

Joint Event on



Euro Congress on

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November 26-27, 2018 | Madrid, Spain

DAY 1

Scientific Tracks & Abstracts

Day 1

SESSIONS

November 26, 2018

**Plant Genetics and Epigenetics | Cell biology and Immunology
Cancer Management & Palliative Care**

Session Introduction

Session Chair

Mamdouh Nassar
Cairo University, Egypt

Session Chair

Veronica R Sobrado
Royal Institute of
Technology, Sweden

- Title: Diversity of cultivable fungal endophytes associated with shoots of Bt and non-Bt maize plants**
Rasheed Adeleke, Agricultural Research Council, South Africa
- Title: Mapping of sex determination regions in chitralada hybrid strain towards all-male fry production**
Andrey Shirak, Agriculture Volcani Centre, Israel
- Title: Approaches of wasps venom as therapeutic source tools of diseases treatment**
Mamdouh Nassar, Cairo University, Egypt
- Title: Intracellular, biofilm-inhibitory and membrane damaging activities of nimbolide isolated from *azadirachta indica a. juss (meliaceae)* against meticillin-resistant *staphylococcus aureus***
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- Title: Do not resuscitate expressly allowed natural death: A common ethical dilemma among terminally ill cancer patients**
Nezar Ahmed Salim, Dubai Health Authority, Dubai
- Title: A flexible infrastructure for next-generation sequencing projects**
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Rasheed Adeleke et al., J RNA Genomics 2018, Volume 14

DIVERSITY OF CULTIVABLE FUNGAL ENDOPHYTES ASSOCIATED WITH SHOOTS OF BT AND NON-BT MAIZE PLANTS

Rasheed Adeleke^{1,2}, Mashiane R A^{1,2}, Bezuidenhout C C²

Chirima J G^{1,4}, Rhode O H J³ and Roopnarain A¹

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⁴University of the Witwatersrand, South Africa

Interactions between endophytes and host plants could be affected by various factors such as the genetic modification of plants. In the present study, impact of genetic modification (*Bacillus thuringiensis* (Bt) cry proteins) of maize plants on the diversity of fungal endophytes was investigated. This was carried out by assessing diversity of fungal endophytes associated with a Bt-maize (MON810) and its isogenic, non-transgenic parental line at pre-flowering (50 days) and post-flowering (90 days) developmental stages. Fungal communities inhabiting the phyllosphere of Bt-maize and its isogenic parental line were isolated and identified. Twenty-one isolates were obtained from the shoots of Bt-maize and 27 from its isogenic parental line, representing 14 genera and 19 OTUs. The most frequently isolated groups were *Fusarium* from tassels as well as *Epicoccum* and *Alternaria* from leaves. In both cultivars, the leaves had the highest fungal diversity. Results obtained in the study indicate that there was no significant difference between isolates from Bt-maize and its parental line, which means the genetic modification did not affect the diversity of cultivable fungi associated with the Bt-maize genotype. This study further highlights the diversity of fungal endophytes that may benefit their hosts through nutrient cycling and biological control of diseases.

BIOGRAPHY

Rasheed Adeleke is the faculty in soil, climate and water at Agricultural Research Council, South Africa. He completed his PhD in Microbiology at University of Pretoria in 2010 and Postgraduate in Environmental Management from University of Toronto in 2011.

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Andrey Shirak et al., J RNA Genomics 2018, Volume 14

MAPPING OF SEX DETERMINATION REGIONS IN CHITRALADA HYBRID STRAIN TOWARDS ALL-MALE FRY PRODUCTION

Andrey Shirak¹, Lior Dor¹, Joel I Weller¹, Micha Ron¹
Eyal Seroussi¹, Tatyana Zak² and Ayana Benet-Perlberg²

¹Agriculture Volcani Centre, Israel

²Dor Research Station, Israel

Effective farming of tilapia requires all-male culture, characterized by uniformity and high growth rate. This is currently achieved by larval masculinization using steroid hormones or by crossbreeding *Oreochromis niloticus* females with *O. aureus* males. While the first technique has severe environmental impacts and has been banned in Europe, the second has low yields due to a reproductive barrier related to sexual behavior differences between the parental species. Moreover, pure bred brood stocks are prone to contamination by hybrids. Several breeding programs demonstrated higher growth rates of crossed strains as compared to pure bred local varieties. However, hybridization leads to segregation of a larger number of sex determining factors and thus complicates the genetic control of sex determination (SD). We performed a genome wide association study by applying genotyping-by-sequencing technique for a selected full sub family of the Chitralada hybrid strain (parents, 14 males and 79 females). The seven most significant associations based on 1,956 informative SNP markers were also validated by analysis of microsatellite markers located in the relevant regions. Microsatellite markers in linkage groups (LGs) seven and fifteen supported the association of these newly discovered regions for SD. Together with the previously described SD effect on LG23, these three loci provided good explanation for SD in the analyzed tilapia family. Analysis of the effect of each of these loci allowed constructing specific breeding scheme for all male fry production in the Chitralada hybrid strain.

