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Insect gall development on *Eucalyptus*.

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The ability to induce the growth of novel plant organs (galls) has evolved repeatedly among arthropods, with about 20,000 species of insects able to induce galls today. Gall-inducing insects tend to be more host-specific than their non-galling relatives, which may be due to the intimate association between insect and its host plant: the insect needs to overcome plant defences and to influence plant development pathways. However, to date, how insects influence plant development is not understood. Here, we investigate gene expression in leaf galls induced on *Eucalyptus* by males of *Apiomorpha*, Australia's most species-rich genus of gall-inducing insect. Compared with ungalled tissue, we find repression of photosynthesis and plant defences in gall tissue but an increase in genes associated with floral development and nutrient transport. We also find differences in gene expression of plant defence-related genes and nutrient transport genes between the apex of the gall and the base where the insect feeds. Our next step will be to investigate how *Apiomorpha* initiates galls.

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