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1	<p><b>HBsAg Serum Level And Viral Load In Egyptian HBV-Infected Patients: Is There A Correlation?</b></p> <p>El-Sayed Tharwa<sup>1</sup>, Mohamed Elmazaly<sup>1</sup>, Omkolsoum Elhadad<sup>1</sup>, <u>Mohsen</u> Salama<sup>1</sup> and Olfat Hendy<sup>2</sup></p> <p><sup>1</sup>Departments of Hepatology and <sup>2</sup>Clinical Pathology, National Liver Institute-Menoufiya University-Egypt <a href="mailto:elsayedtharwa@yahoo.com">elsayedtharwa@yahoo.com</a></p> <p><b>Abstract: Background and aim:</b> HBsAg is the hallmark of overt HBV infection, and detection of HBsAg in serum is the fundamental diagnostic marker of HBV infection. Given that viral load assays are more expensive than quantitative HBsAg, a critical question is whether HBsAg can be used instead of, or must be used in conjunction with, HBV-DNA levels. The aim was to study the relationship between HBsAg serum level and HBV-DNA in chronic Hepatitis B infected patients. <b>Patients and methods:</b> HBsAg quantification, using the Abbott ARCHITECT assay, was done in 200 treatment naïve patients having chronic HBV infection. Serum HBV-DNA was measured by use of COBAS AmpliPrep/ COBAS TaqMan with detection limit of 12 IU/ml. <b>Results:</b> Divided into two groups; group I included patients with HBV-DNA &lt;2000 IU/ml, while group II included patient with HBV-DNA ≥2000 IU/ml. Group (I) included 83 males and 17 females with their mean age (33.21±9.37 years), while group (II) included 84 males and 16 females with their mean age (31.27 ± 6.51 years). All patients in group (I) were HBeAg negative while in group (II) two patients (2%) were HBeAg positive. Each studied group was further divided into two subgroups according to serum ALT level; elevated versus normal. HBV DNA in group (C) and (D) were significantly higher than group (A) and (B) (1.5x10<sup>7</sup>±46204315.2 and 661348±4063280 versus 415.6±195.27 and 724.52±531.99 IU/ml) (<i>p</i> &lt; 0.001). Significant positive correlation was found between HBsAg titer and HBV- DNA level among all studied patients (<i>p</i> &lt; 0.001). However, when the correlation was studied in different groups there was a significant positive correlation in group (C) (<i>p</i> &lt; 0.001) and group (D) (<i>p</i> &lt; 0.001), but it didn't reach significant level in group (A) (<i>p</i> &gt; 0.05) and group (B) (<i>p</i> &gt; 0.05). A cut-off HBsAg titer of 425 IU/ml could predict serum HBV DNA levels ≥ 2000 IU/ml with 85% sensitivity, 97% specificity and 91% Accuracy. <b>Conclusions</b> HBsAg titer is significantly correlated to HBV-DNA level. Baseline HBsAg quantification may help to refine future treatment algorithms for both immune-modulator therapy and oral nucleos(t)ide analogue therapy.</p> <p>[El-Sayed Tharwa, Mohamed Elmazaly, Omkolsoum Elhadad, Mohsen Salama and Olfat Hendy. <b>HBsAg Serum Level And Viral Load In Egyptian HBV-Infected Patients: Is There A Correlation?</b> <i>Life Sci J</i> 2016;13(1):1-8]. (ISSN:1097-8135) <a href="http://www.lifesciencesite.com">http://www.lifesciencesite.com</a>. 1. doi:<a href="https://doi.org/10.7537/marslsj130116.01">10.7537/marslsj130116.01</a>.</p> <p><b>Key words:</b> HBsAg Quantification, HBV-DNA, Diagnostic Marker, Abbott ARCHITECT Assay, Ampliprep/ COBAS Taqman</p>
	<p><b>Prevalence of Idiopathic Tinnitus in Patients with Hypertension and its Impact on Quality of Life</b></p> <p>Nabil Abdulghany Sarhan<sup>1</sup>, Abdulsalam Mahmoud Algamal<sup>2</sup> and Eman Mahmoud Abdelsalam<sup>3</sup></p> <p><sup>1</sup> Department of Otorhinolaryngology, Al-Azhar University, Egypt. <sup>2</sup>Department of Cardiology, Mansoura University, Egypt.</p>

