BIRC SEMINAR

Hosted by Thomas Bataillon

Friday 20 September 2024 @ 14:15-15:00
Meeting Room 1872-347

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Polyploids: Phylogenomics, Genomic Composition, Meiotic Stability

Whole genome duplication is the largest genetic mutation known to occur, giving rise to polyploids, organisms with three or more complete sets of chromosomes. Polyploidy is common among eukaryotic lineages and is believed to have played a major role in the evolution and diversification of vertebrates and flowering plants. While the study of polyploidy has been going on for over 100 years, the dawn of the genomics era has opened new venues for evolutionary biologists, bioinformaticians, and cancer specialists to address long standing problems in polyploidy research. How prevalent is polyploidy in nature? What causes cells to undergo polyploidization? How do polyploids affect the gene flow landscape within a genus? Why are so many neopolyploid species meiotically unstable and how do they regain meiotic stability? How can we identify the diploid parental species of highly hybridized polyploids? In this talk, I will review some of the work being done in our lab in this area, giving particular emphasis to polyploid phylogenomics and meiotic stability.