The 12th Raymond Fong Memorial Lecture

Dakota McCoy, Ph.D.

The University of Chicago
Biological Sciences Division

"The body politic: coral reefs and human pregnancy"

Friday, January 23, 2026
3:30 PM
Virtually via Zoom

https://uiowa.zoom.us/j/92980976132?pwd=XDbOYbMsxl4DKTXox07DcPhoC3Mz0r.1

Meeting ID: 929 8097 6132
Passcode: 723365

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Dakota McCoy, Ph.D.

Dr. Dakota "Cody" McCoy is currently an Assistant Professor in the Department of Ecology and Evolution at the University of Chicago and the Marine Biological Laboratory. Her work combines evolutionary biology with physics-informed computational optics to understand how biological systems are built, and why those designs matter for both evolution and conservation. Through her research, she seeks to uncover unexpected natural designs, inspire new technologies, and contribute to conservation.

Before Chicago, Dr. McCoy was a Stanford Science Fellow. She earned her PhD in Organismic and Evolutionary Biology at Harvard University as an NDSEG and Ashford Fellow under Dr. David Haig, an MPhil in Geography and the Environment at the University of Oxford as a Rhodes Scholar under Dr. Cameron Hepburn, and a BS in Biology from Yale University as a Kennedy T. Friend Scholar.

Dr. McCoy's scholarship has earned major recognition: in 2023 she received the Society for the Study of Evolution's Theodosius Dobzhansky Prize and the American Society of Naturalists' Early Career Investigator Award. Her work appears in journals including *Nature Communications*, *Current Biology*, *eLife*, and *Trends in Ecology & Evolution*, and has been featured in *The New York Times*, *Scientific American*, *National Geographic*, and *The Atlantic*.

A unifying theme of Dr. McCoy's research is how cooperation and conflict coexist in biological systems where partners depend on one another but have partially misaligned evolutionary interests. In coral reefs, she studies the relationship between corals and their photosynthetic symbionts, focusing on how corals manipulate light through photonic structures that can both enhance photosynthesis and increase vulnerability to bleaching under heat or light stress. She applies similar evolutionary logic to human pregnancy where mothers and embryos engage in a high-stakes collaboration shaped by competing interests. By linking coral symbiosis and pregnancy through shared principles of signaling, conflict, and breakdown, her work reveals deep evolutionary patterns that operate across systems and scales.

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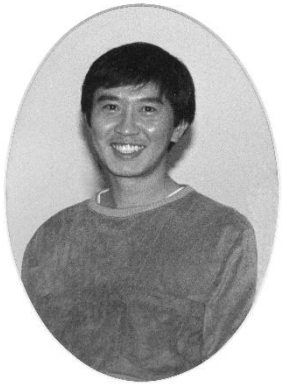

Raymond Shiaw-Ching Fong (1960-1993)

Raymond Fong was a graduate student in the Department of Biological Sciences from 1986 to 1993. At the time of his death in July 1993, he was in the process of writing his thesis, “Reciprocal Interference Between the P_R and P_{RM} Promoters of Bacteriophage Lambda.” He was awarded the Ph.D. posthumously in December 1993. Raymond was a significant positive influence on his colleagues through the quality of his research, his humanity, and his friendship.

The seminar series is funded by a generous gift from his family and contributions from many friends, especially his college classmates. It recognizes the important contributions that all graduate students make to the scholarly life of the department, the university, and the scientific community.

Previous Raymond Fong Speakers

Michael Snyder, Ph.D.
Yale University
Dept. of Molecular, Cellular, & Developmental Biology

W. James Nelson, Ph.D.
Stanford University
Dept. of Molecular & Cellular Physiology

Cynthia Kenyon, Ph.D.
University of California, San Francisco
Dept. of Biochemistry & Molecular Biology

Mark Roth, Ph.D.
Fred Hutchinson Cancer Research Center
Seattle, WA

Robert Weinberg, Ph.D.
Whitehead Institute
Cambridge, MA

Ed Callaway, Ph.D.
Salk Institute for Biological Studies
La Jolla, CA

Michael Levine, Ph.D.
University of California, Berkeley
Department of Molecular & Cell Biology

Richard Harland, Ph.D.
University of California, Berkeley
Department of Molecular & Cell Biology

James Eberwine, Ph.D.
University of Pennsylvania
Perelman School of Medicine

Kara McKinley, Ph.D.
Harvard University
Dept. of Stem Cell and Regenerative Biology

Megan Martik, Ph.D.
University of California, Berkeley
Department of Molecular & Cell Biology