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**Abstract: Background:** Tinnitus is a major clinical problem and can significantly impair the quality of life (QOL). The available data on the rate of tinnitus in the hypertensive population are still controversial. **Objective:** The aim of our study is to evaluate the prevalence of idiopathic tinnitus in patients with hypertension and its effect on their QOL, also to evaluate the severity of tinnitus in these patients. **Methods:** A total of 586 patients with hypertension were divided into two groups. Group A consisted of 67 patients giving the history of tinnitus. Group B: consisted of 519 patients without history of tinnitus (control group). Abbreviated version of the World Health Organization Quality of Life questionnaire (WHOQOL-BREF) was used to assess all patients. The Klockhoff-Lindblom tinnitus-grading system was used to assess severity of tinnitus. **Results:** The prevalence of tinnitus in hypertensive patients in our study was 11.43 % with no significant difference between males and females. Age was significantly higher in patients with tinnitus. The QOL was significantly worse in patients with tinnitus, the severity of tinnitus did not differ with age and was similar in both males and females, also, QOL was significantly worse with increasing the grade of tinnitus. **Conclusion:** The prevalence of idiopathic tinnitus in patients with hypertension is 11.43 %. The QOL was significantly worse in patients with tinnitus and further worsened with increasing the grade of tinnitus.

[Nabil Abdulghany Sarhan, Abdulsalam Mahmoud Algamal and Eman Mahmoud Abdelsalam. **Prevalence of Idiopathic Tinnitus in Patients with Hypertension and its Impact on Quality of Life.** *Life Sci J* 2016;13(1):9-15]. (ISSN:1097-8135) <http://www.lifesciencesite.com>. 2. doi:10.7537/marslsj130116.02.

**Key words:** Hypertension, Tinnitus, Quality of life, WHOQOL-BREF

### Shoot organogenesis of *Echinacea angustifolia* DC as influenced by polyamines

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**Abstract:** Polyamines, low-molecular-weight polycationic molecules are present in all plant cells that play a vital role in cell division and differentiation. Therefore, an attempt was undertaken to evaluate the effects of polyamines i.e., putrescine, spermidine and spermine on shoot organogenesis of *Echinacea angustifolia* DC. Leaf explants were cultured in initial shoot regeneration media with four different concentrations (10, 30, 70, and 100 mg/L) of putrescine, spermidine and spermine. All polyamines showed better regeneration as well as shoot growth except a few than that of control. With increasing the concentration of putrescine, spermidine and spermine, increased regeneration capacity and shoot growth up to the concentration 70 mg/L and then started to decrease in all the cases. Among the polyamines, putrescine at 70 mg/L performed the best achieving for both regeneration and shoot growth. Putrescine at 70 mg/L showed 20% more regeneration and produced the longest shoot length achieving 1.5 times longer shoot than that of control. Our study suggests that polyamines especially putrescine may be utilized efficiently in micropropagation for regeneration of *E. angustifolia*.

[Chae SC. **Shoot organogenesis of *Echinacea angustifolia* DC as influenced by polyamines.** *Life Sci J* 2016;13(1):16-19] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 3. doi:10.7537/marslsj130116.03.

**Keywords:** *Echinacea angustifolia* DC; putrescine; spermidine; spermine; micropropagation

### Endometriosis in a cesarean section scar: A series of 12 patients

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**Abstract: Objective:** Endometriosis is the presence of functioning endometrial tissue outside the uterine cavity. Both pelvic and extra pelvic endometriosis has been described. Extra pelvic endometriosis can occur in abdominal wall following obstetrical and

