

2017-18 (April 2017-March 2018)

HEPATOLOGY

Faculty

Professor and Head	Y K Chawla Till 30.9.2017	MD, DM, FAMS, FACG
Professor and Head	R.K. Dhiman (Since 1.10.17)	MD, DM, FAMS, FAASLD, FACG FRCP Edin, FRCP London
Professors	Virendra Singh Ajay Duseja	MD, DM, FASGE MD,DM,FAMS, FAASLD, FACG, FSGEI
Assistant Professors	Sunil Taneja Madhumita P	MD, DM MD,DM

Dr Y K Chawla was invited as a speaker on “ACLF Management and Statins in Chronic Liver Disease in the 14th National Hepato-Gastroenterology Congress at Antalya, Turkey on April 5-9th, 2017. He was invited as a speaker on Liver Mass during Pregnancy in the G2G Interface Conclave held at Cochin on May 7th, 2017. He delivered a talk on “Statin and Liver” in Kolkata Gut Summit 2017 at Kolkata on May 27-28th, 2017 and also was the Chairperson in the conference. He was invited as a Speaker on “Acute on Chronic Liver Failure” in the Singapore Hepatology Conference 2017 at Singapore on June 2-3rd, 2017. He chaired a session on ‘Hyponatremia in cirrhosis’ at the ‘South Asian Association for the Study of the Liver (SAASL) Meeting’ organised by Sri Lanka Society of Gastroenterology at Colombo, Sri Lanka on July 21- 22, 2017. He was invited as a speaker on “Disease burden and public health implications: Eastern Perspective” in the 25th Silver Jubilee Meeting of Indian National Association for the Study of Liver (INASL).

Dr.RK Dhiman took over the charge of Head of The Department following superannuation of Prof. YK Chawla on October 1st, 2017. He is the Chairman of Technical Expert Group (TEG) of the National action Plan for care, support and treatment on integrated initiative on prevention and control of viral hepatitis. The National Action Plan provides for the first time a comprehensive roadmap for the prevention and control of viral hepatitis in the country, which will be rolled out in a phase-wise manner in association with various states. He is Consultant to Punjab Govt. for MukhMantri Punjab Hepatitis C Relief Fund (MMFHCRF), which has been created to treat hepatitis C patients free of cost in Punjab. He is also the Chairman of Punjab State

Technical Expert Group (TEG) on injection safety, which is primarily meant to prevent spread of infections to both community and service providers resulting from unsafe and used syringes. He was invited as an expert in the Regional Meeting on Viral Hepatitis, held at WHO Regional office for South-East Asia (SEARO), New Delhi, during April 10-12, 2017. He spoke on "WHO Injection safety program in Punjab" in a session on "Prevention of Hepatitis B and C; Injection safety". He was invited by the Punjab Govt. to deliver a talk on "HCV management in Punjab" in a function organised on July 28, 2017. He is Editor-in-Chief of Journal of Clinical and Experimental Hepatology (JCEH), which is an international peer-reviewed official Journal of the INASL. He is the Secretary-General of Indian National Association for the Study of Liver (INASL) from April 2015 to August 2018. In the capacity of Secretary-General of INASL, he organized 25th Silver Jubilee Annual Meeting of INASL, Gurgaon from August 3 - 6, 2017. INASL-AASLD half-day Symposium on Alcoholic Hepatitis was also organised on August 3, 2017; this was attended by stalwarts from USA and Europe. He became Past-President of the 'International Society for Hepatic Encephalopathy and Nitrogen Metabolism (ISHEN)' for the years 2017-19.

Dr. Dhiman delivered the prestigious "Dr Nanivadekar Oration" on "Covert and Overt hepatic encephalopathy: Current status and future directions" at the LTMMC and LTMGH, Mumbai on January 23, 2018.

Dr. Dhiman was a Guest faculty at "The International Liver Congress™ 2017, European association for the Study of the Liver (EASL) held at Amsterdam, Netherland from April 20-24, 2017. He delivered an invited talk on "Experience from India: Do generics work as well as branded drugs?" in a symposium on "Fusion Hepatology: the global view on Hepatitis C" and also chaired a session in the Early morning workshop along with Prof Deiter Haussinger on "Occult, covert and overt hepatic encephalopathy - practical management". He attended the Conference of American Association for the Study of Liver Diseases (AASLD) from October 20-24, 2017 at Boston, USA, and delivered an oral presentation on "Neutrophil Dysfunction in Acute on chronic liver failure" and a poster presentation on "Treatment of hepatitis C patients in a public health care setting with sofosbuvir based treatment regimens: Efficacy and safety in real-life in Punjab, India".

