HEPATOLOGY RESEARCH GROUP
INSTITUTE OF HEALTH AND CARE RESEARCH,
PENINSULA MEDICALSCHOOL, UNIVERSITY OF PLYMOUTH

Hepatology Research Group (HRG) structure:

Head
Prof Matthew Cramp, Professor of Hepatology and Consultant Hepatologist

Senior Clinical Academics:
Dr David Sheridan, Associate Professor and Honorary Consultant Hepatologist,
Dr Ashwin Dhanda, Consultant Hepatologist and Honorary Associate Professor

Senior Scientist:
Dr Daniel Felmlee, Lecturer,
Dr Leticia Scalioni, post-doctoral research scientist (left August 2021)

Clinical Research Fellows:
Dr Huey Tan – PhD student

PhD Fellows:
Paula Boeira
Justyna Lopatecka
Hannah Windmill

MD Fellow:
Mr Andrei Tanase

NIHR Academic Clinical Fellows:
Dr Kris Bennett
Dr Keith Pohl
Dr Prebashan Moodley (joined Sept 2021)

DClinSci fellow:
Kristen Lilly

Lab technician:
Paula Boeira

Hepatology Research Group Annual Report 2021

Overview:
2021 was another very different and frequently difficult year for the Hepatology Research Group (HRG) due to the ongoing impact of the COVID-19 pandemic on so many aspects of professional and personal life for the team. The Derriford Research Facility laboratories remained open, albeit with some restrictions on hours and numbers able to access. The slow return of face-to-face team meetings as the year progressed was welcome, and the BASL Science Retreat in August the first in-person conference since early 2020. The whole group continued to show great resilience in adapting to the new environment, continuing their work throughout, completing the study on COVID immunology and making progress in all areas.

The clinical academics from the HRG continued to provide support for in-patient care of patients with COVID in addition to helping address the backlog of hepatology work that had built up due to COVID impacts on standard hospital care.

Despite these diversions and distractions the group had 11 publications in 2021 and delivered presentations at both national and international meetings. A summary of the work undertaken and progress made in 2020 in each of the HRGs main areas of interest, plus the COVID related research, is included in this report.

At a national level Matthew Cramp served as a clinical expert advisor to the Hepato-pancreatico-biliary Clinical Reference Group and reviewed Wellcome Trust, MRC and NIHR Grant applications. He was awarded the Excellence in Transplantation award for 2021 by the British Transplantation Society for his role in developing liver transplant services in the southwest. Ashwin Dhanda as Chair of the BASL Alcohol SIG (Special Interest Group) has been gathering useful data on rising disease prevalence and is leading this group at a key time for developing national research initiatives.

The clinical trials program of the HRG and the South West Liver Unit expanded with studies on pause during COVID re-opening in 2021 plus many new studies being started. Our thriving commercial and non-commercial clinical trials portfolio underpins much of the clinical research activities of the HRG and this has been achieved despite difficulties in seeing patients face to face for monitoring visits and the research nurse team being diverted to delivering urgent public health studies in the early part of 2021. We were the first UK site to recruit to a study of a novel anti-sense oligonucleotide treatment for chronic hepatitis B virus infection and to the ESSENCE trial, investigating the use of GLP1 receptor agonists as treatment for NASH and were a major recruiter to in-patient studies on alcoholic hepatitis. Clinical trials in NASH and PBC have restarted with new protocols for NASH and PBC therapeutics opened and recruiting to target.

We were pleased to welcome Dr Prebashan Moodley who joined us in a NIHR funded Academic Clinical Fellow post in September. Paula Boeira completed her PhD research work and is writing up her thesis whilst working with the group as a laboratory technician. The Mary Kinross Trust funding for Dr Leticia Scalioni, a post-doctoral

scientist working on the HCV resistance program, ran out in August 2021 and unfortunately we were not successful in securing alternative funding so Letitia left our group in August 2021.

Hepatitis C Virus infection and Protection from Infection
Leads: Dan Felmlee, Matthew Cramp.

