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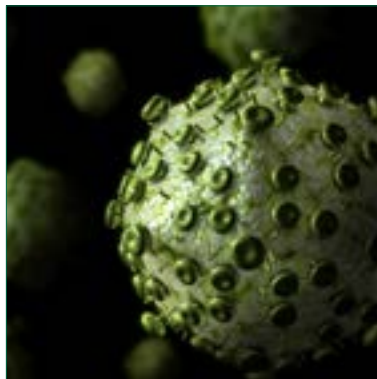
Scientific Tracks & Abstracts
March 28, 2018

Emerging Diseases and
Case Studies & Influenza 2018

International Conference on

Emerging Diseases, Outbreaks & Case Studies

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16th Annual Meeting on Influenza   March 28-29, 2018 | Orlando, USA

The impact of HCV or HBV clearance on HCC incidence or progression

Natalyn N Hawk
Emory University, USA

Hepatocellular carcinoma (HCC) is the most common primary liver malignancy, over 600,000 cases annually world-wide. HCC pathogenesis is driven by a complex product of a chronic inflammatory state generated by liver chronic liver injury and proliferative signals triggered in the setting of injury, repair and regeneration. Hepatitis C virus and/or Hepatitis B virus infection is associated with 5 year cumulative HCC risk of 30%/17% in Asia/Western nations for HCV and 15/10% in Asian/Western countries respectively. Primary biliary cirrhosis, or cirrhosis from alcohol, hereditary hemochromatosis have five year cumulative risk of HCC of only 4%. While Cirrhosis of the liver is a major driver in the pathogenesis of HCC, chronic HCV or HBV infection independently contribute to tumor promotion due to direct proliferative stimuli from hepatitis virus. The result is a host environment in which there is perpetual activation of inflammatory responses which may lead in some cases to abnormal cell proliferation or inappropriate persistence of activation of inflammatory states culminating in malignancy. The erradication of infection by HBV or HCV virus results in statistically signficant reduction in HCC incidence in patients with cirrhosis. Novel anti-viral therapies for HCV clearance have an increasingly prominent role in cirrhosis management, but the role for anti-viral therapy in patients with overt HCC requires additional clarity.

Speaker Biography

Natalyn N Hawk has obtained her MD and PhD from Brown University in Providence, Rhode Island, in collaboration with the Molecular Pathology Graduate program at MD, Anderson Cancer Center in Houston, Texas. She has completed her Residency Training in Internal Medicine at Johns Hopkins Bayview Medical Center in Baltimore, MD. She has completed Fellowship Training in Hematology and Medical Oncology at Emory University as well as a Post-graduate Research Fellowship at Emory Winship Cancer Institute. She is an Assistant Professor of Hematology and Medical Oncology at Emory University and is a Member of the Gastrointestinal Oncology Working Group of Emory Winship Cancer Institute. She is also a Member of the Discovery and Developmental Therapeutics Research Program at Winship Cancer Institute of Emory University.

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Ebola: One perspective on treating this emerging disease from the field

Asa Oxner Myers
University of South Florida Morsani College of Medicine, USA

The Ebola epidemic in West Africa from 2014 to 2015 was the largest ever recorded in history, responsible for the deaths of 11,314 patients across Sierra Leone, Liberia, and Guinea. I had the opportunity to work in an Ebola Treatment Unit (ETU) in Port Loko, Sierra Leone during 2015. At that time, Port Loko was the district with the highest incidence of new Ebola infections worldwide. I will discuss the staffing structure of our ETU using teams of Sierra Leonean nationals employed by their government alongside expatriates, our treatment protocols in the ETU, and two cases of patients who were treated at our ETU.

Speaker Biography

Asa Oxner Myers has completed her MD in 2011 from the University of South Florida Morsani College of Medicine (USF) and her residency in Internal Medicine at Harvard Medical School's Teaching Hospital Beth Israel Deaconess Medical Center. She is the Assistant Division Director of the Division of General Internal Medicine at USF and the Chairman of the Primary Care Quality and Patient-Centered Medical Home Committee. She has an interest in global health and has worked in Botswana, South Africa, Sierra Leone, Colombia, Dominican Republic, and Thailand as well as leading Medical students through research projects in up to 15 different countries annually.

