**مشاريع التخرج للعام الدراسي 2018-2019**

**المشروع الأول**

**اسم الطالبة: صبا طلال**

**Arginase in Health and Disease**

**Abstract**

 Arginase converts L-arginine to urea and ornithine. The former provides protection against ammonia; the later serves to stimulate cell growth and other physiological functions. Although traditionally considered in terms of its role as the final enzyme of the urea cycle, the enzyme is found in a variety of nonhepatic tissues. These findings suggest that the enzyme may have other functions in addition to its role in nitrogen metabolism.

 Abnormal arginase activity in mammals has been associated with number of dysfunctions and diseases. Thus, modulating the activity or expression of arginase represents good therapeutic targets for the treatment of these diseases.

 The aims of this review are to outline the role played by arginase in health and disease. Emphasizing the involvement of arginase in disease and injury conditions such as the cardiovascular diseases, the pulmonary diseases, aging, erectile dysfunction, the central nervous system diseases, and neoplastic malignancies; and to examine the new drug treatments being developed to modulate the activity or expression of arginase.

**المشروع الثاني**

**اسم الطالبة: فاتن محمد**

**Glutathione in Health and Disease**

**Abstract**

 Glutathione (γ-glutamyl-cysteinyl-glycine; GSH) is the most abundant low-molecular-weight thiol, and GSH/glutathione disulﬁde is the major redox couple in animal cells. Two cytosolic enzymes, γ-glutamylcysteine synthetase and GSH synthetase catalyze the synthesis of GSH from glutamate, cysteine, and glycine sequentially.

 Glutathione metabolism and transport participates in many cellular reactions including: antioxidant defense of the cell, drug detoxiﬁcation and cell signaling (involved in the regulation of gene expression, apoptosis and cell proliferation). Alterations in its concentration have also been demonstrated to be a common feature of many pathological conditions. Additionally, GSH catabolism has been recently reported to modulate redox-sensitive components of signal transduction cascades. This review aims to outline the physiological functions of GSH, as well as, its role in the pathogenesis of human diseases.