

The 15th International Symposium on Cells of the Hepatic Sinusoid

Date: 29 August – 1 September, 2010

Location: Pasadena, California, United States

Sponsored by:

International Society for Hepatic Sinusoidal Research (ISHSR)

Co-Sponsored by:

Southern California Research Center for ALPD & Cirrhosis

American Association for Liver Diseases (AASLD)

National Institute on Alcohol Abuse and Alcoholism (NIAAA), NIH

The Office of Rare Diseases Research (ORDR), NIH

The 15th International Symposium on Cells of the Hepatic Sinusoid was held at the Hilton Hotel Pasadena, Pasadena, California from August 29 to September 1, 2010, and was attended by 205 participants from 21 nations. It was designed to provide cutting-edge science and exciting research findings on hepatic sinusoidal cell biology essential for better understanding of the pathogenesis of alcohol-associated liver rare diseases such as fibrosis, cirrhosis and Hepatocellular carcinoma (HCC). The symposium showcased 5 state-of-the-art speakers (Michael Dustin, Randall Moon, Didier Stainier, William Kaelin, Michael Karin) and supported a platform for 57 oral and nearly 100 poster presentations. The program was packed with stimulating science. The meeting brought together scientists from multidisciplinary fields such as anatomy, physiology, cell biology, developmental biology, hepatology, surgery, and oncology that will lead to emergence of new concepts, ideas, and constructive collaborations. It also gave a unique opportunity for young investigators to interact at an international level.

Program

Hilton Hotel Pasadena, Pasadena, California, U.S.A.

16:00-19:00 Registration (Pasadena Hilton, International Foyer, next to International Ballroom)

18:00-20:30 Welcome reception with music and songs at the Pasadena City Hall (business casual attire)

19:45-20:00 Welcoming Remarks by Pasadena Mayor Bill Bogaard

Sunday, August 29, 2010

7:00 – 8:30 Breakfast (San Gabriel Room)

7:30-10:00 Registration (Pasadena Hilton, International Foyer, next to International Ballroom)

8:30-8:45 Opening remarks by Hide Tsukamoto

Session I Steatohepatitis-I (Oral abstracts 1 – 5) (International Ballroom)

Chaired by Ramon Bataller (Spain) and Hartmut Jaeschke (USA)

8:45-9:10 Anna Mae Diehl (USA), "Tissue remodeling in NASH progression"

9:10-9:30 Andrew M. Miller (USA), "Dissociation between steatosis and inflammation in alcoholic and nonalcoholic fatty liver in IL-10-deficient mice: protective role of IL-6/STAT3"

9:30-9:50 Ekihiro Seki (USA), "TLR4 mediates alcohol liver injury and fibrogenesis through Kupffer cells and stellate cells"

9:50-10:10 Fatima Teixeira-Clerc (France), "Cannabinoid receptor 2 protects from alcoholic liver disease by promoting Kupffer cell polarization toward an anti-inflammatory phenotype"

10:10-10:30 Laura E. Nagy (USA), "Macrophage migration inhibitory factor (MIF) contributes to chronic ethanol-induced liver injury in mice"

10:30-10:50 **Coffee Break (Skylight Arcade)**

10:50-11:30 **State of the Art Lecture-I**

Moderated by Neil Kaplowitz (USA)

Michael L. Dustin, New York University School of Medicine, New York

"Distinct migratory behavior of antigen specific liver CD8 T cells underlies response to *Listeria monocytogenes*"

Session II Steatohepatitis-II (Oral abstracts 6 – 12) (International Ballroom)

Chaired by Sophie Lotersztajn (France) and Craig McClain (USA)

11:30-11:50 Cheng Ji (USA), "Liver specific deletion of GRP78 aggravates a spectrum of acute and chronic stress- induced liver injury"

11:50-12:10 Ramon Bataller (Spain), "Human and experimental evidence supporting a role for osteopontin in the pathogenesis of alcoholic liver disease"

