Flavonoids from Pseudotsuga menziesii

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Four O-acylated flavonol glycosides, new in the plant kingdom, were isolated from the needles of *Pseudotsuga menziesii*. Their structures were established by 1D and 2D NMR and MS data as: daglesioside I [kaempferol 3-*O*-[2",5"-*O*-(4",4^{IV}-dihydroxy) - truxinoyl] - -L-arabinofuranoside] (1), daglesioside II [kaempferol 3-*O*-[2",5"-*O*-(4"-hydroxy) - truxinoyl] - -L-arabinofuranoside] (2), daglesioside III [kaempferol 3-*O*-[2",5"-di-*O*-(*E*)-*p*-coumaroyl] - -L-arabinofuranoside] (3), and daglesioside IV [kaempferol 3-*O*-[3",6"-di-*O*-(*E*)-cinnamoyl] - -D-glucopyranoside] (4). In addition, the known flavonoids (*E*)-tiliroside, (*E*)-ditiliroside, astragalin (kaempferol 3-*O*- -D-glucopyranoside), isorhamnetin, kaempferol, and quercetin were identified. The cytotoxic activity of compounds 1 and 3 was evaluated towards the HL-60, HeLa, and MDA-MB468 cell lines.

Key words: Pseudotsuga menziesii, O-Acylated Flavonol Glycosides, -Truxinic Acid Derivatives