

ANTI-BACTERIAL ACTIVITY OF FUNGI ISOLATED
FROM SEEDS OF ORYZA SATIVA

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At present, a considerable number of antibiotics are in clinical use. Yet, there exists a great demand for newer antibiotics that are effective against Gram negative bacteria, fungi and protozoans. Although, the antibiotic era has entered its second quarter century, there is promise that the best is yet to be discovered.

In keeping with the need, a programme was begun to isolate and characterize antibiotics from fungi in Sri Lanka. No such systematic work has yet been carried out on local fungi.

Fungi isolated from seeds of Oryza sativa var BG 94-1, using the agar plate method were screened for anti-bacterial activity. The isolated fungi were grown in a potato-dextrose liquid medium at 30⁺2°C. The filterates obtained from 10 day old liquid cultures were tested against Escherichia coli, Staphylococcus aureus and Streptococcus viridans on blood agar base using the filter paper disc method. The culture filtrates of four fungi, Bipolaris oryzae, Curvularia affinis, Alternaria padwichii and Aspergillus wentii showed anti-bacterial activity.

The filterates were extracted with dichloro methane followed by ethylacetate, and the latter showed the anti-bacterial activity. The ethylacetate extracts when subjected to chromatographic separations, resulted in the isolation of the active principles.

The acetone extracts of the mycelia of the four fungi were also examined for anti-bacterial activity against the same organisms and only the mycelial extract of A.wentii showed activity.

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