

Experimental model

Phenotypic novelties founded

Hypothesis about the origin of phenotypic novelties

Solanum ruiz-lealii
a diploid species of
hybrid origin
($2n=2x=24$)



Changes in floral symmetry



Homeotic transformation



Dissected petals, organ
fusion, reduced and extra
number of organ



Normal and abnormal
flowers are present
simultaneously in
the same plant

Stable mutations in genes that participate in flower development

Genomic instabilities produced
by interspecific hybridization

Nucleus-cytoplasmic incompatibility
(Cytoplasmic Male Sterility-CMS)

Epigenetic changes

Unlikely

Do not explain the presence
of different flower phenotypes
in the same plant (unless variable
expression and/or incomplete
penetrance are assumed)

Likely

Phenotypic plasticity induced
by epigenetic molecular phenomena
capable of altering the temporal,
spatial, and abundance patterns
of gene expression