

# 2<sup>nd</sup> Edition of Vaccines Virtual 2020

August 18-19, 2020

# VACCINES VIRTUAL 2020

AUGUST 18-19, 2020

**Theme:**

Vaccines: Tugboats of Preventive health

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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* **Vaccines Virtual 2020** |

2<sup>nd</sup> Edition of "**Vaccines Virtual 2020**" during **August 18-19, 2020** with the theme "Vaccines: Tugboats of Preventive health" will offer you an impressive roster of speakers, quality attendees and compelling content and is an excellent opportunity for leading academicians and scholars from universities and institutes to interact with the world-class scientists. You can increase your professional skills in this free time and discuss the practical challenges encountered and the solutions adopted.



# KEYNOTE FORUM

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SESSIONS ON:

INFECTIOUS DISEASES | COVID-19 | VACCINES

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VACCINES VIRTUAL 2020



**Dan Jiang, MMedSci, FBACc, FATCM**

Hallam Institute of TCM, UK

## Contacted principles and TCM treatment on post-syndromes of Covid-19

Covid-19 is a pandemic infective disease which has been spreading throughout whole world in the upper half year of 2020. There has been more than 11 million of cases to be infected and more than 528 thousands of cases to be died from it which is involved in 216 countries, these information is reported for Covid-19 daily situation issued in 5th Jul 2020 by WHO, and this figure is increasing daily. Due to such bigger amount of patients' appearance, some post-syndrome of Covid-19 are unavoidably leaving after they are self-healed or treated in the hospitals or anywhere else, they have not recovered completely, still remain some unwanted symptoms, some of them can be quite serious which are possible to disturb them for the rest of their life. We should do and be able doing some significant helps for them with Chinese herbal medicine (TCM). I will discuss these common occurrences of post- syndromes which I have treated: inferior function of lungs, dysfunction of gastrointestinal system, Psychiatric disorder, Post-virus-Chronic-fatigue syndrome, post inflammation of Sexual organs and how manage these post syndromes of Covid-19 with TCM here. TCM should play more effect for helping post-syndromes of Covid-19 after reopening clinics with full of our treating technologies. Key points: Covid-19, Corona Virus, Chinese herbal medicine, TCM.

### Audience Take Away:

- Post-syndromes of Covid-19 have been appearing more and more which are disturb the quality of life to patients, possible remaining to rest of their life. We must have treating methods for helping them. TCM can play important effect on Post-syndrome of Covid-19.
- Introduce on how Chinese herbal medicine which is a unique, effective and easy manageable diagnosis and treating method identify and treat post-syndromes of Covid-19;
- Report on our diagnosing and treating model, and cases study;
- Analysis why TCM can play the significant effect to Post-syndromes of Covid-19? How do we evaluate the herbal superiority and inferiority?

### 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 China and 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.



# SPEAKERS DAY

SESSIONS ON:  
INFECTIOUS DISEASES | COVID-19 | VACCINES

## VACCINES VIRTUAL 2020

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## Walk-Through screening system for COVID-19

Ji Yong Lee<sup>1\*</sup> and Sang Il Kim<sup>2</sup>

<sup>1,2</sup>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 protects healthcare personnel as well as the COVID-19 patients.
- This research provide basic concept and detail solution for COVID-19 screening system.

### Biography:

Dr. Ji Yong 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.



## The advantage of traditional Chinese medicine in treating COVID-19

Jing-Yan Han

Peking University, China

91% COVID-19 patients in China used traditional Chinese medicine (TCM), and 90% of them recovered. TCM played an important role in the treatment of COVID-19 in China. TCM is not using one single Chinese medicine or one formula for all the COVID-19 patients, but using different therapies or formulas based on the stages and severity of the disease. When the virus is invading the respiratory and digestive tract, Yin-Qiao-San and Huo-Xiang-Zheng-Qi-San should be used to improve the symptoms in respiratory and digestive tract. When it comes to fever, cough and dyspnea, Ma-Xing-Shi-Gan-Tang or Qing-Fei-Pai-Du-Tang, which contains Ma-Xing-Shi-Gan-Tang should be used. In the stage of unconsciousness, Qing-Ying-Tang should be used. In the stage of shock, Sheng-Mai-San should be used. In the stage of hemorrhage and thrombus, Xi-Jiao-Di-Huang-Tang should be used. The above mentioned formulas inhibit leukocytes adhesion to the endothelial cells and inflammatory factors release, improve microvessel hyperpermeability and inhibit microvessel hemorrhage and thrombus, thereby exerting the therapeutic effect on COVID-19.

### Audience Take Away:

- TCM played an important role in the treatment of COVID-19 in China.
- TCM is not using one single Chinese medicine or one formula for all the COVID-19 patients, but using different therapies or formulas based on the stages and severity of the disease.
- The different formulas for different stages inhibit leukocytes adhesion to the endothelial cells and inflammatory factors release, improve microvessel hyperpermeability and inhibit microvessel hemorrhage and thrombus, thereby exerting the therapeutic effect on COVID-19

### 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.



## COVID-19 gastrointestinal and hepatological manifestations and treatment

Sarah El-Nakeep M.D.  
AinShams University, Egypt

**S**ARS-CoV-2 is the virus causing the most recent pandemic, which infected 20 million cases globally and responsible for the death of more than 600,000 patients. COVID-19 is the known disease caused by the virus as named by the WHO. Although, it primarily causes a respiratory illness with the possible progression to acute respiratory distress syndrome. It is also known to cause the cytokine storm and the hyper-coagulable state increasing the risk of morbidity and mortality from the disease. The gastrointestinal and hepatological manifestations of COVID-19 disease are important alternative presentation with associated complications especially in the extremes of age or the multisystem affected cases. Their diagnosis is mandatory and their management could be different from another case of common viral gastroenteritis or hepatitis.

