Invited speakers for ESR2016 conference

Prof. Mohamed Ghoneim
Professor Emeritus of Urology
Mansoura University, Egypt

Biography

Mohamed Ghoneim is Professor Emeritus of Urology at Mansoura University in Egypt. He was the Director of the Urology and Nephrology Center in Mansoura, Egypt from 1983 to 2002. Ghoneim obtained his M.B., B.Ch in 1960, Diploma of General Surgery in 1963, Diploma of Urology in 1964 and M.Ch. in urology in 1967, all in Cairo. He obtained E.C.F.M.G from London in 1972 and an honorary MD from Goteberg in 1988. Ghoneim's medical internship and residency were at Cairo University Hospital. He then moved to Mansoura University where he served as Clinical Demonstrator, Lecturer and Associate Professor until 1972. In the 1970s, Ghoneim was a Registrar at the department of urology & general surgery at South Mead General Hospital in Bristol, UK; Clinical Fellow in Urology at Memorial-Sloan Kettering Cancer Centre, New York; and Research Fellow, Urodynamic Lab. Dept. of Urology at the University of Sherbrooke Medical Centre, Sherbrooke, Quebec, Canada.

Ghoneim has received many awards including the Fleix Guyon Medal from the International Society of Urology, the Arab Pioneers Award from the Arab Thought Organization, the Harry Spence Medal from the American Association of Genito-urinary Surgeons, Mubarak's Scientific Award, the Arab-American Medical Association Award, the Saint-Paul Medal Award from the British Urological Association, and Dr Fakhry's Prize for distinguished research in surgical sciences.

He is a corresponding member of the French Urological Association, a member of the Society of Surgical Oncology, U.S.A; a member of the International Society of Urology, an honorary member of the British Association of Urological Surgeons, corresponding member of the American Association of Genitourinary Surgeons, a Vice President of the Societe International D'Urologie (S.I.U.), an honorary member of the American Urological Association, a member of the Board of Chairmen of SIU; was made a honorary President of the Pan-Arab Urological Association in 2000, is a Honorary Fellow of the American College of Surgoens, and a honorary member of the German Urological Association. Ghoneim has been a visiting professor in universities all over the world.

Prof. Essam Khamis
Deputy Minister of Higher Education & Scientific Research
Prof. of Corrosion & Protection of Metals
Faculty of Science, Alexandria University, Egypt

نظرة عامة على
الإستراتيجية القومية لمصر في العلوم والتكنولوجيا والإبتكار
2030 - 2016

أ.د. عصام خميس إبراهيم الحنش
نائب وزير التعليم العالي والبحث العلمي

An Overview
NATIONAL STRATEGY OF EGYPT FOR SCIENCE, TECHNOLOGY & INNOVATION 2016 – 2030

سيتم في المحاضرة إلقاء الضوء على الموضوعات التالية:

- **أهم ملامح إستراتيجية وزارة التعليم العالي والبحث العلمي للعلوم والتكنولوجيا والإبتكار 2016 – 2030، وبالأخص المسار الأول عن تهيئة بيئة محفزة وداعمة للتميز والابتكار في البحث العلمي، وكذلك المسار الثاني عن إنتاج المعرفة ونقل وتوطين التكنولوجيا للمساهمة في التنمية الإقتصادية والمجتمعية، ومؤشرات العلوم والتكنولوجيا والإبتكار.**
- **منظومة العلوم والتكنولوجيا والإبتكار في مصر.**
- **أولويات البحث العلمي في مصر، بما يتفق مع إستراتيجية التنمية المستدامة: رؤية مصر 2030.**
- **دعم ونشر ثقافة المشروعات البحثية في مصر، وتوفير التمويل اللازم لها من خلال صندوق العلوم والتنمية التكنولوجية، وأكاديمية البحث العلمي، وبرنامج البحوث والتنمية والإبتكار الممول من الإتحاد الأوروبي، وكذلك دور منظمات المجتمع المدني في دعم البحث العلمي والإبتكار (مع سرد عدد من قصص النجاح للمشروعات البحثية الممولة).**
- **إقامة عدد من أودية وحدائق العلوم، كوسيلة لدعم وتشجيع الإبتكار، وربط البحث العلمي بالصناعة، ومساعدة الشركات الناشئة في تطوير وتسويق التكنولوجيا، والمساهمة بشكل فعال في تحقيق التنمية الإقتصادية المستدامة القائمة على إنتاج المعرفة.**
- **المؤشرات القومية للعلوم والتكنولوجيا والإبتكار، ومقارنة المخرجات البحثية مع دول العالم.**

Prof. Mahmoud Sakr
President of Academy of Scientific Research and Technology
Ministry of Higher Education & Scientific Research
Egypt

Biography

Prof. Saqr is the Prof. Biotechnology at National Research Center, Egypt and is the former Executive Director of Science and Technology Development Fund, and Vice-Chairman of the Academy of scientific Research. Prof. Saqr is endowed Prof. in Generic Engineering and Biotechnology who has contributed in this area of research. He is the Chief-Editor of the Journal of Genetic Engineering and Biotechnology. Prof. Saqr plays a significant role in reshaping the science and technology in Egypt what has yielded into dramatic changes in the roadmap of scientific activities in both the governmental and private sectors in Egypt.