The viral hepatitis research arm in 2021 could be summarised by the phrase "Each setback is a set-up for a comeback". Whilst we had limited access to laboratory spaces during the early phase of the pandemic in 2020, we were able to make progress this past year in optimising our cell culture gene editing techniques to functionally assess the role of candidate genes important for HCV infection.

We previously had followed up on information garnered from 8 individuals who are highly resistant to hepatitis C virus (HCV) infection. We identified this rare group from the HCV Lookback Programme which sought out recipients of HCV-contaminated blood products transfused before the virus had been identified. Using next generation sequencing, we investigated their genomes for rare changes that the highly resistant group had in common, and found 6 genes expressed in the liver. Interestingly, all 6 of these genes have some rationale for participating in the HCV infection cycle. Some of these genes are involved in the structural lattice on the surface of liver cells that HCV needs to penetrate to enter the cell. Other genes are important for cholesterol and other lipids important for HCV replication. Our research aims to determine if any of these candidate genes are important in preventing HCV infection, and if so can this inform our understanding about other viral infections and potentially reveal novel host targets to prevent infection.

To answer these questions we turn to laboratory based functional assays of HCV infection. There are three primary models of HCV infection that have been developed by the broader HCV research community, and they all rely on a hepatoma cell line (Huh7.5) initially isolated from a liver cancer patient in Japan. The 2020 Nobel Prize in Physiology or Medicine was awarded to HCV researchers, in part for developing these models. That same year the Nobel Prize in Chemistry was awarded for progress in gene-editing using CRISPR/Cas9 that allows functional deletion of genes. To determine the role of our candidate genes of interest we bring these technologies together; we first delete each gene in Huh7.5 cells, then we determine if and at which step in the HCV life cycle the gene is necessary.

Our progress in 2021 has brought us to the point where we have a panel of cell lines with 5 of the 6 genes deleted, and we have optimised the model that tests HCV entry into cells using HCV pseudo-particles (HCVpp). A remaining challenge is that work on the containment level 3 (CL3) laboratory needed for the full life cycle of HCV has been delayed. Faults in the construction of the air-handling need extensive re-building, and this work is at the moment out for tender. Despite this setback, 2022 promises to conclude the first stage of this very exciting project.

We would like to thank Dr. Letitia Scalioni, who contributed greatly to this progress, and who unfortunately we could no longer fund. We have been able to welcome aboard a placement student from Bath University, Marcus Barr, who has been a great help in the lab.

Dan Felmlee

Non-alcoholic fatty liver disease and metabolic liver diseases
Lead: David Sheridan, Dan Felmlee

2021 has proven another challenging year emerging from COVID setbacks and unrelenting clinical pressures, but has also presented opportunities to enhance progress of the South West Liver Unit (SWLU) as a clinical academic unit. As clinical service line Director for SWLU, I have overseen considerable planning and risk management for reconfiguration of outpatient services and information coding that will be beneficial for clinical research registry and intervention studies going forwards. Balancing demand and capacity within the clinical service to protect clinical academic time has been a priority, and with new appointments we expect increased clinical capacity in 2022.

Award of the Royal College of Physicians 'Improving Quality in Liver Services' (IQILS) Level 2 accreditation IQILS is testament to the work the team in promoting high quality, patient centric services with clinical research at the core of driving up these high standards. The SWLU is only the fourth centre in the Country to achieve the IQILS Level 2 accreditation standard.

I have sought to foster further progress of the cross-disciplinary metabolic research group within University of Plymouth. A successful Faculty pump priming award of £10,000 for work with Charlie Affourtit has supported a liver muscle frailty metabolomics study. This ongoing study is being conducted by Hepatology NIHR Academic Clinical Fellow Dr Keith Pohl, utilising the Inflammatory Liver Diseases Biobank. The purpose is to provide proof of concept evidence for the workflow and preliminary dataset to support MRC grant re-submission with Charlie Affourtit.

I am co-applicant on a successful Wellcome Trust Grant investigating the urinary steroid metabolome as biomarkers for NASH ('Trust NAFLD'). As collaborator on a Wellcome Trust award – urinary biomarkers in NASH, R&D for collection of patients samples and data. £33,476.80 was awarded over 3 years to UHP.

