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Pharma Virtual 2020

June 14-15

2020

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PHARMA VIRTUAL 2020

BOOK OF ABSTRACTS

PHARMA VIRTUAL 2020

JUNE 14-15, 2020

Theme:

To Foster the Strategies of Pharmaceutics and Novel Drug Delivery Systems

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About MAGNUS GROUP

Magnus Group (MG) is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conference and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 90 different countries and 1090 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

About PHARMA VIRTUAL 2020

PHARMA VIRTUAL 2020 will bring all the participants an opportunity to explore the recent advancements and developments in the field of Pharmaceutics and Novel Drug Delivery System. Webinar consists of talks to ensure an intense interaction amongst the researchers present at the webinar. The purpose of the PHARMA VIRTUAL 2020 is to promote interaction and discussion among academics, researchers and professionals in the field of Pharmaceutics and Novel Drug Delivery System.

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KEYNOTE FORUM | DAY 1

PHARMA VIRTUAL 2020 WEBINAR

JUNE 14-15, 2020

David Hoffman Van Thiel, MD, Director

Advanced liver & Gastrointestinal Disease Center, USA

A Novel Approach to Terminate the COVID-19 Pandemic

Wide spread confusion concerning what tests should be utilized to identify infected individuals and estimate the extent of the infection within a community of interest, be it a city, county, state, country, or continent. Cultures identify actively infected individuals. Antibodies identify previously infected as well as currently infected individuals, who have developed an antibody response. The quality control of the available tests is highly variable. As a result, both false positive and false negative results are unacceptably high, limiting the value of the result obtained. Once an infected individual is identified, treatment is limited to individuals that are symptomatic, despite the fact that this approach leaves the much larger group of asymptomatic infected individuals untreatedand enables them to perpetuate the disease by infecting others. Two current approaches to this problem is to infuse convalescent plasma into infected individuals in the hope that the infused plasma contains antibodies that can terminate the infection. The problems associated with this approach are that the antibodies transfused have never been shown to be protective and examples of second infections occurring in "recovered" individuals have been reported questioning the utility of this approach. The second is to develop a vaccine that induces antibodies to the virus that either reduce or prevent infection. This approach avoids the problems associated with plasma infusions (transfusion reactions, disease transmission, and the development of auto antibodies) but is limited by the fact that no identifiable disease limiting antibody has been identified.

The FDA recently gave emergent approval to 2 quite different treatment methods. The first was the approval of remdesivir, a drug developed and utilized to treat Ebola. In a preliminary study treating severely ill individuals on ventilators in the ICU a marginally improved survival witha reduced ICU utilization time. If follow up studies confirm this finding, it is to be used in patients within an ICU but not requiring ventilation support. The basic science necessary to demonstrate COVID 19 antiviral efficacy with this agent has not been available. The second approach has considerable basic science support for its use in humans with a COVID-19 infection and consists of the pulsed administration of nitric oxide and low dose oxygen utilizing a portable unit that enables outpatient therapy of COVID-19 patient's n. This approach should immediately reduce the health care costs of COVID-19 and could be expanded to treat infected individuals in an ICU not requiring ventilation support. The ideal therapy for COVID-19 however awaits the development of a small molecule or molecules that inhibit viral replication along the viral replication pathway. This later approach could be applied not only to infected individuals but could be expanded to include their close contacts identified as part of the "back tracking" of identified cases. The contacts could be cultured for the virus and treated immediately. Once the contact culture result is known, those that are positive would continue on therapy while those who are negative would discontinue the therapy within 24 -72 hours of its initiation. This approach clears the infection in those that test positive and minimalizes the treatment of uninfected contacts to 1-3 days. This novel approach could terminate the pandemic.

Biography

Dr. David Hoffman Van Thiel majored in chemistry at Pomona College in California and obtained his MD from the University of California Los Angeles in 1963. He completed a year of pathology training between his second and third year of medical school. His house officer training occurred at the Cornell University in NYC from 1963-1965 and Boston University between1967-1969 having been interrupted for 2 years of government service at the NIH. Following his training, he spent 20 years at the University of Pittsburgh as a professor of medicine and developed 5 different liver transplant programs published >1100 peer –reviewed papers.

Dan Jiang MMedSci, FBAcC, FATCM

Hallam Institute of TCM, UK

Diagnosis and Management on Infected or Suspected Patients with Covid-19------48 Cases study in UK

Covid-19 is a pandemic infective disease which has been erupting throughout whole world in the early half year of 2020. There has been 2454836 cases to be infected and 283325 cases to be died from it which is involved in more than 200 countries (by reported in 12th May 2020), and it has been declared as a world urgent event by WHO. No effective treating model can be confirmed from conventional western medicine, but some herbs can be recognized to possess a positive result on Covid-19. From a successful result is originally displayed in temporary hospitals (Fangcang Hospitals in arenas and exhibitions) in China, more than 90% patients were healed after all of them were given Chinese herbal medicine for banning the patients in the minor or ordinary stages becoming to the severe or critical stage, this is why they can control Covid-19 such quickly in China. Since I contact infected and suspected patients with Covid-19 from uncontacted accesses (WeChart, Whatsapp, Internet, message etc). The appearance of the tongue can demonstrate the special and significant information for identifying whether Covid-19 is infected and its severity as dampness accumulated inside of body recognized by TCM perspective. I give herbal medicine by post for treating themaccording to their tongue information in UK. I can confirm same positive result like in China, so I summary and report my treatment and result here. I believe there are many herbal medicine can do their effect to anti-coronal virus. The Chinese herbal medicine is the effective treating method which can preventand ban the cases in the gentle and ordinary stages developing to the severe or critical stage, so they can significantly decrease and cure the covid-19.

Key points: Covid-19, Corona Virus, Chinese herbal medicine, TCM

Audience Take Away:

- Introduce on how Chinese herbal medicine which is a unique, effective and easy manageable diagnosis and treating method identify and treat Covid-19.
- Report on our diagnosing and treating procedure, and cases study.
- Analysis why TCM can play the significant effect to Covid-19? How do we evaluate the herbal superiority and inferiority? How do we confirm the China's experience in UK?

Biography

Ms Dan Jiang, TCM consultant, MMedSci, Fellowship of British Acupuncture Council (FBAcC), Fellowship of Association of Traditional Chinese Medicine UK (FATCM), Visiting professor and special appointed TCM consultant in Beijing University of Chinese Medicine; Visiting professor and supervisor for the oversea Ph.D students in Nanjing University of Chinese medicine; TCM consultant awarded by World federation of Chinese medicine societies (WFCMS).

Ms Dan Jiang studied western scientific and traditional Chinese medicines in Beijing university of Chinese medicine in Chinaand graduated for bachelor in 1978 and master of medical degrees in 1982 and 1987, who have been practicing TCM in UK since 1991. The chief author and editor for the book 'Principle and Practice of Chinese medicine in the West', the author for the book 'Principle and Practice of TCM on Infertility in the West' etc, more than 40 articles are published in the international medical journals in which 6 in SCI journals; TCM consultant for Euro-Sino researchers group of GP-TCM.

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SPEAKERS | DAY 1

PHARMA VIRTUAL 2020 WEBINAR

JUNE 14-15, 2020

Awareness and knowledge of congenital cytomegalovirus infection among health care providers and health students in France in 2019

Tiphaine Raia-Barjat[1,4*], M.D, Marie-Pierre Jordil[1], M.D, Antoine Giraud[2], M.D, Agathe Vaunois[1], M.D, Marie-Noelle Varlet[1], M.D, Celine Chauleur[3], M.D, Ph. D

[1, 2, 3]University Hospital of Saint Etienne, France

[4]Jean Monnet University, France.

Objective: To study the health students and health care providers awareness and knowledge on congenital cytomegalovirus (CMV) infection in France

Materials and Methods: This anonymous survey was conducted prospectively in France between January 21 and February 21, 2019. We sent a questionnaire on CMV infection to all the relevant health care providers (gynecologists-obstetricians, medical gynecologists, general practitioners, midwives, sonographers and interns in gynecology-obstetrics), and to health students. We assessed their overall knowledge of CMV and more specifically the modes of transmission, maternal symptoms, hygiene rules, patient information and current recommendations; **Results:** The questionnaire was completed by 638 people. Only 6.3% of obstetrician-gynecologists, 4.1% of midwives and 2.7% of general practitioners knew all the modes of transmission ($p = 0.3$). Concerning preventive hygiene measures, 14.6% of obstetrician-gynecologists, 5.8% of general practitioners and 4.5% of midwives knew all the correct answers ($p = 0.02$). Only 36.3% of professionals inform their patients about CMV (53.3% of obstetrician-gynecologists, 25.7% of midwives and 19.5% of general practitioners $p<0.001$). 45.8% of health care providers think that a woman who has already been in contact with CMV (IgG +) is not at risk during pregnancy; **Conclusion:** All studies are consistent and show the interest of these hygiene measures on the risk of primary infection and maybe of secondary infection. But the knowledge of health care providers is insufficient responsible for poor information and ignorance of CMV by patients. Health care providers have to improve their knowledge about congenital CMV.

Audience Take Away:

- Cytomegalovirus is the number one cause of congenital infection.
- Knowledge of health care providers is insufficient responsible for poor information and ignorance of CMV by patients
- Health care providers have to improve their knowledge about congenital CMV.

Biography

Tiphaine Raia-Barjat was appointed associate professor in obstetrics and gynecology in September 2017. She belongs to the Unit of Vascular dysfunction and hemostasis in the SAINBIOSE research center (INSERM UMR1059). Her clinical activity is focused on the clinical and ultrasound monitoring of pathological pregnancies and on fetal medicine. She is a referent sonographer for the prenatal diagnosis center of Saint Etienne University Hospital (France).His research focuses on pathologies related to placental dysfunction and congenital infections. She participated in the 2017/2018 working group of the French High Council of Public Health on "CMV and pregnancy".

Going Viral: Factors that Contribute to Influenza Vaccination Hesitancy in Older Adults

Peter C. Papageorgiou[1]*, Muhammad Ibrar Mustafa[1], Eric Rotgaus[1], Edyta Marcon[1], and Joseph Ferenbok[1]

[1]University of Toronto, Canada

In Canada, 10,000 hospitalizations and 3,000 deaths are attributed annually to influenza in older adults (i.e. >65 years old). They are a high-risk group which represents 14% of the Canadian population. The annual uptake of influenza vaccine among older adults remains approximately 70%, which is below the recommended 80% target set by the National Advisory Committee on Immunization (NACI). This sub-optimal vaccine coverage elevates the health risk in this population, with increased comorbidity complications, emergency hospitalization, secondary pneumonia, and flu-related deaths. The Influenza vaccine has been proven to be the most effective way of avoiding influenza-related health complications. The scope of this project is to assess and verify the factors that contribute to vaccination hesitancy (i.e. refusal or reluctance for vaccination) in older adults. The Toronto Translational Framework will be used to discover and define the needs to frame the problem space. This project has received approval from the Research Ethics Board of the University of Toronto. An electronic survey was created using a validated survey questionnaire from the World Health Organization - Strategic Advisory Group of Experts on Immunization. It was distributed online using the survey monkey platform through our stakeholders' network (National Initiative for the Care of the Elderly) to understand the knowledge, attitudes, behaviors, and barriers associated with influenza vaccination. A total of 80 survey responses across Canada were used for analysis. The inclusion criteria included older adults more than 65 years of age from the general population, who are residents of Canada and understand English.

Preliminary results demonstrate that 95% of responders agree that vaccines are a good way to protect personal and population health, yet 37% disagree that vaccines are effective. Almost all respondents agree that Influenza is a serious disease, however 20% believe there is insufficient evidence that vaccination prevents influenza. Although 91% had easy access to the influenza vaccine, 12% are opposed to receiving the influenza vaccine for religious reasons (12%), influence from other people (12%), or for medical reasons (4%). Other reasons for vaccine hesitancy include perceived side effects, vaccine ineffectiveness, and belief in alternative ways for preventing influenza. These results will assist us in understanding the needs and barriers associated with influenza vaccination. Subsequently, these findings will be validated through a focus group (n=10) and participants will be encouraged to share their thoughts and personal experiences of the factors contributing to vaccination hesitancy. The interviews will be conducted by three researchers to ensure reflexivity, followed by member checking and analyzed using the Quirkos software to elucidate thematic nodes. The factors and barriers will be validated by the focus group session. Defining the needs and the factors that contribute to vaccination hesitancy in older adults with help the healthcare system to provide better outcomes by increasing vaccine coverage above the recommended NACI goal of 80% for optimum immunity.

Audience Take Away:

- Appreciate the higher risk of older adults from Influenza vaccination hesitancy
- Understand the factors that contribute to Influenza vaccine hesitancy in older adults
- Elucidating the needs and gaps allows for a better strategy to reduce Influenza vaccine hesitancy and thereby improve overall health outcomes in this high risk population.

Biography

Dr. Peter Papageorgiou was born in Toronto, but after 10 years abroad he has become familiar with the city again. He has lived and studied in Greece and the United Kingdom only to move back to Toronto to pursue his love of science. It is here, in Toronto, that he discovered a molecule that plays a key role in hypertension that established a physiological connection between the coagulation and sympatho-adrenal systems. Choosing to pursue the project further focusing on translational research he applied his in vitro work to animals and subsequently to a human trial. It is now that his journey begins translating the scientific discoveries into clinical action, as to benefit our healthcare system. For more details go to: https://issuu.com/imsmagazine/docs/imsmag_winter2011/23

Biocompatible nanoparticles as a novel vaccine adjuvant

Su He Wang[1]*, James Baker[2], Jr.

[1]Department of Internal Medicine, and Michigan Nanotechnology Institute for Medicine and Biological Sciences, University of Michigan,
[2]Ann Arbor, MI, USA

Highly pathogenic H5N1 influenza viruses remain a potential pandemic risk to human health. Though vaccines are the best solution to prevent this threat, an effective vaccine for this strain of influenza has yet to be developed. All existing vaccines only target serum antibody against influenza as the primary outcome and fail to address mucosal immunity. To overcome these shortcomings we have used an effective mucosal adjuvant system to produce a prototype vaccine that provides immunity to multiple serotypes of H5. Plant-derived recombinant H5 (rH5) antigen was formulated with a novel nanoemulsion (NE) adjuvant. After intranasal immunization with the rH5-NE vaccine, high titers of rH5-specific IgG were observed in mice and both mice and ferrets achieved titers of higher than 1:40 for both Hemagglutination inhibition and virus neutralization assays. In additionally, the levels of secretion rH5-specific IgA showed significant increases in mice and ferrets. The rH5-NE vaccine also enhanced rH5-specific cellular immune responses including IFN-γ and IL-17. The 10-day survival post challenge was 100% in ferrets that received rH5-NE compared to 12.5% in the PBS group. Furthermore, this vaccine prevented weight loss and increases in body temperature after H5N1 challenge compared to the controls. Moreover, the amount of H5N1 virus in the nasal wash of rH5-NE-vaccinated ferrets was significantly decreased compared to control ferrets. Intranasal immunization with rH5 antigen formulated with NE adjuvant elicited strong, broad and balanced immune responses that effectively protect against H5N1 influenza virus infection in the ferret model. The ease of formulation of rH5-NE makes this novel combination a promising mucosal vaccine candidate for pandemic influenza.