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Cross-protection to new drifted influenza A (H3) viruses and prevalence of protective antibodies to seasonal influenza, between 2014 in Portugal

Raquel Guiomar, Susana Pereira da Silva, Patrícia Conde, Paula Cristóvão, Ana Carina Maia, Pedro Pechirra, Ana Paula Rodrigues and **Baltazar Nunes**
National Institute of Health Lisboa, Portugal

Introduction: Immune profile for influenza viruses is highly changeable over time. Serological studies can assess the prevalence of influenza, estimate the risk of infection, highlight asymptomatic infection rate and can also provide data on vaccine coverage. The aims of the study were to evaluate pre-existing cross-protection against influenza A (H3) drift viruses and to assess influenza immunity in the Portuguese population.

Materials & Methods: We developed a cross-sectional study based on a convenience sample of 626 sera collected during June 2014, covering all age groups, both gender and all administrative health regions of Portugal. Sera antibody titers for seasonal and new A (H3) drift influenza virus was evaluated by hemagglutination inhibition assay (HI). Seroprevalence to each seasonal influenza vaccine strain virus and to the new A (H3) drift circulating strain was estimated by age group, gender and region and compared with seasonal influenza-like illness (ILI) incidence rates before and after the study period.

Results: Our findings suggest that Seroprevalence of influenza A (H3) (39.9%; 95% CI: 36.2–43.8) and A (H1) pdm09 (29.7%; 95% CI: 26.3–33.4) antibodies were higher than for influenza B, in line with high-ILI incidence rates for A (H3) followed by A (H1) pdm09, during 2013/2014 season. Low pre-existing cross protection against new A (H3) drift viruses were observed in A (H3) seropositive individuals (46%). Both against influenza A (H1) pdm09 and A (H3) Seroprotection was highest in younger than 14-years old. Protective antibodies against influenza B were highest in those older than 65 years old, especially for B/Yamagata lineage, 33.3% (95% CI: 25.7–41.9). Women showed a high Seroprevalence to influenza, although without statistical significance, when compared to men. A significant decreasing trend in seroprotection from north to south regions of Portugal mainland was observed.

Conclusions: Our results emphasize that low seroprotection increases the risk of influenza infection in the following winter season. Seroepidemiological studies can inform policy makers on the need for vaccination and additional preventive measures.

Speaker Biography

Raquel Guiomar is a Virologist at National Institute of Health, Portugal (Influenza and other respiratory viruses)responsible for the National Laboratory of Reference for Influenza Virus and Other Respiratory Viruses of the Ricardo Jorge Institute.

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Discrimination of subtypes for influenza surveillance using a peptide-based detection platform(flu type)

Henry Memczak, Marc Hovestädt, Bernhard A Y, Sandra Sänger, Jan Grzegorzewski, Matthias König, Thorsten Wolff and **Frank F Bier**
University of Potsdam, Germany

The only cost-effective protection against influenza is vaccination. Due to rapid mutation continuously, new subtypes appear which require annual immunization. For a correct vaccination recommendation, the circulating influenza strains have to be detected promptly and exactly and characterized regarding their antigenic properties. Due to recurring incidents of vaccine mismatches, there is a great need to speed up the process chain from identifying the right vaccine strains to their administration. The monitoring of subtypes as part of this process chain is carried out by national reference laboratories within the WHO Global Influenza Surveillance and Response System (GISRS). To this end, thousands of viruses from patient samples (e.g. throat smears) are isolated and analyzed each year. Currently, this analysis involves complex and time-intensive (several weeks) animal experiments to produce specific hyper immune sera in ferrets, which are necessary for the determination of the antigen profiles of circulating virus strains. These tests also bear difficulties in standardization and reproducibility, which restricts the significance of the results. To replace this test, a peptide-based assay for influenza virus subtyping is developed. The differentiation of the viruses takes place by a set of specifically designed peptidic recognition molecules which interact differently with the different influenza virus subtypes. The differentiation of influenza subtypes is performed by pattern recognition guided by machine learning algorithms, without any animal experiments.

