

Joint Symposium of



International Society for Hepatic Sinusoidal Research  
*17<sup>th</sup> International Symposium on Cells of the Hepatic Sinusoid*

&

Hepatic Sinusoidal Research Japan  
*27<sup>th</sup> Annual Meeting for Hepatic Sinusoidal Research Japan*

**Osaka, Japan, September 23-25, 2013**

**Osaka International Convention Center**



Co-sponsored by

- **NIAAA/NIH**
- **The Uehara Memorial Foundation**
- **The Southern California Research Center for ALPD & Cirrhosis**

<http://rgsv.net/ischs17/>

## Program Day 1 (September 23, 2013)

16:00-18:00	<b>Registration</b>		
17:50-18:00	<b>Opening Note</b>	Norifumi Kawada, President, Japan	
18:00-18:20	<b>Opening Lecture: Memory and interest of one old Japanese Hepatologist</b>	Kyuichi Tanikawa, Japan Chair: Sumio Watanabe, Japan	P.23
18:20-19:55	<b>Session 1: Stellate Cell and Fibrosis 1</b>		
	Chairs: Massimo Pinzani (University College London, UK) and Takato Ueno (Asakura Medical Association Hospital, Japan)		
18:20-18:40	<b>Tutorial Talk 1: Anatomical aspect of stellate cell biology</b>	Kenjiro Wake, Japan	P.24
18:40-18:55	<b>Invited Talk 1: Mesothelial-mesenchymal transition in liver development and fibrosis</b>	Kinji Asahina, USA	P.31
18:55-19:10	<b>Invited Talk 2: Myofibroblast sub-populations in the liver</b>	Chantal Housset, France	P.32
19:10-19:25	Selected ORAL 1: Cell-specific PPAR $\gamma$ deficiency establishes antiinflammatory and antifibrogenic properties for this nuclear receptor in non-parenchymal liver cells	Eva Moran, Spain	P.54
19:25-19:40	Selected ORAL 2: Retinoid regulation of hepatic antiviral innate immunity	Takeshi Saito, USA	P.55
19:40-19:55	Selected ORAL 3: Toll-Like Receptor 7-Type I IFN signaling axis inhibits cholestasis- and hepatotoxin-induced liver fibrosis through induction of IL-1receptor antagonist	Yoon Seok Noh, USA	P.56
20:00-21:00	<b>Welcome Reception</b>		

## Program Day 2 (September 24, 2013)

8:00-8:45	<b>Morning Seminar 1 (Co-sponsored by Mitsubishi Tanabe Pharma Corporation) Matrix, myofibroblasts and macrophages: players in bidirectional fibrosis</b>	John Iredale, UK Chair: Kazuhide Yamamoto, Japan	P.46
8:45-9:00	<b>Break</b>		
9:00-10:40	<b>Session 2: Stellate Cell and Fibrosis 2</b> Chairs: Laurie DeLeve (University of Southern California, USA) and Haruki Senoo (Akita University, Japan)		
9:00-9:20	<b>Tutorial Talk 2: Facts and wonders of hepatic stellate cells</b>	Hide Tsukamoto, USA	P.25
9:20-9:40	<b>Tutorial Talk 3: Cannabinoid receptors as antifibrogenic targets during chronic liver disease: Novel insights</b>	Sophie Lotersztajn, France	P.26
9:40-9:55	<b>Invited Talk 3: Nogo-B (Reticulon 4B) : a novel regulator of liver fibrosis and portal hypertension</b>	Yasuko Iwakiri, USA	P.33
9:55-10:10	<b>Invited Talk 4: Steering cytokines to modulate fibrogenesis</b>	Klaas Poelstra, The Netherlands	P.34
10:10-10:25	Selected ORAL 4: Reduced angiogenesis and fibrosis in the liver of transglutaminase 2-deficient mice after bile duct ligation	Yutaka Furutani, Japan	P.57
10:25-10:40	Selected ORAL 5: Levistilide A inhibited liver fibrosis and angiogenesis in vivo and in vitro	Zhimin Zhao, China	P.58
10:40-11:00	<b>Coffee Break</b>		
11:00-12:05	<b>Session 3: Communications "Fibrosis in Extrahepatic Organs"</b> Chairs: John Iredale (University of Edinburgh, UK) and Terumi Takahara (University of Toyama, Japan)		
11:00-11:25	<b>Lung: Role of TGF-<math>\beta</math>1, IL-13, and inflammatory mediators in mouse models of pulmonary fibrosis</b>	Thomas A. Wynn, USA	P.43
11:25-11:45	<b>Kidney: Origin and function of scar-forming cells in the kidney</b>	Motoko Yanagita, Japan	P.44
11:45-12:05	<b>Pancreas: Pancreatic stellate cells -multi-functional cells in the pancreas-</b>	Atsushi Masamune, Japan	P.45
12:05-12:15	<b>Break</b>		