12:10-13:40 **Lunch (San Gabriel Room) and Poster Presentations - 1 thru 49 (California Ballroom)**

13:40-14:00 Joan Clària (Spain), "Disruption of the arachidonate lipoxygenase *ALOX5* and *ALOX15* genes protects hyperlipidemic mice from steatohepatitis"

14:00-14:20 Bruce N. Cronstein (USA), "Adenosine A1 and A2B receptors play a role in fructose-induced fatty liver"

14:20-14:40 Tomonori Aoyama (USA), "CX3CR1 on Kupffer cells suppresses toxin-induced liver inflammation and fibrosis"

14:40-15:00 Kenichi Ikejima (Japan), "Contribution of CD1d-restricted natural killer T cells to xenobiotics-induced hepatic inflammation and fibrogenesis in mice"

15:00-15:20 Nicolas Lanthier (Belgium), "Cross-talk between Kupffer cells and adipose tissue in the pathogenesis of insulin resistance"

15:20-15:40 **Coffee Break (Skylight Arcade)**

Session III Hepatic Stellate Cell Biology (Oral abstracts 13 – 19) (International Ballroom)

Chaired by Hide Tsukamoto (USA) and Dieter Häussinger (Germany)

15:40-16:10 **A Tribute to Professor Albert Geerts:**

Scott Friedman (USA), "Evolving mysteries of the hepatic stellate cell"

16:10-16:30 Tatiana Kisseleva (USA), "Genetic labeling does not detect mesenchymal-to-epithelial transition (MET) of Hepatic stellate cells in response to fibrogenic liver injury in mice"

16:30-16:50 Lina Lu (USA), "Hepatic stellate cells exert immune regulatory activity via induction of myeloid-derived suppressor cells (MDSC)"

16:50-17:10 Roland Reinehr (Germany), "Bile acid-induced EGFR activation in quiescent hepatic stellate cells can trigger both proliferation and apoptosis"

17:10-17:30 Chuansheng Wang (USA), "Identification and characterization of cd45+ human hepatic stellate cells"

17:30-17:50 Fabio Marra (Italy), "The mammalian target of rapamycin mediates the angiogenic and chemotactic effects of leptin in human hepatic stellate cells"

17:50-18:10 Norifumi Kawada (Japan), "Update of cytoglobin, the newest member of globin, that was discovered from the stellate cell"

Monday, August 30, 2010

Session IV Innovative Therapeutic Targets of Liver Fibrosis-I (Oral abstracts 20 – 24) (International Ballroom)

Chaired by Massimo Pinzani (Italy) and Norifumi Kawada (Japan)

8:30-8:55 Derek Mann (UK), "Targeting the constitutive NF- κ B activities of liver myofibroblasts to stimulate therapeutic regression of fibrosis"

8:55-9:15 Klaas Poelstra (The Netherlands), "Liver specific delivery of antifibrotic compounds"

9:15-9:35 Yoshiro Niitsu (Japan), "Reversal of liver fibrosis with A-liposome siRNAHSP47 targeting hepatic stellate cells"

9:35-9:55 Hide Tsukamoto (USA), "Crosstalk among morphogens in hepatic stellate cell fate regulation"

9:55-10:15 Krista Rombouts (Italy), "Myristoylated Alanine rich protein kinase C substrate (MARCKS), Aurora B kinase (AUBK) and actin, are fundamental key players during mitosis in human hepatic stellate cells (hHSC)"

10:15-10:35 **Coffee Break (Skylight Arcade)**

Session V Innovative Therapeutic Targets of Liver Fibrosis-II (Oral abstracts 25 – 29) (International Ballroom)

Chaired by Fabio Marra (Italy) and Grant Ramm (Australia)

10:35-11:00 David Brenner (USA), "Where do myofibroblasts come from?"

