

## **LORI MARINO, PH.D.**

### **CONTACT INFORMATION**

4100 Kanab Canyon Road  
Kanab, Utah 84741  
(435) 644-4436  
Marinolori@outlook.com

### **CURRENT POSITIONS**

**Founder and President, The Whale Sanctuary Project (2016 – present)**  
**Founder and Executive Director, The Kimmela Center for Animal Advocacy (2011 – present)**

### **EDUCATION**

**PhD** Biopsychology, State University of New York at Albany, 1995  
Thesis: Brain-behavior relationships in cetaceans and primates: Implications for the evolution of complex intelligence.  
**MA** Experimental Psychology, Miami University, Ohio, 1989  
**BA** Psychology, Biology minor, Honors in Psychobiology, New York University, 1982

### **INTERESTS**

Animal behavior  
Cognitive ethology  
Brain-behavior relationships  
Self-awareness and intelligence in other animals  
Human relationships with other animals  
Animal protection and conservation  
Astrobiology and evolutionary paths to intelligence

### **PREVIOUS ACADEMIC POSITIONS**

**Emory University, Atlanta, Georgia**  
Senior Lecturer, Graduate Institute of Liberal Arts (2011 – 2014)  
Faculty, Emory University Center for Ethics (2009 – 2014)  
Senior Lecturer, Department of Psychology (2010 – 2011)  
Senior Lecturer, Neuroscience and Behavioral Biology Program (2005 – 2010)  
Lecturer, Neuroscience and Behavioral Biology Program (1997 – 2005)  
Affiliate Faculty, Living Links Center for the Advanced Study of Ape and Human Evolution

## **VISITING AND ADJUNCT APPOINTMENTS**

Online Instructor, Humane Society University, Humane Society of the United States (2012 – 2015)

Adjunct Faculty, Department of Biological Sciences, Northern Arizona University (2010 – 2011)

Visiting Assistant Professor, Departments of Biology and Anthropology, Emory University (1995 – 1998)

Research Affiliate, Departments of Paleobiology, Vertebrate Zoology, and Anthropology, National Museum of Natural History, The Smithsonian Institution, Washington DC

Comparative Mammalian Brain Collection, National Museum of Health and Medicine, Wash DC

Behavioral ecological studies of bottlenose dolphins off the southeastern U.S. coast with *The Dolphin Project*, 1996 – 1997

Museum of Natural History, University of Georgia

Museum of Vertebrate Zoology, University of California, Berkeley

Department of Ornithology and Mammalogy, California Academy of Sciences

## **GRANTS**

**SUNY College at Oneonta Faculty Research and Creative Activity Grant** (2011) Grant Title: A Comparison of Public and Scientific Concern for Hydrofracking, Factory Farming, and Marine Mammal Captivity: Is Public Concern Consistent with or Doubtful about Scientific Understandings? (Gregory Fulkerson, Brian Lowe, William Wilkerson, Brett Heindl, Lori Marino).

**NASA Astrobiology Institute Conference and Workshop Fund Award** (2009)  
Grant Title: Virtual Workshops on the Study of Intelligence in Astrobiology  
(Kathryn Denning, co – PI)

**NASA Astrobiology Institute Director's Discretionary Fund Award** (2008)  
Grant Title: A Virtual Resource Center for Interdisciplinary Inquiry into Intelligent Life  
(Kathryn Denning, co – PI)

**Faculty Science Council, Emory University** (summer 2007) Development grant for course on *Animal Welfare*

**National Science Foundation** (start date 3/2007)

Grant Title: Systematics and evolution of living and fossil delphinidans (dolphins, porpoises, and kin) Collaborator (John Gatesy and Jonathan Geisler, PIs)

**Emory University Research Committee**

Grant Title: Analysis of cortical organization in dolphins  
Principal Investigator, (2004 –2005)

**Kellogg Fund, National Museum of Natural History, The Smithsonian Institution**

Grant Title: Evidence for echolocation abilities from cetacean skulls (2004)

**National Science Foundation**

Grant Title: Computed tomography of endocranial morphology in fossil Cetacea  
Principal Investigator (Mark D. Uhen, Co – PI), (2001 – 2004)

**Carl Sagan Center for the Study of Life in the Universe, SETI Institute**

Grant Title: Trends in encephalization: A route to investigating  $F_i$   
Co-Principal Investigator (Daniel McShea, Co – PI), (2002 – 2003)

**Emory University Research Committee**

Grant Title: Descriptive and morphometric analyses of the bottlenose dolphin brain  
Principal Investigator, (1999 – 2000)

**Cetacean Society International**

Grant Title: Testing self-recognition in the bottlenose dolphin  
Principal Investigator (1992 – 1993)

**Sigma Xi, The Scientific Research Society**

Grant Title: Self-awareness in the bottlenose dolphin: A test of convergent cognitive evolution  
Principal Investigator, Years of Funding: (1990 – 1991, 1992 – 1993)

**OTHER HONORS AND AWARDS**

International Travel Award, Institute for International Travel and Comparative Studies, Emory University (2002, 2004)

Animal Behavior Society Symposium Grant

Faculty Development Award, Emory University

Visiting Research Award, National Museum of Natural History, The Smithsonian Institution

HUMAN-NONHUMAN ANIMAL RELATIONSHIPS, ETHICS, PROTECTION AND CONSERVATION OF  
OTHER ANIMALS

**Publications**

- Marino, L. (in press) Captivity. In: *Critical Terms for Animal Studies*, Ed. By L. Gruen. University of Chicago
- Marino L (in press) Marine mammal captivity: Time for a Paradigm Shift. In: *The Handbook of Practical Animal Ethics*. Ed by A. Linzey and C. Linzey. Oxford Centre for Animal Ethics.
- Marino L & Allen K (2017) The psychology of cows. *Animal Behavior and Cognition*, 4(4): 474 – 498.
- Colvin, CM, Allen K & Marino L (2017) Thinking cows: A review of cognition, emotion, and the social lives of domestic cows. Farm Sanctuary/The Kimmela Center  
[https://www.farmsanctuary.org/wp-content/uploads/2017/10/TSP\\_COWS\\_WhitePaper\\_vF\\_web-v2.pdf](https://www.farmsanctuary.org/wp-content/uploads/2017/10/TSP_COWS_WhitePaper_vF_web-v2.pdf)
- Marino L (2017) Cetacean cognition. In *Oxford Handbook of Animal Studies*. Ed by L. Kalof. Oxford University Press.
- Marino L. (2017) Thinking Chickens: A literature review of cognition, emotion, and behavior in the domestic chicken. *Animal Cognition*, 20(2): 127 - 141.
- Marino L & Colvin CM (2016) Thinking chickens: A review of cognition, behavior and emotion in the domestic chicken. Farm Sanctuary/The Kimmela Center  
[https://www.farmsanctuary.org/wp-content/uploads/2017/01/TSP\\_CHICKENS\\_WhitePaper\\_vF\\_web.pdf](https://www.farmsanctuary.org/wp-content/uploads/2017/01/TSP_CHICKENS_WhitePaper_vF_web.pdf)
- Marino L (2016) Why animal welfarism continues to fail. Commentary on Ng on Animal Suffering in *Animal Sentience*, 074: 1 - 4.
- Marino, L. (2016) Can we improve the lives of captive animals? *BBC Focus Magazine*, pp 77 - 82.
- Marino L & Colvin CM (2016) Thinking pigs: Cognition, emotion, and personality – An exploration of the cognitive complexity of *Sus domesticus*, the domestic pig. Farm Sanctuary/The Kimmela Center  
[http://www.farmsanctuary.org/wp-content/uploads/2016/08/TSP\\_PIGS\\_WhitePaper.pdf](http://www.farmsanctuary.org/wp-content/uploads/2016/08/TSP_PIGS_WhitePaper.pdf)
- Colvin CM & Marino L (2015) Signs of intelligent life. Pigs possess complex ethological traits similar to dogs and chimpanzees. *Natural History*, October.

