

## عنوان مقاله:

Study of Catalase, Protease, Antioxidant and Antimicrobial Activities of *Tabernaemontana divaricata* Latex

## محل انتشار:

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## خلاصه مقاله:

The latex was collected from an Indian native species, *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schult. The latex was analysed for different bioactivities, i.e., catalase, protease, antioxidant and antimicrobial activities. Catalase activity was determined by the catalytic decomposition of  $H_2O_2$ , which was monitored by the decrease in the absorbance at 240 nm using a UV-Vis spectrophotometer. Protease activity was determined by the hydrolysis of milk casein proteins, the resultant hydrolysate was colorimetrically analysed using Folin-Ciocalteu reagent at 700 nm, in a UV-Vis spectrophotometer. The antioxidant activity was analysed by the reduction of DPPH (1,1-diphenyl-2-picrylhydrazyl) reagent at 518 nm in a UV-Vis spectrophotometer. The antibacterial activity was determined by well diffusion method using the agar medium. The antifungal activity was determined by well diffusion method using the potato dextrose agar medium. Based on the results, latex of *T. divaricata* possessed mild catalase activity ( $15.2 \pm 3.93$  U/ml), high protease activity ( $4461.55 \pm 230$   $\mu$ g/ml), and moderate antioxidant activity ( $28 \pm 3.0\%$ ). Latex of *T. divaricata* inhibited *Enterococcus faecalis* bacteria growth, but did not affect *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* bacteria. The fungal species *Aspergillus flavus* showed no susceptibility, but *A. niger* was inhibited by latex of *T. divaricata*.

## کلمات کلیدی:

*Tabernaemontana divaricata*, Catalase activity, Protease activity, Antioxidant activity, Antimicrobial activity

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