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gynecological surgery. Cesarean section scars are the most common sites of extra-pelvic endometriosis. It is mostly confused with other surgical conditions and should be considered in the differential diagnosis of lumps in the abdomen in females in reproductive age. The aim of this article is to increase the awareness regarding this rare condition and combine assessment using clinical radiological and pathological findings to solve this diagnostic dilemma of abdominal wall endometriosis which is a frequently misdiagnosed condition. **Method:** We reviewed the case records of patients with the diagnosis of scar endometriosis seen in our hospitals from January 2010 to June 2015. We discuss the cases of the abdominal wall endometriosis following caesarian section. The incidence, pathophysiology, diagnosis, treatment and prevention of this condition are also reviewed. **Result:** Twelve patients of scar endometriosis were operated during the study period. The mean age of the patients was 31 years (range 22–46 years) and mean interval from previous surgery to onset of symptoms was 2.4 years (range 1/2 -5 years). Painful swelling at local site was the most common presenting symptoms. Ultrasound, CT scan and MRI examinations were important in the precise location of the disease. FNAC is a good tool in diagnosis of this condition. 10 patients underwent wide excision of the mass, while re-excision was needed in 2 patients. The patients progressed satisfactorily and histopathology confirmed the diagnosis of abdominal wall endometriosis in all cases. No recurrence was occurred at a follow up ranging from 6 months to 1 years. **Conclusion:** Abdominal scar endometriosis should be kept in mind while dealing with a case of the painful lump over the abdominal scar in any woman of childbearing age having a history of obstetric or gynecological procedure. Increasing awareness of this condition among doctors can help in early diagnosis and treatment with gratifying results.

[Shawki M.K Sharouda, Emad Abdellatif Daoud, Abeer S.M Mohamed, Gehan G Ali, Abeer M. Elsayed, Soha El-Attar Mohammed Taama. **Endometriosis in a cesarean section scar: A series of 12 patients.** *Life Sci J* 2016;13(1):20-27]. ISSN 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 4. doi:10.7537/marslsj13011604.

**Keywords:** endometriosis, abdominal wall endometriosis, scar endometriosis

### The effect of Dexamethasone 0.4% Iontophoresis in treatment of knee Osteoarthritis

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**Abstract: Introduction:** Osteoarthritis of the knee is reported to be a major health problem worldwide. It is the most common articular rheumatic disease. It principally affects the elderly and has variable clinical presentations. It often carries a significant morbidity as compared to any other joint. **Purpose:** to investigate the effect of Dexamethasone 0.4% iontophoresis in the treatment of knee osteoarthritis. **Study Design:** A pre test post test control group design. **Materials and Methods:** 40 patients of both sexes aged between 45 to 65 years were involved. They were divided into two equal groups with 20 patients each. Patients in group (B) received Dexamethasone 0.4% iontophoresis in addition to the traditional treatment method. The traditional treatment included 10 min of stretching exercises (for hamstring and gastrocnemius muscles) and 10 min of strengthening exercises (for quadriceps muscles) in the form of Isometric multiple angles at 0, 45 and 90 degrees of knee flexion. Patients in the second group (A) received the traditional treatment only. Treatment was done three times a week for four weeks. Knee Range of motion, and functional performance were measured before and after the treatment. **Results:** differences in knee ROM and functional performance of the 2 groups were noted. The experimental Group (B) showed better improvement as compared to the control group (A). **Conclusion:** Dexamethasone 0.4% iontophoresis proved to be beneficial in improving knee Range of motion, and functional performance in patients with knee primary osteoarthritis.

[Abdelhamid Akram Fathy and Soheir M. Abd El Rahman. **The effect of Dexamethasone 0.4% Iontophoresis in treatment of knee Osteoarthritis.** *Life Sci J* 2016;13(1):28-34]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online) <http://www.lifesciencesite.com>. 5. doi:10.7537/marslsj13011605.

