Keynote Forum
May 25, 2018

LIVER 2018

World Liver Conference 2018

May 25-26, 2018 | New York, USA

Mark A Feitelson

Temple University, USA

Symbiotic bacteria provide chemoprevention against hepatitis B virus mediated hepatocellular carcinoma in hepatitis B x transgenic mice

Chronic infection with hepatitis B virus (HBV) is associated with the development of progression of chronic liver disease (CLD) and the appearance of hepatocellular carcinoma (HCC). HCC is a prevalent cancer worldwide with few treatment options. Given that HCC develops most often on the background of chronic inflammation, experiments were designed to test the hypothesis that selected probiotic bacteria that suppress inflammation could be used as a simple and inexpensive means to prevent or delay the appearance of HCC. To test this, hepatitis B x (HBx) transgenic mice, which develop progressive liver lesions that culminate in HCC, were treated with a mixture of probiotic bacteria (Synbiotic 2000) several months prior to the development of dysplasia and HCC. The results showed a significant reduction in the number and size of dysplastic and HCC nodules compared to control transgenic mice. Microarray analysis of selected immune and cancer associated markers showed a strong reduced expression in the liver of mice treated with Synbiotic 2000 compared to controls. Thus, Synbiotic 2000 attenuates the pathogenesis of HCC, and may be useful in cancer chemoprevention, not only for HCC, but perhaps against other cancers that often develop on the background of chronic inflammation.

Speaker Biography

Mark A Feitelson received his PhD in Microbiology and Immunology in 1979 from the UCLA School of Medicine. He was an American Cancer Society Post-doctoral fellow at Stanford University from 1980-82, and was then recruited to the Fox Chase Cancer Center by Dr. Baruch Blumberg (Nobel laureate). In 1991, he became an Associate Professor of Pathology and Cell Biology and Head of the Molecular Diagnostics Lab in Microbiology at Thomas Jefferson University. In 2007, he moved to Temple University, where he is now Professor of Biology. His research has been supported by NIH, industry and foundations for more than 35 years; he has more than 140 publications, and is currently Head of the Professional Science Master's program in Biotechnology at Temple University. Since 1980, his research interests have encompassed the pathogenesis of chronic hepatitis B infection and development of hepatocellular carcinoma on the cell and molecular levels.

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Arnolfo Petruzziello

IRCCS Fondazione "G Pascale, Italy

Hepatitis C Virus (HCV) infection: A global epidemiology up-date of the circulation of HCV genotypes

Hepatitis C Virus (HCV) is one of the major globally prevalent pathogen and one of the main leading causes of death and morbidity. The last estimates of disease burden showed an increase in Seroprevalence over the last 15 years to 2.8%, equating to >185 million infections worldwide. Persistent HCV infection is associated with the development of liver cirrhosis, hepatocellular cancer, liver failure and death and is basically the most common cause of death in HIV-positive patients on highly active antiretroviral therapy. Previous and more recent studies have reported regional level prevalence estimates, but always considering a limited number of countries. This study represent one of the most comprehensive effort to quantify global HCV epidemiology, using the best available published data between 2000 and 2015 from 138 countries (about 90% of the global population), grouped in 20 geographical areas (with the exclusion of Oceania), as defined by the Global Burden of Diseases project (GBD). Total global HCV prevalence is estimated at 2.5% (177.5 millions of HCV infected adults), ranging from 2.9% in Africa and 1.3% in Americas, with a global viraemic rate of 67% (118.9 millions of HCV RNA positive cases), varying from 64.4% in Asia to 74.8% in Australasia. HCV genotype one is the most prevalent worldwide (49.1.%), followed by genotype three (17.9%), four (16.8%) and two (11.0%). Genotypes five and six are responsible for the remaining <5%. While genotypes one and three are common worldwide, the largest proportion of genotypes four and five is in lower-income countries. A more precise knowledge of HCV genotype distribution will be helpful to best inform national healthcare models to improve access to new treatments.

Speaker Biography

Arnolfo Petruzziello is the Head of the Virology and Molecular Biology Unit of National Cancer Institute, IRCCS Fondazione G Pascale in Naples, Italy. He has completed his Post-graduation in Microbiology and Virology and PhD in Molecular and Cellular Pathology. After having completed his Post-doctoral studies at University Federico II of Naples; he has published numerous research papers in peer-reviewed international journals and has extended his valuable service towards the scientific community with his extensive research work. He is also Rewiever and Editorial Board Member for several international scientific journals and conferences.

