

WORLD CONGRESS ON
VIROLOGY



6TH WORLD CONGRESS ON

DIABETES & ENDOCRINOLOGY

NOVEMBER 13-14, 2023 ROME, ITALY

Hosting Organization:

Inovine Meetings LLC, 2C Pecan Hill Drive Clinton Mississippi, 39056 USA

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Day 1

Scientific Program

November 13, 2023

08:30-09:00 @ **Registration**

09:00-09:30 @ **Opening Ceremony**

Hotel :MIDAS Palace Hotel

Keynote Forum



09:30-10:30

Title : Emerging biological threats disrupt both society and military operations

Stef Stienstra, Dutch Armed Forces / Royal Dutch Navy, Netherlands

Group photo and Networking & Refreshments @ 10:30-10:50



10:50-11:20

Title : Management of Bilharziasis

Manuel Jose Conwana, Beira Centra Hospital, Beira, Sofala, Mozambique

Track 1:General Virology

Track 2:Epidemiology of Infectious Diseases

Track 3:Infection and Immune System

Track 4: Diabetes

Track 5: Diabetologist and Endocrinologist

Track 6:Human Virology

Session Chair:Stef Stienstra, Dutch Armed Forces / Royal Dutch Navy, Netherlands



11:20-11:50

Title : Opposite charges-electrostatic attraction from Medicinal synthetic Aluminum-magnesium silicate`s nanoparticles {2Al2 Mg3 (SiO4)3}: mechanism for curing HIV/AIDS and Covid-19

M.C.O.Ezeibe, Michael Okpara University of Agriculture, Nigeria



11:50-12:20

Title : Public, health, new emerging zoonotic diseases and the communication challenge to inform the public

Stef Stienstra, Dutch Armed Forces / Royal Dutch Navy, Netherlands



12:20-12:50

Title : Mechanisms Involved In The Effect Of The Subchronic Administration Of Rosuvastatin On Endothelial Function In Rats With Metabolic Syndrome

Miguel Angel Palacios Garay, Isidro Espinosa de los Reyes National Institute of Perinatology, Department of Physiology and Cellular Development, Mexico

Lunch Break @ Restaurant 12:50-13:50

Poster Presentation



13:50-14:20

Title : Antiviral Activity of Antivirals and Mucolytics Against Respiratory Syncytial Virus (RSV) and Parainfluenza Virus

Fatima Nur YILMAZ, Istanbul University, Faculty of Pharmacy, Department of Pharmaceutical Microbiology, Turkey

Panel Discussion

Awards & Closing Ceremony

Day 2

November 14, 2023

Virtual mode meeting | (GMT+1) Time in Italy



09:00-09:20

Title : Establishment of OaPV3 VLP-based tools for ovine papillomaviruses diagnosis and detection of sheep natural immune response to Papillomavirus infection

Carla Cacciotto, University of Sassari, Department of Veterinary Medicine, Italy



09:20-09:40

Title : Energy Alterations In Patients With Dengue

Huang Wei Ling, Medical Acupuncture and Pain Management Clinic, Franca Sao Paulo, Brazil



09:40-10:00

Title : Predictive Model With Artificial Intelligence In Children Hospitalized With Influenza

Paredes Lascano Patricia, Ambato General Hospital, Technical University of Ambato, Ecuador



10:00-10:20

Title : Roles of Therapeutic Bioactive Compounds in Hepatocellular Carcinoma

Ayesha Tasnim Usha, East West University, Bangladesh



10:20-10:40

Title : Investigation of COVID-19 virus mutagenicity and the effect of the NSP13, NSP14 and NSP16 on the -1 ribosomal frameshifting

Ali Khanifar, Hamadan University of Medical Sciences and health services, Iran



10:40-11:00

Title : Clinical Revelations of SGLT2 Inhibition to Reduce Progression of CKD

Osama Elmarghi, Naeem Diabetic Clinic, Al-Jahra, Kuwait



11:00-11:20

Title : Metabolic Abnormalities Related to Bariatric Surgery

Hanaa Tarek El-Zawawy, Alexandria University Faculty of Medicine, Egypt
American Hospital Dubai, United Arab Emirates



11:20-11:40

Title : SARS-CoV-2 Persistent Infections Might Develop to Malignant Tumors, Likely Restrained by Vaccines:A Conjecture

Daniel Benharroch, Department of Pathology, Soroka University, Israel



11:40-12:00

Title : Antibacterial activity of bioactive compounds extracted from the Egyptian untapped green algae Rhizoclonium hieroglyphicum

Amhed Diab Mohamed Ahmed El Esawy, Drinking Water and Sanitation Company, Kafr El-Sheikh, Egypt



12:00-12:20

Title : Coronavirus ORF1ab polyprotein NSP proteins mutations, deletions and insertions as well as target for therapeutics and vaccines development

Asit Kumar Chakraborty, Vidyasagar University, Department of Biotechnology, India



12:20-12:40

Title : N-glycosylation-mediated CD147 accumulation induces cardiac fibrosis in the diabetic heart through ALK5 activation

Mingchuan Liu, The Fourth Military Medical University, China

Awards, Thanks giving & Closing Ceremony

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Joint meeting on

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ENDOCRINOLOGY**

November 13-14, 2023 | Rome, Italy

HYBRID EVENT

**KEYNOTE PRESENTATION
DAY 1**



Stef Stienstra

Dutch Armed Forces / Royal Dutch Navy, Netherlands

Emerging biological threats disrupt both society and military operations

Amongst all CBRN threats the bio-threat is the most invisible and neglected multi source threat. Originally the biological threats were from nature only, but the bio-threat emerges with travelling, climate change and human (criminal) activities.

Officially the BWTC (Biological Weapon & Toxin Convention) prohibits the use of biological agents in warfare, but it has a long history, starting with arrows impregnated with toxins. Both natural- and man-made biological threats are emerging. Both the monitoring of potential threats as the legislation about what to consider as illegal use of biological organisms or toxins as weapons are running behind.

