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Inheritance of the Foliar Variegation Pattern from *Aglaonema nitidum* (Jack) Kunth 'Ernesto's Favorite'

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The attractive foliar variegation patterns of *Aglaonema* contribute to their value as ornamental foliage plants. Initially, the presence of foliar variegation in *Aglaonema* was reported to be dominant to nonvariegation and under the control of nuclear genes (Henny, 1983a). A subsequent study identified the *V*-gene and its series of five dominant alleles, each determining a distinct variegation pattern (Henny, 1986). Alleles were codominant, which allowed for combinations of any two patterns in the same plant. Nonvariegated plants were of the *vv* genotype.

Aglaonema nitidum 'Ernesto's Favorite' is a recently discovered cultivar native to Thailand (Brown, 1984). This cultivar's variegation is a silvery-gray band in the middle of the leaf that is about one-half the width of the leaf and is centered around the midrib (Fig. 1). This report details the inheritance of this variegation pattern.

Stock plants and hybrids were grown at 80% light exclusion in shaded greenhouses under natural photoperiod in the range 18-32C. Parental plants used in test crosses were induced to flower using a single foliar spray of 250 ppm gibberellic acid (Henny, 1983b). Fresh pollen was used in all crosses and inflorescences were wrapped with wet paper toweling and enclosed in plastic bags for 1 day following pollination to promote pollen germination and seed set (Henny, 1985). Seeds were cleaned before planting to speed germination (Henny and Fooshee, 1985). Hybrids were evaluated for variegation pattern when they were 11 year old and had produced eight to 10 leaves.

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Pollinations included selfing of 'Ernesto's Favorite,' and crossing it with 'Curtisii' (genotype V^cv). We also used our own hybrids, #1501 and #1502, both with compound patterns and genotype $V^{mn}V^{tt}$ (Henny, 1986), as females in crosses with 'Ernesto's Favorite'.

Self-pollination of 'Ernesto's Favorite' produced 54 seedlings, of which 42 expressed the parental variegation pattern and 12 were nonvariegated (Table 1). Crossing 'Ernesto's Favorite' with hybrids 1501 and 1502 resulted in four classes of variegated offspring that segregated in a 1:1:1:1 ratio. This ratio included each of the hybrid's compound patterns expressed individually and in combination with the 'Ernesto's Favorite' pattern (Table 1).

These results indicate that the 'Ernesto's Favorite' pattern was controlled by a single dominant allele. The allele has been labeled V^{ef} and is the sixth allele of the V-gene to be identified. The 'Ernesto's Favorite' stock plants used in this study were heterozygous for the V^{ef} allele. Since the parental plants were collected in the wild from naturally crossing populations, it is likely that both heterozygous and homozygous individuals would be obtained.

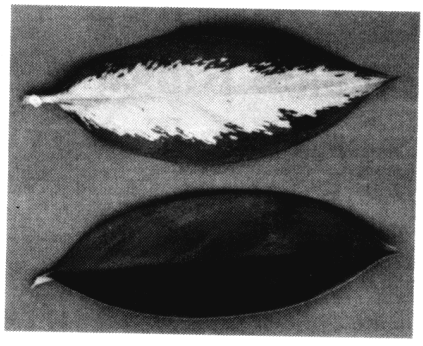

Fig. 1. Foliar variegation pattern of *Aglaonema nitidum* 'Ernesto's Favorite' **(top)** and nonvariegated leaf from seedling obtained by self-pollination **(bottom).**

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Table 1. Segregation data for foliar variegation from crosses involving *Aglaonema nitidum* 'Ernesto's Favorite'.

Cross: Female (P_1)	Cross: Male (P_2)	Parental genotypes: P_1	Parental genotypes: P_2	Total no. seedlings	Hybrid genotypes/ frequency	Ratio tested	χ^2	P
Ernesto's Favorite	(selfed)	$V^{ef}v$	---	54	V^{ef}_/42; vv/12	3:1	0.22	0.75–0.50
Ernesto's Favorite	x Curtisii	$V^{ef}v$	V^cv	14	$V^{ef}v$/5; $V^{ef}V^c$/2; V^cv/4; vv/3	1:1:1:1	1.43	0.75–0.50
1501[z]	x Ernesto's Favorite	$V^{mn}V$	$V^{ef}v$	28	$V^{ef}V^{mn}$/9; $V^{ef}V^{tt}$/6; $V^{mn}v$/7; $V^{tt}v$/6	1:1:1:1	0.86	0.90–0.75
1502[z]	x Ernesto's Favorite	$V^{mn}V^{tt}$	$V^{ef}v$	79	$V^{ef}V^{mn}$/23; $V^{ef}V^{tt}$/23; $V^{mn}v$/16; $V^{tt}v$/17	1:1:1:1	2.16	0.75–0.50

[z]Hybrids developed by the author.