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Maxwell Chait

Columbia University College of Physicians and Surgeons, USA

Lower GI bleeding in patients with cirrhosis

Lower gastrointestinal bleeding (LGIB) is an important cause of morbidity and mortality in patients with cirrhosis. It occurs in approximately 20% of all patients who present with gastrointestinal bleeding (GIB) with cirrhosis. Gastrointestinal diseases that cause LGIB in patients with cirrhosis include specific vascular diseases, inflammatory diseases and bowel ischemia. However, in patients with less severe cirrhosis and advancing age, the causes are much like the general population and must also be considered. The incidence and severity of LGIB in patients with cirrhosis depends upon the incidence of specific gastrointestinal diseases, coagulopathy, co-morbid diseases and polypharmacy. The evaluation and treatment of patients is adjusted to the rate and severity of hemorrhage and the clinical status of the patient and may be complicated by the presence of visual, auditory and cognitive impairment due to hepatic encephalopathy. Bleeding may be chronic and mild or severe and life threatening, requiring endoscopic, radiologic or surgical intervention and methods to reduce portal hypertension.

Speaker Biography

Maxwell Chait is a Fellow of several prestigious organizations, including the American College of Physicians, American College of Gastroenterology, American Gastroenterological Association and the American Society for Gastrointestinal Endoscopy. He is a Gastroenterologist and Assistant Professor of Medicine Columbia University College of Physicians and Surgeons in New York City. He has authored numerous publications in reputed journals. He is the Editor-in-Chief of the *Journal of Liver: Disease & Transplantation* and serves on the Editorial Board of the *World Journal of Gastrointestinal Endoscopy*.

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Ashwani K Singal

University of Alabama at Birmingham, USA

Cellular bioenergetics in patients with alcoholic liver disease

Alcoholic hepatitis (AH) is associated with 40-50% mortality at one month. Liver biopsy is often needed especially for uncertain clinical diagnosis. Corticosteroids (CS) provide 50% survival benefit with their response evaluable only at one week. Defects in bioenergetics or mitochondrial oxygen consumption rate (OCR) in peripheral cells are shown in systemic diseases. We tested the hypothesis that AH patients with severe bioenergetics defects will progress to liver failure and be non-responsive to CS (NRS). After informed consent, 20 mL blood was collected from ALD patients (with or without AH) and healthy controls. Second 20 mL sample was collected at one week, from AH patients receiving CS. Monocytes and neutrophils were isolated within 30 and cellular bioenergetics and OCR (pmol/min./mcg protein) were obtained using XF96 analyzer (Seahorse Biosciences). Of 78 ALD patients (37 AH) and 40 healthy controls, OCR differed among 63 ALD patients for basal, proton leak, non-mitochondrial, and oxidative burst in monocytes and neutrophils. After controlling for age, WBC, and MELD score, basal and ATP linked OCR predicted diagnosis of AH. Bioenergetics in monocytes improved among responders but not in NRS on follow up assessment at one week of therapy. Baseline cellular bioenergetics seems a promising biomarker for personalized medicine in ALD patients for a) diagnosis of AH and b) predicting response to CS and outcome on follow up. Data in larger multicenter population are needed before accepting use of this novel biomarker in clinical practice.

Speaker Biography

Ashwani K Singal is an Associate Professor of Medicine in Division of Hepatology and Director of Porphyria Center at the UAB, Birmingham AL. His clinical research interests include alcohol and non-alcohol fatty liver disease, porphyria, and renal dysfunction in liver cirrhosis. He has over 110 publications, on editorial board of reputed journals, and research award committees of the AGA and AASLD. His research is funded from the Transplant Institute of the UAB, ACG, NIAAA and NIDDK from the NIH, and pharmaceutical industry.

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Eve-Isabelle Pecheur

Cancer Research Center of Lyon, France

Chronic hepatitis C, fibrogenesis and heparan sulfate proteoglycans of the hepatic extracellular matrix

Chronic infection by the hepatitis C virus (HCV) is a major cause of liver diseases, predisposing to liver fibrosis and end-stage liver complications, the most serious being hepatocellular carcinoma. Fibrotic tissue remodeling can exert a pronounced effect on cancer initiation and growth. Liver fibrosis is characterized by an overly abundant accumulation of components of the hepatic extracellular matrix (ECM), such as collagen and elastin fibers, with consequences on the biomechanical and biochemical properties of this microenvironment. However, the molecular mechanisms linking infection to fibrogenesis still remain unclear. Here I will focus on the pericellular matrix or glycocalyx, the transition zone between the cell membrane and the ECM. In this zone, I will more specifically focus on heparan sulfate proteoglycans (HSPG), key molecules which bind cytokines and growth factors and modulate their bioavailability in the ECM. Our data suggest that HCV induces major alterations of HSPG metabolism, and a reshuffle of the pericellular matrix to provide a microenvironment favorable for viral replication and persistence. These key events of HCV pathogenesis could contribute to fibrogenesis.