In addition to the illicit use of biological substances, the hoaxes around possible biological attacks are increasing. As biological threats are invisible, the use of it in PSYOPS with fake news and behavioral influence, is a rising threat, which has a dangerous disruptive effect on the society as well. Not necessary directed against the population, but also towards cattle, agriculture, food industry and environment.

To get better insight it is required to develop a bio-watch program to be able to monitor with high reliability potential biological threats. With innovative equipment and new analytical techniques this is feasible, but monitoring the trigger (base) level is still a challenge like the detection of unknown pathogens.

The combination of gene analysis together with several spectrometric pre-screening techniques and lab-on-a-chip technologies enable to construct a bio-surveillance system, which protects society against disruptive biological incidents, natural or man-made, which we never can exclude in the world.

Key words: Bio-surveillance; bio-detection; public health; communication

Biography:

Dr Stef Stienstra works internationally for several medical and biotech companies as scientific advisory board member and is also an active reserve-officer of the Royal Dutch Navy in his rank as Commander (OF4). For the Dutch Armed Forces he is CBRNe specialist with focus on (micro)biological and chemical threats and medical- and environmental functional specialist within the 1st CMI (Civil Military Interaction) Battalion of the Dutch Armed Forces. For Expertise France he is now managing an EU CBRN CoE public health project in West Africa. He is visiting professor for the University of Rome Tor Vergata in Italy for the CBRN Masters Course and lecturer for the NATO School in Oberammergau in Germany and the Joint NATO CBRN-Defense Center of Excellence in Vyskov in the Czech Republic. In his civilian position he is at this moment developing with MT-Derm in Berlin (Germany) a novel interdermal vaccination technology as well as a new therapy for cutaneous leishmaniasis for which he has won a Canadian 'Grand Challenge'

grant. With Hemanua in Dublin (Ireland) he has developed an innovative blood separation unit, which is also suitable to produce convalescent plasma for Ebola Virus Disease therapy. He has finished both his studies in Medicine and in Biochemistry in The Netherlands with a doctorate and has extensive practical experience in cell biology, immuno-haematology, infectious diseases, biodefense and transfusion medicine. His natural business acumen and negotiation competence helps to initiate new successful businesses, often generated from unexpected combinations of technologies.





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SPEAKER PRESENTATIONS
DAY 1



Public, health, new emerging zoonotic diseases and the communication challenge to inform the public.

Stef Stienstra

Dutch Armed Forces / Royal Dutch Navy, Netherlands

Public health systems are not always prepared for outbreaks of infectious diseases. Although in the past several public health institutes, like the French 'Institut Pasteur' and the Dutch 'Tropeninstituut', were prominent surveyors of infectious diseases, the investments in worldwide public health have decreased. Now more attention is given to curative healthcare compared to preventive healthcare.

The recent Ebola Virus Disease outbreak in West Africa initiated a new wave of interest to invest in Worldwide Public Health to prevent outbreaks of highly contagious diseases. And now we have concerns to limit the spreading of the new 2019 variant Corona virus COVID-19. Public health systems have to be prepared for these potential outbreaks of emerging zoonotic diseases. Also the communication to the public to prevent infection and outbreaks of infectious diseases gets more attention.

Zoonotic diseases are threatening as the population does not have natural nor artificial (from vaccination) immune response to new diseases like in the Ebola Virus Disease outbreak in 2014. The new strain of the Ebola Virus in West Africa was slightly less lethal, compared to other Ebola Virus strains, but the threat of spreading was far bigger as it had a longer incubation time.

Most public health systems are not trained well enough to mitigate highly infectious and deadly disease outbreaks. NGO's helping to fight the outbreak are often better trained in curative treatments and have less experience with biological (bioweapon) threats for which the military are trained for. The UNMEER mission was unique in this. It was a setting in which military and civilian actors cooperate in fighting a biological threat. Protection is essential for health workers. Smart systems have to be developed to prevent further spreading of the disease, but it is not only the biosafety, which has to be considered, but also the biosecurity, as misuse of extremely dangerous strains of microorganisms cannot be excluded.

Several zoonotic infectious diseases, like anthrax, smallpox and hemorrhagic fevers are listed as potential bioweapons. Therefor both biosafety and biosecurity have to be implemented in all measures to fight outbreaks of highly infectious diseases.

Biography:

Dr Stef Stienstra works internationally for several medical and biotech companies as scientific advisory board member and is also an active reserve-officer of the Royal Dutch Navy in his rank as Commander (OF4). For the Dutch Armed Forces he is CBRNe specialist with focus on (micro)biological and chemical threats and medical- and environmental functional specialist within the 1st CMI (Civil Military Interaction) Battalion of the Dutch Armed Forces. For Expertise France he is now managing an EU CBRN CoE public health project in West Africa. He is visiting professor for the University of Rome Tor Vergata in Italy for the CBRN Masters Course and lecturer for the NATO School in Oberammergau in Germany and the Joint NATO CBRN-Defense Center of Excellence in Vyskov in the Czech Republic. In his civilian position he is at this moment developing with MT-Derm in Berlin (Germany) a novel interdermal vaccination technology as well as a new therapy for cutaneous leishmaniasis for which he has won a Canadian 'Grand Challenge' grant. With Hemanua in Dublin (Ireland) he has developed an innovative blood separation unit, which is also suitable to produce convalescent plasma for Ebola Virus Disease therapy. He has finished both his studies in Medicine and in Biochemistry in The Netherlands with a doctorate and has extensive practical experience in cell biology, immuno-haematology, infectious diseases, biodefense and transfusion medicine. His natural business acumen and negotiation competence helps to initiate new successful businesses, often generated from unexpected combinations of technologies.