- Marino L & Colvin CM (2015) Thinking Pigs: A comparative review of cognition, emotion, and personality in *Sus domesticus*. *International Journal of Comparative Psychology*, 28. uclapsych\_ijcp\_23859. Retrieved from: <http://escholarship.org/uc/item/8sx4s79c>
- Crane JK, Satz AB, Marino L, & Willett C (2015) Beastly morality: Untangling possibilities. In *Beastly Morality-Animals as Ethical Agents*. Ed by JK Crane. Columbia University Press, NY, pp. 251 – 262.
- Marino L & Mountain M (2014) Denial of death and the relationship between humans and other animals. *Anthrozoos*, 28(1): 5 – 21.
- Marino L (2014) Cetacean Captivity. In *Ethics of Captivity*. Ed by L. Gruen. Oxford University Press, pp. 22 – 37.
- Marino L (2013) Dolphins, humans and moral inclusivity. In *Humans and Other Animals: Rethinking the Species Interface*. Ed by R. Corbey and A. Lanjouw. Cambridge University Press, pp. 95 – 105.
- Marino L (2013) Dolphins are not healers. *AEON Magazine*.  
<http://www.aeonmagazine.com/nature-and-cosmos/lori-marino-dolphins-are-not-healers/>
- Marino L (2012) Construct validity of animal-assisted therapy and activities: How important is the animal in AAT? *Anthrozoos* 25: s139 – s151.
- Marino L & Frohoff T (2011) Towards a new paradigm of non-captive research on cetacean cognition. *Public Library of Science ONE* 6(9): e24121. doi:10.1371/journal.pone.
- Marino L (2011) Ethical gerrymandering in science. *Journal of Animal Ethics*, 1(2): 199 – 121.
- Marino L, Lilienfeld S, Malamud R, Nobis N, & Broglio R (2011) Strong Claims, Feeble Evidence: A Rejoinder to Falk et al. (2010). *Society and Animals*, 19: 291 – 293.
- Marino L (2011) Dolphin assisted therapy: From ancient myth to modern snake oil. *Phi Kappa Phi Forum* magazine: 4-6.
- Marino L (November 2010) A trans-species perspective on nature. Online essay for *On The Human* (National Humanities Center), <http://onthehuman.org/2010/11/trans-species-perspective/>.
- Marino L (2010) The use of nonhuman animals in R-HET is our own moral litmus test. Commentary in *American Journal of Bioethics – Neuroscience*, 1(2): 58 – 59.

- Marino L, Lilienfeld S, Malamud R, Nobis N & Broglio R (2010) Do zoos and aquariums promote attitude change in visitors? A critical evaluation of the American Zoo and Aquarium study. *Society and Animals*, 18: 126 – 138.
- Marino L (2009) On becoming a scientist-advocate. *The Academic Exchange*. Emory University. 11(6), p. 8-9.
- Stewart KL & Marino L (2009) Dolphin-human interaction programs: Policies, problems, and practical alternatives. Policy paper for *Animals and Society Institute*.
- Marino L (2009) Another kind of scientist activism. *The Chronicle of Higher Education*. 55(28): A37.
- Marino L, Bradshaw G, & Malamud, R (2009) The captivity industry: The reality of zoos and aquariums. *Best Friends Animal Society Magazine*, March-April: 25 – 27.
- Marino L, Bradshaw G, & Malamud R (December 15, 2008) Zoos without elephants: A lesson in compassion. Los Angeles Times, Blowback Section.
- Marino L (2008) Beautiful minds—for how long? *PLoS Biology* 6(7): e189  
[doi:10.1371/journal.pbio.0060189](https://doi.org/10.1371/journal.pbio.0060189) (book review)
- Marino L & Bradshaw G (2008) Elephant assisted therapy: issues and concerns. *The Born Free Foundation*, <http://www.bornfree.org.uk/>
- Marino L & Lilienfeld S (2007) Dolphin assisted therapy for autism and other developmental disorders: A dangerous fad. *Psychology in Intellectual and Developmental Disabilities (Division 33)*, *American Psychological Association*, 33(2): 2 – 3.
- Bradshaw G & Marino L (2007) Minds of their own: The exciting new field of trans-species psychology. *Best Friends Magazine*, November/December: 24 - 26.
- Marino L & Lilienfeld S (2007) Dolphin assisted therapy: More flawed data, more flawed conclusions. *Anthrozoos*. 20: 239 – 249.
- Marino L (2007) Animal consciousness. In *The Encyclopedia of human-animal relationships*. Ed by M Bekoff. Greenwood Publishing Group, pp. 1297 – 1301.
- Marino L (2007) Dolphin mythology. In *The Encyclopedia of human-animal relationships*. Ed by M Bekoff. Greenwood Publishing Group, pp. 491 – 495
- Marino L (2007) Scala natura. In *The Encyclopedia of human-animal relationships*. Ed by M Bekoff. Greenwood Publishing Group, pp. 220 – 224.
- Marino L (2006) The ape in the mirror. *Best Friends Magazine*, November/December: 24 – 25.

Marino L (2003) Has scala naturae thinking come between neuropsychology and comparative neuroscience? *International Journal of Comparative Psychology* 16: 28 - 32.

Marino L & Lilienfeld S (1998) Dolphin-assisted therapy: Flawed data, flawed conclusions. *Anthrozoos*, 11(4): 194 – 199.

### **Talks/Presentations/Abstracts**

#### 2017

Dolphins and whales: Brainiacs of the sea. Santa Barbara Channel City Club.

Captive whales and dolphins: Life beyond concrete tanks. Franklin & Marshall College, Lancaster, PA.

Presenter and co-organizer, workshop entitled Sanctuaries: A New Seascape for Captive Cetaceans, Society for Marine Mammalogy Biennial Conference, Halifax, Nova Scotia.

Panelist in discussion entitled Swimming Upstream: The Emergence of Aquatic Animal Law. The Animal Law Conference, Portland, Oregon.

The Whale Sanctuary Project, Bottlenose Dolphin Workshop, Barcelona, Spain (by skype).

The Someone Project. Farm Sanctuary Hoe Down Conference, Watkins Glenn, NY.

The Whale Sanctuary Project. Public Event at the Roundhouse Community Arts & Recreation Centre, Vancouver, British Columbia.

The Whale Sanctuary Project. Animal Welfare Program, University of British Columbia.

Participant in panel discussion on marine mammal sanctuaries. Zoos and Aquariums as Welfare Centres: Ethical Dimensions and Global Commitment. Detroit Zoological Society, Detroit, MI.

Sanctuaries as Restitution. The “I Am Not An Animal!” Conference, Atlanta, GA.

#### 2016

The Whale Sanctuary Project. Conference on Captive Dolphins, Playa del Carmen, Mexico.

Dolphin Assisted Therapy. Conference on Captive Dolphins, Playa del Carmen, Mexico.

The Whale Sanctuary Project. The Performing Animal Welfare Society 2016 International Captive Wildlife Conference, San Andreas, CA.

Seeing seafood as animals: Three approaches to recognizing the individual. Seeing Seafood as Animals Symposium, New York University, NY, NY.

## 2015

Sea pen sanctuaries: Progressing towards better welfare for cetaceans. (Co-organizer with N. Rose.) Workshop at Society for Marine Mammalogy Biennial Conference.

Sanctuaries for orcas: If you build it, they will come. Compassionate Conservation Conference, Vancouver, British Columbia.

## 2014

Changes for marine mammals: Challenges and successes. Invited talk at The Animal Grantmakers Conference, Phoenix, AZ.

Orcas and elephants: Being big and brainy in captivity for the National Museum of Animals and Society, Burbank, CA.

David versus the corporate Goliath: Marine mammals in entertainment. Invited talk on panel about marine mammal captivity at The Performing Animal Welfare Society International Captive Wildlife Conference, Burbank, CA.

Why Blackfish works: Applying science to advocacy. Invited talk at the 2014 Classy Awards Collaborative, San Diego, CA.

The marine mammal captivity issue: Can we move forward together? Keynote address at the Southern California Marine Mammal Workshop, Newport Beach, CA.

Stormy weather: Communicating science to the media amidst controversy. Invited talk at the Southern California Marine Mammal Workshop, Newport Beach, CA.

## 2013

The science of the Nonhuman Rights Project. Personhood Beyond the Human. Conference sponsored by the Institute for Ethics and Emerging Technologies, Yale University, New Haven, CT.

The denial of death and our relationship with nonhuman animals. Personhood Beyond the Human. Conference sponsored by the Institute for Ethics and Emerging Technologies, Yale University, New Haven, CT. (with M. Mountain)

Dolphin and whale captivity: The science behind the films. Conference of Southwest Foundations, San Antonio, Texas.



