

ANTHROPOLOGY SEMINAR NOTICE

March 18, 3:30-4:50 pm
EE (Engineering East) Room 106 - Boca

The FAU Primatology Lab and the Center for Molecular Biology and Biotechnology presents



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MHC Diversity of Wild Chimpanzees and Bonobos Reflects Fitness Differences in Immune Defense Against SIVcpz and Malaria

Abstract: In binding and presenting peptide antigens to lymphocytes of the immune system, cell-surface major histocompatibility complex (MHC) molecules function as key players in the defense against infections. Pressure from diverse and rapidly-evolving pathogens drives MHC molecules to also evolve rapidly and polymorphism is maintained within the *MHC* region at levels much greater than is found in the rest of the vertebrate genome. Much of the human polymorphism is identified through typing individuals for organ transplantation, but more difficult is the identification of socioecological correlates of variation in human populations. For this, the great apes, as the closest living relatives of humans, are both useful model and comparative species. Great apes and humans have similar *MHC* immunogenomic organization and molecular function. Wild African great apes and humans are also affected by many of the same diseases. I will discuss how our recent studies of wild chimpanzees (*Pan troglodytes*) and bonobos (*Pan paniscus*) shed new light on how HIV/SIV and malaria, respectively, influence MHC composition.

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