

## ENGLISH TITLES

### BIOLOGY

**Isolation and identification of some hot water spring diatoms from  
AḤ wā mi (Karish) - Lahej.**

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#### Abstract

Diatoms are found in different environments, like marine, fresh & benthic form. Studies showed that they are also found in hot waters. They can withstand high temperatures. Samples of hot water, collected from Al – Hwami in June 2005, were identified by the help of Kyowa Medilux – 12 / unilum – 12 series microscope and 20 species were identified. Some of them have been reported from marine and fresh waters. The temperature of water was 500 C. Chemical analysis of water shows that, except T.D.S., all are within W.H.O. guide lines.

**Key words: Diatoms, Hot spring, Al – Hwaimi (Lahaj) Yemen.**

### ENGINEERING

**Improving the performance of a signalized intersection: A case study**

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#### Abstract

Crater is a major signalized intersection in Aden city. This signal intersection was designed quite a few years ago (signal cycle and phase timing) and was functioning till the year 2004. With 7% annual growth rate of vehicles in Aden [5], the old signal design caused considerable delays, and hence it has been replaced by manual traffic police control. Manual traffic control is suitable for small towns and villages but not for a big city like Aden. In addition, manual control has a possibility of human errors.

A detailed study is carried out in January 2003 to improve the performance of Crater signalized intersection. Using Highway Capacity Manual (HCM 2000) [6] procedures. The improvements that has been considered in this study are:

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**Scenario I:** Lengthening the signal cycle from 85 second to 120 second; the delay is reduced from 442 second/ vehicle to 101.2 second/ vehicle, with an overall reduction in delay by 330%

**Scenario II:** Basic changes in intersection geometry; by introducing a left turn pocket in the east bound approach, the delay is reduced from 442 second/ vehicle to 56.9 second/ vehicle, with an overall reduction of 670%.

**Keywords:** Capacity of signalized intersection, Evaluation of signalized intersection, Signalized intersection

Movements of Eigenvalues due to variation of induction motor parameters

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### **Abstract**

This paper deals with stability analysis of induction motors. Two machines have been investigated for their stability. The effect of their parameters on the degree of stability has also been studied. For that, the eigenvalues have been obtained for each machine at different operating conditions. Effect of machines parameters on the eigenvalues has been investigated and presented. The movement of eigenvalues on the eigenvalue plane, as a result of parameter variation, has been presented. Further, the eigenvalues have been identified.

**Keywords:** Eigenvalues, Stability, Induction motors.

## **Efficient grid location service scheme for MANET**

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### **Abstract**

In this paper, we have presented a modified and efficient Grid location Service scheme. In this scheme, we have introduced a fixed geographic zone referred to as location area to reduce the update and query costs in locating a destination

node in the network. Further, we have used selective queries for destination search. We have used a distance based triggering strategy to trigger a location update for moving nodes in the network. The experimental results show that the Modified Grid Location Service scheme (MGrid) outperforms Grid Location Service location update scheme (GLS) in terms of successful updates, average update cost, and successful queries.

**Keywords:** Location update, Grid Location Service, Selective Query, Modified Grid scheme.

## **ENVIRONMENT**

### **Microorganism study of treated waste water in Al-Arish Plant**

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Aden, Yemen.

#### **Abstract**

AL-Arish wastewater plant is one of the two sewage treatment plants in Aden city, Republic of Yemen. It is located to the east of Khormakser district. In this study, water samples were collected from polishing, anaerobic facultative and effluent ponds. Investigation of microorganisms (Pathogenic or Non Pathogenic) , and physico-chemical properties in those ponds were reported. This investigation identified many living organisms in the different ponds. Several groups of organisms have been reported; Algae, Protozoan and Rotiferes, in addition to these various bacteria, and unknown organisms have been noticed.

