

PROGRAM DUTCH LIVER RETREAT 2024

Thursday February 1st 2024

10.00 - 10.50 Registration with coffee/tea

Opening Dutch Liver Retreat 2024

10.50 - 11.00 Welcome (Hans Jonker)

Session: Bile acids / FXR

Session Leaders: t.b.a.

- 11.00 - 11.15 The colorectal tumor suppressive effects of FXR are partly isoform- dependent
S.W.C. van Mil¹, M.D. Appelman¹, J.C.W. de Jong¹, M.C.H. van Rooijen¹, A. El Gammal¹, S.W. van der Veen¹, N. Liv¹, C. de Heus¹, J.M. Ramos Pittol¹, J. Drost^{2,1,3}, H. Clevers³, ¹Center for Molecular Medicine, UMC Utrecht, Utrecht, ²Hubrecht Institute, UMC Utrecht, Utrecht, ³Hubrecht Institute, Hubrecht Institute, Utrecht, The Netherlands.
- 11.15 - 11.30 Microbially-conjugated Bile Salts Found in Human Bile Activate the Bile Salt Receptors TGR5 and FXR.
F.G. Schaap¹, Ü. Ay², M. Lenicek³, R.S. Haider⁴, A. Classen⁵, H.M. Van Eijk⁶, K.V.K. Koelfat², G. Van der Kroft², U.P. Neumann², C. Hoffmann⁴, C. Bolm⁵, S.W.M. Olde Damink¹, ¹Surgery, Maastricht University, Maastricht, ²General, Visceral and Transplant Surgery, University Hospital Aachen, Aachen, Germany, ³Institute of Medical Biochemistry and Laboratory Diagnostics, Charles University, Prague, Czech Republic, ⁴Institute of Molecular Cell Biology, Center for Molecular Biomedicine, Jena University Hospital, Jena, Germany, ⁵Institute of Organic Chemistry, RWTH Aachen University, Aachen, Germany, ⁶Dept. of Surgery, Maastricht University, Maastricht, The Netherlands.
- 11.30 - 11.45 Pretreatment Serum Bile Acid Composition in Patients with Bile Salt Export Pump Deficiency Predicts Treatment Response to Ileal Bile Acid Transporter Inhibition by Odevixibat
M. Nomden¹, F. Kuipers², W.S. Lexmond³, E. Lindström⁴, Q. Yu⁴, V. Valcheva⁴, H.J. Verkade³, ¹Division of Pediatric Surgery, Dept. of Surgery, University of Groningen, University Medical Center Groningen, Groningen, ²Dept. of Pediatrics & European Research Institute for the Biology of Ageing, University of Groningen, University Medical Center Groningen, Groningen, ³Division of Pediatric Gastroenterology and Hepatology, Dept. of Pediatrics, Beatrix Children Hospital, University of Groningen, University Medical Center, Groningen, The Netherlands, ⁴Albireo Pharma, Albireo Pharma Inc, Boston, United States.
- 11.45 - 12.00 The LPA-receptors, a group of established itch receptors, show elevated agonism during cholestasis and are likely to contribute to cholestasis associated itch
F. Wolters¹, D. Tolenaars¹, M. van Weeghel², R.D.W. de Waart¹, K.F.J. van de Graaf¹, C.P. Paulusma¹, A.V. Verhoeven¹, U.H.W. Beuers¹, R.P.J. Oude Elferink¹, ¹Dept. of Gastroenterology and Hepatology, Tytgat Institute, Amsterdam UMC, Amsterdam, ²Amsterdam Gastroenterology and Metabolism, Laboratory Genetic Metabolic Diseases, Amsterdam UMC, The Netherlands.

