Publications Template

#	Research Title	Field	Abstract	Year of Publication Publishing	Publishing Link "URL"
1	Abdelhady S, El Ashmawy N, El Bahrawy H, Fouad H Cyclooxygenase-Independent Mechanism of Nonsteroidal Anti-Inflammatory Drugs. Am. J. PharmTech Res. 2014; 4(1)	Biochemistry	A potential mechanism of NSAID-mediated anti-proliferative activity may be through the induction of NAG-1. The present study was conducted to investigate the possible role of selective and non-selective COX inhibitors in inflammation associated angiogenesis and apoptosis. Wistar rats were classified into 5 experimental groups; 9 rats each. Group (1) normal control andgroup (2) injected s.c. with 0.3 % carrageenan in muscle. Groups (3, 4 and 5) were injected s.c. with carrageenan and at the same time given orally 10 mg/Kg Celecoxib, 12.5 mg/Kg Nimesulide or 10 mg/Kg Sulindac, respectively. NAG-1 gene expression in the liver was measured by RT-PCR. Serum TNFα and muscle caspase-3 were measured by ELISA.Immunohistochemical detection of VEGF in the muscle was investigated. Carrageenan untreated rats showed insignificant change in NAG-1 gene expression compared with control group. Serum TNFα and muscle caspase-3 as well as VEGF expression in carrageenan untreated group were significantly increased	2014	

			compared with normal control rats. In Sulindac treated group, NAG-1 gene expression in the liver and muscle caspase-3 were significantly increased compared with Celecoxib and Nimesulide groups. TNFα serum level was significantly decreased in Nimesulide and Celecoxib treated groups compared with carrageenan and Sulindac groups. The examined NSAIDs proved proapoptotic and antiangiogenic effects.		
2	Gene Expression of Peroxisome Proliferator-Activated Receptor Is Upregulated by Nonsteroidal AntiInflammatory Drugs and Correlates with Cyclooxygenase-2 Suppression In Inflamed-Rat Muscle. IOSR Journal of Pharmacy and Biological Sciences. Volume 3, Issue 3 (Sep-Oct. 2012), PP 25-34.	Biochemistry	Abstract: The peroxisome proliferator-activated receptors (PPARs) have been implicated in the regulation of endothelial cell inflammatory response. The purpose of the present study was to clarify the molecular mechanism of NSAIDs in controlling inflammation regarding the gene expression of PPARα and PPARγ1 in a rat model of chronic inflammation. Wistar rats were classified into 5 experimental groups; 9 rats each. Group (1) normal control; group (2) injected s.c. with 0.3 % carrageenan in muscle on days 1, 4 and 7. Groups (3, 4 and 5) were injected s.c. with carrageenan and at the same time given orally 10 mg/Kg Celecoxib, 12.5 mg/Kg Nimesulide or 10 mg/Kg sulindac, respectively. On day 7, edema was measured before scarification. Gene expression PPARγ1 and PPARα was measured in rat muscle by RT-PCR. COX-2 was analyzed in rat muscle by ELISA. Celecoxib	2012	

			produced the greatest % inhibition of carrageenan-induced edema. PPARγ1 and PPARα gene expression were significantly increased by NSAIDs treatment compared with carrageenan-untreated group. The inhibition of COX-2 together with upregulation of PPARα and PPARγ1 nominate NSAIDs to be promising candidates for pharmacologic treatment of tumorgenesis.		
3	Effects of Dietary Control, Exercise and Anti-Obesity Prescriptions on Weight Loss: An Interview-Based Study.	Biochemistry	Obesity is a major public health problem all over the world. The objective of this work was to evaluate effectiveness of various weight management strategies. Methods A clinic interview-based study was accomplished in various nutrition clinics in Alexandria city and pursued the following data: demographic data, body mass index (BMI), lipid profile, comorbidities, with emphasize on the authenticity of the effectiveness of weight management strategies. Results The study comprised 2,240 participants following weight management strategies at nutrition clinics; 59.8% were obese (group I) and 40.2% were overweight (group II). BMI was highest among age group 30-40 years in group I and 18-20 years in group II. Weight management strategy by dietary control merely in 55.8% of group I and 59.5% of group II. 33.5% of group I implemented exercise training plan and 41.5% of group II respectively. Fourteen point seven	2018	

			percentage of group I responded to adjuvant antiobesity drug versus 1.5% of group II. The most commonly adopted anti-obesity prescription was Orlistat. Conclusion Participants who received anti-obesity prescriptions combined with dietary control and exercise obtained the best results when compared to other strategies, therefore anti-obesity prescriptions may be beneficial in conditions that are resistant to other weight management strategies. Comorbidities, particularly dyslipidemia; may partially impede effective obesity management protocols.		
	Samar R. Saleh, Sherien A. Abdelhady, Amira R. Khattab, Wessam F. El-Hadidy(2020). Dual prophylactic/therapeutic potential of date seed, and nigella and olive oils-based nutraceutical formulation in rats with experimentally-induced Alzheimer's disease: A mechanistic insight. Journal of Chemical Neuroanatomy.	Biochemistry	Alzheimer's disease (AD) is a progressive neurodegenerative disorder with a multifactorial etiology and significantly increasing incidence during the last decade. Hence, developing an effective therapy is crucial for public health. The current study aimed to examine the dual prophylactic/therapeutic potential of a nutraceutical formula based on aqueous extract of roasted date seeds, and nigella and virgin-olive oils against experimentallyinduced Alzheimer's disease in rats. Alzheimer's disease-like pathology was induced in male Wistar rats using oral CuSO4 (200 mg/Kg/day for two months). The nutraceutical formula was given orally to experimental animals (10 mL/kg/d) for 14 days before (as prophylaxis)	2020	

