## E-E2-17

# Cytotoxic and Antioxidant Effects of the Methanol Extract of Persimmon (*Diospyros Kaki*) Leaf G.) Roots

**Hyun-Hwa Lee[1], Song-Won Seob[2], Eun-Sook Jang[3], Min-Jeong Ryu[4], Jeong-Seok Yoo[4], Yeal Park[4], Sook-Young Lee[3†]**

[1]Department of Biology, Chosun University, [2]Faculty of plant science and production, Sunchon University, [3]Research Center for Proteineous Materials, [4]Department of Biotechnology, Chosun University

This research was carried out to determine the cytotoxic and antioxidant activity in plant leaf extracts of the *Diospyros Kaki*. Cytotoxic effects of persimmon leaf extracts was evaluated in human lung cancer cell line (Calu-6) and human breast cancer cell line (MCF-6) by methyletrazolinm (MTT) assay. The methanol extract of persimmon leaf showed the strongest anticancer effects on Calu-6 cells than MCF-6. The cytotoxic effects of persimmon on Calu-6 and MCF-7 cells was 91% and 8%, respectively a dose of 400 ug/ml of leaf extracts. The extract is an effective modulator in controling the activity of cancer cell in human Calu-6 cells. The extract of persimmon leaf exhibited strong antioxdant activity when compared to BHT in 1,1-diphenyl-2-picryl-hydrazyl (DPPH) method. Antioxidant activity ($RC_{50}$) was shown higher in extracts of persimmon leaf (42.95 ug/ml) than BHT (58.26 ug/ml) as a synthetic antioxidant. These results suggest that extracts of *Diospyros Kaki* would be a promising antioxidant source as an alternative antioxidant, based on natural plant resources.

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† Corresponding author:Sook-Young Lee, Tel:62-230-7567, E-mail:seedbank2001@hanmail.net

## E-E2-18

# Production of ginsenoside F1, Rh1 from Rg1 by *Cellulosimicrobium funkei* Gsoil235

**Ju-Ryun Na*, Le-Qin Cheng, Lin-Hu Quan, Min-Ju Park, Ho-bin Kim & Deok-Chun Yang**
Kyung Hee Univ., Korean Ginseng Luxuriating Center & Ginseng Genetic Resource Bank

Abstract: Ginsenoside (glycoside compound in ginseng) is constructed sugar part (glucose, rhamnose, xylose, arabinose) and non-sugar part (aglycone). From now, over 40 ginsenosides have been isolated and studied each pharmaceutical effect. Many researches to produce minor ginsenoside (having strong effect for anti-cancer, immune system etc.) also have been activated. Here, we try to transform ginsenoside F1, Rh1, from Rg1 (contained much amount in ginseng root or leaf) using micro-organism *Cellulosimicrobium funkei* Gsoil235 already isolated from ginseng soil. The strain could transform ginsenoside Rh1, F1 and PPT nearly 8~12 hours and discompose Rg1 in nutrient broth (not in Luria-Bertani broth). TLC and HPLC were used to analysis transformed ginsenosides. The enzyme related this reaction was extracted to check in which part it was contained and confirmed that it was existed in cell (not released to media). Rh1 ($_{R}t$= 38.16 min) was faster than F1 ($_{R}t$= 42.04 min) in $C_{18}$ column (HPLC).

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*주저자: Tel: 031-201-3243, E-mail: dcyang@khu.ac.kr