### **Audience Take Away:**

- We will discuss the gastrointestinal and hepatological manifestations of COVID-19 (literature research)
- How to be aware of them, especially if the presentation is only concerning the GIT?
- What could be the best management plan for the associated gastrointestinal and hepatological manifestations and their associated complications?
- We will discuss difficult case scenario management.

### **Biography:**

Dr. Sarah El-Nakeep M.D. is an Associate professor in Internal medicine, Faculty of medicine, Ainshams University, Egypt. She has an M.D. degree in internal medicine and interested in the genetic background of the diseases and their clinical link.



## **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

**W**e 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 38o to 41o 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.

### **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.



## Artificial Intelligence-An effective tool to combat COVID-19

Amarjeet Gambhir

Lady Hardinge Medical College & Hospital, India

The coronavirus disease 2019 (COVID-19) caused by the SARS-CoV-2 virus originated in late December 2019 in Wuhan, China and over the last few months has spread exponentially to other parts of the world. In this worldwide health crisis, the medical community is desperately looking for new technologies to monitor & control the spread of the disease. Artificial intelligence is one such technology which has emerged as a powerful tool in the fight against the COVID-19 pandemic. AI applications such as natural language processing, speech recognition, data analytics, machine learning, deep learning & computer vision have been used to identify, predict & explain COVID-19 infections as well as help in managing the resulting socio-economic impacts. AI has played a significant role in the early detection & diagnosis of infection by quickly analyzing irregular symptoms and other 'red flags' and thus alert the patients & healthcare authorities. AI based models (COVID-Net, CAD4COVID) are used for analysis of x-ray, CT & MRI images with improved accuracy & reduced time. The terahertz radiation (t-ray) scanning unit & smart phone-based COVID-19 voice test are the latest AI based techniques under consideration for early & rapid detection of coronavirus disease. AI has helped in building an intelligent platform for automatic monitoring of the recovery of patients under treatment.

It has assisted in preventing or slowing the virus' spread through identification of clusters and 'hotspots' & surveillance and contact tracing of individuals. Intelligent drones & robots have been used to ensure compliance of individuals with recommended physical distancing & lockdown measures, broadcast information to larger audiences, disinfect public places & deliver food and medication. AI based virtual healthcare assistants (chatbots) and tele consultation have reduced the workload on already overwhelmed healthcare systems & response measures. This technology has the ability to track and forecast the nature of the virus from the available data as well as the future course of this disease and its likely reappearance. AI has been used for drug research by analyzing the available data on COVID-19 and for drug delivery design & development. It can act as a game changer for the development of antibodies & vaccines for the novel coronavirus. In a nutshell, AI has the potential to be an effective tool in the fight against COVID-19 and similar pandemics. However, its use is somewhat restricted by a lack of useful data as well as concerns for privacy & related human rights. A generous sharing of information and a more collaborative & multidisciplinary research is required to help realize its full potential to combat COVID-19.

### Audience Take Away:

- Applications of artificial intelligence in combating various aspects of Covid-19 pandemic such as: Early detection & diagnosis, Monitoring the treatment, Disease prediction, Disease surveillance, Disease prevention, Development of drugs & vaccines
- Potential challenges in its application

### Biography:

Dr. Amarjeet Gambhir graduated in dentistry from GDC, Indore in 2002 & completed his post-graduation in Oral & Maxillofacial Surgery from NHDC, Mumbai in 2006. He completed his 3 year Senior Residency from Lady Hardinge Medical College & Hospital, New Delhi in 2009. He then worked as a faculty at different dental colleges and was promoted to Professor, Oral & Maxillofacial Surgery in 2016. He again joined Lady Hardinge Medical College as a Faculty in 2016. He has worked as a co-investigator in pilot project on school-based sealant programme 2017 under Ministry of Health & Family Welfare, Government of India. He is a reviewer of various international journals & has published more than 15 national & international papers in indexed journals. He has also authored 3 books for dental postgraduate entrance examinations.

## Covid-19 Treated With Pseudo Active Plasma Therapy

Dr. Shrikant L. Kulkarni

Kulkarni Clinic, Maharashtra, India

Today the solution urgently needed against COVID -19 . Data suggest that BCG vaccinated countries have a lower mortality rate than the non-vaccinated countries. The BCG vaccine has been found to work by increasing the trained immunity and generating nonspecific heterologous immune response. So the immune system is boosted against other bacteria and viruses by eliciting non-specific innate and adaptive immunities. Innate immunity is the body's initial defence mechanism that comes into play immediately when a pathogen enters into the body. Adaptive immunity is the body's second level of defense, which develops as a result of infection with a pathogen or following immunization. The cells of the adaptive immune system include specialized white blood cells (B and T lymphocytes) which can contribute to either cell-mediated immunity or antibody-mediated (humoral) immunity. When pathogens enter the body, white blood cells of the immune system attack first, and handle most of the infection. If these cells fail the adaptive immune system comes forward along with T cells B cells to help fight the pathogens. Once the pathogens are eliminated a small portion of these pathogens specific cells transform into memory cells that are T cells and B cells. Immunologic memory is the immune system's ability to remember its experience with an infectious agent. Plasma therapy is convalescent plasma taken from the patient who has survived an infection in case of COVID-19. This passive antibody therapy provides antibodies immediately but lasts for a short time frame of weeks to months. They are rich with antibodies that their immune system produces to help them to eliminate viruses. The proposed treatment method, "PSEUDO ACTIVE IMMUNITY PLASMA THERAPY" works as follows. A person vaccinated with BCG in early childhood or exposed to TB but completely recovered, the T and B cells in them produce antibodies against TB and viruses and develop active immunity. This is the treatment. A healthy individual age group between 35 to 40 years whose plasma is full of T cells and B cells which can produce antibodies against nonspecific viruses as well as known TB. If you transfer this protective immunity B or T cells to the recipient as a treatment that will be secondary hosts where memory cells will survive for a long time and also protect the secondary host by producing their own antibodies. These will be used in COVID-19 patients to increase their immunity and stimulate their own antibodies with the help of transfused T and B cells. The proposed method is a very safe and effective method. This will help the patient to increase their immunity as well as producing antibodies by fighting with the virus by borrowed B cells acquired through donor plasma transfusion. Logically with the help of passive plasma therapy we are borrowing the antibodies which are short lived in the body, It is better to borrow B cells through pseudo active immunity plasma therapy will help to develop their own antibodies against viruses which stay for a long period and also increase immunity against covid- 19.

