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## Chemical investigation of bioactive secondary metabolites from *Allamanda cathartica*

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*Allamanda cathartica* belongs to Apocynaceae family which is native to Brazil also found in India and Sri Lanka that has an important medicinal value. In India, it is mostly distributed in the eastern coastal region of Odisha locally known as 'Malatilata', 'Ghanta Phul' and 'Harkakra'. The plant is traditionally used in Ayurvedic and Unani system of medicine for the treatment of various ailments such as healing of wounds and ulcers. The bark acts as a hydragogue in ascites while the leaves are a valuable cathartic in moderate doses. The root is used as a remedy for snake-bites. The whole plant is used against jaundice, malaria, fungal infections and antiseptic for the treatment of skin burns. Alcoholic and aqueous extracts of root possess hypotensive activity while leaf extract showed antifungal and anticancer properties. Considering its importance in Indian System of Medicine (ISM) and traditional use, the chemical investigation of whole plant was carried out which resulted in the isolation of eleven medicinally noteworthy secondary metabolites like allamandin, allamdin glucoside, betulinic acid, ursolic acid, 2,6,8-trihydroxy-3-(4-hydroxyphenyl)-4H-chromen-4-one, pinitol, heptacosanoic acid, heptacosane,  $\beta$ -sitosterol,  $\beta$ -sitosterol-3-O-glucoside and sucrose. Betulinic acid, pinitol and flavonoid are reported first time from this plant. The structures of isolated compounds were elucidated mainly by one-dimensional, two-dimensional NMR, MS studies and by comparison with the spectral data in literature. Ursolic acid was found major component (natural abundance: 1.118%), allamdin glucoside (0.0353%) and betulinic acid (0.019%) the least which is advantageous as all are known for potent anticancer, anti-microbial activities.

### Biography

Santosh Kumar Rath is pursuing his PhD from CSIR-Indian Institute of Integrative Medicine, Canal Road, India under the supervision of Dr P L Sangwan. He is registered for PhD in Chemical Sciences in AcSIR session Aug. 2013. He has one published paper in reputed journal. He is working on natural product isolation from plant origin and performs structural modification of major bioactive isolates.

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