Audience Take Away:

- Explain how the audience will be able to use what they learn?
- Application of novel mucosal adjuvants to vaccine development
- How will this help the audience in their job? Is this research that other faculty could use to expand their research or teaching? Does this provide a practical solution to a problem that could simplify or make a designer's job more efficient? Will it improve the accuracy of a design, or provide new information to assist in a design problem? List all other benefits.
- Nanoparticles have been used broadly in the biological sciences and clinical medicine. A new type of vaccine can be developed by this approach.

Biography

Dr. Wang earned her M.D. at Fujian Medical University, China in 1985 and received a Ph.D. in Pharmaceutical Sciences from the University of Strathclyde, U.K. in 1996. Her postdoctoral training was done at King's College School of Medicine, UK and the University of Michigan, USA. Currently she is an Associate Professor in the Department of Medicine and Michigan Nanotechnology Institute for Medicine and Biological Sciences, University of Michigan. Her research focuses on cellular and molecular biology, nanomedicine, particularly novel nano-agents for infection control and vaccine development. She has authored more than 65 peer-reviewed publications as well as 6 book chapters.

Novel Corona Virus: A Global Threat and Recent Treatments Advances

Rajesh Sharma and Rajput Mansi

[1]School of medical and Allied Sciences, K.R. Mangalam University, Gurugram, Haryana, India,
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Corona viruses are the zoonotic virus found in animal and humans. They are RNA viruses with enveloped positive sense, which are attributed by the club-like spikes projecting form their surface having an exceptionally large RNA genome and a distinctive replication strategy. WHO assigned the disease COVID-19, in February 2020, which means coronavirus disease. And the virus causing COVID-19 is ordained as ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2). The disease escalated from china to 26 other countries, as of Feb 18 2020. Replication of phylogenetic material takes place on zoonotic origin that is why person-to-person transmission is responsible for alacritous spread of this virus. Various studies offer ancillary enlightenment into person-to-person transmission. Coronavirus can be primarily transmitted in humans by respiratory droplets produced during sneezing and coughing or coming in contact with them. Coronavirus spike protein interacts with the complement host cell receptor and it is responsible for determining the tissue tropes, infectivity and species range of the virus. For example: -ACE2(angiotensin converting enzyme 2) receptor attaches to the spike of SARS coronavirus and infect human. As, we talk about the treatment of COVID-19; Many researches are going on and few potent drugs like Remdesivir, Favilavir, BCG Vaccine and Blood thinners are effective against in COVID-19. Serum Institute will be manufacturing the vaccine being developed by Oxford University, Other than that USA, Israel, France and countries are also working on the same.

Audience Take Away:

- The participant will get to know about the recent advances in therapy of COVID-19
- They will come to know about the whole structure, history, transmission, prevention etc. of Novel Corona Virus
- It will help many researchers to further know about the covid-19

Biography

Rajesh Sharma is from K. R. Mangalam University, Gurugram, Haryana, India and Pursuing Bachelors in Pharmacy. He is also Serving as National Treasurer for Indian Pharmacy Graduates' Association Student Forum. He has an excellent record with six credit research papers and review articles out of which Four are published in International journals and is currently working on other research projects as well. He also attended and Presented in Organizing team of many National Events and Conferences. a He is a quick learner and also takes interest in co-curricular activities like Taekwondo and Chess. He is also serving as the Deputy Secretary In National Service Scheme (NSS) and Coordinator for various societies in his college. He Believes in unity and team work.

A Quality improvement approach to reduce infections in neonatal intensive care

Monika Kaushal*

Emirates Specialty Hospital, UAE

Aim: To reduce infection in unit by relearning infection control policies; **Objective:** Outcomes in neonatology has improved dramatically in the last 3 decades. Improved survival- associated with increasing short term and long term morbidity. Infections is important cause of morbidity and mortality. Majority of infections are potentially preventable. Early onset sepsis related to maternal and perinatal factors on which NICU professionals have little control. Late onset usually HAI and linked to infection control measures and are Controllable and potentially preventable. Reported Incidence of sepsis is 15-50% depending on location and gestation, 25% of VLBW in the NICHD network were having LOS. Incidence falling in developed economies- Eg: 15% in Canada (2010/11) and drop from 38/1000 admissions to 20/1000 admissions in the UK 2006-2014 and Gulf region – (2013-15) 56/1000 admissions. Seasonal variations have been described to reduce the infection. we need to have policies in place. Some of which are Hand hygiene policy, Central line policy and bundles, Isolation policies, Antibiotic policies, Cleaning and waste.

We might have Disjoint between policy and care delivery. The metrics being used were nor accurate/fit for purpose. If we look at hand hygiene policy, it may happen that there may be Policy in place, IC team audits showing high complianceBut fly on the wall observation revealed a different story, Non-compliance widespread, Accessibility of hand gel at bedside was an issue, Turnover of new staff – eg . Residents who were poorly oriented. Hand hygiene of parents not monitored or enforced Mobile phone use in the clinical area and Publicity poor. So we need to work on the missing gap and improve the compliance. Similarly, for central line bundle it may have issues in any of the following. Bundles in place, IC team reporting high compliance- Wrong metric being used, was a tick box exercise with no empowerment of nurses, No standardisation, Application of antiseptic and adherence to aseptic technique suspect, Type of antiseptic used, Multiple breaks in to the line and Indefinite line duration. When we do quality improvement then we can have infection free NICU; **Outcome:** at the end of the workshop all of us are well aware of the infection control measures and have practical implications of the same.

Biography

Dr. Monika Kaushal is MBBS, MD Pediatrics, DM Neonatology, and FRCPCH. I have extensive experience, which is confirmed by my qualifications in Pediatrics and neonatology and my experience in teaching. In teaching I have provided capability and support not just in UAE but I do so on an ongoing basis to the Indian neonatology forum and Indian Academy of pediatrics and Egypt. I have several publications in journals which are indexed both nationally and internationally indexed journals. I also provide on line training in India in neonatology. I am part of faculty in on line training program in India on neonatology. It's named as online training program of neonatology (ONTOP).

In this endeavor I am NRP Instructor and involved in NRP training of nurse and doctors. I started the Fellowship program in Neonatology with affiliation to National Neonatology Forum and Indian Academy of Pediatrics India. I have conducted local, national and international workshops in India, Dubai and Egypt. I have been featured as senior faculty at various conferences both nationally and internationally. I have delivered lectures and conducted various workshops. I am currently undertaking MSC Neonatology from Southampton University UK; this shows my commitment to ongoing learning. I have great passion for research, teaching and dissemination of knowledge. I know many of the faculty who has been appointed to MBIU. This year faculty of Royal College of pediatrics and child health UK granted me the honor of status of Fellow of Royal Collage of Pediatrics and child health UK (FRCPCH).

Fever is not a symptom in covid-19. None of the diseases require fever as its symptom

K. M. Yacob*, Chief Physician

Marma Health Centre, Kochi, Kerala, India

We have been hearing for centuries that 'fever is not a disease but a symptom'. Physicians say that fever is a symptom of diseases like flu to cancer.

The conservative fever definition, diagnosis, and treatments are based on fever as a symptom.

All the studies related to fever as a symptom of a disease have been done without knowing the Purpose of the temperature of fever is.

Without knowing the Purpose of the temperature of fever, how can fever included in the symptom definition?

Temperature between 38° to 41° centigrade can be symptom of a disease?

Most of the diseases may not have a fever. Sometimes it disappears. Then, is fever a symptom of which disease?

Symptom Definition is the only parameter necessary for a Symptom. As with any or all other definitions, symptom definition should describe the symptom scientifically. If it cannot describe clearly, there is no use of a symptom definition. A symptom is a departure from normal function or feeling which is noticed only by a patient, indicating the presence of disease or abnormality. One cannot be understood directly the temperature is elevated in the hypothalamus. A mechanical device is necessary to measure elevated temperature in the hypothalamus. In symptom definition, fever definition can't be found. The elevation of body temperature is not included in symptom definition.

Different cause of diseases never shows the same symptoms.

Different causes of diseases like virus, bacteria, fungi, venom, horror scene, horror dream,... never shows the same symptoms. Its actions are different and sometimes opposite. No similarities can be seen between their actions.

Elevated temperature or increased temperature never make fever or symptoms of fever. It may create hyperthermia.

None of the diseases or causes of diseases require fever as its symptom.

If the mosquito bites its virus, bacteria, venom gets deposited in the body as a result according to nature and strength of Viruses, bacteria, venom symptoms like itching, pain, and signals like colour change, inflammation may occur.

we can see the symptoms, Signals, and indications of the virus, bacteria, the venom which multiple or spreading or damages(disease) the body before fever emerge. Patients who have flu to cancer may not have a fever.

How can we separate symptoms of the disease and symptoms of fever and symptoms of rising temperatures?

In fever, both symptoms of disease and symptoms of Fever are included. Deduct symptom of disease from total symptoms, we will get symptoms of fever.

(Disease +Fever)- Disease =Fever.

(Symptoms of disease +Symptoms of Fever)- Symptoms of disease =Symptoms of Fever (bitter taste, body pain, fatigue to mind and body, reduced appetite, reduced motion and indigestion, internal and external discomfort,)

Like that we can separate signs, signals, and actions of both fever and disease.

(Signals of disease +Signals of Fever) - Signals of disease =Signals of Fever(high temperature, shivering, unconscious,....)

(Signs of disease +Signs of Fever) - Signs of disease =Signs of Fever.

(Actions of disease +Actions of Fever) - Actions of disease =Actions of Fever. In fever does not show any actions of temperature rise.

How can we prove the fever is not a symptom.

The fever is not symptom when examined in various directions. In fever, both symptoms of disease and symptoms of fever are included. Deduct symptom of disease from total symptoms, we will get symptoms of fever. we can separate signs, signals, and actions of both fever and disease and rising temperature.

Temperature between 38 degrees and 41 degrees cannot be a symptom of any of the diseases.

A different cause of diseases like virus, bacteria, fungi, venom, horror scene, and horror dream never shows the same symptoms.

Fever has never been scientifically proved as a symptom of a disease. Fever has the properties of adaptation.

If we ask any type of question-related to fever by assuming that the fever is not a symptom we will get a clear answer. If we avoid or evade from this we will never get a proper answer to even a single question.

Biography

A practicing physician in the field of healthcare in the state of Kerala in India for the last 30 years and very much interested in basic research. My interest is spread across the fever, inflammation and back pain. I am a writer. I already printed and published nine books on these subjects. I wrote hundreds of articles in various magazines.
After scientific studies, we have developed 8000 affirmative cross checking questions. It can explain all queries related to fever

Can we Treat Urinary Tract Infections without Using Any Antibiotics?

Huang Wei Ling*

Medical Acupuncture and Pain Management Clinic, Brazil

Introduction: Several studies point out urinary tract infections as a widely common pathology worldwide. In Traditional Chinese Medicine, the physiopathology of the disease is Kidney Yin deficiency, Blood deficiency and Heat Retention

Purpose: The purpose of this study is to demonstrate the possibility of treating urinary tract infections without using antibiotics

Methods: The interpretation and analysis of recent articles regarding the treatment of urinary tract infections in Western medicine, traditional Chinese medicine and Hippocratic medicine. The description and analysis of two case-reports. The first from a 75-year-old woman and the second from a 45-year-old female patient both with symptoms of dysuria and diagnosed with urinary tract infection, with positive urine culture for bacteria (more than a hundred thousand colonies per ml)

Results: All patients presented improvement of the symptoms and urine cultures positive for bacteria before the treatment and negative urine culture after the treatment only with Chinese dietary counseling, acupuncture and apex ear bloodletting, not requiring antibiotics use in neither of the cases. Both patients presented complete improvement of urinary tract infections with one session of auricular acupuncture with apex ear bloodletting. The result for both cases appeared in a few days

Conclusion: It is possible to treat urinary tract infections without using antibiotics, according to these two case reports. For this aim, it is important to treat the patient through an integral pathway, focusing the treatment in the energy disturbances, the underlying cause of the symptoms.

Audience Take Away:

- This presentation is different from other presentations, because it is based on the thought of Hippocrates, who states that it is more important to know what sort of patient has a disease than what sort of disease a person has.
- It aims to teach physicians to look at the patients from the energy point of view.
- It also aims to recognize the importance of considering ancient medical traditions and practices, a practice also encouraged by Hippocrates, prior the knowledge we have now a days.
- They will be able to understand the patient in a more holistic way, proposing a safe treatment for urinary tract infection without the use of antibiotics, correcting the energy imbalances leading to the symptoms of urinary tract infection.
- The knowledge will be centered on the patient, not on the pathogen, in this case, the bacteria responsible for urinary tract infection. The treatment is done according to Traditional Chinese Medicine, focusing on the energy imbalances to lead to cure, not focusing only on the pathogen.
- This research could be expanded globally to demonstrate how viewing the patient individually could diminish the antibiotic resistance in cases of urinary tract infection, reducing side effects of the medication, including the harm to the

vital energy, linked to high-concentrated medication consumption.

- This study has the goal of working with energy imbalances and chakras of the patients, proposing a new way of treatment for urinary tract infections.

Biography

Huang Wei Ling, born in Taiwan, raised and graduated in medicine in Brazil, specialist in infectious and parasitic diseases, 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 (1998). Since 1997, she works with the approach and treatment of all chronic diseases in a holistic way, with treatment guided through teachings of Traditional Chinese Medicine and Hippocrates.

Covid-19 genetic- clinical behavior

Sarah El-Nakeep*, M.D

Ain Shams University, Egypt

Covid-19 is the most recent pandemic that created a huge toll on humanity either on morbidity and mortality. The pandemic has a close relation to a less infective SARS-1 and MERS Cov, both created a scare from the high death rate they caused but the small geographical areas affected and the comparatively less numbers of patients infected has made the contamination of the condition a lot easier. The lack of approved cure or vaccination makes it mandatory for all physicians and researchers to try to understand how the virus is behaving and what are the latest knowledge we have on it.

The genetic-clinical link or genotype-phenotype is necessaryto fathom any disease. Bioinformatics and genomics could help us understand the pathophysiology, the immunopathology, the possible diagnostic, treatment and preventive tools we need. We will discuss the latest data provided in the literature in this area.

Audience Take Away:

- The genetic component of the covid-19 genome and the possible clinical understanding of the condition could help doctors identify the real risks and problems they should be aware and deal with.
- We will discuss this relation and what we understand till the time being, and what could we could suggest or predict as points for research on this very important area.
- Discuss the difference between Covid-19 and the preceding SARS-1 and MERS Cov.

