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Project title in Arabic	الاختلافات في مستويات سيستاتين (Cystatin) و علاقتها في الحوامل الاصحاء و المصابات بسكري الحوامل .
Project title in English	Differences in Circulating Serum Cystatin C Levels and its Associations with Metabolic Parameters among Pregnant Women with and Without Gestational Diabetes Mellitus
PI	Prof. Omar Al-Attas
Specialization	Biochemistry
Co-I	Prof. Nasser Al-Daghri
Duration	12 months
Abstract or synopsis of the proposal (200 words or less):	Cystatin C which has been documented as a surrogate marker for renal function, has been documented to be associated with the progression of type 2 diabetes mellitus complications (e.g. diabetic nephropathy) [1]. Very few studies however have associated abnormal levels of serum cystatin C as a risk for gestational diabetes mellitus (GDM). The recent study by Zhao and colleagues among pregnant Chinese women observed cystatin C to be independently associated with insulin resistance and GDM risk [2], but this may not be true across ethnic groups. The present study aims to fill this gap. The study therefore aims to determine differences and associations between circulating levels of cystatin C and other glycemc parameters among Saudi pregnant women with and without GDM.
Hypothesis or scientific justification of the proposal	The significant associations of cystatin C and diabetes complications are well established, but few studies have been undertaken as to whether these associations hold true among pregnant patients at risk for GDM.
Specific objectives	<ol style="list-style-type: none"> 1. To determine circulating levels of cystatin C among patients with and without GDM. 2. To determine changes in levels of cystatin C according to stages of pregnancy 3. To determine associations of cystatin C among glycemc and other metabolic parameters in patients with and without GDM.
Methodology & Major Techniques to be used	<ol style="list-style-type: none"> 1. Chemical analyzer 2. Electrochemiluminiscent assay 3. ELISA 4. Multiplex assay
Availability of Samples	Yes
Availability of Chemicals	Yes

Availability of Instruments	Yes
Availability of Ethical Approval (if needed)	Yes
Recent References	<ol style="list-style-type: none">1. Bjornstad P, Cherney DZ, Maahs DM, Nadeau KJ. Diabetes kidney disease in adolescents with type 2 diabetes: new insights and potential therapies. <i>Curr Diab Res</i> 2016; 16(2): 11.2. Zhao W, Pan J, Li H, Yuang Y, Liu F, Tao M, Jia W. Relationship between high serum cystatin C levels and risk of gestational diabetes mellitus. <i>PLoS One</i> 2016; 11(2): e0147277.