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Evaluation of leaf extracts of four plant species against rice blast pathogen(*Magnaporthe oryzae*)

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Rice (*Oryza sativa*) is one of the most popular food crops in Nigeria. Its successful production has been drastically affected by blast disease caused by *Magnaporthe oryzae*. *In vitro* control of the pathogen by four medicinal plants (*Carica papaya*, *Azadirachta indica*, *Calotropis procera* and *Anacardium occidentale*) was assessed in this study. The extracts of the plants were prepared using aqueous and methanol and agar well diffusion method was used to assess the toxicity of each extract. The pathogen was isolated from rice infected with blast disease. The results revealed the presence of one or more phytochemicals in each of the plant extracts. Among these were alkaloids, tannins, flavonoids, saponin, anthocyanin and phenol. All the extracts inhibited mycelia growth of *M. oryzae*. The potency of all the extracts increased with increasing concentration in the order; 50mg/ml<100mg/ml/150mg/ml. The inhibitions by methanol extracts were higher and significantly different ($P>0.05$) from aqueous extracts. At the highest concentration tested (150mg/ml), *A. occidentale* and *C. procera* gave the highest inhibitions (99.0mm and 98.6mm respectively) which were not significantly different ($P<0.05$) but different from *C. papaya* and *A. indica* (89.1mm and 90.4mm respectively). However, in all, *A. occidentale* aqueous and methanol extracts gave the highest percentage growth inhibition of the pathogen at all levels of concentrations tested while *C. papaya* aqueous and methanol extracts though effective were the least. Therefore, field trials of these four medicinal plants on the control of rice blast disease are recommended since they are easy to obtain and the extracts could easily be made via a simple process of maceration or infusion, they could be the cheaper substitute for conventional drugs in controlling rice blast disease.

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