The critical role of psychology in the conservation of nonhuman animals. Twenty-Sixth International Congress for Conservation Biology, Baltimore, MD.

Animal welfare and conservation: Two sides of the same coin? Online Live Debate for Sentience Mosaic.

Panel participant for screening and discussion of *Maximum Tolerated Dose*, film about ethics and animal research.

## 2012

Cetaceans in captivity: The moral challenge. Invited lecture to the Emory Pre-Veterinary Society.

Cetaceans in captivity: A moral and scientific dead end. Invited lecture for the American Cetacean Society 2012 Meeting.

Cetaceans in captivity: A moral and scientific dead end. Guest lecture at University of Redlands.

The denial of death and our relationship with the other animals. Ernest Becker Foundation Meeting, Seattle, Washington (with M. Mountain).

Dolphin brains, cognition, and culture. Invited lecture in Maymester course entitled *The Biology & Conservation of Marine Mammals*, Odum School of Ecology, University of Georgia, Athens, GA.

The scientific evidence for complex intelligence and self-awareness in cetaceans. Invited talk in symposium entitled Declaration of Rights for Cetaceans: Ethical and Policy Implications of Intelligence. American Association for the Advancement of Science Annual Meeting, Vancouver, Canada.

## 2011

Humans, dolphins and moral inclusivity. Invited participant in roundtable conference entitled: Apes and humans: Rethinking the species interface. ARCUS Foundation, Desmond Tutu Center, NY, NY.

What have we learned from elephants in zoos? Invited presentation for Elephant Challenges: Care, Climate and Cost. Zoocheck Canada, Toronto, Canada.

## 2010

The science of morality. Invited respondent on panel for American Academy of Religion Annual Meeting, Atlanta, GA.

On becoming a scientist-advocate. Invited panelist, “Stepping into the Frame: The Ethics of Individual Choice.” Crossing the Line: The Ethics of Intervention. Emory Center for Ethics 20<sup>th</sup> Anniversary Summit.

Toward a new ethical paradigm of research on cetacean cognition. (Frohoff, T. and Marino, L.). The 12th International Conference of the American Cetacean Society, Monterey, CA.

Noninvasive research on cetacean cognition. Invited talk at Conference on Animals, Research and Alternatives, Physicians Committee for Responsible Medicine, Washington DC.

SHILAS (Species of Human Intelligence Level and Awareness of Self) and environmental law – a dolphin case study (ECM Parsons, M Gore, L Marino, C Milling, NA Rose. Compassionate Conservation: Animal Welfare in Conservation Practice, Oxford, England.

Cetacean rights: a test of our ethical consistency. Invited talk at Conference on Cetacean Rights: Fostering a moral and legal change, Helsinki, Finland.

The clash of dolphin intelligence and human ethics. Invited talk at Atlanta Science Tavern., Atlanta, GA.

The neuroanatomical basis of dolphin intelligence. Invited talk in symposium entitled Intelligence of Dolphins: Ethical and Policy Implications. American Association for the Advancement of Science Annual Meeting, San Diego, CA.

## 2009

Dolphin assisted therapy: A dangerous fad. Invited talk at for Dept of Philosophy at Wofford College, Spartanburg, SC.

On becoming a scientist-advocate. Invited talk for Faculty Creativity Over the Life Cycle Event, Emory University, Atlanta, GA.

## 2008

Dolphin assisted therapy: A dangerous fad. Invited talk for Comparative Medicine Seminar Series. Emory University, Atlanta, GA.

Animal behavior and bioethics: Fertile ground for classroom discussion (with J. Balcombe). National Association for Biology Teachers Conference, Memphis, TN.

Perverting the ark: The messaging and motives of zoos and aquaria. (L Marino, R Malamud, N Nobis, R Broglio). Human Animal Bond: Theory, Research and Practice. International Society for Anthrozoology Conference, Toronto, Canada.

Thinking about human intelligence as an evolved biological trait. National Association of Biology Teachers' Annual Convention, Memphis, TN.

Dolphin assisted therapy: A dangerous fad. Invited Plenary talk at International Compassionate Living Festival, Animals & Society Institute, Raleigh, NC.

Trans-species models of neurobiology. Invited talk at Conference entitled Reframing the Pitbull-Human Issue: A workshop on the science, myth, and cultural change. Jacksonville, OR.

Unitary models of brain and behavior. Invited talk at Trans-Species Psychology Workshop: Theory and Practice. Jacksonville, OR.

Ecotherapy and dolphin assisted therapy. Invited talk at Trans-Species Psychology Workshop: Theory and Practice. Jacksonville, OR.

On the sentience and suffering of dolphins. The Whale Memorial Dance. Invited talk at Indiana University, IN.

What's driving dolphin drive hunts? Invited talk for Speak Out for Species, University of Georgia, Athens, GA.

Dolphin therapy? Invited lecture in Maymester course entitled *The Biology & Conservation of Marine Mammals*, Odum School of Ecology, University of Georgia, Athens, GA.

## 2007

Why dolphin-assisted therapy isn't therapy. Invited talk for ACCOBAMS Third Meeting of Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Croatia.

Conceptual foundations of (teaching) animal ethics. Invited talk for Teaching Ethics Panel, Center for Ethics, Emory University.

Dolphin therapy? Invited lecture in Maymester course entitled *The Biology & Conservation of Marine Mammals*, Odum School of Ecology, University of Georgia, Athens, GA.

A trans-species psychology of primates, cetaceans, and elephants Invited talk at Best Friends Animal Society, Kanab, UT.

Dolphins and whales in captivity. Invited talk at Best Friends Animal Society, Humane Education Dept., Kanab, UT.

2006

Animal Intelligence and self-awareness. Invited talk at Best Friends Animal Society, Kanab, UT.

**ANIMAL BEHAVIOR, COGNITIVE ETHOLOGY, BRAIN-BEHAVIOR RELATIONSHIPS, EVOLUTION OF THE BRAIN AND INTELLIGENCE, SELF-AWARENESS**

**Publications**

Berns G, Cook P, Foxley S, Babdi J, Miller KL & Marino L. (2015) Diffusion tensor imaging of dolphin brain reveals direct auditory pathway to temporal lobe. *Proceedings of the Royal Society B*, <http://dx.doi.org/10.1098/rspb.2015.1203>

Marino L (2015) The landscape of intelligence. *Proceedings of the NASA/Library of Congress Astrobiology Symposium: Preparing for Discovery*. Wash DC: Library of Congress. pp. 95 – 112.

Marino L (2015) The evolution of  $F_i$ . In *The Drake Equation: Estimating the Prevalence of Extraterrestrial Intelligence Through the Ages*. Ed By D Vakoch. Cambridge University Press. pp. 181 – 204.

Marino L (2015) The brain – structure and function. In *Dolphin Communication and Cognition*. Ed By C Johnson and D Herzing, MIT Press. pp. 3 – 18.

Marino L (2014) Intelligence. In *Encyclopedia of Astrobiology*. Springer Reference.

Marino L (2014) The Evolution of Intelligence. In *Encyclopedia of Astrobiology*. Springer Reference.

Preslar J, Kuschner H, Marino L, & Pearce, B (2014) Autism, lateralization and handedness: A review of the literature and meta-analysis. *Laterality*, 19(1): 64 – 95.

Montgomery SH, McGowen MR, Fox C, Marino L & Gatesy J (2013) The evolutionary history of cetacean brain and body size. *Evolution* 67(11): 3339-3353.

Marino, L (2011) Cetaceans and primates: Convergence in intelligence and self-awareness. *Journal of Cosmology*, 14: 1063 – 1079.

