

DAY 1

Scientific Tracks & Abstracts



European Congress on

Vaccines & Vaccination and Gynecologic Oncology

October 26-27, 2018 | Budapest, Hungary

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October 26, 2018

Sessions

HIV/AIDS Vaccines | Vaccines Safety and Efficacy |
Veterinary Vaccines | Vaccine Research and Development
| Mucosal Vaccines | Vaccines and Immunization |
Preventable Disease Vaccines

Session Chair

Leonardo Saenz Iturriaga

Biomedical Sciences of the University of Chile, Chile

Session CO-Chair

Kathleen Hefferon

Cornell University, USA

Session Introduction

- Title: Impact of mixed equine influenza vaccination on correlate of protection in horses**
Mohamed Dilai, Hassan II Institute for Agronomy and Veterinary Medicine-Rabat, Morocco
- Title: Barriers to vaccination for vaccine preventable infections: Georgia experience**
George Kamkamidze, University of Georgia, Georgia
- Title: Contamination prevention**
Brian G. Hubka, Contamination Prevention Technologies, USA
- Title: Bacteriological evaluation and antibiotic sensitivity pattern in tonsillitis among university students in Kerkuk province, Iraq**
Ayoub Bazzaz, University of Kerkuk, Iraq
- Title: Developing an environmental control program for vaccines**
Jeanne Moldenhauer, Excellent Pharma Consulting, USA
- Title: Vaccine strain selection for FMD serotype O-viruses in Southeast Asia and East Asia using antigenic and genetic data by measuring the effect of protective viral determinants**
Sasmitha Upadhyaya, The Pirbright Institute, UK

IMPACT OF MIXED EQUINE INFLUENZA VACCINATION ON CORRELATE OF PROTECTION IN HORSES

Mohamed Dilai¹, Mohammed Piro¹, Mehdi El Harrak², Stéphanie Fougerolle^{3,4}, Mohammed Dehhaoui¹, Asmaa Dikrallah¹, Loïc Legrand^{3,4}, Romain Paillot^{3,4} and Ouafaa Fassi Fihri¹

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²MCI Animal Health, Morocco

³Universite de UniCaen Normandie-BIOTARGEN, France

⁴LABÉO Frank Duncombe, France

In order to evaluate the humoral immune response to mixed equine influenza vaccination, a common practice in the field, an experimental study was carried out on 42 unvaccinated thoroughbred weanlings foals divided into 6 groups of 7. Three groups were vaccinated using a non-mixed protocol (Equilis® Prequenza-Te, Proteqflu-Te® or Calvenza-03®) and three other groups were vaccinated using a mix of the three vaccines mentioned previously. Each foal underwent a primary EI vaccination schedule composed of two primary immunisations (V1 and V2) 4 weeks apart followed by a third boost immunisation (V3) 6 months later. Antibody responses were monitored until one-year post-V3 by single radial hemolysis (SRH), a correlate of protection against equine influenza virus (EIV) infection. The results showed similar antibody responses for all groups using mixed EI vaccination and the group exclusively vaccinated with Equilis® Prequenza-TE, which were significantly higher than the other 2 groups vaccinated with Proteqflu-TE® and Calvenza-03®. All the weanlings (100%) failed to seroconvert after V1 and 21% (9/42) still had low or no SRH antibody titres 2 weeks post-V2. All weanlings had seroconverted and exceeded the clinical protection threshold one month after V3. The poor response to vaccination was primarily observed in groups exclusively vaccinated with Proteqflu-Te® and Calvenza-03®. A large window of susceptibility (3 to 4.5 months duration) usually called immunity gap was observed after V2 and prior to V3 for all groups. The SRH antibody level was maintained above the clinical protection threshold for 3 months post-V3 for the groups exclusively vaccinated with Proteqflu-Te® and Calvenza-03®, 6 months to one year for groups using mixed EI vaccination or exclusively vaccinated with Equilis® Prequenza-Te. This study demonstrates for the first time that the mix of EI vaccines during the primary vaccination schedule has no detrimental impact on the correlate of protection against EIV infection.

