جامعة فاروس

Publications Template

#	Research Title	Field	Abstract	Year of Publication Publishing	Publishing Link "URL"
1	Sherihan Salaheldin Abdelhamid Ibrahim, Samar M Bassam, Seham El-Hawary, Eman Sheta, Inas M Masoud, Sally A El-Zahaby, Abdulaziz M Al-Mahallawi, Ghada O Hammad. The gastroprotective effect of Yucca filamentosa standardized crude leaves extract versus its nano-cubosomal formulation in ethanol-induced gastric injury. International Immunopharmacology Volume 137, 20 August 2024, 112440.	Medical biochemistry	Yucca filamentosa (YF) is widely used in folk medicine for its anti-inflammatory effects. Our study aimed to evaluate the chemical profile of YF extracts. Additionally, the gastroprotective efficacy of its crude leaf extract and nano-cubosomal formulation was assessed in a rat model of ethanol-induced gastric injury by altering the HMGB-1/RAGE/TLR4/NF-κB pathway. The phytochemical composition of YF was investigated using FTIR spectroscopy and LC-MS/MS techniques. Standardization was further accomplished using HPLC. Rats were treated orally with yucca crude extract or its nano-cubosomal formulation at doses of 25, 50, and 100 mg/kg. Famotidine (50 mg/kg, IP) was used as a reference drug. After 1 h, rats were administered ethanol (1 ml, 95 %, orally). One hour later, the rats were sacrificed, and the serum was separated to determine TNF α and IL-6 levels. Stomachs were excised for the calculation of the ulcer index and histopathological examinations. Stomach tissue homogenate was used to determine MDA and catalase levels. Additionally, the expression levels of HMGB-1/RAGE/TLR4/NF-κB were assessed. Phytochemical analysis confirmed the predominance of steroidal saponins, sucrose, organic and phenolic acids, and kaempferol. The nano-cubosomal formulation demonstrated enhanced gastroprotective, anti-oxidant, and anti-inflammatory efficacy compared to the crude extract at all tested doses. The most prominent effect was observed in rats pretreated with the YF nano-cubosomal formulation at a dose of 100 mg/kg, which was similar to normal control and famotidine-treated rats. Our results highlighted the enhanced gastroprotective impact of the yucca nano-cubosomal formulation in a dose-dependent manner. This suggests its potential use in preventing peptic ulcer recurrence.	**2024**	https://doi.org/10.1016/j.intimp.2024.112440
2	Faika Hassanein, Hewida H. Fadel, Amany I. Shehata, Noha Alaa Hamdy & Inas M. Masoud. In silico study to explore the mechanism	Medical biochemistry	We aimed to assess salivary and seroprevalence of Toxoplasma immunoglobulins in risky populations and evaluate drug docking targeting TgERP. A cross-sectional study was conducted in Alexandria University hospitals' outpatient clinics. 192 participants were enrolled from September 2022 to November 2023. Anti-Toxoplasma IgG and IgM were determined in serum and saliva by ELISA. An in-Silico study examined TgERP's protein–protein interactions	**2024**	https://doi.org/10.1038/s41598

	of Toxoplasma-induced inflammation and target therapy based on sero and salivary Toxoplasma. Scientific Reports 14, 13600 (2024		(PPIs) with pro-inflammatory cytokine receptors, anti-inflammatory cytokine, cell cycle progression regulatory proteins, a proliferation marker, and nuclear envelope integrity-related protein Lamin B1. Our findings revealed that anti-T. gondii IgG were detected in serum (66.1%) and saliva (54.7%), with 2.1% of both samples were positive for IgM. Salivary Ig had 75.59% sensitivity, 86.15% specificity, 91.40% PPV, 64.40% NPP, 79.17% accuracy and fair agreement with serum IgG. On the other hand, the sensitivity, specificity, PPV, NPV, and accuracy in detecting salivary IgM were 75.0%, 99.47%, 75.0%, 99.47%, and 98.96%. AUC 0.859 indicates good discriminatory power. Examined synthetic drugs and natural products can target specific amino acids residues of TgERP that lie at the same binding interface with LB1 and Ki67, subsequently, hindering their interaction. Hence, salivary samples can be a promising diagnostic approach. The studied drugs can counteract the pro-inflammatory action of TgERP.		-024-63735-z