Antiviral Activity of Antivirals and Mucolytics Against Respiratory Syncytial Virus (RSV) and Parainfluenza Virus

Fatima Nur YILMAZ, Sibel DOSLER

Istanbul University, Faculty of Pharmacy, Department of Pharmaceutical Microbiology, Turkey

Viral respiratory tract infections constitute an important health problem all over the world. RSV is the most common cause of respiratory infection in infants and children, and no specific antiviral for its treatment has yet been discovered, but Ribavirin is FDA-approved for use in severe cases. There is no licensed vaccine and antiviral therapy for the treatment of parainfluenza virus, which is transmitted by direct contact or large droplets. In our study, antiviral activity studies were carried out against these viruses that cause respiratory tract infections by using Ribavirin, Favipiravir, Oseltamivir and mucolytic agents NAC and Erdostein using MTT method in cell culture. VERO for parainfluenza and HEp-2 for RSV were used as host cells. Virus and agents were added to cells incubated for 24 hours in a 96-well microplate, incubated at 37°C for 3 days in a 5% CO₂ incubator, followed by the MTT procedure. The concentration that provides protection in 50% of cells infected with these viruses is indicated as EC₅₀. The antiviral activity of NAC and Erdostein was not found. EC₅₀ values for ribavirin were 11.65 µg/ml in Parainfluenza and 4.45 µg/ml in RSV. The EC₅₀ values for favipiravir were 9.76 µg/ml in Parainfluenza and 14.1 µg/ml in RSV. The EC₅₀ values for oseltamivir were 13.1 µg/ml in Parainfluenza and 7.67 µg/ml in RSV. Respiratory infections remain a serious epidemic threat, and antiviral therapy remains important unless an appropriate vaccination is provided.

Biography:

I completed the Istanbul University Faculty of Pharmacy in 2018 and started my PhD in pharmaceutical microbiology in the same year. I plan to finish my PhD in 2023. I work as a research assistant at the Istanbul University Faculty of Pharmacy. I have 11 research articles so far, mostly SCI and ESCI.



Management of Bilharziasis

Manuel José Conwana

Beira Centra Hospital. Beira. Sofala . Mozambiqu

Schistosomiasis (Bilharziasis) is caused by blood trematodes (flukes) Schistosoma. The three species infecting humans: Schistosoma haematobium, S. japonicum, and S. mansoni. Three other species, more localized geographically, are S. mekongi, S. intercalatum, and S. guineensis (previously considered synonymous with S. intercalatum). There have also been a few reports of hybrid schistosomes of cattle origin (S. haematobium, x S. bovis, x S. curassoni, x S. mattheei) infecting humans. Unlike other trematodes, in Mozambique mostly S. Haematobium and mansoni but mostly haematobium causing urogenital and digestive infections and causing troubles for both Docs and population.

Biography:

Manuel José conwana was graduated in camaguey cuba as urologist and has been working at Beira central hospital since 2006 as the main director of Urology .



Opposite charges-electrostatic attraction from Medicinal synthetic Aluminum-magnesium silicate's nanoparticles $\{2\text{Al}_2\text{Mg}_3(\text{SiO}_4)_3\}$: mechanism for curing HIV/AIDS and Covid-19.

M. C.O. Ezeibe and F.I.O. Ezeibe

College of Veterinary Medicine, Michael Okpara University of Agriculture, Umudike-Nigeria

When cells become abnormal, they acquire negative electrical charges while viruses are either positively charged or negatively charged. So, medicines that have positive charges will mop infected cells, tumor cells and negatively charged viruses while negatively charged medicines will mop positively charged viruses by opposite charges-electrostatic attraction. Molecules of Aluminum-magnesium silicate [AMS: $\text{Al}_2\text{Mg}_3(\text{SiO}_4)_3$] a WHO-approved medicine/pharmaceutical stabilizing agent consist of nanoparticles which have positive and negative electrically charged ends. Their very small size (0.96 nm) allows them reach all cells in every organ. When all infected cells and all particles of a virus (≥ 5 nm) are mopped, infections of the virus will terminate. Aluminum silicate (AS: $\text{Al}_4(\text{SiO}_4)_3$) and Magnesium silicate (MS: Mg_2SiO_4), which are also approved medicines were used to formulate an AMS-brand named, Medicinal synthetic AMS {MSAMS: $\{\text{Al}_4(\text{SiO}_4)_3 + 3\text{Mg}_2\text{SiO}_4 \rightarrow 2\text{Al}_2\text{Mg}_3(\text{SiO}_4)_3\}$ }. To overcome the challenge of AMS, AS and MS being un-absorbable, Dextrose monohydrate is incorporated in MSAMS-formulations so that the simple sugar conveys the electrically charged nanoparticles into blood-circulation by the principle of active transport. MSAMS inhibits viruses (in vitro), potentiates antimicrobials (so that they terminate microbial infections) and boosts immunity. Mopping viruses and virus-infected cells, terminating secondary infections and enhancing immunity lead to cure of HIV/AIDS and Covid-19.

Biography:

Maduoke Ezeibe holds PhD, from University of Nigeria, Nsukka. He specialized in using animals for medical researches and invented theory of opposite charges electrostatic attraction for treatment of diseases of electrically charged pathogens. Since Aluminum-magnesium silicate (AMS) which has both charges may not exist in every country, he invented a formulation of Aluminum silicate and Magnesium silicate (approved medicines) to get Medicinal Synthetic AMS (MSAMS) and also invented an equation $\{\text{Al}_4(\text{SiO}_4)_3 + 3\text{Mg}_2\text{SiO}_4 \rightarrow 2\text{Al}_2\text{Mg}_3(\text{SiO}_4)_3\}$ for the formulation. MSAMS has proved effective against viral/abnormal cell diseases. It also enhances efficacy of other medicines to prevent/cure Antimicrobial Resistant infections.



Mechanisms Involved In The Effect Of The Subchronic Administration Of Rosuvastatin On Endothelial Function In Rats With Metabolic Syndrome.

