



Special Issue Reprint

# Functionalized Nanomaterials and Structures for Biomedical Applications

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This Special Issue on biomedical applications of functionalized nanomaterials includes nine research papers and two reviews. G. Tejada and D. Leonardi developed a buccal film using natural polymers for delivering miconazole nitrate (MN) and lidocaine hydrochloride (LDCH) to treat oropharyngeal candidiasis. B. Mubaiwa, E. M. Antunes, and D. R. Beukes enhanced cytotoxic metabolite delivery using green-synthesized gold nanoparticles, showing significant activity against breast cancer cells. Other papers cover various particulate systems for biopharmaceutical applications. V. Mikelashvili and L. Almasy characterized citric acid-capped magnetite nanoparticles. R. Rajamoham, S.-K. Kim, and Y.R. Lee synthesized copper oxide nanoparticles with antibiofilm properties. M. Valentin and B. Vertruven prepared macroporous mannitol granules for pulmonary drug delivery. S.K. Nagaraja and S. Nayaka biosynthesized silver nanoparticles with antimicrobial properties. Dhatwalia produced ZnO nanoparticles with various biological activities. M.M. Eshaghi and A. Rahdar developed pH-responsive hydrogels for quercetin delivery. Al-Thani reduced tyrosinase inhibitors' cardiotoxicity with PLGA-PEG-PLGA nanoparticles. The reviews by A.M. Diez-Pascual and H. Ashraf discuss advances in nanostructures for medical applications and selenium nanoparticles for microbiota and neurological diseases.



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