

Proceedings of

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

**December 07-08, 2020 | Webinar**

## *Organizing Committee Members*



**Dr. Gary L. Murray**  
MD, FACC, FICA  
Director of Clinical research,  
The Heart and Vascular Institute,  
Germantown, TN USA



**Dr. Matteo Micucci**  
University of Bologna,  
Department of Pharmacy & Biotechnology,  
Italy

## *Moderator*



**Mr. Surendra, India**  
Moderator, International Scientific Coordinator,  
United Research Forum

# CONTENTS

Sl.No	Name	Title of Talks	Page No
1	MS. SUCHI	Adopting laughter therapy to get dosage of happy hormones to remove stress caused by being in slight pain ,being depressed, being unhappy anxious or sad. Saying positive affirmations aloud changes body cell energy.	5-6
2	Dr. Matteo Micucci	A molecular network based approach to fight viral infections: Focus on phytocomplexes, isolated compounds and SARS-COV-2	7-8
3	Dr. Ganesh Shanmugasundaram Anusuya	Hit Hard and Hit Early concept along with alternative treatment options and combination measures to manage the COVID 19 Pandemic : Experience Based on Whats App Consultations	9-10
4	Dr. Huang Wei Ling	Is it Possible To Treat Community-Acquired and Nosocomial Infections with the Same Method without the Use of Antibiotics?	11
5	Dr. Seong Woo Woo	Reliability Design of Mechanical Systems Subjected to Repetitive Stresses	13
6	Prof. Vladimir Zajac	A way to eliminate a new coronavirus and stop the second wave of infection.	14
7	Mr. Sunil Mishra	Prevalence of Human Bocavirus in Children Suspected with Respiratory Tract Diseases	15
8	Dr. Samuel Sunday Taiwo	Surveillance of Healthcare Associated Infections and Antimicrobial Resistance in the Area of COVID-19 Pandemic	16
9	Dr. Tatiana Hillman	Decelerating HIV-1Viral Escape by Inhibiting Entry into CD4 T Cells	17
10	Dr. Amresh Pati	Challenges in tigecycline susceptibility testing in Acinetobacter baumannii:Bad bug,no test	18
11	Dr. Nelly Raquel Gonzalez Arenas	SARS-CoV-2 identification in saliva: Are we interpreting the results correctly?	19
12	Dr. Adib Riazati	The Education of Different Viruses in Society is crucial to avoid Fear and Hysteria in the COVID-19 era	20
13	Prof. John J. Miles	Using synthetic biology to generate hyper-stable vaccines	22
14	Dr. Marco Paggi	Exploiting machine learning to support policymakers in the assessment of the impact of Covid-19 epidemic spread	23-24
15	Dr. Huang Wei Ling	Treating Patients with Chakras Energy Deficiencies and Coronavirus Infection	25
16	Dr. Tomas Veloz	The pandemic impact tensor: towards a calculus of counterfactual mobility restrictions	26
17	Dr. Gary Murray	COVID-19 Cardiac Complications: Is a Safe, Easy Treatment Right Under Our Noses?	27
18	Miss. Qian Zhou	Compliance measurement and observed influencing factors of hand hygiene based on COVID-19 guidelines	29
19	Prof. Soshu Kiriara	Biological Implant Fabrications with Fluctuated and Graded Dimensions by Stereolithographic Additive Manufacturing	30
20	Miss. Nimra Ashraf	Differential Diagnosis of Novel Corona Virus Pneumonia from Viral and Bacterial Pneumonia	31
21	Dr. Sonia Spandole-Dinu	Phylogenetic analysis and geographical distribution of torquetenovirus in the Romanian population	32
22	Dr. Yongjun Sui	Trained innate immunity in vaccine protection against intrarectal AIDS virus transmission	33
23	Dr. Asit Kumar Chakraborty	A new mechanism of Corona virus pathogenesis: Corona virus RNA Topoisomerase (Nsp2) and rRNA Methyltransferases (Nsp9/10/13/14/16) as therapeutic targets	34
24	Dr. Amresh Pati	Challenges in identification in Acinetobacter baumannii:A comparative analysis of three methods of identification	36
25	Dr. Mahnoor Patel	Global Pandemic COVID-19 (2019-nCoV)	37
26	Dr. Luis Del Carpio-Orantes	Tocilizumab and baricitinib in severe pneumonia due to COVID-19 in Veracruz, Mexico.	38-39



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Webinar

---

**DAY 1** | **KEYNOTE SPEAKERS**



International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

**MS. SUCHI**

Empowerment Advisor, Singapore

**Adopting laughter therapy to get dosage of happy hormones to remove stress caused by being in slight pain, being depressed, being unhappy anxious or sad. Saying positive affirmations aloud changes body cell energy**

**Statement of the Problem:** There is a lack of awareness about what happy hormones are, how to use positive words to feel energetic and what can be done to get happy hormones. People tend to feel unhappy for multiple reasons and neuropathic pain adds on Stress levels of not only the patient but the caregivers as well. Being in pain leads to feeling depressed and anxious in some cases.

**Methodology & Theoretical Orientation:** Review of Books and Research shows that getting a dosage of happy hormones will not only ease slight pain of the patient but feeling happy will also have a positive impact on the recovery of the patient. Adopting Laughter therapy and getting hormones which makes one feel good will help many to recover from Neuropathic pain /Long term sadness caused by having grief, Anger or Resentment, Depression & Anxiety.

**Findings:** One needs to work on his/her energies using Laughter Therapy which is a positive approach for not having Depression & Anxiety caused by Neuropathic pain. The therapy can be used as a Holistic way to recovery.

**Conclusion & Significance:** The Laughter therapy which includes ways to get the dosage of happy hormones promotes overcoming Depression & Anxiety caused by Neuropathic pain, is a fun way to manage pain. Repeated sessions to be conducted to remind patients that life while having pain or during the recovery should go beyond just seeking medical and counselling help and also include rebuilding Spiritual, Physical, Emotional, Relational and Mental health. The model has been put together from for testing in many settings including hospitals, elderly homes and senior citizen centres. This is not a research book or paper. It is just an effort to demystify the help available for Depression & Anxiety caused by pain. It is an attempt to motivate and encourage people to seek help and take a simple approach to remember and work on all aspects of their recovery.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

---

## **Biography:**

MS. SUCHI is an experienced International Pre School Principal/Manager who picked up Laughter exercises from many coaches around the world. She then designed 'Laughter Therapy' which is being used in many places such as hospitals and Senior Activity Centres. She provides individual and group therapy in educational and home settings. A former Manager / Trainer is now engages in building social awareness about Holistic approach for recovery. Be it Depression, Anxiety caused by physical or emotional pain, Death in the family and the harm the unhappiness brings to people, families and communities. Her aim is to encourage people to seek help early and get on the path to recovery. Her works has been featured in local press, TV and Radio and has been an invited speaker at various community clubs and educational Institutions. She has also been awarded by MINDS and various community clubs in recognition of her social work.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event



**Dr. Matteo Micucci, Alberto Chiarini, Laura Beatrice Mattioli and Roberta Budriesi**

University of Bologna, Department of Pharmacy & Biotechnology, Italy

## **A molecular network based approach to fight viral infections: Focus on phytocomplexes, isolated compounds and SARS-COV-2**

The novel coronavirus disease 2019 (COVID-19) caused by SARS-COV-2 is producing a deep impact towards human health and economy. As this pandemic is still ongoing, in addition to the actual preventive and therapeutical strategies, further tools to limit viral infection spread and impact on organism are required.

The development of new treatments may take many months or years, so the investigation of chemically characterized phytocomplexes and isolated compounds effects towards SARS-COV-2 and human organism may accelerate the discovery process.

Some phytocomplexes obtained by different plants such as Echinacea,

1. Were shown to inhibit several coronaviruses strains. In addition, some isolated compounds including isoliquiritigenin, kaempferol, broussonchalcone inhibit MERS CoV proteases (3CLpro and PLpro)
2. Furthermore, in silico studies showed the potential inhibitory effects of some terpenoids and alkaloids against SARS-COV-2-3-chymotrypsin-like protease (3CLpro)
3. Similar results were observed with flavonoids
4. Propolis was shown to contain some compounds, such as caffeic acid phenethyl ester (CAPE), galangin, chrysin and caffeic acid, potentially able to SARS-CoV-2 MPRO. Propolis extract and its phytochemicals were shown to affect several hosts targets such as ACE2, TMPRSS2, PAK-1.
5. In this presentation data about the molecular mechanisms underlying potential application of phytocomplexes and isolated compounds in COVID-19 will be discussed.