**Key words:** Al-Arish, wastewater, Algae, Protozoan, Rotiferes .

## **MEDICINE**

### **The role of immunohistochemistry in the diagnosis of precursor T-lymphoblastic lymphoma**

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**<sup>1,3</sup>Department of paraclinic, faculty of medicine and Health Sciences, Aden**

**<sup>2</sup>University Petz Aladar County Teaching Hospital, Gyôr, Hungary,**

### **Abstract**

**Immunohistochemistry has become an established routine and histological technique for identification of tissue constituents.**

**The wide and increasing range of well characterized antisera, the improvement in antibody-enzyme conjugates and the variety of sensitive methods available have eliminated many of the early problems associated with immunohistochemistry.**

**Immunohistochemistry is a technique for identifying cellular or tissue constituent (antigen) by means of antigen-antibody interaction.**

**The aim of this case study is to diagnose precursor T-lymphoblastic lymphoma based on the new classification of the World Health Organization (WHO) using immunohistochemistry.**

**Key words: Precursor T- lymphoblastic lymphoma, WHO classification, immunohistochemistry.**

### **Anemia during pregnancy in Aden: frequency and associated factors**

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### **Abstract**

**During the period September to December 2004, a questionnaire and records' review of 196 pregnant women were carried out in five Maternal and Child Health Centers in Aden.**

**Interviews were based on the questionnaire that included demographic and socio-economic information. In addition, we obtained the haemoglobin value of each pregnant from her medical record in the MCH center. Statistical analysis was performed by the percentage, using Chi-square test and P-value.**

**The prevalence of anemia in 196 pregnant women was (87.8%). The prevalence rates of mild, moderate and severe anemia among the total study subjects were 19.4%, 61.7% and 6.6% , respectively.**

**Statistically, anemia was found to be significantly associated with residence areas (P=0.044), parity (P=0.0002) and not significant with occupation, educational levels, income, Khat chewing & water pipe smoking (P>0.05).**

**We concluded that anemia, during pregnancy, seems to be a common health problem in Aden. These findings were consistent with other reports; local and regional. An action plan at the level of governorate authority, with the cooperation of all concerned governmental sectors and other agencies, should be developed and implemented to improve the health status of pregnant women in Aden.**

**Key words: Pregnant women, Anemia, Associated factors, Aden.**

## **The humeral shaft fracture: our management and a review of literature**

**Ahmed Abdo**

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### **Abstract**

**This work aimed to study our methods for management of this fracture and to review the recent literature. There is no universal agreement on the most appropriate surgical method for treating this fracture. 126 patients sustained this fracture were admitted consecutively in Al-Gamhooria Teaching Hospital / Aden , Department of Orthopedics in the period 1998-2003. The majority were <50 years old. The average age was 32.9 years (ranged 2-80 years). Males constituted the majority of the patients (77.8%). The commonest method of treatment is the non-surgical method (48.74%). The dynamic compression plate (DCP) was the commonest surgical method of internal fixation in our department constituting 36.98%. The commonest indications for internal fixation (DCP in our series) were isolated unstable or irreducible fractures and / or associated multiple injuries (79.55%). The intramedullary method for internal fixation of this fracture was almost absent in our department. A brief but full literature review has been given here about the growing use of this method in fractures of the humerus shaft. The external fixator method was our third choice (9.24%); it has been indicated in open fractures of the shaft of the humerus.**

**Key words: Humerus shaft fracture-management-literature review.**

## **Fulguration of posterior urethral valves in Yemeni boys: 5 years experience**

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### **Abstract**

**Posterior urethral valves (PUV) are the most common cause of mechanical infravesical obstructive malformation. Our objective is to explore the symptoms, radiological findings and outcome after valve fulguration. The material of our retrospective study were the medical records of 39 boys (mean age 3.7 years, range 6 months and 11 years) diagnosed with PUV and treated in our clinic with valve fulguration since Jan. 2000. Before fulguration, history of voiding habits, voiding frequency, presence of enuresis and dysuria was recorded. After valve**

fulguration, a follow-up for 33 patients has been conducted including a detailed voiding history and re-examination of abnormal variables. Results of the study showed that, the most common presenting symptom was voiding dysfunction. After fulguration of the valves, most patients improved; 15 of 21 (71.4%) had resolution of urinary frequency and 11 of 24 (45.8%) of nocturnal enuresis. Out of 33 patients followed up, 21 (63.6%) had some reduction of hydronephrosis. As a conclusion of our study, the PUV should be considered in boys presenting with voiding dysfunction. After valve fulguration, most patients improve dramatically, and, however, should be followed up much beyond the immediate electrosurgical treatment period as complications could arise on the long term.