**Keywords:** Iontophoresis, Dexamethasone, Osteoarthritis, Exercises

### Laparoscopic Gastric Plication versus Laparoscopic Sleeve Gastrectomy as a Surgical Treatment of Morbid Obesity

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**Abstract: Background:** Morbid obesity increases the risk for many associated diseases including hypertension, type II diabetes and cardiac diseases. The present study aims to compare between laparoscopic vertical sleeve gastrectomy and laparoscopic gastric plication as regarding the feasibility, complication and effectiveness in weight loss. **Methods:** This is a prospective comparative study conducted between June 2011 and May 2014, which included 60 patients, divided into 2 groups, group (A

6 included 30 patients (17 females and 13 males) who underwent laparoscopic vertical sleeve gastrectomy (LSG), and group (B) included 30 patients (16 females and 14 males) who underwent laparoscopic gastric plication (LGP). The mean BMI was  $42.85 \pm 3.8$  kg/m<sup>2</sup> for group (A) and  $41.92 \pm 5.7$  kg/m<sup>2</sup> for group (B). And mean age was  $39.5 \pm 8.6$  years for group (A) and was  $40.2 \pm 3.6$  years for group (B). Follow up for all cases were recorded at 1, 3, 6, and 12 months. The comparison between the 2 groups was done as regarding operative time, complications and percentage of excess weight loss. **Results:** In the present study all procedures were done laparoscopically without the need for conversion. There were 4 cases showed intra-operative bleeding in LSG group and 3 cases at LGP group. The mean operative time was  $78 \pm 26$  minutes for the LSG group and  $90 \pm 7.5$  minutes for the LGP group ( $P < 0.05$ ). The mean hospital stay was  $3.2 \pm 1.7$  days in the LSG group and  $3.9 \pm 2.3$  days in the LGP group ( $P = 0.00473$ ). The excess weight loss (EWL) at 1, 3, 6, and 12 months was 19.8%, 30.4%, 48.6%, and 59.4% respectively for LSG group, while in LGP group, it was 18.7%, 28.9%, 45.8%, and 56.6%, respectively. There is no weight regain recorded up to date in all patients. **Conclusion:** Laparoscopic sleeve gastrectomy (LSG) and laparoscopic gastric plication (LGP), both are gastric restrictive technique for treatment of morbid obesity, but LSG is superior to LGP regarding percentage of EWL and operative time. However, long terms follow up and large prospective randomized controlled studies are still needed.  
[Nasser Ahmed Abdelnazer, Emad Abdellateef Daoud and Shawki M.K Sharouda. **Laparoscopic Gastric Plication versus Laparoscopic Sleeve Gastrectomy as a Surgical Treatment of Morbid Obesity.** *Life Sci J* 2016;13(1):35-41]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 6. doi:10.7537/marslsj13011606.

**Keywords:** laparoscopic bariatric surgery, restrictive procedure, laparoscopic sleeve gastrectomy, gastric plication

### Gastroprotective effects of dietary honey against acetylsalicylate induced experimental gastric ulcer in albino rats

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7 **Abstract:** Honey is a substance produced by bees from the nectar of plants. It is used as a medicine. It is known for its biological properties, having antibacterial, antifungal and healing properties. This work was designed to explore the effect of honey extract on healing of gastric ulcer in experimental rats. Thirty male albino rats ( $170 \pm 5$ g bw) were used and allocated into 6 equal groups Group 1 (Gp-1) used as negative control while the Gp2-5 were given aspirin orally (200mg/kg bw), and Gp3-5 were treated with honey at doses of 3.5, 7 and 14 ml/kg bw, for seven days respectively. The length of gastric ulcer, volume of gastric juice, total acidity, pH value, and histopathological changes of the stomach were examined. The results revealed that treated orally with honey extracts reduced the length of gastric ulcer, total acidity, volume of gastric juice, and ameliorate histopathological changes caused by Acetylsalicylate. It is concluded that, honey could be used for healing acute gastric ulcer.

[Eslam Header, Abd El-Monem Hashish, Naser ElSawy, Abdullah Al-Kushi and Mohamed El-Boshy. **Gastroprotective effects of dietary honey against acetylsalicylate induced experimental gastric ulcer in albino rats.** *Life Sci J* 2016;13(1):42-47] ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 7. doi:10.7537/marslsj13011607.

