* Alison Auld. Canadian Press. Globe and Mail, August 7, 2006. Appeared in major newspapers across Canada (only a few are listed below).
- This dog is never all pooped out.* Alison Auld. The Patriot Ledger, August 7, 2006.
- Excrements de baleine droit devant.* Alison Auld. Le Journal de Quebec, August 7, 2007.
- Whale-sniffing dog works the poop deck.* Alison Auld. The Chronicle Herald (Nova Scotia). August 7, 2007.
- Whales' best friend.* Kirsten Weir. Gulf of Maine Times. Spring 2007.
- Deep doo-doo.* Matador Magazine. Munich, Germany. April 2007.
- Canines have a nose for conservation.* Beth Casper. Statesman Journal (Salem, Oregon). July 11, 2006.
- Scent of a whale.* Joerg Blech. DER SPIEGEL Magazine, Germany. Summer 2007.
- A doggone good whale spotter.* Howard Weiss-Tisman. The Brattleboro Reformer, March 31, 2007.
- Dog is my copilot.* Greg Miller. Science 312: 1853, June 30, 2006.

Radio and Television Interviews

- Scientist able to glean new information from right whale poop.* Canadian Broadcasting Corporation, "Shift with Paul Castle", New Brunswick, Canada, 19 October, 2011. <http://www.cbc.ca/shift/2011/10/19/scientist-able-to-glean-new-information-from-right-whale-poop/#.Tp7pveNJsRc.email>
- The Whale and the Dog.* BBC Science 4 Radio, October 19, 2010.
- Here and Now.* National Public Radio, WBUR, Boston, MA. July 13, 2007.
- Costas Maritime News.* CBC Radio, Nova Scotia, Canada. March 21, 2007.
- Detector dogs trained to do conservation work.* John Stofflet. Evening Magazine. February 2, 2007.

Norwegian Broadcasting Corporation. Are Send Osen. Interviewed January 17, 2007.
LS Radio. Gary Nickerson. Halifax, Nova Scotia. Interviewed September 6, 2006.
KRLD CBS Radio. Mike Rogers. Dallas, Texas. Interviewed August 2006.

Selected Websites

Whaling a deadly science. Non-lethal whale research: Science proceeds, but whales survive. WhyFiles, January 17, 2008.

<http://whyfiles.org/272whale/index.php?g=3.txt>

Tracking dog helps scientists understand fragile whale population. August 2007.

<http://new-brunswick.net/new-brunswick/whales/updates72.html>

Dogs that sniff out whale droppings. http://www.compendiumvet.com/PV_3-2.html. June 6 2007.

Trained canines help New England Aquarium researchers by sniffing out fresh whale poop. New England Aquarium, July 2006. <http://www.neaq.org/special.whaledog>.

“Scat dogs” sniff out endangered species feces. Maryann Mott. National Geographic News October 1, 2003.

http://news.nationalgeographic.com/news/2003/10/1001_031001_scatdogs.html