3	Maha A Feissal Rabie, Marwa H Gaber, Mostafa A Soula, Inas M Masoud. Endothelail and Stress Index as One of New Prognostic Determinants of COVID- 19 Severity. Afro-E Egyptian Journal of Infectious and Endemic Diseases.2023;13(2):101-113.	Medical biochemistry	COVID-19 pandemic began in China in 2019. The disease course can be unnoticed, mild, aggressive or end by death. Several prognostic markers have been studied in order to minimize the severity of the disease or its danger. This study aims at investigating the prognostic value of Endothelial activation and stress index (EASIX) as a new predictor in addition to some haematological, biochemical, computerized tomography (CT), electrocardiogram (ECG) and echocardiography (Echo) findings as determinants of the COVID-19 severity. Patients and Methods: 105 non vaccinated COVID-19 patients aged 17 89 admitted to a referral hospital in Alexandria, Egypt, from January to August 2022 with positive nasopharyngeal qualitative PCR swabs were included. Considerations include demographics, history, hospital stay, and intensive care unit (ICU) admission. Complete blood picture with differential count, C-reactive protein, ferritin, D Dimer, liver and renal function tests, lactate dehydrogenase, cardiac markers, EASIX, chest CT, ECG, and Echo were done. Results: EASIX along with D-Dimer and ferritin showed statistically significant sensitivity and specificity when analysed as predictors for COVID-19 mortality, need for ICU admission and mechanical ventilation, while lymphocyte/monocyte ratio (LMR) showed statistically significant sensitivity and specificity only for COVID-19 mortality and need for ICU admission. D-Dimer had the highest overall accuracy, followed by ferritin, EASIX, and the lowest accuracy appear in LMR. Conclusion and recommendation: Because of its strong correlation with COVID-19 mortality, ESAIX should be added as a new biomarker to the existing set of biomarkers linked to poor prognosis namely D-Dimer and ferritin .	**2023**	DOI: 10.21608/aeji.2023.206428.1287

4	Amira E. El-Nahasa , Heba M. Elbedaiwya , Inas M. Masoudb , Rania G. Aly c , Maged W. Helmyd,e, Amal H. El-Kamelf .Berberine-loaded zein/hyaluronic acid composite nanoparticles for efficient brain uptake to alleviate neuro-degeneration in the pilocarpine model of epilepsy. European Journal of Pharmaceutics and Biopharmaceutics. 2023; 11/4/2023.	Medical biochemistry	Berberine hydrochloride is a plant alkaloid with versatile medicinal applications, yet it has suffered from multiple limitations in its usage. Nonetheless, the acknowledged role of berberine in controlling seizures has fuelled the need to develop a nanosystem capable of delivering it safely and efficiently to the brain. Consequently, zein and hyaluronic acid were chosen for this purpose, and about twenty formulations with different preliminary factors were screened. Afterward, three promising formulations were loaded with berberine and characterized to select an optimum formulation for further in vivo inspection. The B2 formula of particle size of 297.2 nm ± 1.86 and % entrapment efficiency of 83.75% ± 1.39 has succeeded in the increment of the brain uptake of berberine. Moreover, compared to free berberine suspension, the severity of pilocarpine-induced status epilepticus in rats was depleted after the subcutaneous administration of B2. The hippocampal tissue of rats receiving B2 showed signs of reduced neuro-degeneration, remarkably lower expression levels of COX-2 and TNF-α, and enhanced antioxidant activity. Finally, the relative safety of the developed system was determined after searching for any sign of intoxication or behavioral changes. In conclusion, the developed berberine loaded composite nanoparticles successfully delivered berberine across the BBB securely to ameliorate the deteriorating impact of pilocarpine-induced epilepsy	**2023**	https://doi.org/10.1016/j.ejpb.2023.04.008