Lunchbreak

12.00 – 13.00

Session: Trilogy on type Ia GSD

Session leaders: *t.b.a.*

13.00 – 13.20 A view from inside
B. Boelens – GSD IA patient

13.20 – 13.40 Treatment options, burden and unmet needs
Dr. T.G.J. Derks, Pediatrician, Beatrix Children's Hospital, Groningen

13.40 – 14.00 GSD I from bench to bedside
A.K. Kishore, researcher, UMC Groningen

Coffee/Tea break

14.00 – 14.30

Keynote Lecture

Session leader: *t.b.a.*

14.30 – 15.15 How dynamic organ preservation methods are changing liver transplantation practice
Prof. dr. R.J. Porte, Chief of HPB and Transplant Surgery, Erasmus MC, Rotterdam

Short break

15.15 – 15.30

Session: Transplantation / Surgery

Session Leader: *t.b.a.*

- 15.30 – 15.45 Long-term ex situ normothermic machine perfusion of human livers provides a platform to study (patho)physiology and production of hemostatic proteins
B. Lascaris¹, S.B. Bodewes¹, J. Adelmeijer¹, M.W.N. Nijsten², R.J. Porte³, V.E. de Meijer¹, T. Lisman⁴, ¹Dept. of Surgery, Section Hepatobiliary Surgery and Liver Transplantation, University Medical Center Groningen (UMCG), Groningen, ²Dept. of Critical Care, University Medical Center Groningen (UMCG), Groningen, ³Dept. of Surgery, Division of HPB and Transplant Surgery, Erasmus MC Transplant Institute, Rotterdam, ⁴Surgical Research Laboratory, Dept. of Surgery, University Medical Center Groningen (UMCG), Groningen, The Netherlands.
- 15.45 - 16.00 Activated donor-derived platelets are released from human donor livers during normothermic machine perfusion
S.B. Bodewes¹, B. Lascaris¹, B. van den Boom¹, R.J. Porte², V.E. de Meijer¹, J.A. Lisman³, ¹Dept. of Liver Transplantation and HPB Surgery, University Medical Center Groningen, Groningen, ²Dept. of HPB Surgery and Transplantation, Erasmus Medical Center, Rotterdam, ³Dept. of Surgery, University Medical Center Groningen, Groningen, The Netherlands.
- 16.00 – 16.15 Bile proteome reveals biliary regeneration during normothermic preservation of human donor livers
A.M. Thorne, Dept. of Surgery, University Medical Center Groningen, Groningen, The Netherlands. Adam M. Thorne^{1,2}, Justina C. Wolters³, Bianca Lascaris^{1,2}, Silke B. Bodewes^{1,2}, Veerle A. Lantinga^{1,2}, Otto B. van Leeuwen^{1,2}, Iris E.M. de Jong^{1,2}, Kirill Ustyantsev⁴, Eugene Berezikov⁴, Ton Lisman^{1,5}, Folkert Kuipers^{3,4}, Robert J. Porte^{1,6,†}, Vincent E. de Meijer^{1,2,†}, ¹Department of Liver Transplantation and HPB Surgery, University of Groningen and University Medical Center Groningen; Groningen, ²UMCG Comprehensive Transplant Center; Groningen, ³Department of Pediatrics, University of Groningen, University of Groningen and University Medical Center Groningen; Groningen, ⁴European Research Institute for the Biology of Ageing (ERIBA), University of Groningen and University Medical Center Groningen; Groningen, ⁵Surgical Research Laboratory, Department of Surgery, University of Groningen, University Medical Center Groningen; Groningen, ⁶Current affiliation: Erasmus MC Transplant Institute, Department of Surgery, Division of HPB and Transplant Surgery, University Medical Center Rotterdam; Rotterdam, the Netherlands.*
- 16.15 – 16.30 Hepatic Transcriptome Profile at Time of Kasai is Associated with Clearance of Jaundice in Isolated Biliary Atresia
M. Nomden¹, D.B.E. van Wessel¹, J.B. van Praagh², A.R. Gorter³, J.L.M. Bruggink¹, R.H. de Kleine⁴, V.E. de Meijer⁴, M.C. van den Heuvel⁵, P. Olinga³, H.J. Verkade⁶, J.B.F. Hulscher¹, ¹Division of Pediatric Surgery, Dept. of Surgery, University of Groningen, University Medical Center Groningen, Groningen, ²Dept. of Surgery, University of Groningen, University Medical Center Groningen, Groningen, ³Dept. of Pharmaceutical Technology and Biopharmacy, Groningen Research Institute of Pharmacy, University of Groningen, Groningen, ⁴Dept. of Hepato-Pancreatico-Biliary Surgery and Liver Transplantation, University of Groningen, University Medical Center Groningen, Groningen, ⁵Dept. of Pathology, University of Groningen, University Medical Center Groningen, Groningen, ⁶Division of Pediatric Gastroenterology and Hepatology, Dept. of Pediatrics, Beatrix Children Hospital, University of Groningen, University Medical Center, Groningen, The Netherlands.