**Key words:** Honey, Aspirin, Gastric ulcer, Histopathological

### Mass Selection in Tomatoes under the conditions of southern Egypt

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**Abstract:** This investigating was carried out during the period from 2008/2009 to 2012/2013 in successive winter seasons at the experimental farm at the Faculty of Agriculture, South Valley University Qena, Egypt. Presented study aimed to selected superior populations from germplasm tomatoes (collected from different governorates in Upper Egypt) through selection programs by mass selection. It was conducted three cycles ( $M_1$ ,  $M_2$  and  $M_3$ ) of the mass selection of eight populations of tomatoes. Analysis of variance revealed significant differences between populations in three cycles for all studied traits compared with base (unselected) populations ( $M_0$ ) and two checks (Castel Rock and GS-12). The populations exhibited a wide range variability in three cycles for all the traits. The study indicated that yield/plant kg was higher for populations Sv<sub>7</sub>, Sv<sub>2</sub>, Sv<sub>1</sub> and Sv<sub>4</sub>. Number of

8 Fruits/plant for Sv<sub>1</sub> and Sv<sub>7</sub>, wF (g) for Sv<sub>1</sub> and Sv<sub>4</sub>, NB/plant for Sv<sub>2</sub>, Sv<sub>5</sub>, respectively. The results revealed high values of heritability in broad sense (h<sup>2</sup>b) and genotypic coefficient of variance (GCV%) in all studied traits for all populations in three cycles. The values of heritability ranged from 61.50% for Nb trait in Sv<sub>7</sub> to 99.79% for yield/plant kg in Sv<sub>4</sub>, and (PCV%) ranged 3.46% for DF trait in Sv<sub>8</sub> to 22.24% for yield/plant kg for Sv<sub>1</sub>, indicating that all traits were highly heritable and small environmental effects. High genetic advance was observed for yield/plant in populations Sv<sub>1</sub> and Sv<sub>4</sub> (34.11 and 33.19), NF for Sv<sub>1</sub> (30.52), PH for Sv<sub>3</sub> (29.26), NF for Sv<sub>1</sub> (22.32) and DF for Sv<sub>8</sub> (5.8), high H<sup>2</sup>b coupled with high genetic advance were noticed for YP, WF, NB and PH traits in all populations in three cycles. The M<sub>1</sub>, M<sub>2</sub> and M<sub>3</sub> of mass selections relative to (M<sub>0</sub>%) base populations were 122.48%, 141.83%, 165.19% and 119.22%, 131.84, 151.19% for yield/plant kg in populations Sv<sub>4</sub> and Sv<sub>1</sub>. It could be concluded that the population Sv<sub>1</sub>, Sv<sub>2</sub>, Sv<sub>4</sub>, Sv<sub>7</sub> and Sv<sub>3</sub> are considered promising as lines because they are high yield/plant traits and its components. Results of the study confirm that the mass selection was effective in creating new lines of high productivity. And it can take advantage of these lines grown under conditions of Southern Egypt.

[Rashwan, A.M.A. **Mass Selection in Tomatoes under the conditions of southern Egypt.** *Life Sci J* 2016;13(1):48-55]. ISSN 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 8. doi:10.7537/marslsj13011608.

**Key words:** tomatoes, yield/plant, mass selection, relative to (M<sub>0</sub>%), GCV% and PCV%, genetic advance.

### Knowledge, Attitude and Practice towards the Use of Antibiotics

Bahlas R.<sup>1</sup>, Ramadan I.<sup>2,3</sup>, Bahlas A.<sup>4</sup>, Bajunaid N.<sup>5</sup>, Al-Ahmadi J.<sup>2</sup>, Qasem M. Farghaly<sup>3</sup>, Bahy K.<sup>6</sup>

