

A MATERNALLY INHERITED GENE FOR CYANIDE RESISTANT RESPIRATION IN PEA

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The cultivar 'Alaska' has the ability to express the cyanide-resistant (alternative) respiration pathway while cultivar 'Progress No. 9' lacks this ability (1). Reciprocal crosses between the two cultivars demonstrated maternal inheritance of the trait which may be determined by a difference in the mitochondrial genome (2) but chloroplast DNA cannot be ruled out. We propose the gene symbol arp (alternative respiration pathway) which is written wholly in lower case letters in accord with the usual practice for symbolizing cytoplasmically inherited traits and designate Alaska (arp⁻) and Progress No. 9 (arp⁻) as the respective type lines.

The finding that the alternative respiration pathway follows a maternal pattern of inheritance in these pea cultivars is the first information of this kind for any vascular plant species.

1. Musgrave, M. E. and J. N. Siedow. 1985. *Physiologia Plant.* 64:161-166.
2. Musgrave, M. E., I. C. Murfet and J. N. Siedow. 1986. *Plant, Cell Env.* 9:153-156.