### What will audience learn from your presentation?

- No definite treatment for COVID -19 on site yet. Killing of the virus antigens in the body with the help of antibodies is the choice of treatment. In serious patients the immunity is reduced so they can't kill the pathogens. So passive plasma cell therapy is used where the readymade antibodies are transfused from plasma donors to patients to increase immunity. But these antibodies are short lived, and chances of reinfection.
- So pseudo active immunization plasma cell therapy is the treatment of choice. Where the plasma donors memory cells B and T cells are transfused to the recipient. These cells produce antibodies and also increase the immunity to kill the pathogens.

### Biography:

Dr. Shrikant L. Kulkarni completed his M.S.(General Surgery) in 1975 from B.J. Medical College Pune, Maharashtra, India. The bachelor's degree M.B.B.S. completed from Miraj Medical College. Since 1971 he has worked at several government hospitals like the Wanless Hospital Miraj, Sangli General Hospital Sangli, Sassoon Hospital Pune and multispecialty hospitals like Ruby Hall Clinic, Pune and Jahangir Nursing Home, Pune. For the last 35 plus year she has been working at his own hospital at Chinchwad, Pune Maharashtra India.



## Impact of SARS-COV2 pandemic on the management of children with cancers – A retrospective single centre study from a developing country

Adarsh Kancharla

Sri Ramachandra Institute of Higher Education and Research, India

**Purpose or Background:** Knowing that more than 80% of pediatric malignancies are curable, the main challenges for pediatric oncologists remained to be the timely delivery of chemotherapy during this SARS CoV2 pandemic. We present data from our centre on the impact of pandemic on management of children with cancers.

**Method or Case:** Our hospital caters to nearly 100 newly diagnosed pediatric malignancies annually. Ours is unique as we have a separate subsidized ward where same care is given through insurance and NGO support for patients from low socioeconomic status. Of the 342 admissions after the onset of pandemic, screening for the child and mother were done for 82 admissions. We studied this population with the aim of assessing the impact of management.

**Results or Progress:** Of the 17 new children diagnosed with various cancers, only 58% initiated treatment.

Treatment default numbers had gone up to 12 children in 3 months, whereas the previous default rate was only one in past 3 months. Financial reasons and fear of acquiring infection remained the most common reason to default despite support from NGO and cancer relief fund support from the institution. Shared care with pediatricians and nearby pediatric oncologists was sought to keep the treatment ongoing.

Those who tested positive (4.1% of those tested) were quarantined at home/ hospitalized for 2 weeks and were started on chemotherapy after repeat testing. All were asymptomatic and among those with symptoms of fever or respiratory complaints, none were positive. No morbidity or mortality was noted in this cohort.

**Conclusion or Discussion:** There were no increase in COVID related medical complications. The impact was indirect in form of treatment default, delay in chemotherapy and significant increase in cost of care. It is safe to run Pediatric oncology in developing countries with appropriate precautions, shared care and adequate funding.

**Keywords :** SARS CoV2, COVID in cancer, Pediatric Hemato- oncology, Chemotherapy during pandemic, Funding for cancer treatment, Shared Care.



# KEYNOTE FORUM

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SESSIONS ON:  
NEUROLOGY | PSYCHIATRY

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## Adam Wisniewski

Nicolaus Copernicus University in Torun, Poland

### Safety and efficacy of fibrinolytic therapy in ischemic stroke with unclear time of onset

**Background:** Intravenous fibrinolytic therapy within 4.5 hours of stroke symptom recognition using intravenous Alteplase can be beneficial for patients who awaken with stroke symptoms or have unclear time of onset and who have DWI lesion with no visible signal changes in Flair sequences of Magnetic Resonance. This is so called “wake up” stroke protocol that gives a chance for treatment and recovery for patients who waken with stroke symptoms. **Views:** We showed some cases of patients who underwent “wake up” stroke protocol that is recommended by American Stroke Association / American Heart Association and European Stroke Organisation. In general, we treated the patients who met the inclusion criteria developed by the primary trial, but in some cases we decided to extent the potential eligibility to include to procedure or attempt fibrinolytic treatment despite the lack of data on therapeutic possibilities in specific cases or circumstances. The results of therapy were positive- we did not observe any case of clinical deterioration or secondary intracerebral bleeding as adverse effects of intravenous Alteplase treatment. Most of the patients benefited from the treatment which translated into a lower score in National Institute of Health Stroke Scale and lower score in modified Rankin Scale. **Conclusions:** Fibrinolytic intravenous treatment with Alteplase according to wake up stroke protocol is potentially safe and beneficial for patients. Further studies analysing the extent of inclusion criteria for increase number of potentially curative patients who awaken with stroke symptoms or have unclear time of onset are needed.

#### Audience Take Away:

- Presenting primary wake-up protocol as a standard therapy of ischemic stroke, Report on our diagnosing and treating procedure, and cases study.
- Inclusion/exclusion criteria of primary protocol and extending proposal of authors,
- Showing some clinical cases requiring difficult therapy decisions regarding the protocol
- Highlighting the safety and effectiveness of the protocol

#### Biography

Dr. Adam Wisniewski is currently working as Assistant Professor in Department of Neurology at Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun, Poland. He received his Medicine Doctor degree on December, 2018 from Nicolaus Copernicus University in Torun, Poland. From 1 October 2019- the Head of Stroke Intensive Unit in Department of Neurology, The University Hospital No 1 in Bydgoszcz, Poland. Dr. Wiśniewski has authored several relevant publications in respective peer-review journals. His publications reflect his research interests in relationships between stroke and platelet reactivity. He is a member of American Heart Association/ American Stroke Association- Stroke Council, European Stroke Organisation, World Stroke Organisation, and European Academy of Neurology.