11:00-11:20 Isao Sakaida (Japan), "Effect of the splenectomy on autologous bone marrow cell infusion (ABMi) therapy for liver cirrhosis – basic research and clinical trail"

11:20-11:40 Elisabetta Mormone (USA), "Fibromodulin, a novel factor modulating collagen I deposition in liver fibrosis"

11:40-12:00 Massimo Pinzani (Italy), "Molecular insights in the anti-fibrogenic action of pirfenidone, an anti-oxidant and anti-inflammatory agent"

12:00-12:20 Steven Dooley (Germany), "Notch signalling mediates fibrogenesis in the liver"

12:20-13:50 **Lunch (San Gabriel Room) and Poster Presentations - 1 thru 49 (California Ballroom)**

13:50-14:30 **State of the Art Lecture-II**

Moderated by Henry Sucof (USA)

Randall Moon, University of Washington, Seattle

"Wnt signaling in regeneration and regenerative medicine"

Session VI Progenitor Cells, Liver Development and Regeneration-I (Oral abstracts 30 – 32) (International Ballroom)

Chaired by Neil Theise (USA) and Lola M. Reid (USA)

14:30-14:55 Atsushi Miyajima (Japan), "Roles of mesenchymal cells in liver development and regeneration"

14:55-15:15 Kinji Asahina (USA), "Mesothelial/submesothelial cells give rise to hepatic stellate cells in mouse liver development"

15:15-15:35 Dieter Häussinger (Germany), "Stellate cells in the space of Dissé: Stem cells in their niche"

15:35-15:55 Coffee Break (Skylight Arcade)

**Session VII Progenitor Cells, Liver Development and Regeneration-II (Oral abstracts 33 – 37)
(International Ballroom))**

Chaired by Laurie DeLeve (USA) and Kinji Asahina (USA)

15:55-16:20 Yuji Yokouchi (Japan), "Liver bud–blood vessel interactions during chick liver development"

16:20-16:40 Lola Reid (USA), "Multipotent stem/progenitor cells in human extrahepatic biliary tree give rise to hepatocytes, cholangiocytes and pancreatic islets"

16:40-17:00 Shi Yin (USA), "Activation of natural killer T cells inhibits liver regeneration after partial hepatectomy via an IFN-gamma/STAT1 signaling pathway-dependent manner"

17:00-17:20 Kenjiro Wake (Japan), "Morphological evidence for differentiation from circulation angioblasts to sinusoidal and vascular endothelial cells in the chick embryo"

17:20-17:40 Lin Wang (USA), "Liver regeneration requires bone marrow derived liver sinusoidal endothelial cell progenitor cells (SPC)"

Poster Session I - Days 1 & 2 (California Ballroom)

Sunday, August 29 - poster presentations at 12:10-13:40

Monday, August 30 – poster presentations at 12:20-13:50

Posters may also be viewed during the morning and afternoon coffee break periods.

***Please note that names listed are those of the poster presenters.**

Steatohepatitis – Alcoholic Liver Disease

P-1 Fawzia Bardag-Gorce (USA), "Proteasome inhibitor treatment reduces hepatic steatosis by decreasing lipogenic enzymes gene expression"

P-2 Carol A. Casey (USA), "Ethanol-induced accumulation of cellular fibronectin can lead to changes in hepatocytes and Kupffer cells which contribute to liver injury"

P-3 Samuel W. French (USA), "The switch from the 26s proteasome to the immunoproteasome leads to mallory-denk body formation"

P-4 Tung-Ming Leung (USA), "Argininosuccinate synthase and alcoholic liver disease"

P-5 Oygi Park (USA), "Interleukin-22 treatment ameliorates alcoholic liver injury in mice: Role of STAT3"

P-6 Jun Xu (USA), "Proinflammatory macrophage activation and steatohepatitis are synergized by alcohol and moderate obesity in mice"

P-7 Rohit Loomba (USA), "Obesity and alcohol are multiplicative in increasing the risk of hepatocellular carcinoma: A prospective cohort study"

Steatohepatitis – NASH

P-8 Hideki Fujii, (Japan), "A protective role of macrophage scavenger receptor A against the progression of dietary steatohepatitis in mice"