## **References**

1. Signer J, et al. Virol J. 2020;17: 136
2. Park JY, et al. J Enzyme Inhib Med Chem. 2017;32: 504-515
3. Gyebi GA, et al. J Biomol Struct Dyn. 2020: 1-13
4. Berretta AA, et al. Biomed Pharmacother. 2020; 131: 110622



# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

---

## **Biography:**

Dr. Matteo Micucci graduated in Pharmacy at Bologna University, with Honors. In 2010 he worked in the laboratory of Dr. R.R.J. ARROO, Leicester School of Pharmacy, De Montfort University, Leicester, UK. He was Guest Scientist at the Department of Chemistry of Natural Substances, University of Naples "Federico II", Napoli, Italy. He awarded European PhD in Pharmaceutical Sciences at Bologna University in 2012. He is co-author of several publications in the field of food and medicinal chemistry. He is Adjunct Professor in Food Chemistry, Research Fellow Scientist at Department of Pharmacy and Biotechnology, University of Bologna.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event



## **Dr. Ganesh Shanmugasundaram Anusuya**

MD Community Medicine, Fellow in HIV Medicine , Associate Professor in Community Medicine Dept, Zoram Medical College , Mizoram – 796005 , India

### **Hit Hard and Hit Early concept along with alternative treatment options and combination measures to manage the COVID 19 Pandemic: Experience Based on Whats App Consultations**

**Introduction:** Amidst the growing corona virus pandemic which has affected nearly 49,031,012 cases with 1,239,608 as on date Nov 6th 2020. As on date we still do not have an effective cure for corona virus patients.

**Hit Hard and Hit Early Concept:** The key to successful treatment is starting the patients on Antivirals , Antibiotics (Augmentin 625mg three times daily ), Vitamin C 1000mg per day , Zincovit (Zinc plus Multivitamins plus Multiminerals plus Grape Seed Extract) , Lactobacillus (T Nutrolin B) , Anti pyretics along with salt water gargle and steam Inhalation from day one of onset of symptoms is the key for successful treatment in mild to moderate symptomatic COVID 19 patients.

**Salt water Gargle:** Salt water gargle with warm water to be done 3 times daily immediately from the onset of symptoms helps to reduce the viral load in throat.

**Ingredients for Steam Inhalation:** Steam inhalation to be done with 4 to 5 neem leaves or 10ml of neem leaf juice, one pinch of turmeric, one pinch of ashwaganta powder, small piece of crushed ginger, and two gloves of crushed garlic. All the ingredients to be mixed in water and boiled and steam inhalation to be done 3 minutes for 3 times daily can prevent the patients from landing in respiratory complications. Recommended only for COVID 19 Positive patients from day one of symptoms.

**Food Habits for COVID 19 Positives:** Ginger tea once in the morning and evening preferably not in empty stomach. In the night before going to bed, advice to take warm milk with a pinch of turmeric. Lime juice or hot chicken soups or frequent sips of hot water is also advised. Minimum three boiled eggs per day- One in each meal is recommended .Plenty of green leafy vegetables and onions are also advised. Strictly no smoking and no alcohol for all patients. Minimum exposure to sunlight for 10 to 15 minutes per day in your house roof top.

**Whats App Consultation:** I strongly recommend whats App consultation as a preferred mode of consultation for all patients with mild to moderate symptoms. In this way we can reduce the

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

number of patients visiting the hospital, in turn which will reduce the viral load in the hospital environment. All treatment can be advised via Whats App. Drugs should be delivered to the patients house. All patients should be advised to monitor the SpO2 three times daily with Pulse Oximeter instrument and advised to send the values to treating doctor's whats App. The doctors can also monitor the patients via whats App video call. Further key to successful hospital referral is to advice the patients to get admitted in hospital once their SpO2 goes below 94.

**Conclusions:** A randomised controlled trial needs to be done with the drug Augmentin (Amoxicillin and Clavulinic acid). The effectiveness of salt water gargle and steam inhalation with the above mentioned ingredients needed to be studied further. Whats App consultations should be made a preferred mode of treatment for patients with mild to moderate symptoms of COVID 19.

## **Biography:**

Dr Ganesh .S.A has been working in the field of HIV/AIDS since 2006 in India .Has worked as Tamil nadu State AIDS Control (TANSACS) STI medical officer , ART medical officer and HIV Community care centre medical officer . After under graduation, completed his fellowship in HIV Medicine from Government Hospital of Thoracic Medicine (GHTM), Tambaram , which is a centre of excellence for HIV treatment , care and support in India. Has been selected as best outgoing fellow and worked as chief fellow in International Training and Education Centre for Health, India. Subsequently completed his MD in Community Medicine from Sree Balaji Medical College and Hospital (SBMCH) , Bharath University, Chennai. He was the first person as principal investigator to study about discordant response to ART in patients enrolled in a Government programme in India. Has done International Presentations of his research work in Africa , UK , India , Singapore , France , and in USA with many publications .Has been nominated by GHTM and SBMCH for the SAARC Prize on HIV/AIDS 2016 pertaining to his contributions in HIV research. He was conferred with Vocational Excellence Award by Rotary club of Anna Nagar, Chennai for Community Services and HIV Research.. Conferred with Bharat Vikas Award, National Award given by Institute of Self Reliance, Bhubaneswar, Odissa for his contributions to HIV Research and community services done during 2015 Chennai flood relief medical camp activities. Best clinical Researcher in Community Medicine and in HIV Medicine certificate received from ICCREEE (International Consortium for Clinical Research Excellence, Ethics and Education) for two of his publications related to HIV. While working as Assistant Professor in SBMCH, under his leadership free medical camps were conducted in various parts of Chennai continuously for a period of 3 years and his affiliated Bharath University was awarded NO 1 Rank in all India level in outreach activity by National Institutional Ranking Frame work in 2017. His area of research interest are discordant response to ART, virology, quality of life, clinical immunology and public health. Currently working as Associate Professor in Zoram Medical College, Mizoram, India in Department of Community Medicine.



International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

**Dr. Huang Wei Ling**

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

## Is it Possible to Treat Nosocomial Cellulitis Post Placement of Hemodialysis Catheter without the Use of Antibiotics?

**Introduction:** Nosocomial cellulitis is usually treated with broad-spectrum antibiotics, because they are normally caused by multi-resistant bacteria. Patients with chronic renal insufficiency usually have Blood deficiency and Heat retention according to Traditional Chinese Medicine (TCM). Purpose: To demonstrate that nosocomial cellulitis after placement of hemodialysis catheter can be treated without the use of any antibiotics.

**Methods:** One case report, 58-year-old female patient, submitted to hemodialysis for five years (kidney insufficiency). In 2019, her doctor indicated the removal of the hemodialysis catheter (supposed infection), and replaced it with a temporary catheter (superior right arm). On the same day, the patient felt pain, swelling, hyperemia (15x20cm) and localized heat on the skin surrounding the catheter, and the doctor removed it. The patient was already receiving acupuncture treatment and showed the lesion to the acupuncture doctor. She received Chinese dietary counselling (avoid frying, eggs, honey, chocolate, coconut, alcoholic beverages, cold water and dairy products), more auricular acupuncture sessions and apex ear bloodletting. The patient also received the homeopathy medication (Sulphur 6CH, five globules three times a day). Results: In one week, the lesion normalized, with disappearance of hyperemia, pain, swelling and heat on the skin where the catheter was.

**Conclusions:** It is possible to treat nosocomial-cellulitis post placement of hemodialysis catheter without the use of antibiotics, according to this case report. To achieve this result it is important to correct the energy imbalances presented by each patient, taking out Heat retention and correcting the diet according to the energy point of view.

**Keywords:** hemodialysis catheter, nosocomial cellulites, diet, acupuncture, apex ear bloodletting, traditional Chinese medicine.

### 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.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Webinar

---

**DAY 1** | **SPEAKER PRESENTATIONS**



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Reliability Design of Mechanical Systems Subjected to Repetitive Stresses**

**Dr. Seongwoo Woo**

Addis Ababa Science &amp; Technology University, Ethiopia

The basic reliability concepts - parametric ALT plan, failure mechanism and design, acceleration factor, and sample size equation were used in the development of a parametric accelerated life testing method to assess the reliability quantitative test specifications (RQ) of mechanical systems subjected to repetitive stresses. To calculate the acceleration factor of the mechanical system, a generalized life-stress failure model with a new effort concept was derived and recommended. The new sample size equation with the acceleration factor also enabled the parametric ALT to quickly evaluate the expected lifetime. This new parametric ALT should help an engineer uncover the design parameters affecting reliability during the design process of the mechanical system. Consequently, it should help companies improve product reliability and avoid recalls due to the product failures in the field. As the improper design parameters in the design phase are experimentally identified by this new reliability design method, the mechanical system should improve in reliability as measured by the increase in lifetime, LB, and the reduction in failure rate,  $\lambda$ .