## Program Day 2 (September 24, 2013)

12:15-13:00	<b>Luncheon Seminar 1 (Co-sponsored by MSD K.K.)</b> <b>How our knowledge on liver fibrogenesis can improve the clinical management of chronic liver disease?</b> <b>Luncheon Seminar 2 (in Japanese)</b> <b>(Co-sponsored by Toray Medical Co., Ltd./ Toray Industries, Inc.)</b> <b>Acute liver failure in Japan -definition, classification and prediction of the outcome- (Room 1101-1102)</b>	Massimo Pinzani, UK Chair: Norifumi Kawada, Japan Satoshi Mochida, Japan Chair: Shigeki Arai, Japan	P.48  P.49
13:00-15:00	Poster Session (Room 1202, 12F)		
14:40-14:55	<b>Business meeting of the 27th Annual Meeting for Hepatic Sinusoidal Research Japan (in Japanese)</b>		

15:00-16:05

### Session 4: Inflammation and Immunity 1

Chairs: Hartmut Jaeschke (University of Kansas, USA)  
and Hiromasa Ohira (Fukushima Medical University, Japan)

15:00-15:20	<b>Tutorial Talk 4: Complement in Alcoholic and Non-alcoholic liver disease</b>	Laura E. Nagy, USA	P.27
15:20-15:35	Selected ORAL 6: Molecular mechanisms of lipopolysaccharide-mediated inhibition of glutathione synthesis in murine macrophage	Maria Lauda Tomasi, USA	P.60
15:35-15:50	Selected ORAL 7: CCR6 deficiency enhances hepatic inflammation and fibrosis in response to liver injury	Silvia Affo, Spain	P.61
15:50-16:05	Selected ORAL 8: IFN-gamma and IL-4 play opposing roles in controlling invariant NKT cell expansion and neutrophil mediated hepatitis in feedback loops	Hua Wang, USA	P.62

16:05-17:10

### Session 5: Inflammation and Immunity 2

Chairs: Gyongyi Szabo (University of Massachusetts Medical School, USA)  
and Hideki Fujii (University of Yamanashi, Japan)

16:05-16:25	<b>Tutorial Talk 5: Innate immunity and drug hepatotoxicity</b>	Hartmut Jaeschke, USA	P.28
16:25-16:40	Selected ORAL 9: N-Acetylglucosaminyltransferase V (GnT-V) prevents mice steatohepatitis progression through modulation of lymphocytes and hepatic stellate cells function	Yoshihiro Kamada, Japan	P.64
16:40-16:55	Selected ORAL 10: Hepatic stellate cells activation but not hepatocyte proliferation in liver regeneration is TLR4 dependent	Ayako Mabuchi, New Zealand	P.66
16:55-17:10	Selected ORAL 11: Modulating T cell migration in the post-ischemic liver: hepatic stellate cells as new therapeutic target?	Andrej Khandoga, Germany	P.68

## Program Day 2 (September 24, 2013)

17:10-17:30	<b>Break</b>		
17:30-18:15	<b>Evening Seminar 1 (Co-sponsored by Otsuka Pharmaceutical Co., Ltd.) Peri-operative nutritional management using BCAA in hepatic resection patients</b>	Takehiro Okabayashi, Japan Chair: Takafumi Ichida, Japan	P.52
18:15-18:35	<b>Cutting Edge Lecture on Sinusoidal Endothelial Cell : Liver Sinusoidal Endothelial Cell Progenitor Cells</b>	Laurie DeLeve, USA Chair: Jacquelyn J. Maher, USA	P.37
18:35-19:35	<b>Session 6: Cancer Microenvironment 1</b>		
	Chairs: Laura Nagy (Cleveland Clinic, USA) and Masaya Oda (International University of Health and Welfare, Japan)		
18:35-18:55	<b>Keynote Lecture 1: Role of TGF-<math>\beta</math> and TAK1 in the development of liver fibrosis and hepatocellular carcinoma</b>	Ekihiro Seki, USA	P.38
18:55-19:15	<b>Keynote Lecture 2: Loss of E-cadherin in the liver leads to sclerosing cholangitis and promotes tumorigenesis in mice</b>	Shin Maeda, Japan	P.40
19:15-19:35	<b>Keynote Lecture 3: Obesity-induced gut microbial metabolite promotes liver cancer through senescence secretome</b>	Eiji Hara, Japan	P.41
19:35-19:45	<b>Break</b>		
19:45-21:00	<b>Session 7: Cancer Microenvironment 2</b>		
	Chairs: Yutaka Inagaki (Tokai University, Japan) and Isao Okazaki (International University of Health and Welfare, Japan)		
19:45-20:00	<b>Invited Talk 5: Regulation of hepatic metastasis-associated genes in colorectal cancer</b>	Fernando Vidal-Vanaclocha, Spain	P.35
20:00-20:15	Selected ORAL 12: Continuous apoptosis in hepatocytes induces oxidative stress and leads to liver carcinogenesis	Hayato Hikita, Japan	P.69
20:15-20:30	Selected ORAL 13: Progression from NASH to liver cancer in the absent of Cytoglobin	Le Thi Thanh Thuy, Japan	P.71
20:30-20:45	Selected ORAL 14: Combined treatment of sorafenib and angiotensin-II receptor blocker attenuates preneoplastic lesion development of non-alcoholic steatohepatitis in rats	Hitoshi Yoshiji, Japan	P.72
20:30-20:45	Selected ORAL 15: Aflibercept, a soluble VEGF receptor-1 and 2 suppresses tumor growth of hepatocellular carcinoma in mice	Takuji Torimura, Japan	P.73
21:00~	<b>Free Evening</b>		