Biography

Dr. Sarah El-Nakeep M.D. is an associate professor in Internal medicine, Faculty of medicine, Ain shams University, Egypt. She has an M.D. degree in internal medicine. She was a Sub-director of the Intermediate Gastroenterology ICU in Demerdash hospitals and interested in the genetic background of the diseases and their clinical link.

Understanding the binding affinity of main protease of SARS-CoV-2 with screened molecules using Docking and MD simulation at different temperature

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Coronavirus disease - 2019 (COVID-19) is a global health emergency and the matter of serious concern, which has been declared a pandemic by WHO. As of now, there is no much needed nor effective pharmaceutical treatment for the approximately 15% contracting the severe form of the disease. Inhibition of the main protease of the SARS-CoV-2 is essential to control of virus replication and infection. This deadly virus is named as novel 2019-nCoV coronavirus and caused coronavirus disease i.e., COVID-19. The first case of SARS-CoV-2 infection in human was confirmed in the Wuhan of China. The very first victim of this infection was working in the seafood market of the Wuhan city. The present scenario is that COVID-19 is an infectious disease and spread through man to man as well as surface to man and almost every country throughout the world is fighting against this disease or viral infection. In the present scenario, the challenge to humans is that no vaccine or drug is available to cure from this infection. Different researchers are running day and night in the development of drug/ vaccine worldwide to fight against this virus. In spite of this, there is currently no antiviral drug available against coronavirus infection.

In the present study, computer-aided drug design based screening to find potential inhibitors of coronavirus infection. The lead therapeutic drug molecule was investigated through docking and molecular dynamics simulations of designed drug library. In this, binding affinity of noscapine-protease of SARS-CoV-2 complex was evaluated through MD simulations at different temperatures.

Screened more than 1 million molecules in the Zinc database and taken the best two compounds based on bioactive scores. These lead molecules were further studied through docking against the main protease of SARS-CoV-2. Then, molecular dynamics simulations of the main protease of SARS-CoV-2 with and without screened compounds were performed at room temperature to determine the thermodynamic parameters to understand the inhibition. Further, molecular dynamics simulations at different temperatures were performed to understand the efficiency of the inhibition of the main protease in presence of the screened compounds.

Audience Take Away:

- Current outbreak of a novel coronavirus, named as COVID-19 infections occurring in 2019 is in dire need of finding potential therapeutic agents.
- At present, there are no effective drugs available for control of coronaviruses. Currently, researchers are working for a development of therapeutic drugs to treat infections and control death case over world.
- Designed and screened drug molecule was investigated through docking and molecular dynamics simulations of designed drug library and reported natural product database.

Biography

Dr. Prashant Singh studied Chemistry at Indian Institute of Technology and did M.Sc. in 2005. He then joined the research group of late Dr. N. N. Ghosh and Prof. Ramesh Chandra at Dr. B. R. Ambedkar Centre for Biomedical Research, University of Delhi, Delhi, India. He received his Ph.D. in January, 2010. He obtained the position of Assistant Professor at Atma Ram Sanatan Dharma College, University of Delhi in 2006 and published more than 75 research articles/ chapters in journals of international repute. Citation of his work is nearly 1100.

Application of Computer-Guided Drug Repurposing to the Discovery of New Potential Treatments for Infectious Diseases

Alan Talevi[1]*, Maria Laura Sbaraglini[1], Carolina Bellera[1], Carolina Alba Soto[2], Carolina Carrillo[3]

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Drug repurposing consists in finding and developing new therapeutic indications for existing drugs (i.e. approved, discontinued, shelved or experimental drugs at clinical trials). Since the new indications are built on previous pharmacokinetic and safety knowledge, this strategy can expedite the development of innovative medications and it can also serve to rescue failed drug candidates Whereas the first drug repurposing examples originated in serendipitous / non-organized discoveries, the drug discovery community currently explores repurposing prospects in a systematic manner, frequently relying on bioinformatic and cheminformatic approaches.

Here, we will discuss the application of computer-guided drug repositioning to identify potential new treatments for Chagas disease, an infectious parasitic disease historically endemic to Latin America, caused by the infectious agent *Trypanosoma cruzi*. Using a combination of ligand- and structure-based approaches, the antibiotic clofazimine and the antihypertensive agent benidipinewere selected as promising anti-chagasic compounds. The computational predictions were validated experimentally, confirming the trypanocidal effects of both drugs, alone and in combination with benznidazole, both in vitro and in vivo (including an acute and a chronic model of Chagas disease).

Both candidates showed trypanocidal effects against Trypanosoma cruziepimastigotes and amastigotes were able to reduce parasitemia in an acute model of Chagas disease. In the chronic model, benidipine and clofazimine were able to reduce the parasite burden in cardiac and skeletal muscles of chronically infected mice compared with untreated mice as well as diminish the inflammatory process in these tissues.We found that both drugs appear to actadditively and synergistically in combination with benznidazole.

Audience Take Away:

- The audience will learn the definition and advantages of drug repurposing.
- An example of successful drug repurposing at both in vitro and preclinical level is presented.
- Drug repurposing provides a cost-efficient approach for innovative drug discovery. It is particularly attractive from an academic perspective, where limited resources to invest are usually available.

Biography

Alan Talevi obtained his Pharmacy degree in 2004 and completed his PhD studies in 2007, both at the University of La Plata (UNLP, Argentina). He holds an Independent Researcher positionat the Argentinean Council of Science, and he is Lecturer of the Biopharmacy course at the Faculty of Exact Sciences, UNLP. He published over 70 articles and more than 30 book chapters related to machine learning and drug discovery. He was Head of the Department of Biological Sciences of the Faculty of Exact Sciences (2015-2017). Since 2018 he is Head of the Laboratory of Bioactive Research and Development (LIDeB, UNLP).

Effect of hydroalcoholic extract of *Juglans regia* hull on isoprenaline induced testicular toxicity in Wistar rats

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An investigation was carried out to evaluate the effect of hydro-alcoholic extract of *Juglans regia* in amelioration of isoprenaline (ISO) induced oxidative stress in testes of Wistar rats. Thirty rats were randomly allocated to five groups with six animals in each. Group I served as normal control, group II animals were administered ISO at the dose rate of 100 mg/kg b wt subcutaneously on 5th and 6th day, rats in group III received hydroalcoholic extract (300 mg/kg) through oral gavage continuously for 7 days. Group IV animals were given ISO on 5th and 6th day (subcutaneously) in addition to plant extract (orally) at same dose levels for seven days and group V were given quercetin and ISO. Different antioxidant biomarkers in testicular tissue viz. total antioxidant status (TAS), total thiols (TTH), catalase (CAT), superoxide dismutase (SOD), acetylcholinesterase (AChE), arylesterase (AE), glutathione peroxidase (GPX), glutathione reductase (GR) and cellular damage indicators viz. malondialdehyde (MDA) and advanced oxidation protein product (AOPP) were assessed. Isoprenaline (ISO) administration produced significant increases in MDA and AOPP levels and reduced TTH, TAS, AChE, AE, GR, GPx, SOD, CAT activities in testicular tissue of rats. These findings were corroborated by the reduced and abnormal sperm concentration and histopathological alterations in testicular tissue of ISO exposed rats. Pretreatment with hull extract at the rate of 300 mg/kg reduced the ISO induced oxidative damage in testicular tissue and its antioxidant potential was found to be comparable to that of quercetin even though not all antioxidant biomarkers could be fully restored by the extract. Overall, our results show that hydroalcoholic extract of *J. regia* hull confers partial protection to testicular tissue against ISO induced oxidative changes in Wistar rats.

Audience Take Away:

- Isoprenaline (ISO) administration produced significant increases in MDA and AOPP levels and reduced TTH, TAS, AChE, AE, GR, GPx, SOD, CAT activities in testicular tissue of rats.
- These antioxidant and cellular damage biomarkers findings were corroborated by the reduced and abnormal sperm concentration and histopathological alterations in testicular tissue of ISO exposed rats.
- Pretreatment with hull extract at the rate of 300 mg/kg reduced the ISO induced oxidative damage in testicular tissue and its antioxidant potential was found to be comparable to that of quercetin even though not all antioxidant biomarkers could be fully restored by the extract.

Biography

I am working as Assistant Professor in Veterinary Pharmacology and Toxicology, F V Sc & AH, SKUAST, Jammu since 2005. He has his graduation from GB Pant University of Agricultural Sciences and Technology, Pantnagar in 2001. He was awarded JRF by ICAR, New Delhi for his MVSc at IVRI, Izatnagar. He is recipient of Young Scientist Award 2011 by DST and Research Excellence Award 2019, Associate fellow ISVPT 2019 and Associate member, NAVS. He has published more than 100 research publications, authored 03 books, 04 manuals and 15 chapters in text books. He is executive member in different society's viz. ISVPT, STOX, IAEC, ISC, etc. He is Editorial Board member, Advisor and Reviewer for various National and International Journals.

How to bind a novel virus; SARS-CoV-2 on their host?

Aykut Arif Topcu*

Aksaray University, Turkey

A novel virus; SARS-CoV-2 is a member of coronaviridae (family), one of the four genera of (beta genera) of coronavirus family that infects the human and mammals and causes some unwanted conditions especially respiratory problems and even deaths. The first infected person was found with severe pneumonia in Wuhan, China, in 2019 and spreading from China to around the world. The binding of a novel virus on their host is an key issue to prevent the spreading of this virus and the understanding of binding mechanisms and transmission of SARS-CoV-2 could be useful to develop an effective vaccine or drugs for the treatment. So; I firstly, try to give some details about the corona virus family and which genera could be infect humans, mammals and birds will be discussed. After that, some details of how to enter SARS-CoV-2 on their host would be summarized and S protein: an important protein of coronavirus family and the structures of S protein especially binding units would be explained by using scientific papers. After the protein structure explained, how to activated S protein and how to enter SARS-CoV-2 enter on their host will be represented and the last paper of my oral presentation, I give the use of some inhibitors that was useful for blocking the entry of SARS-CoV-2 on their hosts will be discussed.

Audience Take Away:

- Firstly, the audience could easily learn how to enter SARS-CoV-2 on their hosts and if the audience was an expert of medical studies like biologist or biochemist, who are able to give the some details of protein that plays a pivotal role for binding of SARS-CoV-2 on their hosts.
- Second, after the learning of protein structures and binding mechanisms of SARS-CoV-2 , if the audience/s are going on researches that is related about the pharmaceutics industry, this representation may be useful for drug or vaccine development.
- If the audience were academician, she or he could give some short-brief for students, because of using scientific papers during the preparation of my presentation.

Biography

Dr. Aykut Arif Topcu studied at Medical Laboratory Program, Vocational Scholl of Health Service at Aksaray University, Turkey. He graduated as BA from Kırıkkale University in 2006 then received his PhD degree in 2015 at the same university, in Turkey. His research areas are related about the affinity chromatography and its application areas; preparation of cryogels for protein purification and removal of toxic metabolites and biosensing platforms to sense various analytes including clinic of interest. He is currently as an Assistant Professor at Aksaray University.

How can we treat Recurrent Herpes Virus Infection without the Use of Antiviral Drugs?

Huang Wei Ling

Medical Acupuncture and Pain Menagement Clinic, Brazil

Statement of the problem: The herpes virus manifests as an eruption of red, painful blisters or sores in the skin, genitals, lips or eyes. In western medicine, the causative symptoms are related to herpes simplex 1, herpes simplex 2, and varicella-zoster viruses, often combined with a weakening of immune function. In Traditional Chinese Medicine (TCM), this entire process is indicative of Fire Toxin and Damp Heat

Purpose: To demonstrate that recurrent herpes virus infections can be treated without the use of antiviral drugs.

Methods: Two case reports. The first, from an 8-year-old girl with recurrent periocular lesions on the right eye, with edema formation, small blisters, hyperemia and hyperchromic spots. The symptoms were treated several times with topical and systemic antiviral medication, with the condition showing improvement only shortly. The second case report, from a 60-year-old woman, with a condition of recurrent genital herpes virus type 2, which would not improve with the use of antiviral medication. Both patients were referred to an infectologist with a TCM background, who restructured the patient's dietary habits, counselling that all hot energy foods should be avoided. Auricular acupuncture sessions with apex ear bloodletting were also performed

Results: A complete improvement of the conditions of both patients was obtained without using any antiviral drugs

Conclusion: It is possible to treat recurrent herpes virus infection without the use of antiviral drugs. To this end, it is important to see the patient as a whole and treat their energy imbalances by withdrawing their Heat process through acupuncture and dietary counselling.

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 has been presenting her work worldwide, working with the approach and treatment of all diseases of all systems of the human body in a holistic way, with treatment guided through the teachings of Traditional Chinese Medicine and Hippocrates.

Saliva sample in diagnosis of COVID- 19 as alternative to nasopharyngeal swab

Amera K Alkaisi*, PhD

Alfarabi University College, Iraq

Corona viruses are highly contagious and have the potential to cause a very large epidemic in the absence of control measures. A new strain of coronavirus was firstly reported in the late December of 2019, has not been previously identified in human which is named later as 2019 novel coronavirus (2019-nCoV). An outbreak of this virus is emerging and rapidly spreading worldwide. The sign and symptom of this disease varies from patient to another and sometime symptomless. WHO has claimed that 2019-nCoV spreads primarily through saliva droplets or discharge from the nose. The novel corona virus causing COVID-19pandemic, depend on accurate and rapid diagnostic testing. Right now, nasopharyngeal swab test is the most common test for COVID-19, collecting nasopharyngeal swabs causes discomfort to patients due to the procedure's invasiveness, limiting compliance for repeat testing, and presents a considerable risk to healthcare workers, because it can induce patients to sneeze or cough, expelling virus particles. The procedure is also not conducive to large-scale testing, because there are widespread shortages of swabs and personal protective equipment for healthcare workers, and self-collection of nasopharyngeal swabs is difficult and less sensitive for virus detection.

Throat swabs are also used, they are relatively invasive, induce coughing and cause bleeding occasionally, which may increase risks of healthcare worker's infection. Given the limitations, a more reliable and less resource-intensive sample collection method, ideally one that accommodates self-collection in the home, is urgently needed. Oral cavity is an entrance and an outlet of body, and saliva is supposed to play a role in early diagnosis and close contact transmission in infectious diseases. Saliva sampling is an appealing alternative to nasopharyngeal swab, since collecting saliva is non-invasive and easy to self-administer, the test relies on nothing more than spitting into a cup or a swab taken from the mouth. The people can perform at home which could appeal to people who might be too old, too sick or too scared to venture out for a test, even children at school or summer camp could spit into a device and get tested. It is a fast-acting, easy and cheap to use saliva-based screening test for Covid-19 especially in low income countries. In this review I will discuss the diagnostic value of saliva for 2019-nCoV as an alternative to nasopharyngeal swab, which might be an easy and noninvasive method of diagnosis and current approach for screening this disease.

