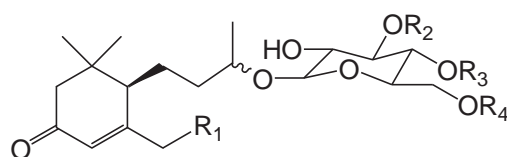


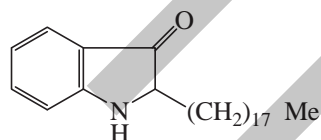
Folk Medicine, Pharmacological and Biological Activities

Allium porrum exhibited diuretic, hypotensive, and digestive properties (Carotenuto *et al.*, 1999), and its juice is bactericide (Fattorusso *et al.*, 1998). The plant is used worldwide as an ingredient of many recipes, and its fresh juice is claimed to possess antibacterial, antifungal and cancer-preventing properties (Fattorusso *et al.*, 2000a,b).

The use of *Allium porrum* seeds in traditional Iranian medicine as an anti-atherogenic remedy (Movahedian *et al.*, 2006) for inflammatory bowel disease has been reported (Rahimi *et al.*, 2010). The experimental studies proved its useful for the treatment of hypercholesterolemia (Movahedian *et al.*, 2006). The ethanolic extract of leek leaf showed antioxidant activity (Koncic and Jug, 2011; Mladenovic *et al.*, 2011). *Allium porrum* bulbs are used as a folk remedy for the treatment of diabetes (Aslan *et al.*, 2010) and consumption of large amounts reduced the risk for gastric cancer (Zhou *et al.*, 2011).



	R ₁	R ₂	R ₃	R ₄
123	OGlc	H	H	H
124	OH	H	H	H
125	OH	$\begin{array}{c} \text{OH} \\ \\ -\text{COCH}_2\text{C}-\text{CH}_2\text{CO}_2\text{H} \\ \\ \text{CH}_3 \end{array}$	H	H
126	H	H	H	Ara
127	H	H	Glc	H
128	H	$\begin{array}{c} \text{OH} \\ \\ -\text{COCH}_2\text{C}-\text{CH}_2\text{CO}_2\text{H} \\ \\ \text{CH}_3 \end{array}$	H	$-\text{COCH}_2\text{CO}_2\text{H}$
129	H	$\begin{array}{c} \text{OH} \\ \\ -\text{COCH}_2\text{C}-\text{CH}_2\text{CO}_2\text{H} \\ \\ \text{CH}_3 \end{array}$	H	H
130	H	H	H	$-\text{COCH}_2\text{CO}_2\text{H}$



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Porrigenins A and B as well other saponins isolated from *Allium porrum* exhibited cytotoxicity and high antiproliferative activity on tumour cells *in vitro* (Carotenuto *et al.*, 1997b,c; Fattorusso *et al.*, 2000b). Porrigenin C showed a considerable antiproliferative activity on four tumor cell lines *in vitro* (Fattorusso *et al.*, 1998). Porric acids A-C, isolated from the plant exhibited antifungal activity against *Fusarium culmorum* (Carotenuto *et al.*, 1998). 1-2-Dihydro-2-stearyl-3H-indol-3-one, isolated from leek root, showed strong antifungal activity against *Fusarium oxysporum*, *Fusarium solani*, *Penicillium roqueforti*, etc. (Tomita *et al.*, 2000). The plant extracts had antibacterial activity (Akrayi and Tawfeeq, 2012).

The antibacterial (Alamri and Moustafa, 2012) and antioxidant (Brenaert *et al.*, 2011, 2012) activities of *Allium ampeloprasum* var. *porrum* have been reported. The steroid saponins, isolated from the same species exhibited immunological adjuvant and anti-inflammatory activities and gastroprotective (antiulcerogenic) properties (Adao *et al.*, 2011a,b, 2012). Wang *et al.* (1997) described a therapy food which contains branches and leaves of cekur manis (*Sauropus androgynes* Merr), roots and leaves of celery (*Apium graveolens* L.), and *Allium porrum* (leek, *Allium ampeloprasum* L.) at a rate of 1:2:2. It can be used for alleviating pain caused by postpartum breast engorgement, reducing weight, decomposing fat, lowering blood pressure, promotine metabolism of sebaceous gland,