

## SHORT COMMUNICATION

### HORDENINE FROM THE ALGA *PHYLLOPHORA NERVOSA*

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*Plant.* *Phyllophora nervosa* (D.C.) Grev.—Phylloporaceae.

*Source.* Black Sea coasts (Şile—Turkey).

*Uses.* Medicinal, antilipemic activity.<sup>1</sup>

*Previous work.* On other marine algae such as *Gracilaria verrucosa* (Huds.), *Gelidium latifolium* (Greville),<sup>2</sup> *Cystoseira barbata* (J. Agardh)<sup>3</sup> and *Sargassum vulgare* Ag., *Polysiphonia subulifera* (C. Agardh) Harvey<sup>4</sup> antilipemic activity, agar in this same species,<sup>5</sup> on sister species amino acids, peptides, proteins, sugars, glycosides, chlorophylls, carotenoids, phycobilins, enzymes, fats, lipoids, fucose and vitamins.<sup>6</sup>

*Present work.* The whole air-dried plant extracted with MeOH containing 2–3% H<sub>2</sub>SO<sub>4</sub>, made alkaline with NH<sub>3</sub> and extracted with CHCl<sub>3</sub>. After purification, a crystalline compound was obtained. *Hordenine*. C<sub>10</sub>H<sub>15</sub>ON, m.p. 115.5° (lit. 117–118°).<sup>7</sup> Found: C, 72.51; H, 9.24; N, 8.68%; u.v. max at 240, 282 nm and min. at 260 nm; i.r. OH band at 3450 cm<sup>-1</sup>, a phenyl nucleus at 3050, 1600, 1580, 1500 and 1450 cm<sup>-1</sup>, 1380 cm<sup>-1</sup> shows the presence of a gem-dimethyl group; NMR spectra gives the bands at 2.35  $\delta$  (single peak 6 H, —N(CH<sub>3</sub>)<sub>2</sub> group), at 2.65  $\delta$  (single peak 4 H, two methylene groups), at 7.7  $\delta$  the phenolic OH group (single peak 1 H), D<sub>2</sub>O exchange left no peak. Four aromatic hydrogens at 6.67  $\delta$  and 7.70  $\delta$  as doublets  $J = 7$  c/s. Integration showed 15 proton. The mixed m.p.s and i.r. curve comparison with hordenine (Merck) proved that, for the first time, an alkaloid has been isolated and identified from marine algae.

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<sup>7</sup> *The Merck Index*, p. 524, Merck, N.J., U.S.A. (1960).