Audience Take Away:

- The audience will have an idea about corona virus, how it transmits and methods of diagnosis
- Whenever they know the ways of transmission they will follow the instruction given through media to protect themselves by wearing gloves and masks
- Doctors, dentists, nurses and all healthcare providers can benefit from this presentation, by protecting them self and their patients. This research can help researcher to confirm the diagnostic importance of saliva and they may discover new markers present in saliva. It is easier than what currently used methods. Yes, the patient can take the sample by himself and send it to the lab, in this way there is no need to be taken by healthcare worker who may expose to the danger of this virus.

Biography

Dr. Amera studied dentistry in University of Baghdad, DOS and M.Sc oral and Maxillofacial surgery 1994&2001 respectively, PhD Maxillofacial Surgery Universti Sains Malaysia 2013, Diplomat of Laser in Oral and Maxillofacial Surgery 2018. The American Board of Laser Surgery.2018 Dubai. Worked in several health centers, in 1997 worked in College of dentistry University of Anbar. Now lecturer in Alfarabi University College. I have 16 national and international Journals publications and one Medical Book.20 presentations. Member of editorial committee of Plastic and aesthetic Research journal (PAR) 2014, Member of editorial committee of Austin Journal of dentistry, Member of editorial committee of Dentistry: Research & Therapy Journal and reviewer in biomedical Journals. I have reviewed 53 articles from different international Journals.

Human Papillomavirus Infection in genital Women in four regions of Senegal

El HadjiSeydou Mbaye*[1,2,3], Tarik Gheit[1], Ahmadou Dem[3], Sandrine McKay-Chopin[1], NdeyeCoumba Toure-Kane[2], Souleymane Mboup[2], Massimo Tommasino[1], Bakary S.Sylla[1], and CheikhSaadBouh Boye[2]

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Introduction: Cervical cancer is the most frequent cancer among women in Senegal. However, there are few data concerning the HPV types inducing neoplasia and cervical cancers and their prevalence, in the general population of Senegal

Aims: The aim of this study is to determine the prevalence of HPV infection in Senegalese women aged from 18 years and older.

Materials And Methods: A study was performed on 498 cervix samples collected from healthy women aged 18 and older in Dakar. 438 other samples were collected from three other regions, Thiès, Saint Louis and Louga. The samples were screened for 21 HPV genotypes using an HPV type-specific E7 PCR bead-based multiplex genotyping assay (TS-MPG) which is a laboratory-developed method for the detection of HPV.

Results: The prevalence for pHR/HR-HPV in the region of Dakar was 20.68%. HPV 52 (3.21%) was the most prevalent HPV type, followed by HPV 16 (3.01%) and HPV 31 (3.01%). In the regions of Thiès, Louga and Saint Louis, the prevalence for pHR/HR-HPV was 29.19%, 23.15% and 20%, respectively

Conclusion: The study revealed the specificity of the HR-HPV prevalence in Dakar and other regions of Senegal. The patterns differ from the one observed in the other regions of the world and rise the issue of the development of vaccination program in the country. Such a program should take into account the real HPV prevalence for an effective protection of HPV-associated diseases.

Biography

Dr. El Hadji Seydou Mbaye was born in 1978 in Kaolack a region of Senegal. During 2008-2013, he earned his PhD in Biology and Human Pathologies with the collaboration of the International Agency for Research on Cancer (IARC) /WHO, Lyon (France); 2006-2007 : Master of Life and Health, Specialty Biology of microorganisms, Virology in Louis Pasteur University of Strasbourg (France); 2005-2006 : Master of Life and Health, option of Immuno-physiopathology in Louis Pasteur University of Strasbourg (France); 2004-2005 : License of Biochemistry in Louis Pasteur University of Strasbourg (France); 2002-2004 : General Degree in Sciences and Technologies in University of METZ (France).

He was certified by the Federation International of Gynecology Obstetrics (FIGO), the Accreditation Council of Oncology in Europe (ACOE) the Institute Catalan of Oncology (ICO) for cervical cancer prevention (Grade 10/10) in support of Continuing Medical Education for physicians. These credits are also recognized as Physician's Recognition Award (AMA PRA Category 1 credits) by the American Medical Association. He was certified, by the United Nations for Basic Notion of Security on the Ground-Protection, Health and behavior, by the International Agency for Research on Cancer (IARC)/World Health Organization, Lyon (France) for Safety Certificate. He has published 1 Book with a style of philosophical story. Author of the world program against cancer in low and middle incomes countries, he is lead author (first listed) of more than 90 peer-reviewed research articles published in reputed journals. He is Review Board Member of Acta Scientific Medical Sciences (ASMS),Acta Scientific Microbiology (ASMI), Research and Reviews on Healthcare: Open Access Journal (RRHOAJ), and Editorial Board Member of the Journal of Medicine and Medical Sciences (JMMS), Modern Journal of Medicine and Biology(MJMB), EC Microbiology, International Journal of Clinical Virology (IJCV), Acta Scientific Cancer Biology (ASCB),BioMed Research Journal (BMRJ), Journal of Medicine and Biology (JMB), Biomedical Research, International journal of vaccines and technologies (IJVT), Journal of Surgery, Operative Techniques and Anaesthesia (JSOTA), Current Research in Bioengineering & Biomedical Sciences (CRBBS),Journal of Women's

Health, Gynecology & Obstetrics (JWHGO), Trauma & Emergency Care journal, Journal of Current Medical Research and Opinion (JCMRO), International Journal of Clinical Pharmacology & Pharmacotherapy(IJCPP), Journal of Clinical Microbiology and Infectious Diseases(JCMID),Journal of Retro Virology and Anti Retro Virology (JRVAV), Journalof Antivirals and Antiretrovirals, Research and Reports in Immunology (RRI), Journal of Medical Case Reports and Reviews (JMCRR), Pyrex Journal of Biomedical Research (PJBR), Advances in Immunology and Microbiology (ADIM), Current Scientific Research in Biomedical Sciences (CSRBS),Journal of Clinical & Experimental Immunology (JCEI), Journal of AIDS and HIV Treatment, Edelweiss Journal of AIDS, Journal of HIV and AIDS,Journal of HIV and AIDS Research, Associate Editors for Journal of Bacteriology & Mycology: Open Access (JBMOA),Pediatrics & Neonatal Biology Open Access (PNBOA). Immune & Autoimmune Disorders Journal (IADJ), Annals of Advanced Biomedical Sciences (AABSc)and associate membership of the World Society for Virology, and also, member of BCNet International Working Group, International Agency for Research on Cancer (IARC)/World Health Organization (WHO).

Dr MBAYE has formed for free, more than 250 healthcare professionals for the techniques of cervical cancer screening in Senegal. He has appeared on local media, 2S TV, Mbour TV and Leeral.net.

Film Formation Potential of Synthesized Chitin co-(Acetate/Succinate) Copolymers

Deepak Kumar Jindal

Guru Jambheshwar University of Science & Technology, India

Various chiti co-(asucnate) copolymers were synthesized under heterogeneous conditions by reacting chitin with a mixture of acetic anhydride and succinic anhydride in different ratios through esterification reaction. Characterization of the synthesized compounds was done using infrared and 1H-NMR spectroscopy. The synthesized compounds were dissolved in a mixture of isopropyl alcohol and dichloromethane in the specified ratio. Glycerine was added as a plasticizer and films were cast by solvent evaporation method. Mechanical properties of the casted films were examined by using the instrument texture analyzer after cutting the films into specified dimensions. Both tensile strength and extensibility were measured and percent elongation was calculated. All the parameters were compared with the casted film of hydroxypropylmethyl cellulose.

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POSTERS

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Evaluation of antifungal activity ofcarbosilane cationic dendritic molecules against *Candida albicans* biofilms

Irene Heredero-Bermejo[1], atalia Gomez-Casanova[1], Jose Luis Copa-Patino[1], Sara Quintana Sanchez[2,3], Jorge Perez-Serrano[1], Juan Soliveri[1], F. Javier de la Mata[2,3], Rafael Gómez[2,3], Javier Sanchez-Nieves[2,3]

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Candida albicans is anopportunistic pathogen associated with biofilm formation. Biofilms are resistant to some antifungalsand contribute to increase mortality rates associated with fungal infectionsin hospitals. Therefore, resistance and lack of effective molecules against biofilms make necessary to develop new biocides to prevent and treat *Candida* biofilm-related infections. *In vitro* activity of four dendritic molecules was tested against biofilm formation and biofilm formed in both clinical and CECT C. albicans strains. Dendrimers with the highest antifugal activity were also studied in combination with anti fungals. Cell viability was evaluated using resazurin colorimetric assay and confirmed plating on agar plates. Cytotoxity was studied in human cell lines, and biofilm alterations were observed by scanning electron microscopy (SEM).BDSQ024 was the most active compound preventing biofilm formation, showing aminimum inhibitory biofilm concentration (MIBC50) of 4-8 mg/L. Theminimum biofilm damage concentration (MBDC50)against biofilm formed was 8 mg/L. However, growth was observed when plating on agar plates, which showed that biofilm cell population was not completely eradicated. Therefore, we confirmed the need to plate cell suspensions on agar petri dish to validate results of cell viability on biofilms. SEM micrographs showed reduction on biofilm density, alteration on *Candida* cell morphology and perforations on the outer membrane. Synergy wasdetected in combination with caspofungin preventing biofilm formation, and the synergistic combinations were non-cytotoxic.We conclude that dendrimers may be a new alternative to treat C. *albicans* and prevent biofilm formation, individually or in combination with clinical antifungals.

Audience Take Away:

- We will provide information about molecules to prevent Candida biofilm formation and in consequence biofilm-related infections. This is a clinical problem due to resistance of Candida to antifungals, specially when forming biofilms.
- We confirmed that it is always necessary to plate samples to confirm viability values when treating biofilms.
- This will improve laboratory procedures and will allow to obtain reliable data.
- We showed synergistic activity with common antifungals.

Biography

Irene Heredero Bermejo has completed her PhD on Health Scienceon December 2015 from Alcala University, Madrid, Spain. From 2017 to 2019, he joined Dr. Arrizabalaga laboratory for her postdoctoral studies at Indiana University School of Medicine, Indianapolis, USA. In 2019, she becamean assistant professor at Alcala University. Her research interests include understanding the biology of infectious pathogens and discovering novel drug targets or compounds to develop new treatments. She has published 13international papers, 2 book chapters and attended national and international meetings. She has been serving as reviewer in different scientific journals.

Strategy to cohort potential COVID-19 patients in inpatient medical care: Is clinical judgement enough?

Jacob Baker*

Shrewsbury and Telford Hospitals Trust, UK

The COVID-19 pandemic has provided many challenges to inpatient care in the United Kingdom's NHS. One such challenge is infection control within unscheduled inpatient care in hospitals where most bed spaces are in open bays of four to six patients, such as the Royal Shrewsbury Hospital (RSH). In hospital transmission of COVID-19 has become a serious problem and was compounded at RSH in the early stages of the outbreak as reliance on out of Trust COVID-19 testing led to waiting times of several days. To counter this RSH implemented a cohort strategy to place patients with respiratory symptoms into low and high suspicion cohort bays. Patients without respiratory symptoms were isolated separately. Patients were judged to be high or low suspicion on the clinical judgement of the consultant or other senior clinician that admitted the patient. We prospectively selected patients admitted in the unscheduled care medical take over a three-week period, noted their allocation as high or low risk and followed up their subsequent COVID-19rt-PCR swab results. Of the 46 judged to be high suspicion 33% later tested positive for COVID-19. Of the 27 patients judged to be low suspicion 7% later tested positive for COVID-19. The difference observed was statistically significant with a P value of <0.01. Our study was limited in showing clinicians actual ability to clinically judge the likelihood of COVID-19 infection by the sensitivity of the COVID-19rt-PCR swab. There are potentially multiple cases of COVID-19 that went undiagnosed due to false negative swabs that we believe to be overrepresented in the high suspicion group. A limitation to the ability of our findings to be extrapolated would be variations in clinician knowledge bases in different sites and the effects of disease prevalence in the subject population. Our study showed the effectiveness of clinicians to stratify patients into high and low risk groups. It justifies the use of clinical judgement as a mechanism of patient cohort, and thus a way to reduce in hospital transmission, compared to admission without any cohort system. However, we believe the development of quantitative scoring systems or rapid point of care tests would significantly increase clinician accuracy and thus reduce in-hospital transmission further.

Audience Take Away:

- Raise awareness of the issues facing inpatient units with COVID-19 cases that lack ample single patient rooms.
- Provide evidence for potential cohort strategies for similar inpatient units in the pandemic.
- Highlight the need for diagnostic tools and point of care testing.
- Provide support to inpatient units in low resource setting where clinical judgment may constitute the only mechanism to stratify and cohort potential COVID-19 patients.

Biography

Dr. Baker graduated from the University of Manchester with masters in Medical Microbiology (MSc) in 2018 and graduated from Keele University with bachelors in Medicine and Surgery (MBChB) in 2019. He currently has two publications written with Professor Denning of the University of Manchester. He is currently practicing medicine as a House Officer in the Respiratory department in Shrewsbury and Telford Hospitals NHS Trust.

Design New Inhibitor Candidates for SARS- Cov- 2 RNA Depended Polymerase: A Computational Study

Manos C. Vlasiou

University of Nicosia, Cyprus

The computer aided chemistry and molecular docking is a rapid tool to drug screening and investigation After the Covid 19 pandemic and the aggressively infection control measures taken by the governments in the whole world, the need for a rapid pharmaceutical solution was more than necessary. Here, we used theoretical studies on previously published biological active molecules and newly designed as an example of evaluating possible drug candidates before entering the laboratory. Our findings suggest that theoretical investigation should always precede on drug discovery.

Audience Take Away:

- This study aims to promote computational chemistry via molecular docking as a powerful tool in drug discovery. The pandemic crisis revealed a need of rapid and cost-effective action manage on drug discovery. Computational tools should be in use in order to evaluate possible candidate molecules for Covid 19 and related diseases. Using state of the art software programs we will be able to design effective molecules before entering the laboratory environment saving money and valuable time.

Biography

Dr. Vlasiou has a PhD (University of Cyprus, Department of Chemistry) in the field of Medicinal Inorganic Chemistry. His thesis was incorporated the synthesis and characterization of metal-based drugs that causing apoptosis in cancer cells through the disruption of electron's Krebs cycle in mitochondria. He is a member of the Royal Society of Chemistry and a certified chemist. In addition, he is a reviewer for a number of scientific journals and a formulation specialist and responsible person for the domestic cosmetic industry. Dr. Vlasiou has published his work in more than ten scientific articles and present his findings in more than fifteen international conferences in poster and oral sessions. He is currently teaching medicinal chemistry and physical chemistry lessons at the University of Nicosia (Pharmacy program) and his research interests lies both on synthesis of anticancer and antimicrobial meta-based drugs and in spectroscopic evaluation of drug interactions. At the same time, he is working as a researcher in a funded project by research and innovation foundation of Cyprus entitled "Hollow Particles for Essential Oil Encapsulation".