BIOGRAPHY

Andrey Shirak has his expertise in animal genetics; detection and investigation of mechanisms underlying the inheritance of categorical and quantitative traits; and implementation of scientific finding in the improvement of animal production. His hypothesis is that overcoming the behavioral barrier between different tilapia species is a key step for mass production of all-male tilapia, through manipulation of sex determination by species hybridization. Following 8 years of experimentation, his hypotheses gain support from the actual determination and localization of the genetic loci that are involved in sex determination and in reproductive communication, including the discovery of male-specific AMH duplication. The Chief Scientist (Israeli ministry of agriculture) and ISF (Israeli Science Foundation) have supported the present study over this period, allowing implementation of knowledge from different disciplines of genomics, and aquaculture in development of intensive technology for tilapia production.

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Mamdouh Nassar et al., J RNA Genomics 2018, Volume 14

APPROACHES OF WASPS VENOM AS THERAPEUTIC SOURCE TOOLS OF DISEASES TREATMENT

Mamdouh Nassar and Hamed M Fayed

Cairo University, Egypt

Insects make up the largest and most diverse group of organisms on earth. Like all other organisms, insects and related arthropods mainly utilize chemistry to adapt to these environments in a wide variety of ways, such as for defense against predation. Among the arthropods that produce pharmacologically active molecules are capable of interfering in human cellular physiology such as scorpions, bees, wasps, spiders, ants and caterpillars. The substances found in the wasp's venom present great potential as anti-disease agents. Wasps are arthropods whose stings cause severe pain and tissue damage and may even cause death of a great number of vertebrates, including humans. These arthropods bear a complex gland responsible for the production and injection of venom, which exhibits physiological, pharmacological and biochemical activities, playing a role in a variety of survival mechanisms such as defense against predators and prey capture, among others. Progress in the field has advanced rapidly and this comprehensive review summarizes the enormous potential for discovery of new natural bioactive products with medicinal value from wasps. In this respect, the present study reviews our current understanding of the action and future prospects regarding the use of new drugs derived from wasps in the treatment of mice parasitic disease.

BIOGRAPHY

Mamdouh Nassar was born in Cairo. He graduated a Bachelor's Degree from Biology (zoology, botany, and toxicology) Department, Faculty of Science, Cairo University. received his MSc Degree in from the same University. PhD degree (channel system) between University of Maryland College Park (USA) and Cairo University. He had many studies for field of sleeping sickness and malaria diseases of vectors stomoxys calcitrans and anopheles in USA Florida, jazan and jeda. staff member program (visitor exchange), University of Maryland College Park, USA. He is a professor of biological sciences at Cairo University, King Abd-Alziz, University Jazan and King Khalid Universities. He was worked at laboratory staff, for dietary microbiology at environmental system service, Beltsville, USA. He was also consultant advisor at Home care company and Al-nasr chemicals company.

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INTRACELLULAR, BIOFILM-INHIBITORY AND MEMBRANE DAMAGING ACTIVITIES OF NIMBOLIDE ISOLATED FROM *AZADIRACHTA INDICA* A. JUSS (MELIACEAE) AGAINST METICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS*

Anirban Banerjee, Prodipta Sarkar, Saurabh Acharyya
Amarendra Patra, Karthika Thankamani, Hemanta Koley
and Prasanta K Bag