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9 **Abstract: Background:** One of the major health problems is inappropriate use of antibiotics that may be affected by several factors. The improper use of antibiotic may cause a serious problem of emerging multidrug resistance organisms (MDRO) without the public realizing it. **Objectives:** The study was carried out to assess knowledge, attitude and practice towards antibiotic use among patients and relatives attending to King Abdulaziz University Hospital, Jeddah, Saudi Arabia, and to investigate the factors that associated with knowledge, attitude and practice towards antibiotic use. **Methods:** A cross sectional survey was conducted at King Abdulaziz University Hospital in the outpatient clinics. **Results:** four hundred and seventy nine participants completed the study, with mean age 37.24±12.17, 75.78% were married, 39.87% were holding a bachelor degree, and 27.14% have insurance coverage. Three quarters of the participants were earning less than 10,000 SR and around 46% of the participants reported to have co-morbidities. Participants consuming antibiotics in the past year knew the type of antibiotic and consult their physician for medication had a higher mean knowledge towards the use of antibiotics. Females, Saudis, married, living with families of five members or less, with an income more than ten thousand S.R and administer antibiotics properly by physician prescription have a positive attitude towards antibiotic use. **Conclusion:** knowledge towards antibiotic use was greatly affected by marital status, educational level and antibiotic used in the past year.

[Bahlas R., Ramadan I., Bahlas A., Bajunaid N., Al-Ahmadi J., Bahy K. **Knowledge, Attitude and Practice towards the Use of Antibiotics.** *Life Sci J* 2016;13(1):56-64]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online) <http://www.lifesciencesite.com>. 9. doi:10.7537/marslsj13011609.

**Keywords:** Knowledge, Attitude, Antibiotic use

### A new medium for the isolation and enrichment of halophilic actinobacteria

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**Abstract:** This paper is about a new nutritional medium designed for the isolation and enrichment of a useful group of bacteria called halophilic actinobacteria. These bacteria can be found in the saline environment, they can be moderate or extremely halophilic. The extremely halophilic require between 15-30% of NaCl for growth, and they can be selectively isolated in different

10 media. The new medium was enriched by the addition of organic and inorganic nutrients appropriate for the growth of these bacteria. It consists of starch, glucose and yeast extract (SGY) supported with artificial sea water for providing a mixture of salt that resemble the composition of concentrated sea water, where halophilic actinobacteria require  $\text{Na}^+$  to grow, In addition to different concentrations of  $\text{Na}^+$ ,  $\text{K}^+$ , and  $\text{Mg}^{2+}$ . The purpose of this medium is for providing the nutritional requirements which can stimulate and support the growth under high salinity conditions during short period of time with high amount of growth compared to other media. Therefore, SGY medium was tested against (Inorganic salt starch agar, Glycerol asparagin agar, Oat meal agar and Yeast extract malt extract agar) supported with 10 % NaCl to enhance the growth of halophilic actinobacteria. According to the results, SGY medium achieved the highest bacterial growth during short period of incubation (4-6 days) than other different culture media which extended for (2-3 weeks). Consequently, the (SGY) medium can be considered an alternative to the media traditionally used for the study of halophilic actinobacteria.

[Manal Jameel Kiki. **A new medium for the isolation and enrichment of halophilic actinobacteria.** *Life Sci J* 2016;13(1):65-71]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 10. doi:10.7537/marslsj13011610

**Keywords:** Halophilic actinobacteria, Saline environments, Saline media, Extreme halophile

**Influence of Using Different Water Quantities and Irrigation Systems on Some Forest Trees growth Parameters**

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11 **Abstract:** This study was carried out at Serapium forest which located in north eastern Egypt, within the Governorate of Ismailia. The experiment was conducted to assess the influence of different amounts of water with different irrigation system technique: (IRST) on some growth parameters [Height and root collar diameter (RCD)] for three forest tree species (*Tectona grandis*, *Khaya senegalensis* and *Gmelina arborea*). Thus; experiment was laid out on block randomise design with two factors. First factor is amount of water which comprise into three treatments ( $Q_1$ ,  $Q_2$  and  $Q_3$ ) approximately (130%, 100% and 70%) from total water applied with average (10.3, 7.7 and 5.1L/Tree/day) respectively. Second factor is four irrigation system techniques [bubbler, dripper on line (drip), dripper built-inline (GR) and sub-surface drip (SSD)] during period November 2013 to March 2015. The results revealed that the (IRST) has a significant influence on growth parameters [Height and root collar diameter (RCD)] for all tree species; however; amounts of water have not any significant influence on previous growth parameter unless the (RCD) for *Tectona grandis* and *Gmelina arborea* which acquired a significant influence for  $Q_1$  comparing with  $Q_3$ . Moreover; ascertained that bubbler is the best technique which obtained a highest value for effective water use with tree height by (42.2cm/m<sup>3</sup> and 73.6cm/m<sup>3</sup>) for (*Tectona grandis*, *Gmelina arborea*) respectively. Furthermore; using drip irrigation technique obtained a highest value for water use on tree height when irrigate a *Khaya senegalensis* by (22.3 cm/m<sup>3</sup>) comparing with other techniques.