5	Faika Hassanein,, Inas M. Masoud, Zeinab M. Awwad, Hussin Abdel-Salam, Mohamed Salem, Amany I. Shehata. Microbial bowel infections-induced biochemical and biological abnormalities and their effects on young Egyptian swimmers. Sci Rep 13, 4597 (2023).	Medical biochemistry	Abstract: Swimmers' personal hygiene afects the spread of microbes in pools. Aim: The present study aimed to determine the incidence of microbial infections among young Egyptian swimmers and its impact on swimmers' scores. From January 2020 to June 2021, Methods: 528 public club swimmers were examined crosssectionally. Swimmers were divided into two groups according to their star tests and their scores in the competition (group 1 with a high score and group 2 with a low score). Stool samples, biochemical and biological parameters were assessed. Results: Microbial infections were 54% for intestinal parasitosis and 2.8% for Helicobacter pylori. The rate of intestinal parasitosis was higher among Gp2 as compared to Gp1. The results also revealed higher prevalence of Cryptosporidium spp., Giardia lamblia, Entameba histolytica, and Cyclospora among Gp2 than Gp1. Swimming frequency, and duration infuenced the infectious status that induced anemia, abnormal blood pressure, and heart rate. Infected swimmers with cryptosporidiosis had higher alanine transaminase levels, white blood cells, and diferential cells but lower aspartate transaminase levels. Giardiasis showed higher reduction in the biochemical markers including ferritin, lactoferrin, iron, and transferrin among Gp 2, compared to Gp 1 and thus afected the swimmers' scores.	**2023**	https://doi.org/10.21203/rs.3.rs-2113868/v1

			Conclusion Thus, raising swimmers' hygiene awareness and targeting health education is oblige		
6	Ghaleb Oriquat, Inas M. Masoud, Maher A. Kamel, Hebatallah Mohammed Aboudeya, Marwa B. Bakir and Sara A. Shaker. The anti-obesity and anti-steatotic effects of chrysin in rat model of obesity mediated through modulating the hepatic AMPK/mTOR/lipogenesis pathways. Molecules. 2023, 28(4), 1734;.	Medical biochemistry	Abstract: Obesity is a complex multifactorial disease characterized by excessive adiposity and is linked to an increased risk for nonalcoholic fatty liver disease (NAFLD). Flavonoids are natural polyphenolic compounds that exert interesting pharmacological effects as antioxidant, anti-inflammatory, and lipid-lowering agents. Aim: In the present study, we investigated the possible therapeutic effects of the flavonoid chrysin against obesity and NAFLD in rats and the role of AMP-activated protein kinase (AMPK)/mammalian target of rapamycin (mTOR) pathways in mediating this effect. Methods: Thirty-two Wistar rats were divided into two groups: control and obese group. The obese rats were subdivided into 4 subgroups, untreated and treated orally with three doses of chrysin (25, 50, 75 mg/kg/day for one month). Results: results revealed that chrysin treatment significantly and dose-dependently declined the weight gain, improved hyperglycemia and insulin resistance in the obese rats. Chrysin suppressed lipogenesis, oxidative stress and stimulated expression of the genes controlling mitochondrial biogenesis in the hepatic tissues. Conclusion: In conclusion, the present study suggested that chrysin could be a potential promising option for the treatment of obesity and NAFLD. Our findings also provide evidence that chrysin treatment attenuates weight gain and ameliorates liver steatosis associated with obesity by modulating AMPK/mTOR/lipogenesis signaling pathways.	**2023**	**https://doi.org/10.3390/molecules28041734**
