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# Liger, Tigons and Bears (Oh My!): The Genomic Consequences of Inter-species Hybridization

Beth Shapiro

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IMSA Great Minds Program ®  
**Leon M. Lederman Frontiers of STEM Symposium  
on Climate Change**

April 2, 2013

IMSA Main Gym ~ 2:45 p.m.– 3:30 p.m.



**Dr. Beth Shapiro** is an evolutionary biologist who uses genomics to better understand the complex relationship between environment and the evolution of species. A pioneer in the young field called “ancient DNA,” Beth travels extensively in the Arctic collecting bones of long-dead creatures including mammoths, horses, and extinct giant bears. Using DNA extracted from these remains, she hopes to learn how environment drives evolution, and why some species may be more susceptible than others to extinction. Currently an Associate Professor in the Department of Ecology and Evolutionary Biology at the University of California Santa Cruz, she received her undergraduate degree in ecology from the University of Georgia in 1999, and a D.Phil in Zoology from Oxford University in 2003. She has been widely recognized for her research, including honors such as being selected as a MacArthur Fellow, Packard Fellow, Searle Scholar, and a National Geographic Emerging Explorer. Her scientific articles have appeared in such journals as *Science*, *Nature*, *Molecular Biology and Evolution*, and *PLoS Biology*.



**Dr. Fredric Janzen** has been a Professor in the Department of Ecology, Evolution, & Organismal Biology at Iowa State University since 1994. Before then, he received his Ph.D. from the University of Chicago and completed postdoctoral work at the University of California-Davis. In addition to teaching, mentoring, and outreach awards and recognition, he has received the Young Investigator Prize from the American Society of Naturalists. He has also authored more than 135 scientific publications since 1986 and served on multiple editorial boards. He has conducted integrative biological research for over 25 years to connect processes working at the molecular level all the way to those operating globally and at time scales from the imminent future to the pre-dinosaur past. In particular, he has contributed to a broader understanding of ecological, evolutionary, and genetic concepts, typically employing sex determination in reptiles as a model system.