Dr. Ahmed Khalid Tawfik

Professor of Tropical Medicine
Faculty of Medicine, Tanta University
Egypt.

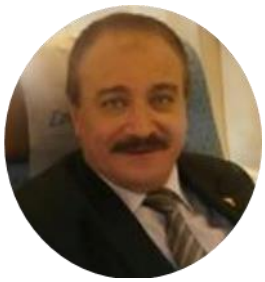
Biography

Ahmed Khaled Tawfik is a Professor of Tropical Medicine at Tanta University , Egypt.
He was born on 1962, married and has 2 kids. Since 1993, he wrote a lot of POP fiction dedicated for youth mainly, college age. He is the first contemporary Arab writer to write horror fiction and the first Arab writer to explore the medical thriller genre. He has a special interest in Sci - Fi literature and he has translated, and simplified, many works by Bardbury, Clark, Asimov, Verne ..etc to Arabic. His novels typically feature all Egyptian characters but set both in Egypt and around the world. He wrote the scripts for many comic stories (bande dessinée), and he writes some political articles regularly. Away from youth, he wrote 3 grim novels ; Utopia, Al - Sengah and Like Icarus. His 4 th novel , (Pasage of mice) will be released soon.

Talk: Pseudo Science

Pseudo Science or Vodoo Science have invaded everything, from treatment of HIV infection to allegedly self perpetuating engines. It seems society lost connection with logic thinking and understanding scientific methods. Skepticism is the main soul of science and should be acquired in schools, so that no scientific (fact) is taken for granted, and should be tested, measured, repeated and explained before being believed.

General MAMDOUH MOHAMED EL BAHNASAWY
Professor of Tropical Medicine, Military Medical Academy, Egypt.
Head Department of Tropical Medicine, Military Medical Academy
Deputy Director of Military Medical Services
mamdouh25@hotmail.com; elbahnasawy23@gmail.com ;
elbahnasawy23@yahoo.com



Biography

Dr. EL-Bahnsawy also was appointed as the Director of Almaza Military Fever Hospital, Head of Tropical Medicine Department, Military Medical Academy, and Director of Military Institute of Health and Epidemiology. His research activities focus on assisting in supervising the post-graduate medical Students in the Field of Tropical Medicine, Community Medicine and Occupational Medicine and Nursing Administration in their dissertation for Master and Doctor Degrees. He is a member in several national and international societies including: Egyptian Society of Parasitology, Egyptian Medical Syndicate, Board of the Holding Company Management of Vaxera, National Infection Control Program, MOH, Member of the Central Committee to oversee the work of the safe disposal of hazardous medical waste system, MOH, Member of the Supreme Committee of measures and preparations to face Ebola virus epidemic, headed by the Minister of Health and Population, Member of the Higher Committee for assigning doctors and Ministry of Health. General Prof. EL-Bahnasawy has published more than 37 research articles and is the author for several books inclusing: Spotlight on Infectious Diseases Following a Disaster at Egyptian Western Border, Deposite Egyptian Book Centre, 1591/2011. Spotlight on Four Infectious Disease Disasters at the Egyptian Eastern Border, Deposited Egyptian Book Centre, 2011. Spotlight on Arthropod Borne Diseases In Sudan, Deposited Egyptian Book Centre, 3894/2012. Educational Program on Infectious Disease during Hajj Season. Vectors of Medical Importance in Egypt. Spotlight on Health Hazards of ICU`s Nursing Staff. Problem Based Learning. Health Education For Peace Keeping Mission. Health Education About Viral Haemorrhagic Fever. Infection Control Guidelines At A Military Hospital

Talk: Mosquito Borne Infectious Diseases Across Borders, Risks, Challenges and Management With Reference To Dengue Virus.