7	Faika Hassanein, Inas M Masoud, Marwa M Fekry, Mohamed S Abdel-Latif, Hussein Abdel-Salam, Mohamed Salem, Amany I Shehata. Environmental health aspects and microbial infections of the recreational water. BMC Public Health. 2023;23(1),1-11.	Medical biochemistry	**Background:** Swimming pools are places for practicing sports, recreation, relaxation, and socialization. However, swimming pools can expose swimmers to physicochemical and microbiological risks. Accordingly, we studied the environmental health aspects and microbial infections for such recreational water aiming to disclose the possible risks they pose on swimmers. **Methods:** 26 pools in Alexandria, Egypt were checked for water quality; 13 pools were checked in winter then summer, and other 13 pools were checked in summer only. Water was collected from both the top and the bottom of each pool; a total of 78 samples were collected in sterile containers. Each sample was divided into three parts; the first part was used for assessing the bacteriological quality of water. They were tested for total colony count (TCC), total coliform (TC), fecal coliform, and E. coli. The second part was used for chemical analysis. The third part was checked for parasitological study. **Results:** Obtained data showed that only 7.7%, 78.2%, and 100% of the examined water samples have been found to fulfill the Egyptian standards for TCC, TC, and E. coli, respectively. Moreover, parasitic infection (PI) was noticed in 73.1% of the	**2023**	Environmental health aspects and microbial infections of the recreati

			collected water samples; mainly Cyclospra and Isospora (37.2% each), followed by Cryptosporidium spp., Giradia lamblia, Microsporidia spp., and Blastocystis spp. (34.6%, 21.8%, 15.4%, and 14.1%, respectively). Acanthameba spp. was detected but at a lower rate (5.1%). The frequency of cleaning the swimming pools, flow rate, Cl_2, and total dissolved solids are significantly affected PI, independently. **Conclusion:** The tested water samples don't meet Egyptian bacteriological criteria. High parasitic contamination despite high residual chlorine level mainly intestinal coccidia, G. lamblia, microsporidia, and Blastocystis spp. Thus, monitoring pool's water quality and improving the disinfection system are mandatory. Consequently, Health education regarding hygienic behaviors before and during swimming should be included in governmental programs.		onal water | BMC Public Health | Full Text (biomedcentral.com)
8	Samar R Saleh, Doaa A Ghareeb, Aliaa A Masoud, Eman Sheta, Mohamed Nabil, Inas M Masoud, Adham M Maher. Phoenix dactilyfera L. Pits Extract Restored Bone Homeostasis in Glucocorticoid-Induced Osteoporotic Animal Model through the Antioxidant Effect and Wnt5a Non-Canonical Signaling. Antioxidants 2022, 11(3), 508;	Medical biochemistry	Abstract: Oxidative stress associated with long-term glucocorticoids administration is a route through which secondary osteoporosis can be developed. The therapeutic potential of Phoenix dactilyfera L. pits is offered by their balanced, valuable and diverse phytochemical composition providing protective potential against oxidative reactions, making it a good candidate to treat glucocorticoid-induced osteoporosis (GIO). Aim: This study evaluates the possible anti-osteoporotic effect of date pit extract (DPE) against dexamethasone (DEXA)-induced osteoporosis. Methods: Male rats were allocated into three control groups, which received saline, low and high doses of DPE (150 and 300 mg/kg/day), respectively. Osteoporosis-induced groups that received DEXA (1 mg/kg/day) were divided into DEXA only, DPE (2 doses) + DEXA, and ipriflavone + DEXA. Femoral bone minerals density and bone mineral content, bone oxidative stress markers, Wnt signaling, osteoblast and osteoclast differentiation markers, and femur histopathology were evaluated. Results: DPE defeated the oxidative stress, resulting in ameliorative changes in Wnt signaling. DPE significantly reduced the adipogenicity and abolished the osteoclastogenic markers (RANKL/OPG ratio, ACP, TRAP) while enhancing the osteogenic differentiation markers (Runx2, Osx, COL1A1, OCN). Conclusion: DPE restored the balanced proliferation and differentiation of osteoclasts and osteoblasts precursors. DPE can be considered a promising remedy for GIO, especially at a low dose that had more potency.	**2022**	**https://doi.org/10.3390/antiox11030508**
9	Ibrahim O. Ibrahim, Inas M. Masoud, and Wessam F. El-Hadidy. Pentraxin-3: A Novel	Medical biochemistry	Background: Inflammatory bowel disease (IBD); includes Crohns disease (CD) and ulcerative colitis (UC) is a chronic condition. Endoscopy is the most effective method in the diagnosis of IBD, although it is an invasive, uncomfortable procedure. Pentraxin-3 (PTX-3) is a primary	**2022**	10.21608/eajb