The Influence of Dipeptidyl Peptidase-IV Inhibitor on Testicular Ischemic Injury in Rats

Ayman Geddawy

Minia University, Egypt

Ischemic conditions are associated with pathogenesis in different body organs. Sitagliptin is an oral anti-diabetic drug acting as dipeptidyl peptidase-IV (DDP-IV) inhibitor. We previously reported the role of DDP-IV inhibition against cardiac and hepatic ischemia. Testicular trauma followed by ischemic injury is a leading cause of male infertility. Here we investigate the effect of sitagliptin on nitric oxide during experimental ischemic testicular injury in rats. Adult male albino rats were left to acclimatize for one week before inclusion to the experiment. Rats were randomly divided for sham-operated group, testicular ischemia-reperfusion (TIR) non treated group, and Sitagliptin-treated TIR group. After the end of the testicular reperfusion period rats were sacrificed. Assays on testicular tissue content of nitric oxide (NO), heme oxygenase-1 (HO-1) and oxidative parameters were performed. Sitagliptin mitigated the testicular ischemic injury as shown by correction of the serum level of testosterone and testicular tissue content of malondialdehyde (MDA). Also sitagliptin showed improvement of the oxidative stress parameters including testicular tissue content of superoxide dismutase (SOD), reduced glutathione (GSH) and NO. The current experiments show that sitagliptin amiolerates the ischemic injury via improvement of the oxidative/nitrosative stress in rat testes.

Audience Take Away:

- Incretin-based antidiabetic drugs include the dipeptidyl peptidase-4 (DPP-4) inhibitors like sitagliptin have been approved as effective and tolerable medications.
- Evidence is accumulated for potential beneficial cardiovascular/hepatic effects other than antidiabetic action of sitagliptin
- Here we show that sitagliptin amiolerates the ischemic injury via improvement of the oxidative/nitrosative stress in rat testes

Biography

Dr. Ayman studied Medicine at the Faculty of Medicine, Minia University, Egypt and graduated as MBBCh in 1999 and got his MSc. In Pharmacology from the same faculty in 2006 . He then joined the research group of Prof. Tomio Okamura at the Department of Pharmacology, Shiga university of Medical Science, Japan and he received her PhD degree in 2012 at the same institution. Currently, he is working as Assistant Professor at Pharmacology Division, Basic Medical Science Department, College of Medicine, Prince Sattam bin-Abdulaziz University, KSA. He has published more than 20 research articles and/or reviews in SCI journals.

Newly diagnosed case with Gilbert Syndrome after 20 years suffering fro jaundice

Noor Mohammed Abdulrahman

University of Basra, Iraq

A 31 years old female patient presented with 25 years history of jaundice and yellow skin that was undiagnosed after several and multiple healthcare facilities. The patient tried to find the source of this abnormal and unusual appearance of her skin by following-up with physicians and specialists in gastrointestinal system. Previous investigations were abdominal ultrasound, blood analysis for complete blood count, liver function test, any blood disorders and endoscopy. During this evaluation, the patient discovered that she had glucose-6- phosphate dehydrogenase deficiency (as infected) and sickle cell disease (as trait). The patients started to take supplements like folic acid and vitamin B complex (B1, B6, B12) through prescriptions by physician but the case not improve, other than she got worsen and no improvement. After that new investigations and laboratory data were done to reach finally of suggested presence of Gilbert syndrome. This case report summarizes the workup for chronic jaundice and how the diagnosis can carry up.

Audience Take Away:

- This work attend to focus on rare disease that may affect some people and need more and more investigations to diagnose it properly
- Any simple symptom in any patient should not be eliminate
- Early detection and constant scanning can reduce the suffering of people having such disorders

Biography

Noor Mohammed Abdulrahman graduated from college of Pharmacy to get Bachlorious degree at 2008. Then she retained a general hospital to training as Trained Pharmacist from 2009-2010. After that she joined into academic and return back into college of pharmacy. She got master degree in Clinical Pharmacy from Baghdad University/ College of Pharmacy at 2014 and later in the same year she got assistant lecturer degree. Several researches were published in clinical pharmacy specialty about 5 researches. From 2014 till now she is studying in clinical pharmacy department at Basra university / college of pharmacy

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KEYNOTE FORUM | DAY 2

PHARMA VIRTUAL 2020

WEBINAR

JUNE 14-15, 2020

Jared Ostmeyer

Department or Population & Data Sciences, UT Southwestern Medical Center, Dallas, Texas, USA

Diagnosing and prognosticating disease with high throughput immune receptor sequencing and machine learning

Immune repertoire deep sequencing allows profiling T-cell populations and enables novel approaches to diagnose and prognosticate diseases by identifying T-cell receptor sequence patterns associated with clinical phenotypes and outcomes. Our study objective is to develop a method to diagnose and prognosticate cancer using T-cell receptors sequenced from tissue biopsies. To determine how to profile the specificity of a T-cell receptor, we analyze 3D X-ray crystallographic structures of T-cell receptors bound to antigen. We observe a contiguous strip typically 4 amino acid residues in length from the complimentary determining region 3 (CDR3) lying in direct contact with the antigen. Based on this observation, we extract 4 residue long snippets from every receptor's CDR3 and represent each snippet using biochemical features encoded by its amino acid sequence. The biochemical features are combined with information about the abundance of the snippet or the receptor and scored using a logistic regression model. Each logistic regression model is fitted and validated under the requirement that at least one positively labelled snippet appears per tumor and no positively labelled snippets appear in healthy tissue. Using a patient-holdout cross-validation, we fit logistic regression models to distinguish colorectal tumors from healthy tissue matched controls with 93% accuracy, breast tumors from healthy tissue matched controls with 94% accuracy, ovarian tumors from non-cancer patient ovarian tissue with 95% accuracy (80% accuracy on a blinded follow-up cohort), and regression of preneoplastic cervical lesions over 1 year in advance with 96% accuracy. In conclusion, immune repertoires can be used to diagnose and prognosticate disease.

Audience Take Away:

- How the immune system generates immune receptors specific for a patient's disease
- New technologies enabling us to sequence large number of immune receptors in patients
- How we can extract clinical information out of immune receptor sequencing data

Biography

Dr. Ostmeyer graduated with a B.S. in physics from the University of Arkansas in 2008 and Ph.D. in Computational Neuroscience from the University of Chicago in 2016. He earned his Ph.D. under Dr. Benoit Roux for his study of ion channel inactivation using molecular dynamic simulations. In 2016, he joined Dr. Lindsay Cowell's group at UT Southwestern to develop new approaches to diagnose disease from immune repertoires. For his outstanding work, he was appointed an independent position as an assistant professor in 2019. Dr. Ostmeyer has published in the fields of biophysics, biochemistry, machine learning, immunology, and cancer.

Dr. Fernando Ferrandiz

Royal National Academy of Pharmacy, Spain

Use of Sound Spectral Analysis as Process Analytical Technology (PAT) Tool in Topical Formulations Development

Process Analytical Technology (PAT) can be defined as a system to measure Critical Process Parameters (CPP) affecting Critical Quality Attributes (CQA) of pharmaceutical products during development and manufacturing, following the principles of Quality by Design (QbD).

According to ICH Q8 Guideline (R1, 2008), QbD is defined as "a systematic approach to development that begins with predefined objectives and emphasises product and process understanding and process control, based on sound science and quality risk management". In addition, according to the FDA PAT Guidance (2004), PAT is considered "to be a system for designing, analysing, and controlling manufacturing through timely measurements (i.e., during processing) of critical quality and performance attributes of raw and in-process materials and processes, with the goal of ensuring final product quality".

None of the Regulatory Authorities requires the use of specific techniques for PAT but the reality is that Raman, Near Infrared (NIR) or Chemical Imaging are extensively used. However, other possible technologies, easy to use and cheaper than those above mentioned, can be applied to determine CPP. Sound Spectral Analysis is one of these technologies.

In this presentation some examples related to the use of Sound Spectral Analysis of critical steps in the development and manufacturing control of topical formulations are explained and discussed. Special attention is paid in specific cases of active pharmaceutical ingredients grinding and phase emulsion, as a demonstration of the usefulness of this technology.

The use of freeware and common computers, the speed in obtaining valuable information about the process under development or control, and the possibility of connecting specific sound signals, determined by Sound Spectral Analysis, to Programmable Logic Controllers (PLC) or other types of controllers, are also considered as advantages of this technology.

Audience Take Away:

- The audience will be informed about the most important steps to be followed in the analysis and characterization of some CPP during topical formulations development (eg. speed of reactor, time of mixing/emulsion, endpoint, etc.) using Sound Spectral Analysis.
- Practical examples of using a specific freeware will be provided, based on personal experience; there is not any commercial interest since other available software with similar characteristics can be used. Other researchers could freely use this technology in order to make their job more efficient.
- The final process design of a topical formulation can be significantly improved since this tool helps the formulator in real CPP characterization and control. The development of other pharmaceutical forms can potentially benefit from the use of this technology.

Biography

Dr. Ferrándiz studied Pharmacy in the Complutense University of Madrid and received his PhD degree in 1991. Professionally dedicated to research in pharmaceutical instrumental analysis, with publications in several scientific journals and co-author of the book "Instrumental Techniques in Pharmacy and Health Sciences". Lecturer in a number of scientific conferences, and professor in courses and masters organized by various centres. Currently he carries out his professional activity in the Government Affairs Division of GlaxoSmithKline, S.A. Corresponding Member of the Royal National Academy of Pharmacy and the Pharmacy Academy of Castilla y León, and permanent member of the American Chemical Society.

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SPEAKERS | DAY 2

PHARMA VIRTUAL 2020

WEBINAR

JUNE 14-15, 2020

Green Wide-spectrum Anti-pathogenic Agent and its Personal Protective Devices

Tao Xiaoming [1]*, Zhang ZH[1], Li J[1], Ma LL[1], Liu SR[1], and Leung P[2]

[1,2]The Hong Kong Polytechnic University, Hong Kong

For the first time, poly (3-hydroxybutyrate) (PHB) oligomer extracted from bio-polymer made by fermentation of starch or sugar, was discovered by us to have wide-spectrum anti-pathogenic properties against virus, fungi, mice, bacteria and drug-resistant bacteria. The PHB oligomer synthesized in our laboratory demonstrates its excellent effectiveness as an anti-pathogenic agent, its anti-viral activity value Mv = 4.24, 4.40 for influenza virus H1N1, H3N2, respectively. The anti-bacterial mechanisms of the oligomer are revealed as the disruption of biofilms and cell membrane, leakage and degeneration of proteins in the cell. The agent and fibers are non-toxic, fully degradable into carbon dioxide and water, without any harmful residues in the landfill. PHB/PLA fibers have been used to make a range of personal protection devices, including face-masks, inner garments, gowns, socks as well as beddings, towers tec. The textiles maintain their anti-pathogenic properties after 50 machine washing cycles. According to ISO18184:2019, the face masks tested possess good anti-viral activity value of 2.21 and 2.04 against influenza virus H3N2 and H1N1, respectively.

Audience Take Away:

- World first discovery of a new green wide-spectrum anti-pathogenic agent, its origin and chemical structure
- Outstanding anti-pathogenic effectiveness against bacteria, drug-resistant bacteria, fungi and viruses as well as mice
- Comparison with other current anti-pathogenic agents and textiles
- Personal protective devices demonstrated like face-masks, socks, undergarments, beddings, towers made from the anti-pathogenic fibers

Biography

Prof. Xiaoming Tao is Chair Professor of Textile Technology and Director of Research Centre of Smart Wearable Technology, Hong Kong Polytechnic University, former World President of Textile Institute International. Her research has been focused on advanced fibrous materials, structures and smart wearables. She has published 350 SCI journal papers with citation over 17500 and H-index of 66. More than a dozen of her inventions have been licensed to leading companies and technology start-ups around the world.

Walk-Through screening system for COVID-19

Ji Yong Lee[1]* and Sang Il Kim[2]

[1, 2]Plus Yangji Hospital, Korea

With the ongoing novel coronavirus disease 2019 (COVID-19) pandemic, the number of individuals that need to be tested for COVID-19 has been rapidly increasing. A walk-through (WT) screening center using negative pressure booths that is inspired by the biosafety cabinet has been designed and implemented in Korea for easy screening of COVID-19 and for safe and efficient consultation for patients with fever or respiratory symptoms. Here, we present the overall concept, advantages, and limitations of the COVID-19 WT screening center. The WT center increases patient access to the screening clinics and adequately protects healthcare personnel while reducing the consumption of personal protective equipment. It can also increase the number of people tested by 9–10 fold. However, there is a risk of cross-infection at each stage of screening treatment, including the booths, and adverse reactions with disinfection of the booths. We had solved these limitations by using mobile technology, increasing the number of negative pressured booths, reducing booth volume, and using an effective, harmless, and certified environmental disinfectant. A WT center can be implemented in other institutions and countries and modified depending on local needs to cope with the COVID-19 pandemic.

Audience Take Away:

- The audience can learn the concept and the details of WT screening system.
- They can modify their screening system more efficient and safe.
- Rapid diagnosis is the essential part of the fight against COVID-19.
- This system enables safe, efficient and rapid diagnosis for the patients and properly protect healthcare personnel as well as the COVID-19 patients.
- This research provide basic concept and detail solution for COVID-19 screening system.

Biography

Dr. Lee received Medical Degree from the Eulji University. He completed internship and residency training in Internal Medicine at Kangbuk Samsung Hospital, Sungkyunkwan University and fellowship training in Division of infectious disease, Department of Internal medicine at Samsung Medical Center, Sungkyunkwan University. Now he is the Director of the Division of infectious disease, Department of Internal medicine, and the manager of infectious control team of H Plus Yangji Hospital since 2016.

