LIBYAN 2018 NANOTECHNOLOGY

2nd LCMPS 2018

The 2nd Libyan Conference on Medical and Pharmaceutical Sciences

مركز بحوث التقنيات الحيوية

Excellence and Creativity in Scientific Research

جامعة طرابلس الأهلية

2nd Libyan Conference on Medical and Pharmaceutical Sciences

Conference Abstract Book

APRIL 2018

2nd Libyan conference of Medical and Pharmaceutical sciences 2018 [2nd LCMPS2018]					
Day: 28th April 2018 (Saturday)	Place: The main hall, University of Tripoli Alahlia – Janzur Alsahli in front of Libyan academia of higher studies, Janzur - Libya				
Time	**Programme**	**Venue**	**Time**	**Programme**	**Venue**
8:00 – 9:00	Registration				The Theatre
9:00 – 9:05	Quran recitation & Welcoming Speech				The Theatre
9:05 – 9:10	Welcoming Address by LCMPS2018 President				The Theatre
9:10 – 9:15	Talk of Research Scientific Center - University of Tripoli Alahlia				The Theatre
9:15 – 9:35	Keynote speaker 1 "Dr. Altaher Altabet" - Global climate change and its relation to pathogenic microbes.				The Theatre
9:35 – 9:55	Keynote speaker 2 "Dr. Nagib Elmarzugi" - Libyan Nanotechnology News, Good News!				The Theatre
9:55 – 10:15	Keynote speaker 3 "Dr. Satya P. Bindra" - Accelerating progress towards SDG3 on good health & wellbeing: UN OKYD ambassador system contributions				The Theatre
10:15 – 10:25	Oral presenter 1 [Salma Bukhatwa]	The Theatre	11:05 – 11:15	Oral presenter 6 [Antesar Boshhiha]	The Theatre
10:25 – 10:35	Oral presenter 2 [Suhera Aburawi]	The Theatre	11:15 – 11:25	Oral presenter 7 [Mohamed Elnaas]	The Theatre
10:35 – 10:45	Oral presenter 3 [Ghazalla Benhusein]	The Theatre	11:25 – 11:35	Oral presenter 8 [Basma Doro]	The Theatre
10:45 – 10:55	Oral presenter 4 [Ahmed Atia]	The Theatre	11:35 – 11:45	Oral presenter 9 [Fadia Gafri]	The Theatre
10:55 – 11:05	Oral presenter 5 [Rokaya Amara]	The Theatre	11:45 – 11:55	Oral presenter 10 [Sakina Saadawi]	The Theatre
11:55 – 12:55	BREAKFAST & POSTER SESSION				Theatre Corridor
12:55 – 01:05	Oral presenter 11 [Abdulsalam Rfaida]	The Theatre	01:45 – 01:55	Oral presenter 16 [Khalifa Alsawidi]	The Theatre
01:05 – 01:15	Oral presenter 12 [Ahmed Shoukrie]	The Theatre	01:55 – 02:05	Oral presenter 17 [Osama Almazok]	The Theatre
01:15 – 01:25	Oral presenter 13 [Mahamoud Jwan]	The Theatre	02:05 – 02:15	Oral presenter 18 [Samira Ameigal]	The Theatre
01:25 – 01:35	Oral presenter 14 [Salwa Eljamay]	The Theatre	02:15 – 02:25	Oral presenter 19 [Hamza Khalifa]	The Theatre
01:35 – 01:45	Oral presenter 15 [Ishag Alsheriff]	The Theatre	02:25 – 02:35	Oral presenter 20 [Ashraf Abdusalam]	The Theatre
02:35 – 03:15	LUNCH TIME& POSTER SESSION				Theatre Corridor
03:15 – 03:25	Oral presenter 21 [Halla Hadi]	The Theatre	04:15 – 04:25	Oral presenter 27 [Eman Almukhtar]	The Theatre
03:25 – 03:35	Oral presenter 22 [Suad Abuzariba]	The Theatre	04:25 – 04:35	Oral presenter 28 [Nafisa bkhait]	The Theatre
03:35 – 03:45	Oral presenter 23 [Hanin Mughrbi]	The Theatre	04:35 – 04:45	Oral presenter 29 [Mawada Jallul]	The Theatre
03:45 – 03:55	Oral presenter 24 [Sondos Almokhzanji]	The Theatre	04:45 – 04:55	Oral presenter 30 [Najwa Alosta]	The Theatre
03:55 – 04:05	Oral presenter 25 [Almabrok Saeed]	The Theatre	04:55 – 05:05	Oral presenter 31 [Esra shaban]	The Theatre
04:05 – 04:15	Oral presenter 26 [Awatef samud]				The Theatre
05:05 – 05:45	Closing ceremony/ Giving certificates				Theatre
05:45 – 06:00	Tea break				Theatre Corridor

2nd Libyan Conference on Medical and Pharmaceutical Sciences

ORGANIZING COMMITTEE

2nd Libyan conference of Medical and Pharmaceutical sciences 2018

Dr. Ahmed Atia
Head of Pharmacy department
University of Tripoli Alahlia
"Conference president"

Assc. Prof. Abdulsalam Rfaida
Head of Scientific Research Center
University of Tripoli Alahlia

Assc. Prof. Yousef Taher
Faculty of Pharmacy
Tripoli University

Dr. Elmahdi Njim
Founder of University of Tripoli Alahlia
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The 2nd Libyan conference on Medical and Pharmaceutical Sciences Funded by University of Tripoli Alahlia.

University of Tripoli Alahlia (UTA) founded in 1999 as private university under ministry of higher education (Resolution No. 33). It seeks since its foundation to prepare the scientific and moral students. The quest for a private university was suggested in 1990s by **Dr. *Elmahdi Njim*,** the founder of this institute, as to move up the private education in Libya.

UTA opened its doors on 1999 to 30 undergraduate students in *Salah-Eddin*, a temporary campus housing three main departments, that is; department of business administration, accounting, and law.

In Jun 2014, UTA moved to its present campus in Janzur. UTA now consists of seven departments of business administration, accounting, law, foreign languages (English), engineering (architecture), and new two Medical departments; Pharmacy and Medical laboratory.

Dr. Sheren Njim
Head of University of Tripoli Alahlia
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Welcome Speech by the head of University of Tripoli Alahlia for 2nd Libyan Conference on Medical and Pharmaceutical Sciences 2018

28-April-2018

It gives me great pleasure to join the Conference President in warmly welcoming you all to The University of Tripoli Alahlia's second Libyan Conference on Medical and Pharmaceutical Sciences 2018. **I would like to specially** welcome our collaborators on this event, their Excellency major intervention to this very important occasion. Thank you for gracing this occasion and making it so much more special for scientific advance. I want to say once more on behalf of the University of Tripoli Alahlia, welcome. It's a pleasure to see so many of you here.

Speech of the Conference President

"Dr. **A**hmed **A**tia"

It is my great pleasure to welcome you to the 2nd Libyan conference on Medical and Pharmaceutical Sciences held by the **Research Scientific Center at University of Tripoli Alahlia**. I would like to take this opportunity to express my profound gratitude to the founder of this university for supporting scientific enterprise. Our annually meeting has traditionally combined great scientific content with a tremendous opportunity to see and taste the diverse and beautiful flavors of research. This year an outstanding gallery of speakers from all over the country which exceeded 60 participants from different universities and research centres, will participate and share with us the most significant advances in our profession.

Scientific research excellence is an essential principle for transforming human thinking and ways of life. Scientific discovery is a major driver of national prosperity, and social and economic sustainable development. For this reason we chose our theme for this 2nd Libyan conference "**Excellence and Creativity in Scientific Research**". We support and provide care in all areas of research, we participate in a multitude of research activities, and enable modern high quality piece of research to be provided in a suitable, and proper manner.

A unique and wonderful aspect of our 2018 meeting is that the conference committee has collaborated with the highest research center in Libya that is **Biotechnology Research Center**, Authority of Natural Science Research and Technology, and National Nanosciences & Nanotechnology Project.

We have a great team working to make this a truly memorable meeting, and I look forward to meeting you annually.

28th April 2018
Janzur – Libya

KEYNOTE SPEAKER 1

Global climate change and its relation to pathogenic microbes

Prof. Altaher Altabet
Faculty of Medical Technology, University of Tripoli
Email: altabet.altaher@gmail.com

Global climate change has become a real phenomenon in our planet, confirmed by scientists in many studies and research, the temperature of the planet is rising because of emissions of greenhouse gases resulting from human activities, the most important of which is carbon dioxide emitted from the burning of fossil fuels, where levels increased CO2 in air from 280 ppm in the pre-industrial era to 379 ppm. Scientists are not optimistic that the levels of pollution will decrease due to our lifestyle, population growth, energy use and development projects will inevitably lead to constant warming and persistent climate changes and it will be worse than we expect. The World Health Organization report in 2008 stated that "global warming is becoming a reality, evidenced by increases in the global average of air and ocean temperatures, widespread melting of ice and rising global average sea level. Eleven years of the 12 years from 1995 to 2006 have been classified as warming in the world's surface temperature record since 1850. Global climate change will have a major impact on the spread of infectious diseases. Many scientists have predicted that in some regions the temperature rise will change the mechanism and geographical area of the spread of diseases such as cholera, malaria and others, and increased rainfall will be a catalyst for the proliferation of vectors such as mosquitoes, ticks and snails. Increased surface and air temperatures will also increase the intensity and frequency of precipitation and flooding, which will be the cause of increased intestinal diseases and other communicable diseases. In general, climate change brings new problems in the control of infectious diseases because many deadly diseases transmitted by water and contaminated food as well as insects are highly sensitive to climatic conditions and extreme weather conditions. Climate change slows down, halts or reverses the current progress in combating many infectious diseases. This talk reviews the effects and factors caused by global climate change in increasing the spread and severity of pathogenic microbes in the world.

KEYNOTE SPEAKER 2

Libyan Nanotechnology News, Good News!

Assco. Prof. Nagib A. Elmarzugi
Department of Industrial Pharmacy. Faculty of Pharmacy, University of Tripoli. Head of National Nanosciences & Nanotechnology Project, Biotechnology Research Center, Authority of Natural Science Research and Technology,
Email: nelmarzugi@gmail.com

Libya is among the developing countries that have launched their first research group activities in nanotechnology at biotechnology research center, Authority of Natural Science Research and Technology in 2009. This participation summarizes the establishment, finding and recommendations of national Nanosciences and nanotechnology project. This keynote talk focusses on the young scientists outcomes as a result of numerous technical projects carried out in biotechnology research center, Libyan universities and other partner institutions where many obstacles and less facilities existed. Many research projects conducted by NNNP@BTRC team including the characterization of nanoparticles, preparation and further characterization of nanoemulsion and recently nanocarrier and nanocapsule, in addition to other research projects and actions, which are in progress until they reach their designed target. This presentation is about the NNNP@BTRC activities and reflects their need for public dialogue about the development of nanotechnology in Libya and the desire to meet the other scientists who are working in the same field form different universities and research centers in order to collaborate and work together.

KEYNOTE SPEAKER 3

Accelerating progress towards SDG3 on good health & wellbeing: UN OKYD ambassador system contributions

Prof. Satya P. Bindra
Presenter OKYD Ambassador, UNCSD Focal Point, HLPF Focal Point, UN DESA, APCI UNIDO, UNESCO CMU Commission, DAAD Prof Germany. Phd Birmingham (UK) SPARK Expert Netherlands,
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Key Note address treats access to Goal 3 of Global Goals on good health and well-being as a human right and the foundation of human prosperity. Objective is to ensure healthy lives and promote well-being for all at all ages which is essential to sustainable development. After highlighting facts & Figures and Targets by 2030 it presents an overview of Global Goal 3 that focuses on all aspects of health in the world including increased life expectancy, reduced infant mortality rates and ending epidemics such as AIDs, hepatitis and other transmittable diseases, it demonstrates that across the world over 1.3 billion people do not have access to effective and affordable health care, and 93 percent of them are in low and middle income countries including Libya. These countries only make up 18 percent of global income, and represent 11 percent of global spending on health care, meaning there's a huge imbalance. Maternal mortality rates are 14 times higher in developing countries than in developed countries, and only half of women in those regions have access to the recommended amount of health care. According to the UN, over 16,000 children under 5 die every day, mainly from malnourishment, dehydration and preventable diseases. Although significant progress has been made in improving the health of billions of people since MDGs of 2000, major hurdles remain — particularly in developing countries, where women and children are most vulnerable. True progress will depend on universal and affordable healthcare that helps prevent disease, supports strong vaccination programmes, and provides equal access to sexual and reproductive care and education. Our work on health OKYD Ambassador's health-related research is designed to demonstrate that how threats to global health in 2018 is being tackled through preparing, preventing and responding in time.by pursuing WHO Policy of "No Regrets" to health emergencies—guided by the knowledge that outbreaks are inevitable, but epidemics are preventable. It untangles the growing social, economic, and

environmental complexity that threatens to outpace the ability of governments and communities to manage the well-being of their citizens, IDPs & migrant in Libya. Because more than half of the world's population now reside in cities, we focus on urban health governance to stem the rise of non-communicable disease, respond to the emergence of global pathogens, and diminish the human health tolls of natural disasters. Our work assesses key elements of healthy development — such as Big Data ICT & infographics in health services, SMART Future HealthCare Insurance Cards at LifeCare, WHOQOL-BREF Programme On Mental Health World Health Organization, health clinics centers for Tawerghen IDPs & migrants. Safe water and sanitation — to ensure that they are reinforced by health policy. Interesting results from case studies are presented to demonstrate that how everyone having the right to safe, effective and affordable healthcare services, medicines and vaccines can help achieve universal health coverage and progress on medical research and development. OKYD Ambassador team lauds and welcomes an autonomous health reform committee (NCHSR) being formed to carryout root review and reform of Libya's ailing health sector that sprang out of the Libya Health System Strengthening Programme (LHSS), set up between the Libyan authorities and the European Union to reform Libya's health sector. Finally the suggestions and recommendations to ensure that suffering belongs to no one based on four Nobel truth and eight fold path for realizing the dream of one common & interdependent planet for people health and wellbeing leading towards peace progress and prosperity are the main highlights of the address.