University of Calcutta, India

Staphylococcus aureus is a leading aetiologic agent of nosocomial- and community-acquired infectious diseases worldwide. *S. aureus* causes several human diseases, ranging from minor skin and soft tissue infections to more severe conditions such as toxic shock syndrome, glomerulonephritis, pneumonia, meningitis, endocarditis, osteomyelitis and septicemia. The public health concern regarding staphylococcal infections is inflated by the increasing occurrence of multidrug-resistant strains, e.g. multidrug- and methicillin-resistant *S. aureus* (MDR MRSA). This study was designed to evaluate the intracellular bactericidal activity and *in vitro* membrane-damaging and biofilm-inhibitory activities of nimbolide isolated from *Azadirachta indica* against MDR MRSA. *In vitro* antibacterial activity of nimbolide was determined by performing MIC, MBC and time-kill kinetic studies. It showed much lower MIC ($8 \mu\text{g ml}^{-1}$) and MBC ($32 \mu\text{g ml}^{-1}$) values than other antibiotics. Biofilm-inhibitory activities were determined by SEM. Cellular drug accumulation and assessments of intracellular activities were performed using Vero cell culture. SEM findings revealed that exposure to nimbolide at 1X MBC on *S. aureus* resulted in the disintegration of the bacterial cell envelope, severe bacterial membrane perturbation, significant membrane damage, bursting of cells and cell lysis. The biofilm structure was disrupted, and the biofilm formation was greatly reduced in the presence of nimbolide as examined by SEM. The level of accumulation of nimbolide in Vero cells incubated for 24 h is relatively higher than that of ciprofloxacin and nalidixic acid. The viable number of intracellular *S. aureus* was decreased [reduction of $\sim 2 \log_{10}$ c.f.u. (mg Vero cell protein) $^{-1}$] in a time-dependent manner in the presence of nimbolide (4 X MBC) that was comparable to that of tetracycline and nalidixic acid. The significant intracellular, biofilm-inhibitory and bacterial membrane-damaging activities of nimbolide demonstrated here suggested that it has potential as an effective antibacterial agent for the treatment of severe infections caused by MDR MRSA.

BIOGRAPHY

Anirban Banerjee has completed his PhD at the age of 29 years from Visva Bharati Santiniketan, India. He is now Post-Doctoral fellow in Department of Biochemistry, University of Calcutta, India. He is engaged in research in microbiology and parasitology and has many publications in reputed Journals.

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THERAPEUTIC REFURBISHMENT OF ARSENICOSIS IN TESTES OF SWISS ALBINO MICE BY SELENIUM

Sanghamitra Das, Anirban Banerjee and Samar Kumar Saha

Visva Bharati Santiniketan, India

In the present experiment a pentavalent arsenic compound, sodium arsenate was administered to mice to raise a model organism with arsenicosis following intraperitoneal administration of sodium arsenate at the dosages of 25 mg kg⁻¹ body weight and 30 mg kg⁻¹ body weight for a period of 45 days. Upon this model organism of arsenicosis ameliorative potentiality of a selenium compound, sodium selenite is evaluated. After thorough investigation on the pathological conditions developed in the vital organ testis due to arsenic toxicity and the following conclusion can be drawn. Arsenic exposure is detrimental to the biological system. It causes damage to the testis at tissue level, cellular level which are ultimately reflected in physiological disruption. Significant reductions in the number and diameter of seminiferous tubules as well as in the number of tubules containing healthy germ cells indicate the arsenic induced gonadal pathology and oligospermia. After selenium treatment, the ameliorative groups showed all the features of normozoospermia with respect to structure, count and motility. Serum testosterone concentrations, GSH and GST levels were also decreased in all successive treated groups and these were refurbished by the treatment with sodium selenite. Apoptosis was detected by chromatin condensation assay, ROS generation and FACs due to sodium arsenate treatment while it was refurbished by sodium selenite. Our fruitful observations support the notion that sodium arsenate impairs male reproductive function by inducing oxidative stress and apoptosis, and these experimental results suggest that selenium supplementation through oral route improved sodium arsenate induced toxicity on testis.

BIOGRAPHY

Sanghamitra Das has completed his PhD in 2014 from Visva Bharati Santiniketan, India. She is now engaged in research in toxicology and vector borne diseases in IICB, Kolkata and Visva Bharati Santiniketan and working in Govt Health Department as District Entomologist.

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Nezar Ahmed Salim, J RNA Genomics 2018, Volume 14

DO NOT RESUSCITATE EXPRESSLY ALLOWED NATURAL DEATH: A COMMON ETHICAL DILEMMA AMONG TERMINALLY ILL CANCER PATIENTS

Nezar Ahmed Salim

Dubai Health Authority, Dubai

Background: Every human being desires a life without suffering and lives his or her life in best possible quality of life, but when death is looming from a terminal disease and one is lying in bed with machines to maintain organ functions; there comes the dilemma of the choice. However, patients may place healthcare providers in an ethical dilemma by declining care or not allowing them to provide treatment; despite that patients have the right to do so.

Aim: This paper examines the ongoing and controversial debate regarding the 'Do Not Resuscitate' (DNR) orders. It discusses the rights of terminally ill patients who opt to refuse treatment as well as the various legal and moral ramifications surrounding this particular topic.

Method: This discussion paper is informed by the results of a literature review. A search was conducted using the electronic databases of Cinahl, Medline, PubMed, EPSCO and Science Direct for articles published during 1994 to 2015. Twenty articles were found after extensive searching via electronic databases. There is no ethical approval to this article.

