
Allelopathy: studies on the ecology of plant chemistry

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Abstract

Plants release allelochemicals or bioactive metabolites into the environment that may suppress or exclude other plant species or populations. In the majority of studies, a binary approach is taken to establish the importance of allelopathy in community assembly. Ecosystem processes, however, mediate the production, release, and activities of allelochemicals. Quantitative approaches are thus required to study the relative importance of allelopathy in comparison to other environmental drivers of plant exclusion or community assembly. In this presentation I will discuss the importance of ecological processes and evolution in selecting for allelopathic traits and determination of the relevance of allelopathy in community assembly. The role of plant metabolites in conferring competitive and invasive abilities to non-native invasive species will also be presented using examples from our research performed on non-native species such as *Prosopis juliflora*, *Ageratina adenophora*, *Eucalyptus globulus* and *Chromolaena odorata*.

Keywords: Invasion, non, native species, soil, microbes

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