



NIMBioS

National Institute for Mathematical
and Biological Synthesis

“Chromosome evolution under local adaptation and sexual conflict”

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** NIMBioS Postdoctoral Fellows Invited Distinguished Visitor*

Wednesday, January 12, 2011

3:30 p.m. , Room 403, Blount Hall, 1534 White Ave.**

Abstract: Genomes of many organisms are very labile and show rapid evolutionary changes in chromosome structure and function. Although these changes have been studied for nearly a century, we know little about the evolutionary forces involved. The talk will explore this topic from two perspectives. First, I show how sexual conflict can drive the origin of new sex chromosomes and cause changes between XY and ZW sex determination systems. Second, I discuss how local adaptation can drive the evolution of chromosomal rearrangements. This idea is explored with a population genetic model and with an analysis of data from populations of a malaria mosquito. The results suggest that polymorphic chromosome rearrangements may be involved in very strong selection and nonrandom mating and play important roles in speciation.

****Join us for refreshments in the NIMBioS Lobby on the 4th floor at 3 p.m.***