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CONTENTS

	ABSTRACT Dicofol is an organochlorine acaricide widely used in local market. The present study was conducted to evaluate how far dicofol chronic toxicity affects male fertility indices, as well as for assessment of reproductive toxicity which may result from this acaricide by estimating the sexual and reproductive hormones. Moreover, to investigate the effect on testicular function and epididymal oxidative parameters. In this investigation, two equal groups of male albino rats were orally administered dicofol, at 4.19 and 16.75 mg/kg body weight/day through drinking water (30 and 120 part per million, respectively) for consecutive 90 weeks. Dosages represent $^{1}/80$ and $^{1}/20$ LD_{50} of dicofol, respectively. The third group was kept as control group. At the end of each experimental period (16, 28 and 90 weeks), blood samples were taken for estimation of sexual , reproductive and thyroid hormones. Also, animals were dissected and the reproductive organs (epididymus and testes) were taken to measure fertility indices, oxidative parameters and testicular biomarkers. The main results of this study were : dicofol at both doses (lower and higher) decreased testes and epididymus weights, this effects were dose-related and associated with decline in epididymus sperm count, percent of sperm motility, viability and maturity and increased abnormal sperm morphology. Moreover, decline in serum testosterone, follicle stimulating hormone and luteinizing hormone levels concomitant with an elevation in estradiol and progesterone levels were observed. Additionally, Dicofol-treated rats demonstrated de-generation and atrophy of some seminiferous tubules associated with depression in luminal spermatozoal concentration. Meanwhile, dicofol increased oxidative stress by an elevation lipid peroxidation index associated with depletion in glutathione level. Concerning the testicular biomarkers, dicofol increased total protein level and decreased the activities of the enzymes responsible of spermatogenesis, *i.e.* lactate dehydrogenase, acid and alkaline phosphatase activities. Conclusion: the results reinforce the idea that, dicofol, as o'ch pesticide, possesses estrogenic and antiandrogenic properties as well as oxidative stress. [Life Science Journal 2010;7(3):5-19]. (ISSN: 1097-8135). **Keywords:** Rats, pesticide, dicofol, chronic toxicity, fertility, testes, epididymus, lipid peroxidation, glutathione, testicular markers, hormones		
3	**Exploring Biotechnology For Conserving Himalayan Biodiversity** Rohit Joshi[1] Tapan K. Nailwal[2], Lalit M. Tewari[3] and Alok Shukla[1] Department of Plant Physiology[1], College of Basic Sciences & Humanities, G.B. Pant University of Agriculture & Technology, Pantnagar-263145, Department of Biotechnology[2], Department of Botany[3], Kumaun University, Nainital-263001-INDIA tapannailwal@gmail.com **Abstract:** The Himalaya is one of the largest and youngest mountain ranges of the world, and covers 10 percent of India's land area. Extending across much of the northern and northeastern borders of the country, the Himalayan massif regulates climate for a broad portion of Asia and provides ecosystem services (especially perennial water systems) to much of the heavily populated plains of India. The outlook for the future of bioprospecting and biodiversity conservation is difficult to predict, but the fact that the issue remains at the forefront of current debate, and that there are ongoing developments on both the institutional and economic front, suggests that much work remains to be done. There is a growing realization of the need for a clearer institutional framework, and for better involvement of local communities, but until concrete steps are taken in this direction, success stories will remain scattered. Under ideal conditions, bioprospecting can be an effective way to preserve biodiversity locally, and it can play an effective, albeit limited role, in overall efforts to conserve global biodiversity. [Life Science Journal 2010;7(3):20-28]. (ISSN: 1097-8135). **Keywords:** Himalaya; Asia; bioprospecting; biodiversity; conservation; global	Full Text	3
4	**Prediction of Herbicide Sorption kinetics using GCMS Quantitation** A.U. Itodo*; F.W.Abdulrahman1; L.G.Hassan2; S.A.Maigandi3; H.U.Itodo4 *Department of Applied Chemistry, Kebbi State University of Science and Technology, Aliero, Nigeria 1Department of Chemistry, University of Abuja, Nigeria	Full Text	4