16.30 – 18.30 **Drinks and Poster Science**

Evening program

18.30 – 20.00 Dinner
20.00 – 21.00 Social program
21.00 - 00.00 Dance

Friday February 2nd 2024

07.00 – 09.00 Breakfast

Session: New liver disease models

Session Leaders: *t.b.a.*

- 09.00 – 09.15 Updates on equine organoids: Developing equine liver organoids for nutritional studies and (metabolic) disease modeling.
J. van Baal¹, R. van Millingen-Kraan¹, B. van der Hee², R. van den Boom³, B. Spee³, W.F. Pellikaan¹, D.A. van Doorn⁴, L.C. Penning⁵, ¹Animal Nutrition Group, Wageningen University, Wageningen, ²Host-Microbe Interactomics, Wageningen University, Wageningen, ³Clinical Sciences/Veterinary medicine, Utrecht University, Utrecht, ⁴Clinical Sciences/Population Health Sciences/Veterinary medicine, Utrecht University, Utrecht, ⁵Clinical Sciences/Veterinary medicine, Utrecht University, Utrecht, The Netherlands.
- 09.15 – 09.30 Multi-dimensional profiling of hepatoblastomas and patient-derived tumor organoids uncovers tumor subpopulations with divergent WNT activation profiles and drug sensitivities
T.A. Kluiver¹, Y. Lu¹, S.A. Schubert¹, L.J. Kraaier¹, F. Ringnalda¹, P. Lijnzaad¹, J. DeMartino¹, W.L. Megchelenbrink¹, V. Amo-Addae¹, S. Eising¹, F.W. de Faria², D.J. Münter², M. van de Wetering¹, K. Kerl², E. Duiker³, M. van den Heuvel³, V.E. de Meijer³, R.H. de Kleine³, R.R. de Krijger⁴, J.J. Molenaar¹, T. Margaritis¹, H.G. Stunnenberg¹, J. Zsiros¹, H. Clevers¹, W.C. Peng¹, ¹Research, Princess Máxima Center for Pediatric Oncology, Utrecht, ²Research, University Children's Hospital Münster, Münster, Germany, ³Surgery, University Medical Center Groningen, Groningen, ⁴Pathology, Princess Máxima Center for Pediatric Oncology, Utrecht, The Netherlands.
- 09.30 – 09.45 NASH-in-a-dish: Identifying targetable metabolite crosstalk for NASH treatment
J.C. Chang^{1, 2}, S. van Essen¹, R. Thomas¹, L. Bongiovanni¹, T.A. Kluivers³, W.C.P. Peng³, E.A. Zaai¹, B. Westerdorp¹, A. de Bruin¹, J.B. Helms¹, C.R. Berkers¹, ¹Dept. of Biomolecular Health Sciences, Utrecht University, Utrecht, ²Dept. Biomolecular Health Sciences, Amsterdam UMC, Amsterdam, ³Pediatric Oncology, Princess Maxima Center, Utrecht, The Netherlands.

09.45 – 10.00 Establishment of a hiPSC-derived liver-on-a-chip for personalized drug metabolism studies & disease modeling.
I. Tamargo-Rubio¹, V.E.J.M. Palasantzas², J.A. Hoogerland¹, A.B. Simpson¹, G.D.L. Weijer¹, R.A.M. Moerkens¹, J.W. Jonker², S. Withoff¹, J. Fu¹, ¹Dept. of Genetics, University Medical Center of Groningen, Groningen, ²Dept. of Pediatrics, University Medical Center of Groningen, Groningen, The Netherlands.