- Marino, L (2011) Brain structure and intelligence in cetaceans. *Whales and Dolphins: culture, cognition and conservation*. Ed By P Brakes, MP Simmonds, C Bass. pp. 115 – 128.
- Sarko D, Domning D, Marino L, & Reep R (2010) Estimating body size of fossil Sirenians. *Marine Mammal Science*. 26(4): 937 – 959.
- Marino L (2010) Sentience. *Encyclopedia of Animal Behavior*, Vol. 3. Ed by M Breed & J Moore. Academic Press, Oxford, pp. 132 – 138.
- Marino L (2009) Brain size evolution. In *Encyclopedia of marine mammals*, Ed by WF Perrin, B Wursig, H Thewissen (2<sup>nd</sup> ed) San Diego, Academic Press, pp. 149 – 152.
- Marino L, Butti, C, Connor RC, Fordyce, RE, Herman LM, Hof PR, Lefebvre L, Lusseau D, McCowan B, Nimchinsky EA, Pack AA, Reidenberg JS, Reiss D, Rendell L, Uhen MD, Van der Gucht E, & Whitehead H (2008) A claim in search of evidence: Reply to Manger's thermogenesis hypothesis of cetacean brain structure. *Biological Reviews of the Cambridge Philosophical Society*, 83: 417 – 440.
- Montie, EW, Ketten DR, Schneider G, Marino L, Touhey KE, & Hahn ME (2008) Volumetric neuroimaging of the Atlantic white-sided dolphin (*Lagenorhynchus acutus*) brain from *in situ* magnetic resonance images. *The Anatomical Record*, 291: 263 – 282.
- Marino L (2008) Cetacean brains. In *The Encyclopedia of Neuroscience* (v2), Ed by L Squire. Elsevier, 807 – 810.
- Montie EW, Ketten DR, Schneider G, Marino L, Touhey KE, & Hahn ME. (2007). Neuroanatomy of the subadult and fetal brain of the Atlantic white-sided dolphin (*Lagenorhynchus acutus*) from *in situ* magnetic resonance images. *The Anatomical Record*, 290: 1459 – 1479.
- Marino L, Connor RC, Fordyce, RE, Herman LM, Hof PR, Lefebvre L, Lusseau, McCowan B, Nimchinsky EA, Pack AA, Rendell L, Reidenberg JS, Reiss D, Uhen MD, Van der Gucht E, & Whitehead H. (2007) Cetaceans have complex brains for complex cognition. *Public Library of Science (PLOS) Biology*, 5(5): e139.
- Marino L (2007) Cetacean brains: How aquatic are they? *The Anatomical Record*, 290: 694 – 700.
- Marino L (2006) Absolute brain size: Have we thrown the baby out with the bathwater? Invited commentary in *Proceedings of the National Academy of Sciences USA*, 103(37): 13563 – 13564.
- Marino L, Sol D, Toren K, & Lefebvre L (2006). Does diving limit brain size in cetaceans? *Marine Mammal Science*. 22(2): 413 – 425.

- Marino L (2006) Cetacean brain evolution. In *Evolution of nervous systems in mammals*, V 3 Ed by L Krubitzer, JH Kaas. Elsevier. Oxford, UK, pp. 261 – 266.
- Marino L (2006) Evolution of the brain and cognition in cetaceans. In *Evolutionary cognitive neuroscience*. Ed by SM Platek, JP Keenan, TK Shackelford. MIT Press. Cambridge, MA, pp. 163-193.
- Marino L & Hof P (2005) Nature's experiments in brain diversity. *The Anatomical Record*. 287A: 997 – 1000.
- Hof P, Chavis R, & Marino, L. (2005) Cortical complexity in cetacean brains. *The Anatomical Record*. 287A: 1142 – 1152.
- Marino L (2005) Big brains do matter in novel environments. Invited commentary in *Proceedings of the National Academy of Sciences USA*. 102(15): 5306 – 5307.
- Marino L, McShea D, & Uhen MD (2004) The origin and evolution of large brains in toothed whales. *The Anatomical Record*. 281A: 1247 – 1255.
- Marino L, Sherwood CC, Tang CY, Delman BN, Naidich TP, Johnson JI, & Hof PR (2004) Neuroanatomy of the killer whale (*Orcinus orca*) from Magnetic Resonance Imaging. *The Anatomical Record*. 281A: 1256 – 1263.
- Marino L (2004) Dolphin cognition. *Current Biology*. 14, R910-R911.
- Marino L, Sudheimer K, Pabst D A, McLellan WA, Arshad S, Naini G, & Johnson JI (2004) Anatomical description of an infant bottlenose dolphin, *Tursiops truncatus*, brain from Magnetic Resonance Images. *Aquatic Mammals* 30: 315 – 326.
- Marino L, Pabst DA, McLellan WA, Sudheimer & K, Johnson JI (2004) Neuroanatomical structure of the spinner dolphin (*Stenella longirostris orientalis*) brain from magnetic resonance images. *The Anatomical Record* 279A: 601 – 610.
- Marino L (2004) Cetacean brain evolution – multiplication generates complexity. *International Journal of Comparative Psychology* 17: 1 – 16.
- Marino L (2004) Objectivity in the study of intelligence: the cornerstone of new methods and discoveries. *Proceedings of Bioastronomy 2002 Symposium: Life among the stars*. Ed by R Norris, C Oliver, F Stootman. Astronomical Society of the Pacific, San Francisco, pp. 163 – 193.
- Gosling S Lilienfeld S, & Marino L (2003) Personality. *Primate psychology: The mind and behavior of human and nonhuman primates*. Ed by D Maestriperi. U. of Chicago Press, pp. 254 – 288.

- Marino L (2003) Can we be too uncertain about uncertainty responses? Invited commentary on target article by Smith et al. The comparative psychology of uncertainty monitoring and comparative metacognition. *Behavioral and Brain Sciences* 26: 317 – 373.
- Marino L, Pabst DA, McLellan WA, Sudheimer K, & Johnson JI (2003) Magnetic resonance images of the brain of a dwarf sperm whale (*Kogia simus*). *Journal of Anatomy* 204: 57 – 76.
- Marino L, Sudheimer K, Sarko D, Sirpenski G, & Johnson JI (2003) Neuroanatomy of the harbor porpoise (*Phocoena phocoena*) from magnetic resonance images. *Journal of Morphology* 257: 308 – 347.
- Marino L, Uhen MD, Pyenson ND, & Frohlich BF (2003) Reconstructing cetacean brain evolution using computed tomography. *The New Anatomist* 272B: 107 – 117.
- Sarko D, Marino L, & Reiss D (2003) A bottlenose dolphin's (*Tursiops truncatus*) responses to its mirror image: further analysis. *International Journal of Comparative Psychology* 15: 69 – 6.
- Marino L, Sudheimer K, Pabst DA, McLellan W A, Filsoof D, & Johnson J I (2002) Neuroanatomy of the common dolphin (*Delphinus delphis*) as revealed by magnetic resonance images (MRI). *The Anatomical Record* 268: 411 – 429.
- Ridgway SH, Marino L, & Lipscomb T (2002) Description of a poorly differentiated carcinoma within the brainstem of a White whale (*Delphinapterus leucas*) from magnetic resonance images and histological analysis. *The Anatomical Record* 268: 441 – 449.
- Marino L (2002) Convergence in complex cognitive abilities in cetaceans and primates. *Brain, Behavior and Evolution* 59: 21 – 32.
- Marino L (2002) Brain size evolution. In *Encyclopedia of marine mammals*, Ed by WF Perrin, B Wursig, H Thewissen. San Diego, Academic Press, pp. 158 – 162.
- Marino L, Sudheimer K, Murphy TL, Davis KK, Pabst DA, McLellan W, Rilling JK, & Johnson JI (2001) Anatomy and three-dimensional reconstructions of the bottlenose dolphin (*Tursiops truncatus*) brain from magnetic resonance images. *The Anatomical Record* 264: 397 – 414.
- Reiss D & Marino L (2001) Self-recognition in the bottlenose dolphin: A case of cognitive convergence. *Proceedings of the National Academy of Sciences USA* 98 (10): 5937 – 5942.
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- Marino L (1999) Brain growth in the harbor porpoise (*Phocoena phocoena*) and Pacific white-sided dolphin (*Lagenorhynchus obliquidens*). *Journal of Mammalogy* 80: 1353 – 1360.
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- Marino L (1998) Brain growth patterns in the La Plata River dolphin (*Pontoporia blainvillei*). *Aquatic Mammals* 24: 111 – 116.
- Marino L (1998) Quantifying brain-behavior relations in cetaceans and primates. Correspondence in *Trends in Ecology and Evolution* 13 (148): 408.
- Marino L (1998) A comparison of encephalization between odontocete cetaceans and anthropoid primates. *Brain, Behavior, and Evolution* 51: 230 – 238.