Results: Number of studies supported the DNR order for terminally ill patients to allow them to pass away in peace. Also CPR in many cases may not end up with direct clinical benefits as the resuscitation would not be fruitful or may even lead to complications, which in result will extend suffering without treating the underlying illness.

Conclusion and Recommendations: DNR should be taken into consideration especially with patients who have exhausted all other kind of treatment modalities; where there is multi-organ failure and hope for a cure has been exhausted. 'DNR' as a concept, may also appear harsh and unacceptable for the patient and their loved ones. The use of this term or language plays an important role. The authors strongly believe that it would be more appropriate if the wording is changed from "Do Not Resuscitate" to "Allow Natural Death".

BIOGRAPHY

Nezar Ahmed Salim is the In-Service Educator and Nurse Researcher in Dubai Hospital, United Arab Emirates. He obtained his Bachelor's Degree in Nursing from Hashemite University in 2012 and proceeded to Master's Degree, Major in Oncology in 2014 in the same university. He started as a staff nurse in the Medical-Surgical Oncology Unit, King Hussain Cancer Center in Amman, Jordan from 2012-2015. With commitment for excellence and career growth, he established the Journal Club at King Hussein Cancer Center and was awarded as a "Champion Nurse" of Research in the Magnet Program. From 2015-2018, He worked as an Oncology Nurse in Dubai Hospital. He was eventually promoted to Nurse Researcher and Educator. Throughout his career, Mr Salim has published 20 researches and articles in different international nursing journals (Epidemiology, Incidence, Mortality, Opinion articles and Experimental). The Al-Jalila Foundation approved and funded studies grant to support the cause of the research. He is also a speaker and organizer of Nursing Conferences on the United Arab Emirates and International Level. In 2017, he is awarded by the Government of Dubai for "You're our Pride", Research Category as a best Researcher. The Dubai Health Authority acknowledge him as a "Recognized Staff" for his dedication and initiative in the practice of Nursing. Currently, he is a Board Editorial member of 2 Medical Journals. As a nurse researcher, he has a Good clinical Practice Certificate (GCP) which upholds the scientific quality standards of clinical trials.

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Veronica R Sobrado, J RNA Genomics 2018, Volume 14

A FLEXIBLE INFRASTRUCTURE FOR NEXT-GENERATION SEQUENCING PROJECTS

Veronica R Sobrado

Royal Institute of Technology, Sweden

The national genomics infrastructure (NGI, Stockholm node) provides state-of-the-art massively parallel sequencing services to researchers in Sweden (and abroad) within a wide-range of applications and protocols. We offer different types of applications such as RNA-Seq (including low input material and small RNA), whole genome resequencing, ChIP-seq, RAD-seq and de novo and DNA sequencing. We perform high throughput library preparation and sequencing followed by data processing and best practise bioinformatics analyses. Our automated protocols allow us to process hundreds of samples per week and produce high quality sequencing data. Our facility is accredited by Swedac according to the ISO/IEC 17025 international standard, which ensures that our projects are completed with rigorous quality levels. With a flexible accreditation, we continuously develop new protocols and analyses addressing the needs of our users and invest in the newest sequencing technology.

BIOGRAPHY

Veronica R Sobrado has a PhD in Molecular Biology from Universidad Autonoma de Madrid and extensive research experience in different fields, including cancer and stem cell biology. She has been working with next-generation sequencing for several years and is now Project Coordinator at the National Genomics Infrastructure (NGI) in Stockholm, Sweden. She organises project planning meetings with users, manages different types of sequencing projects and works with quality-assurance related questions.

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Wassil Nowicky, J RNA Genomics 2018, Volume 14

THE SELECTIVE EFFECT OF ANTI-CANCER PREPARATION "UKRAINE" (NSC 631570)

Wassil Nowicky

Nowicky Pharma, Austria

It is well known that all cells possess the negative charge and cancer cells have a much more negative charge than normal cells. This property has been used for the creation of the anticancer preparation on basis of greater celandine alkaloids with the positive charge. The experiment has been carried out on basis of the sum of greater celandine alkaloids as well as on basis of the pure chelidonine with the aim to understand the mechanism of action of the preparation NSC 631570. Chelidonine is the tertiary alkaloid and due to it doesn't have the property to fluoresce. After its transformation into the quartet alkaloid it becomes a proton, accumulate in cancer tumors very fast what is visible thanks to its autofluorescence. Until now this preparation has been tested on over 100 cancer cell lines and on 12 normal cell lines and the results of the studies carried out in more than 120 universities and research centres (in particular at the National Cancer Institute (the USA)) have shown that the NSC 631570 killed only cancer cells without having damaged the normal cells what confirmed its selective effect. In clinical trials it also has proved its anticancer efficacy and caused no noteworthy side effects. The results of *in vitro* studies also have shown the direct deletion of cancer cells and its ability to regenerate the immune system. Such a property is unusual for an anticancer agent but as it can be seen the NSC 631570 possesses some distinct immune properties. In several immune target-effector systems NSC 631570 significantly amplified the malignotoxic activity of macrophages, lymphocytes and NK cells, and stimulates dendritic cells maturation *in vitro*. While the parameters like B-lymphocytes count, immune globulin concentrations, complement and acute phase proteins did not changed significantly, it can be postulated NSC 631570 modulates the cellular part of the immune system whereas the humoral part remains unaffected.