	specific biomarker for inflammatory bowel Disease Diagnosis. Egypt. Acad. J. Biolog. Sci.(C. Physiology and Molecular biology). 2022; 14(1): 153-163. DOI: 10.21608/EAJBSC.2022.221330 . ISSN 2090-0767.		local inflammatory biomarker. Aim: This study aims to prove that PTX-3 shows sensitivity and specificity in the diagnosis of IBD as a non- invasive biomarker . Design and Methods: Thirty-six (45 ± 15years) subjects, were divided into Group I (control): 12 healthy volunteers, group II: 12 CD patients and group III: 12 UC patients. Serum levels of PTX-3, antinuclear antibody (ANA) and C-reactive protein (CRP)as well as fecal calprotectin level were assessed at the start of the study and at the end of 8 weeks mesalazine treatment. Results: revealed a significant elevation of both calprotectin and PTX-3 levels in either CD or UC- patients in comparison to the control, with no significant difference between them regarding CRP and ANA levels. After mesalazine therapy, serum PTX-3 level was significantly decreased in both UC and CD patients, while no significant change has been detected in other studied parameters.Conclusion: PTX-3 can be used as a sensitive, specific, non- invasive inflammatory biomarker for diagnosis and follow-up of IBDs.		sc.2022.221330
10	Hanan Farouk, Azza Hassan, Faika Hassanein, Inas M. Masoud, Amany I. Shehata, Marwa M. Fekry. Molecular and Microscopical Diagnosis of Cryptosporidial infection among Immunocompromised and Immunocompetent Patients. The Annals of Medical and Health Sciences Research. 2021;11:S5:48-54.	Medical biochemistry	Objective: To study the prevalence of cryptosporidial infection among immunocompromised and immunocompetent patients by using microscopic and molecular examination. Methods: A hospital-based, cross-sectional study was conducted in the Fevers Hospital, Alexandria, Egypt. 300 individuals including 150 patients with immunocompromising conditions (90 with HIV/AIDS and 60 with renal failure and undergoing hemodialysis) and 150 immunocompetent patients (meningitis, acute hepatitis, skin cellulitis and erysipelas) were enrolled in the present work. Stool samples were collected and subjected to modified Ziehl-Neelsen and nested PCR to detect cryptosporidiosis. EDTA – blood samples of immunocompromised patients were collected for CD_{4+} T-cell counting. Results: *Cryptosporidium* infection rate among immunocompetent Patients was approximately half the rate detected among immunocompromised patients (32% vs. 56%) and the difference was statistically significant (P <0.001). Rural residence and illiteracy were found to be highly associated with *Cryptosporidium* spp. infection among both immuno-compromised and immuno-competent groups. 54% of infected patient with low CD4T cell count (<200) had moderate oocyst density and 21.7% of them had high cyst density while 50% of those with CD4Tcell count $\geq$ 200 showed low oocyst counts and only 5.3% of them presented with high oocysts density (P= 0.001). Only 15 samples with high oocyst densities yielded amplicons. Compared to MZN, PCR showed a sensitivity of 11.4% and a specificity of 100%. Conclusion: DNA amplification may be inhibited due to the presence of substances as hemoglobin degradation products, bilirubin and bile acids in the feces leading to false-negative PCR results. Meanwhile, MZN staining smears showed enough accuracy for *Cryptosporidium* diagnosis.	**2021**	