Aedes aegypti. A small, dark mosquito, with white markings, the vector of dengue virus transmission. Dengue is caused by four closely related viruses, commonly referred to as serotypes (dengue-1, -2, -3, and -4). Infection with one serotype elicits life-long immunity, but only to that serotype. Dengue should be suspected when a high fever (40°C/104°F) is accompanied by 2 of the following symptoms: severe headache, pain behind the eyes, muscle and joint pains, nausea, vomiting, swollen glands or rash. Symptoms usually last for 2–7 days, after an incubation period of 4–10 days after the bite from an infected mosquito. Severe dengue is a potentially deadly complication due to plasma leaking, fluid accumulation, respiratory distress, severe bleeding, or organ impairment. Warning signs occur 3–7 days after the first symptoms in conjunction with a decrease in temperature (below 38°C/100°F) and include: severe abdominal pain, persistent vomiting, rapid breathing, bleeding gums, fatigue, restlessness and blood in vomit. The next 24–48 hours of the critical stage can be lethal; proper medical care is needed to avoid complications and risk of death. Treatment: There is no specific treatment for dengue fever. For severe dengue, medical care by physicians and nurses experienced with the effects and progression of the disease can save lives – decreasing mortality rates from more than 20% to less than 1%. Maintenance of the patient's body fluid volume is critical to severe dengue care. Immunization: In late 2015 and early 2016, the first dengue vaccine, Dengvaxia (CYD-TDV) by Sanofi Pasteur, was registered in several countries for use in individuals 9-45 years of age living in endemic areas. The Strategic Advisory Group of Experts (SAGE) on immunization reviewed CYD-TDV in April 2016 and recommended countries consider

introduction of the vaccine in geographic settings (national or subnational) with high endemicity. A WHO Vaccine Position Paper will be published outlining WHO recommendations in July 2016. Prevention: Advanced Technique in mosquito born diseases control using Sunlight Activated Formulated Extract (SAFE).This project introduces an Innovative modality that combines both the effectiveness and efficiency for mosquito born diseases (vector) control with the highest level of human safety and environmental friendliness. Vector control is the key point of cutting the breading cycle of the mosquito born diseases. Material and Methods: In this work we use the plant originated chlorophyll derivatives, which proved its photosensitization efficiency in laboratory and semi-field studies, as a natural products extracted from green plants and endorsed by the food and drug administration (FDA) as food additives. This substance is highly effective, and can be easily dissolved in an aquatic environment, to kill mosquito larvae. Conclusion: The effect of chlorophyll on larvae was good with excellent with mortality rate approaching 99% after exposure to sunlight.
Keywords: Dengue fever, Aedes aegypti, Egypt, borders, photo sensitizer

Professor Maher Chaabene

University of Sfax, Tunisia

Biography

Prof. Maher CHAABENE was born in 1962. He is a professor in Electrical Engineering at the University of Sfax, Tunisia. His Research interests are Modeling, control and management of hybrid renewable energy systems. He supervised fifteen PhD. Also he is author of twenty five articles in journals, Chairman of an IEEE conference and reviewer in many journals.

Talk: On the design and energy optimization of a PV/T plant: Case study of a PV/T based desalination

The supply of drinking water and electricity remains an unsolved problem despite numerous initiatives. Also, the abuse of fossil energy obliged governments to seek new resources so as to equilibrate the energy balance. Thus, international policies are oriented towards the use of renewable energy in its various forms (solar, wind, biomass ...) by installing power plant generating electrical energy based on renewable energy. Pumping and desalination of brackish water is the most appropriate solution to guarantee the supply of rural areas with drinking water. Given the increase in fuel prices and the pollution caused by CO2 emissions, the use of renewable sources represents the best policy to power these pumping stations. Thus, in isolated areas, the use of renewable energy for desalination should solve the problem dealing with the dilemma Energy / Water. Unlike thermal desalination processes that require a tremendous amount of heat, the reverse osmosis technique is frequently used because it requires only electricity to produce fresh water. Reverse osmosis desalination plants powered by photovoltaic panels are considered promising. In addition, the heating of the reverse osmosis unit to supply water promotes the permeability of the membrane unit. To generate thermal and electrical energies, two architectures are adopted: association of a photovoltaic module and a solar thermal panel or the use of a photovoltaic thermal panel (PV/T). This gathers the functions of both conventional heat collector and photovoltaic module. The circulation of air or fluid within the PV/T serves to cool the photovoltaic cells and allows taking advantage of the absorbed heat for heating purposes. Research and development on PV/T led in recent years to a gradual increase in the exploitation of the technology. The keynote presents an innovative solar energy based desalination plant using Photovoltaic Thermal (PV/T) collectors. The adequate system architecture with an evaluation of its productivity is to be proposed. A sizing strategy is consequently designed on the basis of energy need to ensure the installation requirement of the two forms of energy: electricity and heat. A Fuzzy Logic based control law to improve the performance of the installation is to be highlighted. The elaborated control has guaranteed also an optimized energy management.

