RETRACTION

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Mediation of pathogen resistance by exudation of antimicrobials from roots

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The authors wish to retract this Letter after a key reference by Walker *et al.*¹ (ref. 9 in this Letter) was retracted from the scientific literature. The withdrawn paper¹ reported ten compounds exuded by *Arabidopsis thaliana* roots, which were used in this Letter to monitor the defence response in *Arabidopsis* seedlings. In this Letter, these ten compounds were shown to have antimicrobial activity against specific pathovars of the bacterial phytopathogen *Pseudomonas syringae* but not against the pathovar *Pseudomonas syringae* pv. *tomato* strain DC3000 that is a highly virulent pathogen of *Arabidopsis*. Moreover, wild-type *P. syringae* DC3000 suppressed the exudation of the ten compounds whereas a DC3000 *hrcC* mutant did not, leading to the conclusion that DC3000 type III effectors block the exudation or synthesis of the ten compounds. As a consequence of the retraction of the Walker *et al.*¹ paper, the validity of the use of the ten compounds as markers of the *Arabidopsis* defence response is now in doubt. Thus, the data in Fig. 3, Table 1, Supplementary Figs 5–8 and Supplementary Table 1 cannot be used to support the conclusions that *P. syringae* DC3000 is generally resistant to antimicrobial compounds exuded by *Arabidopsis* or that *P. syringae* DC3000 type III effectors block the exudation or synthesis of antimicrobial compounds.

1. Walker, T. S., Bais, H. P., Halligan, K. M., Stermitz, F. R. & Vivanco, J. M. Metabolic profiling of root exudates of *Arabidopsis thaliana*. *J. Agric. Food Chem.* **51**, 2548–2554 (2003).