

Abstract Submitted  
for the MAR12 Meeting of  
The American Physical Society

**Genotyping and phenotyping of an epigenetic modifier *Unstable factor for orange1 (Ufo1)* in maize** KARISA BOWERSOX, Lock Haven University of Pennsylvania, SURINDER CHOPRA, Penn State University — Pericarp color 1 is a model system for the study of epigenetic gene regulation. It has more than 100 alleles that contribute to the color of the pericarp and cob glume of maize. Unstable factor for orange 1 (Ufo1) is a spontaneous dominant mutation that leads to a gain in pigmentation due to a decrease in methylation in p1 genes. This decrease in methylation of cytosine in the DNA leads to changes in chromatin structure. Finding the mechanism for this spontaneous mutation can lead to way of preventing the mutation increasing production colorless maize for food production. Through genotyping and phenotyping fine gene mapping, gene expression and whole genome profiling can be accomplished for plants with the Ufo1 mutation present.

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Date submitted: 19 Nov 2011

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