Miguel Angel Palacios Garay¹, Jorge Skiold López Canales¹, Jair Lozano Cuenca¹

Instituto Nacional de Perinatología Isidro Espinosa de los Reyes, Departamento de Fisiología y Desarrollo Celular

Metabolic syndrome is a multifaceted condition associated with a greater risk of various disorders (e.g., diabetes and heart disease). In a rat model of metabolic syndrome, an acute in vitro application of rosuvastatin causes relaxation of aortic rings. Since the outcome of a subchronic rosuvastatin treatment is unknown, the present study explored its effect on acetylcholine-induced vasorelaxation of aortic rings from rats with metabolic syndrome. Animals were submitted to a 16-week treatment, including a standard diet, a cafeteria style diet (CAF diet), or a CAF diet with daily rosuvastatin treatment (10 mg/kg). After confirming the development of metabolic syndrome in rats, aortic segments were extracted from these animals (those treated and untreated with rosuvastatin) and the acetylcholine-induced relaxant effect on the corresponding rings was evaluated. Concentration-response curves were constructed for this effect in the presence/absence of L-NAME, ODQ, KT 5823, 4-aminopyridine (4-AP), tetraethylammonium (TEA), apamin plus charybdotoxin, glibenclamide, indomethacin and cycloheximide pretreatment. Compared to rings from control rats, acetylcholine-induced vasorelaxation decreased in rings from animals with metabolic syndrome, and was maintained at a normal level in animals with metabolic syndrome plus rosuvastatin treatment. The effect of rosuvastatin was inhibited by L-NAME, ODQ, KT 5823, TEA, apamin plus charybdotoxin, but unaffected by 4-AP, glibenclamide, indomethacin or cycloheximide. In conclusion, the subchronic administration of rosuvastatin to rats with metabolic syndrome improved the acetylcholine-induced relaxant response. Involved stimulation of the NO/cGMP/PKG/Ca²⁺-activated K⁺ channel pathway.

Keywords: Rosuvastatin, metabolic syndrome, rat aorta, vasorelaxation, K⁺ channel.

Biography:

Miguel Angel Palacios Garay is a fifth-year medical student from Escuela Superior de Medicina, Instituto Politécnico Nacional, and a fellow researcher at Instituto Nacional de Perinatología, Isidro Espinosa de los Reyes since 2018. He is a coauthor on one paper which has been on 20-07-23 (DOI: 10.4103/ijcm.ijcm_690_22). He has given multiple seminars for different Universities and organizations. Besides, he has participated two summers in a row in the Summer of Scientific and Technological Research of the Pacific Investigation at the Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas and University of Nebraska at Kearney, respectively.



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HYBRID EVENT

SPEAKER PRESENTATIONS
DAY 2



Establishment of OaPV3 VLP-based tools for ovine papillomaviruses diagnosis and detection of sheep natural immune response to Papillomavirus infection

Carla Cacciotto

University of Sassari, Department of Veterinary Medicine, 07100, Sassari, Italy

Papillomaviruses are a diverse group of small, non-enveloped, dsDNA viruses that cause proliferations of the stratified squamous epithelium of the skin and mucosa in a wide variety of vertebrate hosts. In sheep, 4 different PVs species were identified associate to both healthy skin and to benign and malignant lesions. In particular, OaPV3 was found associate to squamous cell carcinomas, a detrimental lesion affecting the animal welfare and production. The lack of specific and dedicated tools hampered the study of animal PV pathogenic properties. In this study, we first report the production of OaPV3-based non-infectious virus-like particles (VLPs) through expression of the viral L1 major capsid protein in insect cells, using recombinant baculoviruses. VLPs were used to produce both polyclonal and monoclonal antibodies. Moreover, an indirect VLPs-based ELISA was developed, to assess the presence of antibodies in immunized and naturally infected sheep. The newly developed tools will be useful to improve general knowledge on OaPV3 interaction with the natural host, and to investigate the viral biological cycle and pathogenesis.

Biography:

Carla Cacciotto has completed her PhD at the age of 29 years from Sassari University and postdoctoral studies from University of Sassari. She worked in several public institutions in Italy (Porto Conte Ricerche, IZS, University of Sassari, and University of Bologna) and now she's an assistant professor of infectious diseases of domestic animals. She has published more than 25 papers in peer-review journals and now she is serving as reviewer and editor.



Energy Alterations In Patients With Dengue.

Huang Wei Ling

Medical Acupuncture and Pain Management Clinic, Franca São Paulo, Brazil

Introduction: Dengue is a disease caused by a virus transmitted by the female mosquito of *Aedes aegypti*. There are four dengue serotypes. The infection gives protection from same serotypes but can increase for severe dengue if people are infected by different serotypes. The purpose of this study is to demonstrate that patients with Dengue has less immunity caused by energy deficiency inside the five internal massive organs of the five elements theory of traditional Chinese medicine. Methods: three case reports of patients with dengue diagnosis through serology. It was measured the energy of the five internal massive organs months prior to the infection. Results: all three patients have energy deficiency inside the five internal massive organs (Liver, Heart, Spleen, Lungs and Kidney) and the treatment of this condition replenishing the energy of these organs using highly diluted medications according to the theory of Constitutional Homeopathy of the Five Elements Based on Traditional Chinese Medicine will reduce the symptoms and complications caused by this infection. The use of any kind of highly concentrated medications to increase treat this infection will reduce even more this energy and will cause complications such as hemorrhage, altered conscious, etc caused by the formation of more internal Fire, responsible for these symptoms. The conclusion of this study is to demonstrate that Dengue infection is happening in patients with low energy inside the five internal massive organs of the five elements theory of traditional Chinese medicine. The treatment of this condition prior to the infection can reduce the transmission or can cause less severe symptoms. The use of any kind of highly concentrated medications in these type of patients will reduce even more the energy of these organs and can cause complications or even death, according to the Arndt-Schultz law, created in 1888 by two German researchers.

Biography:

Huang Wei Ling, born in Taiwan, raised and graduated in medicine in Brazil, specialist in infectious and parasitic diseases, a General Practitioner and Parenteral and Enteral Medical Nutrition Therapist. Once in charge of the Hospital Infection Control Service of the City of Franca's General Hospital, she was responsible for the control of all prescribed antimicrobial medication and received an award for the best paper presented at the Brazilian Hospital Infection Control Congress in 1998. Since 1997, she works with the approach and treatment of all chronic diseases in a holistic way, with treatment guided through the teachings of Traditional Chinese Medicine and Hippocrates. Researcher in the University of São Paulo, in the Ophthalmology department from 2012 to 2013. Author of the theory Constitutional Homeopathy of the Five Elements Based on Traditional Chinese Medicine. Author of more than 100 publications about treatment of variety of diseases rebalancing the internal energy using Hippocrates thoughts.



