



Synthesis and Characterization for Different nanomaterials and its Nanomedicine Application as Antimicrobial and Anticancer Activity.

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Abstract:

Nanotechnology has gained intense attention in the recent years due to its wide application in diverse areas like medicine, catalysis, energy and materials. Particularly nanoparticles with small size to large surface area (1-100 nm) have potential medical as well as industrial and agricultural applications. Researchers make significant efforts towards the synthesis of nanoparticles by various means, including physical, chemical and biological methods. These methods have many disadvantages due to the difficulty of scale up of the process, separation and purification of nanoparticles from the microemulsion (oil, surfactant, co-surfactant and aqueous phase), and consuming huge amount of surfactant. Green methods for synthesizing nanoparticles with plant extracts are advantageous as it is simple, convenient, environment friendly, and requires less reaction time. Nanomaterials prepared by eco-friendly and green methods may increase agriculture's potential for improving the fertilization process, plant growth, pesticides, delivery of active component to the desired target sites, treatment of wastewater and also to enhance the absorption of nutrients in plant. Also minimize the amount of harmful chemicals that pollutes the environment. Hence, this technology helps in reducing the environmental pollutants. The synthesis of different nanomaterials of MgONps, AuNps, AgNps, FeONPs, are considered to be a successful way of synthesis by using aqueous extracts of peels, leaves, and fruit. The synthesized nanoparticles were characterized by UV-visible spectroscopy (UV-vis), scanning electron microscopy (SEM), energy dispersive X-ray spectroscopy (EDS), transmission electron microscopy (TEM) and fourier transform infrared spectroscopy (FT-IR). SEM and TEM analysis showed that the particles were spherical and the size of the particles ranged from 5 nm to 80 nm.

Biography:

Alaa Yousef Ali Ghidan, Higher council of Science and Technology, Research and Development Center, Jordan is Submitted her abstract on the Webinar on Pharmaceutical Nanotechnology; September 22, 2020; Paris, France.



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