ID 01: Establishing a National Competency Frameworks for Pharmacy Education

Salma A. Bukhatwa*, Iman Elmahdi, Elzahra Buzariba, Ruwida Sinini, Maryam Saleh, Hanin Newisry, Amna Bugrain, Samah Eltyb and Mustafa M. Elfakhri.

Faculty of Pharmacy, Libyan International Medical University, Benghazi, Libya.

During the past century, education of health professionals passed via three generations of reform; starting from integration of modern sciences into curricula, to introducing problem-based instructional innovation, ending with the current system-based education that adapt core professional competencies. In 2012 the International Pharmaceutical Federation (FIP) developed the "Global Competency Framework for pharmacists", that was adopted by many European countries to develop their own competency frameworks and to create their competency profiles to improve the competency and capabilities of pharmacy graduates. Competent graduates can practice at a defined level of proficiency in accord with local conditions to meet local needs. Implementation of competencies frameworks in curricular design, methods of teaching and in assessment processes is the first step towards Competency-Based Pharmacy Education. Competencies are cumulative and cannot be taught in a single course but should be distributed throughout the curriculum, consequently, not only learning activities should be considered here but also methods of assessment. Then, curricula should concentrate on the abilities of a graduate to integrate knowledge, skills and behavior to attain good professional practice. Many challenges are facing designing & implementation of competencies in Pharmacy colleges curricula in Libya, are for example: the cultural heritage of people, their resistance to change, poor performance of academic staff members, legislative and administrative defects and poor investment in education. As a conclusion, curriculum should not derive outcomes, but the competency outcomes should drive curriculum objectives. Success in establishing competency frameworks at national level should address the local needs and use this as driving force of curricular transformation. **Keywords:** Competent Graduate – Pharmacy Curricula – Competency Frameworks.

ID 02: Selenium curative and protective action on the histopathological effect of formaldehyde on female reproductive system using albino mice

Suhera M Aburawi[1]*, Soad Treesh[2], Habiba El jaafari[3], Medeha Elghedamsi[1], Amina A Hussin[1], Naema Shibani[3]

[1]Department of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy; [2]Department of Histology and Medical Genetics, Faculty of Medicine; [3]Zoology Department, Science Faculty - University of Tripoli, Libya.

Female infertility, describe a woman who is unable to carry a pregnancy to full term. Selenium, nutritionally essential for human and is a constituent of selenoproteins that play critical roles in reproductive system. Formaldehyde, is highly toxic on reproductive system. The aim is to investigate the histopathological curative and protective roles of selenium toward formaldehyde induce damage in female reproductive system. Method: Female mice (n=50, 25-40 gm) were divided into 5 groups: group 1 (control) administered normal saline (5ml/kg) for 5 days, group 2 received formaldehyde (30mg/kg) for 5 days, group 3 receive selenium (100µg/kg) for 5 days, group 4 administered formaldehyde and selenium (prophylactic) for 5 days, group 5 received formaldehyde for 5 days followed by selenium for another 5 days (curative). At the end of 21 days, animals were sacrificed, ovaries and uterus were removed and fixed in 10% formalin solution for routine histological techniques. Intraperitoneal administration was adopted. Result: Present study found that, mice received selenium only did not show any significant change in histological structure in ovary and uterus compared to the healthy animal that treated with saline. Formaldehyde treated group showed clear damage in the ovary and uterus structure; there was a great number of growing follicles and few numbers of primordial follicles, thickness of tunica albuginea covering the ovary, decreased prominence of endometrial uterus glands, and proliferative endometrium. Mice administered selenium as prophylaxis showed partial improvement in formaldehyde toxicity. An increase in number of the glands in comparison to the injected group with formaldehyde only was observed. It was noted the presence of some hemorrhage in the stroma uterus, proliferation of the interstitial cells among growing follicles ovary. Mice treated with selenium after formaldehyde toxicity (treatment) showed significant improvement in the damage ovary and uterus induced by formaldehyde such as presence of little primordial follicle but great number of normal growing follicles; corpora lutea were observed in the ovary and uterus, increase in thickness of luminal epithelium and few small endometrial glands lined with degenerated epithelium and the histological structure was nearly like control group. Conclusion: Formaldehyde cause damage to the histological

structure of female reproductive system and treatment by selenium can overcome this damage. **Keywords**: Selenium, Formaldehyde, ovary, uterus.

ID 03: Cytogenetic effect of Raid insecticide found in Libyan market using human peripheral blood lymphocytes

Ghazalla M. Benhusein*, Nahed Ashore, Najwa Mansur

University of Tripoli, Faculty of Pharmacy, Department of Pharmacology and Clinical Pharmacy.

Background: A wide margin of safety to mammals makes these synthetic pyrethroid insecticides ideal insecticides for widespread use in agriculture, veterinary and public health programs. Aim: The aim of this project was to evaluate in vitro cytogenetic effect of Raid insecticide in freshly isolated human peripheral blood lymphocytes. Peripheral blood lymphocytes were treated with 1, 2.5, 5, and 10 µl of raid insecticide for 72 hr using karyotype analysis as a genetic end point. Results: Our results showed that the number of chromosomes count progressively decreases with increase in raid concentrations. However, the higher concentration of 10 µl raid showed uncountable chromosome fragments. The decrease in the chromosomes count has been shown to be proportional to the concentration of the raid insecticide. This insecticide need to be used properly, otherwise may cause harm to humans. Conclusion: For this reason, exposure of human beings particularly children, elderly people, and pregnant women should be restricted. Furthermore, further studies were necessary to assess the genotoxic effects of synthetic pyrethroids. **Keywords:** Cytogenetics, karyotyping, pyrethroids, chromosomal aberrations and human blood lymphocytes.

ID 04: Effects of Frequent Announced Pharmacology Quizzes on the Academic Performance

Ahmed Atia

Department of anesthesia and intensive care, Faculty of Medical technology, Tripoli University, Libya.

The impact of assessment methods in promoting students' performance in terms of knowledge earning and retention is well established. Aims: This study aimed to investigate the possible benefits of frequent announced quizzes in pharmacology on the performance of a representative sample of Libyan pharmacy students. Methods and Material: This experimental study was conducted among 11 fifth semester pharmacy students who had taken the course in Pharmacokinetics and

Pharmacodynamics, in which the basic information about the movement of drugs in the body and its effects on living organisms were provided. Initially, in the teaching of pharmacokinetic lesson, 6 routine sessions were handled with lectures and interactive questions and answers. Then at the beginning of the all of the next 6 sessions in pharmacodynamic topic, the students were informed that they will have a quiz at the end of each session. At the end of the semester, the total scores of quizzes were compared with the mean final scores of pharmacokinetics and pharmacodynamics using t-test at $P<0.05$. Results: The mean final scores of the pharmacokinetics lesson were not significantly different from that of the pharmacodynamics (75.81± 11.11 vs. 68.63± 17.50 on the scale of 100, respectively, $P=0.13$). There was no significant difference in the mean score of the six quizzes compared with the mean final term score of pharmacokinetics. Conclusion: Frequent announced quizzes were not beneficial on enhancing the medical students' performance and learning. **Keywords:** Frequent quizzes, pharmacy student, performance, learning.

ID 05: Stability Study of Praziquantel Lipid Nanocapsules

Rokaya O. Amara[1]*, Nagib A. Elmarzugi[1,2], Labiba K. El-Khordagui[3], Alyaa A. Ramadan[3], Riham M. El-Moslemany[3]

[1]National Nanosciences & Nanotechnology Project, Biotechnology Research Center, Authority of Natural Science Research and Technology, Tripoli, Libya. [2]Department of Industrial Pharmacy, Faculty of Pharmacy, University of Tripoli, Tripoli, Libya. [3]Department of Pharmaceutics, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt

The stability of colloidal lipid particulate systems is influenced by many factors. These include mainly the large interfaces facilitating adsorption-desorption processes, interactions in the stabilizer layer and increasing the risk of chemical instabilities. In the present study, the stability of Lipoid-containing and Span 80-containing Praziquantel lipidnanocapsules (PZQ-LNC) formulations prepared at a 5 mg/mL drug loading without or with oleic acid (OA) and miltefosine (MFS) as additives were assessed over a 6 month-storage period at 4°C. Particle size (nm), polydispersity index (PdI), zeta potential (ZP) and Entrapment efficiency (% EE) were used as stability monitoring parameters. The colloidal properties of the LNC dispersions did not change significantly. Results showed no significant drug leakage during the stability study as indicated by % EE values reassessed at two-month intervals. The effect of freeze drying on Span 80-containing Praziquantel lipidnanocapsules (Sp-PZQ-LNC) prepared at a 25 mg/mL drug loading without or with OA/MFS additives were studied by monitoring colloidal properties and drug

leakage after reconstitution. In the present study, although replacement of Lipoid with Span 80 allowed higher PZQ loading, the Sp-PZQ-LNC-25mg showed poor stability because of PZQ overload. Hence, they were subjected to a stability study upon freeze drying. Combined results of the study indicated good stability of Sp-PZQ-LNC with high drug loading (25 mg/ mL), particularly Sp-PZQ-LNC-OA-MFS, upon freeze dried with 5% trehalose. In fact, freeze drying led to the conservation of the initial properties of the freshly prepared formulation, increasing its promise in potential clinical applicability. **Keywords**: lipid Nanocapsules, Nanotechnology, Nanomedicine, Praziquantel, stability

ID 06: Sources of drug information at Libyan community and private pharmacies

Antesar Boshhiha*, Darine A. Alobide, Nesserin M. Ahmed, Samia S. Mahmud

Pharmaceutics department, Faculty of pharmacy, Benghazi University

The aim of this study was to identify information resources of medicines used by the community and private pharmacists at Benghazi-Libya to update the knowledge and provide updated and effective informations to the patient and other medical professionals. There are 50 pharmacists had received a survey comprising of 21 questions. The initial questions designed to obtain demographic data concerning pharmacist utilization of various information resources. Pharmacists asked specifically about the well-recognized reference books and journals to indicate if they are readily available at their practice site. The second part comprises of questions concerning about the pharmacist's responses and general informations regarding type of advices sought by patients and how did those responses could affect the patient-pharmacist confidence. The response to all questionnaires collected and statistically analyzed with SPSS program. The internet was the most preferred and used source for drug information than the Pharmacopeia and Martindale. The information resources are limited, which are major barrier in effective counseling. The Pharmacist age, experience and level of education have strong effect on the choice of the source of drug informations. It seems likely that some pharmacists are more skilled than other pharmacists in patient counseling. Affiliation and the pharmacist income have a direct effect on the pharmacist prescription of drug substitutes. It was concluded that, the community and private pharmacists is an important source of drug informations and can play a vital role in promoting patient health care in the community. Thus, the pharmacists in the community and private should be trained in an appropriate fashion to meet such

goals. **Keywords**: Information resources, community pharmacy, Private pharmacy, Pharmacopeia, Martindale.

ID 07: Phytochemical Studies and Evaluation of Anti-Parkinson's Disease of Hyoscyamus muticus

Mohamed Elnaas*, Faizul Azami

Faculty of Pharmacy, Misurata University, Misurata – Libya.

Parkinson's disease (PD) is considered as one of the major progressive neurologic disorders of the elderly population and about three percent of this age group over 65 years have developed the overt illness. Although currently used strategies for the treatment of Parkinson's disease are highly effective in controlling the early stages of the disease, long-term treatment is associated with drug-related complications that have prompted the search for alternative drug targets. Discovery of new medicinal agents from natural sources such as plants has largely been an adventitious process based on screening of plant and microbial extracts combined with bioassay-guided identification and natural product structure elucidation. To find a new therapy for PD, the leaf of Hyoscyamus muticus was chosen for the study. In this study, crude extracts of dried leaves obtained from Hyoscyamus muticus were prepared and the presence of alkaloid molecules has been confirmed by employing the specific standard chemical tests. The anti-Parkinsonian activity was determined by using the previously established haloperidol-induced catalepsy method in mice. The results obtained indicates that crude extract given at the dose of 30 mg/kg produces 53.8% reduction in catalepsy and 99.81% reduction in catalepsy was observed at the dose of 300 mg/kg body weight of mice while the standard drug, levodopa was able to control the catalepsy by 91.1%. These preliminary results highlight the possibility for separation, characterization and pharmacological screening of phytochemicals of Hyoscyamus muticus which may emerge as a novel therapy for PD.

ID 08: An In vivo Imaging of Cutaneous Leishmaniasis in BALB/cMice.

Basma Doro[1]*, Najib M SufyaA[1], Fadia Mohamed Gafri[2], K. C. Carter[3]

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Human leishmaniasis is a spectrum of diseases caused by protozoan parasites of thegenus Leishmania. The disease affects the populations of 88 counties of the tropics andsub-tropics with pathologies rangingfrom cutaneous and muco-cutaneous lesions tovisceral disease. L. major infection causes cutaneous disease and is characterised by skinlesions. Previous studies have shown that it is possible to monitor leishmanial infection inthe same mice by monitoring the bioluminescent signal from mice given parasitesexpressing the luciferase gene. Therefore in this study the measurement of parasitesburdens using bioluminescence correlated well with monitoring lesion size in infected L.major and L. mexicana infected mice and parasites grew better in the footpads comparedto the rump. Infection with L. major caused a more aggressive infection compared to L.mexicana. In this study, there was a significant difference between rump and footpadinfected with L. mexicana promastigotes in phagocytic cells present in the infected site asdetected using the chemiluminescence emitted. However there was no significantbetween rump and footpad for mice infected with L. major promastigotes. In vivoimaging model of mice infected with luciferase expressing parasites is easy andconvenient way to follow disease and parasite growth could be detected much earlier. **Keywords**: Bioluminescence imaging; leishmaniasis.