### **Biography:**

Dr. Woo has a BS and MS in Mechanical Engineering, and he has obtained PhD in Mechanical Engineering from Texas A&M. He major in energy system such as HVAC and its heat transfer, optimal design and control of refrigerator, reliability design of mechanical components, and failure Analysis of thermal components in marketplace using the Non-destructive such as SEM & XRAY. Especially, he developed parametric accelerated life testing (ALT) as new reliability methodology. If there is design fault in the mechanical system that is subjected to repetitive stress, it will fail in its lifetime. Engineer should find the design faults by parametric ALT before product launches. In 1992–1997 he worked in Agency for Defense Development, Chinhae, South Korea, where he has researcher in charge of Development of Naval weapon System. In 2000-2010 he had been working as a Senior Reliability Engineer in Side-by-Side Refrigerator Division, Digital Appliance, SAMSUNG Electronics, where he focused on enhancing the life of refrigerator as using parametric the accelerating life testing. Now he is working as associate professor in mechanical department, Addis Ababa Science & Technology University.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **A way to eliminate a new coronavirus and stop the second wave of infection**

### **Prof. Vladimir Zajac**

Formerly scientist at the Cancer Research Institute, BMC, SAS, SAV, Dúbravská cesta 9, 84505, Bratislava, Slovakia

Every virus is a parasite. They exist by themselves. He is envious of your wearer. This is the basic condition of its existence. What living cell carries viruses? Based on work with bovine leukosis virus (BLV) in the stables, we monitored the course of infection in healthy animals and concluded that a bacterial cell can be the host of the virus. We tested this assumption and confirmed the results. This idea was then tested on the HIV model and we have been able to prove that its host may be bacteria, which was confirmed at the level of DNA as well as proteins. In throat swabs from Kenya and Cambodian HIV positive children, HIV was detected in commensal bacteria and also in yeasts *Candida albicans*.

Based on these results and indications, we conclude that viruses are transmitted by bacteria, yeasts or other microorganisms. By destroying the bacteria carrying the viruses, the virus ceases to exist. The virus-containing bacteria are stored in the intestinal and respiratory tracts, from there they can penetrate the body and invade the recipient's cells. This reversal, called the second wave of infection, can be prevented by applying appropriate antibiotics, which eliminate coronavirus-containing bacteria in the intestinal and respiratory tracts.

### **Biography:**

Vladimir Zajac has completed his PhD. in 1982 at the Cancer Research Institute of Slovak Academy of Sciences in Bratislava (Slovakia), where he worked as the Head of Department of Cancer Genetics from 1996 to 2010. He joined the Medical Faculty of the Comenius University as Associate Professor of Genetics in 2007. He has published 74 papers mostly in reputed journals and he was editor of the book „Bacteria, viruses and parasites in AIDS process“(In Tech, 2011).

International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

## Prevalence of Human Bocavirus in Children Suspected with Respiratory Tract Diseases

**Mr. Sunil Mishra<sup>1</sup>, Angelica Rajbhandari<sup>2</sup>, Samikshya Kandel<sup>3</sup>, Bishnu Prasad Upadhyay<sup>4</sup> and Pradeep Kumar Shah<sup>1</sup>**

<sup>1</sup>Tri-Chandra Multiple Campus, Tribhuvan University

<sup>2</sup>Nobel College

<sup>3</sup>Nepal Academy of Science and Technology

<sup>4</sup>Department of Immunology, National Academy of Medical Sciences, Bir Hospital, Nepal

**H**uman Bocavirus (HBoV), a newly identified virus, has been reported to be prevalent in the pediatric populations and is potentially associated with respiratory tract disease. HBoV has been associated with upper and lower respiratory tract infections and shown to be a cause of pneumonia in children. It has been found that HBoV affects individuals of all age group but mainly targeting infants aged 6-24 months with respiratory symptoms. HBoV is a member of the family *Parvoviridae* (subfamily *Parvovirinae*, genus *Bocavirus*). This study was carried out from December 2018 to May 2019, with the objective to determine the prevalence of Human Bocavirus in children suspected with respiratory tract diseases and 120 nasopharyngeal swabs were collected from Kanti Children's Hospital from children between 0-15 years, analyzed by Multiplex RT PCR technique at Central Diagnostic Laboratory and Research Centre, Kathmandu, Nepal. Out of 120 samples studied, 15 (12.5%) were found to be HBoV positive. The prevalence rate in male and female was found to be 15.58% and 6.98% respectively. The population of age group below 2 years was observed to be mostly affected with the prevalence rate of 33.33% followed by 3-5 years and 6-15 years. The highest number of samples was collected in March and the prevalence rate was also found to be high (60%). Only 10% prevalence rate was observed in indoor patients while it was found to be high in out-door patients. Co-infection of HBoV was found to be 33.33% with Respiratory Syncytial Virus (RSV) and 13.33% with Parainfluenza Virus (PIV). The symptoms of HBoV infection varies from individual to individual with fever and cough in all patients followed by wheezing in 80% of the cases.

**Key words:** Human Bocavirus, Children, RTDs, Co-infection.

### Biography:

Sunil Mishra has completed Master's Degree in Medical Microbiology from Institute of Science and Technology, Tribhuvan University, Kathmandu, Nepal and is currently pursuing Master's Degree in International Relations and Diplomacy from Tribhuvan University. He has served Norwegian Red Cross as a Youth Delegate in the year 2014/15 representing his country and a Gold Award Holder of The Duke of Edinburgh's International Award. He was a Research Fellow at Institute of South Asian Studies, Sichuan University, China in 2019 under Belt and Road Initiative Scholarship.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Surveillance of healthcare associated infections and antimicrobial resistance in the era of COVID-19 pandemic**

**Dr. Samuel Sunday Taiwo**

Ladoke Akintola University of Technology (LAUTECH) and Teaching Hospital, Ogbomoso, Nigeria

Surveillance of healthcare associated infections (HAIs) and antimicrobial resistance (AMR) is a pivotal component of both infection prevention and control (IPC) and antimicrobial stewardship (AMS) programs in healthcare facility. The coronavirus disease 2019 (COVID-19) pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) has globally impacted the organization and operation of healthcare systems, with massive shift of resources for the pandemic response, leading to disruption and compromise of IPC and AMS activities, including surveillance of HAIs, especially in areas of high SARS-COV-2 transmission and low resource settings. This situation is simultaneously complicated by AMR crises, with emergence and transmission of multi-drug resistant (MDR) bacterial pathogens. The objective of this paper is to discuss the traditional surveillance methods for HAIs and AMR, and assess the impacts of the COVID-19 pandemic on the surveillance activities of both HAIs and AMR in the healthcare settings. A systematic review of the literature on surveillance methods of HAIs and AMRs suitable for use during the COVID-19 pandemic was undertaken. The results indicated that prospective continuous surveillance offers the best way to establish trends and distribution of HAIs and AMR pathogens. However, due to the enormous diversion of resources to the pandemic response, point prevalence survey (PPS) provides a good substitute especially for low-and-middle-income countries (LMIC). In conclusion, repeated global point prevalence survey (G-PPS) with HAI module offers a simple and feasible method for the integrated surveillance of HAIs and AMR during the ongoing COVID-19 pandemic and beyond.

**Key words:** Surveillance; HAIs; AMR; G-PPS; SARS-COV-2; COVID-19

### **Biography:**

Samuel Sunday Taiwo is a Professor and Head of clinical microbiology laboratory, LAUTECH Teaching Hospital, Ogbomoso, Nigeria and the chair of the hospital infection prevention and control committee (IPCC) as well as the hospital COVID-19 response team. His areas of academic research and professional interests are healthcare associated infections, antimicrobial resistance, infection prevention and control, antimicrobial stewardship, quality management system and good clinical laboratory practice standards. He was an adhoc member of the Steering Committee of the Federal Ministry of Health that produced the National Infection Prevention and Control (NIPC) policy and strategic framework for implementation of IPC in all tiers of hospital facilities in Nigeria, and a member of the Technical Working Group (TWG) that produced the tool/protocol and curriculum for surveillance of surgical site infections (SSI) in tertiary hospitals in Nigeria. He has authored over 100 publications including scientific articles, conference proceedings and chapters in books, and currently the Editor-in-Chief of the African Journal of Clinical and Experimental Microbiology (AJCEM).



