

2. Heterochromatin breakage with maleic hydrazide.

The hypothesis that maleic hydrazide causes selective breakage in heterochromatin was tested on strains of maize containing varying numbers of knobs. Germinated seeds of the strains Knobless Flint (0 knobs), IDT (4 knobs), HY (6 knobs) and Zapalote Chico (12 knobs) were treated with 10^{-3} molar and 10^{-4} molar maleic hydrazide for two hours and fixed 22 hours after the termination of treatment. Chromosome breakage was measured in terms of anaphases with bridges per anaphase. A strong positive correlation was found between knob number and bridges with an approximately five fold difference between the Knobless Flint and Zapalote Chico.

Anaphases with bridges/anaphase- 10^{-3} M. maleic hydrazide

Knobless Flint	IDT	HY	Zapalote Chico
8.3%	12.1%	20.5%	42.9%

G. E. Graf