Keywords: PV/T collector, water desalination, energy management, Fuzzy logic controller.

Professor Ahmed Abdullah Zayed
Prof. of Political Sociology
Faclty of Arts
Cairo University, Egypt

الأستاذ الدكتور أحمد زايد هو أستاذ علم الاجتماع بكلية الآداب جامعة القاهرة وعميد كلية الآداب سابقا. يعمل الأستاذ الدكتور أحمد زايد كمدير لمركز البحوث والدراسات الاجتماعية بجامعة القاهرة و مقرر مجلس العلوم الاجتماعية والسكان بأكاديمية البحث العلمى وعضو المجلس القومي للمرأة. حصل الدكتور زايد علي ليسانس الآداب من قسم الاجتماع بجامعة القاهرة عام 1972م وماجستير علم الاجتماع عام 1976 ودرجة الدكتوراة في عام 1981 بجامعة القاهرة. كما درس الدكتور زايد بجامعة ايست انجليا بإنجلترا وذلك لجمع المادة العلمية للدكتوراه من نوفمبر 1977 إلى نوفمبر 1979 على منحة من المجلس البريطاني وسافر ايضا إلى جامعة بيليفيد بألمانيا لمدة عام دراسى فى مهمة علمية عام 1982 -1983 .

العلوم الاجتماعية والعلوم الطبيعية :إعادة قراءة العلاقات البينية

يبدو أن لا مستقبل لعلم من العلوم دون إدراك لأهمية العلاقات البينية بين العلوم المختلفة، فالحياة الاجتماعية والسياسية والنفسية التي تشكل موضوعا للعلوم الاجتماعية تتشكل على نحو خاص يدفع بعض المفكرين إلى رفض الفكرة القائلة بأن العلوم الاجتماعية تسعى إلى أن تكون علومًا تتبني نموذج العلم الطبيعي، ويدافعون عن وجهة النظر التي تذهب إلى أن العلوم الاجتماعية هي علوم روحية أو تاريخية تختلف في مراميها وطرق بحثها عن علوم الطبيعة التي تتعامل مع عالم الأشياء. ورغم ما في هذا الرأي من صدق إلا أنه لا يعني أن ثمة قطيعة بين العلم الاجتماعي والعلم الطبيعي. فالحقيقة أن تاريخ العلوم يزخر بصور من التداخل، والاستفادة المتبادلة التي تدعونا إلي إعادة قراءتها إذا كنا نسعي إلى علاقات بينية بناءة بين العلوم. وتحاول هذه الورقة أن تعيد قراءة تاريخ العلاقة بين العلوم الاجتماعية والعلوم الطبيعية لاكتشاف صور التعاون والاستفادة المتبادلة. فلم تكتفي العلوم الاجتماعية باستخدام النماذج الرياضية أو محاكاة دراسة التفاعلات الاجتماعية على غرار التفاعلات الكيمائية، أو مقاربة مفهومات مستعارة من العلوم الطبيعية مثل النسق، والتباين، والتكامل، والتفاعل، بل أنها قدمت نماذج نظرية تأسست على فرضيات في العلوم الطبيعية. ويكتشف القارئ لتاريخ العلاقة بين العلوم أننا كلما تقدمنا في الزمن ظهرت مشكلات بحثية لا يمكن تناولها إلا عبر دراسات بينية يشترك فيها أكثر من نظام علمي.

وقد يكون مفيدًا أن تنتهي الورقة بطرح أمثلة للمشكلات البحثية والمناهج الدراسية البازغة، وإلقاء الضوء على أهمية تناولها عبر رؤية بينية. وتحتاج كل هذه الموضوعات وغيرها إلى جهود بحثية تبتعد عن التقوقع داخل الشرنقة الضيقة للتخصص، وأن تسعى إلى فتح آفاق للتعاون والتكامل بين العلوم. وهذا التعاون والتكامل هو الذي يفتح الطريق أمام تكامل الذات البشرية، وأمام التكامل الإنساني بعامة. كما يفتح الطريق أمام مراجعة الانفصال الشديد بين المناهج التربوية خاصة في المرحلة قبل الجامعية.

Professor Masahiko Sekine
Graduate school of Science and
Technology for Innovation
Ube, Yamaguchi 755, Japan
ms@yamaguchi-u.ac.jp

Biography

Talk: Interdisciplinary researches of anthropogenic influence on fish for sustainable development

Our group has been working around interdisciplinary topics on aquatic living organisms which include predicting fish production in sea area, estimating fish evacuation success from lethal environmental deterioration, evaluating and designing river habitat improvement works, detecting migration path through river drops and fishways, determining relationship between water quality and fish community, etc. In the initial stage of our research, we proposed a fish preference equation which allows us adding / removing environmental factors without affecting other parameters. This equation became a base of our further works. The first model handled environmental factors such as velocity, depth, turbidity, food, existence of plants, and population density. Later we added more physical factors such as air content, sound pressure, turbulence; chemical factors such as salinity, DO, and toxicity; biological factors such as home range, behavioral mode, rheotaxis. In this presentation, I will describe experimental setup to handle different types of environmental factors, equations to handle various aspects of fish preference, and insights on anthropogenic influence on fish for sustainable development.

