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The mechanisms of resin use in wood ants

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An advantage of social life is the emergence of collective defences to combat pathogens. The wood ant *Formica paralugubris* disinfects the nest by collecting conifer resin, which confers protection against fungal and bacterial pathogens. So far, we know little about the mechanisms of resin use. We recently investigated i) whether workers processed the resin to increase its antibiotic effect and ii) the factors eliciting resin collection and placement within nests. We found that resin that had been in contact with workers had significantly increased inhibitory activity against the fungal pathogen *Metarhizium brunneum*, as compared to control resin untouched by workers. Additionally, we showed that workers bring more resin to their nest when brood is present, and preferentially place the resin near the brood. These findings indicate that wood ants process the resin and use it strategically for brood protection.