Ameliorating effect and mechanism of Ma-Xing-Shi-Gan-Decoction*, a compound Chinese medicine on pulmonary microcirculatory disturbance

Jing-Yan Han*

[1]Peking University, China

COVID-19 has become a major infectious disease that threatens the lives of people in all countries. China has effectively controlled the epidemic of COVID, and its main prevention and control measures include isolation, closure of the city, mobile cabin hospitals, supportive therapy, etc. The compound Chinese medicine has played an important role in the absence of vaccines and effective antiviral drugs against COVID-19. In the "Diagnosis and Treatment Protocol for COVID-19" recommended by the Chinese government, there are 7 compound Chinese medicines containing Ma-Xing-Shi-Gan-Decoction for the medical observation period and clinical treatment period (mild, moderate, severe, and critical stages) of COVID-19. Our study has confirmed that Ma-Xing-Shi-Gan-Decoction has inhibitory effects on pulmonary microcirculatory dysfunction induced by LPS in rats, including the adhesion of leukocytes on pulmonary microvessels, the leakage of plasma albumin through pulmonary microvessels, the infiltration of inflammatory cells in lung tissue, and the release of inflammatory factors. Ma-Xing-Shi-Gan-Decoction could reduce the partial pressure of carbon dioxide and increase the partial pressure of oxygen. These effects are related to the inhibition of LPS-induced high expression of TLR-4, Src phosphorylation, NF-κB activation, Caveolin-1 phosphorylation, and low expression of tight junction proteins Claudin-5, Occludin, and JAM-1. This study suggests that Ma-Xing-Shi-Gan-Decoction couldbe a potential strategy for LPS-induced acute pulmonary edema, lung injury and acute respiratory distress syndrome.

Audience Take Away:

- The compound Chinese medicine played an important role in the absence of vaccines and effective antiviral drugs against COVID-19.
- Lung microcirculatory dysfunction and inflammation reaction in rats acute lung injury induced by LPS are primary pathophysiology. Therefore, potential therapies aiming at ameliorating lung fluid accumulation and inflammatory infiltration are in urgent need for healing the acute lung injury in patients.
- Ma-Xing-Shi-Gan-Decoction could ameliorate pulmonary microcirculatory dysfunctionand inflammatory reaction, which offers a potential treatment strategy acute pulmonary edema, lung injury and acute respiratory distress syndrome.

Biography

Dr. Jing-Yan Han is tenured professor and chairman of department of integration of Chinese and Western medicine, Peking university health science center. He is mainly engaged in the research of microcirculation and traditional Chinese medicine, focusing on the mechanism of microcirculatory disorder, organ injury and the ameliorating effects of traditional Chinese medicine.He has published more than 100 research articles in SCI journals.He is vice-president of China Society of Microcirculation and councilor member of International Liaison Committee for Microcirculation Research.

Dengue RNA Detection Using Gold Nanoparticle-Based Lateral Flow Biosensor

Flora Maitim Yrad[1, 2, 3]*, Josephine M. Castanares[2], and Evangelyn C. Alocilja[1]

[1]Michigan State University, USA
[2] University of San Carlos, Philippines
[3] Silliman University, Philippines

Dengue disease is caused by dengue virus that occurs in four serotypes, namely: dengue-1, -2, -3, and -4. Reverse transcriptase polymerase chain reaction (RT-PCR) provides sensitive molecular detection and typing of dengue virus, but this technique requires costly and specialized instruments which are limited in many developing countries. This presentation will discuss the development of a gold nanoparticle-based lateral flow biosensor for the visual detection of dengue target RNA. First, gold nanoparticles (AuNPs) were synthesized using modified dextrin method and functionalized with DNA probe using ligand exchange reaction through salt-aging process. The morphology and size of dextrin-capped AuNPs were characterized using UV-Vis spectroscopy, dynamic light scattering (DLS), and high-resolution transmission electron microscopy (HR-TEM). Second, DNA-functionalized AuNP was applied as reporter probe in a fabricated lateral flow biosensor. The signal detection was based on nucleic acid sandwich hybridization reactions among nucleic acid sequence-based amplification (NASBA) amplicon dengue target and DNA probes on the nitrocellulose membrane. The sandwich hybridization reactions accumulate the gold nanoparticles on the test line of the biosensor that can be observed visually. Third, experimental conditions of the lateral flow biosensor were optimized. Results showed that synthesized AuNPs were spherical and mono dispersed. Factors that affect AuNP functionalization, optimization and selectivity tests of the biosensor will be discussed. An optimized lateral flow biosensor was developed using 10 nm AuNP as label. The intensity of the red test line was proportional to the concentration of dengue target. As proof-of-concept application, the biosensor detected dengue-1 virus in pooled human sera. This biosensor system offers alternative diagnostic applications for simple and visual sensing of dengue RNA.

Audience Take Away:

- The audience will learn the applicability of dextrin-capped AuNP as label for lateral flow assay.
- The audience will learn that lateral flow biosensor provides a simpler method of molecular detection for dengue virus compared to PCR.
- The audience can use the findings on selectivity tests in designing a diagnostic biosensor for generalized dengue infection screening.

Biography

Dr. Flora Maitim Yrad studied Chemistry at the University of San Carlos, Philippines, in 2015 and received her PhD degree in 2019. Her dissertation research was conducted at the Nano-Biosensors Laboratory, Michigan State, MI, USA under the supervision of its program director, Dr. Evangelyn C. Alocilja. She worked as Assistant Professor at Silliman University, Dumaguete City, Philippines. She had published her research work on Visual Detection of Dengue-1 in Diagnostics Journal in 2019.

Discovery of Influenza polymerase PA-PB1 Interaction Inhibitors Using an In Vitro Split-Luciferase Complementation-based Assay

Yanmei Hu[1*], Jiantao Zhang[1], Jun Wang[1]

[1]The University of Arizona, United States

The limited therapeutic options and increasing drug-resistance call for next-generation of influenza antivirals. Due to the essential function in viral replication and high sequence conservation among influenza viruses, influenza polymerase PA-PB1 protein-protein interaction becomes an attractive drug target. Here, we developed an in vitro split luciferase complementation-based assay to speed up screening of PA-PB1 interaction inhibitors. By screening 10,000 compounds, we identified two PA-PB1 interaction inhibitors, R160792 and R151785, with potent and broad-spectrum antiviral activity against a panel of influenza A and B viruses, including amantadine -, oseltamivir-, or dual resistant strains. Further mechanistic study reveals that R151785 inhibits PA nuclear localization, reduces the levels of viral RNAs and proteins, and inhibits viral replication at intermediate stage, all of which are in line with its antiviral mechanism of action. Overall, we developed a robust high throughput-screening assay for screening broad-spectrum influenza antivirals targeting PA-PB1 interaction and identified R151785 as a promising antiviral drug candidate.

Biography

Yanmei Hu studied Chemistry at the University of Texas and graduated as MS in 2014. She then joined the research group of Prof. Jun Wang at the college of Pharmacy, the University of Arizona. She started her PhD study in 2018 in the same institute and she is now a 3rd year PhD candidate in the Drug Discovery and Development program.

Identification and characterization of a multifunctional bioactive peptide from the archaeal kingdom

Patrizia Contursi[a]*, Martina Aulitto[a], Simonetta Bartolucci[a], Salvatore Fusco[a], Anna Zanfardino[a], Eugenio Notomista[a], Mario Varcamonti[a], Angela Arciello[b], Eliana Dell'Olmo[b], Rosa Gaglione[b], Martina Schibeci[b], Annarita Del Gatto[c], Annarita Falanga[c], Bianca Farina[c], Stefania Galdiero[c], Laura Zaccaro[c], Luciano Pirone[c], Emilia Pedone[c], Roberto Fattorusso[d], Emanuela Roscetto[d], Adriana Vollaro[d], Maria Rosaria Catania[d], and Giovanni Smaldone[e]

[a,b]University of Naples Federico II, Italy
[c]Italian Research National Council, Italy
[d]University of Campania Luigi Vanvitelli, Italy
[e]SDN Research Institute Diagnostics and Nuclear, Italy

Cationic antimicrobial peptides (CAMPs) are small positively charged peptides with an amphipathic structure, active against bacteria and fungi. We describe the identification and functional characterization of a novel (CAMP)-like peptide, namely VLL-28, in the primary structure of an archaeal transcription factor. VLL-28 shows a broad-spectrum antibacterial activity towards Gram-positive and Gram-negative bacteria and acquires a defined structure in the presence of membrane mimetics. This peptide localizes on the cell membrane as well as in the cytoplasm of Escherichia coli suggesting that it could exert its antimicrobial activity also on intracellular targets. Besides its antimicrobial activity, VLL-28 fulfills other important biological functions since it was found to exert antifungal and antibiofilm activities towards different species of Candida as well ascytotoxic activity towards murine and human tumor cells.

Audience Take Away:

- This work described the identification and characterization of an antimicrobial peptide (VLL-28) endowed with multiple biological activities.
- How to identify cryptic antimicrobial peptides hidden in the primary structure of virtually any protein sequence.
- Why Archaea can be regarded as reservoir of antimicrobial molecules of biotechnological interest
- Antimicrobial peptides can be endowed with other unrelated biological activities thus shedding light to multiple roles of this class of molecules.
- For all the above mentioned reasons, this research can offer new solutions to the longstanding issue of the antibiotic resistance developed by pathogenic bacteria and fungi.
- Moreover, our work points to archaeal microorganisms as a source of biologically active molecules.
- Interestingly, since these prokaryotes are adapted to cope with harsh physio-chemical conditions, it is expected that also molecules produced by Archaea are more resistant to extreme conditions, thus simplifying the job of designing antimicrobial peptides with improved stability.

Biography

Dr. Patrizia Contursi studied Biology at the University Federico II of Naples, Italy and graduated as MS in 1995. She then joined the research group of Prof. S. Bartolucci at the Department of Organic Chemistry and Biochemistry. She received her PhD degree in 2002 at the same institution and she became Researcher in Biochemistry in 2002. She obtained the position of an Associate Professor at Department of Biology, University Federico II, Naples in 2020. She has published more than 40 research articles in SCI(E) journals.

Formulation of herbal capsule containing isolated compound from ethanolicextract of Dregea volubilis and Leptadenia reticulata for the treatment of Diabetes

[1]Venkatesan. N*, [2]Anton Smith. A, [3]Vishwanath. B.A

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[2]Department of Pharmacy, Annamalai University, Annamalai Nagar- 608 002, Tamil nadu

Background: Dregea volubilis and Leptadenia reticulata are reported to contain multiple antidiabetic constituents and hence widely used for the treatment of diabetes mellitus. The present investigation was aimed to formulate capsule formulations containing crude extract of isolated compound from Dregea volubilis and Leptadenia reticulata in order to obtain antidiabetic formulations with more effective oral hypoglycemic activity, less side effects, increased patient compliance thereby providing multifaceted benefits.

Methodology: Our Previous study was carried out with GC – MS analysis and the results showed that there were fifteen compounds in ETDV and ten compounds in ETLR. An attempt was made to isolate the compounds responsible for anti-diabetic activity using column chromatography technique with ETDV and ETLR. Isolated two compounds named as DV-1 and LR-1 from the column. However DV-1 and LR-1 were poly phenolic compound nature confirmed by GC –MS and spectral analysis. Hence we formulate the DVLR (DV and LR isolated fraction was mixed in 1:1 ratio) capsules were formulated and the study was carried out for its anti-diabetic effect of STZ and HFD induced diabetic rats.

Results and Discussion: In our study showed empty capsule shell pH was observed as 3.62 and moisture content of capsule was found to be <5 % w/w which indicated that there were less chances of microbial growth and capsule will not become soft. Filled capsule passed the test for uniformity of weight, all capsules disintegrated within 7 minutes. Dissolution of capsule was found to be 94.17%. HPTLC finger printing indicated that Quercetin was derived from ETDV and ETLR. DVLR possesses significant blood glucose lowering and cholesterol lowering activities. The improvements in the lipid profile in diabetic animals after treatment with DVLR could be beneficial in preventing diabetic complications, as well as improving lipid metabolism in diabetic patients.

Simultaneous MOR/DOR targeting as useful strategy for pain management

Rita Turnaturi[1], Carmela Parenti[2], Girolamo Calò[3], Santina Chiechio[2], Nunzio Vicario[4], Lorella Pasquinucci[1]

[1]Department of Drug Sciences, Medicinal Chemistry Section, University of Catania
[2] Department of Drug Sciences, Pharmacology and Toxicology Section, University of Catania
[3] Department of Medical Sciences, Pharmacology section, University of Ferrara.
[4] Department Biomedical and Biotechnological Sciences, University of Catania.

Opioid analgesics, such as morphine, elicit analgesic effects primarily through mu opioid receptor (MOR), whose activation determines not only analgesia but also a sequel of unwanted side effects. Although indispensable for the management of acute severe pain, the classical analgesics are unsuccessful for inflammatory and neuropathic pain treatment. Multitarget MOR/delta opioid receptor (DOR) agonists, showing synergic antinociceptive activity with low side-effects induction in preclinical models, represent a strategy to overcome the default in chronic pain treatment (1).

In this context, we identified the multitarget MOR/DOR ligand LP2 characterized by high MOR (Ki= 1.08 nM) and DOR (Ki= 6.6 nM) affinity coupled to an agonist profile versus these receptors (IC50MOR= 21.5 nM and IC50DOR= 4.4 nM). In tail flick test, LP2 produced a long-lasting antinociception naloxone-reversed (ED50 of 0.9 mg/kg i.p.) (2). Building upon these evidences, our efforts were focused on demonstrating whether the LP2 multitarget profile could be useful for persistent pain states. Thus, LP2 is evaluated in a model of neuropathic pain induced by chronic constriction injury (CCI) (3) and a model of inflammatory pain (Formalin test) (4). Moreover, both 2R- and 2S- diastereoisomers of LP2 (Figure 1) were synthesized in order to investigate the role of the stereocenter at the N-substituent of the 6,7-benzomorphan scaffold in drug-opioid receptor interaction (5). Their pharmacological profile were compared each other and with LP2. Specifically, 2S-LP2 showed an increased antinociceptive effect than LP-2 consistent with the in vitro functional profile. Moreover, 2S-LP2 resulted a biased MOR/DOR agonist with functional selectivity for G-protein signaling and reduced β-arrestin 2 recruitment, an effectiveness profile in chronic pain conditions management (6).

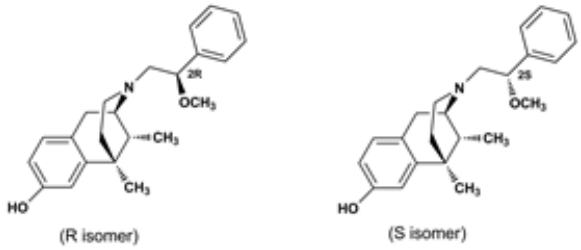

Figure 1: LP2 isomers

Biography

Rita Turnaturi achieved the PhD in Medicinal Chemistry from University of Catania. Currently she is performing a fellowship at the Department of Drug Sciences of University of Catania. She has published more than 30 papers in reputed peer-reviewed journals.