P-9 Kengathevy Morgan (USA), "Betaine improves nonalcoholic fatty liver and associated hepatic insulin resistance: a potential mechanism for hepatoprotection by betaine"

P-10 Ekihiro Seki (USA), "TLR9-mediated IL-1 induces steatohepatitis and fibrosis"

P-11 Terumi Takahara (Japan), "Lipopolysaccharide triggered TNF- α -induced hepatocyte apoptosis in a murine nonalcoholic steatohepatitis model"

P-12 Hironori Tanaka (Japan), "What is the reason of the decrease in signal intensity level in Kupffer image of contrast enhanced ultrasonography in non-alcoholic steatohepatitis?"

P-13 Takato Ueno (Japan), "Green tea catechin improves steatohepatitis in transgenic mice overexpressing nSREBP-1c in adipose tissue"

P-14 Qifa Xie (USA), "Dietary factors enhance T cell-mediated hepatitis and gut permeability in a mouse model of nonalcoholic fatty liver disease"

P-15 Hisafumi Yamagata (Japan), "Impaired hepatic innate immune responses involving NKT cells in obese diabetic KK-Ay mice"

Steatohepatitis – Hepatotoxicity, Inflammation and Innate Immunity

P-16 Tadayuki Ikeda (Japan), "Pro-inflammatory activity of HMGB1 and inhibitory effect of glycyrrhizin in the rat liver intoxicated with carbon tetrachloride"

P-17 Cynthia Ju (USA), "Lactoferrin protects against acetaminophen-induced liver injury in mice"

P-18 Yasuaki Kabe (Japan), "Mining the CO-sensing receptors by affinity nano-beads"

P-19 Nam-Sung Kang (Korea), "Study of the hepatotoxicity via toll-like receptor 4 signaling induced by alginate : a potential role of Ikaros"

P-20 Hiroki Kawamura (Japan), "Extracellular ATP-activated macrophages aggravate concanavalin A-induced liver injury in mice"

P-21 Woo-Yong Lee (Canada), "Intravascular immunity to bacteremia: invariant NKT cell-Kupffer cell interaction"

P-22 Palash Mandal (USA), "Differential mechanisms for the anti-inflammatory effects of globular and full-length adiponectin in both Kupffer cells and RAW 264.7 macrophages"

P-23 Christoph Meyer (Germany), "Mathematical modeling of liver damage with impact on hepatocyte regeneration and liver fibrogenesis"

P-24 Ogyi Park (USA), "Diverse roles of invariant natural killer T cells in liver injury and fibrosis induced by carbon tetrachloride"

P-25 Rebeca Pérez-Cabeza de Vaca, (México), "Role of Kupffer cells on an experimental rat model of carbon tetrachloride-induced cirrhosis"

P-26 Tetsuji Sato (Japan), "Blockade of hmgb1 by glycyrrhizin attenuates lipopolysaccharide/galactosamine-induced injury to the liver in mice"

P-27 Karen Wallace (UK), "The PXR is a drug target for chronic inflammatory liver disease"

P-28 C. David Williams (USA) "Influence of IL-1 β signaling on neutrophil recruitment during acetaminophen hepatotoxicity"

P-29 Jun Wu (China), "NOD1 and NOD2 signaling enhance TLR-dependent innate immunity response of murine parenchymal and nonparenchymal liver cells"

Hepatic Stellate Cell Biology

P-30 Colleen Croniger (USA), "Genetic contribution to liver fibrosis"

P-31 Steven Dooley (Germany), "Impact of the Smad-1/5/8 signal transduction pathway on activation of hepatic stellate cells"

P-32 Allah B. Haafiz (USA), "Expression pattern of CD68-positive vs. fibrogenic α -SMA-positive cells in advanced liver fibrosis due to biliary atresia"

P-33 Yuan-Ping Han (USA), "How hepatic stellate cells sense injury signals in 3D ECM"

P-34 Stephen Hill (UK), "A soluble factor released from liver myofibroblasts activates monocyte NF- κ B in *vitro*"