- Hopkins W, Marino L, Rilling J, & MacGregor L (1998). Planum temporale asymmetries in great apes as revealed by magnetic resonance imaging (MRI). *NeuroReport* 9: 2913 – 2918.
- Marino L & Stowe J (1997) Lateralized behavior in a captive beluga whale (*Delphinapterus leucas*). *Aquatic Mammals* 23: 101 – 103.
- Reiss D, McCowan B, & Marino L (1997) Communicative and other cognitive characteristics of bottlenose dolphins. *Trends in Cognitive Sciences* 1: 140 – 145.
- Marino L & Stowe J (1997) Lateralized behavior in two captive bottlenose dolphins (*Tursiops truncatus*). *Zoo Biology* 16: 173 – 177.
- Marino L (1997) The relation between encephalization level, gestation length, and body weight in odontocetes (toothed whales). *Marine Mammal Science* 13: 133 – 138.
- Marino L (1997) Brain-behavior relations in primates and cetaceans: Implications for the ubiquity of factors leading to the evolution of complex intelligence. *Astronomical and biochemical origins and the search for life in the universe*. Ed by CB Cosmovici, S Bowyer, D Werthimer. Editrice Compositori, Italy, pp.553 – 560.
- Marino L (1996) What can dolphins tell us about primate evolution? *Evolutionary Anthropology* 5: 81 – 85.
- Gallup Jr GG, Marino L, & Eddy T (1996) Anthropomorphism and the evolution of social intelligence: A comparative approach. In *Anthropomorphism, anecdotes, and animals*. Ed by R Mitchell, N Thompson, L Miles. State University of New York, University at Albany Press, pp. 77 – 91.
- Reiss D & Marino L (1995) Self-view television as a test of self-awareness: Only in the eye of the beholder? Reply to K. Marten and S. Psarakos. Using self-view television to distinguish between self-examination and social behavior in the bottlenose dolphin (*Tursiops truncatus*). *Consciousness and Cognition* 4: 235 – 238.
- Marino L, Reiss D, & Gallup Jr GG (1994) Mirror self-recognition in bottlenose dolphins: Implications for comparative investigations of highly dissimilar species. *Self awareness in animals and humans: Developmental perspectives*. Ed by S Parker, R Mitchell & M Boccia. New York: Cambridge University Press, pp. 380 – 391.
- Marino L (1993) Towards a functional learning paradigm: Translating ecologically valid ideas into a functional empirical methodology. *Journal of Psychology and the Behavioral Sciences* 7: 11 – 22.

## Talks/Presentations/Abstracts

### 2017

Intelligence. Are We Alone? Cambridge Science Festival, Cambridge, MA.

Regarding life: Connection-based teaching about astrobiology (K. Denning & L. Marino).  
Astrobiology Science Conference, Mesa, Arizona.

### 2016

Learning about intelligence from cetaceans. Dalhousie University, Dept. of Biology, Halifax,  
Nova Scotia.

The challenge of dolphin and whale brains. Dalhousie University, Centre for Brain Repair,  
Halifax, Nova Scotia.

A biopsychological perspective on SETI and astrobiology. Cain Conference: The Evolving  
Search for Life in the Universe. Philadelphia, PA.

### 2015

Diffusion tensor imaging of dolphin brains reveals direct auditory pathway to temporal lobe.  
(Berns G, Cook P, Foxley S, Jbabdi S, Miller K, Marino L). Society for Marine Mammalogy  
Biennial Conference. San Francisco, CA.

Invited presenter in Millstein Science Series: Ocean Locomotion. American Museum of Natural  
History, NY, NY.

Cetaceans and primates: Convergent themes in cognition. Invited talk for Boston Colloquium for  
the Philosophy of Science, Boston University.

Dolphin brains: An alternative to complex intelligence in primates. Invited talk at The Institute  
for Human and Machine Cognition, Ocala, Florida.

Dolphins: Brainiacs of the sea. Invited talk at The Institute for Human and Machine Cognition,  
Ocala, Florida.

### 2014

Cognition and awareness in Dogs. Invited talk at Best Friends Animal Society Sanctuary. Kanab,  
Utah.

The landscape of intelligence. Invited talk at the NASA/Library of Congress Astrobiology Symposium: Preparing for Discovery. Wash DC.

## 2012

A new conversation about intelligence in the universe (with K. Denning). Astrobiology Science Conference 2012: Exploring Life, Past and Present, Near and Far. Atlanta, GA.

Virtual workshops on the study of intelligence in astrobiology: A status report (with K. Denning). Astrobiology Science Conference 2012: Exploring Life, Past and Present, Near and Far. Atlanta, GA.

Trends and the contingency versus convergence debate: A new framework. Astrobiology Science Conference 2012: Exploring Life, Past and Present, Near and Far. Atlanta, GA.

## 1991 - 2011

Thinking dolphins. Invited presenter in Millstein Science Series: Under the Sea, Inside the Brain. American Museum of Natural History, NY, NY (2011).

Project Intelligence: An interdisciplinary approach to the study of intelligence in astrobiology. Invited talk at University of Colorado, Boulder (2010).

Comparative neuroanatomy in cetaceans and primates: Implications for functional convergence. Invited talk for Dept of Biology, Northern Arizona University, Flagstaff, AZ (2010).

The glia-neuron index in the neocortex of Cetartiodactyla and Afrotheria: implications for mammalian brain evolution. (C Butti, A Bauerfeind, M Spocter, L Marino, P Manger, B Wicinski, M Raghanti, C Sherwood, P Hof). Annual Meeting of the Society for Neuroscience, Chicago, Ill., (2009).

Transcending anthropocentrism in astrobiology. AbSciCon 2008: Astrobiology Science Conference, Santa Clara, CA (2008).

Magnetic resonance imaging: New approaches to study marine mammal health (EW Montie, G Schneider, L Marino, K Touhey, H Harris, F Nutter, F Gulland) Florida Marine Mammal Health Conference III, St. Augustine, Fla (2008).

Neuroanatomy and volumetric neuroimaging of the Atlantic white-sided dolphin (*Lagenorhynchus acutus*) brain from in situ magnetic resonance images (EW Montie, DR Ketten, G Schneider, L Marino, KE Touhey, ME Hahn) The 17<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa (2007).

Dolphin brains and cognition. Invited lecture in Maymester course entitled *The Biology & Conservation of Marine Mammals*, Odum School of Ecology, University of Georgia, Athens, GA (2007, 2008).

The nature of intelligence: Escaping orthogenetic concepts. Invited talk at the Workshop on The Future of Intelligence in the Cosmos, NASA Ames Research Center, Moffett Field, CA (2007).

Magnetic resonance imaging: A new tool to assess the effects of thyroid hormone disrupting chemicals on brain development in marine mammals (EW Montie, G Schneider, L Marino, MJ Moore, DR Ketten, KE Touhey, A Bogomolni, ME Hahn) The Society of Environmental Toxicology and Chemistry North America 27<sup>th</sup> Annual Meeting, Montreal, Canada (2006).

Mirrors and other measures of the self. Invited talk at Special Symposium on Comparative Cognition at the Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego (2005).

Imaging marine mammals. Invited plenary talk for the Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego (2005).

Third Gordon Research Conference on Neuroethology, Oxford, England (2005) Invited chair of session/discussion leader.

Encephalization in odontocetes: What's being aquatic got to do with it? (L Marino MD Uhen, D McShea). Fourth Tri-Annual Convention on Evolution of Aquatic Tetrapods, Akron, OH (2005).

The evolution of high encephalization levels in odontocetes in relation to the origin of echolocation. (MD Uhen, L Marino). Fourth Tri-Annual Convention on Evolution of Aquatic Tetrapods, Akron, OH (2005).

Comparative neuroanatomy in cetaceans and primates: Implications for functional convergence. American Association of Anatomists Platform Session at Experimental Biology, San Diego, CA (2005).

Smooth-surfaced striatal lobes of the cerebral hemispheres of six species of whales and dolphins. (JI Johnson RC Switzer III, L Marino, FM Ferreira, JA Morris, KD Sudheimer, AJ Fobbs Jr). The Society for Integrative and Comparative Biology Meeting, San Diego, CA (2005).

The origin and evolution of large brains in dolphins (L Marino, D McShea, MD Uhen). The Third Astrobiology Science Conference, Mountain View, CA (2004).