ID 09: Eudistomin N Effects on Ap-1 transcription and MAP kinase signaling.

Fadia Gafri[1]*, Feras Alkayed[1], Simon Mackay[2], Andrew Paul[2], Robin Plevin[2]

[1]Department of Pharmacology and Clinical pharmacy, Faculty of pharmacy, University of Tripoli, Tripoli; Libya. [2]Strathclyde Institute of Pharmaceutical and Biomedical Sciences (SIPBS), University of Strathclyde, Glasgow, Scotland; UK

Chronic inflammatory diseases such as asthma, rheumatoid arthritis and the cellular events and the chemical components that involved in the inflammatory process are linked to many transcription factors. Activated protein-1 (AP-1) is one of the major transcription factors that play pivotal role in the triggering of both innate and adaptive immune responses. AP-1 is a pro-inflammatory transcription factor, its activation mediated by many cytoplasmic transforming proteins including Mitogen Activated Protein Kinases (MAP Kinases) pathway, and it is induced by a variety of cytokines and mitogens. Since it regulates many inflammatory genes, it is considered as potential target for anti-inflammatory drugs. In the present study, we investigated the possible modulatory effects of the synthetic alkaloid eudistomin N on the transcription factor AP-1 and related upstream MAP Kinases. The phorbol-12-myristate-13 acetate (PMA) was used to induce AP-1 transcriptional activity in

NCTC2544 human keratinocyte cells stably transfected with AP-1-linked luciferase reporter plasmids. Western blot analysis was applied to identify the effect of eudistomin N on LPS-induced phosphorylation of MAP kinases (P38 MAPK, ERK1/2 and JNK1/2) in RAW 264.7 macrophage cell line. The tested compound cytotoxicity was investigated in both cell lines using MTT cell viability assay. However, eudistomin N possessed a low cytotoxicity in macrophage cell line, rather appeared higher in NCTC2544 human keratinocyte. It did not show any significant effect on PMA-induced transcriptional activity of AP-1. Furthermore, none of the upstream signaling proteins phosphorylation; the MAP kinases were affected by eudistomin N, with an exceptional slight effect on ERK1/2. Taken together, these results indicated that AP-1 or MAP kinases have no role or any dependent anti-inflammatory effects for the euodistomin N either on cytoplasmic or nuclear levels.
Keywords: Inflammation, Eudistomin N, AP-1, transcription, phosphorylation, MAPkinases, cell viability.

ID 10: Study of caffeine consumption rate and concentration in different food and beverages consumed by children

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Caffeine is the most commonly used psychoactive substance throughout the world. It is found in coffee, black tea, and chocolate, as it is produced naturally in the beans and leaves of the plants used to manufacture these products. This study aimed to make a survey study among children 2-11 years in some Tripoli schools to determine caffeine concentration in number of beverages and foods consumed by studied children. About 313 copies of the questionnaire were distributed to students to be filled by their parents. The students included public and private schools in Tripoli, Libya. Their ages ranged between 2 to 11 years. Food and beverages samples were collected randomly depending on brands consumed by children under the study. The working standard solution of caffeine were prepared in different concentrations then its absorbance was measured and used to make a calibration curve. Caffeine was extracted from samples by dissolving solid samples in distilled water then extraction with dichloromethane, while liquid samples were extracted directly by the same solvent. Purity of isolated caffeine was estimated by

using TLC method and was compared with standards. The detection was performed under UV lamp at 254 nm. Quantitative analysis of caffeine was performed by using a UV-Visible spectrophotometer. Chocolate biscuits, chocolate cake, cocoa milk and chocolate ice cream were the highest consumed products among the studied children (81%, 79%, 67% and 63% respectively). The highest side effects of caffeine consumption was hyperactivity was the highest side effect in children (76%). Some children also suffered from severe side effects such as panic attack (14%). Naseem ice cream sample showed the highest caffeine content (28 mg/serving) among solid samples. Whereas in the beverages, energy drink samples Red pull, XIR and Shark were 268, 262 and 250 mg/serving respectively. In conclusion, there was excessive consumption of caffeine among the studied group of children and some of them showed side effects and even severe side effects. Variety of tested foods and beverages under the study contained uncontrolled concentrations of caffeine. In addition, chocolate milk (Al Rayhan), contained no caffeine. **Keywords**: Caffeine, concentration, consumption rate, dichloromethane, side effects.

ID 11: Nitrate removal (NO3-) from different sources of water by laboratory-scale reactor biofilters with anaerobic condition

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This study aims at finding different sources of water pollution with NO3-, which include ground and surface water respectively. An experiment for treatment unit (laboratory-scale reactor) was established. It is to work under the state of Vertical Flow Biofilters (VFB) with anaerobic condition. In side reactor were also used to support materials which include (PVC) and gravel to promote the growth of Biofilms. This study also aimed to assess the effective removal NO3- from the water. Different samples were collected from treatment unit and measured NO3- in a period of four days. The result indicted that NO3- were present in ground and surface water at average of (14 ppm) to (190 ppm). In most cases, it is higher than standard drinking water. However, the result gave optimum NO3- removal performance for about 76.1 %, the experiment was operated at Hydraulic Retention Time (HRT) (4 day). **Keyword**: Biofilm, Biofilter, Nitrate.

ID 12: The Yield of Sputum Smear Direct Microscopy Using Ziehl-Neelsen Stain in Comparison with Lowenstein-Jensen Culture on the Diagnosis of Pulmonary Tuberculosis in Tripoli-Libya

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Background: TB is a challenging public health malady for its sprouting morbidity and mortality in developing countries. As sputum smear direct microscopy is being rapid diagnostic tool for TB, the culture on Lowenstein-Jensen medium is the golden tool for the diagnosis of TB in developing countries despite the modern diagnostic techniques in the present settings. The aim of this study is to analyze the validity and reliability of sputum smear direct microscopy in the diagnosis of PTB. Methods: This study was conducted in TB-Laboratory NCDC, Tripoli from January to December 2016, including NCDC TB-OPD patients. A total of 2783 specimens were processed for both smear and culture. The smears were stained with Zeihl-Nelson stain using (1% Carbolfuchsin, 3% Hydrochloric acid and 0.1% Methylene Blue) and were observed under 100-x oil immersion lens. Cultures were inoculated on Lowenstein-Jensen medium after specimens were decontaminated. Results: Of total 2783 study subjects, 203 (7.29%) were smear positive while 327 (11.74%) were culture positive. Out of 203 smear positive pulmonary cases, 154 (47.094%) were found to be positive on LJ culture. A total of 2407 pulmonary cases were negative on the smear and LJ culture for Mycobacterium tuberculosis. Conclusion: This preliminary study indicated the low sensitivity of sputum smear direct microscopy for early diagnosis of TB, while culturing on LJ media remains the golden standard modality. **Keywords**: Mycobacterium tuberculosis; AFB; ZN Stain; Pulmonary TB; LJ Medium; Libya.

ID 13: Seroprevalence of Cytomegalovirus among population in Zliten, Libya

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Cytomegalovirus (CMV) is widely recognized as an opportunistic pathogen associated with considerable morbidity and mortality in high risk populations such as immunocompromised individuals and pregnant women. Seroprevalence of CMV has been reported to be highest in countries with low socioeconomic states such as

South America, Africa, and Asia, and lowest in Western Europe and United States. The aim of this study was to assess the prevalence of CMV infection and to estimate socioeconomic disparities effect in infection rates among population in the city of Zliten, Libya. A seroepidemiological study was conducted on 250 blood samples from individuals (males and females). According to analyses, 94% and 6% of the specimens were found to be positive for anti-CMV IgG and IgM antibodies, respectively. This study showed no statistically significant associations between the presence of antibodies and the socioeconomic factor of all participants. The findings of this study indicated that there were high prevalence of cytomegalovirus among population in Zliten, Libya. This rate may reflect an alarming picture of infection especially in high risk groups and the detection of this virus could be very helpful in reducing hazard of viral infection. **Keywords**: Cytomegalovirus, Seroprevalence, IgG, IgM, Socioeconomic, Population.

ID 14: Hepatitis B and C Infections in Haemodialysis Patients in Derna City

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Background: Hepatitis outbreaks remains a major issue among dialysis patients. It is associated with a high risk of hepatic complication. The aim of this study was to determine the prevalence of infected patients with hepatitis B and C viruses in hemodialysis (HD) center in Derna city. Methods: A descriptive study was carried out on HD patients visiting Al-wahda hospital in Derna City (n=62) from December 2016 to October 2017. Seropositivity to HBV and HCV were collected and analyzed by a third generation enzyme linked immunoassay (ELISA). Result: Our results showed that the number of infected patients with hepatitis virus were 3 cases (4.8%). Out of which, 2 (3.2%) were HCV and 1 case (1.6%) of HBV. The majority of infected patients with HBV were male (26.04%), while patients with HVC predominated by females 12.4%). Most of our cases were detected with hepatitis during the first year of hemodialysis (1.4%), whereas 0.62% were patients on hemodialysis of more than 1 year Conclusion: Patients on maintenance HD in Derna have a high incidence and prevalence of HCV infection and lower rates of HBV infection. The factors associated with HBV and HCV infection are highly suggestive of Nosocomial transmission within HD units. Urgent action is required to improve infection control measures in HD department, and to reduce dependence on blood transfusions for the treatment of anemia. **Keyword**: Hemodialysis, ELISA, Nosocomial, HBV, HCV.

ID 15: Reference Range of Body Temperature in Sudan

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Introduction: Constancy of core body temperature is a hallmark of its intact. Measuring body temperature is a routine process made by clinicians for diagnosis and prescribing the treatment. Objectives: Establishing a reference range of body temperature as well as its diurnal variation in Sudanese community orally was the objective of this cross-sectional research. Methods: 235 apparently fit subjects (202 males and 33 females) aged 18 to 50 years were enrolled during mid-January to first March, 2007. The study was conducted at Alfashir city - West Sudan; among university students, army residents, and Quran students. A questionnaire was used to exclude temperature disturbance cases. Oral temperature was measured in the morning and the evening by mercury-in-glass thermometer, and then mean oral temperature (MOT) and its diurnal variation (DV) were obtained by analyzing the measured data with statistical programme for social sciences (SPSS) and software t-test. Results: The MOT and its DV were found to be 36.47 ± 0.35oC and 0.94 ±0.61oC respectively. The data showed significant relation of body temperature with both sex (more in females) and age (p = 0.001) with its decrease in elderly. The values of MOT and its DV in January and February (to beginning of March) were 36.43 ± 0.99oC and 36.79 ± 0.53oC respectively. Conclusion: The study indicated 36.5 ± 0.9oC as a reference mean body temperature among Sudanese population. The women and young ages appear to have high body temperature. The reverse values between MOT and its DV as showed by the study deserves further work. **Keywords**: Reference range, body temperature, diurnal variation, Sudan.

ID 16: Surgical outcomes of 23-gauge pars plana vitrectomy for retinal detachment patients in Tripoli

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Aim: To evaluate the outcomes and complications of 23-gauge (G) pars plana vitrectomy (PPV) for repair of retinal detachment (RD). Method: Retrospective review of consecutive, single-surgeon 23-G PPV cases between January 2017 and December 2017. 117 eyes from 117 patients were operated on for RD; all eyes were

tamponaded with, silicone oil, Air. Mean age at surgery was 48.69 years (range 8–75 years), and mean length of follow-up was 5 weeks (range2weeks – 32 weeks). Primary outcomes included best-corrected visual acuity (BCVA), intraocular pressure (IOP), anatomic success, redetachment, and endophthalmitis. Result: We included 117 consecutive patients (117eyes). Males and females are equal. The average age was 48, 69 years (range 8-75). The primary success rate with a single procedure was 98%. However, redetachment occurred in two eyes only (1.7%). Visual acuity was improve in 89.74% of the eyes. Mean IOP increased from 11.16 to 12.58 mm Hg after surgery. Elevated postoperative IOP (≥22 mm Hg) occurred in 10 eyes, and no low IOP. There were no cases of endophthalmitis .The average follow-up period for all patients was 2weeks (range 2-32 weeks). Conclusion: Twenty-three-G PPV repair was safe and effective in the repair of RD, including eyes with a combined rhegmatogenous detachment or PVR. Air, silicone oil, tamponading agents all approved to be efficacious in this surgical population.

ID 17: Risk factors of ectopic pregnancy

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Background: Ectopic pregnancy is an important cause of maternal mortality and morbidity in the first trimester of pregnancy. Aim of study: to determine 'risk factors of ectopic pregnancy in Libyan women. Patients and methods: case series study include 94 cases of ectopic pregnancies carried in in AlKhadra hospital Tripoli/Libya during 2016. Result: with incidence of 1.5 – 2% of pregnancies. The mean age of patients was 31.8 years and most of 'patients were between 26-30 years, and most of them were nulliparous representing (47.9%) of cases, the risk factors that contribute to ectopic pregnancy were as following {(from the highest percentage to the lowest); (45.7%) of 'patients had history of subfertility, (42.6%) had positive history of PID, (39.3%) had previous C/S, (38.3%) had miscarriage, (35.1%) had previous E&C, (19.1%) of the patients had tubal surgery, (18.1%) had positive history of endometriosis, (14.9%) had tubal pathology and only (8.5%) had history of ectopic pregnancy}. Conclusion: Since incidence of ectopic pregnancy is likely to be considered as an important role for future fertility. In 'present study, we found that 'main risk factors for incidence of ectopic pregnancy in a sample of Libyan women were history of subfertility, positive history of PID, previous C/S, previous miscarriage, previous E &C, tubal surgery, positive history of endometriosis, tubal

pathology and prior history of ectopic pregnancy. These findings can be useful for early diagnosis of ectopic pregnancy to pursue. Proper medical therapy instead of unnecessarily surgical treatment. **Keywords**: ectopic pregnancy; risk factors; early diagnosis; fertility.