Dr. Dhiman was invited as a guest faculty to MetaECHO held in Albuquerque from

September 13-16, 2017 to discuss the Indian experience for treating Hepatitis C in a public health setting in a Panel Discussion.

Dr. Dhiman is a member of INASL HBV Taskforce and its INASL Guidelines on Management of HBV Infection in Patients receiving Chemotherapy, Biologicals, Immunosuppressants and Steroids; he contributed on "Management of HBV during treatment of non-hematological malignancies when HBsAg or HBV DNA is positive: Pre-emptive antivirals or careful watch" during its meeting held in Delhi on September 24, 2017. He was invited as faculty at the International Aesthetic and Clinical Dermatology Conference held at PGIMER, Chandigarh from December 8-10, 2017 and delivered a talk on "Intricacies of Liver and Psoriasis for Dermatologists". He was invited faculty for the 8th edition of Master Class in Liver Disease - "Liver Disease and Transplantation - Care of the Critically ill" held at Chennai on the January 26-27, 2018; he was an expert to a session on "Acute Liver Failure and Subacute Liver Failure" and chaired a session on "Liver Injury and Regeneration".

Dr. Dhiman was invited faculty at "Advances in Hepatobiliary diseases - Clinician's Perspective" organized by Institute of Liver Gastroenterology & Pancreaticobiliary - Sciences (ILGPS), Sir Ganga Ram Hospital, New Delhi on September 2-3, 2017. He gave a talk on "Management of Hepatitis C: Can the Punjab model be implicated into national perspective?" He was invited as faculty to Current Perspectives in Liver disease (CPLD) 2017: Interventions in Hepatology held in AIIMS, New Delhi on October 7-8, 2017 and delivered a talk on "Acute liver failure: Role of plasma exchange".

Dr. Virendra Singh delivered guest lectures on "Management of refractory ascites" and "AKI in cirrhosis: new definition, treatment, outcome" at Purvanchal Gastrocon at IGIMS, Patna between April 15-16, 2017. He attended Indian National Association for Study of the Liver (INASL), organised at Gurgaon, from August 3-6, 2017 and spoke on "Management of Ascites". He delivered guest lecture on "Midodrine in Refractory ascites" at "Advances in Hepatobiliary Disease-clinician's perspectives" at Sir Ganga Ram Hospital, New Delhi held between September 2-3, 2017. He presented four papers entitled "Sofosbuvir with NS5A Inhibitors in Hepatitis C Virus Infected Patients with Severe Renal Insufficiency", "Direct Acting Antivirals in Hepatitis C Virus Genotype 3 and Advanced Cirrhosis", "Sarcopenia in Decompensated Cirrhosis" and "Seroprevalence of HCV and Transient Elastography in a Correctional Setting" at The

Liver Meeting®2017, AASLD's 68th Annual Meeting, held at Washington DC(USA) from October20-24, 2017. He delivered guest lectures on "Midodrine in Refractory ascites and HRS"atGulberga in the ISGCON Karnataka on November 11-12,2017 and on "Midodrine in Refractory ascites" at a Meeting at LokmanyaTilak Municipal Medical college(LTMMC), Mumbai on November 25, 2017. He attended Annual conference of Indian Society of Gastroenterology organised at Bhubaneswar onDecember 14-17, 2017 and delivered a guest lecture on "Management of Ascites: Has it been changed?" He attended Annual Conference of the Asian Pacific Association for the Study of Liver held at Delhi from March 14-18, 2018. He was a guest speaker at APASL Conference and delivered a guest lecture on "Refractory ascites". He also chaired a session in postgraduate course.

Dr. Ajay Duseja was an invited speaker on' Pathogenesis of NASH – Genetics, Gut or Both' at the 'South Asian Association for the Study of the Liver (SAASL) Meeting' organised by Sri Lanka Society of Gastroenterology at Colombo, Sri Lanka on July21- 22, 2017. He was a guest speaker on 'Recent Advances in the Pharmacological Treatment of NASH' and a Panelist on 'Obesity Management' at the 'GUT-2017- Annual Scientific Meeting of the Malaysian Society of Gastroenterology and Hepatology' organised at Penang, Malaysia from August 11-13, 2017. He was a guest speaker on 'Metabolic syndrome and NAFLD – the bidirectional link' at the Asia Pacific Digestive Week (APDW 2017) organised at Hong Kong, China from September23 – 26, 2017.

