Chemistry and biological activity studies of green algae *Ulva lactuca* L.

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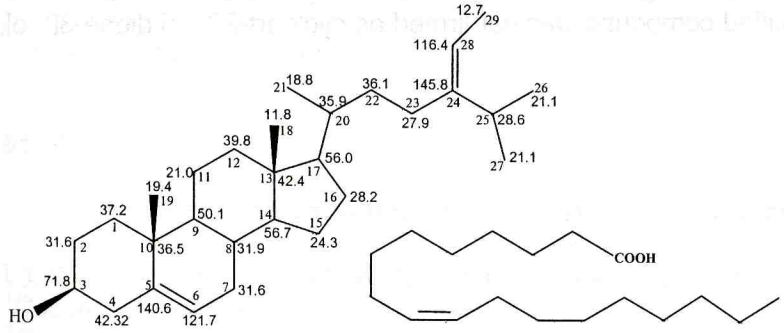
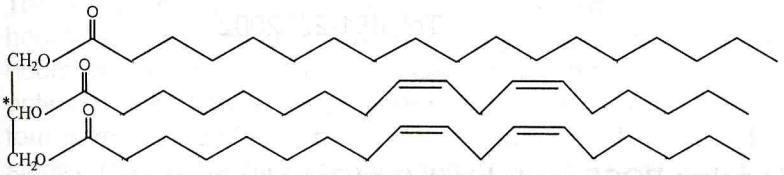
Sri Lankan seaweeds (marine algae) remain largely unexplored. Therefore, the present investigation is initiated with the hope of isolation and identification of biologically active and economically important compounds from Sri Lankan seaweeds. Methanol extract of the common seaweed *Ulva lactuca* was subjected to antibacterial, antifungal, antioxidant, cytototoxicity and seed germination inhibition assays. However, no activity was observed. Column chromatography of the methanol extract of *Ulva lactuca* followed by PTLC gave seven metabolites. ^{13}CNMR spectrum of compound UL-3 showed 29 carbon atoms including four olephinic ones. Its ^{1}HNMR spectrum clearly showed two olefinic proton signals at δ 5.32 and 5.11 as a multiplet and a quartet respectively. The CIMS of UL-3 had M^+ of *m/z* 412 with *m/z* 413 $[M+1]^+$ as the base peak. HMQC and HMBC correlation studies and comparison with literature data suggested UL-3 to be (Z)-stigmasta-5, 24(28)-dien-3-ol. ^{1}H NMR, ^{13}C NMR, HMQC, HMBC data and by comparison with literature, the structures of UL-1and UL-4 were established as Oleic acid, and a triglyceride with two linoleic acid molecules and one stearic acid molecule (as shown in the figure) respectively. (Z)-Stigmasta-5, 24(28)-dien-3-ol and Oleic acid have previously been reported from *Ulva lactuca*.



UL-3: (Z)-stigmasta-5,24(28)-dien-3-ol

UL-4:Oleic Acid



UL-1: Triglycerides

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