تعبئة الإهتمامات البحثية (نموذج رقم 1)

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In the emerging field of nanotechnology, metal oxide nanoparticles (NPs) such as copper oxide (CuO) NPs are extensively used for their industrial, biomedical and consumer applications. These applications are largely attributed to unique properties of CuO NPs including, high surface reactivity, stability and easy cellular diffusion. Despite their useful commercial and medical applications, the toxic effects of NPs on human health have not been well investigated. More so the negative effects of NPs at varying doses and time points have not been tested. Understanding the toxic effects of NP at dose and time variables is of significance considering that lower doses and longer durations may be less toxic and more effective than the higher doses. Oxidative stress and inflammation are the two basic and fundamental pathophysiological changes that occur in response to internal and external cellular challenges and serve as important indicators of cellular stress. These changes also underlie the etiologies of various disorders. Therefore, the research interest is to examine the expression of oxidative stress and inflammatory markers including HO-1, SOD, GPx-2, IL-1β, IL-6 and TNF-α in MCF-7, human cancer cells to ascertain the toxic effects of CuO NPs at varying doses and time intervals. The outcome of this work will help in designing strategies to minimize their negative effects on human health.			الإهتمامات البحثية Research interests (~100 words)
Elucidation of dose and time dependent effects of copper oxide nanoparticles on cell viability and gene expression of oxidative stress and inflammatory markers in MCF7, human breast cancer cells.			المواضيع المقترحة للمشاريع البحثية للطلبة الدراسات العليا (الماجستير) Proposed topics for master research projects
None			الابحاث المنشورة مع طلبة الدراسات العليا Publishing with post graduate students
عينات samples, مواد و تجهيزات Materials and equipment, تقنيات ضمن خطة البحث Techniques within the research plan			توفر مستلزمات المشروع Availability of project supplies
4			العدد المقترح للاشراف على طلبة الدراسات العليا وحسب اللائحة According to the regulations, proposed number of supervised postgraduate students

إقرار Endorsement	أقر أنا المدون بياناته أعلاه، ان البيانات المرفقة أعلاه صحيحة, I confirm that the information given in this form is true, complete and accurate.