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Folate Conjugated INPs from Goat Blood for Cellular Imaging and Targeted Delivery for Breast Cancer Cell Lines

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In the present article, we report the preparation of iron nanoparticles (INPs) from goat blood and fabrication of a biocomposite by coating these nanoparticles with chitosan coupled with folic acid (INP-CF). This biocomposite was characterized for its physicochemical properties and cancer cell targeting studies. The size of the INP-CF was found to be 80-300nm. FT-IR studies have confirmed the presence of chitosan and folic acid (F) in the composite. Cancer cell line studies confirmed the internalization of INP-CF and this phenomenon was also supported by SEM-EDX and MRI analyses. The cell viability was found to be 71.5% as determined by the MTT assay.