Dr. Jin Seok KANG

Associate Professor,
Department of Biomedical Laboratory Science,
Namseoul University, Republic of Korea

Biography:

Dr Kang has obtained his Ph.D. (Degree of Medical Science) from the department of Pathology, Osaka City University Medical School, Japan. He is an associate professor in the Department of Biomedical Laboratory Science, Namseoul University. He is interested in Toxicologic pathology, Bioimaging and Carcinogenesis. He has several licenses including the the National Board Examination of Korea Veterinary License No. 6673, Diploma, the Korean Society of Toxicologic Pathology (DKSTP); The Korean Society of Toxicologic Pathology Certification Serial No. 079 and the diploma, the Korean College of Veterinary Pathologists (DKCVP); The Korean Society of Veterinary Pathology Certification Serial No. 55. He has several international papers published in highly reputed journals in the field of Toxicology and Bioimaging.

Talk: Integration of Biomaging with Toxicopathology in Biomedical Researches

Scientists have used toxicologic pathology techniques to examine pathological lesions. Even though it is a direct tool to evaluate the lesions, it generally has some limitation for quantification and three-dimensional reconstruction of them. Bioimaging techniques such as micro-computed tomography (micro-CT), micro-magnetic resonance imaging (micro-MRI), fluorescence molecular tomography (FMT) and optical coherence tomography (OCT) have become dedicated for use in several animal models for assessment of pharmaceutical efficacy or chemical toxicity. These bioimaging technologies enable non-invasive detection and visualization of biological processes of compound-related processes over time in the body of animals. Furthermore, bioimaging in living animals helps to reduce the number of animals required per experimentation. However, conventional toxicopathologic examinations should be conducted to confirm the evaluation of pathological lesions in combination with bioimaging. In this time, I'd like to introduce the recent studies about the pharmaceutical efficacy of therapeutics and chemical toxicity of nanomaterial and hepatocarcinogens using micro-CT, micro-MRI, FMT and OCT in combination with histopathological examination. Overall, as most of these bioimaging techniques are still undergoing rapid development, it is important that toxicologic pathologists embrace and utilize these technologies to assess pathological lesions more clearly and to qualify and/or quantify the lesions associated with histopathological examination

Key words: bioimaging, toxicopathology, animal, micro-computed tomography, micro-MRI, fluorescence molecular tomography, optical coherence tomography

Papers related to topic (Recent 3 years)

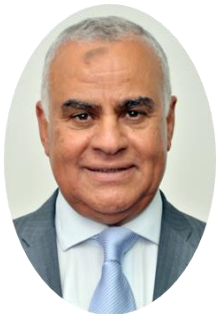
1) Jin Seok Kang, Hwan-Goo Kang, Young-Il Park, Hyunjung Lee, Kiho Park, Yun-Seok Lee, Soohee Kim and Doug-Young Ryu: Expression of epithelial cell adhesion molecule and proliferating cell nuclear antigen in diethylnitrosamine-induced hepatocarcinogenesis of mice. Experimental and Therapeutic Medicine 5 (1), 138-142 (2013).

2) Hyun-Il Yang, Woo-Sik Kim, Dal-Hyun Kim and Jin Seok Kang: Histopathological evaluation of heart toxicity of a novel selective PPAR-γ agonists CKD-501 in db/db mice. Biomolecules & Therapeutics 21 (1), 84-88 (2013).

3) Young Hee Kim and Jin Seok Kang: Expression of glypican-3 in mouse embryo stem cells and its derived hepatic lineage cells treated with diethylnitrosamine in vitro. Asian Pacific Journal of Cancer Prevention 14 (11), 6341-6345 (2013).

4) Jin Seok Kang and Dae Joong Kim: Expression of CD44 in mouse diethylnitrosamine (DEN)-induced hepatic tumors as well as in DEN-treated embryo stem cells and derived hepatic lineage cells. Journal of Biomedical Research 14 (4), 230-234 (2013).

5) Yinghua Li, Kazumi Shiraiwa, Kyeongnam Ko, Jemin Moon, Sunhee Park, Miju Lee, Sunhee Shin, Myoungjun Kim, Hosong Jang, Yonghoon Lee, Duyeol Kim, Jin Seok Kang and Jongkoo Kang: A paraganglioma at posterior wall of left atrium originated from aortic body in a Wistar Hannover rat. Experimental Pathology, 65 (5), 631-636 (2013).