## Program Day 3 (September 25, 2013)

8:00-8:45	<b>Morning Seminar 2 (Co-sponsored by Eisai Co., Ltd. / Minophagen Pharmaceutical Co., LTD.) Hepatitis C virus cell culture system and antiviral development</b>	Takaji Wakita, Japan Chair: Tetsuo Takehara, Japan	P.47
8:45-9:00	<b>Break</b>		
9:00-10:25	<b>Session: 8 NASH &amp; ASH 1</b> Chairs: Hiroko Iijima (Hyogo College of Medicine, Japan) and Hide Tsukamoto (University of Southern California, USA)		
9:00-9:20	<b>Tutorial Talk 6: Fibrogenic mechanisms in ASH and NASH</b>	Fabio Marra, Italy	P.29
9:20-9:40	<b>Keynote Lecture 4: From NAFLD to NASH to cirrhosis -New insights into disease mechanisms</b>	Ariel Feldstein, USA	P.42
9:40-9:55	Selected ORAL 16: Characterization of liver sinusoidal endothelial cell in non-achol fatty liver	Edward N. Harris, US	P.74
9:55-10:10	Selected ORAL 17: Defenestration in liver endothelial cells as a cause of insulin resistance	Mashani Mohamad, Austraria	P.75
10:10-10:25	Selected ORAL 18: Dietary glycine minimizes metabolic steatohepatitis in diabetic KK-Ay mice through modulation of hepatic innate immunity	Kenichi Ikejima, Japan	P.76
10:25-10:45	<b>Coffee Break</b>		
10:45-11:50	<b>Session 9: NASH &amp; ASH 2</b> Chairs: Sophie Lotersztajn (IMRB - Inserm U955, France) and Yoshiyuki Takei (Mie University, Japan)		
10:45-11:05	<b>Tutorial Talk 7: ER stress in fatty liver disease: pathophysiologic link and therapeutic target</b>	Jacquelyn J. Maher, USA	P.30
11:05-11:20	Selected ORAL 19: Liver Bid is the therapeutic target in the treatment of fibrosis associated with nonalcoholic steatohepatitis	Akiko Eguchi, USA	P.77
11:20-11:35	Selected ORAL 20: The role of TLRs and its downstream molecules in the development of NASH	Koichi Miura, Japan	P.78
11:35-11:50	Selected ORAL 21: Mitochondrial oxidative stress exacerbates inflammation and subsequent fibrogenesis in high fat diet-induced murine hepatic steatosis	Tadashi Moro, Japan	P.80
11:50-12:00	<b>Break</b>		

## Program Day 3 (September 25, 2013)

12:00-12:45	<b>Luncheon Seminar 3 (Co-sponsored by Chugai Pharmaceutical Co., Ltd.)</b> <b>Inflammation and danger signals in alcoholic and non-alcoholic fatty liver disease</b>	Gyongyi Szabo, USA Chair: Kiwamu Okita, Japan	P.50
	<b>Luncheon Seminar 4 (in Japanese) (Co-sponsored by Bristol-Myers Squibb Company)</b> <b>Studies on hepatitis viruses using human hepatocyte chimeric mice (Room 1101-1102)</b>	Kazuaki Chayama, Japan Chair: Morikazu Onji, Japan	P.51
12:45-13:00	<b>Break</b>		
13:00-14:00	<b>President-selected Short Oral Presentation of Poster (Oral session)</b>	Chairs: Kazuo Ikeda, Japan and Takuji Torimura, Japan	
14:00-14:30	<b>Business meeting of ISHSR (in English)</b>		
15:00~	<b>Trip to Kyoto</b>		
19:00~	<b>Banquet</b>		
23:00	<b>End of 17<sup>th</sup> ISCHS &amp; 27<sup>th</sup> HSRJ</b>		

