From Viral Hepatitis to Chronic Inflammation and Liver Cancer

February 21–22, 2019
Hörsaalzentrum Chemie
Heidelberg, Germany

Program
7 credit hours (CME) have been awarded for the Workshop by the European Union of Medical Specialists (UEMS).
Dear Colleagues,

On behalf of my co-organizers Mathias Heikenwälder and Peter Schirmacher it is my great pleasure to welcome you to the workshop „From Viral Hepatitis to Chronic Inflammation and Liver Cancer” that takes place in Heidelberg in association with the 35th Annual Meeting of the German Association for the Study of the Liver.

Viral hepatitis and ensuing liver diseases are major medical problems that have sparked global scientific interests aiming at better understanding of the pathogens and the pathogenesis they are inducing with the ultimate goal to control or even eradicate these infections. Without doubt, major progress has been made as witnessed e.g. by the prophylactic hepatitis B vaccine and the recently approved drugs eliminating hepatitis C virus infection in the vast majority of patients. Nevertheless, important scientific and medical challenges remain in all fields of viral hepatitis, some of which will be addressed during this workshop.

The program of this meeting is centered on three major aspects. First, all five conventional hepatitis viruses, in spite of their exquisite hepatotropism, have a distinct biology, each of which setting the stage to make ground-breaking discoveries in molecular and cell biology as well as immunology, while at the same time offering new opportunities for antiviral therapy. Second, three of the five hepatitis viruses frequently establish persistent infections, thus triggering a chronic inflammation that promotes liver damage. Therefore, understanding the pathogenesis of viral hepatitis is not possible without careful dissection of the (dysfunctional) immune response induced by these viruses. Third, infections with three of the hepatitis viruses are associated with liver cancer, most notably hepatocellular carcinoma. In fact, around 70% of all hepatocellular carcinoma cases are linked to infections with hepatitis C or hepatitis B virus, the latter occasionally in association with hepatitis D virus. Taking these considerations into account we have assembled a program that covers all three aspects that are bridged by a session focusing on important novel in vivo systems and technologies of high relevance for future studies of these topics.

Complementary to the oral presentations that are dedicated to these four topics, we will have an accompanying poster session on both days. The workshop will be followed by the annual meeting of the GASL 2019 to which you are also cordially invited.

We would like to thank all the speakers and participants of this workshop for taking time out of their busy schedules to share with us their most recent data and to contribute to a most stimulating meeting that will not only provide new insights into viral hepatitis and liver diseases, but hopefully offer new opportunities for future productive collaborations. We are also most thankful to the Falk Foundation for the generous support of this workshop.

We wish you all a most enjoyable meeting and very much look forward to welcome you in Heidelberg.

Ralf Bartenschlager
GASL President 2018/2019
Professor and Chairman
Department of Infectious Diseases,
Molecular Virology
University Clinic Heidelberg
Coordinator of the Collaborative Research Center (SFB) 179
Workshop

From Viral Hepatitis to Chronic Inflammation and Liver Cancer

February 21–22, 2019
Hörsaalzentrum Chemie
Heidelberg, Germany

The 35th Annual Meeting of the German Association for the Study of the Liver will follow the Workshop:
February 22, 13.15 h to February 23, 14.30 h

Workshop Venue:
Hörsaalzentrum Chemie
Chemisches Institut
Hörsaal West
Im Neuenheimer Feld 252
69120 Heidelberg

The Workshop is organized by Falk Foundation e.V.

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Scientific Co-Organization:
M. Heikenwälder, Heidelberg
P. Schirmacher, Heidelberg

Official Language:
English
Thursday, February 21, 2019

12.00  Lunch with poster session

13.00  Welcome and opening remarks

Session I
What’s new in viral hepatitis?
Chair: V.L. Dao Thi, Heidelberg; R. Thimme, Freiburg