I have also been actively developing an NIHR RfPB grant as co-applicant, investigating very-low-calorie diet to reduce hepatic steatosis prior to major liver resection (RESOLVE), pending outcome from a stage two submission.

As an active member of the BASL BSG NAFLD Special Interest Group (SIG), I led the second national NAFLD clinical Practice survey, presented to the BASL BSG NAFLD SIG and am overseeing the first national NAFLD care audit. I have supported clinical teaching as an academic tutor for Peninsula Medical School years 3 and 4 and ISCE examiner for years 2 and 4.

David Sheridan

Alcohol-related liver disease
Lead: Ashwin Dhanda

2021 was a busy year with the opening of MIRAGE, the feasibility trial of a novel psychological therapy for alcohol dependence in patients with alcohol-related liver disease for which I am Chief Investigator (https://www.plymouth.ac.uk/news/study-to-explore-whether-new-therapy-can-help-address-problem-drinking). Recruitment has been challenging in the face of further waves of COVID but thanks to support from the NIHR Clinical Research Network, the local research teams and investigators, it is underway at 4 centres around the country with results expected by the end of 2022.

In my role as lead for the BASL Alcohol-related Liver Disease Special Interest Group, I held further virtual meetings, hosting influential speakers from around Europe. Together with colleagues in the BSG I developed a series of case-based webinars on Alcohol Use Disorder (https://www.bsg.org.uk/events/basl-bsg-alcohol-use-disorder-webinar-series/), which were attended and viewed online by hundreds of healthcare professionals. A further webinar series is in development for 2022. My work with collaborators in PHE on testing a coding algorithm for Hospital Episode Statistics to improve identification of patients with alcohol-related liver disease admitted to hospital is ongoing and has the potential to alter the reporting of national statistics.

I was appointed to a regional role as the Hepatology Specialty Research Lead for the NIHR Clinical Research Network SW Peninsula, taking over from Matthew Cramp. In this role, I will support clinical research teams around the region in taking part in and recruiting to clinical trials in liver disease, improving access to trials for patients in the South West.

Translational research continues with experimental work conducted by Dr Queenie Tan and Paula Boeira on biological samples from the MICAH cohort study of patients with alcoholic hepatitis (www.mimah.org). Queenie is investigating oxidative stress and epigenetic regulation in immune cells from patients with alcoholic hepatitis and will complete her PhD in 2022. This year she has presented her work at the Digital International Liver Congress and the BASL Annual Meeting. Further cell culture work is being conducted by Kristen Lilly (DClinSci candidate) and our University of Bath undergraduate placement study Sam Gill who are investigating the effect of antioxidants and gut metabolites on immune cell and hepatocyte function.

Ashwin Dhanda

Immune dysfunction in COVID-19: investigation of mechanisms and identification of immune biomarkers of clinical outcome

- **Immune Biomarkers of Outcome from COVID-19 (IBOC)**

Leads: Ashwin Dhanda and Matthew Cramp

COVID-19 continued to impact the clinical service in 2021 with several waves of infection. With the additional patients admitted in 2021 we successfully completed our COVID-19 study recruiting almost 50 participants.

We achieved our 3 objectives:
- To define immune phenotype in peripheral blood of patients with COVID-19 and correlate with clinical course and outcome
- To measure global immune function in patients with COVID-19 and correlate with clinical course and outcome
- To measure markers of immune senescence and correlate with clinical course and outcome

Firstly, we documented immune phenotype and did not find any relation to clinical outcomes. Secondly, we demonstrated that all COVID-19 patients had significantly impaired global immune function, but this did not correlate with clinical outcomes. Thirdly, we confirmed that immune cells were exhausted and reported for the first time that markers of immune senescence were increased in circulating T cells. These results indicate that COVID-19 alters immune phenotype and function. Reversing immune cell exhaustion and senescence may prove useful therapeutic targets.

We have published our findings in the journal *Immunobiology* (https://pubmed.ncbi.nlm.nih.gov/35134628/).