Predictive Model With Artificial Intelligence In Children Hospitalized With Influenza

Paredes Lascano Patricia, Carranza Sánchez Luis, Bravo Paredes Alejandro

Ambato General Hospital, Technical University of Ambato, Ambato – Ecuador

INTRODUCTION After the COVID-19 pandemic, there was a clinical epidemiological silence of influenza in children, which has returned with atypical outbreaks, causing a clinical expression that provides criteria and becomes a predictive model.

GENERAL OBJECTIVE Characterize the clinical and paraclinical aspects of pediatric patients with influenza to develop a predictive model with the use of artificial intelligence.

MATERIALS AND METHODS Cross-sectional, prospective, descriptive epidemiological and predictive study, from December 2022 to June 2023 in pediatric patients with influenza. Using descriptive and inferential statistics for the quantitative and qualitative variables, measures of central tendency and dispersion were estimated, with a statistical significance of $p < 0.05$. With artificial intelligence, a multilayer neural network trained with clinical data was implemented to create a predictor model.

RESULTS 51 patients with influenza, from 5 months to 9 years, were studied. 96.1% had influenza A and 3.9% had influenza B. 56.9% were male. Schoolchildren were the most affected 72.5%, preschoolers 19.6% and infants 7.8%. 41.2% underweight. There was a higher incidence in the first quarter of the year.

The clinical expression is shown in Table 1.

Table 1. Frequency of symptoms and signs of SARI due to influenza in pediatric patients.

SYMPTOMS	%	SIGNS	%
Wet cough	70.6	Fever	90.2
Nasal discharge	66.7	Pharyngeal erythema	80.4
Asthenia	47.1	Low saturation on pulse oximetry	74.5
Dry cough	29.4	Tachypnea	72.5
Diarrheal stools	15.7	Tachycardia	72.5
Odynophagia	11.8	Wet rales	72.5
Dysphonia	9.8	Dry rales (rhonching and wheezing)	62.7
		Rib cage retractions	62.7
		Cervical lymphadenopathy	49

Graph 1. Paraclinical studies.

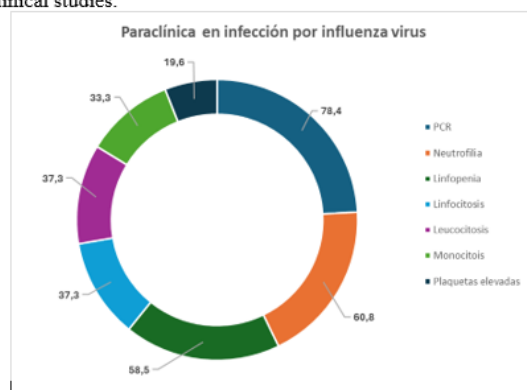


Chart 2. Correlation between Vitamin D level vs Downes Score.



Radial graph demonstrates correlation between vitamin D insufficiency with a Downes score greater than 4 points.

Table 2. Influenza Predictor Model with Artificial Intelligence.

CONSEQUENCE	ANTECEDENT	% CONFIDENCE FOR THE CONSEQUENCE TO HAPPEN
Influenza A	Rattles	100
Influenza A	Wet cough and rales	100
Influenza A	Rales and fever	100
Influenza A	Wet cough	97.22
Influenza A	Wet cough and fever	97.05
Influenza A	Interstitial pattern	96.66
Influenza A	Interstitial pattern and fever	96.42
Influenza A	Fever	95.65

The Downes score in 47.1% was 5. The predominant radiological pattern was interstitial. Hypovitaminosis D was present in 91.3% with an inverse relationship to the severity of respiratory distress. Graph 2. The average hospital stay was 5 days. Only 27.5% were immunized. Using artificial intelligence, a multilayer perceptron neural network was implemented, trained with patients' clinical data to develop a predictive model for influenza A based on signs and symptoms, the model achieved a prediction accuracy of 98% for influenza A, table 2.

CONCLUSION It is imperative to resume clinical-epidemiological surveillance of this respiratory virus that after the pandemic has returned with atypical outbreaks in children. The clinical expression allowed a predictive model with the use of artificial intelligence, which was very helpful in environments limited to confirmatory tests. Strategies to identify warning signs, immunization campaigns during school periods and climate changes will have a positive impact on influenza control.

Biography:

Author Patricia Paredes L, Doctor in Medicine and Surgery, Specialist in Pediatrician, Master in Medical Education at the Central University of Ecuador. Research Professor at the Technical University of Ambato. Chief Physician of Pediatrics at Ambato General Hospital. SEP Award for research in Latin America, Pedro Fermin Cevallos Distinction for women researchers. She has published more than 50 scientific articles, 5 books, member of the editorial board in several journals, national and international speaker.



Roles of Therapeutic Bioactive Compounds in Hepatocellular Carcinoma

Ayesha Tasnim Usha

East West University , Bangladesh

Hepatocellular carcinoma (HCC) is due to poor prognosis and lack of availability of effective treatment. Novel therapeutic strategies will be the fine tuning of intracellular ROS signaling to effectively deprive cells of ROS-induced tumor-promoting events. This review discusses the generation of ROS, the major signaling their modulation in therapeutics. We explore some of the major pathways involved in HCC, which include the VEGF, MAPK/ERK, mTOR, FGF, and Ser/Thr kinase pathways. In this review, we study cornerstone on natural bioactive compounds with their effect on hepatocarcinomas. Furthermore, we focus on oxidative stress and FDA-approved signaling pathway inhibitors, along with chemotherapy and radiotherapy enhancers which with early evidence of success. While more in vivo testing is required to confirm the findings presented here, our findings will aid future nonclinical, preclinical, and clinical studies with these compounds, as well as inspire medicinal chemistry scientists to conduct appropriate research on this promising natural compound and their derivatives.