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Decelerating HIV-1 Viral Escape by Inhibiting Entry into CD4 T Cells**

**Dr. Tatiana Hillman**

Biotechnology, TheLAB, Inc., Los Angeles, California, United States

**V**iral escape is a major challenge for lymphocytes to develop an immune response for neutralizing HIV viruses. HIV mutates rapidly where immune cells cannot recognize the modified epitopes of HIV viruses. Decelerating the viral escape of HIV-1 could serve to provide more time for a therapeutic vaccine to produce an immune response for neutralizing the virus. This review attempts to advocate for an inclusion of antiviral methods in a therapeutic vaccine design that can prolong the viral escape of HIV-1. Delaying viral escape can enhance the effectiveness of HIV-1 therapeutic vaccination. The gene editing of T cells through CCR5 disruption can lower the frequency of infection. A lesser rate of infection due to CCR5 disruption can reduce the rate of viral escape when HIV-1 is prevented from entering and infecting naive HIV-resistant CD4 T cells. An antibody-like CD4 T cell entry inhibitor called eCD4-Ig can trap the HIV virus by mimicking the CD4 T cell receptor and then lock in the virus. HIV cannot quickly escape from eCD4-Ig because HIV mutations to evade eCD4-Ig would need to be produced at a higher fitness cost. This delay may offer more time for antivirals and a therapeutic vaccine induced immune response to recognize and neutralize the virus.

The time of the initial HIV-1 infection plays a major role in the efficacy of antivirals and determines the kinetics of HIV-1 viral escape. Combining gene disruption of CCR5 expression on CD4 T cell surfaces and an eCD4-Ig HIV-1 entry inhibitor with a therapeutic vaccine may delay viral escape and control HIV-1 replication, which can possibly provide a functional cure for HIV.

### **Biography:**

Tatiana Hillman is an independent researcher for The LAB INC., in Los Angeles, California. The LAB INC. is a private biotechnology company where she conducts microbiology research with an emphasis on synthetic biology and genetic engineering. She has designed projects such as inhibiting Gram-negative bacterial metabolic genes, required for fatty acid synthesis and lipid membrane assembly, to decrease quorum sense signaling, reduce bacterial growth, and to lower the antibiotic resistance of *Escherichia coli* cells. She believes many infectious diseases such as multi-drug resistance of bacteria and HIV have a pathogenicity that is gene-based and may require a gene-based solution. For this reason, she hopes to further study methods of recombinant DNA technology and synthetic biology for treating infectious diseases.

International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

## Challenges in identification in *Acinetobacter baumannii*: A comparative analysis of three methods of identification

**Dr. Amresh Pati, Ashoka Mahapatra and Kavita Gupta**

Department of Microbiology, AIIMS BHUBANESWAR, Odisha, India

**Research question:** Comparative Evaluation of phenotypic, automated VITEK-2 compact system & genotypic methods for identification of *Acinetobacter baumannii*: An analysis of 78 isolates

**Background:** *Acinetobacter baumannii* has emerged as a multidrug resistant pathogen with high mortality as compared to non *baumannii* species especially in hospital settings. However, identification of *Acinetobacter* upto the species level is complicated. Molecular detection of bla OXA-51 (intrinsic to *A. baumannii*) has been found as a simple and rapid method for identification

**Purpose:** In this study we intend to compare the performance of conventional phenotypic & automated VITEK 2 compact system with that of molecular detection of bla OXA 51 to identify *A. baumannii*.

**Methods:** A total of non-repetitive 78 bacterial isolates presumptively identified as *Acinetobacter* spp. from routine clinical samples were further subjected up to species level as per modified Bouvet and Grimont phenotypic system, VITEK 2 compact system & OXA 51 detection by PCR.

**Results:** Out of 78 isolates, 75 were phenotypically identified as *Acinetobacter baumannii* by Bouvet and Grimont phenotypic system (75/78), 74 were confirmed *A. baumannii* by VITEK 2 compact system (74/78) & 73 were confirmed for the presence of OXA51 by PCR (73/78). Sensitivity, specificity, NPV & PPV for VITEK 2 compact system was calculated as 100%, 80%, 100% & 98.65% respectively. Phenotypic identification by modified Bouvet and Grimont phenotypic system was found having similar sensitivity of 100% but less specificity (60%) & NPV and PPV were 100% & 97.33% respectively.

**Conclusion:** Our findings showed that we can simply and quickly detect *A. baumannii* isolates by PCR using blaOXA genes which could be useful with better clinical outcome, antimicrobial stewardship and in outbreak situation.

**Keywords:** *A. baumannii*, blaOXA-51, VITEK 2 compact system

### Biography:

Dr. Amresh Pati completed my MBBS from S.C.B Medical college, Cuttack, Odisha, India in 2011, After doing 6 yrs of peripheral service, currently pursuing Post Graduate degree in Microbiology in AIIMS Bhubaneswar

International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

## SARS-CoV-2 identification in saliva: Are we interpreting the results correctly?

**Dr. Nelly R. Gonzalez-Arenas<sup>1</sup>, Juan P. Ramirez-Hinojosa<sup>1</sup>, Yunuen Rodriguez-Sanchez<sup>1</sup>, Angel K. Romero-Gonzalez<sup>1</sup>, Marisol Chavez-Gutierrez<sup>1</sup>, Aurora Ibarra-Arce<sup>1</sup>, Sara Arroyo-Escalante<sup>1</sup>, Beatriz Zavaleta-Villa<sup>1</sup>, Luz E. Espinosa de los Monteros-Perez<sup>1</sup>, Angelica Olivo-Diaz<sup>1</sup>, Rigoberto Hernandez-Castro<sup>1</sup>, Lourdes Suarez-Roa<sup>1</sup>, Hector Prado-Calleros<sup>1</sup>, Guillermina Avila-Ramirez<sup>2</sup>, Ana Flisser<sup>2</sup>, Pablo Maravilla<sup>1</sup> and Mirza Romero-Valdovinos<sup>1</sup>**

<sup>1</sup>Hospital General "Dr. Manuel Gea Gonzalez", Mexico City, Mexico

<sup>2</sup>Facultad de Medicina, Universidad Nacional Autonoma de Mexico (UNAM), Mexico City, Mexico

In this study, we obtained cycle threshold (Ct) values by qRT-PCR with three sets of primers for the N gene (N1, N2, and N3) in saliva samples of inpatients with COVID-19 and asymptomatic health workers (AHW), it was compared with clinical and laboratory data. Data from 58 inpatients (37 critically ill patients and 21 patients with severe disease) and 105 AHW were obtained. In our system, the limit of viral detection corresponded to a Ct =46.5; therefore, our analysis focused on comparing the positivity rate obtained when using Ct <40 as the cut-off with that obtained using Ct <46 as the cut-off. The positivity rate was increased when the Ct cut-off of 46 was used as the criterion, yielding a sensitivity of 87.9% for patients and a sensitivity of 43% for AHW. The bivariate analysis revealed an association between Ct <40 for N2 and mechanical ventilation assistance among patients (p=0.013). In addition, the serological values of alanine transaminase (ALT), aspartate-transaminase (AST), lactate dehydrogenase (LDH), ferritin and creatine kinase MB (CK-MB) showed significant correlations with the Ct values of N1 and N3.

Our results support the claim that physicians should be informed of the Ct values obtained during the amplification of viral markers, as well as the Ct values that correspond to the limit of detection for viral RNA, which vary according to the characteristics of each system and amplification protocol used.

**Keywords:** COVID-19, Cycle threshold (Ct), qRT-PCR, saliva, SARS-CoV-2, asymptomatic health workers (AHW)

### Biography:

Nelly R. Gonzalez-Arenas Bachelor's degree in biology from the UNAM faculty of sciences, master's degree in biological sciences and PhD in biomedical sciences from the UNAM faculty of medicine.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **The Education of Different Viruses in Society is crucial to avoid Fear and Hysteria in the Covid-19 Era**

**Dr. Adib Riazati**

California Baptist University, Riverside, USA

Ask all of us to grow our ways of expressing knowledge in Virology and the specific scientific knowledge needed to help society in this global health crisis. We have the knowledge to rise and meet the needs of our society, but we lack the proper channels and approaches to guide the masses on their response to this variable. The gap of knowledge and conceptual understanding between researchers and society is far too wide for society to use the knowledge accrued by researchers. An improvement of the approachability of this science is crucial as we continue our development of research and understanding. Virology and the study of viruses need to be universally integrated in education at every level. Developing our professional/personal ability to have constructive conversations about viruses are the connections for society's development. It is the responsibility of each of us to teach this crucial safety and knowledge with a humble posture of teaching and spreading that mentality towards a universal education goal for the study of virology. The developments and changes we implement at this time will be instrumental to our continued relationship with viral agents in the future. Our goal should be that to work on a foundation to bring society into the fold so that generations after will not be confined to their homes out of fear and hysteria. The power rests on our willingness to develop a framework to counter fear and hysteria to give society the tools required for preparing and limiting another viral episode. Knowledge of these entities in proper communication channels guided by attributes of Humility, Persistence, and Resilience are crucial to rising our society's capacity to counter the fear and hysteria in the COVID-19 Era.