**Key words:** Posterior urethral valves, Yemeni boys

### **Macroscopic haematuria in childhood malignancy**

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#### **Abstract**

The present study, is a retrospective study of 114 patients consisted of 71 males and 43 females, who were conducted in Al-whada teaching hospital in the period between Jan.1999 and Dec.2003. The health data of every patient was collected according to the type of malignancy; associated complications; presence or absence of haematuria; time of occurrence of haematuria; platelet count and coagulation study ; site of bleeding and outcome. The results of the study showed that out of the 114 patients- 14.9% were with macroscopic haematuria that has occurred in 17.7% as initial presentation, in 32.2% as a clinical association, and in 47.1% as clinical association. The most frequent bleeding site of the studied patients was as the following: skin in 15.8%, G.I. bleeding 3.5%, epistaxis 9%, haematuria 14.9%, multiple site 6.1%. The investigation of platelet count showed a decrease in platelet count in 70.6%, abnormal coagulation in 5.9%, and normal coagulation in 23.5% of the patients .The relative frequency of the different types of malignancy among the patients was as the following: ALL of relative frequency of 13.0%, AML 21.1%, nephroblastoma 44.4%, lymphoma 2.8%,neuroblastoma 50 %, and Histiocytosis-X 50% . A mortality rate of 88.2% was also revealed in this study.

Bleeding is a common problem in patients with malignancy. It is mainly due to severe thrombocytopenia that may cause death because of the absence of platelet transfusion; therefore we recommend the health authority to introduce this service into hospitals in order to decrease the mortality rate and other consequences of bleeding.

**Key words:** haematuria, childhood, malignancy

**Skin cancer: A retrospective study**

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**<sup>2</sup>Faculty of Medicine – University of Aden/Aden.**

**Abstract**

There are three major types of skin cancer: basal cell carcinoma (BCC), Squamous cell carcinoma (SCC) and malignant melanoma (MM) with a rising incidence rate of these cancers in most regions of the world. In Yemen, data on this cancer are lacking. The aim of this study is to describe the patterns of skin cancer, its incidence by age and sex, and its distribution by body site in Al-Gamhoooria Hospital patients. Methodology: A retrospective study of 63 cases of skin cancer that was registered in the local Histopathological Department of Al-Gamhoooria Hospital, a major hospital in Aden city of Yemen, was conducted in the years 1991 –1999. Results: The average patient's age was 54 years old with approximately equal male (50.8%) to female (49.2%) incidence. 90.5 % of cases was above 40 years old. SCC is the most common types of skin cancer followed by BCC then MM (60.3%, 20.7%, and 19%) of each, respectively. The most common body site affected with skin cancer is the face and mouth (lips, tongue & mucosa) constituting (55.6%). BCC mostly affected the face (76.9% out of BCC cases only), SCC is the only cancer that affected the mouth (47.4 out of SCC cases only), MM mostly affected the lower extremities (75% out of MM cases only, out of which 58.3% affected the feet) . Conclusion: There is no sex difference in the incidence of skin cancer. Most of the cases were above 40 years old. SCC is the common skin cancer pattern in this study and the face is the common body site affected with these cancer.

**Key words: Basal cell carcinoma, Squamous cell carcinoma, Malignant melanoma.**

## PHYSICS

### **Effect of thickness and annealing on the optical energy gap of ZnS thin films**

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University of Science & Technology**

#### **Abstract**

Thin films of ZnS of different thickness were deposited on a glass substrates by vacuum evaporation technique. The optical absorption edge has been measured and the optical energy gap (E<sub>gopt</sub>) shown is a function of thickness and annealing temperature. The value of the optical energy gap was increased when the film thickness increased by annealing process. Also, the tail width of the films was calculated and has shown a decrease in thickness as well as the heat treatment. The X-ray diffraction of some films was also investigated and revealed that the films were semipolycrystalline in nature .

**Keywords :** Thin films, optical energy gap .

## **Arabic Titles**

## AGRICULTURAL SCIENCES

### **Effect of biological, organic and mineral fertilization on the bread wheat (*Triticum aestivum*, L.)**

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**University of Aden, Nasser's Faculty of Agricultural Sciences, Department of  
Agronomy and Botany**

#### **Abstract**

This investigation was carried out at the Experimental Farm of Nasser's Faculty of Agricultural Sciences, Aden University during 2002/2003 and 2003/2004 growing seasons to study the effect of biological, organic and mineral fertilization on the bread wheat cultivar Ghonemie.



A randomized complete blocks design with 3 replications was used, containing 6 treatments of fertilization: zero, biofertilizer (Azospirillum), 10 ton F Y M /ha., 110 kg N/ha., 55 kg N/ha., + Bio. (Azospirillum) and 5 ton F Y M /ha. + Bio. (Azospirillum).