Broca's desert lobe and the corpus striatum in the cerebral hemispheres of six species of whales and dolphins. (JI Johnson, RC Switzer III, L Marino, FM Ferreira, JA Morris, KD

- Sudheimer, AJ Fobbs Jr). American Association of Anatomists Annual Meeting, Wash. DC, (2004).
- Distinctive organization of the basal ganglia in the brains of cetaceans. (JI Johnson, RC Switzer, KD Sudheimer, FM Ferreira, L Marino, AJ Fobbs). The Society for Integrative and Comparative Biology Meeting, New Orleans (2004).
- Thinking intelligently about intelligence: The biological nature of human intelligence. National Association of Biology Teachers' Annual Convention, Chicago (2004).
- The comparative psychology of dolphins. Invited talk at Georgia State University, Atlanta, GA (2004).
- Fifty-million years of cetacean brain and cognitive evolution (so far!). Joint 12<sup>th</sup> Biennial Meeting of the International Society for Comparative Psychology and 16<sup>th</sup> Congress of the Spanish Society for Comparative Psychology, Oviedo, Spain (2004).
- A research program for the study of the evolution of intelligence. Plenary address at Eighth International Conference on Bioastronomy, Reykjavik, Iceland (2004).
- Dolphin brains and cognition. Invited talk at Princeton University, Princeton, NJ (2003).
- Neurobiology of whales and dolphins. Invited talk at New York University, NY, NY (2003).
- Big trends in big brains. Invited talk at Emory University, Atlanta, GA (2003).
- Neurobiology and cognition in whales and dolphins. Invited talk at McGill University. Quebec, Canada (2003).
- Brain and intelligence in whales and dolphins. Invited talk for Group for Research and Education in Marine Mammals (GREMM), Center for Interpretation of Marine Mammals, Quebec, Canada (2003).
- Reconstructing brain and behavioral evolution in cetaceans and other large-brained species. Invited talk at Florida International University, Miami, FL (2003).
- Reconstructing cetacean brain and behavioral evolution. Invited talk at University of California, Davis, Davis, CA (2003).
- Reconstructing cetacean brain and behavioral evolution. Invited talk at University of California, Santa Cruz, CA (2003).
- A new analysis of trends in cetacean brain evolution. (L Marino, MD Uhen, D. McShea). Biennial Conference on the Biology of Marine Mammals, Greensboro, North Carolina, (2003).

Encephalization trends in cetacean evolution: New data and new analyses. (L. Marino, M. D. Uhen, D. McShea). Annual Meeting of the J. B. Johnston Club in Comparative and Evolutionary Neurobiology, New Orleans, LA (2003).

Comparative Neuroanatomy of the killer whale (*Orcinus orca*) and Amazon river dolphin (*Inia geoffrensis*) from magnetic resonance images. (L Marino, CC Sherwood, CY Tang, BN Delman, TP Naidich, JI Johnson, PR Hof) Annual Meeting of the Society for Neuroscience, New Orleans, LA (2003).

Globus pallidus and substantia nigra form a contiguous “extended pallidum” in brains of whales and dolphins (Cetacea). (JI Johnson, RC Switzer III, KD Sudheimer, FM Ferreira, AJ Fobbs, L Marino). Annual Meeting of the Society for Neuroscience, New Orleans, LA (2003).

Lateralized cerebral peduncles, extensive midbrain pallidum, and other distinctive features of the midbrain of whales and dolphins. (JI Johnson RC Switzer III, KD Sudheimer, FM Ferreira, AJ Fobbs, L Marino). The Society for Integrative and Comparative Biology Meeting, Toronto, Canada (2003).

Evolution of cetacean brains over time, through morphospace, and among lineages. (MD Uhen, L Marino, N Pyenson). Meeting of the Secondary Adaptation of Tetrapods to Life in Water, Dunedin, New Zealand (2002).

Neuroanatomy of the harbor porpoise (*Phocoena phocoena*) as revealed by magnetic resonance imaging. (D Sarko, L Marino, KD Sudheimer, JI Johnson). Annual Meeting of the Society for Neuroscience, Orlando, Fla (2002).

Brain morphometry during cetacean (dolphin, porpoise, and whale) evolution revealed by computed tomography. (L Marino, MD Uhen, ND Pyenson, S Rotenberg, B Shamsai, B Frohlich). Annual Meeting of the Society for Neuroscience, Orlando, Fla (2002).

Extensive chromophilic cell group in the ventral tegmental region and the distinctive spatial configuration of components of the ventral midbrain in dolphins and whales. (JI Johnson, RC Switzer III, KD Sudheimer, FM Ferreira, AJ Fobbs, L Marino). Annual Meeting of the Society for Neuroscience, Orlando, Fla (2002).

Primate and cetacean comparative psychology: A meeting of the minds. International Society for Comparative Psychology Meeting, Chicago, Ill. (2002).

Statistical analysis of encephalization patterns in mammalia: Revisiting trends in the evolution of intelligence with a new and more direct analytical tool (D McShea, L Marino, MD Uhen). Bioastronomy 2002: International Astronomical Union Symposium 213, Hamilton Island, Australia (2002).

Atlas of the brain of the bottlenose dolphin (*Tursiops truncatus*) using magnetic resonance images and corresponding stained sections. (JI Johnson, KD Sudheimer, L Marino, JK Rilling, TL Murphy, AJ Fobbs). Society for Integrative and Comparative Biology Meeting, Anaheim, CA (2002). Abstract in *Integrative and Comparative Biology*, 41(6), 1487-1488.

High resolution magnetic resonance imaging of postmortem cetacean brains. Emory University (2002).

Towards a true primate comparative psychology. I Coloquio Internacional Filosofia e Ciencias Cognitiva. Braga, Portugal (2002).

Thinking intelligently about the evolution of intelligence. Invited talk for Fulbright Symposium: Science Education in Partnership, Hamilton Island, Australia (2002).

Objectivity in the study of intelligence: the cornerstone of new methods and discoveries. Invited plenary address at Bioastronomy 2002: International Astronomical Union Symposium 213, Hamilton Island, Australia (2002).

Complex cognitive abilities in cetaceans and primates: insights, implications, and lessons. Conference on Evolutionary Theory, Esalen Center for Theory and Research, Big Sur, CA. (2002).

What self-recognition in the dolphin tells us about self-awareness. Annual Meeting of the Society for Philosophy and Psychology, Alberta, Canada (2002) (with D. Reiss).

Neuropsychology and comparative psychology: Insights from recognizing the essential nature of human and nonhuman brains. Annual Meeting of the Southern Society for Philosophy and Psychology, Nashville, TN (2002)

A dolphin's eye-view of human intelligence. Emory University (2002).

Convergent and divergent characteristics of cetacean and primate brains. Mount Sinai School of Medicine, New York, NY (2002) (invited).

Intelligence in non-humans. International Symposium on Astrobiology, Barcelona, Spain (2002).

Comparative brain evolution in cetaceans and primates. Biennial Conference on the Biology of Marine Mammals, Vancouver, Canada (2002)

Computed tomography of endocranial morphology in fossil cetacea (MD Uhen, L Marino). Biennial Conference on the Biology of Marine Mammals, Vancouver, Canada (2001).

Look ma – no frontal lobes! The neurobiological implications of convergence in self-recognition ability in dolphins and hominoids. Annual Meeting of the J. B. Johnston Club in Comparative and Evolutionary Neurobiology, San Diego, CA (2001).

Comparative morphometric analyses of cetacean brains reveal inter-species variation. Annual Meeting of the Society for Neuroscience, San Diego, CA (2001).

A 3D atlas of the brain of a bottlenose dolphin in magnetic resonance images (JI Johnson, L Marino, KD Sudheimer, JK Rilling, KK Davis, TL Murphy, AJ Fobbs). Annual Meeting of the Society for Neuroscience, San Diego, CA (2001).

Computed tomography of endocranial morphology in fossil cetacea. (MD Uhen, L Marino). Annual Meeting of the Society for Vertebrate Paleontology, Bozeman, Montana (2001).

Mirror self-recognition in the bottlenose dolphin: a case of cognitive convergence. Biennial Conference on the Biology of Marine Mammals, Vancouver, Canada (2001) (with D. Reiss).

Dolphin evolution: A non-primate path to complex intelligence. Invited talk at The Krost Symposium on the Evolution of Intelligence, Texas Lutheran University, Seguin, TX (2001).

Self-recognition in dolphins: what does it mean for primate-centered theories? Emory University (2001).

Self-awareness in humans and other animals: A comparative-developmental framework. Annual Convention of the American Psychological Association, San Francisco, CA (2001)

Cetacean brain evolution. Annual Meeting of the J. B. Johnston Club in Comparative and Evolutionary Neurobiology, New Orleans, LA (2000).

