

STATISTICS-BIOSTATISTICS



SEMINAR

TITLE: ANALYSIS OF TIME COURSE mRNA
TRANSLATION PROFILES IN DROSOPHILA

SPEAKER: Terry Speed
University of California, Berkeley

TIME: 4:00 P.M.

DATE: Friday, March 10, 2006 **(NOTE DIFFERENT DAY)**

ROOM: 140 BARDEEN

ABSTRACT:

I'll report on a study of the translational status of *Drosophila melanogaster* genes at 3 times in the life of the embryo: 1-2 hours, 4-6 hours, and 8-10 hours, covering the transition from maternally to zygotically transcribed genes. At each time mRNA was separated by velocity sedimentation on a sucrose gradient, and the 12 fractions (with 1-5 pooled) were analysed on Affymetrix *Drosophila* chips, leading to profiles of ribosome association with mRNAs for the genes represented on the chip. The time-course nature of this experiment permits us to identify genes whose translation profile changes over the period under study. This research posed a number of methodological challenges, and not being a biologist, they will be my focus. Three worth mentioning are a) normalizing chips when the total amount of mRNA varies; b) getting an estimate of the average number of ribosomes attached to any transcript; and identifying genes whose translational profile changes over time. This research was carried out with Soyeon Ahn (Statistics), Xiaoli Qin and Gerry Rubin (Molecular and Cell Biology), all of UC Berkeley.

Coffee and Cookies at 3:30 p.m. in Room 1210 MSC