Evaluation of Allelopathic Activity by bioassay and proposal of “Allelopathy Hypothesis”

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The allelopathic activities of all kind of plants (crop, weeds, trees) were evaluated using sandwich method, plant box method, dish-pack method, and rhizosphere soil method. From the results of these assays, we would like to propose a hypothesis, named “Allelopathy Hypothesis”. Hypothesis 1: Endangered or unique plants that have little relatives (little genus, little species) tend to have strong allelopathic activity. Hypothesis 2: Fossil plants whose relatives have already been vanished tend to have strong allelopathic activity or contain toxic chemicals. Hypothesis 3: Medicinal plants or herbs are strongly allelopathic. As a result, allelopathy might be contribution for the richness of biodiversity by this allelopathy hypothesis. We will show the examples of these plants.