He was a speaker on 'New Molecular Targets for the Treatment of NASH' at the 'Workshop on Liver Diseases and Diabetes – Indo-French Perspective' organised by Institute of Liver and Biliary Sciences (ILBS), New Delhi on April 26, 2017. He was the invited Expert for the Medical Council of India's Meeting of Expert Group to finalise the Syllabus, Teacher Eligibility Qualifications and Minimum Standard Requirements for DM in Hepatology on May 1, 2017 at New Delhi. He was a guest speaker on 'Recurrent Diseases after Liver Transplantation – NASH, AIH, PSC' at the "Third Transplant Hepatology Course 2017" on May 13-14, 2017 at Medanta- The Medicity, Gurugram'. He was the Member of the NAAC (National Assessment and Accreditation Council) Peer Team to Visit "Institute of Liver and Biliary Sciences, Delhi" from June 19-21, 2017 for Assessment and Accreditation of the institution. He was a speaker on 'PPAR Agonists in NASH' at the "Non-Alcoholic Fatty Liver Disease: National Conclave on Emerging

Therapies", organised by Fortis Medical Centre Institute, in Delhi on June 25, 2017. He gave three talks at the 25th Annual Scientific Meeting of the Indian National Association for Study of the Liver (INASL), organised from August 3-6, 2017 at New Delhi. He was a speaker on 'Simple steatosis – Natural history and Management' at the 'Advances in Hepatobiliary Diseases – Clinician's Perspective' organised by Institute of Liver Gastroenterology & Pancreaticobiliary Sciences (ILGPS), Sir Ganga Ram Hospital, New Delhi on September 2-3, 2017. He was a guest speaker at the third module of 'Hepatology Training Program for Young Gastroenterologists (HTYG) on ACLF' organised by Spare Liver Trust at Fortis Escorts Hospital, New Delhi on September 9, 2017. He was speaker on 'Liver Assist Devices for ACLF' at the 'Current Perspectives in Liver Diseases – CPLD 2017' organised by All India Institute of Medical Sciences (AIIMS), New Delhi on October 7-8, 2017. He was an invited expert for the 'Meeting of the National Action Plan for Viral hepatitis and Formulation of Strategic Plan Draft' organised by National Centre for Disease Control (NCDC), Ministry of Health and Family Welfare on October 12-13, 2017 at New Delhi. He was a speaker on 'Diabetes and Fatty Liver' at the 'HP Chapter of Research Society for Study of Diabetes in India' conference organised at Manali on October 28-29, 2017. He was a speaker on 'Treatment approach in HCC' at the 'INASL LI-RADS HCC Consensus Meet' organised at Gurugram on November 25-26, 2017 and on 'Newer modalities for the assessment of Hepatic Fibrosis' and 'Emerging pharmacological treatment of NASH' at the annual conference of Indian Society of Gastroenterology, held at Bhubaneswar in December 14-17, 2017. He was a guest speaker on 'Newer drugs for the treatment of NAFLD' at the 'North East Gastro Meet' organised by the Department of Gastroenterology, Guwahati (Assam) on February 3-4, 2018. He was the invited faculty at the 'Gastroenterology Young Masters (GYM)' organised by the Indian Society of Gastroenterology at AIIMS, New Delhi on February 9-11, 2018. He was a speaker on 'Approach to elevated ALT – A panel discussion' at the 'Gastrocon-2018' CME organised by Midas Medical Foundation and Research Institute, Nagpur on February 17-18, 2018. He was the invited faculty and gave three talks and chaired a session at the 'APASL -2018' Annual conference of the Asian Pacific Association for the Study of the Liver organised by ILBS at New Delhi on March 14-18, 2018.

Dr. Sunil Taneja participated and presented a paper in the 'Liver Meeting – The annual conference of European Association for the Study of Liver' held at Amsterdam

(Netherlands) from April 19-23, 2017. He spoke on Treatment of Acute Hepatic Encephalopathy in SIG on HE at the annual conference of the Indian National Association for Study of the Liver (INASL), organised at New Delhi from August 3-6, 2017. He spoke on 'The sick recipient - Pre operative issues' in the 3rd CLBS Liver Symposium on 'Early Graft Loss after Liver Transplantation' and Operative Workshop on Live Laparoscopic Living Donor Hepatectomy on September 15th, 2017 at New Delhi. He was a part of panel discussion on Gut microbiome and its therapeutic role in liver disease are we there yet (Myth or Science) in CPLD 2017 on October 7, 2017. He spoke on Severe Hepatic Encephalopathy: Beyond rifaximin and lactulose in "LIVERCON 2017" and EUSCON 2017- CME and Workshop on November 4, 2017 at Delhi. He was a panellist on "Management of Critically Ill Liver patient symposium in Frontiers in Liver Diseases 2017, INASL single theme meeting on November 11, 2017 in Kochi, Kerala. He spoke on the Diagnostic imaging pathway incorporating LIRADS in LIRADS HCC consensus meet held on November 25-26, 2017 at New Delhi. He spoke on HCV infection special situations- Renal dysfunction, post-transplant, co infections at the 58th Annual Conference of the Indian Society of Gastroenterology held at Bhubaneswar from December 14-17, 2017. He spoke on Hepatic Encephalopathy Recent Advances at the Gastro Intensive Care CME & Workshop on January 21, 2018 in Kolkata. He spoke on 'Challenges in the Management of Hepatitis B in Pregnancy' at the NE Gastro meet on February 3, 2018 at Guwahati. He chaired a session on Challenges in Hepatology in the Postgraduate Course of the 27th Conference of the Asian Pacific Association for the Study of the Liver (APASL2018) on March 15, 2018 at New Delhi, India.