ID 18: Risk factors for breast cancer in the Libyan women

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Breast cancer (BC) is the most common cancer among women. Previous data in Libya revealed the frequent occurrence of breast cancer among females. Genetic and environmental factors are correlated with increase in risk developing breast cancer. Epidemiology studies among various population suggested that the most important risk factors for BC includes gender, age, previous breast cancer, body mass index, menopausal status, postmenopausal hormonal therapy, reproductive factor, alcohol consumption, smoking, and breast feeding. In this study, data were collected from questioners distributed on 38 breast cancer cases visiting Tripoli Medical Centre, Libya. All statistical analyses were implemented in SPSS version 19.0. The results showed that the risk of breast cancer was associated with age. The mean ages of the case and control groups were 46.7% and 38.8% respectively with significant difference (P=0.0023), age at the first pregnancy (P=0.036), family history (P=0.042) and menopausal status (P=0.002). The risk decreased with breastfeeding (P=0.033). Lack association with passive smoking (P=0.363) and number of pregnancy and births (P=0.402). These data indicated that there were many factors associated with breast cancer among Libyan female. Also results showed that Libyan women who made self-examination were few, suggesting the lack of awareness of early detection among Libyan women. Therefore we need to improve breast cancer awareness to reduce breast cancer mortality. **Keywords**: breast cancer, risk factors, Libyan female.

ID 19: Epidemiological Study of Leishmaniasis at the city of Bani Waleed, Libya

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Leishmaniasis is an intracellular parasitic infection, it affects human by bite of sand fly. About 350 million people are at great risk of having this disease, with incidence

about 2 million new cases worldwide yearly and that appears in one of different types: Cutaneous Leishmaniasis (the most common type which has wide prevalence in some Libyan cities), Visceral Leishmaniasis (which is fatal in 85-90% of untreated cases), and Mucosal Leishmaniasis. This paper aims to identify cutaneous Leishmaniasis as a disease, its prevalence in Bani Waleed city, and its diagnosis and treatment with all the available facilities. The study is completed based on data collected from the central hospital and primary health care centers in the city plus patients themselves with the help of specialist doctors. According to our study, the spread rate of Leishmaniasis was variable at Bani Waleed areas, with airport road had the highest number of affected cases (36 cases), followed by AL-Menasla (26 cases), AL-Dahra (23 cases), AL-hay AL-Senaay (19 cases), AL-Lotien (9 cases), The city Centre (5 cases), and AL-Shmiakh (2 cases).The total number of selected cases were 117 with different age groups (76 male and 41 female). The study population were predominated with Libyans. The great number of cases were 31- 40 age group with 28 cases, then 21-30 age group with 26 cases, 11-20 age group with 22 cases, 41-50 age group with 16 cases, 51-60 age group with 6 cases , and 61-70 age group with one case only. Site of injuries the exposed areas of the body 47 cases in the hands, 30 cases in feet, 28 cases in the extremities, and 12 cases affected the face. The great majority of cases were infected in August, minority in May, and least in November. **Keywords**: Leishmaniasis, disease, infection.

ID 20: Molecular docking study of compounds from Thymus vulgaris against Asthma disease an In-silico approach

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In the field of healthcare, there is a noticeable increase in the burden caused by asthma disease in many areas of the world. About 300 million people affected by Asthma disease worldwide and a further 100 million have been estimated will be affected by 2025. Thyme (Thymus vulgaris L.) is a name of the plant that covers both genus and species; it's most widely used for many centuries as a culinary herb, flavouring agent and herbal medicine for the treatment of asthma and various disorders of the respiratory tract. This study aimed to investigate compounds that responsible for the treatment of asthma. In this study, molecular docking-based virtual screening of compounds reported its existence in Thymus vulgaris, were performed against asthma protein. The obtained results showed that six compounds namely Ursolic acid, 6- Hydroxyluteolin, Quercitin, Taxifolin, Genkwanin

and Rosmarinic acid showed the best binding affinity (-7.3, -6.3, -6.2, -6.2, -6.2 and -4.6 kcal/mol) respectively, were selected as virtual hit ligands for asthma. These findings suggest that the obtained compounds present in the Thyme vulgaris responsible for the treatment of asthma disease. **Keywords**: Molecular docking, Asthma disease, Virtual screening, Herbal medicine.

ID 21: Virgin coconut oil Solid Lipid Nanoparticles for Skin Care

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Coconut oil offers a variety of health benefits and can be used for cooking as well as skin, hair care and cosmeceutical wide applications. Virgin coconut oil is believed to be of the highest quality, made naturally and free of harsh chemicals. Aim: The preparation of virgin coconut oil in nanoparticles from is a very interesting and considered a new addition as a result of nanotechnology science development and application. Methodology: The average particle size inside the nanoemulsion was obtained at fixed period of time repeatedly. Overall average partial size were below 400 nm preparation, and the way of preparation virgin coconut oil solid nanoparticle is considered simple and less time consumed. The chemical synthesis method has been adapted to prepare virgin coconut oil allowed formation of nanoparticle with well dispersion uniform particle diameter. 1- VCO-solid lipid nanoparticles (using high-pressure homogenizer). Results: The virgin coconut oil nanoparticles are solid lipid nanoparticles form and were stable for a reasonable length of time at room temperature, using probe sonicator and lab homogenizer to form two-phase emulsion. The average particle size inside the emulsion was obtained at a fixed period of time repeatedly. Overall, average particle sizes were below 400nm. Conclusion: The current used method that has been used to prepare VCO nanoparticles is considered simple and less time consuming. **Keywords**: Nanoparticles, Virgin Coconut Oil, Nano-formulation, Particle size.

ID 22: Laser Driven Proton Acceleration for Medical Applications

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The laser-driven accelerators are ultra-compact relativistic ion and proton beam sources that could form the basis for next-generation X-ray light sources and particle accelerators. In this work enhanced yields of protons from laser interactions with solid targets have been investigated. Using a high power laser system (intensity of ~4 · 1019 W/cm2), hydrogen-doped foils of Au, Cu and Ti have been used as targets to identify the effect of hydrogen implantation on the produced proton beam. From this novel experiment, it has been demonstrated that an enhancement in the proton yield by approximately a factor of 3 is obtained from hydride Au and Cu targets for proton energies of ~3 MeV. Energetic proton beams may be used to some advantage since with conventional accelerators, the monoenergetic beams must be broadened to match the size of the tumour, before being used in therapy.
Keywords Laser, Proton Beam, Tumour, Ultra-compact relativistic ion.

ID 23: Study of adverse effects of henna (Lawsonia inermis L.) colouring additives on female experimental mice

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Henna (Lawsonia inermis L.) has been used since ancient times due to its coloring features, traditional and medical uses, over the time, henna has gained the interest in body painting or temporary tattoo as part of wedding ceremonies. To boost the henna staining and the color intensity, many of the henna coloring additives like Sheih, Saratiya and Mahalabiya, have been frequently added to henna paste. This project has studied the adverse effects of these oils accordance with women's complaint in terms of their effects on pregnancy, liver and kidney functions and investigation of their histopathological changes. Extracts of oils with henna injected to female pregnant mice by daily dose 1 ml for 5 days subcutaneously, the liver and kidney organs were collected. Additionally, microscopical study and heavy metals quantification have carried to compare the marketed henna with each other and with original henna. The results of aqueous extract of L.inermis alone or with oil have not any detected effect on pregnancy, but there are some histopathological changes on liver and kidney organs which might not revealed 100% to those extracts. Marketed henna is not pure, it might be adulterated or contaminated with other types of plants or substances.

ID 24: Phytochemical Constituents, Cytotoxic Potentials and Effects on Wheat Growth Parameters Possessed by Extracts of some Seaweed Collected from the Western Libyan Coast.

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Various inhabitants of the water such as, animals, and microbes produce compounds that have potential as pharmaceuticals. They produce "secondary metabolites" chemicals which are not vital for primary metabolic processes of these organisms, yet are believed to confer some evolutionary advantage. Many of these organisms are non-motile and have developed chemical compounds due to living in densely populated habitats. The natural products drug discovery research aimed its investigations at the marine environment recently due to its unraveled biodiversity compared to other environments. The pioneering work of Bergmann in the 1950s introduced the potential of the marine natural products as pharmaceuticals. A total of 5 ethanol and dichloromethane extracts of macroalgal species (2 green, 2 brown, 1 red) collected from Libyan coast were screened for their major phytochemical groups. The 5 algal species also subjected to be evaluated against brine shrimp lethality bioassay. The effect of seaweeds liquid fertilizer on growth parameters of Traticum sativum were also be examined using in vitro seed germination in petri dishes bioassay. Ethanolic and dichloromethane extracts of the five algae samples represented the presence of several chemical constituents. All extracts exhibited LC50 >1000 ppm. There are different effects on growth of wheat seeds, in our study all algal extracts are non-toxic according to Brine shrimp leathality assay so they may be considered as an edible seaweeds. Different effects on growth parameters of Traticum sativum suggested the presence of micro elements, macro elements and different concentrations of plant growth hormones.
Keywords: Marine Algae, Artemia, Fertilizer, Wheat.

ID 25: The effect of epigenetic factor macroH2A1.1 on DNA-damaging response

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The main goal for any cells is to pass integrated genetic material to the next generation. To achieve this target an appropriate DNA damage repair system must be chosen by cell. Several mechanisms are involved in detecting DNA damage and repair. However, the factors that mediate these processes are not fully understood. Several studies have confirmed that macroH2A1.1 is involved in cell proliferation and suppression of gene transcription. MacroH2A1- depleted Mice (Knock out, KO) created by DR. Vinciguerra, seem to be more vulnerable to irradiation-induced death in vivo (data not published). Here we wanted to investigate the potential role of an epigenetic protein macroH2A1 in DNA damage response. In the current study we investigated the sensitivity of mouse embryonic fibroblast cells (MEFs) treated with the anticancer drug doxorubicin. We analysed both the growth inhibition by doxorubicin and doxorubicin-induced cell death in the macroH2A1.1 KO and WT MEFs. In this work, several techniques were utilized including cell culture, Trypan blue, colorimetric assay (MTT), and western blot with gammaH2A.X antibody. The finding of the present study showed that there was no significant change observed in the responses of these cells to doxorubicin. Notably, proliferation rate of macroH2A1.1 KO cells was less than (Wild Type, WT), and interestingly, only at higher dose of doxorubicin the proliferation rate of macroH2A1.1 KO MEFs was increased. Since macroH2A1.1 significantly recruited to the sites of DNA damage by irradiation, these findings illustrated the importance of genotoxic insults in determining the ability of macroH2A1.1 to influence the DNA damage response. **Keywords**: Epigenetic, DNA damage, Histone H2A, Cell proliferation.

ID 26: A comparative study among risk factors involved in pre and post-menopausal breast cancer women in west region of Libya

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The present study was aimed to investigate the difference between pre- and post-menopausal breast cancer women and the risk factors involved. A prospective case-control study was conducted in Sabrata Oncology Hospital, Tripoli Medical Center and Central Hospital during the period October 2016 - May 2017. The study included 150 breast cancer women, and 300 healthy persons as control subjects. Overall, menstrual and reproductive histories were recorded. Among breast cancer patients, 40% were pre-menopausal and 60% were post-menopausal women. Our

results showed that age at menarche and breast feeding had no association with breast cancer for both pre- and post-menopausal women. In contrast, nulliparity was found to be a risk factor for post-menopausal breast cancer women during pre- and post-menopausal time, (OR=3.1, 4.28), respectively. Among parous women, only post-menopausal patients who having less than 3 children were found at increased risk for breast cancer compared with females having more than 3 children. Younger age at first live birth decreased the risk on being breast cancer patient in both pre- and post-menopausal women. In conclusion, our study demonstrates that nulliparity, younger age at first live birth and less parity plays role in being a breast cancer patient among pre and post-menopausal women.

ID 27: Preparation and characterization of Metformin Hydrochloride microspheres for oral drug delivery

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Biodegradable microspheres may develop improved drug delivery system to gastrointestinal tract for treatment of Diabetes. Metformin hydrochloride have the ability to produce effect for extended period, were prepared using ethyl cellulose and polyvinyl alcohol as the retardant material with entrapment efficiency and extended release using solvent evaporation techniques. Microspheres were prepared by the double emulsification technique (W/O/W). A mixed solvent system of water and chloroform contains metformin, ethyl cellulose and PVA in the ratio of (1:2:1) respectively. The product with a yield (50 %) was investigated under immersion lens with magnification X40 using immersion oil. The prepared microspheres were characterized by drug loading and showed a low entrapment. Microspheres were examined by optical microscopy, the size and the external features of particles determined. The microspheres were indicated a mean microsphere size 100 µm in diameter. IR study was carried out to check the compatibility between the selected polymer and Metformin hydrochloride. This study was performed to assure that there is complete physical entrapment of the drug into the polymer without any mutual interaction. The DSC and XRD studies proved that, there was retention of the crystalline nature of the drug in solid dispersion ruling out any probability of drug and polymer interaction or complex formation. **Keywords**: Metformin, Microspheres, DSC, XRD, IR, Ethyl cellulose, PVA.