**Keywords:** Growth, Capacity, Universal, Humble, Resilient, Persistent

### **Biography:**

Adib Riazati is a consultant and has dedicated 6 years to learning all he can about this discipline. He originally worked in healthcare and studied biochemistry then he pursued research in the analysis and genome structure of the Acanthamoeba polyphaga mimivirus (APMV). In 2017 and 2018 He was a coordinator for initiatives centered on bringing the discipline of virology to young children ages 12-16. They went over 5 books regarding the discipline and the participants went forward very aware and hopeful about the knowledge of this organism. He has a great love for teaching virology and now more than ever we must teach everyone. They must gather within ourselves a great passion to teach others about these entities.





International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Webinar

---

**DAY 2** | **KEYNOTE SPEAKERS**

International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

**Prof. John J Miles**

Centre for Biodiscovery and Molecular Development of Therapeutics, Australian Institute of Tropical Health and Medicine, James Cook University, Cairns, Queensland, Australia

**Using synthetic biology to generate hyper-stable vaccines**

Polypeptide vaccines effectively activate human T cells but suffer from poor biological stability, which confines both transport logistics and *in vivo* therapeutic activity. Synthetic biology has the potential to address these limitations through the generation of highly stable antigenic “mimics” using subunits that do not exist in the natural world. We developed a platform based on non-natural chemistry and used this platform to reverse engineer entirely artificial T cell agonists that immunogenicity more than 5-fold of their natural blueprints. This non-natural chemistry is highly stable in human serum and gastric acid. *In vitro*, these synthetic agonists expanded antigen-specific responses against multiple epitopes across multiple viruses. *In vivo*, synthetic vaccinated mice were protected from lethal challenge.

Moreover, the synthetic agonists were immunogenic after oral administration. We have since expanded this technology to other human viruses, including SARS-CoV-2. These proof-of-concept studies highlight the power of synthetic biology to expand the horizons of vaccine design and therapeutic delivery

**Biography:**

Professor John Miles is Principal Research Fellow of Molecular Immunology at the Australian Institute of Tropical Health and Medicine, James Cook University, Australia. He is co-director for the Centre for Tropical Bioinformatics and Molecular Biology and theme leader for the Centre for Molecular Therapeutics at James Cook University. Professor Miles is an expert in human immune system monitoring and modulation, where he has published 117 papers (*h*-index 44 and 6,700 citations), I am in the 100th percentile in percentile by worldwide Topic Cluster Prominence in my field of T-cells, Neoplasms and Immunotherapy (SciVal, 2020).

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

**Dr. Marco Paggi**

IMT School for Advanced Studies Lucca, Lucca, Italy

## **Academic and Translational Medicine**

**T**he control of the Covid-19 epidemic spread is highly complicated by the long gap intercurring between the time of infection and the time when symptoms become observable, and also by the significant percentage of asymptomatic infectious individuals in the population. These specific features of Covid-19 clearly complicate the application of Susceptible-Infectious-Recovered (SIR) epidemiological models, since observed data inevitably refer only to a portion of the whole set of individuals actually involved into the epidemic.

To overcome this complexity, a robust machine learning approach based on particle swarm optimization has been proposed by the present author [1,2] to identify the time-dependent parameters of an enhanced Susceptible-Infectious-Recovered (SIR) epidemiological model accounting for asymptomatic (infected and recovered) and dead compartments based on the available observed data on infectious, recovered and dead compartments published on open databases. The initial number of susceptible individuals was also considered as a parameter to be identified.

The application of this computational approach to the Italian regions of Lombardy, Reggio Emilia, Valle d'Aosta, and Veneto during the so-called Italian lockdown shows that it is feasible to predict the numerosity of the individuals belonging to all the compartments, also those that cannot be accurately assessed over time by sampling the population using a finite extent of medical swabs.

Results highlight that, at the end of the Italian lockdown, the number of susceptible individuals involved in the epidemic was expected to be around 10% of the population for Lombardy, 16% for Reggio Emilia, 18% for Veneto, and 40% for Valle d'Aosta. Such percentages implied significant risks after releasing lockdown measures, as happened in Autumn 2020.

At present, the exploitation of the proposed methodology is still timely, since it would support strategic decisions for the plan and allocation of intensive care hospital units.

**Keywords:** Covid-19 epidemic, assessing asymptomatic infected individuals, machine learning, SIR compartments, data analysis.



# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **References**

1. Paggi, M. An Analysis of the Italian Lockdown in Retrospective Using Particle Swarm Optimization in Machine Learning Applied to an Epidemiological Model, Physics, 2020, 2, 368-382, doi:10.3390/physics2030020
2. Paggi, M. Simulation of Covid-19 epidemic evolution: are compartmental models really predictive?, arXiv, 2020, 2004.08207, q-bio.PE, <https://arxiv.org/abs/2004.08207>

## **Biography:**

Marco Paggi is Full Professor of Computational Mechanics at IMT School for Advanced Studies Lucca, Italy. His research interests focus on modelling and simulation of complex systems and on the development of numerical methods for the solution of coupled problems, with special regard to reaction-diffusion systems. He is Fellow of the Young Academy of Europe since 2014, Alexander von Humboldt Alumno since 2011, and he has been recipient of two research grants from the European Research Council (ERC Starting Grant "CA2PVM" and ERC Proof of Concept "PHYSIC").

International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

**Dr. Huang Wei Ling**

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

## Treating Patients with Chakras Energy Deficiencies and Coronavirus Infection

**Introduction:** Coronavirus is a virus that emerged in Wuhan China (December-2019). In Traditional Chinese Medicine (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: 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.

**Methods:** A clinical case report: 42-year-old male patient, layer, work on the military. He was diagnosed with deficiencies (one in eight) in his seven chakra (november of 2019), performing treatment for replenishment the chakras energy. In May 2020, he reported to have symptoms: 1) redness on the face /neck. 2) he fainted for the period of five minutes. 3) shortness of breath. He was taken to the emergency, nothing was found. He received treatment based on the reasoning of TCM. The shortness of breath was associated with Kidney's deficiency (second chakra). He was oriented to increase the water intake (improve Kidney's energy). 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 TCM, as well as Chinese dietary counseling. The patient had been in contact with three other people who have coronavirus infection and died.

**Results:** The patient presented great improvement of all symptoms, on the following day of the start of the medication, not needing hospitalization.

**Conclusion:** treatment of the chakras energy deficiency it is important to recovery of patients with coronavirus infection leading to a quick recovery and less complications not necessitating hospitalization according to this case report.

**Keywords:** COVID-19, Traditional Chinese Medicine, Chakras, Energy, Pandemic.

## 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.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

**Dr. Tomas Veloz**

Foundation for the Interdisciplinary Development of Science, Technology and Arts(DICTA), Chile.

## **The pandemic impact tensor: towards a calculus of counterfactual mobility restrictions**

**M**easures to reduce the impact of COVID19 require a mix of logistic, political and social capacity. In order to better understand the impact of these measures we developed a meta-populations compartmental model which, on the one hand allows to calibrate the behaviour of people within and the mobility of people among different areas, and on the other hand it incorporates an hospitalization dynamics that differentiates the available kinds of treatment that infected people can receive. We will explain the model, show its computational implementation, elaborate on the parameter optimization problem, and present an analysis of the impact of COVID19 in Chile.

### **Biography:**

Dr. Tomas Veloz is an interdisciplinary researcher with a background in physics, mathematics and computer science. He is currently leading the mathematical modelling team at the COVID19Geomodeler of Project at Ciencia & Vida foundation in Santiago, Chile. The project aims at developing a tool to forecast the evolution of COVID19 combining geo-spatial, behavioral, and epidemiological information in a meta-populations differential-equations-based compartmental model. He has published more than 50 research articles of diverse levels of technicality and in several areas including cognitive science, ecology, epidemiology, among others. He has developed international collaborations not only in science (researching for collaborative grants, organizing conferences, editing books and magazines, etc.), but also as an entrepreneur in renewable energies, and as a musician. He is also the director of the Foundation for the Interdisciplinary Development of Science, Technology and Arts (Santiago, Chile), the head of mathematical modeling at the Centre Leo Apostel, VUB, (Brussels, Belgium), and scientific advisor of the General Comptroller in Chile.



International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event



**Dr. Gary L. Murray**

MD, FACC, FICA, Director of Clinical research, The Heart and Vascular Institute, Germantown, TN, USA

## COVID-19 Cardiac Complications: Is a Safe, Easy Treatment Right Under Our Noses?

**Background:** Many chronic conditions, as diabetes (DM) and cardiovascular Diseases, suffer Major Adverse Cardiac Events (MACE): myocarditis, congestive heart failure (CHF), Ventricular Tachycardia (VT), Ventricular Fibrillation (VF), Acute Coronary Syndromes (ACSs), and Sudden Cardiac Death (SCD). Acute infections, like COVID-19, also involve oxidative stress, leading to increased Sympathetic tone (S) and decreased Parasympathetic tone (P), increasing Sympathovagal Balance (SB) and MACE. The antioxidant (r)alpha lipoic acid(ALA) improves SB. The anti-anginal Ranolazine (RAN), is also an antioxidant, and an anti-arrhythmic. Our studies of their effects on MACE, in DM, and non-DM patients with CHF, ventricular arrhythmias and SCD are reviewed herein, as our findings may apply to acute diseases, such as COVID-19.