Prof. Mahmoud Abdel-Kader

President of Physcial Chemistry
German University in Cairo, Egypt
mahmoud.abdelkader@guc.edu.eg

Biography:

Prof. Mahmoud H. Abdel-Kader is a Professor of Photochemistry and currently,the President of the German University in Cairo, since 2002. Prof. Abdel-Kader received his Ph.D. (Dr. rer. nat.) in Spectroscopy and Photochemistry at Stuttgart University, Germany in 1979, under the supervision of Prof. Dr. Theodor Foerster and Prof. Dr. H.E.A. Kramer. He got a post doctoral position at the Institute of Physical Chemistry, University of Karlsruhe, from 1982 to 1983. From 1983 to 1984, he was a Senior Researcher at the Federal Institute of Technology, EPFL, Lausanne, Switzerland. He was a Visiting Professor at both Georgia Institute of Technology, Atlanta, USA and the Institute for Laser Technology in Medicine and Metrology, Ulm University. He then served the position of Vice Dean of the National Institute of Laser-Enhanced Sciences (NILES), in Cairo University. Prof. Abdel-Kader has supervised over 80 master's theses and doctoral dissertations. He has published over 100 publications in peer reviewed journals and in conference proceedings. Also, he is an inventor of 8 patents. He has given more than 80 invited talks and plenary lectures at both national and international meetings. Prof. Abdel-Kader's research interests include: Laser Spectroscopy to study the Kinetics and mechanism of Ultrafast Chemical Reaction (Photochemical Isomerization, Protolytic Reactions and Electron Transfer Processes), Utilization of Solar Energy in Photochemical Conversions for Malaria, Filaria and Dengue Fever Vector control, Parasites such as Schistosomiasis and Agricultural pests using environmentally friendly (natural extract) Photosensitizers and Application of Nanoparticles in Photodynamic Diagnosis and Therapy of Cancer. Prof. Abdel-Kader was elected as Officer, then Chair of the European Society for Photobiology (ESP) outside Europe (1997–2001). He was awarded the distinguished State Prize in Chemistry, in Egypt, 1996 as well as the State Medal in Chemistry, 1998. Recently, Prof. Abdel-Kader was awarded the 2012 Excellence Award of Science from Cairo University.

Talk: Photodynamic Modality for Cancer Treatment and Malaria Vector Control

Photodynamic therapy (PDT) is a promising new modality for cancer treatment, which involves the combination of light of an appropriate wavelength and a photosensitizing agent, which is selectively taken up and retained by tumor cells. Separately, each of these factors is harmless; however when they are combined in the presence of oxygen, cytotoxic reactive oxygen species are produced, which leads to irreversible cellular damage and causes cell death and tumor destruction. PDT has been used for many years, but only now is becoming widely accepted and utilized, even though it has many advantages over other types of treatments. First, PDT avoids systemic treatment since treatment occurs only where light is delivered. Therefore, side-effects are also avoided. Another advantage is that PDT is selective. It can also be used when surgery is not possible. Moreover, it is a low cost procedure.On the other hand, the lecture will also include the successful field implementation of PDT, as a new approach for Vector Control of Malaria, Filaria and Zika diseases.

In conclusion, the results reveal that this innovative modality against vector borne diseases combines both effectiveness and efficiency with the highest levels of human safety and environmental friendliness.

Prof. Dr. Galal Elgemeie

Professor of organic chemistry
Faculty of Science
Helwan University
Egypt

Biography

Prof. Dr. Galal H. Elgemeie was born in Egypt on July 20, 1953. He received both his B.Sc (1974) and his Ph.D. (1982) degrees from the Faculty of Science, Cairo University. He was awarded the degree of Doctor of Science (D. Sc.) in 2004. He was a postdoctoral fellow of the Alexander von Humboldt Foundation in Germany (1983-85) where he worked at Darmstadt Technical University. He also obtained the Fulbright postdoctoral fellowship at Princeton University USA (1986), the British Council postdoctoral fellowship at the University of East Anglia, England (1989), and then the German Research Foundation (DFG) fellowship at the German Cancer Research Center (DKFZ), Heidelberg, Germany (1998). He was invited to many research visits at the universities of Stuttgart, Braunschweig, Hamburg and Dusseldorf in Germany. He is an international elected member of the Scientific Board of the International Basic Sciences Programme (IBSP), UNESCO, United Nations, in Paris, France "2004-2008". From 2011-2013, he acted as a Chairman for the Board of Directors of the Fulbright Foundation in Cairo. In 1995, he was appointed Chairman of the Chemistry Department at Helwan University in Cairo, a position he held until July 1998. He was appointed Vice Dean of the Faculty of Science at Helwan University from July 1998 until December 2005. In January 2006 until June 2009, Prof. Elgemeie was appointed to the position of Cultural Counselor and Director of the Educational Mission of the Embassy of Egypt in Berlin, Germany. He also carried out supervision of the Egyptian students in Scandinavian countries (Norway - Sweden - Denmark - Finland), Poland and the Netherlands. In October 2009 until July 2011, he was appointed Dean of the Faculty of Science at Helwan University; and from July 2011 until November 2013, he worked as the First Deputy Minister of State, Ministry of Higher Education, Egypt.

