

## Mobile DNA Symposium 2010 Abstract & Schedule

On Friday Feb 19, 2010 the IGB together with the Department of Biological Chemistry and the Developmental Biology Center will sponsor a *Mobile DNA Symposium*. Mobile DNAs include sequences that move to many potential sites in the genome via mechanisms involving either DNA or RNA intermediates and also bits of host DNA that move in relatively defined ways but allow controlled variation in gene expression. Mobile DNAs are important because they are used by pathogens to evade host immune defenses, they can disrupt normal host genome function, and in some cases they appear to have been co-opted by the host genome to serve functions as structural elements in the genome or to encode important host proteins. Mobile DNAs constitute a significant fraction of many eukaryotic genomes, for example almost half of the human genome.

The symposium will include discussion of DNAs that mobilize to cause surface antigenic variation in bacteria, retroelements that cause mutations in human germline DNA, cut and paste DNA elements used in genetic engineering and elements in yeast and plants that by accumulating in specific regions may drive chromosomal function itself and even ribozymes that occur in viruses as well as host genomes. The *Mobile DNA Symposium* will feature two outside speakers, Dr. John Moran, U. Michigan and Dr. Peter Atkinson, U. Riverside. Dr. Moran studies human LINE element mobility in embryonic cells and Dr. Atkinson studies applications of hAT DNA cut and paste elements in genetic engineering. However, a major goal of the Symposium is to bring together for the first time, faculty from UCI who study transposable elements in bacteria, yeast, mosquitoes, plants, and the test tube! *We hope to see you there.*

Calit2 Auditorium

*Welcome 11:00 Suzanne Sandmeyer, University of California, Irvine*

11:10-11:40 Brandon Gaut, University of California, Irvine  
*Epigenetic modification of transposable elements in Arabidopsis thaliana: an evolutionary trade-off*

11:40-12:10 Peter Atkinson, UC Riverside  
*The distribution and regulation of hAT transposons*

*12:10-1:00 break*

1:00-2:00 John Moran, University of Michigan, Ann Arbor  
*Studies of a human retrotransposon*

2:00-2:30 Tony James, University of California, Irvine  
*Prospects for transposon-based gene-drive systems in mosquitoes*

2:30-3:00 Alan Barbour, University of California, Irvine  
*Evolution of variable antigen repertoire of the pathogen Borrelia hermsii*

*3:00-3:30 break*

3:30:4:00 Andrej Luptak, University of California, Irvine

*Self-cleaving ribozymes in transposable elements*

4:00-4:30 Kevin Thornton, University of California, Irvine  
*Transposable elements and genomic variation in Drosophila*

4:30-5:00 Suzanne Sandmeyer, University of California, Irvine  
*Connecting with yourself: a yeast position-specific retrotransposon*

**RSVP to Katarina Fletcher, [fletcher@uci.edu](mailto:fletcher@uci.edu).**