	2Department of Pure and Applied Chemistry, Usmanu Danfodiyo University, Sokoto, Nigeria 3Faculty of Agriculture, Usmanu Danfodiyo University, Sokoto, Nigeria 4Department of Chemistry, Benue State University, Makurdi, Nigeria Corresponding Author* Email: itodoson2002@yahoo.com; TEL: +2348073812726, +2348039503463 **Abstract:** Economically Viable adsorption technique based on sorbate removal by phosphoric acid (H3PO4) poultry droppings (PD) was proposed to improve the ecological system. Two ways activation schemes generated activated carbons was applied to herbicide uptake and evaluated with three (3) kinetic models. GC/MS quantitation experiment based on external standard method was performed to demonstrate up to 89.216% atrazine removal. The kinetic equilibrium study showed that a 300 minute sorbate – sorbent interaction gave 19.293 out of 25 gdm3 adsorption (being a 77.172% adsorption). This is only 5.140, 1.992, 1.432 and 0.632% higher than the 60, 120, 180 and 240 minutes interaction with 72.032, 75.180, 75.740 and 76.540% atrazine removal respectively .The pseudo-second order kinetics was observed to be more suitable in predicting the adsorption rate by the sorbate wherein the initial adsorption rate, h was estimated as 0.3646 g.mg-1 min-1. A time dependent physisorption phenomenon was evidenced. The major results support the conclusion that the sorted agro-waste has the potential to serve as extractants adsorbents in remediation process. [Life Science Journal 2010;7(3):29-36]. (ISSN: 1097-8135). **Key words**: Quantitation, Adsorption kinetics, Rate, Poultry droppings, GCMS		
5	**Chlorpyrifos-Induced Clinical, Hematological and Biochemical Changes in Swiss Albino Mice-Mitigating effect by co-administration of vitamins C and E** Suleiman Folorunsho Ambali,[a*] Dayo Olufemi Akanbi,[a] Mufta'u Shittu[a], AbdulGaniyu Giwa,[b] Olushola Olalekan Oladipo,[c] and Joseph Olusegun Ayo[a] [a]Department of Veterinary Physiology and Pharmacology, Ahmadu Bello University, Zaria, Nigeria [b]Department of Clinical Pharmacy and Pharmacy Administration, University of Maiduguri, Nigeria [c]National Veterinary Research Institute, Vom, Nigeria Short title: Vitamins C and E mitigate chlorpyrifos-induced pathological changes **Abstract** *Background.* Induction of Oxidative stress is one of the molecular mechanisms in chlorpyrifos toxicity. *Objective*. To evaluate the effect of prolonged CPF exposure on clinical, hematological and biochemical parameters in mice and the possible ameliorative effect of coadministration of vitamins C and E. *Methods.* 40 mice divided into 4 groups of 10 animals in each group served as subjects for this study. Groups I and II were administered corn oil (2 ml/kg) and combination of vitamins C (100 mg/kg) and E (75 mg/kg), respectively. Group III were exposed to CPF only (21.6 mg/kg ~ 1/5th of the previously determined LD_{50} of 108 mg/kg), while group IV were pretreated with combination of vitamins C (100 mg/kg) and E (75 mg/kg) and then administered CPF (21.6 mg/kg) 30 min later. The regimens were administered orally once daily for a period of 10 weeks. The mice were examined for signs of toxicity and weekly body weight changes. Blood and serum samples obtained from sacrificed animals at the end of the study were evaluated for some hematological and biochemical parameters, respectively. *Results.*Vitamins pretreatment ameliorated cholinergic toxic signs and changes in body weight, PCV, Hb, RBC and WBC count induced by CPF. CPF-evoked alteration in Na^+, K^+, Cl^-, TP, urea, creatinine, ALP and MDA levels were ameliorated by pretreatment with the vitamins. ALT and AST activities lowered by CPF was further reduced by vitamins pretreatment. *Conclusion*. Vitamins C and E protected mice from subchronic CPF-induced alteration in clinical, hematological and serum biochemical parameters. [Life Science Journal 2010;7(3):37-44]. (ISSN: 1097-8135). **Key words**- Chlorpyrifos; hematology; serum biochemistry, lipid peroxidation; vitamins C and E	Full Text	5
6	**Phytotoxic and Anti-microbial activities of Flavonoids in *Ocimum gratissimum*** Ighodaro Osasenaga.Macdonald, Agunbiade Shedrach.Oludare, Akintobi Olabiyi. Departments of Biochemistry & Microbiology, Lead City University, Ibadan, Nigeria Corresponding Author: Ighodaro O.M., E-mail: macigho@yahoo.com. Tel:+2347031833938	Full Text	6

Abstract

In this study, the leaves of *Ocimum gratissimum* have been investigated and found to contain flavonoids as part of their secondary metabolites. This observation agrees with the few available reports on the presence of flavonoids in *O.gratissimum* plants. The flavonoids were extracted from dried powdered leaves of *Ocimum gratissimum* using soxhlet extraction method. The crude extract was partially purified on column chromatography using an eluting system of formic acid and ethyl acetate in the ratio of 15:85.Qualitative tests were carried out to confirm the presence flavonoids in the O. gratissimum extract. Frothing test, as a follow up was also done on the extract to ensure the absence of saponins which are usually abundant as secondary metabolites in plants. The allelopatic investigation of the partially purified extract on bean and maize seeds germination, and on seedlings growth showed that *O.gratissimum* flavonoids are phytotoxic. The inhibition of the radicle and coleoptile growth was observed to be dose-dependent, and the radicles of both seeds were comparatively more inhibited. Eight human pathogenic microbes; six bacteria and two fungi were used to evaluate the antimicrobial activities of the flavonoid extract. A broad-spectrum antimicrobial effect was observed with the flavonoids. However, they had no effect on fungi growth. [Life Science Journal 2010;7(3):45-48]. (ISSN: 1097-8135).