Investigation of COVID-19 virus mutagenicity and the effect of the NSP13, NSP14 and NSP16 on the -1 ribosomal frameshifting

Ali Khanifar

Hamadan University of Medical Sciences and health services , Hamadan, Iran

The COVID-19 pathogen is a pathogen with a single strand of genetic material, belonging to the family coronaviridae. It possesses a genome that is approximately 29881 bp long, which results in the development of a respiratory disease with sudden onset. One of how the COVID-19 virus is transmitted is through the respiratory system, which accounts for the significant spread of the disease. The COVID-19 virus induces changes in different regions of its genetic material, employing mechanisms such as -1 ribosomal frameshifting. The spike protein, which undergoes the most pronounced mutations, plays a crucial role in the emergence of new variants. The majority of mutations observed in the COVID-19 virus have been reported in the S protein and a specific area known as the RBD. The RBD establishes a connection with the ACE2 receptor found in human cells. Changes in the RBD region will determine how it binds to the ACE2 receptor, in other words, the changes created as a result of the mutation determine the affinity of the RBD to ACE2. On the other hand, the presence of the NSP13, NSP14, and NSP16 proteins in the COVID-19 virus helps the mutation of the virus by consuming magnesium ions. Since the ribosome is stable with magnesium ions, the COVID-19 virus, by consuming magnesium ions, causes the ribosome to convert from the polysome to the monosome state, which causes a break in translation and finally leads to the formation of ribosomal -1 frameshifting.

Biography:

Ali Khanifar has master at the age of 39 years from Hamadan University of Medical Sciences and health services. He has published 2 papers in journals so far. He is interested in fields such as virology, microbiology and biotechnology. He plays the role of a reviewer in a prestigious journal.



Clinical Revelations of SGLT2 Inhibition to Reduce Progression of CKD

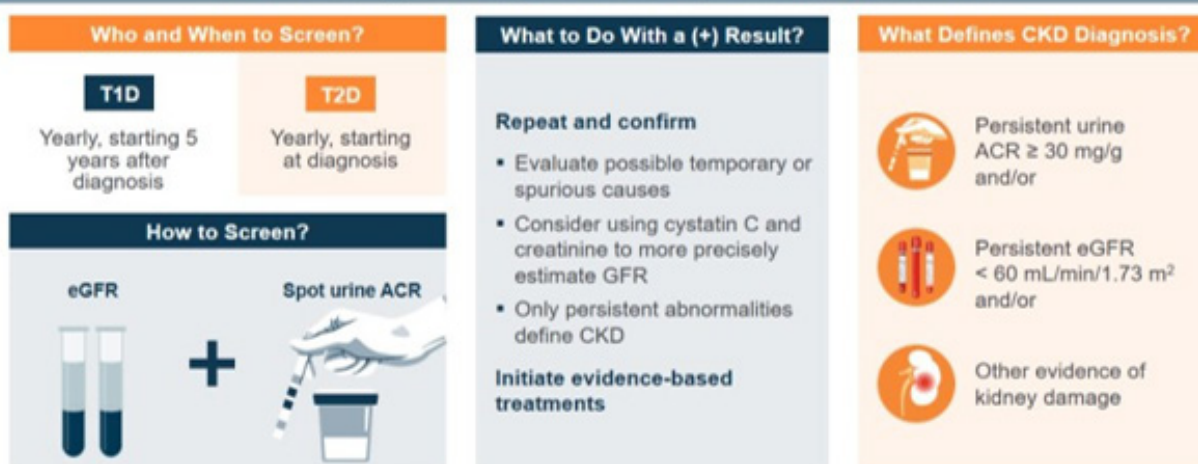
Osama Elmarghi

Naeem Diabetic Clinic, Al-Jahra, Kuwait

There are 537 million people with Diabetes all over the world and diabetes is not a mild disease. Diabetic patients have macrovascular and microvascular complications. CKD is one of the microvascular complications that increases over time after diagnosis of T2D. T2D is the first cause of kidney failure. CKD in a diabetic patient increases the risk of CVD. Globally there are 844 million with CKD. The problem is the awareness of CKD between doctors is very poor and Life Expectancy is reduced in patients with Diabetes. We will speak about how to discover early CKD and the stages of CKD and how to treat and when to transfer patient to nephrologist. Also discussing empagliflozin, dapagliflozin and the FDA approval of SGLT2i in patients with CKD either diabetic or not diabetic and discuss the New ADA guidelines 2023 and Joint ADA-KIDGO Consensus Report.

Joint ADAKIDGO Consensus Report

CKD Screening and Diagnosis for People Living With Diabetes*



*Screening includes measurement of both urine albumin and eGFR. Abnormalities should be confirmed. Persistent abnormalities in either urine ACR or eGFR (or both) diagnose CKD and should lead to immediate initiation of evidence-based treatments.

ADA, American Diabetes Association; KDIGO, Kidney Disease: Improving Global Outcomes; T1D, type 1 diabetes. De Boer IH, et al. Diabetes Care. 2022;45:3075-3090.