Biography

Mohamed Dilai is a Veterinarian graduated from Hassan II Institute for Agronomy and Veterinary Medicine in Morocco in 2008. He started his career in the pharmaceutical industry at Elanco Animal health and stayed for a period of 3 years. In 2012, he joined the National Horse Institute in Rabat and started his PhD in 2014 for the study of equine influenza. In 2016, he joined the Hassan II Institute for Agronomy and Veterinary Medicine as a Clinician in Equine Department.

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BARRIERS TO VACCINATION FOR VACCINE-PREVENTABLE INFECTIONS: GEORGIA EXPERIENCE

George Kamkamidze^{1,2} and Maia Butsashvili^{1,2}

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Several studies have been done in recent years in Georgia to study barriers to vaccination for vaccine-preventable infections. In one of such studies, 278 obstetrician-gynaecologists in 8 cities in the country of Georgia were investigated on the knowledge, attitudes, and practices related to influenza vaccination during pregnancy. Most physicians perceived influenza to be a serious infectious disease (88%) and that pregnant women are more susceptible to it than the general population. Only 43% of physicians reported recommending influenza vaccination during pregnancy; 18% reported vaccinating any pregnant patients during the last influenza season. Most (75%) physicians reported a perception that there is insufficient evidence supporting influenza vaccination during pregnancy. Most (93%) were receptive to receiving additional education on maternal vaccination. Another cross-sectional study was conducted using a self-administered written survey of 288 physicians practicing in 7 healthcare institutions in Tbilisi, Rustavi and Batumi, Georgia. Data were collected on demographics, conduct of and perceived barriers to Pap smear testing, knowledge about HPV and HPV vaccination. Only 48% of physicians actively offered the HPV vaccine, although most physicians were receptive to increased education and training about HPV and cervical cancer. Another study focused on the prevalence and awareness of hepatitis B and hepatitis B vaccine was conducted among randomly selected physicians and nurse employed in seven hospitals in Georgia. Of the 1328 participants included in this analysis, 36% reported recommending against hepatitis B vaccination for children, including 33% of paediatricians. Among the 70.6% who provided a reason for not recommending HBV vaccine, the most common concern was an adverse vaccine event. Unvaccinated physicians and nurses were more likely to recommend against HBV vaccine. Additionally, health care worker age was inversely correlated with recommendations for HBV vaccine with older workers less likely to recommend it.

Biography

George Kamkamidze, MD, PhD, MS is the Full time professor at the Department of Immunology and Infectious Diseases, University of Georgia and the Head of Research Department, Health Research Union, Tbilisi, Georgia. He got his MD and PhD from the Tbilisi State Medical University and the MS in Biometry and Statistics from the Albany School of Public Health, SUNY, Albany, NY. He was also a Post-doctoral fellow at the Wadsworth Center for Laboratories and Research, Albany, NY and at the Laboratory of Immunology, Hospitals Group Pitie-Salpetriere, Paris, France. His research interest is focused on the immunology and immunogenetic aspects of HIV/AIDS, viral hepatitis and other persistent viral infections. He has published more than 50 papers in peer-reviewed journals.

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CONTAMINATION PREVENTION

Brian G Hubka

Contamination Prevention Technologies, USA

Contamination Prevention is a common occurrence costing time delays for product release, product rejection by quality and product recall by the FDA. There are several new technologies that can quickly and completely eliminate contamination:

- **How to prevent certain types of contamination**
- **Identify extremely effective disinfectants that don't harm stainless steel**
- **Identify easier methods to validate cleaning and disinfection using biological indicators**
- **Preventing and eliminating biofilm with ambient water.**

Prevention, Effective, Easy, Biofilm

Biography

Brian G. Hubka is the CEO of Contamination Prevention Technologies, Inc. This company provides a vast array of contamination remediation and prevention technologies and products to eliminate and prevent mold, bacteria, viruses, prions and the like. They are also specialists in biofilm remediation and elimination. He also consults on contamination issues in pharmaceutical and biotechnology companies. Has worked with Pfizer, Amgen, Celgene and many others. He is a graduate of University of Notre Dame pre-medicine. He is also a frequent speaker and has authored book chapters for many PDA/DHI books.

