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PII: S0731-7085(19)32137-5

DOI: https://doi.org/10.1016/j.jpba.2019.112961

Reference: PBA 112961

To appear in: *Journal of Pharmaceutical and Biomedical Analysis*

Received Date: 31 August 2019

Revised Date: 15 October 2019

Accepted Date: 28 October 2019

Please cite this article as: Aygun A, Gülbagca F, Ozer LY, Ustaoglu B, Altunoglu YC, Baloglu MC, Atalar MN, Alma MH, Sen F, Biogenic Platinum Nanoparticles using Black Cumin Seed and Their Potential Usage as Antimicrobial and Anticancer Agent, *Journal of Pharmaceutical and Biomedical Analysis* (2019), doi: https://doi.org/10.1016/j.jpba.2019.112961

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Highlights

- The green synthesis of Pt NPs by using Black Cumin Seed Extract,
- Characterization of biogenic Pt NPs by XRD, XPS, TEM, HRTEM, and UV-Vis methods
- High antibacterial activity of Pt NPs against gram-positive and gram-negative bacteria
- The inhibition of proliferation of MDA-MB-231 and HeLa cells in the IC50 at a dose of 36.86 μg/mL and 19.83 μg/mL of Pt NPs, respectively

Abstract

Herein, the biogenic platinum nanoparticles (Pt NPs) were synthesized by using black cumin seed (*Nigella sativa L.*) extract as a reducing agent. The biogenic platinum nanoparticles