P-35 Joy Jiang, (USA) "Hepatocyte apoptosis directly induces profibrogenic responses *in vivo*"

P-36 Aritz Lopategi (USA), "Osteopontin, a cytokine induced in liver injury, contributes to the fibrogenic response of hepatic stellate cells via integrin α v β 3 and PI3K/pAkt pathway"

P-37 Ricardo Marcos (Portugal), "Influence of age and sex in the number and ultrastructure of the rat hepatic stellate cells: preliminary data"

P-38 Fabio Marra (Italy), "Myostatin: A novel modulator of hepatic stellate cell biology"

P-39 Yoshihiro Mezaki (Japan), "Elevated expression of TGF- β 3 mRNA in carbon tetrachloride-treated rat liver"

P-40 Hiroyuki Motoyama (Japan), "Cytoglobin is a sensitive marker of stellate cells in normal and fibrotic human liver"

P-41 Shiguang Qian (USA), "Liver stellate cells play an important role in regulating immune response"

P-42 Komal Ramani (USA), "Expression of glutathione synthetic enzymes during hepatic stellate cell activation and differentiation"

P-43 Richard G. Ruddel (USA), "The potential role of the hepatic stellate cell in iron homeostasis"

P-44 Ming Song (USA), "Copper deficiency exacerbates bile duct ligation-induced liver fibrosis in rats"

P-45 Juan Antonio Suárez-Cuenca (Mexico), " β -catenin-, but not α -SMA-expressing cells, are associated with portal hypertension in chronic alcohol liver disease in humans."

P-46 Gabriela Velasco-Loyden (USA). "The adenosine derivative compound IFC305 inhibits *in vitro* hepatic stellate cell activation"

P-47 Alessandra Warren (Australia), "Old age is associated with hyperplasia of quiescent hepatic stellate cells with increased lipid droplets"

P-48 Kiwamu Yoshikawa (Japan), "ADRP and TIP47 are involved in the formation of vitamin A-rich lipid droplets in hepatic stellate cells"

P-49 Pawel Stachowiak (Netherlands), "Role of lipid droplets in hepatic stellate cell activation"

Tuesday, August 31, 2010

7:00 – 8:30 **Breakfast (San Gabriel Room)**

7:30-12:00 **Registration desk open (Pasadena Hilton, International Foyer, next to International Ballroom)**

Session VIII Progenitor Cells, Liver Development and Regeneration –III (Oral abstracts 38 – 42) (International Ballroom)

Chaired by Isabelle A. Leclercq (Belgium) and Samir Zakhari (USA)

8:30-8:55 Jose M. Pérez-Pomares (Spain), "Wilms tumor gene (Wt1) is a critical regulator of liver mesothelial contribution to embryonic hepatic sinusoids"

8:55-9:15 Stacey S. Huppert (USA), "Notch signaling is required to maintain an intact intrahepatic bile duct network in mice"

9:15-9:35 Neil D. Theise (USA), "Epithelial cell adhesion molecule (EpCAM) marks hepatocytes newly derived from stem/progenitor cells in humans"

9:35-9:55 Toru Nakamura (Japan), "Human peripheral blood CD34-positive cells exhibit increased potency for therapeutic hepatic regeneration in carbon tetrachloride-induced hepatic fibrosis model nude rats"

9:55-10:15 Andrew Cox (USA), "Nitric oxide signaling regulates liver development in zebrafish"

10:15-10:55 **State of the Art Lecture-III**

Moderated by Martin Pera (USA)

Didier Stainier, University of California, San Francisco "Cell-cell interactions in the developing zebrafish liver"

10:55-11:30 **Society Business Meeting – (International Ballroom)**

11:30-12:10 **Poster Presentations – 50 thru 95 (California Ballroom) with light snacks (Skylight Arcade)**

12:30-22:30 **Excursion to Getty Center and Memorable Evening by Malibu Beach (casual attire)**