## Poster Session (September 24-25, 2013)

### Poster session 1: Hepatic Stellate Cell

- P-1. Haruki Senoo, Akita University Graduate School of Medicine, "Hepatic stellate cell and biodiversity"
- P-2. Seiichi Ishida, National Institute of Health Sciences, "Simple culture method for the preparation of deactivated hepatic stellate cells"
- P-3. Yoshihiro Mezaki, Akita University Graduate School of Medicine, "Differential increases in the expression of intermediate filament proteins in transdifferentiating rat hepatic stellate cells"
- P-4. Kiwamu Yoshikawa, Akita University Graduate School of Medicine, "Involvement of perilipin2/ADRP and perilipin3/TIP47 in the formation of vitamin A-storing lipid droplets in hepatic stellate cells"

### Poster session 2: Liver Fibrosis

- P-5. Balasubramaniyan Vairappan, Jawaharlal Institute of Postgraduate Medical Education and Research, "Effect of leptin and ethanol on the regulation of apoptosis and fibrosis in the mouse HCC cell lines"
- P-6. Kenichiro Mikami, Hirosaki University Graduate School of Medicine, "A hyaluronan synthase suppressor, 4-methylumbelliferone, attenuates liver fibrosis in bile duct ligated rats"
- P-7. Hiroyuki Motoyama, Osaka City University Graduate School of Medicine, "Cytoglobin expression in hepatic stellate cells in chronic hepatitis-induced fibrotic livers in human"
- P-8. Yoshinari Matsumoto, Osaka City University Graduate School of Medicine, "Lack of Cytoglobin triggers priming of primary mouse hepatic stellate cells"
- P-9. Saori Itami, Osaka City University Graduate School of Medicine, "The profiling of the miRNA expression in liver fibrosis"
- P-10. Hideki Aizaki, National Institute of Infectious Diseases, "Hepatitis C virus RNA replication in human stellate cells regulates gene expression of extracellular matrix-related molecules"
- P-11. Shu Li, Shuguang Hospital, Shanghai University of Traditional Chinese Medicine, "Fugan formula and its active ingredients reversed liver fibrosis by modulating RAS-related signaling"



- P-12. Tao Guo, Shuguang Hospital, Shanghai University of Traditional Chinese Medicine “Effects of Dang-gui Buxue decoction on angiogenesis in fibrotic liver and its active components”
- P-13. Yuka Yamamoto, RIKEN Center for Life Science Technologies, “Screening of LAP binding inhibitors of TGF- $\beta$  activation reaction”
- P-14. Mitsuko Hara, Micro-Signaling Regulation Technology Unit, CLST, RIKEN, “Monitoring changes in a promising fibrogenesis biomarker, TGF- $\beta$  LAP-DP levels in hepatitis patients and trials to develop anti-fibrotic antibodies inhibiting TGF- $\beta$  activation”
- P-15. Baasanjav Uranbileg, Tokyo University, “Sphingosine 1-phosphate receptor 2 mRNA expression may be increased in association with hepatic stellate cell proliferation in liver fibrosis in humans”

### **Poster session 3: Cancer Microenvironment**

- P-16. Yoon Seok Noh, University of California, “Gp130 mediates inflammation-associated hepatocellular carcinogenesis in hepatocyte specific Tak1-deleted mice”
- P-17. Keita Kanki, Tottori University, “Preserved hepatocyte integrity by retinoid signaling: identification of retinoic acid-responsive genes and their contribution to the prevention of human hepatocellular carcinoma”
- P-18. Yoshihiro Mikuriya, Hiroshima University, “Fatty liver microenvironment favors the progression of hepatocellular carcinoma via activating hepatic stellate cells”
- P-19. Hiroshi Kono, Yamanashi University, “Macrophage colony-stimulating factor induces angiogenic factors and play a pivotal role in hepatocarcinogenesis”
- P-20. Sawako Kobayashi Uchida, Osaka City University Graduate School of Medicine, “Correlation between CD68-positive Kupffer cells and post-vascular imaging by contrast-enhanced ultrasonography using Sonazoid in hepatocellular carcinoma”
- P-21. Hironori Tanaka, Hyogo College of Medicine, “Malignant grading system including the evaluation of Kupffer function for hepatocellular carcinoma using Sonazoid contrast enhanced ultrasonography”