Disappointingly, we could not continue our collaboration with Qiagen to develop and test a novel assay looking at interferon gamma release in response to the SARS-CoV2 spike protein. This has the potential to measure cellular immunity to infection, and vaccination, but without access to the containment level 3 laboratory in the Derriford Research Facility we were unable to proceed.

This work demonstrates how translational research can be rapidly set up and completed with a strong partnership between the Trust and University. We would have liked to build further on this study to test potential therapies for COVID-19 and better understand protective immune responses, but without access to the CL3 laboratory this is not possible so we have decided to focus our endeavour on our core liver research programme.

Ashwin Dhanda and Matthew Cramp

Hepatocellular Carcinoma
Lead: Matthew Cramp

Dr Ollie Rupar was awarded his PhD after a successful viva in June 2021. His thesis presented novel work on universal tumour associated antigens (U-TAA) and their role in primary liver tumours. His work included detailed study of Survivin and Telomerase using a combination of histological and genetic methods.

In 2021 I worked with Gabriel Rogers and Ken Stein to re-visit the vexed question of surveillance for the development of hepatocellular carcinoma (HCC) in patients with cirrhosis. We had originally worked together to produce the HTA in 2008 but wanted to re-visit the work in light of major advances in treatment of liver cancers and also liver disease, especially viral hepatitis. In July 2021 we submitted a bid for NIHR funding for a study entitled: The benefits, harms and costs of surveillance for hepatocellular carcinoma in people with cirrhosis: synthesis of observational and diagnostic test accuracy data and cost –utility analysis. This was successful and we have been awarded £342,500 to undertake the work which will start in July 2022 with Dr Kris Bennett and myself both involved.

Another key aim for 2021 was to establish clinical trials for patients with HCC. Several studies have been in set up in 2021 and will start recruiting in 2022 - including the CRC-UK funded PEARL and SELINA biomarker studies and the interventional TACE3 study.

Matthew Cramp

Current and future plans

The COVID pandemic and its profound impact on our work provided us with a strong impetus to take stock of areas to focus on and to seek opportunities for future growth.

Several key strategic themes were identified:

1) **Collaborations** – the importance of collaborations, both within the University of Plymouth and outside, for the groups success and to attract the most able candidates for posts was recognised. This is a major part of the groups long term viability strategy. Work continues with our main external collaborators - Imperial College London (MRC personalised medicine bid in alcoholic hepatitis), the MRC Centre for Virology in Glasgow (HCV exposed uninfected work) and with the Institute of Hepatology, Kings College London (lipidomics in HCV resistance and more recently precision cut liver slice techniques). In 2021 a fledgling University of Plymouth metabolic, multi-morbidity group was established to focus on obesity, its physical, nutritional and socio-economic

causes, its consequences and treatment approaches. This is shaping up to be a truly multi-disciplinary group and has the clear target of fostering lasting internal collaborations with the specific remit of success in gaining NIHR grant support.

2) **Environment and liver disease** - developing research work to study the impact of environmental issues on human health will become an important part of our research portfolio. This is a key topic for the HRG with rising concern about the links between environmental degradation / pollution and climate change with poor health. Discussions between Matthew Cramp and Richard Thompson, Director of the Marine Institute at University of Plymouth have resulted in a new collaboration that will use the skills and facilities of both groups to look at micro- and nano-plastics and their potential impact on gut and liver health. Ashwin Dhanda has been successful at getting internal funding support for a joint PhD student who will join us in 2022. Further grant submissions are in progress.
3) **Grant support and financial stability** – focusing on financial sustainability of the group at a time of increasing pressure on university and academic funding remains a key priority. The REF2021 conclusions will be published in May (the HRG submitted a case of impact study for HCV infection) and we hope this will secure some additional medium-term support for the HRG. External grant support remains crucial. We have had some success in 2021 and hope to develop this further with a number of submissions planned for 2022.

A major disappointment for 2021 was the failure to have the containment level 3 (CL3) laboratory at the Derriford Research Facility commissioned and active. Unfortunately, a further review of the facility identified a number of flaws in the ventilation that require remedial work to correct before it can be commissioned. Tendering for this work is well underway and we hope that 2022 will finally see the lab commissioned by the England Health Safety Executive. Once in place this will be an important component of research infrastructure for Plymouth and Southwest England and is crucial to facilitate progress on our viral resistance work.