# SPEAKERS | DAY 1

SESSIONS ON:  
NEUROLOGY | PSYCHIATRY

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## s-APP-alpha peptide as a possible new target in alzheimer's Disease treatment: A theoretical approach

<sup>1</sup>\*Santos Gesivaldo, <sup>2</sup>Avila Marcos

<sup>1</sup>State University of Southwestern Bahia(UESB), Brazil

<sup>2</sup>Tolima University, Colombia

Alzheimer disease as neurodegenerative disorders of the central nervous system shares common metabolic pathways associated with the default network (DMN) that seems to suffer imbalances in their Connectome. They also relate to an abnormal high level of peptides and catabolites, such as that derived from Amyloid Precursor Protein (APP), which plays a key role in Alzheimer's disease. In this study, we proposed to evaluate a possible interaction between sAPP-alpha peptide, derived from the original protein APP, and the insulin-signaling pathway, using computational tools (systems biology and chemoinformatics). After a set of docking simulations, we have found that sAPP-alpha (non-amyloid) binds with high affinity to the site L1 of the insulin receptor, interfering with its signal, and probably producing synaptogenic breakdown, as well as increasing their stabilization. Become an opportunity to the development of new strategies to tratmento of Alzheimer's condition.

**Keywords:** Autism, Alzheimer disease, Amyloid precursor protein, Insulin, System biology, metabolomics.

## **Fry pan paediatric mother Pune University and followed depression direction worst living against of credit social distancing of Burnside mouth**

Rahul Hajare

Indian Council of Medical Research, India

**P**hone sex has a safe and easy way to keep the spark in a relationship alive and remain free from infection. Infection has higher side. When everyone knows has practising social distancing and self-isolation where does that leave sex? The country has in a lockdown. People have to keep themselves confined to their homes; it doesn't preclude the possibility of sex. It has unrealistic to believe that during the lockdown; billions of people won't give in to their most primal desire and abstain from lovemaking. The lockdown has intended to keep people confined to their homes; what they do inside is their own business. The threat posed by COVID-19.

# KEYNOTE FORUM

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SESSIONS ON:

INFECTIOUS DISEASES | COVID-19 | VACCINES

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## David Hoffman Van Thiel, MD, Director

Advanced liver & Gastrointestinal Disease Center, USA

### The NAFLD conundrum: How to distinguish NAFLD from NASH utilizing a novel biomarker without a liver biopsy

**Background:** NAFLD is a disease characterized by increased hepatic fat with a global prevalence of 25.2%. NASH, a subtype of NAFLD is characterized as having varying degrees of fibrosis, hepatic fat, hepatocyte injury, and inflammation. Both forms of NAFLD can progress to cirrhosis and hepatocellular carcinoma with this progression occurring more frequently with NASH. The health care costs of NAFLD are substantial as a result of the number of hospital admissions, the severity of the underlying liver disease, hepatic and non-liver disease mortality, all of which are greater in NASH as compared to NAFLD. Thus, it is important to distinguish between NAFLD and NASH. A host of algorithms have been used for this purpose with only modest success. Ultrasound assessments using transient or shear wave (SWE) have been used for this purpose with the latter having the advantage of estimating the hepatic fat content determined by the determined hepatorenal ratio (HRR). More recently, MRE has been utilized as well. SWE is more available, cheaper, and less demanding in terms of time commitment and experience as compared to MRE which is limited to a few research centers.

**Aim:** To identify a serologic marker that distinguishes those with NASH from those with NAFLD.

**Methods:** From a total of 105 patients investigated with SWE, 40 patients were selected after matching for BMI, presence of type 2 diabetes mellitus, hypertension, and hyperlipidemia. 10 were identified as liver disease controls not having NAFLD, and 15 with NAFLD and 15 with NASH. Each individual had the following studies performed: Complete blood count, BUN, creatinine, prothrombin time, aPTT, total bilirubin, AST, ALT, alkaline phosphatase, gamma glutamyltranspeptidase, blood sugar, hemoglobin A1c, plasma leptin and adiponectin. ANOVA utilizing the EPI 7 program of the CDC was utilized for the statistical analyses.

**Results:** The only laboratory parameter that distinguished those with NASH from those with NAFLD and the liver disease controls was the plasma level of leptin ( $P < 0.03$ ). Adiponectin levels declined progressively as the measures of glucose dysregulation (fasting blood sugar and insulin levels) increased ( $P < 0.05$ ).

**Conclusions:** The plasma level of leptin was the only factor that distinguished individuals with NASH from those with either NAFLD without NASH and the liver disease controls.

#### 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 between 1967-1969 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.

SPECIAL TALK

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## Treating patients with chakras energy deficiencies and Coronavirus infection

Huang Wei Ling

Medical Acupuncture and Pain Management Clinic, Brazil

**Introduction:** Coronavirus is a virus that emerged in Wuhan China (December-2019). On May 18th, there was 4,872,016 confirmed cases and 319,206 deaths. In TCM, coronavirus infection is classified as external pathogenic factor invasion. According to a previous study of the author, more than 90% of the 409 patients analyzed have chakras energy deficiency.

**Purpose:** The purpose of this study is to demonstrate that the energy of the chakras is important to maintain the functioning of the organs, circulation of the energy on the five massive organs. Demonstrate how the lack of this energy could be leading to the complications associated with coronavirus infection, and not by the viral infection in itself.

**Methods:** A clinical case report of a 42-year-old male patient, lawyer and work on the military. He was diagnosed with chakras energy deficiencies in November of 2019, and was performing treatment for replenishment of the chakras energy. In May 2020, the patient returned, reported to have symptoms of redness on the face and neck, when he went to bathroom to check on the redness, he fainted for the period of five minutes. He was taken to the emergency, exams were performed and nothing was found. He also reported shortness of breath. The patient had no cough and no fever. He received treatment based on the reasoning of Traditional Chinese Medicine, through the Five Elements theory. The shortness of breath was associated with deficiency of the Kidney or the second chakra.