Key words: *Ocimum gratissimum*, flavonoids, allelopatic, phytotoxic, pathogenic microbes, antimicrobial

7	**Mycological, Biochemical and Histopathological Studies on Acute Fusariotoxicosis In Sheep.** Atef, A. Hassan*; Mogda, K. Mansour**, Samira, A.M. Snousi ** and Randa, A. Hassan*** Departments of Mycology*, Biochemistry**and Pathology***, Animal Health Research Institute,Biochemistry Department,Dokki-Giza,and Veterinary Laboratory, El-Dakhla , El-Wadi -El-Gadid Governorate, Egypt. **ABSTRACT:** One hundred cases of diseased sheep at desert districts in governorates of (Giza; 6th. October and El-Wadi-El-Gadid), were investigated. Sixty percent of these sheep sera had a mean levels of T-2, zearalenone and fumonisins (2.5±0.2, 4.3±0.5 and 25.0±2.0) respectively. The used feeds and underground water in breeding of this sheep were examined mycologically which revealed that all examined samples gave a variable rates of pollution. Seven genera and 15 species of fungi were recovered from feeds and water. The most predominant isolates belong to members of genus Aspergillus with a range of (5-100%), followed by Fusarium spp. with a range of (40-90%), Penicillium spp. with a range of (10-55%) and Mucor spp. with a range of (10-50). The Fusarium toxins were detected in same feed samples, the largest amount estimated in crushed yellow corn (60%) namely FB1, T2 and zearalenone with the mean levels of (48.4±1.0; 3.0±0.1 and 0.84±0.03) respectively. The significant high levels of FB1 in the present feed samples and serum of diseased sheep gave a large possibility that FB1 was responsible for this disease outbreak in sheep. On the other hand, the biochemical examination of diseased sheep sera for estimation of toxic effects is based on the assumption that the elevated activities in levels of serum enzymes such as (AST, ALT, GGT, LDH and urea). While, slightly decreases in ceratinine, calcium and phosphorus levels compared with the apparently healthy group. The pattern of protein electrophoresis showed a significantly decreased values in serum total protein, alpha globulin, beta globulin and while slightly increase in gamma globulin. The internal organs of dead cases during this disease had various significant pathological changes in vital organs including hemorrhagic, alveolar pneumonia and calcification in lung. The liver showed hemorrhage, oedema, vacuolar degeneration and necrosis of hepatocytes with evidence of preneoplastic stage in liver cells. Whereas, the kidney showed vacuolar degenerating changes and necrosis of the tubular epithelium, in addition to glomurular oedema and calcium deposition. This study increased awareness of the significant dangerous effect of environmental pollutions particularly fusarium species and their toxins. This study increased awareness of the significant dangerous effect of environmental pollutions particularly fusarium species and their toxins. [Life Science Journal 2010;7(3):49-57]. (ISSN: 1097-8135). **Keywords:** pollution; biochemical alterations; fusarium	Full Text	7
8	**The effects of CRP and PlGF expression on plaque stability in human carotid atherosclerosis** Wang Bing, Wang Jiaxiang	Full Text	8

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Objective: This study aimed to investigate the effects of C-reactive protein (CRP) or placenta growth factor (PIGF) on atherosclerotic plaque stability. **Methods:** Fifty-five patients were recruited from among individuals who underwent carotid endarterectomy (CEA) in the Vascular Surgery department of the Fifth Hospital of Zhengzhou University from January 2008 to June 2009. The patients were divided into symptomatic and asymptomatic groups. Symptomatic patients were stratified according to the transient ischemic attack (TIA) frequency within six months: level I (1-2), level II (3-5), or level III (6 or more). CRP and PlGF expression were assayed and analyzed to determine whether they were associated with plaque stability. **Results:** No significant differences were found in CRP expression between the two groups, but PlGF expression in asymptomatic patients was lower in symptomatic patients. PlGF expression in asymptomatic patients was found to be positively related with TIA frequency, suggesting that lowering the PlGF level may represent an effective strategy to stabilize atherosclerotic plaques. [Life Science Journal 2010;7(3):58-63]. (ISSN: 1097-8135).

Keywords: carotid atherosclerosis, unstable plaque, placenta growth factor, C-reactive protein, transient ischemic attack

