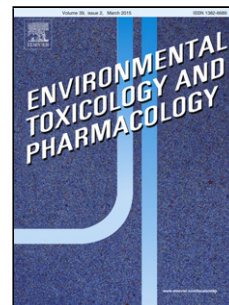


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# **Lithium Entrapped Chitosan Nanoparticles to Reduce Toxicity and Increase Cellular Uptake of Lithium**

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## **Highlights**

- Lithium carbonate loaded chitosan nanoparticles synthesized for possible reduction of Li side effects
- Size and zeta potential tuned to enable diffusion of nanoparticles in the cell membrane
- A 1.3 times increase in cell proliferation when Li was loaded to chitosan over that of using lithium carbonate directly observed
- Lithium carbonate loaded chitosan nanoparticles resulted in an increase in the negative ellipticity in BSA

## **Abstract:**

Lithium carbonate is an effective drug against bipolar disorders. Direct use of lithium carbonate has been reported to result in lithium toxication and pulmonary complications. With chitosan micro and nanoparticles gaining attention for their protein absorption, drug targeting and improved dissolution rate of sparingly water-soluble drugs, this work has focused on chitosan

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