Joint ADAKIDGO Consensus Report

Holistic approach for improving outcomes in patients with diabetes and CKD

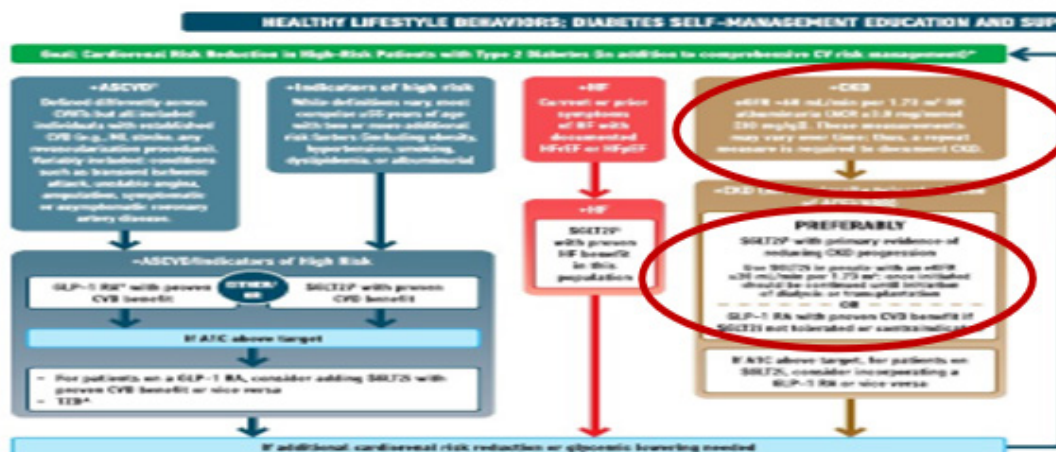


1. Unless contraindicated, start an ACEI or ARB for anyone with diabetes and hypertension and/or albuminuria
2. Start a SGLT2 inhibitor for anyone with diabetes with CKD, even if their HbA1c is at goal

Boer et al. (2022) Diabetes Management in Chronic Kidney Disease: A Consensus Report by the American Diabetes Association (ADA) and Kidney Disease: Improving Global Outcomes (KDIGO). Diabetes Care © 2022. The Author(s), used under the Creative Commons Attribution 4.0 International Licence. To view a copy of this licence, visit <https://creativecommons.org/licenses/by/4.0/> <https://doi.org/10.2337/d022-0027>

Now we are not glucoconcentric but cardio-renalconcentric

USE OF GLUCOSE-LOWERING MEDICATIONS IN THE MANAGEMENT OF TYPE 2 DIABETES



* Examples with ESK, established CVD or multiple risk factors for CVD, the decision to use a GLP-1 RA or SGLT2i with proven benefit should be independent of background use of metformin. Metformin is recommended for people with CVD and a modest recommendation for those with indicators of high CV risk. However, a higher absolute risk reduction and thus benefit may also occur at higher levels of baseline risk and should be factored into the shared decision-making process. See text for details. * Lower dose T2D may be better tolerated and starting with metformin may help demonstrate their efficacy in reducing the risk of composite MACE, CV death, all-cause mortality, HF, and renal outcomes in individuals with T2D with initiation of the GLP-1 RA. CKD demonstrates their efficacy in reducing composite MACE, CV death, all-cause mortality, HF, stroke, and hospitalizations in individuals with T2D with established CVD.

Pharmacologic Approaches to Glycemic Management:

Standards of Care in Diabetes - 2023. Diabetes Care 2023;46(Suppl. 1):S140-S157



Metabolic Abnormalities Related to Bariatric Surgery

Hanaa Tarek El-Zawawy

Alexandria University Faculty of Medicine, Egypt
American Hospital Dubai, United Arab Emirates

According to the Endocrine Society Clinical Practice guidelines, bariatric surgery is recommended for patients with BMI=40 Kg/m² without co-morbidities and patients with BMI=35 Kg/m² with co-morbidities. Bariatric surgery offers the benefits of sustained weight loss, improved physical function, a more favourable metabolic profile, and reduction of co-morbidities. Yet, several complications and metabolic abnormalities can follow bariatric surgery. The metabolic complications include; vitamin & nutritional deficiencies, hypoglycemia, adrenal insufficiency, and neurohormonal changes

Biography:

Hanaa Tarek El-Zawawy is an Endocrinology Consultant at American Hospital Dubai and an Assistant Professor of Endocrinology at Alexandria University Faculty of Medicine where she had her doctorate degree in Endocrinology in May 2015 at the age of 31 years.

El-Zawawy is a member of the Egyptian Society of Endocrinology and Obesity as well as the European Society of Endocrinology. She participates in many national & international conferences and workshops every year.

She authors 18 peer-reviewed publications. She was cited 94 times. Also, she is an active reviewer in many international journals and receives a yearly award from the publisher "WILEY" for her contributions.



SARS-CoV-2 Persistent Infections Might Develop to Malignant Tumors, Likely Restrained by Vaccines: A Conjecture.

Daniel Benharroch

Department of Pathology, Soroka University, Israel.

The three coronavirus species of infectious diseases, evolving into SARS, turn at times into persistent illnesses. The malady might affect the RNA virus only, or new symptoms may turn-up, often neurological or systemic, or else, diverse immune facets will arise. The bond, if any, between persistence and the “long COVID” is yet to be confirmed. A thesis has been put forward, that, the perseverance of the SARS-CoV-2 infection, might progress into a malignant tumour. Thus, the TMPRSS2 gene mutation might lead into prostatic cancer, while the ground glass lung opacities might evolve into lung cancer. On the other hand, vaccinations may block the development of a cancer. The most prominent vaccines in this context, comprise the BCG and the MMR, the latter being represented, mainly by the mumps and measles viruses. A similar role for anti-SARS-CoV-2 vaccines cannot be established at this early stage.



Antibacterial activity of bioactive compounds extracted from the Egyptian untapped green algae *Rhizoclonium hieroglyphicum*