Wednesday, September 1, 2010

7:00 – 8:30 **Breakfast (San Gabriel Room)**

7:30-17:25 **Registration desk open (Pasadena Hilton, International Foyer, next to International Ballroom)**

Session IX Liver Sinusoidal Endothelial Cells-I (Oral abstracts 43 – 47) (International Ballroom)

Chaired by Eddie Wisse (Belgium) and Vijay Kalra (USA)

8:45-9:10 Paul Kubes (Canada), "Responses to pathogens and sterile injury in the liver microcirculation"

9:10-9:30 Clark L. Anderson (USA), "Role of liver sinusoidal endothelial cells in clearing virus from blood"

9:30-9:50 Guanhua Xie (USA), "Acceleration of resolution of cirrhosis by normalization of liver sinusoidal endothelial cell (LSEC) phenotype through the cGMP signaling pathway"

9:50-10:10 Cyrill Géraud (Germany), "Liver sinusoidal endothelium: a microenvironment dependent differentiation program in rat including the novel junctional protein Leda-1"

10:10-10:30 Ruomei Li (Norway), "Role of liver sinusoidal endothelial cells and stabilins in elimination of oxidized low density lipoproteins"

10:30-11:10 **State of the Art Lecture-IV**

Moderated by Peter Jones (USA)

William G. Kaelin, Harvard Medical School, Boston

“Oxygen sensing and disease: Lessons from the VHL tumor suppressor protein”

11:10-12:40 **Lunch (San Gabriel Room) and Poster Presentations – 50 thru 95 (California Ballroom)**

Session X Liver Sinusoidal Endothelial Cells- II (Oral abstracts 48 – 50) (International Ballroom)

Chaired by Robert McCuskey (USA) and David G. Le Couteur (Australia)

12:40-13:10 **A Tribute to Professor Hiromasa Ishii** Makoto Suematsu, (Japan)

“Mining gas-responsive regulators of metabolic systems through advanced mass spectrometry”

13:10-13:30 Vijay K. Kalra (USA), “Ethanol–HIF-1 α - micro RNAs (miRs) axis in inflammation in hepatic sinusoidal endothelial cells”

13:30-13:50 Sarah J Mitchell (Australia), “Age-related loss of fenestrations impairs hepatic uptake of the water soluble substrate acetaminophen”

13:50-14:30 **State of the Art Lecture-V**

Moderated by Derek Mann (UK)

Michael Karin, University of California, San Diego

“Inflammation and metabolism in liver tumorigenesis”

Session XI Cancer Biology (Oral abstracts 51 – 55) (International Ballroom)

Chaired by Fernando Vidal-Vanaclocha (Spain) and Keigo Machida (USA)

14:30-14:50 Keigo Machida (USA), “Defective TGF- β signaling and excessive TLR4-Nanog stemness pathway are linked in cancer stem cells through *Yap1* and *Igf2bp3*”

14:50-15:10 Sayaka Inokuchi (USA), “TNF receptor signaling and Toll-like receptor signaling 4 mediate hepatic injury, inflammation, fibrosis and carcinogenesis in hepatocyte-specific TAK1-deficient mice”

15:10-15:30 **Coffee Break (Skylight Arcade)**

15:30-15:50 Fernando Vidal-Vanaclocha (Spain), “Contribution of sinusoidal cells to the tumor microenvironment at different stages of the hepatic metastasis process”

15:50-16:10 Elvira Olaso (Spain), “Discoidin Domain Receptor 2 deficiency predisposes hepatic tissue to colon carcinoma metastasis”

16:10-16:30 Pnina Brodt (Canada), “Distinct and gender-specific roles of the TNF receptors in liver metastasis”

Session XII Comparative Anatomy and Evolutional Biology (Oral abstracts 56 – 57) (International Ballroom)

Chaired by Kenjiro Wake (Japan) and Bård Smedsrød (Norway)

16:30-16:55 Bård Smedsrød, “Scavenger endothelial cells in the vertebrate kingdom”

16:55-17:15 Haruki Senoo (Japan), “Capacity of vitamin A storage in the hepatic stellate cells- Comparison between free-living polar bears and a polar bear kept in a zoo”

17:15-17:25 Closing Remarks by Hartmut Jaeschke

19:00-22:00 **Banquet at Walt Disney Concert Hall (Cocktail attire)**

Poster Session II - Days 3 & 4 (California Ballroom)

Tuesday, August 31 - poster presentations at 11:30-12:10

Wednesday, September 1 – poster presentations at 11:10 – 12:40

Posters may also be viewed during the morning and afternoon coffee break periods.