9	**Effect Of Aflatoxin B1, Zearalenone And Ochratoxin A On Some Hormones Related To Fertility In Male Rats** Atef A. Hassan; *M.A. Rashid** and Kh. M. Koratum ** * Mycology Dept., Animal Health Research Institute, Cairo, Egypt. ** Biochemistry Dept., Animal Health Research Institute, Cairo, Egypt. elbarawy4@yahoo.com; aishazyat@yahoo.com; atefhassan2000@yahoo.com **ABSTRACT** Three hundreds samples of feeds and sera of cattle and sheep (one hundred samples of each) were collected from farms at Minufiya, El-Behira and Assiute governorates in which animals (cattle and sheep) suffered from loss of weight gain, low productivity and disturbance in fertility. These samples were evaluated for mycotoxins contamination. Aflatoxins were detected in 30% of feed samples with the mean amount of 3.4 ± 0.1 ppm and ochratoxins in 20% with the mean values of 2.2 ± 0.02 ppm . Whereas, T-2 toxins and zearalenone were gained from 20% and 16% of samples with the mean levels of 36.0 ± 1.0 and 22 ± 0.3 ppm, respectively. But fuminosin B1 (FB1) toxin was found in 2% of samples at mean levels of 70 ± 0.01 ppm. The detection of mycotoxins in sera of diseased cattle and sheep showed that the most prevalent mycotoxins in cattle sera was aflatoxin B1 which detected in 40% of cases with the mean level of (5.4 ± 0.1), followed by ochratoxin A in 33% of cases with the mean level of (8.2 ± 0.1), T2 in 17% with the mean level of (26 ± 0.2) and zearalenon in (10%) with mean level of (19 ± 0.2). The lowest incidence was detected in cases 0f FB1 which obtained from 2% of cattle cases with the mean levels of (55 ± 0.6). Also , the pattern of incidence of mycotoxins in sheep sera were nearly similar to those in cattle with the exception that the FB1 not detected at all in sheep. The mycotoxins, aflatoxins, ochratoxins and zearalenone were given to male albino rats in the doses of 0.5, 1.0 and 2.5 ppm in feeds(respectively), for up to 6 months of age to investigate their effects on the growth rates and hormones regulating fertility (FSH, LH, Testosterone, T3 and T4). The results indicated the obvious adverse effects of mycotoxins on the secretion of these hormones and productivity of animals. The environmental pollutions particularly feed contamination was suggested to be the main source of the problem. Hence, regulatory measures must be undertaken to prevent such contaminants to reach the feed of animals. The significance of our results were fully discussed. [Atef A. Hassan; M.A. Rashid and Kh. M. Koratum. Effect Of Aflatoxin B1, Zearalenone And Ochratoxin A On Some Hormones Related To Fertility In Male Rats. Life Science Journal 2010;7(3):64-72]. (ISSN: 1097-	Full Text	9

	8135). **Key Words:** Mycotoxins, Aflatoxin, Ochratoxin A, Zearalenone, Fungi, Hormones, luteinizing H., follicle stimulating H. testosterone, thyroxin H.		
10	**A General and Effective Two-Stage Approach for Region-Based Image Retrieval** Mann-Jung Hsiao [1,*], Yo-Ping Huang [2], Tienwei Tsai [3], Te-Wei Chiang [4] [1]Department of Computer Science and Engineering, Tatung University, Taipei 104, Taiwan; [2]Department of Electrical Engineering, National Taipei University of Technology, Taipei 106, Taiwan; [3]Department of Information Management, Chihlee Institute of Technology, Taipei County 220, Taiwan; [4]Department of Accounting Information Systems, Chihlee Institute of Technology, Taipei County 220, Taiwan, China hsiao@mis.knjc.edu.tw **Abstract** Content-based image retrieval (CBIR) has received substantial attentions for the past decades. It is motivated by the rapid accumulation of large collections of digital images which, in turn, create the need for efficient retrieval schemes. Many research works further utilize regional features to obtain the semantics of images for better retrieval performance. In this paper, a two-stage retrieval strategy is presented to improve the performance of region-based image retrieval (RBIR). In this approach, an image is first segmented into a fixed number of rectangular regions. Then, each region is represented by its low-frequency discrete cosine transform (DCT) coefficients in the YUV color space. At the first stage of retrieval, the threshold-based pruning (TBP) serves as a filter to remove those candidates with widely distinct features. At the second stage, a more detailed feature comparison (DFC) is conducted over the remaining candidates. In the experimental system, users can represent their region of interest (ROI) by selecting different strategies, setting parameter values, and/or adjusting the weights of features as the search progresses. The experimental results show that both efficiency and accuracy can be improved by using the proposed two-stage approach. [Life Science Journal 2010;7(3):73-80]. (ISSN: 1097-8135). **Keywords:** Content-based image retrieval; region-based image retrieval; threshold-based pruning; region of interest; discrete cosine transform	Full Text	10
11	**Correlation of the Biological Traits of Cancers with Its Redox Status** Zhuhua Li Department of Pathophysiology, Luzhou Medical College, Luzhou 646000, Sichuan, China Xiaqung Han Department of Pathology, Wuhan Hospital for Infectious Diseases, Wuhan 040022, Hubei, China Qiuling Wang The First Affiliated Hospital of Chengdu Medical College, Chengdu 610500, Sichuan, China Yilun Liu The First Affiliated Hospital of Chengdu Medical College, Chengdu 610500, Sichuan, China Chenghen Wu Department of Pathophysiology, West China College of Preclinical and Forensic Medical Sciences, Sichuan University, Chengdu 610041, China Yaorong Ma Department of Pathology, Luzhou Medical College, Luzhou 646000, Sichuan, China **Abstract**: Background The Redox status is a fundamental element for homeostasis, its deviation may be deeply involved in the pathogenesis of cancers. Here we investigate the deviation of representative redox pair of GSH/GSSG in cancers and its impacts on its biological traits. Materials and Methods. The deviation of representative redox pair of GSH/GSSG in cancers was measured, including its changes in plasma of cancer patients and in tumor tissues, and its impacts on apoptosis, drug resistance of tumor cells and the tumor-neoangiogenesis. The state of GSH/GSSG in plasma and tumor tissues of cancer patients vs their control counterparts was examined by fluorometric analysis. The correlation of apoptotic factors of tumors with GSH/GSSG redox status were examened by immunohistochemical method in tissue microarray, the impact of GSH/GSSG redox status on proliferation of endothelial cells and on drug resistance of tumor cell were explored by MTT. Results The GSH/GSSG redox status in plasma of cancer patients deviated to pro-oxidative direction, while the GSH/GSSG redox status in cancer tissues deviated to reductive direction, which showed an opposite deviation vs that in plasma. The proliferation of endothelial cells stimulated by tumor-conditioned medium was totally reversed by GSH depletion. Depletion of intracellular GSH increased	Full Text	11