Design, Synthesis and pharmacological activity of triazine based chalcones

Ravindra S. Shinde, Aishwary A. Andhare

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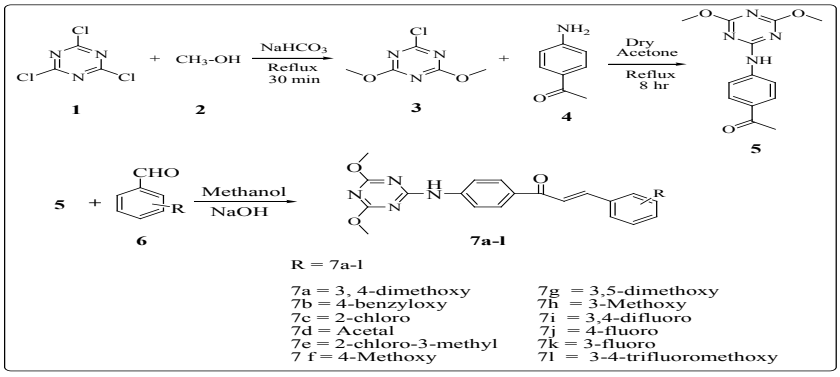
The Synthesis of aryl substituted 1-[(4-(4,6-dimethoxy-1,3,5-triazin-2-ylamino)phenyl)]prop-2-en-1-one by the Claisen-Schmidt condensation. The changes in their aryl rings have accessible high degree of variety that has proven useful for the development of new medicinal agents with improved potency and lesser toxicity. A convenient method for the synthesis of biological active triazine based chalcones using triazine ketone and substituted benzaldehyde in dry methanol has been developed. The spectral data (IR, 1H NMR and Mass spectroscopy) compounds have been given. The synthesized compounds were studied for their antioxidant and anti-diabetic activity. The results showed highest to moderate antioxidant activity and anti-diabetic activity.



Scheme 1: Synthesis of triazine based chalcones.

Audience Take Away:

During the last few years the potential of s-triazine derivatives in molecular recognition, agrochemical and medicinal properties has been investigated to greater extent. Literature survey reveals that substituted s-triazine derivatives are associated with number of pronounced antibacterial activites against gram positive (*B. subtilis, B. cereus and S. aureus*) and gram negative organisms (*S. typhi, E. coli and K. aerogenes*). To randomly explore these novel compounds, our idea is to combine, cyanuric chloride with various organic compounds for the synthesis of triazine derivatives and incorporation of these derivatives for further condensation giving access to a wide array of structures, which can be expected to show interesting antibacterial activities.

On the basis of literature survey and taking into consideration anti-inflammatory antidiabetic, antioxidant, antiurolithic, antibacterial, antifungal, anti-allergy and seed germination growth promoting agent activity of triazine and their derivatives. It is proposed to find out new and efficient methods for the synthesis of various triazine derivatives having biological active structural moieties imparting enhanced pharmacological and biological properties.

- The present research work will include:
- 1. Synthesis of some triazine heterocyclics and their derivatives.
- 2. Spectral characterization and biological studies on the synthesized compounds.

- 3. The analytical data obtained from spectral characterization will be used to arrive at the final structure of synthesized compounds.
- 4. The biological studies will be used for ascertaining their pharmacological and biological importance.

Biography

Dr. Shinde studied Chemistry at the Dayanand Science College, Latur, (M.S.) India affiliated to S.R.T.M. University, Nanded and graduated as MS in 2000. He then joined the research group of Prof. S. D. salunke at the R. S. Mahavidyalaya, Latur, (M.S.), India. He received her PhD degree in 2017 at the same institution. After two year he obtained the position of an Associate Professor at the Dayanand Science College, Latur. He has published more than 30 research articles in SCI (E) journals, written 11 chapter in International edited book, worked as associate Editor in Apple Academic press Canada, U. S. A., edited six international book, Brand Ambassador of Swayam NPTEL local chapter, Brand ambassador of Bentham science journal, author of Lulu press, U.K., LAP LAMBERT Academic Publishing, OmniScriptum GmbH & Co. KG Bahnhofstr. 2866111 Saarbrücken, Germany.

Can TGF-β1 be a significant marker molecule in Non-alcoholic fatty liver disease?

Lekshmi.R.Nath* & Bhagyalakshmi Nair

Amrita School of Pharmacy, India

Non-alcoholic fatty liver disease (NAFLD) is the most common preliminary liver conditions that affect about 25% of worldwide population. The progression of NAFLD is associated with wide range of risk factors. Obesity, insulin resistance, intake of high calorie fat containing dietary items, unhealthy life style, oxidative stress, free radical production, mitochondrial oxidation and Hepatic stellate cell (HSC) activation are some of the important risk factors that can be linked with the development of NAFLD. Excessive consumption of fat, obesity, impairment in glucose metabolism and lack of exercise will lead to abnormal deposition of fat in liver cells. A plethora of toxic lipid free radicals will stimulate quiescent HSC's and proceeds in the activation of HSC's. Activation of Hepatic stellate cells will further worsen the condition by stimulating various inflammatory and pro-inflammatory signalling pathways which will produce a wide range of inflammatory cytokines like TGF-β1, TNF-α, IL-8, Fas-ligand and chemokine like MCP-1 that leads to the death of hepatocytes. In this presentation we are trying to highlight the points regarding the pre and post translational modification of TGF-β1 polypeptide along with its synthesis and role in different stages of NAFLD.

Audience Take Away:

- Explain how the audience will be able to use what they learn? Audience will be able to gain information regarding the significant role of TGF-β1, polypeptide in different stages of NAFLD development. Also, TGF-β1 cytokine nowadays gains an important perspective in the field of Hepatocellular carcinoma due to its unique feature of tumor suppressing and tumor progressing activity.
- How will this help the audience in their job? Is this research that other faculty could use to expand their research or teaching? Does this provide a practical solution to a problem that could simplify or make a designer's job more efficient? Will it improve the accuracy of a design, or provide new information to assist in a design problem? List all other benefits. NAFLD affects about 25% of population globally. Due to changes in daily lifestyle and lack of exercise NAFLD is one of the common preliminary condition that affects a large number people. Normally, it is believed that fatty liver development and impairment in the normal functioning of hepatocytes and related liver cells are due to excessive alcohol consumption. But nowadays alcohol consumption is not only a risk factor that constitutes to progressive chronic liver ailments. Several other risk factors like obesity, diabetes mellitus, insulin resistance, overconsumption of fat containing food items etc. have a crucial role in the fatty liver development. In this presentation, audience will be able to gain information related to NAFLD progression at cellular and molecular level. Also, the audience will be pleased to have knowledge regarding how a simple fatty liver can develop into chronic hepatocellular carcinoma.

Biography

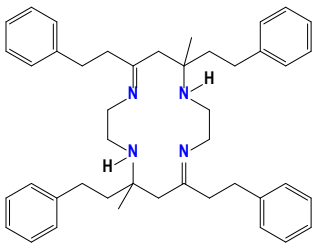
Dr Lekshmi.R.Nath is working as Asst. Professor at Amrita School of Pharmacy, AIMS, Amrita Vishwa Vidyapeetham, Kochi Campus, India. She pursued her doctoral research at Rajiv Gandhi Centre for Biotechnology (RGCB), a prestigious national institute under DBT, India. She has patented her PhD research findings based on hepatocellular Carcinoma (Uttroside B and derivatives thereof as therapeutics for hepatocellular carcinoma, Filed on 28 May 2016 .WO 2017208254 A1) and currently this compound is under preclinical trials with Qbiomed, a leading biotech company to develop as liver cancer therapeutics. She has more than 10 years research experience in the area of anticancer compounds, as chemotherapeutics as well as chemopeventives especially against HCC. She has published several papers in highly reputed impact journals like Scientific Report (Nature Press), RSC Advance, Plose One, Frontiers in Microbiology etc. and has been serving as an editorial board member of many reputed journals.

Syntheses, Characterization and Antimicrobial Investigation on Some New Metal Complexes of an Aryl Substituted Azamacrocyclic Chelator

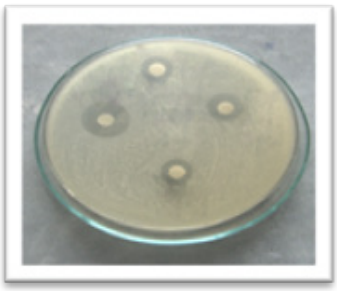
Tapashi Ghosh Roy[1]*, Saroj Kanti Singh Hazarib[2], Benu Kumar Deya[3], Debashis Palita[4], Lucky Deya[5] and Saswata Rabia[6]

[1]Department of Chemistry, University of Chittagong, Chattogram-4331, Bangladesh
[2]BGC Trust University Bangladesh, Chattogra, Bangladesh

The chemistry of macrocyclic compounds like Vitamin B12, hemoglobin, chlorophyll etc. has been a fascinating area of current research interest to the chemists all over the world. These compounds are also important for their uses in pharmacological, industrial and analytical field, above all, research on these complexes as antitumor and anticancer drugs have got top priority. Aza-type macrocyclic chelators appear very promising for potential use as antifertile, antibacterial and antifungal agents as well as biologically important components. Moreover recently these chelators are being used in application for neuclear waste decontamination. Thus in the present context, synthesis, characterization, antifungal and antibacterial activities of metal complexes of a new macrocyclic chelator (L) have been reported. Condensation of the ethelenediamine with benzyl acetone in presence of quantitative amount of perchloric acid produced a new methyl and ethylphenyl substituted macrocyclic chelator Me2(C6H5-CH2-CH2-)4[14]diene.2HClO4 which on extraction with CHCl3 at pH above 12 yielded free diene chelator Me2(C6H5-CH2-CH2-)4[14]diene. The diene chelator in its free state as well as in diperchlorate form undergoes facile complexation with copper(II), nickel(II) and cobalt(III) to furnish corresponding metal complexes. All these chelators and complexes have been characterized on the basis of different modern spectroscopic and analytical techniques. The antimicrobial activities of these chelators and complexes have been tested against bacteria and fungi. Antibacterial activities of synthesized compounds have been investigated against four gram positive and five gram negative bacteria. However antifungal activity of the same compounds has been tested against five fungi. The growth inhibiting activity of the chelators and complexes against bacteria and fungi were compared with the standard antibiotic Ampicillin and commercially important antifungal agent, Griseofulvin respectively. Among them some of these macrocyclic complexes were found to be more fungitoxic and antibacterial compared to standard antibacterial and antifungal agents as well to alkyl substituted macrocyclic complexes.



Chelator L



Antibacterial disc

Antifungal disc

Audience Take Away:

- Synthesis of concerned types of biologically active macrocyclic chelators and their complexes;
- Characterizatiom of new compounds by modern analytical techniques;

- Antimicrobial activities of concerned and related compounds;
- Application in radioactive waste decontamination.

Biography

Dr. Roy did her BSc Honors and MSc in Chemistry from the University of Chittagong, Bangladesh. She completed her PhD from the Indian Institute of Technology (IIT), Roorkee, India and post-doctoral fellowships from USA, Germany, Japan, Korea and Argentina. She obtained the position of Professor in the Department of Chemistry at the University of Chittagong, Bangladesh in 2005. She has published 75 articles in peer reviewed journals. Dr. Roy has been supervising M.S., MPhil and PhD students since 1994. She is also working as editorial board member and reviewer of many reputed journals.

Biocomposite Scaffolds Impregnated with Liposomes for Local Drug Delivery to Oral Lesions

Neha M.Munot

STES's Smt.Kashibai Navale College of Pharmacy, India

Oral lesions like oral leukoplakia, oral erythroplakia and submucous fibrosis are some of the premalignant lesions, which if not treated promptly and properly may undergo malignant transformation. Management of such lesions has been evolving rapidly by the design of state-of-the-art strategies which reduce the complications and improve the efficacy of drug delivery.Systemic administration of drugs for the treatment of oral lesions may lead to decreased efficacy as very little amount of drug will reach the desired site of action. It may also cause systemic side effects of drug. Hence, development of local, site specific drug delivery can be beneficial in providing a more targeted therapeutic option, thereby reducing the required drug doses and the risk of systemic side effects.

Mechanical movements of the tongue and continuous salivary flow may prevent long-term adhesion of carriers to the oral mucosa and lead to dilution of the active drug content. The success of local treatment depends on choice of an appropriate carrier for drug which will also influence rate of penetration and deposition in the oral mucosa and residence time at the affected area. Hence, there is a need for development of an appropriate carrier that can protect the stability and integrity of drugs, provide controlled release of drugs by governing the residence time in the mucosal tissue, and deliver the therapeutic agent to a desired target site to minimize side effects to other organs. It has been found that Liposomes are widely employed as drug carriers for local delivery as they have tendency to localize in the inflamed areas of oral lesions. These are biocompatible, biodegradable spherical vesicles made up of phospholipid bilayers which may entrap hydrophilic as well as lipophilic drugs.

Cationic liposomes made up of positively charged lipids have ability to get attached onto the negatively charged bacterial cell wall targeting bacterial infections in the mucosal lesions. Also, these may adhere to the negatively charge sialic acid residues present in the mucin which forms the layer on the mucosa showing mucoadhesive drug delivery. Inspite of all these advantages, use of liposomes in regenerative medicine and therapy has been limited due to the absence of mechanical support that facilitates tissue regeneration and cell growth resulting in adverse pathology and delayed healing. Hence, in present investigation, cationic liposomes were formulated using Quality by Design approach and their efficacy was further improved by impregnating them on porous scaffolds.

Scaffolds are biomaterials that provide support and act as a biological platform which facilitates the appropriate repair and restoration of cells into the targeted functional tissue or organ during the healing process. In this process of tissue regeneration, porous scaffolds provides the oxygen supply on healing site and serves as a template for cell infiltration and physical support to guide the growth, differentiation and proliferation without triggering any inflammatory responses or rejection from the body.

Thus, therapeutic potential of liposomes amplified by combination with biomaterial scaffolds can lead to the new avenues for local drug delivery in the clinical settings.

Audience Take Away:

- Drug delivery along with tissue engineering is the upcoming field being widely explored as multimodal system with improved efficacy. In this presentation, simple but robust and reproducible methods of manufacturing of liposomes as well as scaffolds would be explained which would be successful from bench top to large scale manufacturing too. Quality by design is need of an hour. Present investigation was carried out using same approach. Successful local drug delivery has always been a challenge. This presentation will reveal opportunities for the researchers in this field and also throw light on means to converge demands from a drug delivery system with improved efficacy, safety in the clinical settings.

Biography

Dr.Neha Manish Munot, Asst. Prof at STES's Smt.Kashibai Navale College of Pharmacy since 2009. She graduated from Pune University, obtained post graduate (M.Pharm) degree from S.N.D.T. University and Ph.D degree from Pacific University. She has about 40 publications and presentations to her credit. She has authored books and chapters for books. She is a recipient of various research grants and awarded with different awards like "Best researcher of the year award" from Sunpure Extracts, "Innovation Award" from Nehru Science centre, National Centre for Science Communication etc. She is an approved PG Guide and have guided around 18 M.Pharm students.