			and after Alzheimer's disease induction and its therapeutic effect in both cases is tested in comparison to donepezil (0.5 mg/kg/d). The nutraceutical formula was found to ameliorate the CuSO4-induced neuronal damage and regenerate the affected hippocampus tissue and significantly improvemed in learning ability. The formula was also effective in decreasing brain amyloid-β, tau protein, TNF-α level, iNOS level in hippocampus, oxidative stress level, and inhibiting acetylcholinesterase activity and expression in brain and hippocampus, respectively. Further, an increase in GSH levels, activities of SOD, and GST and levels of hippocampus ADAM 17 and brain phospholipids was observed. In conclusion, the studied nutraceutical formula is proved to be effective in ameliorating Alzheimer's neurodegenerative progression with added-prophylactic potential.		
	Noha S. El-Salamouni, Mai M. Ali, Sheeren A. Abd El-Hady, Lamia S. Kandil, Gihan A. El Batouti & Ragwa M. Farid (2019). Evaluation of chamomile oil and nanoemulgels as a promising treatment option for atopic dermatitis induced in rats. Expert Opinion on Drug Delivery.	Biochemistry	Background: Atopic dermatitis is a chronic inflammatory skin disease that remarkably affects the quality-of-life of patients. Chamomile oil is used to treat skin inflammations. We evaluated the efficacy of chamomile oil and nanoemulgel formulations as a natural alternative therapeutic option for atopic dermatitis. Research design and methods: Formulations were developed comprising chamomile oil: olive oil (1:1),	2019	

			Tween 20/80 or Gelucire 44/14 as surfactant-cosurfactant mixtures, propylene glycol (10%w/w), water and hydroxypropyl methylcellulose (3%w/w). In-vitro physicochemical characterization, stability testing and in-vivo assessment of inflammatory biomarkers and histopathological examination of skin lesions were conducted in rats induced with atopic dermatitis. Results: Nanoemulgels G1 and X1 which displayed the smallest particle size of 137.5 ± 2.04 and 207.1 ± 5.44 nm, good homogeneity and high zeta-potential values of –26.4 and –32.7 mV were selected as the optimized emulgel. Nanoemulgels were nonirritating of pH value 5.56, readily spreadable, and were physically stable following 10 heating-cooling cycles. Treatment with nanoemulgels showed a two-fold decrease in duration of skin healing and no spongiosis compared to chamomile oil. Levels of biomarkers were reduced after topical application of both nanoemulgels and chamomile oil. Conclusion: Nanoemulgels are a potential cost effective, safe topical carrier system for chamomile in treating atopic dermatitis		
	Rania M. Khalil, 2 Abla Ebeid, 3 Hassan Fayed and 4 Sherien Abd-Elhady (2020). Metformin: New Insights into	Biochemistry	Background and Objective: Alzheimer disease is a major problem continues to increase worldwide. Insulin resistance has recently	2020	

	Alzheimer Disease Protection. Asian Journal of Biochemistry		been implicated in Alzheimer disease pathogenesis as it decreases insulin degrading enzyme and therefore induces the accumulation of amyloid beta. The aim of the study was to explore the effect of metformin in the brain of Alzheimer Disease (AD) rat model. Materials and Methods: Alzheimer disease was induced chemically in rats by adding 6 mg LG1 copper sulphate (CuSO4) in drinking water. Metformin-treated group in which (150 mg/kg/day) metformin was given orally to Alzheimer induced rats for 28 days. Rat's behaviour was assessed by the Morris water maze test. Histopathology of the hippocampus of neurofibrillary tangles, amyloid beta and insulin-degrading enzyme levels were evaluated by enzyme-linked immunosorbent assay in hippocampus tissues. Results: The amyloid beta level was significantly reduced while insulin degrading enzyme level was significantly elevated in the metformin-treated group compared with Alzheimer disease rat model. Conclusion: It is concluded that the findings of the present study have proposed for the first time the potential effect of metformin in protecting against copper producing senile plaques that leads to Alzheimer disease		

	Lamia Kandil, Amira Hanafy & Sherien Abdelhady(2020): Galantamine transdermal patch shows higher tolerability over oral galantamine in rheumatoid arthritis rat model, Drug Development and Industrial Pharmacy.	Biochemistry	Rheumatoid arthritis (RA) is a chronic autoimmune disease of idiopathic etiology that triggers inflammatory cytokines compromising the joint mobility. Epidemiological evidences recommend the utilization of galantamine (GH) to reverse the anti-inflammatory reactions induced RA. Oral administration of GH is non-selectivity due to its association with serious gastrointestinal symptoms which, could hinder its therapeutic success. Therefore, the present study aimed to validate the therapeutic potential of GH transdermal patches as a novel application to constitute an effective and tolerable delivery system for managing RA in adjuvant arthritis model. RA was induced in Sprague-Dawley rats intradermally by Heat-killed M (0.12 ml/day). Oral GH (1.25 mg/kg/day) and GH transdermal patch (2.5 mg/kg/2 days) were administrated for 14 days, during which the hind paw and body weight (BW) were assessed. Effects of C-reactive protein (CRP), inflammatory cytokines (TNF-α, IL-10 and IL-1β) and Janus kinase (JAK-2) were evaluated. Oral- and transdermal GH significantly improved the hind paw edema in arthritis animal model and offered a protective impact against RA. Oral GH group showed marked decrease in BW than that of transdermal patches group. Transdermal patch group showed a significant decrease in	2020	

			the level of IL-1β more than the oral group. However, no significant difference was detected in the levels of TNF-α and IL-10 between the two groups. It is concluded that GH transdermal patch can be a promising drug delivery system that copes with side effects better than oral GH consequently represents novel strategy in management of RA.		