Speaker Biography

Henry Memczak has studied Nanotechnology at the University of Kassel, Germany and completed his PhD in Biochemistry in 2014 at the University of Potsdam, Germany and the Fraunhofer Institute for Cell Therapy and Immunology, Germany. He has worked on the development of analytical biosensors for influenza detection and methods for Peptide-Based Bio Interaction Analysis for several years, he did\ publishing in published several papers, holds two patents and Co-founded the company QPA Bio Analytics GmbH for the commercialization of novel peptide biochips. For his dedicated translational research, he received several Awards and Scholarships.
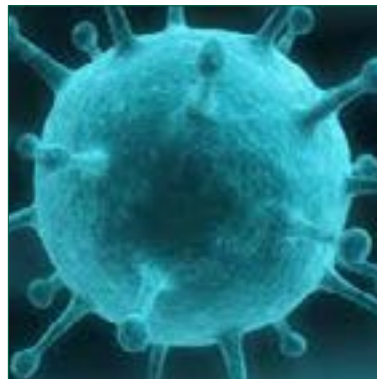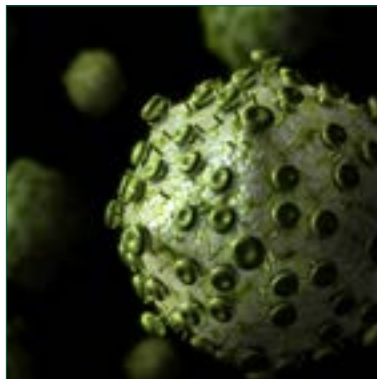
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Video Presentation
March 29, 2018

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Swine Flu Myths & Fact, Local/Global" GOI Guidelines Awareness & Surveillance

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Background: Swine flu is an acute respiratory infection caused by influenza virus (H1N1 subtype A). It is a highly contagious virus. If remains undiagnosed & untreated, it causes significant morbidity and mortality and spread in community.

Aim: Primary goal of this study is to spread epidemiological awareness for Swine Flu & to convey the Guidelines provided by Government of India & WHO to general public specifically Students, Healthcare workers, Social representatives & layman (mainly housewives). To educate people & take their feedback for the awareness they got. Get rid of community from Myths for such a big public health problem.

Methods and Materials: This retrospective descriptive study analyses of Swine Flu awareness & satisfaction level of targeted audience in the state of Gujarat from the month of July 2017 to October 2017. The study included only those who were filling the feedback forms given after each of the educational seminar as per the national guidelines. Besides the presentation on government Guidelines people were given self-assessment tool kit to check their level of understanding. The audience is classified according to age, gender, location, approach to government or private hospital, educational qualification, occupation etc. The incidence ratio for the satisfaction level & awareness of the community is calculated and compared with other states.

Conclusion: Epidemiological parameters and seasonal pattern of swine flu awareness gives ideas that such educational programs can improve the people's general attentiveness & responsiveness towards them self and for the community. Such programs & surveillance will lead to improve the control strategies to minimize the morbidity & mortality and spread of disease & overcome the old alternative methodologies to control the infection.

Speaker Biography

Bhavin Bhatt has completed his PhD in 2009 years from Bhavnagar University, Gujarat INDIA. He is Consultant Microbiologist & Head Hospital Infection Control. He is having more than 18 years of experience in the field of Microbiology & Infection control. He has a personal expertise in Infectious diseases, Microbiological/Bacteriological Diagnostic technologies. He has carried out more than 95000 culture & sensitivity testing of various clinical specimens. He has number of publications under his name. He has conducted more than 150 awareness programs for more than 10000 students/healthcare workers/community representatives & layman as a Designated Nodal Officer for Swine Flu & Infectious diseases by State Government.

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