The previous measurement had shown deficiency in 7 of the 7 chakras. The patient was oriented to increase the water intake to improve the energy of the Kidney, and treatment was started with homeopathy medications, to replenish the energy of the chakras, according to the theory of the author entitled Constitutional Homeopathy of the Five Elements based on Traditional Chinese Medicine, on concentration of 1000CH, as he had taken 30CH and 200CH of the homeopathy (Natrium Muriaticum, Phosphorus, Sulphur, Calcarea Carbonica, Silicia). Medication for taking out Heat retention were also recommended, according to Traditional Chinese Medicine (Mercurio solubilis 200CH and Aconitum 6CH) as well as Chinese dietary counseling. After, it was found that the patient had been in contact with three other people who have coronavirus infection and died from the complications.

**Results:** The patient presented great improvement of all symptoms, on the following day of the start of the medication, not needing hospitalization. **Conclusion:** When treating patients with chakras energy deficiencies it is important to be careful with the recommendation of high-concentrated medications, because according to the Arndt-Schultz law, high-concentrated medication will harm the vital energy even further, leading to increase the internal Heat, that is comprehended as the inflammatory process in Western Medicine and increasing the risk of having intravascular coagulation, myocardial infarction, renal insufficiency and respiratory insufficiency due to the lack of energy of the chakras that is responsible for the proper functioning of these organs.

### 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 nowadays.

- They will be able to understand the patient in a more holistic way and analyze the implications and complications of coronavirus infection nowadays.
- The knowledge will be centered on the patient, not on the virus, according to Traditional Chinese Medicine, focusing on the energy imbalances to lead to cure, not focusing only on the pathogen.
- Yes, this research could be expanded globally to demonstrate how viewing the patient individually could diminish the complications and deaths associated with coronavirus infection.
- Yes, this study has the goal of working with energy imbalances and chakras of the patients leading to less complications and diminishing the death rate on coronavirus infection patients.

## **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.

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## **Pseudomonas aeruginosa biofilm inhibition by propolis**

\*<sup>1</sup>Lorena Abadia-Patino, <sup>2</sup>Carlos Enrique Bravo, <sup>3</sup>Jose Luis Prin

<sup>1,2,3</sup>Eastern University, Venezuela

**P**ropolis is a resin produced by honeybees. It has antimicrobial activity on Gram positive and Gram negative bacteria. Depending on the origin of propolis, its compounds change, and up to 150 different components can be described. Biofilms are dynamic heterogeneous communities, formed by microorganisms that synthesize and secrete a protective matrix that firmly adhere to a biotic or abiotic surface, in which bacteria are embedded in a dense and viscous barrier of sugars and proteins. The biofilm is a barrier that protects microorganisms from external threats, as antibiotics. To evaluate the activity of propolis on biofilms produced by strains of *Pseudomonas aeruginosa* with different antibiotic profiles. Susceptibility testing and synergism were performed in all strains. Biofilm production level was determined onto nitrocellulose membranes and transmission electronic microscopy. Biofilm inhibition propolis was done on plate dilution. At “Dr. Julio Rodriguez” hospital, in Cumana, *P. aeruginosa* strains were isolated from different infectious processes, mainly diabetic foot. All the strains produced biofilm at mild, moderate and high levels. Sixty percent of the strains are producers of metallo-beta-lactamases, and 49% of AmpC. The predominant antibiotype was resistance to aminoglycosides and fluoroquinolones (XII). Seven strains were resistant to colistin. Biofilms treated with propolis (10 µg/ml) were almost completely inhibited. We conclude that propolis is a good option in the local treatment of patients with diabetic foot, apart from debridement to eliminate the biofilm formed by *P. aeruginosa* bacteria.

### **Audience Take Away:**

- They can use propolis as a new substance to treat bacterial resistant strains and in topical infections untreatable.
- Avoid to amputate diabetic patients.
- They can use propolis in other clinical uses, because it has anti-tumor, healing, analgesic, anti-inflammatory, antiviral, anti-parasitic, diuretic activities, among others.
- There are no possibilities to have new antibiotic classes to treat bacterial resistance strains. We are on post-antibiotic era. We have to go back to nature to try infections and this is a nice way, because it is neither expensive nor toxic.
- Propolis is a safe substance that could have several uses in medicine. Scientists have just to experiment with it and use it in practical medicine.

### **Biography:**

Dr. Lorena Abadia-Patino studied Bio analysis at the Orient University, Venezuela and graduated in 1997. In 1998, she went to Paris to do 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 BacterialResistance Laboratory. At present, she has the position of an Associated Professor at the UDO. She has published several papers, chapters and books. Associated editor of The Journal of Infection in Developing Countries.



## Surface plasmon resonance based biomimetic sensor for urinary tract infections

Erdogan Ozgur<sup>1</sup>, Aykut Arif Topcu<sup>2\*</sup>, Erkut Yilmaz<sup>3</sup>, Adil Denizli<sup>4</sup>

<sup>1,4</sup>Hacettepe University

<sup>2,3</sup>Aksaray University

Urinary tract infection (UTI) is a common bacterial infection of the urinary system, caused by a gram-negative bacteria; *Escherichia coli* (*E.coli*), and it annually affects nearly 10 million people through the World. If left untreated, UTI can cause even deaths; so, the early diagnostic of UTI is of great importance to prevent the unwanted conditions. Urine culturing, ELISA, urine microscopy, and the other methods like polymer chain reaction (PCR), by using instrumental devices, and biosensor based detection could be used to identify UTI; but, the selected methods having some limitations such as the long incubation periods, need well-trained person, costly equipment, and labeling can restrict the effective use in practice.