BIOGRAPHY

Wassil Nowicky Director of "Nowicky Pharma" and President of the Ukrainian Anti-Cancer Institute (Vienna, Austria). Has finished his study at the Radiotechnical Faculty of the Technical University of Lviv (Ukraine) with the end of 1955 with graduation to "Diplomingenieur" in 1960 which title was nostrificated in Austria in 1975. Inventor of the anticancer preparation on basis of celandine alkaloids "NSC-631570". Author of over 300 scientific articles dedicated to cancer research. Wassil Nowicky is a real member of the New York Academy of Sciences, member of the European Union for applied immunology and of the American Association for scientific progress, honorary doctor of the Janka Ku-pala University in Hrodno, doctor "honoris causa" of the Open international university on complex medicine in Colombo, honorary member of the Austrian Society of a name od Albert Schweizer. He has received the award for merits of National guild of pharmacists of America. The award of Austrian Society of sanitary, hygiene and public health services and others.

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Maciej Pawlikowski, J RNA Genomics 2018, Volume 14

MINERALIZATION OF LUNG CANCER TUMORS

Maciej Pawlikowski

University of Science and Technology, Poland

Investigation was devoted for determination if cancer tissues of lungs are mineralized or not. Moreover, author likes to find answer for question: if the mineralization of tissue may lead to formation of cancer tumors or cancer tissue producers of substances necessary for lung mineralization? May be both phenomenons are possible? Investigation was performed using classic mineralogical methods on thin sections of cancer tissues done with the use of microtome. Obtained results confirmed the presence of trace mineralization of cancer tissues. It is represented by two type's i.e., secret and visible mineralization. Both types are probably factors creating deformations of DNA leading to formation of cancer. This hypothesis has to be confirmed by experimental investigation.

BIOGRAPHY

Maciej Pawlikowski is presently Professor at AGH University of Science and Technology, Kraków, Poland. He has over 215 research publications that have been cited almost 2150 times, and his publication H-index is 21. He has been Chief Editor for many National & Int'l Journals.

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Joel I Osorio, J RNA Genomics 2018, Volume 14

REGENERAGE SYSTEM: THERAPEUTIC EFFECTS OF COMBINATORIAL BIOLOGICS (MRNA AND ALLOGENIC MSCS) WITH A SPINAL CORD STIMULATION SYSTEM ON A PATIENT WITH SPINAL CORD SECTION

Joel I Osorio

RegenerAge Clinic, Mexico

As it has been previously demonstrated that co-electroporation of *Xenopus laevis* frog oocytes with normal cells and cancerous cell lines induces the expression of pluripotency markers and in experimental murine model studies that mRNA extract (Bioquantine® purified from intra and extra oocyte liquid phases of electroporated oocytes) showed potential as a treatment for a wide range of conditions as squint, spinal cord injury (SCI) and cerebral palsy among others. The current study observed beneficial changes with Bioquantine® administration in a patient with a severe SCI. Pluripotent stem cells have therapeutic and regenerative potential in clinical situations CNS disorders even cancer. One method of reprogramming somatic cells into pluripotent stem cells is to expose them to extracts prepared from *Xenopus laevis* frog oocytes. We showed previously that co-electroporation of *Xenopus laevis* frog oocytes; with normal cells and cancerous cells lines induces expression of markers of pluripotency. We also observed therapeutic effects of treatment with a purified extract (Bioquantine) of intra and extra oocyte liquid phases derived from electroporated *X. laevis* oocytes on experimentally induced pathologies including murine models of melanoma, traumatic brain injury and experimental skin wrinkling induced by squalene-monohydroperoxide (Paylian et. al, 2016). The positive human findings for spinal cord injury and cerebral palsy with the results from previous animal studies with experimental models of traumatic brain injury, respectively (Paylian et. al, 2016). Because of ethical reasons, legal restrictions and a limited numbers of patients, we were able to treat only a very small number of patients. These results indicate that Bioquantine® may be safe and well tolerated for use in humans and deserves further study in a range of degenerative disorders. We propose that the mechanism of action of Bioquantine® in these various diseases derives from its unique pharmacology and combinatorial reprogramming properties. In conclusion, these preliminary findings suggest that Bioquantine is safe and well tolerated on patients with cerebral palsy and spinal cord injury among others. In addition to the regenerative therapy and due to the patient condition, we decided to include the restore-sensor sure scan. Based on the electrical stimulation for rehabilitation and regeneration after spinal cord injury published by Hamid and MacEwan, we designed an improved delivery method for the *in situ* application of MSCs and Bioquantine® in combination with the RestoreSensor® SureScan®.