***Please note that names listed are those of the poster presenters.**

Innovative Therapeutic Targets of Liver Fibrosis

P-50 Leila Gobejishvili (USA), “Critical role of phosphodiesterase 4 isozymes in cholestatic liver injury and fibrosis”

P-51 Reiichi Higashiyama (Japan), “Matrix metalloproteinase-13 enhances migration of bone marrow-derived cells and contributes to the repair of experimental liver fibrosis”

P-52 Guangcun Huang (USA), “HB-EGF gene knockout exacerbates liver fibrosis in mice”

P-53 Keiko Iwaisako (USA), “A specific peroxisome proliferator-activated receptor (PPAR)-delta agonist attenuates liver fibrogenesis”

P-54 Soichi Kojima (Japan), “Detection of LAP degradates: A novel biomarker of TGF- β activation reflecting liver fibrogenesis”

P-55 Grant A. Ramm (Australia), “Tumour necrosis factor-like weak inducer of apoptosis and lymphotoxin β are key regulators of the wound healing response to chronic liver injury”

P-56 Yumiko Sekiya (Japan), “Type I interferon inhibits hepatic stellate cell proliferation via downregulation of cyclin E1 by microRNA-195”

P-57 Taro Takami (Japan), “Autologous bone marrow cell infusions do not promote *N*-nitrosodiethylamine –induced hepatocarcinogenesis in carbon tetrachloride-treated liver cirrhosis mice”

P-58 Naoki Yamamoto (Japan), "The electron microscopical analysis for cell lineage of bone marrow cell differentiation in cirrhosis mice"

P-59 Melissa Yang (USA), "PPAR γ epigenetic de-repression and restoration of stellate cell quiescence are achieved by rosmarinic acid via induction of miR132-miR137 network and suppression of MeCP2 and EZH2"

P-60 Mujdat Zeybel (UK), "DZNep attenuates liver fibrosis by blocking EZH2 in vivo"

Progenitor Cells, Development and Regeneration

P-61 Kristen Alexa (USA), "The role of Vitamin D in liver formation and regeneration"

P-62 Andrew Axon (UK), "Estrogen treatment increases the rate of proliferation of cells cultures which originate from a liver progenitor cell present in the biliary structure"

P-63 Steven Dooley (Germany), "IFN- γ inhibits hepatic progenitor cell activation in chronic liver damage"

P-64 Steven Dooley (Germany), "TGF- β signaling mediates hepatic progenitor cell activation in HBV-, but not Schistosomiasis-associated liver damage"

P-65 Ange-Clarisse Dusabineza (Belgium), "Assessment of hepatic function recovery mediated by liver progenitor cell in 2-AAF/PH rat model"

P-66 Regina Español (Belgium), "Liver progenitor cell expansion in the diseased liver: Do associated myofibroblasts derive from progenitor cells?"

P-67 Emma A. Fairhall (UK), "Myofibroblasts modulate the differentiation of hepatic progenitor cells *in vitro*"

P-68 Kouichi Hasegawa (USA), "GCTM-5: a new marker and isolation tool for adult hepatic stem cells"

P-69 Yoshiya Ito (Japan), "Vascular endothelial growth factor receptor-1 tyrosine kinase signaling hepatic repair and regeneration after acetaminophen-induced liver injury"

P-70 Tomokazu Matsuura (Japan), "Transplantation of liver organoids in the omentum and kidney"

P-71 Mayako Morii (Japan), "Apoptosis in the biliary epithelial cells during metamorphosis of a Japanese lamprey -model system for the human biliary atresia?"