	the adriamycin sensitivity in both MCF-7/ADM and MCF-7/S cells , and at the background of GSH depletion, the adriamycin exerted a significant reducing effect on intracellular GSH content in a dose-dependent manner. Discussions These results suggest that the GSH/GSSG redox status in cancer's plasma and cancer's tissues were differently deviated, which may be deeply involved in some unique traits of tumor cells, including the apoptosis, drug resistance of tumor cells and the tumor-neoangiogenesis. [Life Science Journal 2010;7(3):81-90]. (ISSN: 1097-8135). **Key words**: Redox status; Cancer; Glutathione; Neoangiogenesis; Apoptosis; Drug resistance		
12	**Factors influencing agricultural extension officers' knowledge on practice and marketing of organic agriculture in North West Province, South Africa** Oladele O.I and Tekena S.S Department of Agricultural Economics and Extension, North-West University, Mafikeng Campus, South Africa. E-mail: oladele20002001@yahoo.com **Abstract**: This paper examines the factors influencing agricultural extension officers' knowledge on practice and marketing of organic agriculture in North West Province, South Africa. A simple random sampling technique was used to select 20 percent extension officers from which data were collected with a structured questionnaire and analyzed using frequency counts, percentages and multiple regression analysis. The results revealed that extension officers had a wide range of knowledge levels regarding marketing of organic agriculture as all the items had at least 55 percent. Significant determinants of knowledge on practice and marketing of organic agriculture were gender (t= 2.46), age (t= - 1.73), educational level (t = 1.75), working experience (t = - 1.71), job location (t = 2.72) and sources of information (- 3.02) . The results have several implications for training and educating extension officers in organic agriculture issues. [Life Science Journal 2010;7(3):91-98]. (ISSN: 1097-8135). **Keywords**: Organic agriculture, extension officers, knowledge, marketing, South Africa	Full Text	12
13	**Socio-economic Determinants of Job Satisfaction among Extension Officers in North West Province South Africa** Oladele O. I. and Mabe L.K Department of Agricultural Economics and Extension, North-West University, Mafikeng Campus, South Africa. E-mail: oladimeji.oladele@nwu.ac.za **Abstract:** This paper examines the socio-economic determinants of job satisfaction among extension officers in North West Province South Africa. This is predicated on the fact that the current implementation of the Extension Recovery Plan (ERP) in all the nine provinces in the South Africa to bring about agricultural improvement through effective extension services delivery is among other things dependent on job satisfaction among extension officers. A simple random sampling technique was used to select 40 extension officers and data were collected with a structured questionnaire and analyzed using frequency counts, percentages and multiple regression analysis. The results show that most of extension officers (82.5%) were males, between 40 to 45 years, married (85%0 and 87.5% had Diploma as educational qualification. Also, 54% had between 4 to 6 persons as household size, while 75% were Christians. Majority of the extension officers live in their job area (82.5), while 80% covered at least 3 communities and 3 farmers group. In terms of number of farmers covered, only 40%of the extension officer covered more than 500 farmers and 45% travelled more than 40 km to reach their farmers. Prominent areas of satisfaction among extension officers were research policies (3.77) work exposure (3.37) identifying farmers' problems (3.02) and opportunities to advance education (3.00). Significant determinants of job satisfaction were gender (t = 2.31), marital status (t = -2.27), working experience (t = 2.60), living in job area (t = -3.05), number of farmers covered (t = 2.00) and distance to farmers (t = -2.11). The study therefore recommends that policy makers and extension managers should pay attention to the items indicated for satisfaction and dissatisfaction by the extension officers with a view of boosting their morale for a higher level of performance. [Life Science Journal 2010;7(3):99-104]. (ISSN: 1097-8135). **Key words:** Job satisfaction; job performance; motivation; extension officers; South Africa	Full Text	13