10.00 – 10.15 Rapid and efficient liver-specific editing of multiple genes in mice using Somatic Liver Knockout (SLiK) strategy adapted for AAV or Lipid Nanoparticles
D. Wu^{1,2}, I. Bolt¹, T. Yadati³, S.F.J. van de Graaf^{1,2}, R. van der Meel⁴, ¹Amsterdam University Medical Centers, Tytgat Institute for Liver and Intestinal Research, Amsterdam, ²Amsterdam University Medical Centers, Amsterdam Gastroenterology, Endocrinology Metabolism (AGEM), Amsterdam, ³Amsterdam University Medical Centers, Tytgat Institute for Liver and Intestinal Research, Amsterdam, ⁴TU Eindhoven, Institute for Complex Molecular Systems, Eindhoven, The Netherlands.

Coffee/Tea break

10.15 – 10.45

Session: Fibrosis/HCC

Session leader: *t.b.a.*

10.45 – 11.00 Detecting early-stage hepatocellular carcinoma using novel methods: the ASAP model and circulating tumor DNA
S. Fu¹, A. Boonstra¹, B.J. Beudeker¹, S.M. Wilting², R.G. Boers³, J.B. Boers³, M. Doukas⁴, J. Gribnau³, D. Sprengers¹, R.A. de Man¹, J.D. Debes¹, ¹Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, ²Dept. of Medical Oncology, Erasmus MC University Medical Center, Rotterdam, ³Dept. of Developmental Biology, Erasmus MC University Medical Center, Rotterdam, ⁴Dept. of Pathology, Erasmus MC University Medical Center, Rotterdam, The Netherlands.

11.00 – 11.15 Engineered superparamagnetic iron oxide nanoparticles functionalized with endothelin receptor A antagonist inhibit hepatic stellate cells activation and ameliorate early liver fibrogenesis
M.M. ten Hove¹, A. Smyris¹, R.S. Booiijink¹, L. Alic², C. Höltnke³, R. Bansal¹, ¹Medical Cell Biophysics, University of Twente, Enschede, ²Magnetic Detection and Imaging, University of Twente, Enschede, The Netherlands, ³Clinic of Radiology, Westfälische Wilhelms-Universität, Münster, Germany.

11.15 – 11.30 Identification and characterization of tumor-reactive CD8 and CD4 T cells in hepatocellular carcinoma
L. Magré¹, Y.S. Rakké¹, R.S. van Gemerden¹, M. Doukas², J.N.M. Ijzermans³, J. Kwekkeboom¹, D. Sprengers¹, S.I. Buschow¹, ¹Gastroenterology and Hepatology, Erasmus MC, Rotterdam, ²Pathology, Erasmus MC, Rotterdam, ³Surgery, Erasmus MC, Rotterdam, The Netherlands.

- 11.30 – 11.45 B cells demonstrate a heightened activation state in blood and liver of chronic HBV patients
Z. Osmani¹, B.J.B. Beudeker¹, Z.M.A. Groothuismink¹, R.J. de Knecht¹, M. Doukas², H.L.A. Janssen¹, H.J.G. van de Werken³, A. Boonstra¹, ¹Gastroenterology and hepatology, Erasmus University Medical Center, Rotterdam, ²Pathology, Erasmus University Medical Center, Rotterdam, ³Immunology, Erasmus University Medical Center, Rotterdam, The Netherlands.

Lunch Break

11.45 – 12.45

Session: Liver diseases

Session leader: t.b.a.