Interaction of triatomine immune system, the *Trypanosoma cruzi* and the microbiota

Daniele P Castro*, Cecilia S Vieira, Patricia Azambuja, Fabio F Mota, Eloi S Garcia

Oswaldo Cruz Institute, Brazil

Rhodniusprolixus is an insect vector that transmits the parasite, Trypanosoma cruzi, which causes Chagas disease. The interaction between parasite and insect vector is correlated to the coevolution of triatomine species with parasite strains. T.cruzi strain capable of adhering to insect´s epithelial cells, modulating its immune responses and overcome the gut microbiota is essential to successful infection. The maininsect immune responses that challenge T. cruzidevelopment are antimicrobial peptides (AMPs), reactive nitrogen and oxygen species (RNS and ROS), and phenoloxidase activity (PO). Besides that, the bacteria Serratia marcescens, found in the gut microbiota of hematophagous insects, have trypanolytic activity against T. cruzi and can be a limiting factor to the parasite development. Moreover, the insect´s physiological state and the neuroendocrine system can interfere in the success of parasite development.

Audience Take Away:

- Learn about triatomine neuroendocrine system and the parasite infection
- Humoral immune responses that affect trypanosome infection in the insect vector
- Correlation between trypanosome immune modulation and the microbiota
- The relation between bacteria of the insect digestive tract and trypanolytic activity

Biography

Dr. Daniele Castro studied agricultural engineer at Universidade Federal de Lavras, Brazil,and graduated in 2001. She then joined the research group of Prof. Patricia Azambuja at the Instituto Oswaldo Cruz (IOC-Fiocruz). She received her PhD degree in Parasite Biology in 2009 at the same institution. After three years of postdoctoral fellowship supervised by DrEloi Garcia she obtained the position of an Associate Researcher at the IOC. Currently, she is a Principal Investigator at the same institute. She has published more than 20 research articles in SCI(E) journals.

Sterilization of the hearts of *Rattusnorvegicus Sprague Dawley* from experimental endocarditis by *E. faecalis* ATCC 29212 with generic vancomycin

Lorena Abadia-Patino[1]*, Beatriz Hidalgo[2], Luzmarina Rojas[3]

[1, 2, 3]Eastern University, Venezuela

The use of generic antibiotics creates suspicion regarding the innovator. In many countries, especially those in the developing world, these drugs are abundant, due to the cost of theinnovatoracquisition. However, there are many therapeutic failures that doctors report with its use.The objective of this work was to evaluate the efficacy of generic vancomycin, to sterilize the hearts of Rattusnorvegicus Sprague Dawley from experimental endocarditis caused with the vancomycin sensitive strain E. faecalis ATCC 29212.Adult male specimens of Rattusnorvegicus Sprague-Dawley were used; they were inoculated with the E. faecalis ATCC 29212 strain (1.5 x 108 CFU / ml) intravenously, to produce an experimental endocarditis. The control rat was sacrificed 48 hours after bacterial inoculation.The remaining five rats, also inoculated with E. faecalis ATCC 29212, received the treatment for five days intramuscularly, one rat for each vancomycin under study.Generic vancomycins were from Behrens, Celovan, Fada Pharma, Vancomax, and Vancocyn. To verify the sterility of the hearts with the generic vancomycin, they were placed in BHI broth, at 35 ° C.Following incubation, E. faecalis ATCC 29212 colony growth was verified and CFUs were counted per gram of cardiac tissue. The control rat had a bacterial growth of 1.8 x 1012 CFU/g of cardiac tissue. The rats treated with Behrens, Vancocyn and Celovan sterilized the hearts, while those treated with Vancomax and Fada Pharma showed bacterial growth (2.8 x 1012 CFU/g and 4.2 x 1010 CFU/g, respectively).In conclusion, the pharmaceutical equivalence of a generic vancomycin, with respect to the innovator, does not guarantee therapeutic equivalence. More studies need to be done on generic antibiotics to ensure their human clinical use.

Audience Take Away:

- They will learn that generic antibiotics could not be actives to combat infection diseases. Even, if the laboratory did in vitro assays or physicochemical analyses. Also, that therapeutic failure is not only associated to generic antibiotic.
- Physicians must evaluate what is the cause of the therapeutic failure.
- This research is not innovator, but the way we did and analyzed, could help other laboratories to make better approaches to get new results. The aim of this team is not to deny about generic drugs, but to investigate what is going on about this drugs. Because, there are very good generic drugs on the market.
- Normally, generic drugs are tested by physicochemical analyses; but in vivo systems, reality changes. So, we do not need just *in vitro* tests, but *in vivo*. Researchers have to consider that.
- I think that researchers could improve the way they evaluate generic drugs. As all the published papers, have the same approach, and we used another one.

Biography

Dr. Lorena Abadia-Patino studied Bio analysis at the Orient University, Venezuela and graduated in 1997. In 1998, she went to Paris to did a Microbiology Master and Ph. D at Denis Diderot University and her work at Pasteur Institute under the direction of Patrice Courvalin. She got her Ph. D in 2003; returned to Venezuela and joined the research group of Biomedicine department at IIBCAUDO, created the Bacterial Resistance Laboratory. At present, she has the position of an Added Professor at the UDO. She has published several papers, chapters and books. Associated editor of The Journal of Infection in Developing Countries.

Perspectives for the development of strategies (drugs and non-drug therapies) for the reduction of inflammation, injury, and muscle recovery biomarkers

Renato Carvalho Vilella

INCISA-IMAM, UNIASSELVI, Connective Tissue, Brazil

A recent article I have wrote, with the medical student Camila Carvalho Vilella, and published in the Open Journal of Pharmacology and Pharmacotherapeutics shows that the Homo sapiens has one of the most amazing characteristic, adaptability. And when adaptability comes to mind, exercising is just by side. Exercising brings many benefits for our body and it is the greater stimulus to trigger musculoskeletal adaptation, starting at mitochondrial level (i.e. biogenesis) to muscular level (i.e. hypertrophy). Mainly when the exercise is of high performance or strenuous, the athlete need a time to recover from fatigue, muscular damage, over-increase of muscular inflammation series of muscle and to prevent overtraining syndrome.

Following the concept of "Evidence Based Practice" that is use the best available evidence in clinical decisions, what should be the methods that really have efficacy to prevent or reduce muscle damage, muscle biochemical markers of inflammation and recover? We answered it with a full systematic review of the PubMed's database.

The aim of this Keynote Presentation is to bring new and clear information about the perspectives for the development of strategies (drugs and non-drugs therapies) for the reduction of inflammation, injury, and muscle recovery biomarkers. After the presentation you will be able to develop new ideas, improve your research, and identify new opportunities for drug and non-drug therapies development.

Audience Take Away:

- Identify and understand what therapies have efficacy in muscular conditions.
- Be able to identify opportunities for drug and non-drug therapies development.
- Improve quality of researches focused on muscular biomarkers.
- Develop new ideas for research, and drug development.

Biography

Prof. Renato Vilella is a physiotherapist (Post Graduated in Pain; Neurosciences; and Medical Neurosciences), Manual Therapist (Connective Therapist), and Professor (Bachelor of Physiotherapy Course; Massotherapy Course; Manual Therapy). He is also, a Ph.D. student (one of the youngest Brazilians to enter a Ph.D. program).
Currently, the professor is a reviewer for eleven International Scientific Journals and in approximately one year has published, as independent researcher, over ten articles in International Scientific Journals.The clinical work focus on Non-Resolved pain, amateur and elite athletes (mainly climbing and Crossfit).The research focuses on pain; sports physiotherapy; Neuro-immuno-endocrinology effects of manual therapy; Anatomy; and terms definitions.

Glycyrrhizin ameliorates high fat diet-induced obesity in rats by activating NrF2 pathway

Nada F. Abo El-Magda, Mohamed El-Meserya, Amro El-Karefb, Mamdouh M. El-Shishtawya

a Department of Biochemistry, Faculty of Pharmacy, Mansoura University, Mansoura 35516, Egypt
b Department of Pathology, Faculty of Medicine, Mansoura University, Mansoura 35516, Egypt

Aim: Obesity based on insulin resistance is a state of chronic oxidative stress and inflammation that are highly regulated through nuclear factor Erythroid 2-related factor 2 (NrF2) pathway.

Materials and methods: 70 male Wistar rats were randomized into two models. The prophylactic model was 10 weeks and rats were grouped into: normal group, GL group (received glycyrrhizin 50 mg/kg/day orally along with normal pellet diet), HFD group and HFD+GL group (received glycyrrhizin along with HFD). The treatment model was 14 weeks and rats were grouped into: normal group, HFD group and HFD+GL group (received glycyrrhizin from the week 10).

Key findings: Glycyrrhizin decreased significantly rat weights and insulin resistance, normalized lipid profile and reduced significantly the adipocytes size in adipose tissue and lipid deposition in the liver tissue through histopathologic examination. Furthermore, glycyrrhizin ameliorated obesity-induced oxidative stress which indicated by significant decrease in liver malondialdehyde level ($P < 0.001$) and increase in the total antioxidant capacity ($P < 0.001$). Interestingly, molecular mechanism of glycyrrhizin was explored, that included significant reduction of liver gluconeogenic enzymes mRNA expression ($P < 0.001$), a significant increase of liver insulin receptor, NrF2 and homooxygenase-1 mRNA expressions ($P < 0.001$) and significant increase and nuclear translocation of NrF2 in liver tissue.

Significance: Glycyrrhizin ameliorates HFD-induced obesity in rats that may be attributed to its ability to increase insulin receptor expression and to activate NrF2 and subsequent homooxygenase-1 pathway. Thus, this work represents a safe natural compound (glycyrrhizin) that has a great role either as prophylaxis or treatment for insulin resistance related to obesity.

Audience Take Away:

- The prophylactic and the treatment effects of glycyrrhizin in metabolic syndrome induced in rats
- The role of NrF2/HO-1 and gluconeogenic enzymes in metabolic syndrome occurrence and in modulating it in prophylaxis or treatment using glycyrrhizin.
- The strong anti-oxidant effect of glycyrrhizin which give a promising indication if it is started to be available as natural supplement in the market.

Biography

Dr. Nada Fawzy Abo El-Magd had B.Sc. of pharmaceutical sciences-Mansoura University, Egypt-May 2012; grade excellent with honors (2nd achiever). In 2012, She started academic work at Biochemistry Department, Faculty of Pharmacy, Mansoura University, Egypt. She received master's degree (biochemistry) in 2015 then Ph.D. (Clinical Biochemistry) in 2018 from the same home institution. In 2019, She traveled as a visitor postdoctoral fellowship at Robert Gordon University, Aberdeen, Scotland, UK for 6 months. She returned to her job as lecturer of Biochemistry and started her postdoctoral research at her home institute in different disciplines related to the molecular pathways underlying diseases and the effect of natural compounds and drugs in modulating these pathways.

Progress report on molecular characterization of measles virus in central african republic: 2013-2016

Joel Wilfried Dote[1], Marilou Pagonendji[2], Laure Gnikpingo Kaye[3], Judith M. Hübschen[4], Ionela Gouandjika-Vasilache*

[1]Institut Pasteur de Bangui, BP 923, Bangui, Central African Republic
[2]Institut Pasteur de Bangui, BP 923, Bangui, Central African Republic
[3]Université de Bangui, BP 1450, Central African Republic
[4]Luxembourg Institute of Health, 29, rue Henri Koch, L-4354 Esch-sur-Alzette, Luxembourg
[5]Institut Pasteur de Bangui, BP 923, Bangui, Central African Republic

Introduction: Measles is one of the most important causes of morbidity and mortality in young children in Africa, despite the existence of an effective vaccine. Many African countries began implementing national measles elimination programs in 2015. However, it remains a public health problem on the continent.

Material and methods: A descriptive retrospective study was conducted at the Institut Pasteur in Bangui, using blood samples collected within 4 days of rash onset from measles IgM positive patients between 1st of January 2013 to 31st of December 2016 to attempt genotyping. Measles virus RNA was amplified by RT-PCR and the amplicons were sequenced to determine the circulating genotypes.

Results: Out of 2229 sera received at the WHO National Reference Laboratory for Measles, 679 were positive for measles IgM antibodies. The age group comprising 1-4-year-old children was most affected with 46% (314/679). Among the 135 sera collected within 4 days of rash onset, 24 samples yielded amplicons for sequencing (17.7%). Phylogenetic analysis showed the circulation of genotype B3 between 2013 and 2016 in the Central African Republic.

Conclusion: This study confirmed the endemicity of genotype B3 in the Central African Republic. The high number of cases in the 1-4 years age group evidences the poor vaccine coverage for measles.

Audience Take Away:

- We present data issued from laboratory measles surveillance performed at the WHO National Reference Laboratory hosted at Institut Pasteur de Bangui. Few data are available on the MV genotypes circulating in African Countries. Our data fill an exiting gap. It also shows that in the absence of nasopharyngeal and salivary swabs or urine samples, RNA virus can be detected by RT-PCR from blood samples collected within 4 days after rush onset.

Biography

Dr Ionela GOUANDJIKA-VASILACHE is a virologist, in charge of the Enteric Viruses and Measles Virus at Institut Pasteur de Bangui, Central African Republic. She received her PhD degree in 2006 at Université Pierre et Marie Curie, Paris, France. She has published 32 articles in SCI(E) journals.

Promoting Traditional Healthcare research in Post Covid-19 Era

[1]Dimallkumar A. Shah, [2]Ashok Mahajan

[1]Babaria Institute of Pharmacy, BITS Edu Campus, Vadodara, Gujarat India
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Covid-19 pandemic has taught entire world a big lesion. Every country is trying to protect their citizen and trying to develop drugs and vaccines. It is high time for every country to focus on basic research and promote research activity. It is very critical situation in all developing and underdeveloped countries where they are mostly reliant on developed countries for their healthcare needs. It is necessary for all the countries to promote basic research so that peoples can be saved from such pandemic conditions. Use of traditional therapies including ayurveda and homeopathy has proven useful in some of the cases. Promoting traditional medicines can prove useful for the world, but such therapies are suffering problems with the regulatory compliance. As Ayurvedic formulations are extract of plant, it may contain many ingredients which are difficult to quantify. Even the method of collection, extraction and preparations plays an important role with the success of therapy. It is necessary to focus research on traditional system of medicines as synthetic medicines have not proven useful in such situations. The presentation will mainly focus on traditional research opportunities for the healthcare sector in post Covid era.

Audience Take Away:

The presentation is focused on role of healthcare sector in post Covid era and how to promote research in such situation. The researchers will gain insight about the opportunities with the traditional systems of medicines and strengthening of healthcare sector in every country.

Biography

Dr. Dimalkumar Shah is presently working as Professor at Babaria Institute of Pharmacy. He has more than 17 Years of teaching and research experience. He has published more than 75 research articles in indexed journals. He has published 7 Books in the field of analytical chemistry. He is recipient of best researcher award at 5th Indo-Malaysian conference organized by Association of Pharmacy Professionals in year 2019.

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