

# Limited contribution of transposable elements to regulatory adaptation in maize inbreds and hybrids

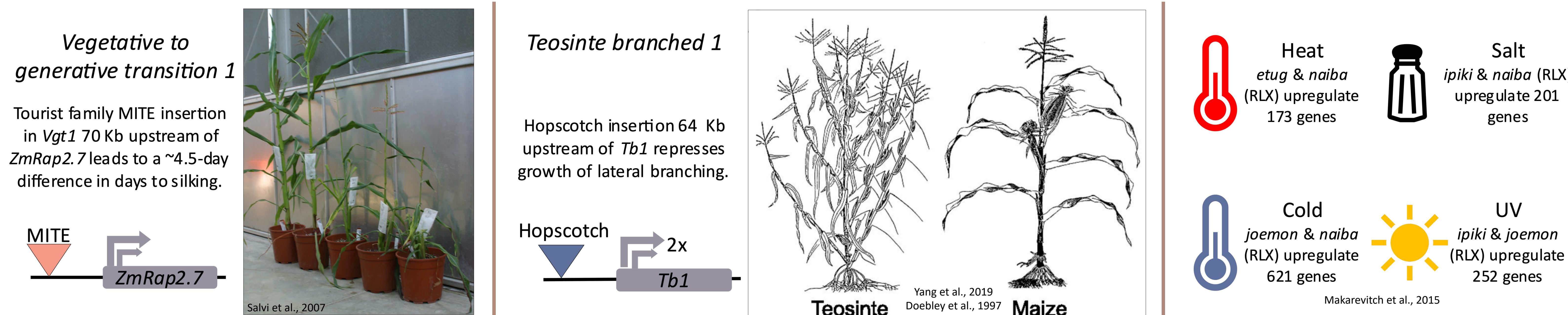


Merritt Khaipho-Burch<sup>1</sup>; Michelle Stitzer<sup>2</sup>; Terry Casstevens<sup>2</sup>, Zack Miller<sup>2</sup>, Cinta Romay<sup>2</sup>, Edward Buckler<sup>1,2,3</sup>

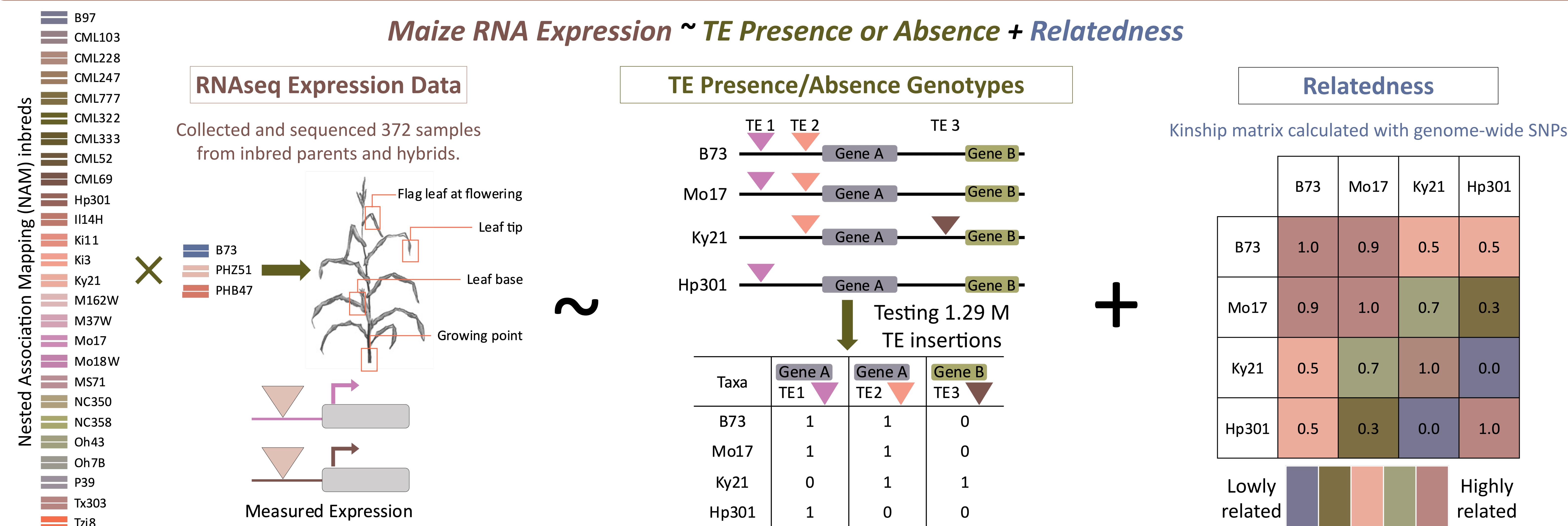
1) Section of Plant Breeding and Genetics, Cornell University, Ithaca, NY; 2) Institute for Genomic Diversity, Cornell University, Ithaca, NY; 3) USDA-ARS; Ithaca, NY

@MerKhaiBurch  
mbb262@cornell.edu

Transposable element insertions in maize can drastically alter plant phenotypes and gene expression under stress.

