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<b>عنوان المشروع باللغة العربية - Title of the proposed project in Arabic</b>	التعرض للملوثات العضوية الثابتة وعلاقته بالإصابة بسرطان الثدي
<b>Title of the proposed project in English</b>	Exposure to Persistent Organic Pollutants and Relation with Breast Cancer
<b>المشرف الرئيس - PI</b>	Prof. Nasser Al-Daghri
<b>التخصص الدقيق للمشرف الرئيس - Specialty of PI</b>	Clinical Biochemistry
<b>المشرف المساعد - Co-PI</b>	Dr. Sherif Hussein
<b>المدة المتوقعة لإنجاز البحث منذ الحصول على موافقة عمادة الدراسات العليا (بالشهور) - Expected time in month to finish</b>	شهر 12
<b>Abstract of the proposal (No more than 200 words)</b>	Persistent organic pollutants (POPs) are released into the environment from different sources. They are detected in most of different environmental samples; air, water, soil, food. Many of recent clinical evidence, experimental models, and epidemiological studies suggest that POPs have major risks for humans due to their endocrine disrupting properties and targeting different organs and

systems in the body (e.g. reproductive system, breast tissue, adipose tissue, pancreas, etc.). Due to the ubiquity of human exposure to these compounds the aim of this study is to describe the relation between POPs exposure through determination of serum POPs and breast cancer.

**Hypothesis of the proposal**

POPs have major risks for humans due to their endocrine disrupting properties, but there is no clear scientific evidence for the relation between POPs exposure and breast cancer. We have hypothesis that accumulation of POPs in the body are related to breast cancer in Saudi females. So, we need to test this hypothesis.

**Specific objectives**

- Determine serum POPs concentration
- Determination of cancer markers
- To investigate the association between POPs level and
- To sharing the obtained data, practical aspects, and experiences with other international research groups (peer review publication, practical training, conferences and workshops)

**Methodology & Major Techniques to be used**

Subjects: A total of 100 (50 obese, 50 non- obese) Saudi female.  
POPs analysis: Quantitation of Organochlorine pesticides in serum samples.  
Biochemical analysis: Biochemical and metabolic parameters and cancer biomarkers.  
Investigate the association between serum POPs concentration and breast cancer.

**Availability of Samples**

Yes

**Availability of Chemicals**

Yes

**Availability of Instruments**

Yes

**Ethical Approval**

Ethical approval is available

**Recent References**

1- Giulivo M, Lopez de Alda M, Capri E and Barcelo D. Human exposure to endocrine disrupting compounds: Their role in reproductive systems, metabolic syndrome and breast cancer. A review. *Environ Res* 2016; 151: 251-264.  
2- Arrebola JP, Fernandez-Rodriguez M, Artacho-Cordon F, Garde C, Perez-Carrascosa F, Linares I, Tovar I, Gonzalez-Alzaga B, Exposito J, Torne P, Fernandez MF and Olea N. Associations of persistent organic pollutants in serum and adipose tissue with breast cancer prognostic markers. *Sci Total Environ* 2016; 566-567: 41-49.