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Research Article

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[Amine Functionalized Graphene Quantum Dots as a Smart Nano Antibacterial Agent](#)

Conventional antibiotics are resisted by bacteria at an increasing rate, prompting studies into the development of alternate antibiotic agents. This work demonstrates the fabrication and characterization of amine functionalized graphene quantum dots (af-GQDs) with starting materials of graphene oxide, ammonia, and hydrogen peroxide by chemical oxidation and hydrothermal methods. The synthesized af-GQDs were characterized using analytical techniques such as UV-vis, fluorescence, FTIR, Raman spectroscopy, and morphological studies through TEM. TEM images showed that af-GQDs have smooth surface morphology with porous in nature and are spherical in shape with particle size less than 20 nm. The prepared af-GQDs show a quantum yield of 26.32%. A growth inhibition test was performed on *E. coli* and *S. aureus* for the prepared af-GQDs at different increasing concentrations. The minimum inhibitory concentration for the prepared af-GQDs on *E. coli* was found to be 55 µg/mL and for *S. aureus* was found to be 35 µg/mL. Percentage cell viability studies were performed on HeLa and Jukart cells for 24 hours at different concentrations. Both cells showed maximum cell viability percentage at the initial concentration. At higher concentrations, the cell viability is decreased for both cells but the Jukart cells show a minimum percentage of cell viability at higher concentrations than the HeLa cells.

Case Report

Published Date:- 2024-08-23

[Laryngeal Xanthogranulomatosis: A Case Report](#)

Xanthogranulomatosis is an uncommon disease affecting non-Langerhans histiocytes. Laryngeal involvement is very rare.

We describe the clinical case of an adult patient with disseminated xanthogranulomas affecting the supraglottic region of the larynx, leading to thickening and immobility of the epiglottis. The patient experienced inspiratory dyspnea on exertion. A transoral supraglottic epiglottectomy was performed, and a tracheostomy was subsequently required.