14	**Skin abnormalities，female reproductive disorders and shorter life span with a mutation in the hairless gene** Kui-cheng Zhu,Jin-tao Zhang,and Chun-yao Wang Laboratory Animal Center, Zhengzhou University, Zhengzhou -450052, Henan, China jtzhang@zzu.edu.cn **Abstract:** A spontaneous recessive mutation named rhinocerotic and short-lived（symbol：hr^{rhsl}） arose in a breedng colony of Chinese Kunming mice.Mutant *hr* mouse strains show skin and hair abnormalities and shorter life span.The present study analysed the skin，thymus and ovary of young（2 mo）and adult（6 mo）wild type and mutant mice.The mutant mice showed the disintegration of hair folliciles and formation of utriculi and dermal cystic strctures in the dermis by histology and electron microscopy.The thymus of mutant mice underwent the accelerated atrophy and the decreased number of $CD4^+CD8^-$ and $CD8^+CD4^-$ were examined，and the increased apoptosis in the ovarian granulosa cells were observed in the mutant mice compared with the age-matched wild type by hematoxylin-eosin staining and flow cytometry.Taken together，present results strongly suggest accelerated age-depent regression of thymus and increased apoptotic cells of ovary in mutant mice compared with the age-matched wild type，which could explain at least in part the immunodeficiency，shorter life span and reproductive disorder. [Life Science Journal 2010;7(3):105-111]. (ISSN: 1097-8135). **Key words:** hairless mouse, ovary, thymus, hair follicle, skin	Full Text	14
15	**Subconjunctival bevacizumab, a potential therapeutic strategy for treatment of corneal neovascularization.** **Hisham A. Hashem[1], Iman M. A. Zaki[2], Mohamed Ramzy[1].** [1] Ophthalmology Dept, Research Institute of Ophthalmology. [2] Pathology Dept, Research Institute of Ophthalmology. hisham_hashem@hotmail.com **Abstract:** Purpose: feasibility of local application of bevacizumab for inhibition and treatment of corneal angiogenesis. Materials and Methods: 20 pigmented rabbits with average weight 3.7±0.4 kg were numbered and two groups were made, Group A: the rabbits of this group were subjected to corneal sutures application to induce corneal vascularization. Group B: rabbits of this group were subjected to corneal sutures with concomitant bevacizumab application. The rabbits were kept under observation and were examined and photographed after one week of taking the deep corneal suture for assessment of the corneal vessels. Then rabbits of group B were anaesthetized and bevacizumab was injected. At the end of the experiment, the rabbits were killed with an intravenous overdose of thiopentone, and histopathological studies were done. All histopathological analyses were performed by investigators blinded to medicine injected and the group of bevacizumab injection. Results: Corneal neovascularization disappeared in all rabbits of the group of bevacizumab injection. Conclusion: Data presented in this study effectively demonstrates the potential feasibility and safety of local application of bevacizumab for inhibition and treatment of corneal angiogenesis in an animal model. [Life Science Journal 2010;7(3):112-116]. (ISSN: 1097-8135). **Keywords:** Subconjunctival, bevacizumab, corneal neovascularization	Full Text	15
16	**The Protective Role of Alpha Lipoic Acid Against pesticides Induced testicular toxicity. (Histopathological and Histochemical Studies)** **Azza M. Gawish** Department of Zoology, Faculty of Science, Cairo University, Giza, Egypt azzagawish@ymail.com **Abstract:** The present study aimed to investigate the efficiency of alpha-lipoic acid (ALA) as natural	Full Text	16

	antioxidant in ameliorating some of changes induced by intoxication with a mixture of well known pesticides used in our agricultural media. Four groups of male rats were treated as follows untreated control animals, (p-mix, consists of 1/60LD50 chloropyrifos (2mg/Kg b.wt) 1/200 LD50 of fenitrothion (2.5 mg/km b.wt) as used in agriculutural environment and ALA 200mg/animal of alpha lipoic acid, (P-mix+ALA). Histological observation of the intoxicated rats revealed significant alterations in the testis tissue of P mix. treated group including focal mild testicular damage, blood hemorrhage and hypospermatogensis, necrosis and atrophy. The degree of fibrosis was encountered using masson-trichrome stain technique which revealed various fibrosis grades between the control and treated testes tissues upon the exposure to the insecticides. TUNEL technique showed an increase in the incidence of positive apoptotic cells between the spermatogonial and germ cells. Also complete depletion of the level of acid phosphatase enzyme which involved in the testosterone biosynthesis. The treatment with alpha lipoic acid showed many degrees of improvements in the seminiferous tubules, spermatogenic germ cells and the interstitial cells. Also decrease in the grades of fibrosis between testes tissues. Conclusion: The biochemical, hiopathological, reports supported that the pesticides have many implicated toxic changes on the testes tissues and the antioxidants like alpha lipoic acid obtained many trials to get ameliorative effects on the toxicity of pesticides. [Life Science Journal 2010;7(3):117-124]. (ISSN: 1097-8135). **Key Words:** Pesticides – Reproduction - Apoptosis - Fibrosis – Antioxidants		
17	**Field study on the use of Artemisia cina (Sheih Baladi) and Humates (Humapol-Fis) in the control of Saprolegniosis in fingerlings of Nile tilapias and Mugal cephalus in lower Egypt fish farms** **Noor El Deen , A. I.E. *, Mona, S. Zaki * , Razin, A.M.** and Shalaby, S.I.** *Hydrobiology Department, Veterinary Division, National Research Centre **Medicinal and Aromatic Plants Department (MAP), National Research Centre *** Reproduction Department, Veterinary Division, National Research Centre dr_ahmednoor2002@yahoo.com **Abstract:** Saprolegniosis is a fungal disease and it is one of the most causes of economic loss in fish farming industry, affecting all developmental stages. This study was carried out on 300 cultured fingerlings of Nile tilapias and Mugal cephalus from earthen ponds in lower Egypt fish farms suffered from Saprolegniosis . Diseased fish were subjected to full clinical and postmortem examination . Artemisia cina (Sheih Baladi) and Humates (humic and fulvic acid) were tested for the control of Saprolegniosis affecting fingerlings of Nile tilapias and Mugal cephalus. Artemisia cina L. (A.cina) was used in the form of 5% and 25% stock solutions prepared by pouring boiling water on the herb in a piece of gauze and soaked for 2 hours. The doses were 0.25, 0.5 and 1 ml/l 3 times every an hour for 3 days in fingerlings of Nile tilapias and twice for 2days in fingerlings of Mugal cephalus in earthen ponds. Humates was used as HUMAPOL-FIS dry stock solution in the rates of 5, 10 and 15 g/1000 liter in earthen ponds. Three replicates were used per each treatment and 3 earthen ponds served as control where malachite green or formalin were applied for comparison. Results revealed that A. cina and humates gave the best estimates of viability percentages among the Nile tilapia and Mugal cephalus fingerlings and were safe for fingerlings in the rates of 5% and 25% for A. cina and 5 and 15 gm/1000 liter for humates. [Life Science Journal 2010;7(3):125-128]. (ISSN: 1097-8135). **Keywords:** Saprolegniosis, Nile tilapias, Mugal cephalus, Artemisia cina and humates	Full Text	17
18	**Diarrhoea in Neonatal baraki kids-goats** Mona S. Zaki[*1]; Nagwa S. Ata[2]; Shalaby, S. I[3]. and Iman M. Zytoun[4] [1]Dept. of Hydrobiology, National Research centre. Cairo, Egypt [2]Dept. of Microbiology and Immunology, National Research centre. Cairo, Egypt [3]Dept. of Reproduction, National Research centre. Cairo, Egypt [4]Dept. of Microbiology, Central Lab. Zagazig University, Zagazig, Egypt [*]dr_mona_zaki@yahoo.co.uk	Full Text	18