Conclusions: To the present day the patient who suffered a total section of spinal cord at T12-L1 shows an improvement in sensitivity, strength in striated muscle and smooth muscle connection, 11 months after the first therapy of cell regeneration and three month after the placement of Restore Sensor® at the level of the lesion, the patient with a complete medullary section shows an evident improvement on his therapy of physical rehabilitation on crawling from front to back by himself and standing on his feet for the first time and showing a progressively important functionality on the gluteal and legs sensitivity.

BIOGRAPHY

Joel I Osorio is a innovative businessman with a distinct entrepreneurial mindset concentrated in adding value on the areas of Biotechnology (mRNA), Reprogramming & Regenerative Medicine for translational use in humans and a variety of clinical applications aimed for both the private and the public health sectors. He is the CEO of RegenerAge Clinic and RegenerAge Beauty. VP and Clinical Developer for Bioquark, Inc., CCO at Reanima Advance Biosciences Project. President at Jois an anti-aging, beauty, and cosmetic products endorsement company. VP and Chairman of the WAMS Americas Division. Earned MD degree at Westhill University. Diplomate in aesthetic medicine (UAG), Advance Fellow by the ABAARM, visiting scholar at UNC at Chapel Hill in Dermatology. Fellow in Stem Cell Medicine by the A4M and USF, Business Diplomate at ECA, enrolled Master on Health Sciences at Victoria University.

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DAY 2

Scientific Tracks & Abstracts

Day 2

SESSIONS

November 27, 2018

Cancer Bio-markers | Cancer Diagnostics and Staging

Session Introduction

Session Chair

Mamdouh Nassar
Cairo University, Egypt

Session Chair

Veronica R Sobrado
Royal Institute of
Technology, Sweden

- Title: Investigating forest products for cancer management in Nigeria**
Oluwakemi O, Federal College of Complementary and Alternative Medicine, Nigeria
- Title: Profiling of miRNAs expression in pediatric brain tumors**
Marwa Tantawy, Children's Cancer Hospital, Egypt
- Title: Effects of far-infrared & terahertz onnetsu therapy on various cancers, rheumatoid arthritis and other diseases**
Kazuko Tatsumura, Gaia Holistic Health, USA
- Title: Electronic water can reduce oxidative stress in cancer and diabetes patients for 3 weeks drinking**
Masahiro Onuma, Trisguide Ltd, Japan

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Oluwakemi O et al., J RNA Genomics 2018, Volume 14

INVESTIGATING FOREST PRODUCTS FOR CANCER MANAGEMENT IN SOUTHWEST NIGERIA

Oluwakemi O and Samuel Oluwalana

Federal College of Complementary and Alternative medicine, Nigeria

Experts have predicted that by 2020, the number of cancer patients in Nigeria will rise from 24 million to 42 million, in line with speculations 21 years ago. It is also feared that by same 2020, death rates from cancer in Nigerian males and females may reach 72.7 per 100,000 and 76 per 100,000 respectively. The development of forest products is already creating markets and improving lives of the people who depend on it as a source of livelihood.

Objectives of the study include: Description of the various activities involved in the utilization of forest products by Traditional Medicine Practitioners (TMPs) to treat cancer, identify the medicinal impact of forest product in cancer treatment in the study area and examine the difference in the treatment of cancer by Traditional Medicine Practitioners and Orthodox Medicine Practitioners.

Results: The result showed the following species were identified belonging to seven different families; *Rutaceae*, *Asteraceae*, *Anarcardiaceae*, *Annonaceae*, *Meliaceae*, *Guttiferaceae* and *Leguminaceae* topped the priority list for Cancer treatment in Southwest Nigeria. Five of the plants were tested against cancer cell lines MCF7 and Hs578T while Doxorubicin (a synthetic anticancer drug) was used as the control treatment. Three plants *Saccharum officinarum* (Stem), *Sucriniega virosa* (Root) and *Piper guineensis* (Seed) produced no result; *Garcinia kola* (Bark) did not exhibit any anticancer effect even at a concentration of 10 u1/m1 while only one plant species was effective against the cancer cell line at 1u1/m1. 58% of patients recovered after treatment and 42% did not suggest that treatment with forest products does not guarantee 100% cure of the disease. The subjective causes of cancer were however identified through the responses from the general public to be more of life style related. It is therefore, concluded that indigenous forest products are effective in treatment of cancer.

