

International Conference and Exhibition on

Marine Drugs and Natural Products

July 25-27, 2016 Melbourne, Australia

“Scytonemin” pigment from *Lyngbya notarisii* (*Cyanobacteria*) may protect human skin from UV radiations.

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*L*yngbya notarisii (*Menegh.*) Wille, is characterized by a filament having thick sheath of 10-12 layers around a trichome with yellow to reddish-brown pigment “scytonemin”. In Chu 10D medium filaments may attain about 3 cm long and 42 μ m wide, including 6.6-14.0 μ m diameter sheath when grown under a continuous light flux of 50 μ E m⁻² s⁻¹ and at a temperature of about 25° C. The scytonemin produced by trichomes is known to protect cells from UV-A and UV-B radiations and diffuse into sheath layers as the filament grows, sometimes abundant in the inner layers. The scytonemin is water soluble and continuously oozes out through open end of a filament after exposure to diurnal cycle having about 950 μ E m⁻² s⁻¹ light flux during mid day. A sheath containing pure scytonemin may be separated by maximizing phosphorus concentration in the medium that induces repeated hormogonia formation from the trichome and their release. The scytonemin impregnated polysaccharide sheath remained may be processed in making protecting cream reducing the cost of base material and of extraction of the pigment.

Biography

Abdul Aziz has completed his PhD from University of Durham, England in 1985. He is Professor of Botany, published over 100 research papers and served as a Chief Editor, Bangladesh J. Botany. He has developed large scale Azolla pinnata (used as poultry and fish feeds) production system in ponds round the year; bio-indicator of arsenic pollution and measuring arsenic in groundwater using Azolla filiculoides; discovered new phenomena of cyanobacterial morphogenesis like differentiation of a hormogonium or a hair from a single cell depending on availability of PO₄-P in the environment; sorted out taxonomic confusions of some cyanobacteria.

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