Speaker Biography

Eve-Isabelle Pecheur has completed her PhD in 1997 from University Paris XI and Post-doctoral studies from Groningen University of Medical Sciences, Netherlands. She leads a research group at the Cancer Research Center of Lyon. She has published more than 50 papers in reputed journals. She is serving as an Editorial Board Member of *Antiviral Research*, and as an Academic Editor of *PLoS One.*

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Amanda J Brisebois

Grey Nuns Hospital, Canada

Integrating advance care planning education early in cirrhosis care: An inter-disciplinary model to increase uptake

Advance Care planning (ACP) and goals of care designation (GCD) are being increasingly discussed amongst specialists and generalists involved in the care of patients with cirrhosis. Uptake and adoption of integrating these discussions into standard inpatient and outpatient care have been limited with physicians citing many perceived barriers and limitations. Based upon the literature evidence-base and our experiences, we provide an actionable framework that can be readily implemented into a busy clinic setting, or in in-patient populations, suitable for use by any practitioner. A set of two educational pamphlets, including an ACP cogwheel and figures explaining the course of chronic illness have been implemented. Discussions have involved both Palliative Care (and Internal Medicine) specialist and a Gastroenterology specialist or General Medicine specialist, as well as an inter-disciplinary team, the patient and their surrogates. The percentage of patients with ACP and GCD documentation has increased dramatically during this time. The use of a formalized process, visual aids, educational pamphlets, has been integrated into care in both the outpatient and inpatient settings. These tools can be customizable based on the underlying gastroenterological (GI) disease, and are hoped to be conversation starters in many clinical settings. In our practice, this assemblage of "best practice tools" has increased the number of outpatients with cirrhosis, and other GI chronic illnesses, who have actively contributed to their GCD prior to acute health events and are supported by well-informed surrogates. We have shown significant value of inter-disciplinary outpatient clinics to educate health practitioners and patients, and wish to promote this globally.

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Higinio T Mappala

Jose R Reyes Memorial Medical Center, Philippines

The efficacy of tocotrienols in the treatment of non-alcoholic steatohepatitis: A systematic review

Non-alcoholic fatty liver disease (NAFLD) is one of the most common forms of chronic liver disease which may progress to non-alcoholic steatohepatitis (NASH). Currently there are no therapeutic strategies for such disease. Only lifestyle modification through diet and exercise were proven to afford some benefit in patients with NAFLD. No pharmacologic agents have so far been approved for the treatment of NAFLD or NASH. Therefore, most clinical efforts have been directed at treating the components of metabolic syndrome, namely obesity, diabetes, hypertension and dyslipidemias. Other interventions are directed at specific pathways potentially involved in the pathogenesis of NAFLD, such as insulin resistance, oxidative stress, pro-inflammatory cytokines, apoptosis, bacterial overgrowth, and angiotensin pathway. This lecture aims to show the potential of Tocotrienols as a promising therapeutic option for NAFLD. This is a Systematic Review of the effects of Tocotrienols on Non-Alcoholic Fatty Liver Disease (NAFLD). Tocotrienols may yet prove to be an effective treatment for Non-Alcoholic Fatty Liver Disease.

Speaker Biography

Higinio T Mappala is a full-time Medical Specialist III and Administrator at the Jose R Reyes Memorial Medical Center, Manila, Philippines. He is a Board-certified Internist, Gastroenterologist, Endoscopist, Clinical Nutritionist and Clinical Toxicologist. He has served as a University Professor and Dean of two medical schools. He is a highly-regarded Researcher, with more than 70 scientific papers, and more than 30 international publications. He is a former Board Director of the Philippine Societies of Gastroenterology and Digestive Endoscopy, and Online Research Rater of McMaster, Canada, and Online DynaMed Research. He has won Young Investigator's Award at the World Congress and Asia-Pacific Congress of Gastroenterology. He has attended the three-level training courses on Leadership and Management by the World Gastroenterology Organization held in Florida, USA, Dubrovnic, Croatia, Porto, Portugal. He was nominated as one of the top 100 leading physicians 2018, Cambridge Biographical Institute. He is a focused Lecturer on NAFLD in local and international conventions.

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