BIOGRAPHY

Oluwakemi O completed her PhD from Federal University of Agriculture, Abeokuta, Ogun State, Nigeria in 2016. She is a Medical Scientist at the Federal College of Complementary and Alternative Medicine, Abuja, Nigeria. She has over 10 publications.

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Marwa Tantawy et al., J RNA Genomics 2018, Volume 14

PROFILING OF MIRNAS EXPRESSION IN PEDIATRIC BRAIN TUMORS

Marwa Tantawy, Mariam G Elzayat, Dina Yehia and Hala Taha

Children's Cancer Hospital, Egypt

Introduction: The understanding of pediatric CNS tumors biology is essential in the development of disease stratification and in development of less toxic therapeutic agents as well as finding novel markers for early diagnosis. MicroRNAs are short 18–25 nucleotide small non-coding RNA molecules regulate gene expression. Recent studies showed that miRNAs play a significant role in brain tumor biology and may up-regulated or down-regulated in malignancies, which referred their oncogenic or tumor suppressor effect. MiRNA expression patterns have been linked to clinical outcomes, tumor regulation; such as tumor progression, cell growth, cell death and metastasis. The identification of tumor specific miRNA signatures may assist in future in the discovery of new biomarkers with diagnostic and prognostic utility. The main objective of the present study is to detect the expression of different miRNAs in different subtypes of pediatric CNS tumors to distinguish between them in discovering biomarkers for early detection in addition to develop novel therapies.

Methods: The expression level of 82 miRNAs were detected in 120 cases of pediatric CNS tumors from fixed formalin paraffin embedded tissues (FFPE), divided into four subtypes including; low grade glioma, high grade glioma, ependymoma, and medulloblastoma using quantitative real time PCR (qRT-PCR).

Results: Analysis of qRT-PCR data showed significant differences in miRNA expression between tumor subtypes with P value < 0.05 and Low expression of (miR-221, miR-9, and miR-181c/d) and over expression of miR-101, miR-222, miR-139, miR-1827 and miR-34c) in medulloblastoma patients compared to other subtypes. Low expression of miR-10a and overexpression in (miR-10b, and miR-29a) in Ependymoma patients compared to other subtypes. Low expression of miR-26a and over expression in (miR-19a/b, miR-24, miR-27a, miR- 584 and miR-527) in low grade glioma patients compared to other subtypes.

Conclusion: Micro RNAs are differentially expressed between different subtypes of pediatric CNS tumors suggesting that they may play a significant role in diagnosis to distinguish between different subtypes. A greater understanding of aberrant miRNA expression in pediatric brain tumors may support in the development of novel therapies. In addition, the characterization of tumor specific miRNA signatures may play an important role in the discovery of biomarkers with diagnostic or prognostic utility.

BIOGRAPHY

Marwa Tantawy from Pathology Department, Children's Cancer Hospital in Egypt. She completed her PhD in Ain Shams University in 2016 and her masters in Immunology and Parasitology at Cairo University in 2009.

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November 26-27, 2018 | Madrid, Spain

Kazuko Tatsumura, J RNA Genomics 2018, Volume 14

EFFECTS OF FAR-INFRARED & TERAHERTZ ONNETSU THERAPY ON VARIOUS CANCERS, RHEUMATOID ARTHRITIS AND OTHER DISEASES

Kazuko Tatsumura

Gaia Holistic Health, USA

Introduction: Onnetsu means comfortable heat. Onnetsu Therapy invented by the author that heat emits from a special patented ceramic at precise 8-10 μ of vibration of far infrared sun ray and vibration of terahertz. She is the first in the world to incorporate terahertz minerals to medical use from active volcanos stones from Japan.

Methods: When Onnetsuki is slid over the skin, healthy areas are comfortable, but if deep tissue is unhealthy or cold, degenerated and patient feels this spot to be hot. When this 'hot spot' is effectively treated with onnetsu therapy (Far-Infrared, Terahertz vibrations and Heat) the hot sensation subsides and the disease conditions improve through vibrating water molecules of our deep tissue. Therefore, the onnetsu therapy is both a diagnostic and therapeutic. Onnetsu Therapy is based on four historical and scientific facts are traditional Japanese concept of the significance of body temperature and Hippocrates; NASA's finding regarding far-infrared vibration from sun light precise to 8-10 μ . Also, added is the specific terahertz vibration of earth minerals from volcanos stones from the depth of our planet earth; Immunology by Toru Abo, balancing autonomic nervous system to improve condition of white cells; Raising Immunity; Promoting four flows of energy throughout our body by using acupuncture meridian technique.