ID 28: Bacterial Uropathogens and Antibiotic Susceptibility Pattern in Patients with Urinary Tract Infection

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Background: Urinary tract infections is one of the most frequent bacterial infections worldwide diagnosed in outpatients as well as hospitalized patients. The aim of this study was to investigate the prevalence and antibiotic resistance patterns of bacterial pathogens isolated from patients with urinary tract infections (UTIs) at the red-crescent private clinic, Tripoli, Libya. Methods: This retrospective study was conducted at a private clinic in Tripoli city during February to May, 2016. Urine was collected from suspected cases of UTI patients. Identification of bacterial isolates was performed by conventional methods. Antimicrobial susceptibility testing of culture positive bacterial isolates was done by disk diffusion method according to Clinical Laboratory Standard Institute guidelines (CLSI). Results: A total number of 224 urine samples were collected of which 62 (27.7%) showed significant bacterial growth. The commonest bacterium isolated from the culture positive urine sample was Staphylococci (64.5%) followed by Escherichia coli (29.0%) and Klebsiella pneumonia (6.5%). K. pneumonia and E. coli were highly resistant (38.11%, 34.13%, respectively) than staphylococci spp (26.29%), and exhibit resistance to wide range of tested antimicrobials. Ciprofloxacin was the most (12.3% resistance) powerful antibiotic agent followed by Gentamycin (17.6% resistance) and Erythromycin (19.0% resistance) which affected 87.7%, 82.4% and 81.0% of tested UTI causative pathogens, respectively; on the other hand, Coamoxclav and Amoxicillin were the least (63.0% & 50.3% resistance, respectively) affected only 37.0% and 49.7% of tested isolates, respectively. Conclusion: The obtained findings emphasized the need for ongoing investigations to show the pattern of antibiotic resistance which can help clinicians in antibiotic prescription in their clinics. **Keywords**: urinary tract infection, antibiotic, urine culture.

ID 29: The impact of CYP2C9 and VKORC1 polymorphisms in patient's response to warfarin and acenocoumarol

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Background: Warfarin is a commonly prescribed oral anticoagulant medication for treatment of many thromboembolic events, its narrow therapeutic index, and associated complications like bleeding, and hemorrhage remain the main challenge for physicians to prescribe the right dose for each patient with minimum side effects. The large inter-individual variation between patients refers to non-genetic factors including; age, body mass index, co-administered medications, concomitant diseases, and genetic factors. The most common studied SNPs that cause warfarin sensitivity were CYP2C9*2 and *3, and VKORC1-1639G>A/ and 1173 C>T. This study was aimed to assess role of genetic factor (selected SNPs of CYP2C9*2 and *3, and VKORC1-1639G>A, and 1173 C>T), and non- genetic factors: age, and BMI in the response of Libyan patients using oral anticoagulants namely, warfarin and acenocoumarol. Methods: A total of 100 patients with stable maintenance dose (at least one month or more, based on INR measurements) of warfarin or acenocoumarol were recruited during their routine follow up in outpatient department of Tripoli Medical Centre, Libya. CYP2C9 and VKORC1 variant alleles were screened by HRM real-time PCR, followed by DNA sequencing. Results: For VKORC1 (-1639 G>A, 1173 C>T) variant alleles, the dose was significantly lower than wild type, (P value=0.04, 0.01 respectively). No significant differences in dose requirement were found between carriers of wild type and CYP2C9*2 and *3 (P value = 0.11, 0.98 respectively). Conclusions: Our data showed that CYP2C9* and *3 variant alleles had a less effect on mean weekly dose of oral anticoagulant than VKORC1 variant alleles. **Keywords**: Warfarin, CYP2C9, VKORC1, Polymorphism, SNPs, Libya.

ID 30: Study of caffeine effect on behavior and motor activity in mice

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Caffeine has dose-dependent effects on mood, attention, and physiology. Behavioral effects of caffeine in humans have also been well documented. This article aimed to study the effect of different caffeine concentrations on behavior and motor activity of mice. The experiments was carried out using 24 male mice (25-30gm). Plus maze was used for screening of antianxiety effect of caffeine. While swimming maze was used to test antidepressant effect. Statistical analysis were performed using computer program SPSS (version 22). At dose of 100 mg/kg,

caffeine acted as anxiolytic compound. Caffeine increased motor activity at dose of 25mg/kg and decreased motor activity at dose of 200mg/kg. At dose of 100mg/kg, caffeine acted as antidepressant. In conclusion, caffeine can act as stimulant, while in over dose it acts as depressant. Caffeine showed to have anxiolytic effect in certain doses. **Keywords**: Caffeine, anxiolytic effect, Behavioral effects, motor activity, antidepressant.

ID 31: Stress-related mucosal disease (SRMD) in critically ill patients

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Background: stress related gastrointestinal bleeding is a common occurrence in patients admitted to intensive care unit (ICU). Several clinical conditions and medications place patients at risk for clinically important GI mucosal damage including: prolonged mechanical ventilation (i.e. > 48 h) and coagulopathy, trauma or shock, sepsis, hepatic failure, severe burns (i.e. > 35% of body surface area), and severe central nervous system disorders. Methods: This is a retrospective study aimed to determine the management of 100 severely ill patients who have been admitted to ICU at Burn and Plastic Surgery Hospital in Tripoli from January 2016 to April 2017 with emphasis on prophylaxis of stress-related GI bleeding. Results: Majority of patients were males 68% vs 32% females, mean age of patients was 31.58 ± 8.54 years. Libyan patients represented 84% vs 16% non-Libyans. A total of 69 patients were using PPI (omeprazole) alone or combined with ranitidine. Conclusion: This protocol is widely applied in similar situations and the antisecretory agents were more effective than antacids or coating agents like sucralfate in reducing stress-induced GIT bleeding. **Keywords:** stress-related mucosal disease (SRMD), Intensive care unit (ICU), Prophylaxis.

ID 32: Nanofilter in Water Purification

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The membrane filtration technology is quickly acceptance as an important manufacturing step in many application, membrane filtration a much more cost-effective solution than more conventional methods such as rotary vacuum filtration or filter presses. Nanofiltration membrane (NF) is a type of pressure-driven membrane that has properties in between those of ultrafiltration and reverse osmosis membranes. Nanofiltration membranes have the advantages of providing a high water flux at low operating pressure and maintaining a high salt and organic matter rejection rate. The solution pH alters retention and flux of diverse commercial membranes differently and is strongly dependent on charge or chemistry of the polymer network. Most commercial polymeric NF membranes are suitable for treating aqueous streams at pH levels between 2-10, in many potential applications in the chemical industry involve much more aggressive conditions. Typically, NF involves separation of monovalent and divalent salts, or organic solutes with molecular weight in the range 200 to 1000 g/mol. Recently, nanofiltration membranes have been employed in pre-treatment unit operations in both thermal and membrane seawater desalination processes. **Keywords**: The membrane filtration technology.

ID 33: Bacterial Spectra of upper respiratory tract infection in Abu-Sitta hospital, Tripoli city, Libya

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The study aimed to determine the bacterial etiology of upper respiratory infection in abu-sitta Hospital, Tripoli city, Libya. Method: A total of 470 sputum specimens and 60 throat swabs were collected over a period of one year (From January 2014 to December 2014) from patients presented with clinical signs of upper respiratory tract infection at Abu-Sitta hospital. Enrolled patients were sorted as in or outpatients, and by gender. Results: Bacterial pathogens were detected in 64.5 % (n=303) and in 58.3% (n=35) in Sputum specimens and throat swabs respectively. Accordingly out of the total 530 screened samples 63.7 % (n=338) samples were bacterial positive. Streptococcus pneumoniae was the most prevalent (49 %), followed by Pseudomonas aeruginosa (22 %), Eschericia coli (9%), Staphylococcus aureus (9%), Enterobacter (6%). Citrobacter freundii (3%), and latest with Klebsiella (2%). Conclusion: The spectrum of pathogenic bacterium causing upper respiratory infection in abu-sitta hospital is considerably wide, however, we can conclude that the major causative bacteria were Streptococcus pneumoniae and Pseudomonas aeruginosa. **Keywords**: Bacteria – Respiratory – Infection.

ID 34: Antibiotic susceptibility of bacterial strains isolated from patients with respiratory tract infections in Tripoli city

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Background: Respiratory tract infections (RTI) has been known to be a major health problem for mortality and morbidity since many years. The study was aimed at determining bacterial agents of the upper respiratory tract and the susceptibility patterns of isolates to antibiotics. Methods: This retrospective study was conducted at Abussitta hospital in Tripoli city – Libya during September 2017 to March 2018. A total of 1110 respiratory samples (Sputum, Pleural fluid, IT-Tube sample, Respiratory swab) of RTI patients during the years from 2011 to 2014 were collected. Bacterial pathogens were determined by bacteriological culture methods and antibiotic susceptibility of the isolates was identified following Clinical Laboratory Standard Institute guidelines (CLSI). Results: Of the 1 110 respiratory samples tested, 71.1% (n = 789) of specimens were positive cultures with the dominant bacterial pathogens being streptococcus pneumonia 43.3% (n = 342), followed by pseudomonas aeruginosa 22.8% (n = 180), staphylococcus aurous 13.8% (n = 109), Escherichia Coli 6.9% (n = 55), Enterobacter spp 6.2% (n = 49), Citrobacter 4.5% (n

= 36), Klebsiella 1.9% (n = 15), Proteus mirabilis 0.25% (n = 2), and Moraxella 0.12% (n = 1). Most streptococcus spp. were resistant to gentamicin, ciprofloxacin and amikacin. All the isolates were resistant to at least one antibiotic. Conclusion: The level of antibiotic resistance in this study is alarming and brings to light the timely and suitable diagnosis of the common bacteria causes of RTI and proper antibiotic administration based on susceptibility test. **Keywords**: Respiratory tract infections (RTI), antibiotic, sensitivity, resistant, bacteria.

ID 35: A Study of phytochemical properties, antioxidant activities and the synergistic effect of Mesembryanthemum crystallinum on some human pathogenic bacteria.

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The increased prevalence of antibiotic resistance, as a result of extensive antibiotic use, may render the current antimicrobial agents insufficient to control, at least, some bacterial infections. The aerial part of Mesembryanthemum crystallinum was extracted by maceration with methanol (96% v/v) to exhaustion. The solvent was evaporated under reduced pressure. The decoction of the plant is used in traditional folk remedies as vaginal douche to treat vaginitis. To evaluate antimicrobial activity, the agar disc-diffusion assay was used against a Gram-positive bacteria (Staphylococcus aureus) and two Gram-negative bacteria (Escherichia coli and Pseudomonas aeruginosa). The methanolic extract did not show any inhibitory effect on the tested bacterial strains. Association of antibiotics and the plant extract showed synergistic antibacterial activity especially with Ciprofloxacin, Tetracyclin and Amikacin. The antioxidant activity of the methanolic extract was investigated using TLC plate method with DPPH, their antioxidant characters were also tested utilizing DPPH as the radical reagent and ascorbic acid as reference. The methanolic extract showed effective free radical scavening. The major chemical constituents reported from the plant parts are flavoniods, saponins, steroids, triterpenoids and Phenolic compounds which show that this plant part can be a potential candidate to be used as a therapeutic agent.

ID 36: Applications of gold Nanoparticles in Medical field

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Nanoparticles are increasingly becoming indispensable tool of modern day research in almost every field of science, and potentially used in diagnosis or treatment of diseases. These biologically compatible particles can be easily synthesized, tuned to different sizes, and functionalized by conjugation to various biologically useful materials. Common nanomaterial's applicable in biomedical applications include liposomes, polymeric micelles, grapheme, carbon nanotubes, quantum dots, Ferro ferric oxide nanoparticles, gold nanoparticles (Au NPs), and so on. Au NPs have been potentially applied for medical imaging, drug delivery, and tumor therapy in the early detection, diagnosis, and treatment of diseases. This poster focuses on some applications of gold nanoparticles as Drug delivery, Targeting and Imaging Applications. **Keywords**: Gold nanoparticles, Drug delivery, Treatment, Imaging applications.

ID 37: A Review on Nanoparticles: Their Synthesis and Types

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Nanotechnology refers to the creation and utilization of materials whose constituents exist at the nanoscale; and, by convention, be up to 100 nm in size. Nanotechnology explores electrical, optical, and magnetic activity as well as structural behavior at the molecular and sub molecular level. It has the potential to revolutionize a series of medical and biotechnology tools and procedures so that they are portable, cheaper, safer, and easier to administer. Nanoparticles are being used for diverse purposes, from medical treatments, using in various branches of industry production such as solar and oxide fuel batteries for energy storage, to wide incorporation into diverse materials of everyday use such as cosmetics or clothes, optical devices, catalytic, bactericidal, electronic, sensor technology, biological labelling and treatment of some cancers. Due to their exceptional properties including antibacterial activity, high resistance to oxidation and high thermal conductivity, nanoparticles have attracted considerable attention in recent years. Nanoparticles can be synthesized chemically or biologically. Metallic nanoparticles that have immense applications in industries are of different types, namely, Gold, Silver, Alloy, magnetic etc. This review aims to present an overview of

nanoparticles, with special reference to their mechanism of biosynthesis and types. **Keywords**: Nanoparticles, silver, bactericidal, thermal conductivity, optical devices.

ID 38: Use of bacteriophages for food protection from microbiological spoilage

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Introduction: Pseudomonas strains of bacteria have shown to play a key role in milk spoilage, slaughtered poultry and meat, eggs and fish. This study aims at detecting the presence of Pseudomonas bacteria in various objects. Methods: Bacteriophages isolated from spoiled poultry, pork, beef and carp samples were the subjects of the study. 20 g of the weighed sample were inoculated with 20 µl of Pseudomonas spp. diluted 24 hrs culture and incubated at 30°C for 2 days. About 2 g of heat untreated protein-contained food samples: beef, pork, poultry and fish were placed into Petri dishes and undergone the following treatments: inoculated with bacteria Pseudomonas fluorescens and Pseudomonas aeruginosa (control), treated with bacteriophage suspensions (BV12 – isolated from beef, BV25 – isolated from poultry, BV55 – isolated from fish); treated with suspensions of bacteriophages with their host cells (BVB12 – bacteriophages with Pseudomonas aeruginosa bacteria, BVB25 – bacteriophages with Pseudomonas aeruginosa bacteria and BVB55 – bacteriophages with Pseudomonas fluorescens bacteria). After that Petri dishes with the samples were stored at 4°C (9 days) and at 30°C (5 days). Results: our results revealed that samples treated with Pseudomonas fluorescens and Pseudomonas aeruginosa cells exhibited organoleptic deterioration. On the third day, the surface of the samples became mucous and mucus appeared on poultry and fish samples inoculated with Pseudomonas aeruginosa bacteria. Color changes began to appear on the samples on the 5th-6th day of storage and faint odor appeared on the 3rd-4th day. Conclusions. Protein-contained food treatment with suspensions of bacteriophages resulted in twofold increase of food shelf life at 4°C as well as at 30°C. **Keywords**: bacteria – Pseudomonas – bacteriophages.