So, the choice of an effective method for diagnostic of UTI play a vital role to overcome these limitations, and among them, surface plasmon resonance (SPR) based sensor, which measures the change in the refractive index at the sensor surface depending on the analyte concentration of interest could be alternatively used in various purposes including medical diagnostic, and nowadays, the results of the integration of tailor-made receptors by using molecular imprinting technique (MIT) with SPR based sensors are highly satisfying of a clinic of interest. In this work, we designed tailor-made *E.coli* receptors by using MIT on the sensing surface SPR sensor, and then during the formation of the film on the sensing layer, silver nanoparticles (NPs) were entrapped to improve the better *E.coli* sensing in real-time and label-free. After that, the sensor was characterized in the ranges of  $1.5 \times 10^1$ - $1.5 \times 10^6$  CFU/mL, the selectivity studies and feasibility of the sensor were tested two other bacterial strains and in urine mimic, respectively.

### Audience Take Away:

- The audience will know, how to use the molecular imprinting technology for designing of the tailor-made receptors, and know about their advantages, moreover, they also know the basic concepts of biosensor platforms, and how to combine them with the other approaches for various purposes.
- If the audience works as an academician, who can use this presentation for teaching or improve the sensing performance for clinical trials, and if the audience is an expert on biosensing, who can easily modify these platforms to use in home-care.
- Our work serves an alternative method for the diagnostic of urinary tract infections, and the experimental results of our biosensing platform by the combination of tailor-made receptors, which support the fabricated our platforms for *Escherichia coli* (*E.coli*) sensing with high selectivity in aqueous solution and urine mimic.

### Biography:

Dr. Aykut Arif Topcu got his PhD. Degree at Kirikkale University, 2015, and he joint BİOREG group at Hacettepe University in 2009, and he studies as an Assistant Prof at the Aksaray University, Turkey. His research fields are based on the applications of the affinity chromatography, and molecular imprinting technology such as biosensors for the clinic of interests, purification of proteins, toxic materials by using different types of affinity-based materials.



## Microbial-mimicking mesoporous silica: An adjuvant system proposal

Carlos M. Valdemar-Aguilar

Universidad Nacional Autónoma de México, Mexico

**Abstract:** Vaccination represents one of our greatest weapons against infectious diseases. However, there is a need for optimizing vaccine potency, safeness and stability. Subunit vaccines have proven to be more stable and safer than live attenuated vaccines, but they lack the potency to evoke a correct immune response. Nanoparticles have been used in biomedical applications due to certain properties like shape, surface reactivity, and size. Among them, inorganic nanoparticles like those of mesoporous silica have gained interest due to their biocompatibility, absorbance/encapsulation capability, and easiness of functionalization. We designed a new carrier composed of mesoporous silica particles known as SBA-15 (Santa Barbara Amorphous-15), modified with a surface lipid bilayer (SLB) that displays an amphipathic lipid with adjuvant capabilities. The particles were synthesized by condensation of tetra-ethyl-ortho silicate in the presence of Pluronic 123. Phosphatidylinositol mannosides (PIMs), which are known to be TLR-2 agonists from mycobacteria, were isolated and assembled within SLB. Cationization of SBA-15 particles with amine groups was performed in order to promote the electrostatic interaction between silica and the negative phospholipid bilayers. Electron microscopy, raman spectroscopy, zeta potential, and Fourier transform infrared (FTIR) analyses were used to characterize the as-obtained particles, and their interaction with THP-1 macrophages was assessed through confocal and DIC microscopy. The biomimetic colloids, named PIM@SBA-15, showed biocompatibility towards human fibroblasts and were found to colocalize with Toll-like receptor TLR-2 upon their incubation with THP1-derived macrophages. Furthermore, the particles induced the formation of pseudopods and were internalized into phagocytic cells. In all, these data suggest the usefulness of PIM@SBA-15 particles to better comprehend the interactions between immune cells and PIMs.

### Audience Take Away:

- Using nanoparticles to enhance the immune response and the delivery of antigens, as a possible adjuvant system.
- The combination of nanoparticles, such as mesoporous silica particles and liposomes, to develop a biomimetic system, capable of inducing a THP-1 macrophage response and the development of pseudopods.
- A possible carrier such as the SBA-15, decorated with a surface lipid bilayer composed with mycobacterial lipid as an immune stimulator.

### Biography

Carlos M. Valdemar Aguilar completed a postgraduate program in M.S. in Nanotechnology at the Autonomous University of Queretaro (Mexico) and he is currently working towards a Ph.D. in the Biomedical Sciences Program at the National Autonomous University of Mexico (UNAM). He is working at the research group of Prof. Luz M. Maria Lopez Marin at the Center of Applied Physics and Advance Technology, UNAM, at Queretaro.



## The Purpose of Temperature of Fever in Covid -19

K. M. Yacob(Chief Physician)  
Marma Health Centre, Kochi, Kerala, India

**W**hen the disease made by virus becomes a threat to life or organs blood circulation decreases, Temperature of fever will emerge to increase prevailing blood circulation. And it acts as a protective covering of the body to sustain life.

When blood flow decreases to the brain, the patient becomes fainted-delirious. If we try to decrease the temperature of fever, the blood circulation will further be reduced. Blood circulation never increases without temperature increase. Delirious can never be cured without an increase in blood circulation.

The temperature of fever is not a surplus temperature or it is not to be eliminated from the body. During fever, our body temperature increases like a brooding hen's increased body temperature. The actual treatment to fever is to increase blood circulation.

Two ways to increase blood circulation.

1. Never allow body temperature to lose
2. Apply heat from outside to the body.

When the temperature produced by the body due to fever and heat which we applied on the body combines together, the blood circulation increases.

Then the body will stop to produce heat to increase blood circulation. And the body will get extra heat from outside without any usage of energy.

### **How can we prove that the temperature of fever in Covid -19 is to increase blood circulation?**

If we ask any type of question-related to fever by assuming that the temperature of fever is to increase blood circulation we will get a clear answer. If avoid or evade from this definition we will never get a proper answer to even a single question

If we do any type of treatment by assuming that the temperature of fever is to increase blood circulation, the body will accept, at the same time body will resist whatever treatment to decrease blood circulation.