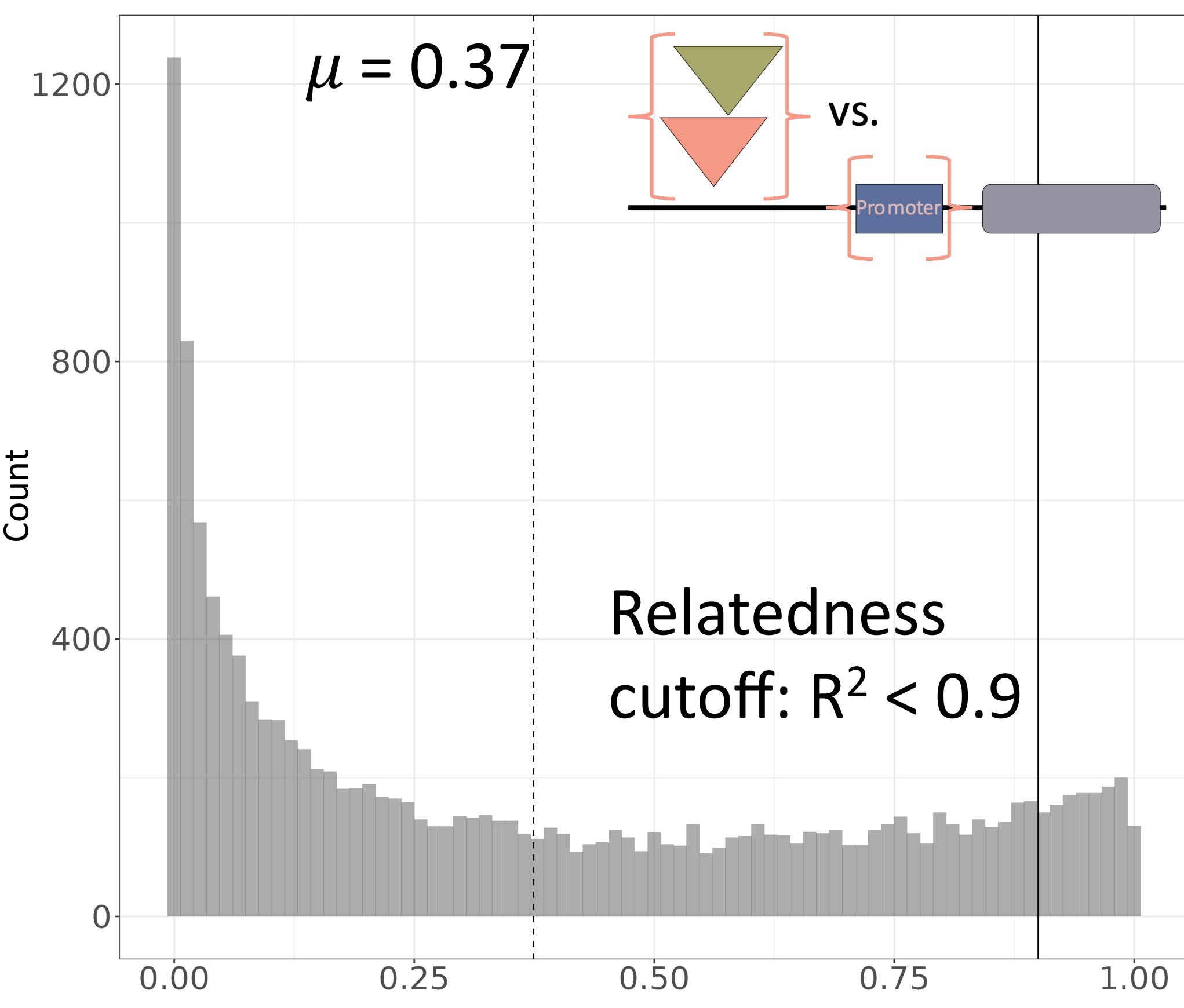


Which TEs impact gene expression during normal plant development in maize inbreds and hybrids?



TE and promoter regulatory effects can be separated in a subset of genes, of which few TEs impact gene expression.

For 66% of genes (24,332) TE effects within 5Kb are statistically indistinguishable from background SNP and promoter effects due to LD.



For the 34% of genes (12,668) whose TE effects are not confounded by LD, 5,418 genes and 11,811 associated TEs show some effect on measured expression.