Prof. Elgemeie is the author of over 220 scientific international papers on heterocyclic chemistry, medicinal chemistry and synthetic methodology. He supervised the work of 35 Ph.D and 55 M.Sc. students. His research interests cover the development and mechanistic understanding of organic reactions and their application to the synthesis of antimetabolic agents. He is nominated as one of the leading scientists of the Member States of the Organization of Islamic Countries in the year 2009 Report. The international citation of his published work and his scientific research have been classified among the research which has most global reference in the field of chemistry and that admitted in the ISI encyclopedia as "Most Cited Chemists in the years 1982-1997". His work is cited for several international patents. He acted as a referee for many international scientific journals. He was invited to give many scientific lectures and scientific research in international universities, research centers and international conferences.

Prof. Elgemeie supervised several cooperation projects with the European Community aiming at restructuring Egyptian and Arab Educational Institutions under the TEMUPS programme, each of these projects could be said to contribute to fulfilling certain international millennium development goals:

- Structural and Complementary Measures- Project No:Tempus-SCM-M002B03-2003

- Exchange the Bologna Process Experience with Selected Egyptian Universities- Project No:Tempus-SCM-M016B05-2005
- Strengthening Institutional Capacity in the Arab Universities- Project No: Tempus-JP-144789-2008
- Mediterranean Universities Innovation- Project No:Tempus-ES-JPHES159210-2010
- Novel epigenetic small molecules and antimetabolites to combat cancer– in cooperation with Institute of Medicinal Chemistry, Dusseldorf University, Project financed by the Alexander von Humboldt Stiftung, Germany (2015)
- Sofosbuvir analogues: Innovative synthesis of novel anti-HCV drugs for the treatment of HCV and hepatocellular carcinoma of Egyptian patients", (2016-2018)-Project financed by the Egyptian Academy of Scientific Research & Technology.

Prof. Elgemeie's research activities were acknowledged through the following Awards:

1989	Egypt Prize in Chemistry
1990	Shoman Award in Basic Sciences "Jordan"
1995	Third World Academy of Sciences Award in Chemistry
1995	First Class Ribbon for Distinction from the President of Egypt
1996	Helwan University Award for Distinguished Research
2004	Egypt State Award of Merit in Basic Sciences
2004	D.Sc. Degree in Organic Chemistry
2010	The African Union Scientific Award "Continental Scientific Award" for Outstanding Achievements in Science and Technology
2013	The State Honor Award "NILE"
2014	First Class Ribbon for Science and Arts from the President of Egypt

Talk: Synthetic Strategies to Novel Antimetabolites

Antimetabolites are drugs which are structurally similar to essential metabolites, they may inhibit the synthesis of these metabolites and biological pathways in which the natural occurring metabolites are envolved. The marketed antimetabolites are categorized as antifolates, pyrimidine analogs and purine analogs. Research in my group involves the design and synthesis of derivatives and analogs of the naturally occurring metabolites.

References:

[1] G. Elgemeie and B. Hussain Tetrahedron, 50, 199 (1994).
[2] G. Elgemeie Current Pharmaceutical Design, Bentham Science Publishers, Exceutive Editor: G. Elgemeie, USA, Vol. 9, No. 31, 2627 (2003).
[3] G. Elgemeie et al. Eur. J. Med. Chem., 46, 229 (2011).

Prof. AHMED M. EL-ASSAL

Prof. of Mechanical Engineering
Faculty of Engineering
Benha University, Egypt

Biography

Prof. Assal worked in 7 funded research projects as a principal and coprincipal investigator . Published and as an author and coauthor more than 35 publications in journals, conferences and bulletins. He earned the D. Sc. Degree in September 1988, in the field of Solid Mechanics and Material Engineering from the School of Engineering and Applied Science, The George Washington University, Washington, D.C., he earned the M. Sc. in April 1982, in the field of Production Engineering and the B. Sc. in May. 1976, in Mechanical Engineering form the Faculty of Engineering and Technology, Helwan University, Helwan, Cairo.