**Methods:** (1) In a case-control study, 109 CHF patients, 54 were given adjunctive off-label RAN added to ACC/AHA Guideline therapy (RANCHF). MACE and SB were compared with 55 NORANCHF patients; mean f/u 23.7 mo.

(2) 59 adults with triggered premature ventricular contractions (PVCs), bigeminy, and VT were given off-label RAN. Pre- and post-RAN Holters were compared; mean f/u 3.1 mo.

(3) 133 DM II with cardiac diabetic autonomic neuropathy were offered (r)ALA; 83 accepted; 50 refused. P&S were followed a mean of 6.31 yrs, and SCDs recorded.

Results: (1) 70% of RANCHF patients increased LVEF 11.3 EFUs ( $p \leq 0.003$ ), SCD reduced 56%; VT/VF therapies decreased 53%.

(2) 95% of patients responded: VT decreased 91% ( $p < 0.001$ ).

(3) SCD was reduced 43% in DM II patients taking (r)ALA ( $p = 0.0076$ ).

**Conclusions:** RAN, (r)ALA treat CHF, VT, and prevent SCD. Trials in COVID-19 are needed.

**Keywords:** Ranolazine, (r)Alpha Lipoic Acid, Sudden Cardiac Death, Congestive Heart Failure

## Biography:

Gary L. Murray MD, FACC, FICA is Research Director, The Heart and Vascular Institute, Germantown, TN, USA, and Co-Chairman Membership Committee, International Collage of Angiology. After Tulane School of Medicine and The University of TN Center of Health Sciences, he has managed to co-invent the Schaad- Murray RNA CAD and IPPA Myocardial Viability Tests, and publish several articles regarding new methods of CAD, CHF, HBP, AODM and CV autonomic assessment/management, despite a full-time private practice.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Webinar

---

**DAY 2** | **SPEAKER PRESENTATIONS**

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Compliance measurement and observed influencing factors of hand hygiene based on COVID-19 guidelines**

**Miss. Qian Zhou and Xinping Zhang**

Institute, city, country: School of Medicine and Health Management, Tongji Medical School, Huazhong University of Science and Technology, Wuhan, Hubei, China

Higher requirement is put forward in the measurement of hand hygiene (HH) during a pandemic. This study aimed to describe HH compliance measurement and explore observed influencing factors with respect to coronavirus disease 2019 (COVID-19) guidelines in China. Compliance was measured as the percentage of compliant opportunities based on criteria for 17 moments. The criteria for compliance included HH behavior, procedure, duration, hand drying method, and the overall that counts them all. The observed influencing factors included different departments and areas and protection motivation. Descriptive analysis and logistic regression were performed. The compliance of overall criteria, HH behavior, procedure, duration, and hand drying method were 79.44%, 96.71%, 95.74%, 88.93%, and 88.42%, respectively, which were significantly different from each other ( $P < .001$ ). Meanwhile, the overall and hand drying method compliance in semi-contaminated areas (odds ratio [OR] = 1.829,  $P < .001$ ; OR = 2.149,  $P = .001$ ) and hygienic areas (OR = 1.689,  $P = .004$ ; OR = 1.959,  $P = .015$ ) were significantly higher than those in contaminated area. The compliance with HH behavior for the motivation of patient-protection (OR = 0.362,  $P < .001$ ) was lower than that for the motivation of self-protection. HH compliance was firstly measured using different criteria for 17 moments according to COVID-19 guidelines in China. The measurement of HH compliance needs clearer definition and comprehensive practice. Contaminated areas and motivation of patient-protection contribute to lower compliance, which may be addressed by allocating more human resources and increasing supervision and education.

**Keywords:** hand hygiene, criteria, moment, duration, hand drying

### **Biography:**

Qian Zhou, Doctor candidate at School of Medicine and Health Management, Tongji Medical School, Huazhong University of Science and Technology. Publish five SCI papers as first or corresponding author. Research assistant of nosocomial infection department in Tongji hospital, Tongji Medical College, Huazhong University of Science and Technology



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Biological Implant Fabrications with Fuructuated and Graded Dimensions by Stereolithographic Additive Manufacturing**

**Dr. Soshu KiriHara**

Osaka University, Japan

In stereolithographic additive manufacturing (STL-AM), 2D cross sectional patterns were created through photo polymerization by ultra violet laser drawing on spread resin paste including ceramic nanoparticles, and 3D composite models were sterically printed by layer lamination though chemical bonding. The stereolithography system has been developed to obtain bulky ceramic and metal components with functionally geometric structures. An automatic collimeter was newly equipped with the laser scanner to adjust beam diameter. Fine or coarse beams could realize high resolution or wide area drawings, respectively. Nanometer sized ceramic particles were dispersed in to photo sensitive liquid resins from 40 to 60 % in volume fraction. The paste was spread on a glass substrate at 10  $\mu\text{m}$  in layer thickness. An ultraviolet laser beam of 355 nm in wavelength was adjusted from 10 to 300  $\mu\text{m}$  in variable diameter and scanned on the pasted resin surface. Irradiation power was changed automatically from 10 to 200 mW. The created precursor was dewaxed and sintered in an air atmosphere to obtain full metal or ceramic components. Subsequently, ultraviolet laser lithography was newly developed. 2D cross sections were created through dewaxing and sintering by UV laser drawing on spread resin paste including ceramic nanoparticles, and 3D composite models were sterically printed by layer laminations. Irradiation power was changed automatically from 1.0 to 1.2 W for enough solidification depth for 2D layer bonding. The half wavelength of the incident ultraviolet ray should be comparable with the nanoparticles gaps in the resin paste, therefore the dewaxing and sintering will be realized through the electromagnetic waves resonations and localizations. Through the smart additive manufacture, design and evaluation (Smart MADE), bioceramic implants of dental crowns were fabricated successfully.

### **Biography:**

Soshu KiriHara is a doctor of engineering and a professor of Joining and Welding Research Institute (JWRI), Osaka University, Japan. In his main investigation "Materials Tectonics" for environmental improvements of "Geotechnology", multi-dimensional structures were successfully fabricated to modulate energy and materials flows effectively. Ceramic and metal components were fabricated directly by smart additive manufacturing, design and evaluation (Smart MADE) using high power ultraviolet laser lithography. Original stereolithography systems were developed, and new start-up company "SK-Fine" was established through academic-industrial collaboration.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Differential Diagnosis of Novel Corona Virus Pneumonia from Viral and Bacterial Pneumonia**

**Miss. Nimra Ashraf**

Government College University of Faisalabad

**N**CP (Novel Corona Virus Pneumonia) is actually COVID-19 pneumonia. This disease is pandemic now which transmits from person to person. The basic standard for confirming the NCP is chest computed tomography (CT). CT scan is used as an important diagnostic tool for NCP in current pandemic. Other types of pneumonia are already present in the world. So, there is a need to differentiate this pneumonia from others. I mainly focused on viral and bacterial pneumonia and to differentiate them from NCP. We can differentiate them with the use of CT scan. CT features are very helpful in diagnosis. With the help of these CT features, radiologists can easily differentiate NCP with other types of pneumonia. At the end, I found that the GGOs are the main thing to make a difference. NCP shows peripheral distribution of GGOs and all the five lobes are affected with this virus. On the other hand, unilateral segmental consolidation shows viral/bacterial pneumonia. In this way we can make a differential diagnosis. So, CT is very helpful in diagnosing NCP.