Our commitment to clinical trials continues as we recognise that a thriving commercial and non-commercial clinical trials portfolio is good for our patients and supports much of the clinical research activities of the HRG. The HRG with the SWLU are the largest recruiter to trials in liver disease in the southwest. After the downturn in activity as a consequence of COVID, 2021 saw a significant recovery in activity and 2022 is expected to be our busiest year to date. The research nurse team has been expanded and strengthened to deliver a broadening portfolio of studies, with studies in 2022 expanding to new disease areas including hepatocellular carcinoma and primary sclerosing cholangitis.

Other developments planned for 2022 include new studies on the role of nutrition and nutrients / nutritional supplements in modifying liver disease and immune function, a focus on expanding the inflammatory liver diseases biobank to provide a strong future

research resource and developing new skills to support the laboratory research program including the use of fine needle aspiration liver biopsy sampling and precision cut liver slice technology.

Our laboratory work relies heavily on clinical and biological samples provided willingly and voluntarily by many patients. We remain indebted to the wider clinical team at the SWLU and to all our collaborators, but most importantly to all the patients and their families who have supported us by their involvement in clinical trials and the research work in the course of 2021.

Grant and Charitable Support:

MRC Minimising Mortality in Alcoholic Hepatitis (MIMAH) grant
- June 2018- June 2024, Total funding £4.8m
- Ashwin Dhanda work stream lead

The MIRAGE trial
- started Oct 2020, completion due Dec 2022
- funded by Jon Moulton Charity Trust total £332,692
- Ashwin Dhanda – Chief Investigator

NIHR Health Technology Assessment grant 134670: The benefits, harms and costs of surveillance for hepatocellular carcinoma in people with cirrhosis: synthesis of observational and diagnostic test accuracy data and cost–utility analysis
- awarded £342,583 funding in Dec 2021
- starting July 2022
- Matthew Cramp - co-applicant

NIHR Academic Clinical Fellows
- 2 x NIHR funded Academic Clinical Fellows in post with academic training and support provided by the HRG
- salary costs for 3 years covered by NIHR funding.
- Funding of approx. £100,000 per annum

Mary Kinross Trust – the Mary Kinross Trustees have generously supported our HCV research program with over £200,000 awarded over 7 years.
- £35,000 awarded for post-doctoral post investigating HCV resistance
- started March 2020, completed June 2021
- supported Dr Letitia Scalioni

Research Outputs for 2021:

Publications:

Trans-ancestral fine-mapping of MHC reveals key amino acids associated with spontaneous clearance of hepatitis C in HLA-DQβ1
Ana Valencia, Candelaria Vergara, Chloe L Thio, Nicolas Vince, Venceslas Douillard, Alba Grifoni, Andrea L Cox, Eric O Johnson, Alex H Kral, James J Goedert, Alessandra Mangia, Valeria Piazzolla, Shruti H Mehta, Gregory D Kirk, Arthur Y Kim, Georg M Lauer, Raymond T Chung, Jennifer C Price, Salim I Khakoo, Laurent Alric, **Matthew E Cramp**, Sharyne M Donfield, Brian R Edlin, Michael P Busch, Graeme Alexander, Hugo R Rosen, Edward L Murphy, Genevieve L Wojcik, Mary Carrington, Pierre-Antoine Gourraud, Alessandro Sette, David L Thomas, Priya Duggal
Am J Hum Genet 2022 Feb 3;109(2):299-310. doi: 10.1016/j.ajhg.2022.01.001. Epub 2022 Jan 31.