13.10  Understanding HAV-host interaction by using a novel mouse model of hepatitis A
S.M. Lemon, Chapel Hill

13.40  Immune control of chronic hepatitis B: Towards curative approaches
U. Protzer, Munich

14.10  Exploiting HDV entry for antiviral therapy
S. Urban, Heidelberg

14.40  Towards a prophylactic HCV vaccine
E. Barnes, Oxford

15.10  Principles of Hepatitis E virus replication, resistance, and chronic persistence
E. Steinmann, Bochum

15.40  Coffee break with poster session

Session II
Chronic inflammation
Chair: E. Barnes, Oxford; U. Protzer, Munich

16.10  Lymphotoxin β receptor signaling-dependent control of virus clearance in chronic HBV and HCV infection
M. Heikenwälder, Heidelberg

16.40  Systemic crosstalk of metabolism and inflammation in viral hepatitis
A. Bergthaler, Vienna

17.10  Dysfunctional T cell responses and their role in viral hepatitis
R. Thimme, Freiburg

17.40  Bile acids and their therapeutic applications
V. Keitel, Düsseldorf

18.10  Networking with light refreshments
Friday, February 22, 2019

Session III
Liver cancer

Chair: M. Heikenwälder, Heidelberg; P. Schirmacher, Heidelberg

8.30 Viral liver cancer
T.F. Baumert, Strasbourg

8.55 Epigenetic regulation of tumor cell plasticity
D. Tschaharganeh, Heidelberg

9.20 Oncolytic virotherapy-based strategies for cancer immunotherapy
F. Kühnel, Hannover

9.45 Molecular diagnostics
T. Longerich, Heidelberg

10.10 Coffee break with poster session

Session IV
Bridging the gap

Chair: T.F. Baumert, Strasbourg; V. Lohmann, Heidelberg

10.40 Functional target discovery
L. Zender, Tübingen

11.05 Towards an immune competent HCV mouse model
T. Pietschmann, Hannover

11.30 In vivo imaging of immune cells
M. Gunzer, Essen

11.55 Linking the microbiota, chronic disease and the immune system
D. Haller, Freising

12.25 Lunch with poster session

13.15 Opening of the annual meeting of the GASL
Poster Session

1. Expression and function of early growth response 2 in hepatocellular carcinoma

2. Sofosbuvir induces changes in cell cycle distribution by upregulation of B-MYB
   D. Bojkova, S. Westhaus, L. Timmer, K.S. Lang, R. Bröring, S. Heinrichs, F. Vondran, S. Ciesek (Essen, Hannover, DE)

3. Immunological crosstalk between host and virus in chronic viral hepatitis

4. Induction and interference of toll-like receptor 3 signaling by hepatitis A and hepatitis C virus
   O. Colasanti, K. Esser-Nobis, J. Traut, O. Grünvogel, V. Lohmann (Heidelberg, DE; Seattle, US)

5. Differences in UDCA treatment response among primary biliary cholangitis patients with and without cirrhosis
   O.R. Contreras, J.S. Téllez, E. Nieto (Hidalgo, MX)

6. NK-cell responses are biased towards CD16-mediated effector functions in chronic hepatitis B virus infection

7. Expression and function of histone deacetylases in liver fibrosis and hepatic stellate cells
   K. Freese, J. Sommer, C. Hellerbrand (Erlangen, DE)

   V. Fritz, C. Hellerbrand, A.K. Bosserhoff, P. Dietrich (Erlangen, DE)

9. Deciphering the role of bile acid signaling in intrahepatic cholangiocarcinoma (iCC)
   M. Garcia-Beccaria, M. Reich, D.F. Tschaharganeh, V. Keitel, M. Heikenwälder (Heidelberg, Düsseldorf, DE)

10. Novel feedback inhibition in hepatocellular carcinoma of Lin 28 homolog A by tumorsuppressor miR-622
    A. Gaza, C. Hellerbrand, A.K. Bosserhoff, P. Dietrich (Erlangen, DE)

11. Mode of action of the RIG-I like receptor LGP2 in the interferon response triggered by viral infections
    N. Gillich, S. Jung, A. Reuter, P. Scaturro, A. Pichlmair, M. Binder, R. Bartenschlager (Heidelberg, Munich, DE)
12. The exhausted fate of memory-like HCV-specific CD8+ T cells
N. Hensel, D. Wieland, Z. Gu, K. Jechow, J. Kemming, B. Bengsch,
C. Neumann-Haefelin, R. Bartenschlager, C. Conrad, N. Ishaque,
M. Hofmann, R. Thimme (Freiburg, Heidelberg, DE)