### **Poster session 4: Inflammation and Immunity**

- P-22. Srivatsan Kidambi, University of Nebraska-Lincoln, “In vitro liver models: design and cellular interaction studies”
- P-23. Alessandra Warren, Centre for Education and Research on Ageing ANZAC Research Institute, University of Sydney, “Effect of manipulating membrane rafts on liver sinusoidal cells fenestrations”
- P-24. Soichiro Murata, University of Tsukuba, “Sinusoidal endothelial cells promote hepatocyte proliferation with S1P”
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- P-25. Toru Nakamura, Kurume University School of Medicine, "Ex vivo cultured human CD34+ cell enhances stem cell function and promotes hepatic regeneration in chronically injured rat liver"
- P-26. Rebecca Perez Cabeza De Vaca, Universidad Nacional Autonoma De Mexico, "Early hepatocyte proliferation, limited apoptosis and sinusoidal cell's oxidative stress markers underlie cirrhotic liver regeneration in rat model"
- P-27. Sohji Nishina, Kawasaki Medical School, "Splenectomy causes hepatic inflammation and oxidative stress through activation of Kupffer cells in iron-overloaded mice"
- P-28. Shintaro Kuroda, Hiroshima University, "Specific inhibition of Rho-kinase in hepatic stellate cells using vitamin A-liposomes prevents ischemic reperfusion injury in rat liver"
- P-29. Yuga Teranishi, Osaka City University Graduate School of Medicine, "Cytoglobin expressed in hepatic stellate cells is involved in acetaminophen-induced acute hepatocyte damage"
- P-30. Hirotohi Ohkubo, Department of Pharmacology, Kitasato University School of Medicine, "Role of leukotriene B4 1 (BLT1) in liver injury and repair following hepatic ischemia/reperfusion injury in mice"
- P-31. Tsutomu Minamino, Kitasato University, "Thromboxane A2 receptor signaling promotes liver repair through platelet adhesion to the sinusoids during chemical-induced hepatotoxicity"
- P-32. Akinobu Takaki, Okayama University, "Unique profile of liver perfusate mononuclear cells-Analysis of the living donor liver perfusate by multicolor flowcytometry"

### Poster session 5: NASH

- P-33. Terumi Takahara, University of Toyama, "IFN-g deficiency attenuates hepatic inflammation and fibrosis in mouse steatohepatitis"
- P-34. Tsutomu Matsubara, Osaka City University Graduate School of Medicine, "Stress accelerates derangement of bile acid homeostasis during development of steatohepatitis in mice"
- P-35. Shi Yin, NIAAA/NIH, "Interleukin-6-deficient mice are more susceptible to steatosis but resistant to inflammation and tumorigenesis in mice with long-term high-fat feeding"
- P-36. Tomohiro Ogawa, Kinki University, "The beneficial effect of propolis on fat accumulation and liver fibrosis in mice fed a methionine-choline diet"
- P-37. Akitoshi Douhara, Nara Medical University, "Inhibition of endotoxin cascade with antibiotics attenuates the liver fibrosis development in rat model of nonalcoholic steatohepatitis"
- P-38. Hiroo Fukada, Juntendo University, "Autophagic dysfunction caused by hepatic steatosis sensitizes Kupffer cells to endotoxin"

- P-39. Hideki Fujii, Osaka City University Graduate School of Medicine, "Role of macrophage scavenger receptor A in hepatic fibrogenesis of an animal NASH model"
- P-40. Ryuichi Noguchi, Nara Medical University, "Combination of angiotensin-converting enzyme inhibitor and selective aldosterone blocker, suppresses the liver fibrosis and carcinogenesis of nonalcoholic steatohepatitis in the rat"
- P-41. Kayo Mizutani, Osaka University Graduate School of Medicine, "Serum Mac-2 binding protein levels as a novel diagnostic biomarker for prediction of disease severity and nonalcoholic steatohepatitis"

### **Poster session 6: ASH**

- P-42. Motoh Iwasa, Mie University Graduate School of Medicine, "Protein S exacerbates acute alcohol-induced liver injury by enhancing activation of liver natural killer T cells"
- P-43. Lakshmi Kuttippurathu, Thomas Jefferson University, "Modeling hepatic stellate cell mirna regulatory networks driving chronic alcohol effects on liver regeneration"
- P-44. Moon Young Kim, Yonsei University Wonju College of Medicine, "Assessment of intrahepatic hemodynamic change using a microbubble contrast ultrasonography can non-invasively predict the histological grade of alcoholic liver disease"