If we measure the heat energy used for which activities in fever, we will know the purpose of the temperature of fever.

No further evidence is required to prove the temperature of fever in Covid -19 is to increase blood circulation.

### **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.



## Prevalence of antibiotic resistance in Escherichia coli isolates from poultry environment and UTI patients in Kerala, India: A comparison study

Stelvin Sebastian

International Society for Infectious Disease, India

**Background:** Limited studies are done regarding antimicrobial resistance of pathogens in poultry environment in India and its transmission to humans. The use of antimicrobials in food animal production is not properly regulated in India. So many clinically important antimicrobials are used indiscriminately.

**Objective:** Our aim was to do a comparative analysis of the prevalence of antibiotic resistance in Escherichia Coli isolates from poultry environment and UTI patients.

**Methodology:** Two poultry farms each from six areas in Muvattupuzha region of the state of Kerala in India were selected for study. From each farm, samples of fresh fecal matter, litter from inside, litter from outside shed, nearby agricultural soil and control soil were collected. E.coli was isolated from each sample and antimicrobial susceptibility testing of E. coli was done with fifteen antibiotics. Antibiogram of UTI patients were collected from the tertiary care hospital and those were compared with the antibiograms of poultry samples.

**Result:** 31 of 48 samples showed E. coli growth. All samples were resistant to ampicillin, amoxicillin, meropenem and tetracycline. Similar resistance pattern in poultry environment and UTI patients were seen for antibiotics such as ampicillin, amoxicillin, amikacin, and ofloxacin.

**Conclusion:** E. coli were resistant not only to extended spectrum beta lactams, but also to carbapenems which may be disseminated to environment where litter was used as manure. This might be due to irrational use of antibiotics in chicken and poultry feed as growth promoter.

**Keywords:** Antimicrobial resistance, poultry, E. coli, UTI patients, Irrational, Environment

### Biography

EDUCATION: Doctor of Pharmacy (Pharm D) - 71% - Nirmala College of Pharmacy (2014-2020) Kerala University for Health And Science Thrissur, Kerala

Diploma in Nutrition and Education - pursuing Indira Gandhi Open University, New Delhi

Higher Secondary (2014) - 92%

S.S.L.C (2012) - 96%

Aster Medicity Kochi (Clinical internship) - 3 month (Pulmonology, MICU, Urology, Neurology, CTVS, ILC) Nirmala Medical Centre - 12/6/15 to 20/10/19

General Hospital EKM - 1/07/18 - 01/08/18 (Oncology)

Healthcloud AI - 2 month Clinical internship - medical history collection of the patients for Assisting doctors.



## Indigenous Probiotic lactobacilli in combating bacterial infection - The insights

Shyamapada Mandal  
University of Gour Banga, India

This study authenticates the probiotic features and safety aspects of some indigenous isolates of lactobacilli from curd and infantile stools in West Bengal state, India. Such lactobacilli were characterized biochemically as well as through 16S rRNA gene sequence analysis for their identify confirmation. The lactobacilli had antagonistic activity against both gram-positive and gram-negative pathogenic bacteria, and the bacteriocin isolated from them demonstrated excellent antibacterial property. The  $\gamma$ -haemolytic lactobacilli strains without gelatinase and DNase activities tolerated high concentration of sodium chloride (2 – 6.5%), low pH (2 – 4%), and bile salts (0.125 – 0.5%). The 16S rRNA gene sequences of these probiotic lactobacilli strains have been submitted to the NCBI GenBank. The probiotic lactobacilli mentioned herein are thus safe for human consumption, and might be useful as non-antibiotic bio therapeutics in tackling multidrug resistant bacterial infection to humans, at least in our part of the globe.

**Keywords:** Probiotics, Lactobacilli, Bacteriocin, Antibacterial activity, Bacterial pathogens.

### Biography

Dr. Shyamapada Mandal, Professor, Department of Zoology, University of Gour Banga, focuses his study on molecular epidemiology of infectious diseases including COVID-19; probiotics, genomics and bioinformatics. He has published more than 100 articles in different journals of repute, with 7 book chapters. He acquired more than 24 years of research and teaching experiences in the field of biomedical sciences. Seven national academic and research awards have been conferred to him. Prof. Mandal is reviewer of more than 30 scientific papers in the field of Biomedicine, and is editorial board member of 6 biomedical science journals, and Editor-in-Chief for one journal.



## Factors Influencing The Utilization of Prevention of Mother to Child transmission of HIV (PMTCT) Services in Makurdi, Benue State, Nigeria

Omotowo Babatunde  
University of Nigeria, Nigeria

**Introduction:** The HIV pandemic remains a major public health problem affecting nearly all countries, regions and continents of the world. Globally, about 52% of 37.9 million people living with HIV are women.

**Objective:** To examine factors influencing the utilization of Prevention of Mother to Child Transmission of HIV (PMTCT) services in Makurdi.

**Methodology:** A cross-sectional study carried out among 337 HIV positive pregnant women across six government-owned hospitals and clinics. Data collected were analysed using SPSS version 22. Multiple regression analysis was used at the  $P=0.05$  level of significance. Ethical clearance was obtained.

**Results:** Findings from the study revealed that demographic variables influence the utilization of PMTCT services ( $R^2 = 0.231$ ,  $F = 3.825$ ,  $p < .05$ ). Demographic factors combined with knowledge of PMTCT significantly influence utilization of PMTCT services in Makurdi ( $R^2 = 0.148$ ,  $F = 9.757$ ,  $p < .01$ ). Also, years of HIV infection ( $R^2 = .234$ ,  $p < .01$ ), educational status ( $R^2 = 0.097$ ,  $p < .05$ ) and income status ( $R^2 = 0.023$ ,  $p < .05$ ) had influence on utilization of PMTCT services.