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BACTERIOLOGICAL EVALUATION AND ANTIBIOTIC SENSITIVITY PATTERN IN TONSILLITIS AMONG UNIVERSITY STUDENTS IN KERKUK PROVINCE, IRAQ

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University of Kirkuk, Iraq

Tonsillitis is a common bacterial disease caused by (β -haemolytic streptococci group-A), spread in most part of the world causes inflammation of tonsils while it could also be caused by Adeno and Epstein-Barr viruses. The objective was to determine the bacterial aetiology of Tonsillitis and their susceptibility to antibiotics amongst the university students within Kerkuk province. Only 148 throat swabs were collected from student and assessed in laboratory. The bacterial causes involved β -haemolytic streptococci group-A (29.7%), *Staphylococcus aureus* (17.6%) *Pseudomonas aeruginosa* (10.8%), *Klebsiella* spp. (5.4%) and *E. coli* (1.4%) respectively. The infection prevalence was 23.6% and 8.8% in rural and urban areas, respectively. Antimicrobial sensitivity assessment showed that all the bacterial isolates were 100% sensitive towards Ceftazidime and relatively high resistant to Ampicillin but varied in their sensitivity to other antibiotics. Both β -haemolytic streptococci group-A and *Staphylococcus aureus* showed high sensitivity for Cefotaxime) 91% and 92 %, respectively. The *Pseudomonas aeruginosa* gave showed (87.5%) sensitivity to Ciprofloxacin while *Klebsiella* spp (75%) while the *E. coli* showed multi resistance to many antibiotics. It is concluded that Bacteria causing tonsillitis are of various species which their resistance to antibiotics vary enormously. Such variation endure the general practitioners to have cultural Tests carried out prior prescribing an effective and righteous antibiotic for patients.

Biography

Ayoub A Bazzaz has completed his PhD from Nottingham University, UK and continued postdoctoral research works for over 10 years at Leeds, Liverpool and Cardiff Universities in UK. He is one of the founder of Faculty of Medicine of Tikrit University, Iraq and first head of Anatomy department 1988-1991. Has supervised and refereed many PhD and MSc students in Iraq, KSA, Libya and UK and has over 55 published scientific papers in reputed International journals.

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DEVELOPING AN ENVIRONMENTAL CONTROL PROGRAM FOR VACCINES

Jeanne Moldenhauer

Excellent Pharma Consulting, Inc

In this every changing world of regulatory expectations, developing a regulatory strategy for environmental control can be challenging. This talk will discuss current expectations for environmental control and will also provide guidance on regulatory issues associated with these programs.

Biography

Jeanne Moldenhauer, Vice-President of Excellent Pharma Consulting has more than 30 years' experience in the pharmaceutical industry. She chaired the Environmental Monitoring/Microbiology Interest Group of PDA for more than 15 years, served on the Scientific Advisory Board of PDA for 20 years, founded the Rapid Microbiology User's Group™, and is a Member of ASQ and RAPS. She is the author of many books and numerous publications (book chapters and magazine articles).

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Young Research Forum



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VACCINE STRAIN SELECTION FOR FMD SEROTYPE O VIRUSES IN SOUTHEAST ASIA AND EAST ASIA USING ANTIGENIC AND GENETIC DATA BY MEASURING THE EFFECT OF PROTECTIVE VIRAL DETERMINANTS

Sasmita Upadhyaya

The Pirbright Institute, UK
Jenner Institute (NDM), University of Oxford, UK
Boehringer Ingelheim (BI), the Netherlands