My cerebellum is bigger than yours: relative size of the cerebellum in dolphins and primates. (L Marino, JK Rilling, S Lin, SH Ridgway). Annual Meeting of the Society for Neuroscience, New Orleans, LA. (2000).

A 3-D atlas of the brain of a beluga whale in magnetic resonance images (TL Murphy, L Marino, JA Morris, AL DeWeerd, SH Ridgway, AJ Fobbs, N Humblot, JI Johnson). Annual Meeting of the Society for Neuroscience, New Orleans, LA (2000).

Primate and cetacean brains: alternative ways to build large brains. Annual Meeting of the Animal Behavior Society, Atlanta, GA (2000).

Comets and predators: Predicting the emergence of intelligence from physical and biological conditions. First Astrobiology Science Conference, National Aeronautics and Space Administration Ames Research Center, Mountain View, CA (2000).

Brain evolution in cetaceans as revealed by endocranial morphology. Annual Meeting of the Society for Integrative and Comparative Biology, Atlanta, GA (2000).

Self-recognition in the dolphin: Implications for primate-centered theories of the self.



- Emory University (2000).
- Evolving brains on this and other planets. Invited talk at Astrobiology '99 Education Symposium sponsored by NASA Life Sciences and NASA Astrobiology Institute, Kohala Coast, HI (1999).
- Magnetic resonance imaging of normal and pathological cetacean brains (L Marino, SH Ridgway). Biennial Conference on the Biology of Marine Mammals, Maui, HI (1999).
- Cetacean (dolphin, whale, and porpoise) neuroanatomy as revealed by magnetic resonance imaging (L Marino, JK Rilling). Annual Meeting of the Society for Neuroscience, Miami Beach, Fla (1999).
- Three-dimensional reconstruction of cetacean (dolphin, whale, and porpoise) brains from postmortem magnetic resonance images. (AJ Fobbs, L Marino, JI Johnson, JA Morris). Annual Meeting of the Society for Neuroscience, Miami Beach, Fla (1999).
- Turning the empirical corner on Fi: The probability of complex intelligence. Sixth Bioastronomy Meeting, Kohala Coast, HI (1999).
- Neuroimaging of fossil and living marine mammals. Frontiers in Neuroscience colloquium, Emory University (1998).
- A comparison of brain and behavior in dolphins and primates. Invited talk for United States Naval Marine Mammal Program, San Diego, CA (1998).
- The application of computed tomography to paleoneurology: An example from the study of brain evolution in cetaceans. Annual Meeting of The American Association of Physical Anthropologists, Salt Lake City, Utah (1998) (with B. Frohlich and F. C. Whitmore, Jr.).
- Humanlike pattern of asymmetry in the planum temporale of great apes, but not lesser apes or monkeys. Conference on Human Cognitive Specializations: Developmental and Comparative Perspectives, Lafayette/New Iberia, LA (1998).
- Evidence for advanced sensorimotor abilities in the bubble ring play of bottlenose dolphins. (E Vance, B McCowan, L Marino, L Walke, D Reiss). Annual Meeting of the Animal Behavior Society, Chicago, Ill (1998).
- Geographical Information Systems (GIS) as a tool in population dynamics research. (J Schacke, L Marino). Annual Atlantic Coastal Dolphin Conference, Mote Marine Laboratory, Sarasota, Fla (1998).
- Chimpanzee (*Pan troglodytes*) responses to deception in a social bartering situation. (L Marino, W Hopkins, H Smith, C Hyatt). Meeting of the American Society of Primatologists, San Diego, CA (1997).

A comparison of encephalization quotients among modern odontocetes: implications for cognitive capacities. International Symposium on Information Processing by Aquatic Mammals, Marine World, Vallejo, CA (1997).

Comparative brain and life history evolution in cetaceans and primates. Invited talk at University of Florida, Gainesville, FL (1997).

Brain evolution and life history in toothed whales and dolphins. Emory University (1997).

Brain-behavior relations in primates and cetaceans: Implications for the ubiquity of factors leading to the evolution of complex intelligence. International Conference on Bioastronomy: International Astronomical Union Colloquium No. 161: Astronomical and Biochemical Origins and the Search for Life in the Universe, Capri, Italy (1996).

Are dolphins really that smart? Scientific answers to enduring questions. Hughes Undergraduate Science Initiative Interdisciplinary Colloquium, Emory University (1996).

How correlates of brain size in complex mammals inform exobiology. Invited talk at The Scripps Institution of Oceanography, NASA Specialized Center of Research and Training in Exobiology, University of California, San Diego, CA (1995).

Brain-behavior relationships in primates and cetaceans. Emory University (1995).

The relation between encephalization and diving patterns in odontocetes. Biennial Conference on the Biology of Marine Mammals, Orlando, Fla (1995).

Relative brain size is related to diving duration in Odontocetes. Annual Convention of the American Psychological Society, Wash., DC (1994).

A test of self-recognition in the bottlenose dolphin. (L Marino, D Reiss, GG Gallup Jr). Annual Convention of the American Psychological Society, San Diego, CA (1992).

Testing self-recognition in the bottlenose dolphin. (L Marino, D Reiss, GG Gallup Jr) Biennial Conference on the Biology of Marine Mammals, Chicago, Ill (1991).

Responses to mirror exposure: A comparison of chimpanzees and bottlenose dolphins. (L Marino, D Reiss, GG Gallup Jr). Self-recognition and Self-awareness in Monkeys, Apes, and Humans Conference, Sonoma State University, CA (1991).

## **TEACHING AND COURSE DEVELOPMENT**

*Animal Behavior, Animal Minds and Animal Protection* –taught for Humane Society University Summer 2013, Fall 2013, Summer 2014, Spring 2015

*Evolution: Biological Continuity and Adaptation* – graduate course developed and taught for Humane Society University, Winter 2014

### **Emory University**

*Animal Ethics* (Spring 2012, Fall 2012) co-taught with Dr. Jonathan Crane  
*Interdisciplinary Foundations: The Nature of Evidence and Explanation* (Fall 2011, Fall 2012)  
*Human Relationships with Other Animals* (Fall 2011, Spring 2013, Fall 2013)  
*Introduction to Psychology* (Spring 2011)  
*Animal Minds* (Fall 2010, Spring 2011)  
*Animal Welfare* (NBB elective taught several semesters)  
*Brain Imaging* (taught every year from 1998 - 2010)  
*Self-awareness in Animals* (Spring 2010)  
*Neuroscience for Animal Lovers* - pre-college course (Summer 2009)  
*Animal Intelligence, Cognition and Culture* - Emory QUEST course for adults (Feb-Mar 2009)  
*Animal Intelligence* - Special topics seminar (Spring 2009)  
*Perspectives in Neuroscience and Behavior*  
*Imaging Mammal Brains* (freshman seminar)  
*Behavioral Neuroscience*  
*Mammalian Intelligence*  
*Cognitive Ethology*  
*Comparative Brain Evolution*  
*Dolphin-Human Interaction* (freshman seminar)  
*The Evolution of Primate Intelligence*  
*The Evolution of Social Behavior*  
*Child Development*

### **OTHER PROFESSIONAL AND SERVICE ACTIVITIES**

Creative Affiliate, *The Safina Center* (2016 - present)

Lead Scientist, *The Someone Project* with Farm Sanctuary (2013 - present)

Science Director, *The Nonhuman Rights Project* (2011-2013)

Advisory Board, *Dolphin Biology and Conservation* (present)

Advisory Board, *New Horizons Message Initiative* (present)

Project Personnel, *Evolution of Dolphins and Whales*,  
([http://www.nyit.edu/nycom/research/evolution\\_of\\_dolphins\\_and\\_whales\\_homepage/](http://www.nyit.edu/nycom/research/evolution_of_dolphins_and_whales_homepage/))  
(present)

Consultant and reviewer of proposals on ocean protection/conservation, *Savannah Ocean Exchange* (2011 - 2012)

Oral and written testimony before The House Committee on Natural Resources Subcommittee on Insular Affairs, Oceans and Wildlife regarding educational aspects of public display of marine mammals (2010)

Co-founding signatory, *Declaration of Rights for Cetaceans*, (a project of The Whale and Dolphin Conservation Society) (2010)

Advisory Boards on Human-Nonhuman Relationships, Neuroscience, and Astrobiology, *The Lifeboat Foundation* (present)

