

June 20-21, 2018
Rome, Italy

J Plant Physiol Pathol 2018, Volume 6
DOI: 10.4172/2329-955X-C1-015

ANTIMICROBIAL EFFECT OF CHINESE MEDICINAL PLANT CRUDE EXTRACTS AGAINST *RHIZOCTONIA SOLANI* AND *PYTHIUM APHANIDERMATUM*

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Medicinal plants have been found to natural anti-fungal and anti-oomycete compounds to defend plants against pathogenic organisms. Here we evaluated *in vitro* anti-fungal and anti-oomycete effect of the crude methanol extract from 103 Chinese medicinal plant species against *Rhizoctonia solani* and *Pythium aphanidermatum*. Twelve crude methanolic extracts showed strong anti-fungal and anti-oomycete activities against both pathogens using the paper disc diffusion method. The highest anti-fungal and anti-oomycete plant extract *Glycyrrhiza uralensis* that showed significant inhibitory effect against both pathogens and preferred for more assessment. Most effective

solvent of methanolic extract from *G. uralensis* was separated through silica gel plates and each phase was evaluated for anti-fungal and anti-oomycete activity. The ethyl acetate phase of *G. uralensis* completely suppressed the radial growth of *R. solani* and *P. aphanidermatum* *in vitro* and *in vivo*. Taken together, our results indicate that ethyl acetate phase is an important antimicrobial constituent of *G. uralensis*, and that its anti-fungal and anti-oomycete effect is attributed to the control strategies of these pathogens.

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