11	Christine A. Georgy , Inas M. Masoud, Khaled Helmy , Mohamed M. Mokhtar , Ebtesam M. Abdalla ,and Noha M. Issa. Associations of the Cannabinoid Receptor -1 Polymorphisms with the Susceptibility to Major Depressive Disorder and the Response to the Antidepressant Escitalopram in a Sample of Egyptian Patients. IOSR Journal Of Pharmacy And Biological Sciences (IOSR-JPBS) e-ISSN:2278-3008, p-ISSN:2319-7676. Volume 16, Issue 3 Ser. I (May – June 2021), PP 54-61	Medical biochemistry	Background: The endocannabinoid system, especially the cannabinoid receptor-1 (CNR-1) is associated with depression and antidepressant treatment. Some polymorphisms of CNR1 gene of the cannabinoid receptor-1 are associated with depression and clinical response to antidepressants. Aim: This study investigated the effect of the polymorphisms 4895A/G and 1359 G/A of the CNR1 gene on the etiology of depression, and on response to treatment with Escitalopram. Subjects and methods: CNR1 polymorphisms 4895A/G and 1359 G/A of cases and controls were determined by Polymerase Chain Reaction-Restriction Fragment Length Polymorphism technique. Diagnosis of cases was determined by Diagnostic and Statistical Manual of Mental Disorders-5th edition, and then they were treated with Escitalopram for six weeks. Drug response was determined by Hamilton Rating Scale of Depression. Results: The association between both polymorphisms and Major Depression was not statistically significant. While there was a statistically significant difference between the genotypes (AG and GG) of the polymorphism 4895A/G of responders and non-responders, especially in males ($p<0.001$). The polymorphism 1359G/A showed no significant difference between the genotypes of responders and non-responders. Conclusion: The polymorphism 4895A/G is not associated with major depression, but is associated with treatment response to Escitalopram, especially in males. While the polymorphism 1359G/A showed no association with major depression or treatment response in Egyptian population.	**2021**	DOI:10.9790/3008-1603015461
12	Faika I Hassanein1, Inas M Masoud2, Amany I Shehata. Infection hazard of exposure to intestinal parasites, H. pylori and hepatitis viruses among municipal sewage workers: a neglected high-risk population. Parasitologist United Journal. 2019;7(12:2) P 130-138) – DOI: 10.21608/PUJ.2019.13679.1047.	Medical biochemistry	Background: Wastewater may contain pathogenic human and animal excreta-derived micro-organisms that can cause infections. Municipal sewage workers are relevant neglected high-risk population especially in the absence of effective protective equipment and lack of hygienic practices mainly washing hands. Objective: The present study aims to assess the hazards of infection with micro-organisms among municipal sewage workers as a neglected population Methods: A cross-sectional study was conducted on sewage workers from different sectors in Alexandria Governorate, Egypt. Collected stool samples were subjected to the following techniques; Kato-Katz, ether concentration, Jones' Media culture, modified Ziehl-Neelsen, and quick hot Gram-chromotrope staining. Stool samples were also tested for *Helicobacter pylori* antigen. Serum was separated for detection of viral hepatitis C antibodies (HCV Ab), and HBV surface antigen (HBVs Ag). Results: Out of the 410 examined workers, 289 (70.5%) were infected; among them 111 (38.4%) had mixed infections. It was found that 56.8%, and 31.2% harbored intestinal parasitic infections (IPIs) and *H. pylori*, respectively; and 12.2% had hepatitis mainly HCV (9.8%). Protozoal infections amounted to 54.6%, and only 5.9% had	**2019**	DOI: 10.21608/puj.2019.13679.1047

			helminthic infections. *Blastocystis* spp. was the most prevalent parasite (46.8%) followed by *Cryptosporidium* spp., *Entamoeba histolytica/dispar* and *Microsporidium* spp. (15.6%, 11.7%, and 7.8%, respectively). Almost equal percentages were recorded for single IPI and multiple infections (28.3%and 28,5% respectively). Significantly higher rates of IPIs and *H. pylori* were observed among workers who were in frequent contact with sewage. Also, IPIs were statistically higher among young workers (<40 years), while hepatitis was significantly more prevalent among those from rural areas. Conclusions: Although almost all the detected microbiological infectious hazards can affect sewage workers *via* sources other than their occupational hazard, our findings call for the importance of self-protection measures that should be in association with regular medical investigation and treatment.		