The results of statistical analysis showed the following;

The application of biofertilizer, farmyard manure and nitrogen fertilizer caused significant increase in yield and its components, except number of kernels/ spike, as compared with the treatment without fertilization in both seasons, and there were no significant differences between the treatment of fertilization in the studied characteristics.

The two treatments of 55 kg N/ha., with biofertilizer and 5 to. FYM/ha. with biofertilizer, gave the highest values of yield and its components in both seasons, respectively. While the application of 55 kg N/ha., with biofertilizer, produced the more yield of 1.96 and 2.42 ton/ha. in both seasons, respectively.

**Key words:** fertilization, biological, organic, mineral, wheat.

### **Evaluation of some sesame varieties in different planting dates**

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#### **Abstract**

Two field experiments were carried out at the Farm of Nasser's Faculty of Agricultural Sciences, Al-Hawtah, Lahej Governorate, during 2002/2003 and 2003/2004 seasons aimed to evaluate three varieties (Balady red, Say'un1 and Say'un2) in four planting dates ( August 15, September 5, September 26 and October 17). The two experiments were performed in a split plot design with four replications. The results could be summarized as follows:

- The tested varieties significantly differed in all of its studied characters except fruiting zone length. Balady variety was higher than the other two varieties in plant height and height to first branch, followed by Say'un1. The greatest number of branches/plant was produced by Say'un1 in the first season and by Balady red in the second one, while Say'un2 was the lowest variety in the previous characters, with significant differences, compared with Balady red and Say'un1 varieties.

- Say'un1 surpassed Balady red and Say'un2 varieties in number of capsules/plant, 1000-seed weight, seed yield/plant, seed yield/hectare, oil percentage and oil yield/hectare with significant differences. Increase in oil yield/hectare was 36.68% and 55.26% in the first season and 36.61% and 42.99% in the second one when compared with Balady red and Say'un2, respectively, Say'un2 was the worst variety in most of the mentioned traits, while Balady red was in 1000-seed weight and oil percentage.

- There was significant continued reduction in the values of all characters under study by delaying planting dates from August 15 to September 5 or September 26 and October 17. These reductions in oil yield/hectare was 17.75, 47.24 and 65.95% in the first season and 14.64, 48.90 and 62.98% in the second season, respectively.

All studied characters were significantly affected by the interaction between the two factors of study in both seasons. The highest amount of oil per hectare was 526 and 424 kgs produced by Say'un1 variety in first planting date of the first and second seasons respectively, with significant differences than the other treatments.

**Key words:** Sesame, varieties, planting dates.

**Evaluation of two isolates of *Beauveria bassiana* (Bals.) Vuill. against some insects and mites and testing the efficiency of some culture media**

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**Abstract**

Two isolates of *Beauveria bassiana* were isolated from long horned date palm stem borer *Jebuseae hammerschmidtii* (BJH) from Mahaweel (Babel) area and date palm orchard soil in Basra (Bb). The efficacy and pathogenesis of both isolates have been tested on different insects and mites 1-10 days after spore spray. Both isolates showed 100% mortality after 5 days on cucumber aphids, termites, scale insects on citrus and olive and grape thrips. The mortality reached 100% on potato aphids, parlatoria scale insects and potato tuber moth after 7 days of spore spray and on stone fruit borers and capnodis larvae and adults after 10 days. The mortality on sunn pests was 100% after 7 days when sprayed by BJH and after 10 days for Bb however, it was 100% after 7 days on mite for BJH and 10 days for Bb. Several solid and liquid production cultures have been tested and found that rice seed culture produced  $3.2 \times 10^8$  spores /gm while potato sucrose broth and dates extract (Debis) cultures produced  $5 \times 10^7$  and  $3.9 \times 10^7$  spores/ml respectively.

**Key words :** Beauveria ,Jebuseae ,pathogenesis,efficacy,pests ,Iraq

## ANIMAL PRODUCTION

### **Effect of Heat Stress and supplemental Chromium on Thermo-respiratory responses, and some Hematological and Metabolic parameters and Transaminases profile in Ewes**

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#### **Abstract**

This work was conducted to evaluate the supplementation of chromium in depressing the detrimental effect of heat stress. 28 non-pregnant Saidi ewes were allotted analogously to two experimental groups: The control and treated (supplemented by 250 µg per 1kg concentrate fodder) groups. All animals were kept under the experimental condition for 3 weeks during May- June 2003, in the experimental farm of Faculty of Agriculture, Assiut University, Upper Egypt. At 9 o'clock a.m of the last day of treatment, measurements relating to thermo-respiratory responses (respiration rate, rectal and skin temperature), and blood samples were withdrawn to investigate hemoglobin, billirubin, total protein, albumin, globulin, urea, glucose, cholesterol and transaminase enzymes (AST & ALT).

