1023-K5-1690 **Vera Cherepinsky*** (`vcherepinsky@mail.fairfield.edu`), MACS Department, Fairfield University, 1073 North Benson Road, Fairfield, CT 06824. *Mathematics in Genomic Analysis — A Module for Biology Students.*

This talk describes a module on mathematics in computational biology, featuring a forensic exercise, presented as a guest lecture in an upper-level biology course at Fairfield University.

The module started with an overview, which included a discussion of various places mathematics comes up in genomic analysis, such as in PCR, DNA fingerprinting, restriction mapping, and microarray analysis.

The students then got really involved hands-on in a forensic "murder mystery" exercise (found on a SUNY Buffalo Biology department website), where they had to run simulated "gels" on DNA samples from suspects and the crime scene (sequences provided) and make conclusions based on their results as to the probable identity of the murderer. On the following day, I returned to class to go over the results students obtained and discuss the significance of their findings in the context of conditional probability.

Modules similar to the one described here expose biology students to mathematical concepts, including topics in combinatorics, vector analysis, probability, and statistics, that they may not otherwise encounter in their coursework. Furthermore, such modules may help overcome the language barrier presently prevalent between mathematicians and biologists. (Received September 26, 2006)