



Are Sharks Smart?

Diving into the Brain of Sharks and Their Relatives

with Dr. Kara Yopak

UNCW Department of Biology and Marine Biology

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6:00 PM

VIRTUAL SEMINAR

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Although they have a reputation for being pre-programmed, eating machines, sharks possess a battery of highly developed sensory systems, are capable of a wide range of complex behaviors, and have relative brain sizes that are comparable to birds and mammals. This lecture will explore the brain in a wide range of shark species, from the deep-sea dogfish, navigating in deep, dark, cold waters, to the great white shark, an active, agile predator occupying the well-lit open ocean. We will explore how the brain can give us insights into sensory specialization and behavior, and how an understanding of the brain across a wide range of species can actually be informative about our own neuroanatomy. Are sharks smart? Stay tuned...

Dr. Kara Yopak received her B.A. in Biology (with a specialization in marine science) from Boston University in 2002 and completed her PhD at the University of Auckland in New Zealand in 2007 where she first started to explore variation in the brain of sharks. She was fortunate to serve as a Postdoctoral Fellow at the University of California San Diego and later a postdoc and Research Assistant Professor the University of Western Australia. Now, her lab is based at the University of North Carolina Wilmington within the Department of Biology and Marine Biology.



Her research interests lie in the evolution of the brain within and across cartilaginous fishes, particularly the ways in which variation in brain size, structure, and cellular composition underlies complex behaviors and even “intelligence” in sharks and their relatives. Dr. Yopak and her students uses novel techniques, such as magnetic resonance imaging (MRI) and flow cytometry, coupled with traditional methods, to describe variation in the brain across this fascinating group of fishes and how we can use this variation to make predictions about their life history, ecology, and behavior.

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