- 12.45 – 13.00 Portal vein intimal thickening in patients with cirrhosis is associated with indicators of portal hypertension
T. Lisman¹, E.G. Driever¹, S.C. Cannegieter², S. Gregory³, Y. Zen⁴, W. Bernal⁵, ¹Surgery, UMC Groningen, Groningen, ²Clinical Epidemiology, LUMC, Leiden, The Netherlands, ³Radiology, King's College Hospital, Londen, ⁴Pathology, King's College Hospital, Londen, ⁵Institute of Liver Studies, King's College Hospital, Londen, United Kingdom.
- 13.00 – 13.15 Carbonic anhydrases may protect cholangiocytes and are aspecific autoantigens in IgG4-related cholangitis
D.C. Trampert¹, R.H. Kersten¹, A. Jongejan², W.D. Tolenaars¹, K.F.J. Van de graaf¹, U. Beuers¹, ¹Dept. of Gastroenterology and Hepatology, Tytgat Institute for Liver and Intestinal Research, Amsterdam UMC, Amsterdam, ²Dept. of Epidemiology & Data Science, Bioinformatics Laboratory, Amsterdam Public Health Research Institute, Amsterdam UMC, Amsterdam, The Netherlands.
- 13.15 – 13.30 Investigating the gut microbiome in patients with end-stage liver disease: association with portal vein thrombosis?
R.R. Aleksandrova¹, L.M. Nieuwenhuis¹, R.K. Weersma², T. Lisman³, E.A.M. Festen², V.E. de Meijer¹, ¹Surgery, Section of Hepatobiliary Surgery and Liver Transplantation, University of Groningen, University Medical Center Groningen, Groningen, ²Dept. of Gastroenterology, University of Groningen, University Medical Center Groningen, Groningen, ³Surgical Research Laboratory, Dept. of Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands.
- 13.30 – 13.45 Intrahepatic formation of thrombin contributes to liver injury induced by acetaminophen in mice
F.A. von Meijenfildt¹, J.A. Lisman¹, C.N. Jenne², A. Carestia², L.C. Godin³, J.P. Luyendyk⁴, ¹Surgery, University Medical Center Groningen, Groningen, ²Microbiology, Immunology and Infectious Diseases, University of Calgary, Calgary, ³Microbiology, Immunology and Infectious Diseases, University of Calgary, Calgary, Canada, ⁴Pathobiology & Diagnostic Investigation, Michigan State University, East Lansing, United States.

Coffee/Tea break

13.45 – 14.15

Session: NAFLD/Lipids

Session leader: t.b.a.

- 14.15 – 14.30 ATP8B1 deficiency causes glucagon resistance and hepatic steatosis
J.C. Chang^{1,2}, C.P. Paulusma³, S. Duijst³, K. Ho-Mok³, K.F.J. van de Graaf³, R.P.J. Oude Elferink³, ¹Dept. of Biomolecular Health Sciences, Utrecht University, Utrecht, ²Dept. of Biomolecular Health Sciences, Amsterdam UMC, Amsterdam, ³Tytgat Institute for Liver and Intestinal Research, Amsterdam UMC, Amsterdam, The Netherlands.
- 14.30 – 14.45 Hepatic Abca6 knockdown increases circulating non-HDL cholesterol by promoting the production of VLDL cholesterol
X. Ge¹, K. Jarrett², T. Vallim², B. Sluis³, P. Rensen¹, M. Schönke¹, ¹Medicine, Leiden University Medical Center, Leiden, ²Medicine, University of California Los Angeles, Los Angeles, USA, ³Pediatrics, University Medical Center Groningen, Groningen, The Netherlands.
- 14.45 – 15.00 Extracellular vesicles derived from liver sinusoidal endothelial cells inhibit the activation of hepatic stellate cells and Kupffer cells in vitro
J. Wang¹, Z. Wu¹, M. Xia¹, S. Serna Salas¹, J. Arroyave Ospina¹, M. C. Harmsen², H. Moshage¹, ¹Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, ²Dept. of Pathology and Medical Biology, University Medical Center Groningen, Groningen, The Netherlands.
- 15.00 – 15.15 The narcolepsy drug sodium oxybate improves metabolism in developing and existing obesity
C. Liu¹, S. Zhang¹, M. Zwaan¹, A. Verhoeven², M. Schinkelshoek¹, Y. Wang^{1,3}, M. Giera², M.R. Boon¹, P.C.N. Rensen¹, M. Schönke¹, ¹Endocrinology, Leiden University Medical Center, Leiden, ²Center for Proteomics and Metabolomics, Leiden University Medical Center, Leiden, The Netherlands, ³Endocrinology, Xi'an Jiaotong University, Xi'an, China.

Poster and presentation award

15.15 – 15.30

Final remarks, questionnaire & closure

15.30 – 15.45