

## Sedative, anxiolytic and analgesic effects of the methanol extract of *Urena sinuata* L.

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The sedative and analgesic potential of *Urena sinuata* L., a Bangladeshi tribal medicinal plant was studied for the first time. The crude methanol extract of *Urena sinuata* L. leaves was evaluated for its central nervous system (CNS) depressant effect using rodent behavioral models, such as hole cross, open field and thiopental sodium induced sleeping time tests for its sedative properties and an elevated plus-maze (EPM) test for its anxiolytic potential, respectively. The methanol extract of *U. sinuata* at doses of 400 mg/kg, p.o., displayed a dose dependent suppression of motor activity, exploratory behavior (in hole cross and open field tests) and prolongation of thiopental induced sleeping time in mice. In the EPM test, the dose of methanol extract significantly ( $p < 0.05$ ) increased exploration to and time spent by the treated mice in EPM open arms in a dose dependent manner. In addition, analgesic potential of *U. sinuata* was evaluated for centrally acting analgesic property using formalin induced licking response model and peripheral pharmacological actions using acetic acid-induced writhing test and also by tail immersion test. In acetic acid-induced writhing test, all extracts at 200 mg/kg dose exhibited significant ( $p < 0.05$ ) reduction of writhing response in a dose dependent manner; in formalin induced licking response model a significant ( $p < 0.05 - 0.001$ ) result was comparable to the standard drug diclofenac sodium. The extract also produced a significant reduction of pain by tail immersion test. These results provide in vivo evidence that leaves of *U. sinuata* in general have potent sedative and analgesic effects.

### Biography

Mr. Sakib Chowdhury is a student of 7th semester in the Department of Pharmacy, BGC Trust University, Bangladesh. He participated in many seminars and conferences in home to present his research activities. His research work based on Phytochemistry, Pharmacology, Oncology and Bioinformatics. He is a life member of Association of Pharmacy Professionals (APP), India. He is interested in Clinical Research, Protein Engineering, Immunology and Nanotechnology.

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## Nanosponges: A novel class of drug delivery system – review

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Effective targeted drug delivery systems have been a dream for a long time, but it has been largely frustrated by the complex chemistry that is involved in the development of new systems. The invention of nanosponges has become a significant step toward overcoming these problems. Nanosponges are tiny sponges with a size of about a virus, which can be filled with a wide variety of drugs. These tiny sponges can circulate around the body until they encounter the specific target site and stick on the surface and begin to release the drug in a controlled and predictable manner. Because the drug can be released at the specific target site instead of circulating throughout the body it will be more effective for a particular given dosage. Another important character of these sponges is their aqueous solubility; this allows the use of these systems effectively for drugs with poor solubility.

### Biography

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