ID 39: Plant extracts inhibition effect on pseudomonas bacteria growth

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Introduction: In medicinal plants these effect is determined by flavonoids, essential oils, tannins and many others. Antimicrobial agent's mechanism of action is based on their ability to trigger changes inside the microbial cell: they inhibit cellular respiration, dissolve and destroy the cell membrane, disrupt biosynthesis processes. Methods: Ps. fluorescens and Ps. aeruginosa bacterial cultures isolated before have been used for the experiment. 50% ethanol, distilled water and chloroform have been chosen as the solvents. 0.5g of crashed plant material was placed into sterile tubes and 3.5 ml of the solvent added and shaken vigorously. Extraction continued for 1 day with regularly shaking. 80 µl of each extract were placed into the wells with agar medium inoculated with Pseudomonas fluorescens and Pseudomonas aeruginosa 24-hour cultures. The plates were incubated for one day in a thermostat at 30°C. Results: Transparent zones around the wells indicated the extract antibacterial activity. The conclusion about the level of antibacterial activity was made upon the average zone diameter. Thus, the research demonstrated that the highest inhibitory effect against bacteria of the genus Pseudomonas had been observed in aqueous and ethanol extracts of Sage-leaved Rockrose (Cistus salviifolius L.). Conclusions. Sage-leaved Rockrose possesses antibacterial activity. It inhibits the growth of bacteria Ps. fluorescens and Ps. aeruginosa. Sage-leaved Rockrose contains substances able to inhibit the growth of bacteria Ps. fluorescens and Ps. aeruginosa. Chloroform extracts of Spanish Thyme and Garden Sage demonstrate antibacterial activity. **Keywords**: bacteria – Spanish thyme (Thymus capitatus L), Sage-leaved Rockrose (Cistus salviifolius L.), Fenugreek (Trigonella foenum-graecum L).

ID 40: Lipid-based drug delivery systems

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Lipid-Based drug delivery systems (LBDDS) are attractive carriers for oral formulations since it was proven from many years ago, that the co-administration of poorly water-soluble drugs (PWSD) with a meal rich in fat enhanced their oral bioavailability through enhancing gastrointestinal solubilization and absorption via selective lymphatic uptake. Further mechanistic understanding of their impact on drug disposition is emerging. The maximum advantage from a lipid formulation could only be drawn if the drug remains in lipid solution throughout its residence in the GI tract. As many drugs are successfully marketed as lipid-based formulations,

the lipid-based drug delivery system (LBDDS) has a wide scope in terms of solubility and bioavailability enhancement. The current work mainly focuses on advantages of lipid-based formulations, namely, emulsions, vesicular systems, and lipid particulate systems and their subcategories as well as on their prominent applications in pharmaceutical drug delivery. **Keywords**: drug delivery, formulations, emulsion, lipid-based drug delivery system, poorly water-soluble drugs.

ID 41: Method validation for determination of metformin hydrochloride in pharmaceutical formulations by capillary electrophoresis with capacitively coupled contactless conductivity detection

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A method for the determination of metformin hydrochloride (MH) in pharmaceutical formulations by capillary electrophoresis with capacitively coupled contactless conductivity detection (CE-C4D) was investigated. The separation was achieved under normal polarity mode at 17.5 °C, 30 kV, hydrodynamic injection (50 mbar for 8 s) and using a bare fused silica capillary 72 cm × 75 µm i.d. (detection length, 10.5 cm from the outlet end of the capillary). Under the optimum conditions, the method shows good linearity over the range of 10-30 µg mL-1 MH (r2=0.9971). Limits of detection and quantitation based on S/N ratio of 3 and 10 were 0.049 and 0.15 µg mL-1, respectively. The proposed method was successfully applied to the assay of MH in pharmaceutical formulations and establishing the dissolution profiles for both immediate and extended release formulations of MH. **Keywords**: CE-C4D; metformin hydrochloride; drug product; dissolution profile.

ID 42: Pharmacognostic and phytochemical study of commercial hair dyes henna in Libya

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The adulteration of henna getting to rise in the commercial world for the cosmetic desire increased. The study aimed to authentification of the pharmacognostic and phytochemicals profile of four different colors of natural commercial henna hair dyes collected from Libyan market in comparison to standard (Lawsonia inermis L). The current study carried out to investigate macro- and microscopical characters and preliminary phytochmeical tests TLC profile of collected royal henna samples to differentiate the authentic henna feature from any adulterant. Such investigation may provide basis for authentication, standardization and characterization of genuine drug. The study found varied results between the standard and commercial samples. Surprisingly, the red henna showed the existence of plant parts related to microscopical structure of senna and brown henna showed the presence of some parts of the real henna plant coupled with a strange plant parts carrying dyes unrelated to the flora of henna, while the black sample was plant microscopical plant structure of henna were very rare and the sample was predominantly forms fibrous parts of the black particles. To emphasize the microscopic results, the samples subjected to chemical analysis. Where TLC results provide a clear picture of mixing the Royal henna with natural and/or synthetic materials. As phytochemical profile of red and brown and black were showed foreign substance not mentioned in the product label. In conclusion, it important to identified and quantify the foreign substance which might put the consumer health to risk. **Keywords**: Pharmacognostic, Libya, Henna, TLC.

ID 43: Physiotherapy prospects for burns injury: A case study

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Physiotherapy for patients with burn starts from the day of injury. A comprehensive rehabilitation program is essential to decrease patient's post-traumatic effects and improve functional independence. In this experimental case study, patient had thermal burn injury in his hands and legs from 15 November 2016 to 20 May 2017, at Bani Waleed social security center. The patient complain from pain on affected organs, scars on his skin, contractures of muscles of wrist and ankle joints, with slightly stiffness of wrist and phalanges joints. According to that complications, physiotherapy program was focused on applications provided my patient target treatment. At the first time of injury, after hospitalization treatment, initially elevation technique was focused on affected organ, with slightly massage for around area of injury to decrease pain and edema, therapeutic exercises were

applied for around joints of injury to enhance blood circulation of affected organ and the whole body. After one week of injury, serious application of physiotherapy program were applied, thought patient to take care of his scars and trained him how to back to the normal activity of life. It is possible to say that psychological support for patient from his family and friends, made patient more cooperated with treatment and played major role to succeed physiotherapy program. The early assessment of patient easies the therapy program, minimize the complication of injury and shorter time of rehabilitation program. Moreover, the young age of patient and good general health present in this study had caused good results. **Keywords**: Burns, Scar, Goniometer, Exercise, planting.

ID 44: Oil base nanoemulgel for topical application

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The word nanoemulsion is referred to a type of emulsion with uniform and extremely small droplet size in the range of 20-200 nm. Nanoemulsion is a spontaneous emulsifying method, which provides numerous advantages over other carriers such as polymeric nanoparticle and liposomes, including low cost preparation procedure, high hydrophilic and lipophilic drug loading system and enhances the shelf life upon preserving the therapeutic agents. Incorporating the preparation of nanoemulsion with hydrogel matrix produces Nanoemulgel; this formulation is exhibited by the two separate systems that form it. Nanoemulgel possesses the properties of thixotropic, non-greasy, effortlessly spreadable, easily removed, emollient, not staining, soluble in water, longer shelf life, bio-friendly, translucent and agreeable appearance. Different natural oils are gaining popularity in the scientific field and among the public, due to their various health benefit and special characteristics. Oil based emulsions were prepared using high speed stirrer with various surfactant concentrations and mixing ratio. The resultant mixture was added with distilled water. Among the formulations, best optimum formulation was selected for secondary homogenization using High Pressure Homogenizer (HPH) to produce Oil-based Nanoemulsion in the size range 20-200nm. The secondary homogenization process involves using variable parameter of pressure and homogenization cycle number. **Keywords**; VCO, Nanoemulsion, Nanoemulgel, Topical application, Nanocosmetics.

ID 45: Cross sectional study of Cutaneous Leishmaniasis in Dermatology Hospital Bear Asta Mield in Tripoli Libya.

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Leishmaniasis is a disease caused by infection with the protozoan parasite Leishmania and is responsible for significant mortality and morbidity in tropical and subtropical countries. There is currently no vaccine available to protect people against infection, therefore the main methods used to control it is vector control, drug treatment of clinical cases or control of reservoir hosts. This study is designed to collect data from files of leishmaniasis patients follow in Dermatology Hospital Bear Asta Melid, Tripoli; some of the extra data were taken from medical staff when required. The total of 258 samples was obtained from patient files during the period from January 2014 to December 2015. The questionnaire was prepared and modified from WHO leishmaniasis questionnaire in leishmaniasis center. The result was indicated that the frequency of infection was high in 2015 than 2014, increased by rate 1.5. The high frequency of infection was in autumn than other seasons, which in October was higher infection rate. The high infection frequency in younger age group between 0-25 years. The conmen infection area was Trahouna, Al kamous, Kabow and Al heria. There was poor social awareness of the disease and of the availability of treatment in this sampled population. Most of the community considered sand fly biting as a nuisance of moderate intensity and dusk as the peak biting time. In conclusion, we recommended that more effective surveillance, case reporting, and control measures be implemented in high-risk areas. **Keywords**: Leishmaniasis, risk area, cutaneous leishmaniasis, Leishmania.

ID 46: Comparison of Different Techniques in the Diagnosis of Osteoporosis

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Osteoporosis is characterized by reduced bone density and increased risk of fracture, and is found most commonly in elderly females. Vertebral compression fractures are the hallmark of this disease. If diagnosed early, the fractures associated with the disease can often be prevented. An examination to diagnose osteoporosis can involve several methods and steps that predict the chances of future fracture,

diagnose osteoporosis, or both. There are many monitoring options available to diagnosis the osteoporosis. Single and dual photon absorptiometry (DXA) have largely given way which used for measuring bone density. Quantitative computed tomography (QCT) and peripheral QCT have the advantage of measuring cortical geometry and volumetric densities of both trabecular and cortical bone, Another method used to measure peripheral bone geometry and density is digital X-ray radiogrammetry, as well as quantitative ultrasound and magnetic resonance imaging. In this study different methods and techniques of evaluating generalized or local osteoporosis havebeen presented and compared. **Keywords**: Bone Density, Diagnose, DXA, Osteoporosis, QCT.

Id 47: Placenta previa; Risk factors, Maternal and Neonatal outcomes

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Background: placenta previa is an important cause of maternal mortality and morbidity in obstetric practice; may leading to hemorrhage and surgical intervention. Aim of study: to determine 'risk factors & maternal, neonatal outcome of placenta previa in Libyan women. Patients and methods: case series study include 89 cases of placenta previa carried in AlKhadra hospital Tripoli/Libya during 2015-2016. Result: With incidence of 0.4-0.5, percentage of pregnancies, 'mean age (35.47 ± 5.1 years). Increasing 'number of pregnancies shown to be an important risk factor. Risk factors and maternal outcome include; previous miscarriage (39%), previous C/S (42.7%), previous placenta previa (11.2%), previous APH (24.7%), previous uterine surgery (19.1%), multiple pregnancies (5.6%), polyhydraminos (9%), GDM (9%) and PIH (4.5%). 'Placental location as following; (9%) anterior, (50.6%) posterior; (40.4%) centralize; (5.6%) of 'cases diagnosed accidently during delivery; (2%) diagnosed accidentally during C/S. Regarding maternal complications: - (22.5%) of 'patients had massive blood loss, (37.1%) needed blood transfusion, (6.7%) had visceral injury, (2.2%) had PPH. (2.2%) had DIC, (6.7%) had hysterectomy, (2.2%) admitted to ICU. Regarding 'neonatal outcome: - (2.2%) of neonate had IUGR, (20.2%) had RDS, (47.2%) had malpresentation; 'perinatal mortality rate (9%). Regarding 'BW, about (24.7%) of 'neonates had low BW, (71.9%) had normal BW & (3.4%) were large babies; 'study also showed about (48.3%) of neonate male; (51.7%) female. Conclusion: Study didn't report any maternal death due to placenta previa or its complications. In asymptomatic cases, screening U/S after 28 wks.' of gestation to detect undiagnosed placenta previa, which may cause

major challenges rather than when presented as an emergency. **Keywords**: placenta previa; risk factors; outcome.

ID 48: Hysteroscopic diagnosis and treatment of endometrial pathology

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Hysteroscopy has become the first choice approach for patients with suspicion for intrauterine lesions. The one-step approach in which diagnosis and hysteroscopic treatment is performed in one session has been described as being highly appreciated by the patient, has a low risk profile, and is a cost-effective approach. This study addresses the value of hysteroscopy on diagnostic accuracy and its effectiveness to the one-step therapeutic approach. It's a prospective study of patients admitted in the obstetrics and gynecology department Alkhadra hospital from February 2013 to December 2017, Patient selection done on transvaginal ultrasound findings or on clinical pathology. Depending on the transvaginal ultrasound report and the clinical data, the average age was 54 years (range24–87 years). The majority of patients (96.2%) presented with a transvaginal ultrasonographic lesion. The hysteroscopic evaluation characterized the findings in two groups: the "uterine cavity lesions" and "the endometrial characterization. Results: Four hundred nineteen women fulfilled the inclusion criteria. The average age was 54 years (range 24–87 years), of which 43.9% were menopausal. The referral cause was for the majority of patients (96.2%) an abnormal result in the son-graphic examination such as endometrial thickness, endometrial irregularity, endometrium heterogeneity, endometrium liquid, polyps, myomas, IUD, foreign body, and placental or fetal debris. Only 3.8% of patients had a normal son-graphic examination. Conclusion: We concluded that the ambulatory performance of direct visualization of uterine cavity by hysteroscopy guarantees a high diagnostic accuracy, allowing the simultaneous accomplishment of biopsies and surgical treatment of the visualized lesions. **Keywords**: Hysteroscopy, Histology, Endometrial pathology, uterine lesions.