**Conclusion and Recommendations:** Demographic factors and knowledge of PMTCT have influence on utilization of PMTCT services. Health talks on PMTCT services, and empowerment of women should be encouraged.

**Keywords:** Utilization, Services, PMTCT, Makurdi.

### Audience Take Away:

- Audience will know some factors affecting utilization of PMTCT in Nigeria
- Demographic factors significantly influenced utilization of PMTCT
- Knowledge and educational status also influenced utilization of PMTCT.

### Biography

Dr. Omotowo Babatunde obtained MBBS from University of Ilorin, Nigeria in 1987. He completed MPH from University of Nigeria, Nsukka in 2006, and FWACP from West African College of Physicians in 2009. He joined the Department of Community Medicine, College of Medicine, University of Nigeria, Enugu Campus as a Lecturer in August, 2012, later became a Senior Lecturer in October, 2015. He was promoted as Associate Professor in October 2018. He was department MBBS Coordinator from August, 2012 to October 2018. He has published some papers in both local and international journals. His interests are infectious and non-communicable diseases.



## Invasion of epithelial cells is Correlated with secretion of biosurfactant via the Type 3 secretion system (T3SS) of *Shigella flexneri*

Duchel Jeanedvi Kinouani Kinavouidi<sup>1,2</sup>, Christian Aime Kayath<sup>1,2\*</sup> and Etienne Nguimbi<sup>1,2</sup>

<sup>1</sup>Marien Ngouabi University/IRSEN, Congo

<sup>2</sup>National Institute for Research in Exact and Natural Sciences (IRSEN), Congo

**B**io surfactants are amphipathic molecules produced by many microorganisms, usually bacteria, fungi, and yeasts. They possess the property of reducing the tension of the membrane interfaces. No studies have been conducted on *Shigella* species showing the role of biosurfactant-like molecules (BLM) in pathogenicity. The aim of this study is to assess the ability of *Shigella* environmental and clinical strains to produce BLM and investigate the involvement of biosurfactants in pathogenicity. Our study has shown that BLM are secreted in the extracellular medium with EI24 ranging from 80% to 100%. The secretion is depending on the type III secretion system (T3SS). Moreover, our results have shown that *S. flexneri*, *S. boydii*, and *S. sonnei* are able to interact with hydrophobic areas with 17.64%, 21.42%, and 22.22% hydrophobicity, respectively. BLM secretion is totally prevented due to inhibition of T3SS by 100 mM benzoic and 1.5 mg/ml salicylic acids. *P. aeruginosa* harboring T3SS is able to produce 100% of BLM in the presence or in the absence of both T3SS inhibitors. The secreted BLM are extractable with an organic solvent such as chloroform, and this could entirely be considered a lipopeptide or polypeptide compound. Secretion of BLM allows some *Shigella* strains to induce multicellular phenomena like “swarming.”

### Audience Take Away:

- This study has been accepted in Journal of Pathogens and that is in press as statut
- This will help the audience in their job to understand the *Shigella* pathogenesis.
- This research could use to expand in research of Gram negative bacteria and/or teaching as well to provide new and more information to assist of designing problem.

### Biography

Dr. Christian Aime Kayath studied at Marien N'gouabi University (Congo) and at the University of Liege (Belgium) graduated as D.E.S in 2005. He received PhD degree in 2010 at the University of Liege (Belgium). After teaching three years as Professor Assistant at Free University of Brussels, He joined the Marien Ngouabi University as Researcher. He is currently Head Manager in the Molecular Biology Lab of IRSEN and He is a senior Lecturer in Biochemistry and Molecular Biology since 2014 at the Marien Ngouabi University. He does research in Molecular characterization of Biomolecules like Biosurfactants and Bacteriocins. He also studies Bacteria-Bacteria Interactions and Host-*Shigella* Interactions.

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## The validation of High-throughput novel drug screening in *Trichomonas vaginalis*

Tahani ALSiari<sup>1\*</sup>, Manal Natto<sup>1</sup>, Prof. Harry De Koning<sup>1</sup>  
University of Glasgow, UK

**T**richomoniasis is one of the most prevalent non-viral sexually transmitted diseases (STDs), with millions of cases reported annually worldwide. The disease is caused by the anaerobic flagellated protozoan *Trichomonas vaginalis*, for which metronidazole is a long-established, effective first-line treatment. In recent years, however, metronidazole-resistant strains of *T. vaginalis* have been reported in up to 5% of trichomoniasis cases, prompting researchers to search for alternative treatments. However, the search for new drug candidates has been limited by the lack of an effective screening method. In this study, we report a newly developed, optimised screening technique that targets the chemical structure of the interior of the parasite. The optimised technique – an adaptation of the existing resorufin-based (Alamar blue) drug sensitivity assay – uses a cell-based plate reader assay, multi-drop dispenser, airtight incubation pods to create stable microaerobic conditions, and a fluorescent read-out of *Trichomonas* metabolic activity. *Trichomonas* is one of the few cell types with the reductive potential to reduce resazurin to resorufin and resorufin to dihydroresorufin, yielding highly-specific readouts based on diminishing fluorescence proportional to cell numbers from blue (resazurin) to pink (resorufin) to colourless (dihydroresorufin). In this study we tested the antitrichomonal activity of 40 nucleoside adenosine analogue compounds. Among these, 22 compounds were shown to have greater activity against *T. vaginalis* compared with metronidazole, with EC<sub>50</sub> values in the range of 0.056–0.8  $\mu$ M.

### Audience Take Away:

- The optimized screening technique is an effective methods to study anirichomonal activity.
- This technique targets the chemical structure of the interior of the parasite which help researchers find an alternative treatments for non-viral sexual transmitted disease (STDs)Trichomoniasis.

### Biography

Tahani Alsiari PhD Candidate at the University of Glasgow, Glasgow, United Kingdom. Graduated as MSc in 2016 from Long Island University, New York, United State. Joined the research group of Prof. De Koning at the Institute of Infection, Immunity & Inflammation at university of Glasgow early 2019.

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