Effects of Some Aromatic Plant Extracts on *Curvularia lunata* Wakker Isolated from *Brassica oleracea* L.

A Dissertation submitted for the partial fulfillment of Masters Degree in Botany, Institute of Science and Technology, Tribhuwan University, Kathmandu, Nepal

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RECOMMENDATION

This is to certify that Mrs. Manju Regmi has carried out the dissertation work entitled **"Effects of Some Aromatic Plant Extracts on *Curvularia lunata* Wakker Isolated from *Brassica oleracea* L."** under my supervision. The work is primarily based on the data collected by the student herself, and results have not been submitted for any other academic degrees. I therefore, recommend this dissertation to be accepted for the partial fulfillment of Masters Degrees in Botany from Tribhuvan University, Nepal.

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LETTER OF APPROVAL

The dissertation paper submitted by Mrs. Manju Regmi entitled **"Effects of Some Aromatic Plant Extracts on *Curvularia lunata* Wakker Isolated from *Brassica oleracea* L."** has been accepted for the partial fulfillment of the requirements for Masters of Science in Botany.

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Mrs. Manju Regmi

ABSTRACT

The extracts of five medicinal plants *viz*. *Azadirachta indica, Ocimum sanctum, Allium sativum, Tagetus patula and Lantana camara,* were assessed in-vitro for antifungal activity against *Curvularia lunata* Wakker. Pathogenecity test was then confirmed. The assessment of fungitoxicity was carried out by poisoned food technique using six different concentrations (0, 20, 40, 60, 80, and 100%) of above mentioned plant's extract against the test fungus in terms of percentage of mycelial growth inhibition. Among the test plants, the extracts of *Ocimum sanctum*, *Azadirachta indica* and *Lantana camara* were found to be effective in the control of the mycelial growth of *Curvularia lunata.*

The inhibitory effect of these concentrations of used plant extracts were found significant at 1% and 5% level of significance with a high degree of negative correlations against mean colony diameter of the test fungus. The highest correlation coefficient value for the case was found to be - 0.98 in case of *Ocimum sanctum* and that of the lowest value for the same was found to be -0.847 in case of *Tagetus patula.*

After the experiment, the order of effectiveness of used plant extracts was reported in the form of: Os > > Ai ≥ Lc >> As > Tp.

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ABBREVATIONS

cm	-Centimeter
mm	-Millimeter
gm	-Gram
GC	-Gas chromatography
TLC	-Thin layer chromatography
NARC	-National Agricultural Research Council
PDA	-Potato Dextrose Agar
Viz.	-Visually
MIC	- Minimum inhibitory concentration
E.oils	- Essential oils
C*f*	- Correlation factor
Mcd	- Mean colony diameter
Lc	- *Lantana camara*
Ai	-*Azadirchta indica*
As	- *Allium sativum*
Os	- *Ocimum sanctum*
Tp	- *Tagetus patula*
Pp	-Page Number
T.U.	-Tribhuwan University.
MS	- Mass spectroscopy.
Ha	- Hectare
Mt.	- Metric Ton
Kg	- Kilogram
pH	- Potential of Hydrogen (Acidity)