**Keywords:** NCP, COVID-19 pneumonia, bacterial pneumonia, viral pneumonia, coronavirus, computed tomography.

### **Biography:**

Nimra Ashraf an undergraduate student great interest in Research. Now, She is working on the COVID-19 with great of my Interest. She has already published my one article in journal.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Phylogenetic analysis and geographical distribution of torquetenovirus in the Romanian population**

**Dr. Sonia Spandole-Dinu, Dănuț Cimponeriu, Lavinia Berca, Stoica Ileana, Oana Apircioaie, Larisa Gogianu, Silvia Nica, Mihai Toma and Remus Nica**

University of Bucharest, Bucharest, Romania

**T**orquetenovirus (TTV) has a high prevalence in humans, yet there is limited information on its circulation in the human population. This study aimed to estimate the geographical distribution and phylogenetic relationships between TTV isolates found in the Romanian general population. A number of 200 volunteers aged  $51.6 \pm 17.1$  were tested for TTV DNA presence in blood using PCR techniques targeting the untranslated region of the viral genome. A region of approximately 400 bp of 3'UTR was sequenced by Sanger technology in 40 volunteers residing in all seven development regions of Romania, in order to determine the geographical distribution of TTV and to describe the phylogenetic relationships between isolates. The prevalence of TTV DNA was 66%. Most of Romanian sequences clustered with isolates from genogroup 1, currently assigned to TTV1 and TTV3 species, while two other sequences clustered closest with TTV19-SANBAN and TTV22-svi-1 (genogroup 3). Phylogenetic analysis showed segregation between isolates from north-east and center-west Romania. In order to better characterize certain isolates (e.g. seasonality, pathogenic potential), further phylogenetic studies should focus on distinguishing between genogroups/genotypes

**Keywords:** phylogeny, phylogeography, DNA virus infection

### **Biography:**

Sonia received her Ph.D. degree in biology from the University of Bucharest in 2016 and she nurtures a keen interest in molecular virology, multifactorial disorders and population genetics. She is currently a member of the Human Genome and Molecular Diagnostics laboratory and her study focuses on human anelloviruses as environmental factors in multifactorial diseases.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Trained innate immunity in vaccine protection against intrarectal AIDS virus transmission**

**Dr. Yongjun Sui**

Vaccine Branch, National Cancer Institute, NIH, Bethesda, MD, USA

**W**e have found that vaccine protection against SIV/SHIV transmission in rhesus macaques can be achieved in the absence of anti-envelope antibodies, and even without a direct role of T cells, but rather mediated by monocytic cells through trained innate immunity. In the first study, a vaccine involving an envelope construct and modified vaccinia Ankara (MVA) encoding SIV antigens was used mucosally, with TLR ligands, IL-15, and mutant E coli labile toxin as adjuvants. Protection was achieved against repeated SHIV challenge (VE= 44%) even though no anti-envelope antibodies could be detected. T cells were induced but did not correlate. Rather, protection correlated with newly migrated CD14+ monocytes. Since trained innate immunity of monocytes has been shown to involve epigenetic changes leading to increased response to exposure to the same antigens, we tested monocytes from protected or naïve macaques and found that the protected ones produce more IL-6, TNF and MIP1a than the naïve ones, and these responses correlated with the number of exposures required to infect the animals. Epigenetic changes in the IL-6 gene were detected. In the second study, animals were vaccinated with a live attenuated virus, SHIV, whose envelope does not crossreact with SIV envelope. No antibodies to SIV envelope could be detected, yet the animals had reduced risk of rectal transmission of SIVmac251 (VE = 81%). T cells were induced but did not correlate with protection. Moreover, CD8 T cell depletion of protected animals led to rebound of the original SHIV, but no infection with SIV. Transcriptomic studies suggested changes in myeloid cells from the protected animals compared to those from infected animals. This provides new approaches to AIDS vaccine development.

**Keywords:** AIDS vaccine, trained immunity, monocytes, rhesus macaque model

### **Biography:**

Dr. Sui got her PhD in Pathology from Beijing Institute of Basic Medical Sciences. After two postdoctoral training from Department of Microbiology, Immunology, and Molecular Genetics, University of Kansas Medical Center and Department of Infectious Diseases and Microbiology, University of Pittsburgh, she joined Vaccine Branch at NCI, NIH as a staff scientist in 2008. Dr. Sui has been studying the innate and adaptive immunological mechanisms of human immunodeficiency virus/simian immunodeficiency virus (HIV/SIV) vaccine-induced control of HIV mucosal transmission using SIV/SHIV-macaque models. In addition, she is interested in exploring new technologies and novel molecular adjuvants to help prevent mucosal HIV-1 transmission.

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **A new mechanism of Corona virus pathogenesis: Corona virus RNA Topoisomerase (Nsp2) and rRNA Methyltransferases (Nsp9/10/13/14/16) as therapeutic targets**

**Dr. Asit Kumar Chakraborty**

Associate Professor of Biochemistry, Department of Biotechnology & Biochemistry, Genetic Engineering Laboratory, Oriental Institute of Science & Technology, Vidyasagar University, Midnapore-721102, West Bengal, India.

Corona virus infected ~100 million people with confirmed >900000 deaths worldwide whereas lockdown has reduced GDP 2-20% of many countries with 20 million jobless. So far no proper medicine was discovered and worldwide efforts for vaccine development against S-protein at the 3rd phase of clinical trial. We found that Nsp2 non-structural protein derived from polyprotein of coronavirus was not known and disclosed as RNA topoisomerase by homology search with *Vibrio haemolytica* DNA topoisomerase I & IV as well DNA primase and bi-subunit DNA topoisomerase IB of *Trypanosoma brucei* and DNA gyrase of *Escherichia coli*. Further, we found Nsp16 was a 2'-O-Ribose Uridine Methyltransferase and Nsp13 was a 2'-O-Ribose Guanosine Capping Methyltransferase previously implicated as RNA helicase. Search with 200 RNA/DNA binding-modifying proteins confirmed Nsp13 protein has scattered homology to ribosomal L6 and L9 proteins and Nsp2 protein to L1 protein and Nsp15 protein to S1/S22 ribosomal proteins. Further, Nsp13 has some homology with Cfr 23S rRNA methyltransferase and RNaseT whereas Nsp15 to Dcm DNA methyltransferase and Nsp14 to Cfr 23S rRNA methyltransferase. Further, Nsp8, Nsp9 and Nsp10 have some similarities to Rlm-types methyltransferases of *E. coli* and also some different ribosomal proteins similarities. These bioinformatics data suggested that Nsp2, Nsp8, Nsp9, Nsp10, Nsp13, Nsp14 and Nsp16 non-structural proteins may be recruited easily to mitoribosome making chimera ribosome to methylate the 21S rRNA of human mitochondria or change its topology favouring viral protein synthesis and inhibiting host protein synthesis. Such change in host protein synthesis (CoxI/II) in the mitochondria may cause a inhibition in oxidative phosphorylation and ATP synthesis causing blood clotting, breath trouble, coma and heart failure as seen in many corona-infected patients. Thus, targeting those viral mRNA and proteins with drugs, antisense, ribozyme and CRISPR-Cas6 may save life. So far, only Nsp12 (RNA-dependent RNA polymerase) and Nsp3 (C3 protease) proteins were targeted for drug design against corona virus.

### **Biography:**

A molecular biologist experienced in bacteriology, protein purification, mammalian cell culture, plant tissue culture, retrovirology, gene therapy, gene transcription and drug discovery.



International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Webinar

---

**DAY 2** | **e-POSTERS**



International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

## Challenges in tigecycline susceptibility testing in *Acinetobacter baumannii*: Bad bug, no test

**Dr. Amresh Pati, Ashoka Mahapatra and Kavita Gupta**

Department of Microbiology, AIIMS BHUBANESWAR, Odisha, India

**Research question:** To determine tigecycline susceptibility by using three different methods and compare them taking BMD as reference method

**Background:** The growing incidence of multi-drug resistant *Acinetobacter baumannii* (MDR AB) has left very limited therapeutic options. Tigecycline has been approved by US FDA for its use for complicated intra-abdominal and complicated skin and skin structure infections. It is difficult to interpret the susceptibility status of this antimicrobial agent due to lack of officially available breakpoints for *Acinetobacter* spp. against tigecycline.

**Purpose:** To determine tigecycline susceptibility by using different methods (BMD, E-test, Vitek-2) and compare different methods for tigecycline susceptibility taking BMD as reference method

**Methods:** 150 clinical isolates of *Acinetobacter baumannii* were included in this study and determination of tigecycline susceptibility was done by BMD, E-test, Vitek-2 compact. Categorical agreement and essential agreement was expressed taking BMD as gold standard. Category discrepancies were reported as very major error, major errors, minor errors. MIC<sub>50</sub> and MIC<sub>90</sub> were calculated by each method.

**Results:** MIC<sub>50</sub> and MIC<sub>90</sub> were found to be 1 µg/ml and 4 µg/ml in Vitek 2 respectively as compared to E strip where MIC<sub>50</sub> and MIC<sub>90</sub> was found to be .75 µg/ml and 1 µg/ml respectively. MIC<sub>50</sub> (0.125 µg/ml) and MIC<sub>90</sub> (0.5 µg/ml) were found to be lowest in BMD. Based on FDA Criteria for tigecycline susceptibility in Enterobacteriaceae, 14% and 0.66% major error was seen in Vitek 2 and E-Strip respectively compared to BMD as gold standard.

**Conclusion:** Discordant results have been seen with different susceptibility testing methods as well as different interpretative criteria. Vitek system was found as least reliable followed by E-strip in susceptibility testing of MDR and XDR *Acinetobacter baumannii* against Tigecycline.

