D-38 Isolation of an antagonistic bacterium active against *Fulvia fulva* causing leaf mold on tomato. Ok Ju Chun, Han Woo Kim, Kwang Youll Lee, Ki Hyuck Choi, Hyun Young Jang, Seon Woo Lee and Byung Ju Moon. Dong-A University, 840 Hadan2-dong, Saha-gu, Busan, Korea

Tomato leaf mold caused by *Fulvia fulva* is the most common and destructive disease in greenhouse-grown tomatoes, and is particularly severe under conditions of high humidity. For the period of Feburary 2005, incidence of tomato leaf mold was up to 28.8% at the four plastic greenhouses in Taejeo, Pusan. A total of 16 isolates of *Fulvia fulva* were obtained from diseased leaves of tomatoes. Among them, the *F.fulva* TF13 strain was the most virulent on the whole tomato plant. Thus, the strain TF13 was used as fungal inoculum to select potent biological control bacteria from healthy soils cultivated with crisphead lettuce. Nine bacterial isolates showed strong antifungal activity against *F.fulva* TF13 in confrontation culture on PDA media. In a pot test to confirm the biological control activity, A-2 strain exhibited the remarkable disease control value against the tomato leaf mold disease. The strain was, therefore, selected as a biocontrol candidate against leaf mold and its 16S rDNA sequence was analyzed. The A-2 strain was highly related to *Bacillus subtilis* and *B. amyloliquefaciens*. Further precise identification was performed by analyzing the *gyrA* gene sequence of the strain A-2. The *gyrA* sequence of the strain A-2 had 96% identify to that of *B. amyloliquefaciens*. Consequently, the isolate was identified as *B. amyloliquefaciens* A-2.

D-39 Suppressive effects of culture filtrates of ectomycorrhizal fungi on *Fusarium oxysporum* .Nam-Kyu, Kim, Keum-Cul Shin, IL-Won, Seo, and Jong Kyu Lee Tree Pathology and Mycology Laboratory, Division of Forest Resources, Kangwon National University, Chunchon, 200-701, Korea

Root disease suppression by ectomycorrhizal(ECM) fungi, *Pisolithus tinctorius, Rhizopogon rubescens, Hebeloma cylindrosporum, Suillus bovinus*, was investigated by *in vitro* examination and *in vivo* co-inoculation of both ECM fungi and root pathogenic fungus, *Fusarium oxysporum*, to the mycorrhizal-free *Pinus densiflora* seedlings. Mycelial growth and sporulation of *F. oxysporum* were inhibited from 9.3 to 18.6%, and from 20.1 to 58.9%, respectively, on potato dextrose arar containing culture filtrates of ECM fungi as compared with mycelial growth and sporulation on the control medium. Spore germination was also strongly inhibited by culture filtrates of *R. rubescens* for 90 days upto 81.8%. Inoculation of *P. densiflora* seedlings with ECM fungi before and