	Abstract: A survey was carried out in 130 kids-goats aged from 2 days to 3 month from different private farms in El Mounofia and Kalubia Governorates. Out of these animals, 100 were suffering from diarrhoea. Bacteriological examination of the faecal samples revealed the presence of *E. coli* (58%), *Salmonella*, (27%), and *Shigella* (15%), as the main causative agents of diarrhoea. They were sensitive to common antibiotics and less sensitive to 10% garlic extract and 40% *Hibiscaus subdarifa*. Haematological studies revealed significant decrease in hemoglobin content (Hb), erthrocytic (RBCs) count. On contrary, haematocrit value (PCV %) showed significant increase in affected animals. A significant decrease was detected in the values of serum total proteins, albumin, iron, copper, and growth hormone. On the other hand, there was a significant increase in cortisol hormone, lactate dehydrogenase (LDH), and alkaline phosphatase enzymes. We emphasize that the demonstrated diarrhoea caused many harmful clincopathological effects, reduced growth hormone, and caused severe anaemia in kids-goat. [Life Science Journal 2010;7(3):129-132]. (ISSN: 1097-8135). **Keywords:** Kids-goat - kids - diarrhoea - haemogram - Salmonella - *E. coli* -serum biochemistry - LDH - alkaline phosphatase - hormones - trace elements - garlic extract - *Hibiscous subdarfa*		
19	**Estimating Of Some Trace Elements In Mineral Water In The Kingdom Of Saudi Arabia** **Sana Arab[1] , Asia Alshikh[2]** [1]Kingdom Of Saudi Arabia, Ministry of Higher Education, King Abdulaziz University, Deanship of Scientific Research, Girl's College of Educational, Jeddah.[2]Kingdom Of Saudi Arabia, Ministry of Higher Education, Jizan University, Deanship of Scientific Research, Girl's College of Educational, Jizan. Ziadahmed1020@hotmail.com **Abstract:** A novel sensor was developed for simultaneous detection of Pb, Cd, Cu and Zn concentration based on the differential pulse anodic stripping voltammetry techniques. Response (DPSV) performed on a hanging mercury drop electrode (HMDE). The estimation of Pb, Cd, Cu, Zn concentration in the mineral water of Al – Qasim, Hana Al Qasim, Najran, Nova, Safa Makah, and Mozn Jazan drinking water in the Kingdom of Saudi Arabia was accomplished. [Life Science Journal 2010;7(3):133-137]. (ISSN: 1097-8135). **Keywords:** mineral water; voltammetry; Saudi; trace elements	Full Text	19
20	**Aspects of Egg Laying in Indian Robin (*Saxicoloides fulicata*)** **Vinaya Kumar Sethi, Dinesh Bhatt, Amit Kumar and Archana Bhatt Naithani** Department of Zoology and Environmental Science, Gurukul Kangri University, Haridwar 249 404, Uttarakhand, India E-mails: vinayaksethi@yahoo.co.in, dineshharidwar@gmail.com **Abstract:** Several aspects of the breeding biology of wild birds have been studied thoroughly. However, information on patterns of egg laying is lacking for most passerines species. Using direct observations of individuals of Indian Robins (*Saxicoloides fulicata*), we documented the timing and duration of egg laying and behaviour of males and females around the time of laying in a tropical study area of Haridwar (29^0 55' N, 78^0 08' E), India. The mean laying time was SR + 41.4 ± 8.9 min (range: SR + 24 - 58 min) and did not vary with the laying order. The mean duration of laying bouts was 16.9 ± 5.37 min and did not vary significantly for the laying of successive eggs. Females seemed equally active before and after egg laying indicating laying times to be determined primarily by physiological mechanisms involved in egg formation, such as hormone surges and ovulation. In most cases, females were accompanied by their mates when approaching the nest to lay. After leaving their nests following laying, females were immediately joined by their mates or they flew directly to them. Such observations suggest that both sexes may be guarding their pair bond against divorce by either member of the pair. [Sethi, V.K., Bhatt, D., Kumar, A., Naithani, A.B. Aspects of egg laying in Indian Robin (*Saxicoloides fulicata*). [Life Science Journal 2010;7(3):138-140]. (ISSN: 1097-8135). **Keywords:** Bout duration, egg laying, Indian Robin, *Saxicoloides fulicata*, sunrise	Full Text	20
21	**Retrotransposon *Tto1* in tobacco was activated by the implantation of Low-energy N^+ ion beam**	Full	21