13. Characterization of naturally occurring single nucleotide polymorphisms in
the toll-like receptor 3 gene
J. Hesebeck-Brinckmann, O. Colasanti, N. Gillich, S. Münchau, V. Lohmann
(Heidelberg, DE)

14. Knockout of type I interferon-response leads to reduced induction of autophagy
in HBs-transgenic mice
C.S. Imiela, Y. Churin, M. Roderfeld, M. Huber, E. Roeb (Gießen, Marburg, DE)

15. CB1 knockout alleviates hepatic steatosis via lipophagy and lipolysis in HBs
transgenic mice
K. Irungbam, Y. Churin, M. Ocker, M. Roderfeld, E. Roeb (Gießen, Berlin, DE)

16. Intracellular but not extracellular IFNL4 is a stronger inducer of STAT1 and
ISGs in liver cell lines than IFNL3
K.Z. Janouskova, O. Lunov, M. Lunova, M. Jirsa (Prague, CZ)

17. Linking gut dysbiosis in hepatitis C and interleukin 10 (RS1800872) and heat
shock protein 70-2 (RS1061581) genes polymorphisms
R.P. Knut, I.R. Sydorchuk, L.P. Sydorchuk, B. Syrota, I.I. Sydorchuk,
A.R. Sydorchuk, S. Chirileac, R.I. Sydorchuk, O. Khomko (Chernivtsi, UA;
Tangen, NO)

18. PNPLA3 (adiponutrin) p.I148M risk allele carriers might be at-risk of chemo-
therapy-associated steatohepatitis (CASH)
M. Krawczyk, M. Casper, S. Zimmermann, F. Lammert (Homburg, DE;
Warsaw, PL)

19. Hepatocellular c-Jun activation via S. mansoni infection in a hamster model
and primary human hepatocytes
J. Lichtenberger, S. Padem, T. Quack, C.G. Grevelding, A. Tschuschner,
Y. Churing, M. Roderfeld, E. Roeb (Gießen, DE)

20. Ultrastructural characteristics of liver sinusoidal endothelial cells in morphoge-
ensis of pediatric autoimmune hepatitis: the first electron microscopic report
J.M. Lotowska, M.E. Sobaniec-Lotowska, P. Sobaniec, D.M. Lebensztejn
(Bialystok, PL)

21. In hepatitis B virus surface antigen transgenic mice hepatocarcinogenesis is
associated with inflammation
X. Luo, M. Lu, H.A. Baba, G. Gerken, H. Wedemeyer, R. Bröring (Essen, DE)

22. Synergistic effects of iso-alpha-acids and xanthohumol in in vitro models of
hepatic steatosis and fibrosis
A. Mahli, S. Lee, W.E. Thasler, C. Hellerbrand (Erlangen, Munich, DE)
23. Functional microRNA screening to improve hepatocyte formation via direct reprogramming  
J. Markovic, S. Möbus, M.P. Manns, M. Ott, T. Cantz, A.D. Sharma  
(Hannover, DE)

24. Effect of long-term IFN exposure on CD8 T cell functionality  
J. Mikulec, M. Hofmann, R. Thimme, R. Bartenschlager  
(Heidelberg, Freiburg, DE)

25. HBV bypasses the innate immune system and does not protect HCV against the antiviral effect of IFN  
P. Mutz, P. Metz, F.A. Lempp, S. Bender, B. Qu, K. Schöneweis, T. Tu,  
S. Seitz, A. Restuccia, J. Frankish, B. Schusser, B. Koschny, G. Polychronidis,  
P. Schemmer, K. Hoffmann, T.F. Baumert, M. Binder, S. Urban, R. Bartenschlager  
(Heidelberg, Munich, DE; Strassburg, FR)