13	Nermine Mogahed, Safaa Ibrahim Khedr, Rasha Abdelmawla Ghazala, Inas Mohamed Masoud. Can miRNA712_3p be a promising biomarker for early diagnosis of toxoplasmosis? Asian Pacific Journal of Tropical Medicine 2018; 11(12): 688-692. doi:10.4103/1995-7645.248341. (ISSN 2352-4146).	Medical biochemistry	Objective: To assess the role of miRNA712_3p as a specific biomarker in early detection of toxoplasmosis in plasma of mice acutely infected with Toxoplasma gondii. Methods: Real-time PCR was used to measure the level of miRNA712_3p in plasma of infected mice. Immune-competent and immune-suppressed mice were examined, three and five days post-infection. Results: Results revealed significant up-regulation of plasma miRNA712_3p in both immune-competent and immune-compromised groups in comparison to the control non-infected group. Additionally, an increase in the level of miRNA712_3p was noticed correspondently in the parasite density detected in liver impression smears. Conclusions: miRNA712_3p can be used as a novel biomarker for the detection of Toxoplasma gondii infection in both immune-competent and immune-compromised host.	**2018**	*DOI:* 10.4103/1995-7645.248341
14	Noha S. Kandil, Rania Mohamed El Sharkawy , Lubna Mohamed Ibrahim Desouky , Lamia Said Kandil , I.M. Masoud, Noha Gaber Amin. Renalase gene polymorphisms (rs2576178 and rs10887800) in Egyptian hypertensive end stage renal disease patients. The Egyptian	Medical biochemistry	Background: The highly polymorphic gene encoding human renalase (RNLS) is a 311,000 bp gene located on chromosome 10. Aim: This study aimed at studying the possible association of the two RNLS gene polymorphisms rs2576178 and rs10887800 with chronic kidney disease in general or specifically with hypertensive nephropathy in Egyptian end stage renal disease (ESRD) patients on maintenance hemodialysis. Subjects and method: This case control study was conducted on two hundred and eighty one individuals, divided equally into two groups; an end stage renal disease patients on maintenance hemodialysis with/ without hypertension and healthy matching individuals as a control group. Full clinical examination, Biochemical analysis and Molecular genetic testing were performed to detect single nucleotide polymor- phism using restriction fraction length polymorphism (RFLP) for RNLS rs2576178 and rs1088780. Results: The results of this study demonstrated that the	**2018**	https://doi.org/10.1016/j.ejmhg.2018.02.004

	Journal of Medical Human Genetic. The Egyptian Journal of Medical Human Genetics 2018;19: 379-383.		https://biotech-asia.org/wp-content/themes/biss/img/shadow.pngrisk of developing ESRD was increased among carriers of AA genotype for the rs10887800 (3.05 times) p = 0.001, OR = 3.05, CI95% (1.558–5.971) and GG genotype for the rs2576178 p = 0.047, OR = 1.949, CI95% (1.028–3.694). Conclusion: Our study revealed that the risk of developing end stage renal diseases was increased among carriers of AA genotype for the rs10887800 polymorphism and GG genotype for the rs2576178 polymorphism		
15	Mohamed E Zayed, Suliman A Alharbi, Inas M Masoud, Reda A Ammar. Utilization of bacteria as virulence agents for urinary tract infectionin Egyptian patients. Biosciences Biotechnology Research Asia.	Medical biochemistry	This study involved an examination ofbacteriuria according to the results of quantitative cultures in overall 300 urine samples collected from patients admitted at El-Hussein University Hospital. The infection rate of both E. coli and Klebsiella pneumoniae were found to be 26.92 and 11.54%; respectively. As the glucose and albumin concentration increased, the number of all infectious organisms was greatly increased. Similarly when creatinine concentration elevated up to 3.5 g/l, the infectious organisms (Enterobacterfaecalis, Streptococcus sp.(B) group, Proteus mirabilis, P. aeruginosa, Enterobactersp. and Citrobacterfreundii) were significantly increased. The effect of sodium chloride (NaCl), calcium oxalate (CaC2O4), magnesium chloride (MgCl2) and uric acid (C5H4N4O3) concentrations were fluctuated according to the concentration used and the type of each infectious organism. Noracin was effective against all tested organisms. Acinetobactersp. recorded 50% resistance to ampicillin while it was sensitive to all other tested antibiotics.	**2016**	**http://dx.doi.org/http://dx.doi.org/10.13005/bbra/1029**
