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Bioactive metabolites from the Red Sea soft coral *Simularia terspilli*

Rabab Mohamed¹, Mohamed M Radwan², Guoyi Ma², Mena M Thabet³, Mohamed A Seliem⁴, Tarek A Mohamed⁵ and Mahmoud El Sohly²

¹Beni Suef University, Egypt

²University of Mississippi, USA

³Misr University for Science and Technology, Egypt

⁴Cairo University, Egypt

⁵National Institute of Oceanography and Fisheries, Egypt

Ten compounds including five sterols (1-5), three sesquiterpenes (6-8) and two fatty acid esters (9-10) have been isolated from the Red Sea soft coral *Simularia terspilli*. The anti-leukemic, anti-leishmanial, antimicrobial, and antimalarial activities of the isolated compounds and some acetylated derivatives (1Ac, 3Ac, 4Ac, 5Ac) were evaluated. Compounds 4, 5, and 5Ac exhibited strong cytotoxic activity against human leukemia cell lines HL60 and K562 with IC₅₀ values of 4.0, 2.0 and 25 nM, respectively for HL60 and 5.0, 3.0 and 40 nM for K562.

rmwork06@yahoo.com

Role of cross cultural ethno-botany in search of newer drug plants: Some concerns & issues

R R Rao

Indian National Science Academy, India

Indian region is one of the greatest Emporia of ethno-botanical wealth and a store house of traditional knowledge. Many Adivasi groups (80% of the population in villages) still live in isolation from the influences of the modern world and maintain close association with the ambient vegetation for all their needs. The time tested traditional knowledge among these tribes percolates from generation to generation through oral folk lore. Although the heritage of Indian medicinal plants is very ancient and goes back to the Vedic times, the medicinal plants sector is still mostly unorganized. The Himalayan region is said to be a real store house of may reputed Sanjivani-like medicinal plants such as *Aconitum heterophyllum*, *Valeriana spp.*, *A. falconeri*, *Arnebia benthamii*, *Dactylorhiza hatagirea*, *Gymnadenia orchioides*, *Megacarpaea polyandra*, *Picrorhiza kurrooa*, *Nardostachys jatamansi* *Podophyllum hexandrum* and *Taxus wallichiana*, *Rheum emodi*, which are used by many Adivasi tribes in the region and have great potential for development. Use of a number of diverse, unrelated medicinal plant species for any particular ailment like diabetes, jaundice or even cancer by different ethnic tribes in India is a major issue observed with regard to the use of traditional medicinal plants. The same is observed even in authoritative treatises like *Charka samhita*. The author strongly stresses the need for short listing and prioritizing the leads for a specific ailment by cross-crossing of information through cross-cultural studies among different ethnic tribes within a country and then compare with other developing countries for intense bio prospecting and then product development. It is believed that the use of a particular species for the same ailment by different unrelated ethnic groups certainly indicates the efficacy and potential of these plants for drug development. Biodiversity prospecting, particularly on traditional medicinal plants can certainly result in some lead/novel molecules of great economic significance. Bioprospection of tree flora, particularly of Western Ghats, where important antitumor plants like *Aphanamixis polystachya*, *Nothopodytes nimmoniana*, *Mesua nagassarium*, *Semecarpus anacardium* etc exist, would be rewarding. *Nothopodytes foetida* is shown to contain 0.1% camptothecine, an antitumor/anticancer drug. However, shortage of field botanists/ethno botanists/taxonomists, lack of adequate financial support for ethno botanical investigations involving cross cultural studies, lack of much needed co-operation between biotechnologists and ethno botanists in bioprospection programs on ethno botanical leads, lack of comprehensive ethno botanical databases among biodiversity rich developing nations for comparative ethno botanical study are shown to be some of the major constraints in this direction. Finally, the author feels that serious and meaningful efforts should be initiated to overcome these constraints so that the rich traditional wealth of medicinal plants of the country is properly and profitably utilized at least in the 21st century.

raocimap@gmail.com