

생약석곡(*Dendrobii herba*)의 생리활성 성분 규명

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Phytochemical Identification of Bioactive Constituents of *Dendrobii herba*Bomi Nam*

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Two new phenanthrenes, namely, (*1R,2R*)-1,7-hydroxy-2,8-methoxy-2,3-dihydrophenanthrene-4(*1H*)-one (**1**) and 2,7-dihydroxyphenanthrene-1,4-dione (**2**), were isolated from the ethyl acetate-soluble fraction of *Dendrobii Herba*, together with the eleven known compounds, densiflorol B (**3**), 6,7-dimethoxyphenanthrene-2,5-diol (**4**), dehydroorchinol (**5**), 1,5,7-trimethoxy-2-phenanthrenol (**6**), denthyrsinin (**7**), ephemerantol A (**8**), lusianthridin (**9**), moscatilin (**10**), gigantol (**11**), 3-[(*1E*)-2-(3-hydroxyphenyl)ethenyl]-5-methoxyphenol (**12**) and (-)-syringaresinol (**13**). Structures of **1** and **2** were elucidated by analyzing 1D and 2D NMR as well as HR-ESI-MS data. The absolute configuration of compound **1** was confirmed by ECD spectroscopic method. In cytotoxicity evaluation using FaDu human hypopharyngeal squamous carcinoma cell line, compounds **3-6**, **8**, **10** and **12** showed activities, with IC_{50} values ranging from 2.55 to 17.70 μ M. Among them, compound **10** exhibited remarkable cytotoxic activity with IC_{50} value of 2.55 μ M. This is the first report on the anticancer mechanistic study of compound **10** in HNSCC including FaDu cells.

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