

T H E P L A N T C E L L

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ON THE COVER



Kiwifruit (*Actinidia* spp) is a dioecious plant, where male and female flowers set on distinct individuals, with an XY (heterogametic male) sex-determining system. However, the genetic sex determinants have remained unidentified until now. Akagi et al. (pages 780–795) identified a candidate gene encoding a type-C cytokinin response regulator, named *Shy Girl*, located on the Y chromosome. It is specifically expressed in female organs and suppresses their development, resulting in male flowers. An *Actinidia*-specific duplication event gave rise to two copies of this kind of gene, which then evolved independently and one became *Shy Girl* by developing a new expression pattern to act as a sex determinant. This work provides an example of how a lineage-specific duplication event can provide a template for the evolution of new functions that affect key biological processes, such as sex determination. The cover image shows female kiwifruit flowers.

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CORRECTION^[OPEN]

Cañas, R.A., et al. (2017). Exploiting the genetic diversity of maize using a combined metabolomic, enzyme activity profiling, and metabolic modeling approach to link leaf physiology to kernel yield. *Plant Cell* 29: 919–943. 946

^[OPEN] Articles can be viewed without a subscription.

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