Foot and mouth disease (FMD), caused by FMD virus (FMDV) is a highly contagious disease affecting cloven hoofed animals. Although vaccination is one of the most important control measures to prevent FMD outbreaks, the available vaccines may not provide enough cross protection against recent circulating FMDV, mainly due to emergence of new lineages and sub lineages. Therefore, the main aim of this project is to find out a suitable cross protecting vaccine strain by matching (antigenic and genetic characterisation) circulating viruses with existing vaccines and new putative vaccine strains. So in the first year of this study, a total of 50 serotype O (2013-2017) viruses selected from SEA, Far East and EA countries, were characterised by virus neutralisation test and capsid sequencing. O/PanASIA-2 is seen to be the broad cross reacting vaccine for serotype O. However, recent circulating CATHAY topotype viruses are not protected by any of these existing vaccines. Further capsid sequence analysis of these viruses elucidated amino acid changes in the antigenic sites of these viruses. The effect of these amino acids changes are being investigated using reverse genetics technique. This can help to design new vaccines, which can give better cross protection against the circulating viruses.

Biography

She is currently studying in The Pirbright Institute, UK.

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DAY 2

Video Presentation



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Budapest, HungaryGiulio Tarro, Journal of Clinical Immunology and Allergy, Volume: 4
DOI: 10.21767/2471-304X-C2-005

Euro Vaccines 2018

TUMOR LIBERATED PROTEIN (TLP) AS POTENTIAL VACCINE FOR LUNG CANCER PATIENTS

Giulio Tarro

Foundation T & L de Beaumont Bonelli for cancer research, Italy

Tumor liberated protein (TLP) has been previously described as a TAA (complex) present in the sera from lung cancer patients with early stage disease. Since early detection improves overall survival in lung cancer, identification of screening biomarkers for patients at risk for the development of this disease represents an important target. Starting from the peptide epitope RTNKEASI previously isolated from TLP complexes, we generated a rabbit anti-RTNKEASI serum. This antiserum detected and immunoprecipitated a 55 kDa protein band in the lysate of the lung cancer cell line A549. This protein band was identified as aldehyde dehydrogenase isoform 1A1 through mass spectrometry, revealing the molecular nature of at least one component of the previously described TLP complex. Next, we screened a cohort of 29 lung cancer patients (all histologies), 17 patients with non-neoplastic lung pathologies and 9 healthy donors for the presence of serum ALDH1A1 and global serum ALDH by enzyme-linked immunosorbent assay. This analysis indicated that the presence of ALDH was highly restricted to patients with lung cancer. Interestingly, the global ALDH test detected more lung cancer patients compared to the ALDH1A1-specific test, suggesting that other ALDH isoforms might add to the sensitivity of the assay. Our data suggest that ALDH levels may therefore be evaluated as part of a marker panel for lung cancer screening. Finally, the ability of the immune system to recognize a TAA, enables the development of a vaccine approach for preventive and therapeutic application and represents a main target of this field of research.

Biography

Giulio Tarro has graduated from Medicine School, Naples University (1962). He served many positions such as Research Associate, Division of Virology and Cancer Research, Children's Hospital (1965-1968); an Assistant Professor of Research Pediatrics, College Medicine (1968-1969), Cincinnati University, Ohio; Oncological Virology Professor, Naples University (1972-1985); Chief Division Virology (1973-2003); Head Department Diagnostic Laboratories (2003-2006) at D Cotugno Hospital for Infectious Diseases, Naples; an Emeritus, from 2006 to till now. Since 2007, he is serving as Chairman Committee of Biotechnologies and VirusSphere, World Academy Biomedical Technologies, UNESCO; an Adjunct Professor at Biology Department, Temple University, College of Science and Technology, Philadelphia. He is the Recipient of the Sbarro Health Research Organization Lifetime Achievement Award (2010). His researches have been concerned with the characterization of specific virus-induced tumour antigens, which were the finger-prints left behind in human cancer. His achievements include patents in field; discovery of Respiratory Syncytial Virus in infant deaths in Naples and of tumor liberated protein as a tumor associated antigen, 55 kiloDalton protein overexpressed in lung tumors and other epithelial adenocarcinomas.

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