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Arugambenol, a new acyclic diterpenoid from green alga *Ulva lactuca* L

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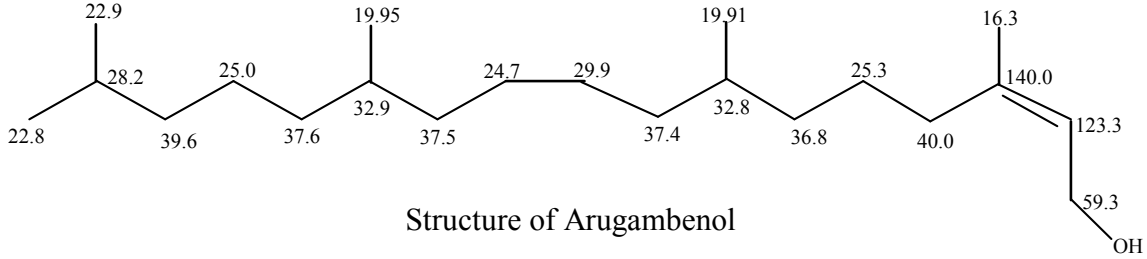
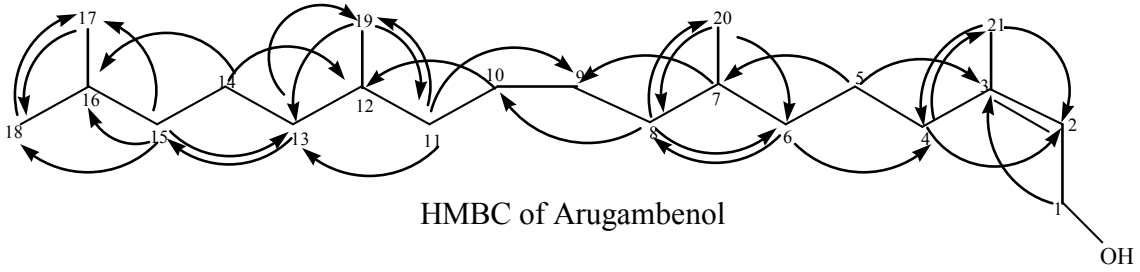
As a continuation of our research work on Sri Lankan marine algae, methanol extract of the common seaweed *Ulva lactuca* was investigated. In our previous studies we reported the isolation of (Z)-stigmasta-5, 24(28)-dien-3-ol, oleic acid and a triglyceride with two linoleic acids and one stearic acid

unit. Further chromatography of the above MeOH extract gave a yellow coloured oil and its ^{13}C NMR and DEPT data showed 21 carbon signals due to 5 methyl, 11 methlene, 4 methine and a quaternary carbon. All the proton-carbon correlations were assigned by a HMQC experimental data. Of the 21 carbons, two were ascribed as olefinic carbons appeared at δ 123.3 and 140.0, and 5 carbons resonated at δ 16.3, 19.91, 19.95, 22.8 and 22.9 were ascribed as methyl carbons. Moreover, the ^{1}HNMR spectrum showed a doublet at δ 0.84 (6H, J = 6.4) being a part of an isopropyl group that was coupled with a methine proton resonated at δ 1.48. Another doublet appeared at δ 0.82 (J = 6.0) was assigned for the two parted methyl groups coupled to two methine protons appeared at δ 1.33. In the ^{13}C NMR spectrum those two methyl carbons appeared at δ19.91 and 19.95. Further, an allylic methyl, an olephnic proton and an oxy methylene group were observed resonating at δ1.64 (3H, s), 5.40 (H, t, J = 6.4) and 4.17 (2H, d, J = 6.8) respectively. The CIMS of the compound exhibited its molecular ions at m/z 309.0 ($[M-H]^+$) and 311.0 ($[M+H]^+$). The above data suggested this compound to be 3, 7, 12, 16-tetramethylheptadec-2-enol having the molecular formula $C_{21}H_{42}O$. Literature reveals that this is a new diterpenoid, and it was named as Arugambenol.



Structure of Arugambenol



HMBC of Arugambenol

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