Co-Organizer (with Ani Satz, Emory School of Law) of Brown Bag luncheon: Finding a common path: Scholarship-based animal advocacy. Sponsored by The Center for Faculty Development and Excellence. (2009)

Chair, Undergraduate Research Committee, *Neuroscience and Behavioral Biology Program*, Emory University (2009 – 2010)

Co-organizer, session entitled *Getting Smarter About Intelligence. AbSciCon 2008: Astrobiology Science Conference*, Santa Clara, CA (2008)

Member at large, Operations Committee, *International Society for Comparative Psychology* (ended 2008)

Executive Committee, Neuroscience and Behavioral Biology Program, Emory University (2006 – 2008)

Co-organizer of working group on *Socio-Cognitive Complexity*, *Santa Fe Institute* (2006)

Co-chair, Working Group on *Animal Behavior, Cognition, and Communication: The Role of Networks and Information*, *Santa Fe Institute* (2005)

Co-organizer, Symposium on *The Evolution of Neurobiological Specializations in Mammals*, *American Association of Anatomists Meeting at Experimental Biology (FASEB)* (2005)

Program Organizing Committee, *Biennial Meeting of the NASA Astrobiology Institute*, University of Colorado, Boulder, Co. (2005)

Co-organizer, Symposium on *Evolution of Vertebrate Brain and Behavior*, *International Society for Comparative Psychology*, Oviedo, Spain (2004)

Scientific Organizing Committee, *International Society for Comparative Psychology*, Oviedo, Spain (2004)

Scientific Organizing Committee, *Bioastronomy 2004: Habitable Worlds*, Iceland. (2004)

Co-organizer, Session on the *Evolution of Intelligence*. *Astrobiology Science Conference*, NASA Ames Research Center, Moffett Field, CA (2004)

Member, *NASA Astrobiology Institute Lead Team*, SETI Institute (2003 - 2004)

Scientific Organizing Committee, *Bioastronomy 2002: International Astronomical Union Symposium 213*, Hamilton Island, Australia (2002)

Strategic Planning Committee for *the SETI Institute Carl Sagan Center for the Study of Life In The Universe*, Mountain View, CA (2000 – 2004)

Co-organizer, Animal Behavior Society-funded *Symposium on Comparisons of Primates and Cetaceans*, Annual Meeting of the Animal Behavior Society, Atlanta, GA. (2000)

Co-organizer, Symposium on *The Cetacean Nervous System*, Biennial Conference on the *Biology of Marine Mammals*, Maui, HI (1999)

## **MEDIA**

### ***Magazine Interviews***

Subject of National Geographic Ocean Views interview with Carl Safina and Erica Cirino entitled: “Animal Neuroscientist Discusses her Career and the Case for Keeping Cetaceans out of Captivity” (2017)

Subject of *National Geographic Innovator Project* article by Virginia Morell entitled: “Lori Marino: Leader of a Revolution in How we Perceive Animals” (2014)

Subject of *Discover* magazine article by Erik Vance entitled “It’s Complicated: The Lives of Dolphins and Scientists” (2011)

Subject of *Science* magazine article by David Grimm entitled “Are Dolphins Too Smart for Captivity?” (2011)

### ***Television News Interviews***

CNN in Atlanta (numerous appearances to discuss dolphin and whale captivity, behavior and protection, AC360, Jane Velez Mitchell, etc.)

Atlanta Fox Five News (numerous appearances to discuss dolphin and whale captivity, behavior and protection)

## ***Documentary Films, Commercial Motion Pictures, and Television Program Appearances***

*Whale Like Me* (Quiet Heart Film) - release date tbd  
*Unlocking the Cage* (Pennebaker Hegeudus Films) - 2016  
*By All Rights* (Earth Views Production) – 2016  
*Vancouver Aquarium Uncovered* (Evotion Films Inc) - 2015  
BBC TWO Horizon episode on dolphin and whale brains – to be released in 2016  
*Inside the Animal Mind* (BBC) - 2014  
*The Ghosts in Our Machine* (LizMars Productions) 2013  
*Blackfish* (<http://blackfishmovie.com/>) 2013  
*A Fall from Freedom* (Earth Views Productions) 2011  
*Hero Animals: The Dolphin that Saved the Surfer* (Big Wave Productions) 2009  
*Saved by Dolphins* (Big Wave Productions) 2008  
*Humanimal: Animal Minds* (France 2 Productions) 2007  
*What We Still Don't Know* (Darlow Smithson Productions) 2004

## ***Radio Show Interviews***

Our Hen House (talk radio)  
The Recovery Zone (talk radio)  
Knowledge@Wharton (talk radio)  
Animals Today (talk radio) (regular appearances)  
Minnesota Public Radio News  
Animal News Hour (talk radio)  
State of the Oceans with Captain Paul Watson and the Barbi Twins (LA Talk Radio)  
Second Opinion Radio (WRFG 89.3 FM Atlanta) (regular appearances)  
WRFG radio In Tune to Nature (regular appearances)  
Formula One: The Drake Equation (Are We Alone? SETI Institute Science radio)  
The Current (CBC radio and podcast)  
Ocean Mind (CBC radio and podcast)  
Women on the Move (Atlanta AM1160)  
*Intelligence in Cetaceans* (Science in Your Life Emory University Radio show)  
*You Animal* (Are We Alone? SETI Institute Science Radio)

## ***Podcast and Video Interviews***

*The Politics of Species* (for the ARCUS Foundation)  
<https://youtu.be/xOsW7P98SXk>  
*The Ghosts in Our Machine*  
<http://www.theghostsinourmachine.com/featured-animal-ambassador/>  
*Animal Suicide* (HD Worldnet Report)  
BigThink/Edge (online podcast interview)  
*In Opposition to Dolphin Captivity* (Online interview on Animal Planet)  
Sounds of the Sea (Anthro Media)  
*Dolphin Intelligence – Confirming the Mind in the Water* (The Whales online Podcast),

*The Magnificent Minds of Dolphins* (SupremeMaster TV)  
*The Truth About Dolphin Assisted Therapy* (The Dolphin Pod podcast, Dolphin Communication Project)

### ***Other***

How Smart Are Dolphins? TED ED Lesson  
<https://www.youtube.com/watch?v=05PpTqtGhGU>

### **EDITORIAL AND REVIEW ACTIVITIES**

**Editorial Board** (2014 - present) *Animal Sentience*

**Associate Editor** (marine mammals) (2014 - 2017) *International Journal of Comparative Psychology*

**Lead Guest Editor** (2011-2012) Special Issue on Protecting Wild Dolphins and Whales: Current Crises, Strategies, and Future Projections, *Journal of Marine Biology*.

**Reviewer** (2010, 2011) The role of human-animal interaction in child health and development. National Institute of Child Health and Human Development (NICHD) and National Institute of Nursing Research (NINR), *National Institutes of Health*

**Reviewer** (2001) *National Science Foundation*

**Editorial Board** (ended 2012) *Anthrozoos*

**Board of Editors** (ended 2011) *Society and Animals*

**Board of Reviewers** (2004 - 2009) *The Anatomical Record*

**Editorial Board** (2003 - 2008) *International Journal of Comparative Psychology*

**Guest Co-editor** (2004) Special issue on The Evolution of Neurobiological Specializations in Mammals for *The Anatomical Record*

**Guest Co-editor** (2004) Special issue on Evolution of the Vertebrate Brain and Behavior for *International Journal of Comparative Psychology*

### **Ad Hoc Reviewing**

*Acta Astronautica*

*American Journal of Bioethics*

*Anthrozoos*

*Aquatic Mammals*

*Behaviour*

*Behaviour Processes*

*Behavioral and Brain Sciences*

*Biological Reviews*

*Brain, Behavior and Evolution*

*Canadian Journal of Zoology*

*Environmental Communication*

*Evolutionary Anthropology*

*Journal of Anatomy*

*Journal of Applied Animal Welfare Science*

*Journal of Comparative Neurology*  
*Journal of Comparative Psychology*  
*Journal of Neuroscience Methods*  
*Journal of Vertebrate Paleontology*  
*Kennedy Institute of Ethics Journal*  
*Marine Mammal Science*  
*Nature*  
*Proceedings of the National Academy of Sciences*  
*Proceedings of The Royal Society: Biological Science*  
*Society and Animals*

## **PROFESSIONAL REFERENCES**

Available upon request