ID 49: Uterine choriocarcioma a case report

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Background: Gestational trophoblastic diseases include complete, partial molar pregnancy, invasive mole, placental site trophoblastic tumor, and choriocarcinoma. Gestational choriocarcinoma is one of 'most malignant form of a group of tumors. Although choriocarcinoma has a very high propensity to metastasize to various sites including lungs & brain, it also has a very high cure rate. Our study represents 'case of choriocarcinoma developed after primary molar pregnancy, which treated successfully with medical management. We now present a course of gestational trophoblastic disease transforming from benign to a malignant condition in due course of management. Case presentation: We are presenting a case of a 31-year-old who presented with molar pregnancy had suction curettage followed by Ten cycles of methotrexate for rising level of HCG. Went in to remission and she had relapse during her follow-up which turned out to be choriocarcinoma on histopathological examination and she had started combination chemotherapy in the form EMA-CO. Conclusion: Our case report emphasizes that persistent trophoblastic disease needs to be define precisely and 'judicious use of methotrexate with surgical intervention at proper time in management of persistent trophoblastic disease is 'key to 100% survival in gestational trophoblastic neoplastic. Furthermore, early diagnosis by ultrasound and histopathological examination is 'key to avoid associated complications such as hyperemesis gravid arum, hyperthyroidism, and preeclampsia. Our case also proves that 'clinical presentation of hydatidiform mole has changed in recent years and fewer current patients as compared to historic control presented with traditional symptoms of molar pregnancy. **Keywords**: Chemotherapy, choriocarcinoma, gestational trophoblastic disease.

ID 50: Infection control in radiology department

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Hospital infections are serious concerns for health care workers and patients. Needle stick injuries, blood contacts, airborne infections and any kind of contamination pose a risk for hospital infections. A cut–off point 48 hours after admission is typically used to distinguish between Hospital infections and community acquired infection. The risk of hospital infection has been increased in

radiology since the number of the patients and the exposure time between patients and radiology workers have increased especially with the usage of new modalities. Imaging techniques are commonly used to confirm suspected cases of infectious diseases and are often used to visualize complications that may occur secondary to infectious pathogens. The Radiology technologist needs to be aware of the transmission modes of various infectious agents and the standard precautions that must be utilized to prevent the spread of infectious diseases. Furthermore, they should be aware of the radiographic procedures that are used for various infectious diseases and significant findings that are often visualized on examination of infected patients. This Paper provides education activity and awareness for Radiology technologist and other health care worker, with the risk of hospital infection especially in Radiology department, for that a Surveillance was sending to six different Libyan hospitals and the results show that there is no specific infection control policy regarding radiology department in among these hospitals and The entire participant did not attend any conferences or training programs regarding hospital infection control.

ID 51: Variety of Bone Diseases Imaging by (99mTc-MDP) Bone Scintigraphy

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Abstract: Bone scintigraphy is a special type of nuclear medicine procedure that uses small amounts of radioactive material to diagnose and assess the severity of a variety of bone diseases and conditions, including fractures, infection, and cancer. The main agent in current clinical use for bone scanning is (MDP). The imaging technique plays an important role in preoperative evaluation, treatment efficacy evaluation and monitoring of bone metastases. Bone scan is able to evaluate the total body in one study, as well as its availability and low cost, makes it a useful modality to locate, diagnose, and evaluate bone pathology. Scintigraphy can provide early detection of primary cancer and cancer that has spread to the bones from other parts of the body. Bone scan able to pinpoint molecular activity within the body, and it offers the potential to identify disease in its earliest stages. In this research different results of cases of bone disease which detected by using bone scan techniques are visualized, presented and reviewed thus the concluding remarks were abstracted. More work are needed in this area. **Keywords**: Bone Metastases, Bone Scan, Diagnose, MDP, Nuclear Medicine.

ID 52: Antibacterial activity of honey and propolis on bacteria isolated from diabetic foot

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Diabetic foot ulcer is a significant complication of diabetes mellitus and often proceed lower extremely amputation. Propolis is a naturally occurring anti-inflammatory bee derived protectant resin. Previously, topically applied propolis has been reported to reduce inflammation and improves cutaneous ulcer healing in diabetic rodents. The aim of this study is to determine in vitro antimicrobial activities of crude hexane and methanolic extract of Libyan propolis against bacteria isolated from diabetic foot ulcer lesion collected from patient in Tripoli Iben Nafees Hospital using disc and agar diffusion method. The result showed that the percentage of aerobic bacteria isolated from diabetic lesion was about 74%, which include MRSA, E. coli, Ps. aeruginose, Citrobacter, Pantoea, Protease, Staph. Epidermis, Enterobacter and Serratia bacteria. Whereas anaerobic bacteria reported about 26 % of Clostridium, Bacteroides, and Lactobacillus Jensenii. It was concluded that the honey and propolis extract had antibacterial activity against different type of aerobic and anaerobic bacteria that were isolated from diabetic foot ulcer lesion. **Keywords**: Diabetic foot, Propolis, MRSA, E. coli, Ps. aeruginose, Citrobacter, Pantoea, Protease, Staph. Epidermis.

ID 53: Asymptomatic Incarcerated retroverted gravid uterus with fibroid at term

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Background: Uterine incarceration is a serious and rare complication of pregnancy. 'Patient may complain of low abdominal pain, low-back pain, urinary retention, & constipation, or may by asymptomatic until labor begins. Most instances of incarceration are not reported; a rough estimation is that symptomatic incarceration occurs in 1/3000-6000 pregnancies. Retroversion before 12-14 weeks gestation occurs in approximately 15% of pregnancies and is usually concerned an innocent finding. When 'uterus remains retroverted as 'pregnancy advances, 'growing uterine corpus impacts in 'hollow of 'pelvic cavity and uterine incarceration may develop.

Diagnosis is difficult, and physical Findings can be misleading which may lead to fetal mortality and maternal morbidity. Case: A 25-year-old primigravida referred at 36 weeks gestation as case of placenta previa with cervical fibroid, underwent a challenging Caesarean section because during the procedure there was an unusual distorted anatomy, after 'delivery of 'fetus we discovered that we did a transvaginal posterior wall transverse cesarean section, as it turned to be incarcerated retroverted gravid uterus with fundal fibroid impacted in cul-de-sac, also myomectomy was done to prevent recurrence in future pregnancies. Conclusion: Recognition of a gravid uterus that is retroverted and incarcerated is critical because of 'increased risk of fetal mortality & maternal morbidity. Recurrence has been reported, there for 'patient should be monitored closely during subsequent pregnancy. In reporting our case, we aim at improving awareness, diagnosis & management of incarcerated retroverted gravid uterus. **Keywords**: incarcerated uterus, acute retroversion.

ID 54: asymptomatic bacteriuria and symptomatic urinary tract infection among pregnant women in Tripoli, Libya.

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This study aimed at investigating the incidence of symptomatic urinary tract infection (UTI), asymptomatic bacteriuria, and results of routine urine examination and culture analysis in pregnant women during antenatal period. Also the aim of this study is discovery types of bacterial isolates in positive (UTI) culture cases and study of complications of UTI. Methods: Between July 2016 and August 2017, 350 Pregnant Women were submitted to mid-stream urine routine examination. Urine microscopy results with more than 6-8 pus cells /ml urine were sent for bacterial culture and antibiotic sensitivity using standard microbiological methods. The incidence of urinary tract infection was made according to cases with positive culture in relation to total women screened. The incidence of UTI according to gestation age was calculated. Results: Among 350 women screened, 97(27.7%) cases had pus cells in urine upon routine microscope examination of urine. 72(20.6%) were positive for UTI on routine urine examination and culture analysis. According to gestation age, the number and percentage of cases with positive urine culture were 26(36%) in the first trimester, 31(43%) in the second trimester, and 15(21%) in the third trimester. Among positive UTI cases, 29 patient had no symptoms so the incidence of asymptomatic bacteriuria was 40.27%. Out of 72 patients with positive culture, 37 patients (51.38%) had previous history of UTI. Type

of organisms isolated in urine culture were E. coli in 31(43%) patients, Staphylococcus in 20 (27.8%) patients, Streptococcus in 9(12.5) patients, K. pneumonia in 5(6.9%), Enterococcus in 3(4.2%) patients, Proteus in 3 (4, 2%) patients, Acinetobacter in 1 (1.4%) patients. Conclusion: Because we found a significant percentage of patient with UTI during pregnancy, we recommended that urine examination should be performed as part of antenatal care. Keywords: Bacteria – UTI – Libya.

ID 55: Speed-oligo techniques for rapid differentiation between Mycobacterium tuberculosis complex and different species of non-tuberculous mycobacteria in clinical specimens

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Background: During recent years, the prevalence of tuberculosis (TB) and non-tuberculosis mycobacteria (NTM) infections have increased, mainly because of several factors such as the AIDS epidemic. Rapid and accurate identification to species level is essential for the control and management of infections caused by Mybacteriun tuberculosis complex (MTBC) and /or NTM. Aims: The aims of this study were to evaluate of Speed-oligo Direct Mycobacterium tuberculosis assay and Speed-oligo mycobacteria assays, for rapid detection and differentiation of nineteen different species of NTM from clinical specimens. Methods: This study was conducted from January to June 2014 in the TB reference laboratory at the National Center for Disease Control (NCDC), Tripoli- Libya. A total of 2433 specimens were routinely processed for direct microscope examination and cultured on (Middle brook 7H9) media using the BACTEC™ MGIT™ 960 system, 457 specimens were assessed by Speed-oligo techniques. Results: From 337 positive culture results by MGIT 960 culture system, 331 (98%) specimens were positive and 6 (2%) were negative by SO-DMT. 295 specimens were identified as MBTC and 36 were identified as mycobacteria genus. Ten strains were identified to species level and the rest as genus level by SO-mycobacteria assay. Compared to positive culture, the sensitivity of SO-DMT assay was 98% (88& for MTBC and 10% for NTM). While specificity of SO-DMT assay for positive specimen was 90%, and the predictive value positive (PVP) and the predictive value negative (PVN) respectively was (99%), (75%). Conclusion: The SO-DMT and SO-Mycobacteria assays appear to be a fast and easy

assay for detecting mycobacteria and differentiating MTBC from NTM in clinical specimens.

ID 56: Waste as a disaster, Waste as a treasure

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Recycling of organic waste especially food waste & faeces to produce useful biogas that can be used every day in our life and help in reducing waste and pollution. Waste is a material which has been used and is no longer wanted. Organic waste is a type of waste and it is an important source of renewable energy. It includes all materials that are composed from hydrogen and carbon and can be broken down by microorganisms (biodegradable materials). This review aimed to make people realize that they can conserve our environment by making useful things from unwanted materials. In conclusion, three groups of anaerobic bacteria play rules in production of biogas; 1) Bacteria that secretes enzymes convert carbohydrates into glucose, protein into amino acid and fat into fatty acid (fermentation), 2) Hydrogen producing-acetogenic bacteria that convert fatty acid into acetic acid and hydrogen, 3) Methanogenic bacteria that help in formation of methane gas and carbon dioxide from acetic acid and hydrogen. Small –scale production of renewable energy as methane gas from organic waste is very cheap, can take place at home and can be used as a fuel for heating.

ID 57: Vasa previa Case report

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Background: Vasa previa is a condition in which fetal blood vessels cross or run near 'internal opening of 'uterus. These vessels are at risk of rupture when 'supporting membranes rupture, are unsupported by 'umbilical cord or placental tissue 'largest studies report a prevalence of 1.5–4:10,000. In addition, 10% occur in twins. Yet 'diagnosis is easy to miss, even postnatal and thus be underreported; thus, it is likely that 'condition is not as uncommon as generally though 'Gold standard for 'diagnosis is 'fetal ultrasound scan. Witch found during 'routine second trimester ultrasound check-up; 'mode of delivery is 'C-section which tends to reduce 'frequency of possible complication. A clinical case: A 36-year-old patient G3P2 NVD

hospitalized in zlitten teaching hospital as term pregnant women in labor; after complete assessment of 'pt. 'most strange singe was p\v finding ; 'presenting part ?? Vasa previa; ass with heavy show. Pt. transferred as 37 weeks pregnancy to 'surgery room for Emergency C-section according to 'guidelines 'management of multiple deceleration of fetal CTG. Male alive infant was successfully delivered; 'evaluation of 'placenta confirmed 'diagnosis of vasa previa; pt. discharged 3 days after delivery in a healthy condition. Conclusions: Substantial improvement in outcome will depend only on prenatal detection. This implies a greater awareness of 'condition and an effort at detecting it. 'purpose of this reporting is to help alert those who do prenatal examination that vasa previa are not difficult to recognize when sought and that they are common enough to be worth seeking. **Keywords**: vasa previa, obstetrical management, outcomes.

ID 58: Evaluation of Three Brands of Metronidazole Tablets

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Metronidazole is a commonly used drug. It has an activity against protozoa and anaerobic bacteria. The success of drug therapy using this drug and others depends, among other factors, on the quality of the product. The aim of this study is to assess the quality of different brands of metronidazole tablets and to test their stability after storage. The three brands used were SupplineR (Sp) of Biochemie, Austria; Metronidazole (Mnz) of Life pharma, Italy; and FlagylR (Fg) of Specia Rhome Poulene Rorer, France. The objectives were achieved by carrying out the following tests: weight variation, crushing strength, friability, and disintegration tests according to the BP methods and the content uniformity and the assay using the USP methods. The results of this study showed that the three brands met the official requirements. The results of the assay test showed that Sp, Mnz, and Fg tablets had 95.3%, 98.6%, and 104.3% of labeled amount of the active ingredient respectively. The three products passed and met the official requirements of the physicochemical tests. Storage was found to have an effect on the disintegration time. The disintegration time before and after storage for Mnz tablets was 43.3s (SD +/- 7.6) and 414.8s (SD +/- 101.8) and for Sp was 51.6s (SD +/- 18.2) and 77.0s (SD +/- 53.9) respectively. The differences between the three brands may be due to the differences in formulations, manufacturing process and conditions, nature and/or the thickness of film coat. From the result of this study we can conclude that: (a) the three brands of metronidazole tablet had good quality and met the official

requirements but they had different disintegration time; and (b) storage has an effect on the chemical stability of the drug and on the disintegration time. **Keywords**: Metronidazole tablets, SupplineR, FlagylR, Metronidazole R, evaluation, disintegration, content uniformity, and stability.