P-72 Michele T. Pritchard (USA), "Chronic carbon tetrachloride exposure induces robust oval cell activation in early growth response (Egr)-1-deficient mice: role of attenuated hepatocyte division"

P-73 Chise Tateno (Japan), "Reduced susceptibility of human hepatocyte-repopulated chimeric mice to TNF α -mediated hepatocellular apoptosis with LPS-sensitization"

P-74 Noemi Van Hul (Belgium), "Liver progenitor cell expansion in the injured mouse liver: do Kupffer cells play a role?"

P-75 Karen Wallace (UK), "The trans-differentiation of pancreatic acinar cells into hepatocytes is mediated by a suppression of WNT signaling"

Liver Sinusoidal Endothelial Cells

P-76 Rupa Shree Appa (Denmark), "Clearance of human factor VIIa in rat liver"

P-77 Robin Fraser (New Zealand), "The liver sieve and other barriers to vectors transporting genetic manipulates to hepatocytes"

P-78 David G. Le Couteur (Australia), "Three dimensional, structured illumination microscopy of liver sinusoidal endothelial cell fenestrations"

P-79 Ivana Malovic (Norway), "Nidogen is a physiological ligand for the scavenger receptors in liver endothelial cells"

P-80 Montserrat Martin-Armas (Norway), "Role of liver clearance in the transfer of feed-derived DNA to different tissues"

P-81 Aisling C McMahon (Sydney), "Effect of a novel antioxidant compound on abnormal fenestrations in the diabetic liver"

P-82 Cristina Ionica Øie (Norway), "Rat liver sinusoidal endothelial cells (LSECs) express functional low density lipoprotein receptor-related protein-1 (LRP-1)"

P-83 Ana Oteiza (Norway), "Effects of oxidized low-density lipoproteins on the hepatic microvasculature"

P-84 Sugiru Pak (Japan), "Identification of the interaction between platelets and sinusoidal endothelial cells after ischemia reperfusion"

P-85 Leela L. Paris (USA), "The role of liver sinusoidal endothelial cells in thrombocytopenia that occurs during liver xenotransplantation"

P-86 Karen Kristine Sorensen (Norway), "Endocytic activity of liver sinusoidal endothelial cells in aging"

P-87 Samantha M. Yeligar (USA), "Ethanol-induced expression of ET-1 and ET-BR in liver sinusoidal endothelial cells and human endothelial cells involves hypoxia-inducible factor-1 α and miRNA-199"

Cancer Biology

P-88 Nigel Bird (UK), "Evidences of a protease-independent invasion mechanism in colon cancer liver metastases with "pushing" growth pattern"

P-89 Matthew C. Cave (USA), "Biomarkers for hepatic hemangiosarcoma"

P-90 Matthew C. Cave (USA), "Vinyl chloride-induced hepatic hemangiosarcoma: The Louisville experience"

P-91 Douglas E. Feldman (USA), "Leptin signaling to liver cancer stem cells links obesity to tumor growth"

P-92 Koichi Fujisawa (Japan), "Expression of Zebrafish homologue of Maid (ZHM) in liver tumors induced by DEN"

P-93 Jian-Chang Liu (USA), "The role of hepatic stellate cells of liver cancer stem cell niche in liver tumor growth"

P-94 Hua Wang (USA), "Coordination of hepatic and myeloid STAT3 in governing liver carcinogenesis and regeneration"

P-95 Shuping Zhong (USA), "A novel class of genes targeted by alcohol-induced response"

Late-Breaking Posters

LBA-1 Dmitri Svistounov (UK), "Gene expression profile in LSEC from young and middle aged mice with Werner syndrome"

LBA-2 Ray Chihara (USA), "Porcine Liver Sinusoidal Endothelial Cell Proteome – Identification of Antigens Relevant to Xenotransplantation"