

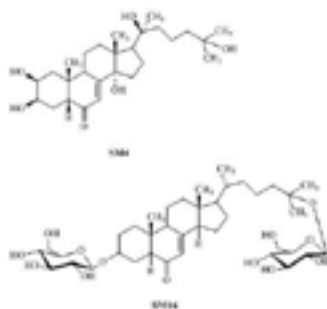
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## MEDICINAL CHEMISTRY AND DRUG DESIGN

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The new steroids from *Silene montbretiana*Hilal Kiliç<sup>1,2</sup>, Milena Masullo<sup>3</sup>, Tamer Karayildirim<sup>2</sup>, Sonia Piacente<sup>3</sup> and Özgen Alankuş<sup>2</sup><sup>1</sup>Dokuz Eylül University, Turkey<sup>2</sup>Ege University, Turkey<sup>3</sup>Salerno University, Italy

*Silene* genus (*Caryophyllaceae*) is represented by 119 species, wild and cultivated, in Middle and East Anatolia, Azerbaijan, Iran and Iraq. Due to its wide range of biological and pharmacological effects, *Silene* species are used as herbal medicine. *S. gonosperma*, *S. morcroftiana* W., *S. edgeworthii*, *S. chlorifolia*, *S. acaulis*, *S. flos cuculi* L. and *S. vulgaris* have been used in the treatment of eye and skin problems, dysentery, inflammation, colic, malaria and stomach pains, urinary infection, respectively. *S. vulgaris* has been used for its sedative effect and as an anti-toxic agent. Modern biological studies have shown that *Silene* species exhibit a wide range of biological actions. It has been reported that *S. armeria* L. showed moderate antifungal activity against all plant pathogens. *S. swertiifolia* and *S. spargulifolia* had a high antibacterial activity against gram negative and positive bacteria. *S. montbretiana* was collected from Malatya, Turkey in 2010. Air-dried and powdered whole plant material was extracted with MeOH. After filtration, the residue was dissolved in water and then partitioned n-BuOH saturated with H<sub>2</sub>O. The n-BuOH phase was fractionated over RP-VLC to give eight main fractions. Fractions were subjected to open column chromatography by using normal and reverse phase silica gel as adsorbents. This is the first study that describes the isolation and identification of secondary metabolites from *S. montbretiana*. In this study, two new steroids (SM 4, SM 16) 2 $\beta$ ,3 $\beta$ ,14 $\alpha$ ,20S,25- pentahydroxy-cholest-7-en-6-one, 3-O- $\beta$ -D-glucopyranosyl,25-O- $\beta$ -D-glucopyranosyl-3 $\beta$ ,25- dihydroxycholest-7-en-6-one, along with eight known compounds (six steroids, one flavonoid, and one cerebroside) were isolated from the methanolic extract. Their structures were elucidated by extensive spectroscopic methods including 1D- and 2D-NMR techniques as well as ESIMS and HRMS analyses.



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## Biography

Hilal Kiliç has completed her PhD from Ege University and has received scholarship from the scientific and technological research council of Turkey for 4 months to study at Salerno University under the supervision of Professor Sonia Piacente. Her studies focused on isolation, purification and structural elucidation of secondary metabolites.

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