Prof. Assal currently as a professor of mechanical design and production engineering at Benha Faculty of Eng., Benha University. He was the Director of Egyptain Tchnical Colleges Project From Jan. 2011 till June 2013 then form Jan 2015 till December 2015. From July 2013 till Dec. 2014, Prof. Assal worked as a professor and chairman in the department of Mech. Eng. at Benha Faculty of Eng., Benha University. And from September 2007 to Dec. 2010 as the Vice Dean and Professor Benha University, Benha High Institute of Technology, Mech. Eng. Dept. From September 2000 to 2007, Prof. Assal worked as Associate Professor then Professor at King Abdul Aziz University, Faculty of Engineering and from September 1991 to September 1993 as a Visiting Assistant Professor at The George Washington University,

Dr. Noha Awad
Asst. Prof. of Epidemiology
Higher Institute of Public Health
The founder and Director of Egybiotech

Noha Awad is an oncologist and cancer epidemiologist who obtained her doctoral degree in oncology from University of Leeds, a postgraduate certificate in Health Research from University of Leeds as well as MPH from University of Manchester. Noha has spent several years working in Cancer research UK (CRUK) research labs and clinics within the Leeds NHS Trust. After return to Egypt, she established the Alexandria University cancer research cluster and Egyptian Cancer Research . Since return to Egypt, Noha has rolled out 4 research programs with competitive funding amounting to 12 million EGP based at the University of Alexandria. Her research funding comes from national agencies like the Egyptian Science and Technology Development Fund (STDF) as well as international organizations including ASCO, UNICEF, UNAIDS, NATO Science for Peace program and others. In addition, Noha is also the primary founder and director of Egybiotech for research and biotechnology which is the first biotechnology research startup in the Middle East.

Talk: Biotechnology Entrepreneurship from idea to market

Egybiotech was established in 2012 in an attempt to prove our belief that Research is no longer a luxury for the developing world, but is in fact a necessary and fundamental solution to the varied and complicated problems which exist in such countries. Our goal does not stop on developing neotherapeutics and predictive models to improve quality of life, but stretches to polarize the private sector contribution to scientific society development. Egybiotech takes on significant challenges to excel and make a difference in research and biotechnology in Egypt and the Middle East region. We aim to establish a strong biotechnology industry sector in Egypt and the region, contribute to the progress of medical science and to build a culture that promotes a knowledge-based economy, and fosters the younger generation's skills and understanding of scientific research careers. Egybiotech is a company with a strong work ethos focusing on the added value to society and to human progress in general. Our activities reflect this as we often offer research training placements and internships for undergraduate students and carefully selected pre-university students in our research projects, participate in university activities and in entrepreneurial mentoring and training activities conducted by the Global Entrepreneurship program. Egybiotech started as a limited partnership and evolved into a joint stock company. Its main remit is to develop and validate predictive molecular diagnostics in the form of multigene assays that can predict susceptibility to disease and response to treatment. In addition, we operate as a contract research organization for a number of international agencies, a technology incubator and research training and education facility. Our presentation will outline the journey from conceptualizing the idea to establishing the company and working through inevitable obstacles to achieve success.

Dr. Wael Kher

Asst. Prof. of Mechanical Engineering
Faculty of Engineering, Assiut University
waelmkh@aun.edu.eg

Research Interest

Electrical Engineering, Environmental Engineering, Chemical Engineering, Ecological Engineering, Civil Engineering, Agricultural Engineering , Petroleum Enginee

1SH. M. Ismael, W. M. Khair-Aldien, A. A. Kalil and A. A .Nassr , CHARACTERISTIC OF ANCHOR EMBEDDED ON CONCRETE UNDER DIFFERENT LOADING RATE, Journal of Engineering Sciences, Assiut University, Faculty of Engineering, 41- 4, 1564 - 1580, 201

Integrated Technology Transfer Unit at Assiut University: A success story

Integrated Technology Transfer Unit (ITTU) is a unit formed in February 2009 at ASSIUT University through An European fund (RDI program) presented for one year with the aim to enhance the industrial collaboration between university and industrial community through the following mechanisms. 1) Transferring Assiut University to a third generation university. 2) Developing research projects contracted from industry or undertaken jointly. 3) Providing development and consultancy services to the community and industry. 4) Cover both of low tech and high tech, ranges of R&D. 5) Covering all over Egypt including upper Egypt region Joint research program. 6) Joint projects. 7) Increasing both sides marketing and branding capabilities. The ITTU has been successful in accomplishing several projects related to technology transfer. These projects represent a model system in Upper Egypt to other institutes.