26. Generation of proliferating mouse hepatocytes (upcyte® mouse hepatocytes)  
N. Nagy, T. Evenburg, S. Rohrmoser, A. Nörenberg, T. Johannsen  
(Hamburg, DE)

27. Hepatitis B virus transcription from cccDNA is inhibited by Am 80 (tamibarotene), an agonist of the retinoic acid receptor alpha  
S. Nkongolo, F.A. Lempp, L. Nußbaum, B. Qu, S. Urban, Y. Ni  
(Heidelberg, DE)

28. Hepatocellular activation of oncogenic components of the Wnt-pathway in Schistosoma mansoni infected hamsters  
M. Roderfeld, J. Lichtenberger, F. Wolters, T. Quack, C.G. Grevelding,  
E. Roeb  
(Gießen, DE)

29. The influence of hepatitis C virus on the induction of CXC chemokine expression in response to the inflammatory cytokines TNFα and IL1β  
K. Rufinatscha, S. Stindt, C. Ehlting, R. Bartenschlager, D. Häussinger,  
J.G. Bode  
(Düsseldorf, Heidelberg, DE)

30. Immunodominant HLA-B*35:01 restricted CD8+ T cell epitope is associated with clustered viral evolution in HBV polymerase  
E. Salimi Alizei, M.M. Kiraithe, P. Ehrenmann, M. Hofmann, R. Thimme,  
C. Neumann-Haefelin  
(Freiburg, DE)

31. Metabolic changes upon inhibition of the lysine-specific-demethylase-1 (LSD1) in hepatocellular carcinoma  
M. Schmiel, L. Wang, X. Yu, P. Dalvi, I. Macheleidt, R. Büttner, M. Odenthal  
(Cologne, DE)

32. Cancer (HCC and MM) in Gaucher disease: a multicentric analysis from 4 German centers  
D. Schöler, S. vom Dahl, E. Mengel, M.N. Müller, A.E. Canbay, M. Merkel,  
D. Häussinger  
(Düsseldorf, Mainz, Magdeburg, Hannover, DE)
33. Xanthohumol, a prenylated chalcone derived from hops, inhibits liver metastasis
   T. Seitz, P. Dietrich, C. Hackl, A. Mahli, S.A. Lang, A.K. Bosserhoff, 
   C. Hellerbrand (Erlangen, Regensburg, Freiburg, DE)

34. Effect of chain length and saturation status of fatty acids on viability and tumorigenicity of hepatocellular carcinoma cells
   J. Sommer, L. Rupp, A.K. Bosserhoff, C. Hellerbrand (Erlangen, DE)

35. Hepatocyte-derived calcineurin regulates the development of hepatocellular carcinoma independent of hepatic steatohepatitis
   A. Strigli, K. Peuker, B. Bazylak-Kaps, M. Jäger, J. Hampe, S. Zeissig 
   (Dresden, DE)

36. Possible genetic background for systemic inflammation, liver fibrosis, carcinogenesis and endothelium vascular injury in chronic hepatitis C patients
   A.R. Sydorchuk, L.P. Sydorchuk, I. Plehutsa, R.I. Sydorchuk, I.I. Sydorchuk, 
   N. Plehutsa (Chernivtsi, UA)

37. Changes of gut microbiota in chronic HCV infection compared to NAFLD
   L.P. Sydorchuk, I.I. Sydorchuk, A.R. Sydorchuk, S. Chirileac, I. Sydorchuk, 
   O. Khomko, R.I. Sydorchuk (Chernivtsi, UA; Tangen, NO)

38. Hepatitis B virus (HBV) DNA integration is not driven by viral proteins
   T. Tu, B. Zehnder, B. Qu, M. Levy, G. Micali, L. Tran, O. Dabere, N. Main, 
   N. Shackel, L. Qiao, J. George, S. Urban (Heidelberg, DE; Liverpool, 
   Westmead, AU)

39. Reshaping of the cellular signaling landscape under continuous stimulation of innate antiviral responses
   H. Welsch, K. Heine, C. Urban, A. Pichlmair, M. Binder (Heidelberg, Munich, 
   DE)