ID 59: A comparison study on different commercial brands of mouthwash preparations

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A mouthwash is a solution used as adjunct to regular oral hygiene methods like brushing and flossing. There are many brands of mouthwashes products available in the local market. The quality of these mouthwash products need to be evaluated to ensure that the consumer receives a high quality product. Therefore the aim of this study is to assess the quality of different brands of mouthwash preparations. To achieve this goal, samples of five different brands of mouthwash products available in the local market in Tripoli-Libya; Listerin Plus© (LP), Corsodyl© (C), Listerinee© (Le), Hextril© (H), and En Liven© freshmint (EL) were collected and used in this study. The formulation, the physical characteristics such as appearance, color, odor, taste, pH, antimicrobial activity, packaging components, and labeling of each product were evaluated and/or tested. The results of this study indicate that the active ingredients present in the studied products include chlorohexidine gluconate (in C and Le), Hexetidine in H, Cetyl pyridinum and Sodium fluoride in EL, and Menthol, Methyl salicylate, Eucalytol, and Thymol in LP. Le mouthwash is similar in name to the LP but it has completely different composition. pH values of the products are different (3.85 to 6.84). All tested products have antimicrobial activity. C and H have higher antibacterial activity than the other brands. The containers of the products have tamper-evident systems. Some of labeling requirements are missing in some products. From the results we can conclude that all the studied mouthwash brands had antibacterial activity, their quality is different and some of them did not comply with some quality standards. Therefore, the quality of such products needs to be controlled. **Keywords**: Mouthwash, formulation, physical characteristics, packaging, labeling, evaluation, antimicrobial activity.

ID 60: Prevalence of hookworm infections in dogs and its effects on various blood parameters in Tripoli, Libya

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Studies concerning the zoonotic importance of hookworm parasites in pets are still a major concern for scientists in developed countries. In Tripoli- Libya, studies of dog endoparasites are limited. On the other hand in comparison with other similar reports in same study area, the current study is more comprehensive because it was carried out on housed and stray animals. The aim of present study was to determine the prevalence of hookworm infections in dogs in Tripoli, and to study the changes in some blood parameters associated with hookworm infestations. Accordingly in the period from 4th of October 2009 to 18th of April 2011, one hundred and fifteen dogs (73 housed, 42 stray) from different localities in the city, were investigated. The housed dogs were examined during their visits to private and governmental veterinary clinics for routine procedures such as check-up or vaccination. The stray animals were captured by using special traps. All animals were subjected to clinical examination and their general condition were evaluated. A structured questionnaire was designed to gather information on pet ownership, management and related risks. The faecal and blood samples were collected from all investigated animals, then processed and examined. The overall prevalence of hookworm infections among dogs was (3.4%). The prevalence of infections in housed dogs was (5.4%), and in stray dogs was (0%). In dogs the use of anthelmintics, habitation (housed/stray) and age were statistically significant with P-value at 0.000, 0.001 and 0.023, respectively. Whereas sex and breed did not affect the prevalence. In the housed dogs, the haematological results showed that there is significantly difference in WBCs count, segmented neutrophils count, lymphocytes count and eosinophils count with P-values at 0.010, 0.015, 0.007 and 0.022, respectively. The infected housed dogs were suffered from mild anaemia. Importantly, our findings showed the prevalence of hookworm in canine that cause potential public health problems. It is essential to keep companion animals under veterinary care with regular use of broad spectrum anthelmintics. In addition, periodic monitoring of these animals is important and recommended as one of the possible control measures to avoid the spread of endoparasites infections among dogs and humans.

Keywords: Prevalence, hookworm, dogs, blood parameters, Tripoli, Libya.

ID 61: Parasitic Isopods Infestation of Bogue Fish [Boops boops (Linnaeus, 1758)] from Tripoli, Libya

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Isopods are external parasites of sea and freshwater Teleostei fishes. Isopods are blood-sucking; numerous species inhabit in the buccal cavity of fish, others exist in the gill chamber or on the body surface including the fins. They parasitize various sea species of marketable importance fisheries. Sea isopods play an important role in the food web, especially in eliminating the putrefied substances from natural or altered environments and they also represent a significant part of economic non-equilibrium. There is no prior research carried out to study Isopod fauna along Libyan coast. Hence, in the period between February to March 2018, this study was achieved to investigate parasitic isopod species of bogue [(Boops boops (Linnaeus, 1758)] from Tripoli coast. From a total of 61 bogue were examined, two individuals (3.27%) were infested with parasitic isopods. Only one parasitic isopod species [Ceratothoa parallela (Otto, 1828), was documented (both sexes were detected). This specie was recorded of the Isopod fauna at the littoral zone of Tripoli, Libya for the first time. **Keywords**: Parasite, Isopods, Boops boops, Tripoli.

ID 62: Treatment of Carpal Tunnel Syndrome in Different Physiotherapy Departments, Tripoli

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Background and Aim: This experimental study was intended to an overview of definition, diagnosis, associated impairments and physiotherapy management of post operation carpal tunnel syndrome within four case diagnosed by professional doctors and therapists. The study was carried out in the period between September 2012 and the December 2012 at the department of physical therapy of whoever (Al-Housine Medical Center -Libya Medical Center - Maetigqa (Tripoli military base) hospital. Methodology: The current study covered four male cases of ages varies from 25 to 35 years whom had suffered from carpal tunnel syndrome, and the most associated impairment is spasm, medical information was collected by designed

questionnaire from the different physiotherapy departments, and the patients themselves. Results: On the long term Improvement was significantly more pronounced for symptoms, effects were sustained at 1 months follow up. Conclusion: Results suggest there are satisfying short to medium term effects due to ultrasound treatment in patients with mild to moderate idiopathic carpal tunnel syndrome. Findings need to be confirmed, and ultrasound treatment will have to be compared with standard conservative and invasive treatment options. **Keyword**: Carpal Tunnel Syndrome, Physiotherapy, Faculty of Medical Technology.

ID 63: Impact of Partial Uropygialectomy on Body Weight of Broiler Chickens

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The uropygial gland of birds, (otherwise known as the oil, preen or rump gland) located on the base of the tail, dorsally to the levator caudal muscle. This gland has been the subject of much discussion and research for nearly two past decade. Partial ablation of the preen gland is being used in the chickens industry as a recent manner to improve the bird performance. However, inadequate informations are offered assessing the influence of partial uropygialectomy to ameliorate body mass. Accordingly, during the period from 23rd of April to 10th of June 2017, the current study carried out to estimate the impact of partial uropygialectomy on the body weight of 45 Ross 308 broiler chickens. The birds were randomly assigned to three treatment groups by 15 (mixed-sex) per treatment. Each treatment consisted of three replicates of 5 birds per replicate. The experimental treatments consisted of; a control treatment T1, partial ablation of the uropygial gland was applied in T2, and T3 treatments at end of 2nd, and 3rd week of the age, respectively. The birds were raised to 7 weeks (49 day) in a deep litter house. Water and feed were provided ad libitum. All treatment groups were supplied the same diet. Moreover, continuous lighting and regulated ventilation were provided. All the birds were kept under standardized homogeneous management conditions, and veterinary prevention measurements during the experimental period. Body weight and feed intake for birds from 1st week till 7th week age were measured by digital scale. Concurrently, these data were used to determine the weight gain and feed conversion ratio. The findings at week 7 showed that the birds in T3 group revealed higher body weight followed by T2 when compared with the control group, with extremely statistical significant ($P<0.01$) difference in body weight. No significantly differences were

detected to feed intake parameter in the three treatments. Furthermore, the results observed strongly significantly ($P<0.01$) amelioration in the total weight gain parameter, and in feed conversion ratio for both partial uropygialectomy treatments compared with the control treatment. This study demonstrates that partial ablation of the uropygial gland could be to boost the body yield of broilers. Further studies are reqiured to assess the effects of partial uropygialectomy in the other types of poultry. Keywords: uropygial gland, body weight, broiler chickens.

ID 64: Antimullerian hormone as a predictor of ovarian reserve among IVF candidates in Tripoli, Libya

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Background: Antimullerian hormone (AMH) is expressed only in the gonads. In male, it is secreted by immature sertoli cells and in female by adult granulosa cells of the ovary. AMH is responsible for the regression of mullerian ducts in male fetus. Absence of AMH results in development of female fetus reproductive organs and it is believed to control the formation of primary follicles. Objective: To assess AMH in early follicular phase as a predictor of ovarian reserve among females undergoing in vitro fertilization (IVF) in the Tripoli, Libya. Methods: AMH was determined by enzyme linked immunosorbent assay in 100 women (cases) undergoing IVF at Al-Gharghany Fertility Center/ Tripoli. Data were computer analyzed using SPSS statistical package version 16.0 Results: Of the 100 women examined in the study 54% were aged from 41-50, and 60% were suffering from Low AMH concentrations, whereas 73.7% from women examined showed that Normal FSH concentrations. The findings shown that there was a significant negative correlation between AMH and age. Whereas no correlation was present between age and FSH. We conclude that AMH can be used in IVF programs as a good predictor of ovarian reserve and ovarian response. Consequently AMH can be used as a marker for ovarian aging. **Keywords**: Anti-mullerian hormone (AMH), Ovarian reserve, In vitro fertilization (IVF) candidates, Tripoli, Libya.

ID 65: Assessment of vitamin D deficiency among different age groups of women in Tripoli-Libya

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Background: High prevalence of vitamin D deficiency among women has been reported in different countries. Aims: The aims of this study was to assess the vitamin D status among women and analyze its relationship with daily sun exposure, sunscreen use, vitamin D intake and skin pigmentation through a questionnaire. Methods: This cross sectional study was conducted among 144 women with mean age 35.2 years. The participants were divided into three groups, single (n=52), married (n=55) and pregnant (n=37) women. Results: The Results showed that 23% of women had severe deficiency, 38% had moderate deficiency, 29% had mild deficiency and 10% had sufficient vitamin D levels. The means of 25(OH) vitamin D level was 11.7ng/ml in single group, 13.1 ng/ml in married group and 8.0 ng/ml in pregnant group with (P=0.037). No significant differences in the levels of vitamin D with sun exposure, sun screen use and skin pigmentation, but vitamin D was significantly correlated to vitamin D intake (P= 0.019). Conclusion: Our results confirmed a high prevalence of vitamin D deficiency among different age groups of women and especially among pregnant women.

ID 66: Prevalence of vitamin D deficiency among Libyans in Tripoli city

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Background: Vitamin D, also known as calciferol, comprises a group of sterols responsible for increasing intestinal absorption of calcium, magnesium, and phosphate, and numerous other biological effects. In humans, the most significant compounds in this group are vitamin D3 (also known as cholecalciferol) and vitamin D2 (ergocalciferol). Deficiency in vitamin D causes a net demineralization of bone, resulting in rickets in children and osteomalacia in adults. Chronic kidney disease causes decreased ability to form active vitamin D as well as increased retention of phosphate, resulting in hyperphosphatemia and hypocalcaemia. Objectives: To determine the prevalence of vitamin D deficiency in Tripoli - Libya with different age. Method: This prospective study was conducted on 8 cases at Alkhadra Hospital in Tripoli city during February to April, 2018. Blood was collected from suspected

cases and analyzed by automated immunoassay based on chemiluminescence technology. The assay was performed on the IDS-iSYS Multi-Discipline automated analyzer. 10 µL of serum aliquots were automatically pipetted and subjected to a pre-treatment step with NaOH to denature the DBP inside the IDS-iSYS Multi-Discipline automated analyzer. The extraction procedure of 25(OH) D from the DBP was followed by analysis. The measurement range of this assay is 30-100 ng/mL (according to manufacturer protocol). The IDS-iSYS 25(OH) D control set (IS-2730) Immunodiagnostic. Systems Ltd, was used for quality control (QC). Result: Approximately 42% of the participants were vitamin D deficient (< 30 ng/mL). Vitamin D status was inversely associated with body fat (%), while positively associated with lean body mass (LBM) and hand grip strength (HGS). Conclusion: Vitamin D deficiency is common in the health of Libyan adults and this is more pronounced in females and in younger age groups. It is likely to be wearing traditional clothing, deliberately avoiding the sun, using sunscreen, and inadequate dietary intake, the main causes of low vitamin D level. **Keywords**: Vitamin D – Rickets – Osteomalacia.

ID 67: The antidepressant-like effect of Mitragyna Speciosa Korth

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Mitragyna Speciosa Korth was used as an opium substitute in Southeast Asia. It has been shown to have addictive properties and to produce tolerance and dependence. The methanolic leaf extract of Mitragyna Speciosa (MS) is known to contain several alkaloids including mitragynine which structurally has an indole moiety. This moiety is also a feature of serotonin which is an important neurotransmitter in depression. On the other hand, current strategy in designing antidepressants in the form of selective serotonin reuptake inhibitors (SSRIs), this study has investigated whether the methanolic leaf extract of MS possesses antidepressant-like effect. The Porsolt swim test method for screening antidepressants had been used. Female mice were forced to swim for 6 minutes. This was followed 24h later with a second swim session of 6 min. Drugs were administered (n=10) orally1, 5 and 24h after the first swim session to record chronic effect. The oral administration of MS methanolic leaf extract at doses 100, 200, 400 mg/kg, significantly reduced the immobility time. **Keywords**: Mitragyna Speciosa, Selective Serotonin Reuptake Inhibitors, Antidepressant effects.