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Abstract Tobacco retrotransposon *Tto1*, one of a few active retrotransposons of plants, has been shown to be activated by plant tissue culture (protoplast), wounding stress and methyl jasmonate. Low-energy ion beam, a kind of mutagen, can induce many kinds of botanical mutants. The relation between the retrotransposon *Tto1* and stress of the ion implantation was interested to many researchers focused on idea that whether *Tto1* was activated by implantation of the low-energy ion beam or not. Here，quantitative real-time PCR were used to investigate whether the implantation of ion beam increased the copy number of the *Tto1* in tobacco genomic or not, clustering according to the banding pattern generated by IRAP with primers to retrotransposon *Tto1* was used to investigate the genetic polymorphism between the tobacco population implanted by the ion. The results showed that the copy number of *Tto1* in some treated individuals was creased 10 folds in the second euphylla and more 2 folds in petal. Analysis of the clustering UPGMA method showed that radiation of the ion caused great dissimilarity (dissimilarity coefficient >0.6) between partial treated samples and the controls. The great genetic dissimilarity based on the retrotransposon *Tto1* and the increased copy number of the *Tto1* implied that *Tto1* was also activated by the exposure to the implantation of ion. The transposition of *Tto1* takes place in both the somatic cell and the apical meristem cell, and then, the increased copy number can be transferred from the apical meristem cell of the plantule to the differential organs (here petal is showed). These findings are discussed in the role of the transpositional *Tto1* played in response to the implantation of the low-energy ion beam. [Life Science Journal 2010;7(3):141-147]. (ISSN: 1097-8135).

Keywords: Retrotransposon *Tto1*; *Nicotiana tabacum L.*; Low-energy ion beam; Transposition

Text

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The hepatoprotective effect of dimethyl 4,4- dimethoxy 5,6,5,6- dimethylene dioxy-biphenyl-dicarboxylate (D.D.B.) on aflatoxin B1 induced liver injury

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Abstract

Seventy five samples of frozen meat, raw milk and poultry feed (25 samples each), were examined mycologically and for detection of aflatoxin B_1 (AFB_1). The results revealed that the isolated fungi represented 6 genera of moulds. The most prevalent fungi in these samples was the genus aspergillus (60%, 60% and 76%) with mean of count of ($1.6 \times 10^2 \pm 0.1$, $6.0 \times 10 \pm 0.23$ and $3 \times 10^2 \pm 1.0$), respectively, which was at the top of all isolated fungi . However, *A. flavus* was isolated form all kind of samples and that which isolated from feed produced aflatoxin B_1 with mean level of (60 ± 0.1 ppb) followed by that isolated from frozen meat (9.5 ± 0.71 ppb), but those isolated from milk had the lowest AFB_1 level (1.0 ± 0.1 ppb). The effect of dimethyl 4, 4- dimethoxy 5, 6, 5, 6- dimethylene dioxybiphenyl 2, 2- dicarboxylate (D.D.B.) in degradation of AF was evaluated by intraperitoneal injection of 30 rats with 1.5 ppm of AFB_1 to evaluate their effect on haematological, biochemical and protein electrophoretic patterns of aflatocicated rats. The obtained results indicates an improvement in the haematological picture (Hb, RBCs and PCV) together with WBCs and differential leucocytic count of the treated rats compared with non treated ones. Also, biochemical analysis revealed significant changes in urea and creatinine levels; AST and ALT activities; total protein and protein electrophoretic patterns of treated rats. The administrated of DDB effectively improved haematological alterations and prevent serum biochemical changes, ameliorated, the toxic effect of aflatoxin B1 and had hepatoprotective effect on AFB_1 induced liver toxicity. [Life Science Journal 2010;7(3):148-153]. (ISSN: 1097-8135).

Keywords: frozen meat; raw milk; poultry feed; aflatoxin B_1 (AFB_1); genus aspergillus; toxicity

Full Text

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