

주제발표 초록

1. Antifungal Metabolites from Myxobacteria. Jong-Woong Ahn. Korea Research Institute of Chemical Technology, P. O. Box 107, Yusong, Taejon 305-600, Korea

Myxobacteria are very remarkable microorganisms which are usually not obtained by standard isolation techniques. These microorganisms form characteristic fruiting bodies which are not produced by other bacteria and they decompose microbial cells and cellulose for their nutrients. Although not much is known about the basic physiology and biochemistry of most of these bacteria, myxobacteria have proved to produce a variety of bioactive substances and a great portion of these substances exhibit antifungal or cytotoxic properties. This makes them to be valuable candidates for a possible application in agriculture.

In the course of screening for new antifungal antibiotics from myxobacteria, strain JW150 was found to produce two closely related antibiotics that were active against several phytopathogenic fungi. This strain was identified as *Myxococcus stipitatus* by morphological and cultural characteristics. The major component of the antibiotics produced was identified as KR-025, which had been first isolated by our group from the myxobacterium *Myxococcus fulvus*, while the other component named stipithiazole was structurally related to KR-025. The gross structure of these compounds were elucidated by spectroscopic analysis and chemical degradation.

Taxonomy of the producing strain, fermentation, isolation and structural elucidation including stereochemistry, and biological activities of these compounds are discussed.