40. Outcome in the German HCV (1b)-anti-D cohort over a period of 40 years
   M. Wiese (Leipzig, DE)

41. The long non-coding RNAs IncRNA-ADM-2 and IncRNA-NBPF3-9 outline potential novel targets for hepatocellular carcinoma
   L. Wormser, C. Hellerbrand, A.K. Bosserhoff, P. Dietrich (Erlangen, DE)

42. The relation of serum galectin-3 and hyaluronic acid with the severity of liver fibrosis in patients with chronic hepatitis B infection
   E. Yorulmaz, O. Sonmez, A.S. Kaya, B. Ozdemir, F. Eksi Polat, U.S. Tetikkurt, 
   C. Davutoglu (Istanbul, TR)

43. The decrease of intracellular tumor suppressor miR-198 is correlated with vesicle release from hepatocellular carcinoma cells
   X. Yu, H. Eischeid, R. Büttner, M. Odenthal (Cologne, DE)
Towards a novel RNAi and AAV vector-based gene therapy against hepatitis E virus
C. Zhang, C. Schmelas, M. Gunkel, D. Grimm, V.L. Dao Thi (Heidelberg, DE)

IFN response suppresses HDV persistence during hepatocyte proliferation in vitro
Z. Zhang, Y. Ni, S. Urban (Heidelberg, DE)
List of Speakers, Moderators and Scientific Organizers

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**Congress Office**

During the Workshop in Heidelberg

**Congress Office Telephone:** +49-175-7795-327

**Opening Hours:**
Thursday, February 21, 2019 10.00 – 18.00 h
Friday, February 22, 2019 8.00 – 12.30 h

Hörsaalzentrum Chemie
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Im Neuenheimer Feld 252
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**Admission to Scientific Program**

For admission to scientific events your name badge should be clearly visible.
How to get there

The workshop will be held at Heidelberg University Campus “Im Neuenheimer Feld”: Chemisches Institut Hörsaal West Im Neuenheimer Feld 252 69120 Heidelberg

The campus is located about 2 km from the city centre and can be reached easily by public transport.

By car

Coming from motorway A5, change to A 656 towards Heidelberg at the intersection Heidelberg. Coming from motorway A6, change to A656 at the intersection Mannheim. Turn left towards “Chirurgie” at the end of the motorway. Having crossed river Neckar on Ernst-Waltz-Brücke (bridge) turn left to the institute buildings.

By train / Public transport:

Heidelberg central station can be reached via Deutsche Bahn: www.bahn.de
From central station, take tram line 21 (direction “Handschuhsheim, Hans-Thoma-Platz) or line 24 (direction “Handschuhsheim, Burgstraße) and get off at “Bunsengymnasium”.
From the old city centre take bus line 31 (direction Neuenheim, Chirurgische Klinik) departing at University Square and get off at “Technologiepark”.

Airport

From Frankfurt international airport train station the best way to get to Heidelberg would be to take the train to Heidelberg central station, which takes one hour.
A car ride would take approx. 50 min, depending on traffic.

Conflicts of Interest

Members of the scientific committee declare the following potential conflicts of interest: Ralf Bartenschlager: Reblikon GmbH; Peter Schirmacher: Novartis, BMS, MSD; Mathias Heikenwälder declares no conflicts of interest.
International Symposia and Workshops

Scientific Dialogue in the Interest of Therapeutic Progress

Workshop
From Viral Hepatitis to Chronic Inflammation and Liver Cancer
Heidelberg, Germany
February 21–22, 2019

Symposium 214
IBD: From Pathophysiology to Personalized Medicine
Oxford, Great Britain
March 29–30, 2019

Symposium 215
IBD: From Diagnosis to Therapy
St. Petersburg, Russia
July 5–6, 2019

Symposium 216
Building Bridges in IBD
Brussels, Belgium
September 13–14, 2019

Workshop
Nutrition and Microbiome in Allogeneic Haematopoietic Stem Cell Transplantation
Regensburg, Germany
November 8–9, 2019

Symposium 217
West Meets East: Functional Meets Organic in Gastrointestinal Diseases
Singapore
November 29–30, 2019

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2019
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