Result: Some countries (Peru, Cuba & Mexico) are practicing it in the hospitals and clinics. Clinical trials have shown improvements on many diseases: such as asthma, brain, ear and eye problems, cancers, diabetes, rheumatoid arthritis, tuberculosis and various pain conditions. Clinical studies from Cuba and Peru will be presented.

Conclusion: Onnetsu Therapy is a new, easy and non-invasive treatment modality to treat difficult chronic medical conditions. Therapy uses universal vibrations, heat, light, and autonomic nervous system balance and acupuncture meridian system. Author has taught onnetsu therapy to MDs and health practitioners over past decades throughout the world.

 Note:

BIOGRAPHY

Kazuko Tatsumura completed her Graduation from Toho Academy of Music in Tokyo, as a pianist and composer, invited by the Boston symphony. She received Master of Art from New York University and finished her PhD credits in Philosophy in 1965. She then turned to an independent career and became the top International Classical and Cultural Impresario/producer in 1967. Until 1992, she produced an average of 2,000 cultural events each year, travelling to more than 140 countries. She was presented with numerous honours for her work from different countries and many for humanitarian causes. She is also well known as a philanthropist. She studied Oriental Traditional Medicine of Japan, Korea, Taiwan and China. In 2000 she received her PhD and OMD from the International Academy of Education in Tokyo. She established the Oki-Do Holistic Health Center in 1994 in NY and in 2001 the GAIA Holistic Center (501C3 non-profit organization) at the wake of 9/11 tragedy, for body mind and spirit, aiming for the non-invasive natural healing methods based on the wisdom of the East. She has written numerous articles and several books named "Overcoming Cancer and Other Diseases in a Holistic Way", "Your Immune Revolution & Healing Your Healing Power" (with Toru Abo, M.D.). She teaches and lectures to MDs and practitioners all over the world.

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ELECTRONIC WATER CAN REDUCE OXIDATIVE STRESS IN CANCER AND DIABETES PATIENTS FOR 3 WEEKS DRINKING

Masahiro Onuma

TrisGuide Ltd, Japan

Oxidative stress means a state where there is imbalance between the oxidizing action and the reducing action due to reactive oxygen species (ROS) in a living body, resulting in the oxidizing action becoming dominant. Oxidative stress arises as the balance between production and removal is disrupted through excessive production of ROS and impairment of the antioxidant system. Oxidative stress has been reported to be involved in the onset and progress of various diseases. Characteristics of Type-2 diabetes are insulin secretion failure and insulin resistance, but it seems that oxidative stress is greatly involved in insulin secretion failure. In the insulin secretion inducing β cells of islets of Langerhans in the pancreas, the amount of superoxide dismutase (SOD), which is representative of the ROS elimination system is small and resistance to oxidative stress is considered to be weak. Regarding cancer, it is well known that chronic inflammatory conditions increase the risk of carcinogenesis. Cells such as neutrophils and macrophages are activated in the inflammation area leading to increase in production of active oxygen and nitric oxide. These free radicals cause DNA mutation and cell proliferation thereby promoting cancer development. When chronic inflammation is present, cancer develops more easily. Electronic water, which was developed to generate electron in water was consumed for three weeks, after meals, between meals and before sleeping 6 times a day and according to the test subjects' possible time periods. The amount of drinking water was 750-1000 mL and BAP and reactive oxygen metabolites (d-ROMs) checks for all cases were carried out at 4:30 pm. The results of cancer patients and diabetes patients were seen as attached. As a result, the d-ROMs value in the degree of oxidative stress has reduced and the BAP value, which is an indicator of plasma antioxidant capacity has improved significantly.

Recent Publications

1. Masahiro Onuma, Iwao Suzuki and Hiroshi Yamauchi. New development of uric acid synthetic inhibitor – Toward a new target for xanthine oxidation-reduction enzyme inhibitor allopurinol.



Note:

BIOGRAPHY

Masahiro Onuma has expertise in oxidative disease prevention to use non-medical product based on GSK's experience of Allopurinol which is the strongest anti-oxidant efficacy in this world. He creates new indication of Allopurinol for stomatitis induced by cancer treatment which was approved by the Japanese Cancer Treatment Committee to propose new mechanism of Allopurinol for anti-oxidant and now there are so many new research papers of Allopurinol in the world.

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