Trajectory of Serum Bilirubin Predicts Spontaneous Recovery in a Real-World Cohort of Patients With Alcoholic Hepatitis.
Parker R, Cabezas J, Altamirano J, Arab JP, Ventura-Cots M, Sinha A, **Dhanda A,** Arrese M, McCune CA, Rowe IA, Schnabl B, Mathurin P, Shawcross D, Abraldes JG, Lucey MR, Garcia-Tsao G, Verna E, Brown RS Jr, Bosques-Padilla F, Vargas V, Louvet A, Holt AP, Bataller R.
Clin Gastroenterol Hepatol. 2022 Feb;20(2):e289-e297. doi: 10.1016/j.cgh.2021.01.042. Epub 2021 Jan 28.

Virtual liver transplant assessment: a novel pathway that is likely safe, effective and optimises access to transplantation
Agimol Pradeep, Faye Barker, Katie Ramos, Wendy Littlejohn, Oliver Tavabie, Chris Nicholson, Krishna Menon, **Matthew E Cramp**, Neil McDougall, Johnny Cash, Varuna Aluvihare.
Frontline Gastroenterology October 2021; DOI:10.1136/flgastro-2021-101976

Mapping of population disparities in the cholangiocarcinoma urinary metabolome
Munirah Alsaleh, Zoe Leftley, Thomas O'Connor, Thomas Hughes, Thomas A. Barbera, Larry K. Koomson, Abigail Zabron, Helen Reeves, **Matthew Cramp**, Stephen D. Ryder, Shaun Greer, Martin Prince, Paiboon Sithithaworn, Narong Khuntikeo, Watcharin Loilome, Puangrat Yongvanit, I. Jane Cox, Roger Williams, Christopher A. Wadsworth, Elaine Holmes, Kathryn Nash, Ross Andrews, Simon D. Taylor-Robinson
Sci Rep. 2021; 11: 21286. Published online 2021 Oct 28. doi: 10.1038/s41598-021-00530-0

Alcohol's Impact on the Gut and Liver.
Pohl K, Moodley P, Dhanda AD.
Nutrients. 2021 Sep 11;13(9):3170. doi: 10.3390/nu13093170.

Recurrent Chronic HEV in Severe Combined Immunodeficiency.
Moodley P, Whyte AF, **Dhanda A**.
J Clin Immunol. 2021 Jul;41(5):1103-1105. doi: 10.1007/s10875-021-00999-4.

Interleukin-2 receptor antibody induction with early low dose tacrolimus preserves post-liver transplant renal function in at risk individuals
Jeremy S Nayagam, Oliver D Tavabie, Benjamin Norton, Michael J S McMahon, Katie Ramos, Ian Cadden, **Matthew E Cramp**, Krish Menon, Andreas Prachalias, Kosh Agarwal, Michael A Heneghan, Deepak Joshi, Varuna R Aluvihare.
Journal of Liver Transplantation 2021 Jul-Sept;3:100028

A Multiancestry Sex-Stratified Genome-Wide Association Study of Spontaneous Clearance of Hepatitis C Virus
Candelaria Vergara, Ana Valencia, Chloe L Thio, James J Goedert, Alessandra Mangia, Valeria Piazzolla, Eric Johnson, Alex H Kral, Thomas R O'Brien, Shruti H Mehta, Gregory D Kirk, Arthur Y Kim, Georg M Lauer, Raymond T Chung, Andrea L Cox, Marion G Peters, Salim I Khakoo, Laurent Alric, **Matthew E Cramp**, Sharyne M Donfield, Brian R Edlin, Michael P Busch, Graeme Alexander, Hugo R Rosen, Edward *L Murphy, Genevieve L* Wojcik, Margaret A Taub, David L Thomas, Priya Duggal
J Infect Dis. 2021 Jun 15; 223(12): 2090–2098. doi: 10.1093/infdis/jiaa677

Real-World Outcomes of DAA Treatment and Retreatment in UK-based Patients Infected with HCV Genotypes/Subtypes Endemic in Africa
Elihu Aranday-Cortes, C Patrick McClure, Christopher Davis, William L Irving, Kazeem Adeboyejo, Lily Tong, Ana da Silva Filipe, Vattipally Sreenu, Kosh Agarwal, David Mutimer, Benjamin Stone, **Matthew E Cramp**, Emma C Thomson, Jonathan K Ball, John McLauchlan
J Infect Dis 2021; Mar 1;jiab110. doi: 10.1093/infdis/jiab110. .

