

FINAL REPORT

SUMMARY

A large number of antibiotics in use today were initially obtained from fungal sources. The rich Sri-Lankan fungal flora, however, remains untapped. It is very likely that some of these fungi may harbour novel and highly effective antibiotics. Therefore the study was begun to isolate and characterize such compounds from local fungi. The fungi were grown on potato liquid medium. The filtrate obtained were tested against the bacteria, Escherichia coli, Staphylococcus aureus and Streptococcus viridae, on a blood agar base. The separation of the active compounds were carried out by columns, followed by repeated preparative chromatography.

Thirteen fungi were isolated from the seeds of Oryza sativa var. BG 94-1 and the filtrates of four of them namely, *Curvularia affinis, Bipolaris oryzae, Alternaria padwickii, Aspergillus wentii and Stachybotrys bisbyi showed activity. The chemical investigations carried out on the ethyl acetate extracts of the four fungi led to the isolation of several active compounds. The compound isolated from the active fraction of Stachybotrys bisbyi, was a novel rearranged carbohydrate, bisbynin. In the absence of anti-tumour screening facilities we have been selecting plants for our chemical investigations on the basis of chaemotaxonomy. Micromelin, a coumarin, which displays in vivo activity in P-388 lymphocytic leukemia test system, which has been isolated from the bark of Micromelum zeylanicum, was isolated from the fruit of the same plant. Our studies indicate that its structure should be revised.