16	Inas Mohamed M. Mokhtar, Mervat M. Mostafa, and Asmaa A. Aziz. Study the polymorphism in DNA repair genes (XRCC1) and colorectal adenocarcinoma risk. IJSER 2013; 4 (9):1571-76 (ISSN 2229-5518.	Medical biochemistry	Background: XRCC1 gene has been extensively investigated both in its function and in its association with cancer risk. The presence of the variant Gln399 allele has been shown to be associated with measurable reduced DNA repair capacity. Aim: The present study aimed to study the association between XRCC1 Arg399Gln polymorphism and colorectal cancer risk, and to investigate their role as susceptibility markers for colorectal cancer. Subjects and method: Twenty colorectal adenocarninoma patients attended Tanta cancer center during the period from December 2010 to May 2011 were enrolled in this study. Matching group of 20 healthy controls was used for comparison. Subgroup analyses based on age groups, sex, and smoking status were further performed. Results: The overall data failed to indicate significant associations between XRCC1 Arg399Gln polymorphism and colorectal cancer risk (Arg/Arg odds ratio (OR) = 1.27; 95% CI = 0.34- 4.31; Arg/Gln: OR = 1; 95% CI = 0.27- 3.67; Gln/Gln: OR = 0.474; 95% CI = 0.04 -5.69). In subgroup analyses stratified by age, gender and smoking status similar results were obtained. Conclusion, XRCC1 Arg399Gln polymorphism is not associated with colorectal adenocarinoma and is consistent with the results of a recently published meta-analysis.	**2013**	Study the polymorphism in DNA repair genes (XRCC1) and colorectal adenocarcinom

					a risk (ijser.org)
17	I. M. El Akkary, Z.A.El-Kholy, M.M.Mokhtar, M.M.Mostafa, I.M.Masoud, and A.I. Adam. Study the Possible Role of β2 Adrenergic Receptor Gene in the Pathogenesis of Bronchial Hyperresponsiveness in Asthmatic Patients and its Relation to Disease Severity and Treatment Response.J.Am.Sci.2012;8(10):394-408].(ISSN:1545-1003).http://www.jofamericanscience.org.	Medical biochemistry	Background and objectives: Several identified β2-adrenergic receptor (β2AR) gene polymorphisms, including the amino acid substitution from arginine (Arg) to glycine (Gly) at codon 16 and from glutamine (Gln) to glutamic acid (Glu) at codon 27, are linked with functional changes in the β2AR in the respiratory system. The objective of this study was to investigate the association between single nucleotide polymorphisms (SNPs) in β2AR gene in asthmatic patients with bronchial hyperresponsiveness (BHR), asthma severity, and response to inhaled long acting β2 agonists. Methods: This case-control association study involved 60 patients with asthma and 60 healthy subjects. Thirty asthmatics patients of them received inhaled long acting β2agonists. The β2AR gene polymorphisms at codon 16 and 27 were assessed on the genomic DNA obtained from the whole blood. Genotyping was carried out by a PCR based restriction fragment length polymorphism technique. Results: 1- The combined genotype Gly Gly/Gln-Glu was positively associated with BHR ($P < 0.05$). 2- No association between β2AR polymorphism at codon 16 and asthma severity was observed. However; homozygous Gln27 genotype was significantly associated with severe asthma either individually or when combined with homozygous Gly16. In contrast; Glu 27 was found to reduce asthma severity as a significant negative association was observed between Gln-Glu, Gly-Gly/Gln-Glu and clinical severity score, and between Gly-Gly/Gln-Glu and the airway reactivity score ($P < 0.05$). 3- Glu27Glu genotype had significant positive association with the improvement in BHR (assessed by percentage of change in PD20-FEV1) after long acting β2 agonist administration for 14 days (P	**2012**	