Persistent Hepatitis E virus infection across England and Wales 2009-2017: Demography, virology and outcomes
Michael Ankcorn, Bengü Said, Dilys Morgan, Ahmed M Elsharkawy, James Maggs, Stephen Ryder, Talal Valliani, Fiona Gordon, Kushala Abeysekera, Deepak Suri, Stuart McPherson, Jack Galliford, Belinda Smith, Emanuela Pelosi, Sanjay Bansal, Claire Bethune, **David Sheridan**, Louisa Vine, Richard S Tedder, Samreen Ijaz, enhanced persistent HEV surveillance group, Unell Riley, Mark Zuckerman, Harry Dalton, Brendan Healy, Matthew Donati, Kelly Bicknell, Cariad Evans, Bozena Poller, Erasmus Smit, Clare van Halsema, Earl Williams, Mohammed Raza, Hugh McGann, Will Irving, Sam Douthwaite, Chin Lye Ch'ng, Conall McCaughey, Dianne Irish
Journal of Viral Hepatitis 2021 Feb;28(2):420-430. doi: 10.1111/jvh.13424.

Assessment of hepatic steatosis by controlled attenuation parameter using the M and XL probes: an individual patient data meta-analysis.
Petroff, D Valentin Newsome, P; Shalimar Voican, Thiele, M; de Lédinghen, V; Baumeler, S; Chan, W:; Perlemuter, G; Cardoso, AC; Aggarwal, S; Sasso, M; Eddowes, PJ; Allison, M; Tsochatzis, E; Anstee, QM; **Sheridan D**, Cobbold, JF; e Naveau, Lupsor-Platon, Mueller, S; Krag, A; Irles-Depe, M; Semela, D; Lai-Hung Wong, G; Vincent Wai-Sun Wong; Villela-Nogueira, C; Garg, H; Chazouillères, O; Wiegand; Karlas, T.
Lancet Gastroenterology and Hepatology January 15, 2021; 6(3):185-198
DOI:https://doi.org/10.1016/S2468-1253(20)30357-5

Editorial: can quantitative fibrosis assessment be used to enhance prediction of outcomes in patients with alcohol-related liver disease?
Moodley P, **Dhanda AD**.

Alimentary Pharmacology and Therapeutics. 2021 Jan;53(1):183-184. doi: 10.1111/apt.16134.PMID: 33333610

Conference Presentations:

International Meetings:

European Association for the Study of the Liver annual meeting (Digital International Liver Congress 2021) - 23rd -26th June 2021:

High oxidative stress in T cells and monocytes correlates with mortality from alcoholic hepatitis.
Tan H, Boeira P, Cramp ME, Dhanda AD.
- Queenie was awarded an EASL Young Investigator Bursary

Microbiome metabolites aggravate hepatic lipid deposition by decreasing mitochondrial function in an in vitro model of non-alcoholic fatty liver disease
Paula Boeira, Daniel Felmlee, Charles Affourtit**, Matthew Cramp, David Sheridan**
- Paula was awarded an EASL Young Investigator Bursary

National meetings:

BASL Annual Meeting - held on-line 21st-24th September 2021

Differential epigenetic regulation in survivors and non-survivors from severe alcoholic hepatitis
Tan H, Cramp ME, Dhanda AD.
Presented at BASL Annual Meeting 2021

Increasing burden of alcohol-related liver disease in the UK associated with the COVID-19 pandemic
Dhanda A, Allison M, Bodger K, Forrest E, Hood S, MacGilchrist A, Masson S, Parker R, Simpson K, Vergis N, BASL ArLD SIG service evaluation group
Presented at BASL Annual Meeting 2021

BASL Basic Science Retreat - The Roger Williams Institute of Hepatology, London 21st -22nd August 2021

Paula Boeira, Daniel Felmlee, Charles Affourtit**, Matthew Cramp, David Sheridan**
Microbiome metabolites aggravate hepatic lipid deposition by decreasing mitochondrial function in an in vitro model of non-alcoholic fatty liver disease.