

# Dolphin cognitive abilities raise ethical questions, says Emory neuroscientist

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Two bottlenose dolphins playing with a bubble ring they just created. Photo by Brenda McCowan.

Many modern dolphin brains are significantly larger than those of humans and second in mass to the human brain when corrected for body size, says an Emory scientist. Some dolphin brains exhibit features correlated with complex intelligence, including a large expanse of neocortical volume that is more convoluted than that of humans, extensive insular and cingulated regions, and highly differentiated cellular regions. This has ethical and policy considerations.

Emory University neuroscientist Lori Marino will speak on the anatomical basis of dolphin [intelligence](#) at the American Association for the Advancement of Science conference (AAAS) in San Diego, on Sunday, Feb. 21.

"Many modern dolphin brains are significantly larger than our own and second in mass to the human [brain](#) when corrected for body size," Marino says.

A leading expert in the neuroanatomy of dolphins and whales, Marino will appear as part of a panel discussing these findings and their ethical and policy implications.

Some dolphin brains exhibit features correlated with complex intelligence, she says, including a large expanse of neocortical volume that is more convoluted than our own, extensive insular and cingulated regions, and highly differentiated cellular regions.

"Dolphins are sophisticated, self-aware, highly intelligent beings with individual personalities, autonomy and an inner life. They are vulnerable to tremendous suffering and [psychological trauma](#)," Marino says.

The growing industry of capturing and confining dolphins to perform in marine parks or to swim with tourists at resorts needs to be reconsidered, she says.

"Our current knowledge of dolphin brain complexity and intelligence suggests that these practices are potentially psychologically harmful to dolphins and present a misinformed picture of their natural intellectual capacities," Marino says.

Marino worked on a 2001 study that showed that [dolphins](#) can recognize themselves in a mirror - a finding that indicates self-awareness similar to

that seen in higher primates and elephants.

Provided by Emory University

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