Chemical screening uncovers an antagonist for the strigolactone receptor HTL

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Striga spp. (Witchweed) is an obligate parasitic plant that attaches to host roots to deplete them of nutrients. In Sub-Saharan Africa, the most destructive *Striga* species, *S. hermonthica*, parasitizes major food crops affecting two-thirds of the arable land and over 100 million people. One potential weakness in the *Striga* infection process is the way it senses the presence of a host crop. *Striga* only germinates in the presence of the plant hormone, strigolactone, which exudes from a host root. Hence small molecules that perturb strigolactone signalling may be useful tools to disrupt the *Striga* lifecycle. Here we developed a chemical screen to suppress strigolactone signalling in the model plant Arabidopsis. One compound, Soporidine, specifically inhibits a *S. hermonthica* strigolactone receptor and consistent with this, Soporidine inhibits germination of this parasite. This suggests strigolactone-based screens using Arabidopsis may be useful in identifying lead compounds to combat *Striga* infestations.