**Keywords:** A.baumannii, VITEK 2 compact system

### Biography:

Dr. Amresh Pati completed my MBBS from S.C.B Medical college, Cuttack, Odisha, India in 2011. After doing 6 yrs of peripheral service, currently pursuing Post Graduate degree in Microbiology in AIIMS Bhubaneswar

International E-Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

## **Global Pandemic COVID-19 (2019-nCoV)**

### **Dr. Mahnoor Patel**

Department of Molecular Biology and Genetic Engineering, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara-144411, Punjab, India

**G**lobal pandemic cause by coronavirus has been reported in Wuhan, China; in late December 2019. Within time duration of few weeks, the newly identified virus designated as 2019-Novel Coronavirus (2019-nCoV) and it was declared by World Health Organization (WHO). At the time of late January 2020, WHO announced it as the international emergency outbreak because of the rapid spread and increases at the global level. There is no any preventive vaccine is present or any approved therapy/treatment for this viral emergency which is very infectious globally. Till the previous few decades, six strains of coronaviruses were found, but in Wuhan, China in December 2019, a totally new strain of coronavirus was spread across the city. Within few days, it was designated as the novel coronavirus abbreviated as 2019-nCoV by World Health Organization. The rate of virus progression is still not determined and that is why it is very difficult to find the patient zero which is very essential. Phylogenetic analysis of the virus specifies bat origin of 2019-nCoV, its transmission is airborne i.e. human to human, infected person can be identified having the primary symptoms which includes high fever, upper or lower respiratory tract infection. Its diagnosis at the molecular level includes Real-Time PCR for encoding genes for the internal transcribed RNA-dependent RNA polymerase and Spike protein receptor binding domain. It can be confirmed by the Sanger Sequencing including full genome analysis by Next Generation Sequencing, multiplex nucleic acid amplification and microarray based analysis. There are few mRNA vaccines which were developed by few Biotechnology companies, showing positive results against COVID-19 and it is there in 4th phase clinical trial which possibly be the first vaccine available in the market in between mid-2021.

**Keywords:** Contagion, Envelop Protein, Global Pandemic, Infectious Viral Disease, Novel Coronavirus (2019-nCoV), RNA Vaccine.

### **Biography:**

Mahnoor Patel completed my master degree in Biotechnology and PhD in Molecular Biology and Genetic Engineering. She has interest in studying diseases for developing next generation vaccines and personalized medicine. Disciplines of her interest for research are Bioengineering, Biotechnology, Computational Biology, Cytogenetics, Developmental Biology and Embryology, Genetic Engineering, Immunology, Infectiology, Nanobiotechnology, Nanotechnology, Neurotechnology, Regenerative Medicine, Reproductive Biology, Stem Cell Engineering, Tissue Engineering, Translational Medicine, Vaccinology, Virology. She interested in 3D bio printing of human organs for transplantation & interest is to change the way of present treatment of disease to next generation personalized treatment combined with nanotechnology which is a new era of medical science.



International E-Conference on

# VIROLOGY, INFECTIOUS DISEASES AND COVID-19

December 07-08, 2020 | Virtual Event

## **Tocilizumab and baricitinib in severe pneumonia due to COVID-19 in Veracruz, Mexico**

**Dr. Luis Del Carpio-Orantes, Sergio García-Méndez, Jesús Salvador Sánchez-Díaz, César López-Guzmán, Gustavo Miguel Zamudio-Severino, Benito Navarrete-Espinosa, Miguel Angel Rivera-Viñas, Arturo Salas-González, Manuel Martínez-Rojas, Jorge Samuel Cortés-Román, Oscar Rodrigo Jiménez-Flores, Samuel Pascual-Epímenio, Raymundo Ramírez-Rojas, Mario Antonio Ataxca-González, Edna Rosario Contreras-Sánchez, Ada Lili Rosas-Lozano, Álvaro Efrén Munguía-Sereno, Zeltzin Olivia Guerrero-Mancinas, Elisa Estefanía Aparicio-Sánchez, Omar García-Hernández, Orlando Israel Segura-Rodríguez, Alejandro Escobar Huerta, Andrés Aguilar-Silva, Azael Ahumada-Zamudio, Andrés Realino Velasco-Caicero and Sara Nohemi Hernández-Hernández**

Internal Medicine-Researcher; Department of Internal Medicine, General Hospital 71, Instituto Mexicano del Seguro Social, Veracruz, Mexico

**Introduction** Until now, there is no specific treatment to treat COVID-19 pneumonia, causing concern in patients with hypoxemic pneumonia and cytokine storm given the high mortality, for which compassionate medications have been implemented.

**Methods.** The individual experience with each drug used in severe hypoxemic pneumonia and cytokine storm is presented.

**Results. Tocilizumab.** 20 patients in ICU, 15 men and 5 women, with median age of 50.5 years. Diabetes mellitus and systemic arterial hypertension were the most frequent comorbidities. In paraclinical patients, lymphopenia with a median of 860 cells/mm<sup>3</sup> stood out. The median neutrophil-lymphocyte index was 7.4, the D-dimer was 1,086ng/mL, the ferritin was 1,625.6ng/mL, and the PaO<sub>2</sub>/FiO<sub>2</sub> index had a median of 162. The median number of days of evolution prior to admission was 9. 95.0% of the patients had pulmonary failure, hematological failure in 20.0%, kidney failure in 20.0% and neurological failure in 10.0%. Furthermore, 80% of the patients had moderate ARDS and 20% had severe ARDS; All patients remained in the prone position, 60.0% received invasive mechanical ventilation and 40% with non-invasive ventilation. As for the administration of tocilizumab, 17 (85.0%) patients received one dose, (15.0%) patients received two doses. The median days of hospital stay was 16 days; additionally, there were 2 (10%) patients who died. No infectious adverse events were reported after drug administration.

**Baricitinib.** 30 patients with home care, 8 women and 22 men, with a median age of 58.5 (46.5 - 68.0) years. 23 patients (77%) had comorbidities, the most frequent being arterial hypertension (43%), followed by obesity (30%), type 2 diabetes mellitus (27%), among others. In the laboratory, the medians of D-Dimer 982ng / mL, Ferritin 1,375ng / mL and C-Reactive Protein 10.0mg / dL. Regarding the use of previous medications, we found that 29 (97%) patients had treatment with some medication, the most frequent: azithromycin (77%), ivermectin (53%) and dexamethasone (47%). The median number of medications received was 3. The initial pulse oximetry (SaO<sub>2</sub>) measurement with room air had a median of 80.5% and the median SaO<sub>2</sub>/FiO<sub>2</sub> (SAFI) was 134; Regarding the type of ARDS, 90% had moderate and 10% had severe. The median day of



# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

December 07-08, 2020 | Virtual Event

evolution on which baricitinib was started was 10 days, all received 4 mg/day, and the median days of treatment with baricitinib was 14.0 days. At follow-up, SaO<sub>2</sub> at 7 days had a median of 93.0% and the median SAFI at 7 days was 310.0; the median SaO<sub>2</sub> at 14 days was 95.0% and the median SAFI at 14 days was 452.0. In comparative analysis, baseline SaO<sub>2</sub>/SAFI was significantly lower compared to 7 and 14 days ( $p = 0.001$  for both comparisons). The outcomes, 27 (90%) patients improved and there were 3 (10%) who died.

**Conclusion.** Tocilizumab and baricitinib are safe drugs in patients with severe hypoxemic pneumonia and cytokine storm, and can be used in hospitals (tocilizumab) or at home (baricitinib) given their presentations, fighting hyperinflammation as well as avoiding intubation, and in intubated patients, favoring Successful extubation coupled with standard care, mortality is low in this series of cases.

**Keywords:** Pneumonia; COVID-19; Tocilizumab; Baricitinib

## **Biography:**

Luis Del Carpio-Orantes, Medical specialist in Internal Medicine and Associate Researcher A, Mexican Institute of Social Security. Leader of the Guillain Barré Syndrome Study Group in arbovirus season in Veracruz, Mexico and of the Study Group for the diagnosis and treatment of COVID-19 in Veracruz, Mexico. Columnist for the Ibero-American Society for Scientific Information. Member of the Mexican Network of Virology. Member of the Mexican Society of Virology.

**NOTE:**





Venue: Manchester Meeting Place, Sackville Street Campus, The University of Manchester, United Kingdom

**See you at Upcoming 2021**

International Conference on

# **VIROLOGY, INFECTIOUS DISEASES AND COVID-19**

Conference on July 22-23, 2021

**Secure your seat today at**

<https://manchestervirology.com/>

**Secure your seat today at**

Email: [admin@virologyforum.com](mailto:admin@virologyforum.com) | Mobile/Whatsapp: +44 772-186-3159