[A.M. El-Gindy; A.K. Mahmoud and A.H. Mohamed. **Influence Using Different Water Quantities and Irrigation Systems on Some Forest Trees growth Parameters.** *Life Sci J* 2016;13(1):72-81]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online) <http://www.lifesciencesite.com>. 11. doi:10.7537/marslsj13011611.

**Key words:** irrigation systems; water quantities; forest tree and water use

**Values of Islamic piety impact on Islamic job satisfaction of the addicts for material and spiritual treatment- A comparison precept between Japan and Malaysia**

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12 **Abstract:** The aim of this study was to determine values and analysis of Islamic piety impact on Islamic job satisfaction for the addicts between in Toyama, Japan and in Rawang, Malaysia. Analysis is using ordinary least squares with 280 the addicts among them majority permanent resident in Japan who work with car industry in Toyama, Japan and small and medium businesses in Malaysia. The outcomes indicated that the values of Islamic piety are significantly positive impact along the Islamic job satisfaction on small and medium businesses and in auto manufacture for Japan. It means needing to establish an internationalization the Islamic values in the work place in order the addicts feel material and spiritual satisfaction together.

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**Keywords:** Islamic piety, material and spiritual treatment, drug addicts, values, Islamic job satisfaction

### Drug delivery using nano materials

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**Abstract:** The use of nanotechnology in medicine and more specifically drug delivery is set to spread rapidly. Currently many substances are under investigation for drug delivery and more specifically for cancer therapy. Interestingly pharmaceutical sciences are using nanoparticles to reduce toxicity and side effects of drugs and up to recently did not realize that carrier systems themselves may impose risks to the patient. The kind of hazards that are introduced by using nanoparticles for drug delivery are beyond that posed by conventional hazards imposed by chemicals in classical delivery matrices. For nanoparticles the knowledge on particle toxicity as obtained in inhalation toxicity shows the way how to investigate the potential hazards of nanoparticles. The toxicology of particulate matter differs from toxicology of substances as the composing chemical(s) may or may not be soluble in biological matrices, thus influencing greatly the potential exposure of various internal organs. This may vary from a rather high local exposure in the lungs and a low or neglectable exposure for other organ systems after inhalation. However, absorbed species may also influence the potential toxicity of the inhaled particles. For nanoparticles the situation is different as their size opens the potential for crossing the various biological barriers within the body. From a positive viewpoint, especially the potential to cross the blood brain barrier may open new ways for drug delivery into the brain. In addition, the nanosize also allows for access into the cell and various cellular compartments including the nucleus. A multitude of substances are currently under investigation for the preparation of nanoparticles for drug delivery, varying from biological substances like albumin, gelatine and phospholipids for liposomes, and more substances of a chemical nature like various polymers and solid metal containing nanoparticles. It is obvious that the potential interaction with tissues and cells, and the potential toxicity, greatly depends on the actual composition of the nanoparticle formulation. This paper provides an overview on some of the currently used systems for drug delivery. Besides the potential beneficial use also attention is drawn to the questions how we should proceed with the safety evaluation of the nanoparticle formulations for drug delivery. For such testing the lessons learned from particle toxicity as applied in inhalation toxicology may be of use. Although for pharmaceutical use the current requirements seem to be adequate to detect most of the adverse effects of nanoparticle formulations, it can not be expected that all aspects of nanoparticle toxicology will be detected. So, probably additional more specific testing would be needed.

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