After that, the ewes of the two groups were exposed to heat stress under direct solar radiation for 2 continuous hours, where the ambient temperature was over 45C° approximately. Then, readings relating to the thermo-respiratory responses and blood samples were withdrawn again for the same above mentioned investigations.

Obtained results indicated that exposing ewes for 2 continuous hours to solar radiation significantly increased body temperature (rectal / skin) and respiration rate. Chromium supplementation had no significant effect on such parameters. Hemoglobin content didn't differ by chromium supplementation, meanwhile sun exposure decreased hemoglobin level by 10 to 3% in the blood of animals of control and chromium supplemental groups, respectively. Such effect of chromium appeared in serum billirubin which content exceeded 60% in the control (chromium non-supplemented) group after the exposure to direct solar radiation.

Serum total protein was not affected neither by chromium supplementation, nor by sun exposure. But results indicated significant increase in albumin in the both groups after exposure to heat stress. Chromium supplementation caused in urea-N was decreased and glucose increased, whereas heat stress didn't significantly affect serum glucose in both groups. Cholesterol differences were not pronounced, Aspartate and alanine aminotransaminases concentrations ranged within their normal levels in both groups either before or after sun exposure.

**Key words:** Heat stress, chromium, ewes, body temperature, respiration rate and metabolites)

## BIOLOGY

### Study of Cyanobacteria in Yemeni Fresh-Water:

#### 1. Tuban Valley. Lahej Governorate.

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#### Abstract

This study was conducted in the laboratories of the Department of Biology-Faculty of Education/Saber. We found many types of cyanobacteria in Yemeni fresh-water (collected from Aqan and Al-Anad bridges).

Our result revealed that there are some cyanobacteria species which are unicellular "cells single or forming colonial": *Mersimopedia elegans*. Barun., *Gloeocapsopsis dvorakii*.(Novàcek) Komàrek and *Chroococcus giganteus* West; and the others are filamentous "chain of cells". The filamentous were non-heterocystous cyanobacteria: *Spirulina*. Maior Kützing; *S. sp.*; *Oscillatoria princeps* Vaucher.; *O. limosa* Agardh; *O sp.*; and *Phormidium uncinatum* Gomont. The filamentous heterocystous cyanobacteria were: *Anabaena sperica* Bornet. and *Cylindrospermum muscicola* Kützing . We found that all types of filamentous cyanobacteria were straight and not branched filaments.

**Keywords:** Yemeni fresh-water; Tuban Valley; Cyanobacteria

## ENVIRONMENT

### Determination of concentrations of lead and some heavy metals in *Calotropis procera* as a bioindicator plant in Aden city-Yemen

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#### Abstract

In this research paper the bio-accumulation of some transition elements is evaluated by using *Calotropis procera*(L.) as bioindicator plant in Aden city-Yemen.

Forty five samples were collected from different districts by random method, and one blank sample was from unpolluted area outside Aden city during the period from 17 march-13th may 2005.

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The samples were prepared by usual method, digested and atomic absorption spectrophotometer vario6 was used to measure the concentrations of lead, copper, cadimium, cobalt and zink.

The results show high concentrations in some sampling sites of highly density traffic and human activity. The average results of districts are as follow: lead(9.69-63.9),copper (2.6-22.59),cadimium(0.04-4.19),cobalt(1.26-6.47) and zinc(61.59-108.34). and the highest concentrations of elements recorded in the following districts are ;

lead: (86.73ppm):Al-Towahi garden- Al Towahi district ,  
copper:44.84ppm):Al-Gahraa round-Al Shiekh Othman district  
,cadimium(2.767ppm):Abdul-Ghawi round- Al-Shiekh Othman district  
,cobalt;(9.14ppm):Al-Madina Al-Ghathra entrance-Dar Saad district,  
Zinc:(150.2ppm) :Al Gahra'a round- Al Shiekh Othman district.

**Keywords:** Lead, transition elements, Calotropis procera, pollution, Aden, Yemen