Amhed Diab Mohamed Ahmed El Esawy

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Finding alternative powerful antibacterial drugs of natural origins is, today, a crucial prerequisite due to the resistance of some bacterial strains to commercial and widely-used medications. Algae are characterized by their bioactive constituents and have a wide spectrum of biotechnological aspects, particularly antibacterial implications. During this study, four concentrations (5, 10, 20, and 40 mg mL⁻¹) of the Egyptian untapped green algae *Rhizoclonium hieroglyphicum* (Chlorophyta) were prepared using the polar solvents ethanol, methanol, and acetone. The antibacterial activity of the above-mentioned extracts was assessed, using the agar disc diffusion technique against three pathogenic bacteria, *Staphylococcus aureus* ATCC 6538, *Escherichia coli* ATCC 8739, and *Pseudomonas aeruginosa* ATCC 9027, which was compared to standard antibiotics. The minimal inhibitory concentrations (MICs) were also assessed and determined using a broth dilution assay. Our findings revealed that the *R. hieroglyphicum* ethanolic extract exhibited the most potent antibacterial effect and its MICs values were 0.533, 2.25, and 5.34 mg mL⁻¹ against *P. aeruginosa*, *E. coli*, and *S. aureus*, respectively. A gas chromatography–mass spectrometry (GC–MS) approach to the crude *R. hieroglyphicum* ethanolic extract uncovered 30 different bioactive constituents, mainly including long-chain polyunsaturated and saturated fatty acids such as myristic (C14:0), palmitic (C16:0), stearic (C18:0), α-linolenic (C18:3; ω-3), and oleic (C18:1, ω-9) acids, which synergistically make this potent antibacterial action. The mechanism of action of these fatty acids was also discussed. Conclusively, *R. hieroglyphicum* could be a good candidate for the production and development of promising antibacterial agents.

Biography:

- BSc Degree in Chemistry and Microbiology, Faculty of Science, Menoufia University, Egypt.
- Diploma in Analytical Biochemistry, Faculty of Science, Menoufia University, Egypt.
- Medical analysis chemist at Al-Borg laboratories, Egypt.
- Director and medical analysis specialist, Tiba laboratories for Medical Analysis, Sidi Salem, Kafr El-Sheikh, Egypt.
- Chemist at the Central laboratory for Drinking Water and Sanitation Company , Sidi Salem, Kafr El-Sheikh, Egypt.
- Director of the Al-Haddadi plant for drinking water purification, Sidi Salem, Kafr El-Sheikh, Egypt.
- MSc Degree in Microbiology, Faculty of Science, Menoufia University, Egypt.
- International research publisher in scientific journals in Asia(International Journal of Alternative Fuels and Energy) and Europe (MDPI)



Coronavirus ORF1ab polyprotein NSP proteins mutations, deletions and insertions as well as target for therapeutics and vaccines development

Asit Kumar Chakraborty

Vidyasagar University, Department of Biotechnology, India.

Coronavirus SARS-CoV-2 was appeared in 2019 and mutations in the spike (D614G, N501Y) and RdRp (P323L) were created havoc pathogenicity worldwide and such strains were known as B.1.1.7 or Alpha and B.1.617.2 or Delta. It is a positive sense ~30kb RNA virus which creates a 7076AA long polyprotein that degrades into sixteen non-structural-proteins (NSP) like protease, RNA polymerase, RNA topoisomerase, Methyltransferase and RNA helicase. We first described nsp2 as RNA topoisomerase and nsp16 as rlmE methyltransferase and nsp13 as capping methyltransferase. We presented data to support that nsp9, nsp10 and nsp13 as methyltransferases to methylate host rRNAs inhibiting protein synthesis. Further, homology search detected similarities with host ribosomal proteins to form a chimera-ribosomes favoring viral protein synthesis. The spike 24LPP, 69HV, 145Y, 212L mutations in Omicron were important whereas 215EPE (BA.1) and 147RWMD (BQ.1) spike insertions were noticed. Similarly, we found 82GHVMV and 141KSF mutations in the nsp1 which implicated in cellular tropism. We detected 3675SGF deletion in the nsp6 and 31ERS deletion in the N-protein. However, ORF7 deletions were great and termination codon mutations in the ORF8 were also made weak virus load and pathogenicity. Finally, a 30nt deletion in the 3'-UTR was found in Omicron virus lineages BF.7.5, BQ.1.1, XBB.1.5 and XBB.1.16. We will discuss the gradual mutations, deletions and insertions in the viral genome that has lowered the viral titer and now WHO has declared omicron coronavirus as non-emergency pathogen.

Biography:

Asit Kumar Chakraborty has completed his PhD in 1990 from Calcutta University and postdoctoral studies from University at California-Berkeley. He is retired professor of Biochemistry at Vidyasagar University, a premier university of rural West Bengal, about 100 miles West of Kolkata. He has published more than 70 papers in reputed journals and has been serving as an editorial board member of repute. His research area is virology and phyto-drug development against infectious diseases and MDR bacteria.



N-glycosylation-mediated CD147 accumulation induces cardiac fibrosis in the diabetic heart through ALK5 activation

Mingchuan Liu

The Fourth Military Medical University, Xi'an, 710038, China

Emerging evidence has implicated the important role of fibrosis in diabetic cardiomyopathy (DCM), while the underlying mechanism remains unclear. Considering the distinct and overlapping roles of Cluster of Differentiation 147 (CD147) in the pathogenesis of fibrotic diseases, we aim to investigate the role of CD147 in the fibrosis of DCM and explore its underlying mechanism. AAV9-mediated cardiac-specific CD147 silencing attenuated cardiac fibrosis and cardiac function in diabetic mice. CD147 knockdown significantly inhibited high glucose (HG)-induced activation of CFs. Mechanistically, CD147 directly bound to type I transcription growth factor β (TGF- β) receptor I (ALK5), promoting ALK5 activation and endocytosis to induce SMAD2/3 phosphorylation and nuclear translocation. In addition, HG prevented the ubiquitin-proteasome-dependent degradation of CD147 by promoting GNT-V-mediated N-glycosylation. As a result, cardiac-specific CD147 overexpression in control mice mimicked diabetes-induced cardiac fibrosis, aggravating cardiac function. Importantly, CD147 was also upregulated in serum and myocardial specimens from patients with diabetes compared with non-diabetes, accompanied by echocardiographic indices of cardiac dysfunction and excessive collagen deposition. Our study provides the first evidence that CD147 acts as a pivotal factor to promote diabetic cardiac fibrosis, and may contribute to the development of future CD147-based therapeutic strategies for DCM.

Biography:

Dr Liu is a doctoral candidate in the Fourth Military Medical University. His main research interest is metabolic disorders and myocardial injury. He has published more than ten papers in reputed journals and has been serving as an editorial board member of repute.

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