Dr. Madhumita Premkumar presented a paper at the ISGCON conference 2017 from December 14-17, 2017 on Cirrhotic Cardiomyopathy. She presented a paper on the 'Role of Endogenous heparinoids in Alcoholic Hepatitis' at the Annual Meeting of the Asia Pacific Association for Study of the Liver (APASL) in March 14-18, 2018 and Chaired two sessions on 'Direct acting Antiviral Agents in the treatment of Pediatric Chronic Hepatitis C' and on 'Coagulation failure in severe Alcoholic Hepatitis'. She has co-authored two chapters in 2017-2018, one on "Treatment of Chronic Hepatitis C", and the second on 'Portal Hypertension' which are under editorial production.

SERVICE

An outpatient liver clinic is conducted every Monday and Friday. A total No. of [390058841](#)old and [390058841](#)new patients were seen in liver clinic during 2017-2018. During the year, the investigations performed included:-

Name of Test/Procedure	2017-18	2016-17	2015-16
Upper GI Endoscopies	4432	3127	3117
Lower GI Endoscopies	182	83	101
ERCs	377	381	430
Ultrasound	539	963	1424
Endoscopic Ultrasound (EUS)	66	59	171
Fibroscan	10702	7650	5810
Anti HCV	4678	4858	5035
HBsAg	4752	4637	5342
HBeAg/Anti HBe	3752	2050	3895
Anti HEV (IgM)	921	908	1096
Anti HBc (IgM)	240	442	465
Anti HBc (total)	3218	2810	2720
Anti HBs	506	355	520
Anti HAV (IgM)	899	946	1127
Amonia	306	433	385

These services were rendered to outpatients, patients attending special clinics, emergency and indoor patients.

TRAINING

Eight residents were pursuing DM (Hepatology) and five students were pursuing PhD training in the department during the year.

MD residents from the department of Internal Medicine rotated through the department for training imparted through regular sessions of clinical case discussions, topic discussions, hepato-radiology rounds, seminars, liver biopsy rounds and journal clubs. They were also trained to perform bedside procedures like liver biopsy, abdominal paracentesis, etc. DM residents from the department of Gastroenterology also rotated through the department for training imparted through regular sessions of bedside clinical case discussions, liver transplant forums, hepato-radiology rounds, seminars, liver biopsy rounds, journal clubs and through specialised procedures like liver

transplantation, Fibroscan, TJLBs, TIPS/DIPS, TACE, and RFA etc. done for the patients of the department.

RESEARCH COMPLETED

PUNJAB GOVERNMENT

1. Decentralized Care is Effective in the Management of Patients with Hepatitis C in a Public Health Care Setting: The Punjab Model

The prevalence of hepatitis C virus infection (HCV) infection in Punjab, India is 3.29%, with an estimated burden of around 650,000 viremic chronic HCV (CHC) patients. The MukhMantri Punjab Hepatitis C Relief Fund (MMPHCRF) was launched in June 2016 to provide free treatment to all CHC aiming to eliminate HCV from Punjab. We assessed the feasibility of decentralized care and efficacy and safety of 12 or 24 weeks of sofosbuvir (SOF) + ledipasvir (LDV) or SOF + daclatasvir (DCV) ± ribavirin (RBV) in the treatment of CHC patients in a public health care setting. All patients were evaluated and treated at 3 Government Medical Colleges and 22 District Hospitals; they were followed up to 12 weeks post-treatment to look for sustained viral response (SVR-12). We enrolled 29,371 patients (61.7% male; mean age 42 years) in 1 year; of which 19,646 have completed treatment, with SVR-12 of 92.5%. Cure rate in cirrhotics (93.1%) and non-cirrhotics (92.4%), and G3 (92.6%) vs non-G3 (93.1 %) were comparable. We have validated the efficacy and safety of generic all oral DAA regimens in a decentralized algorithm based public health model in Punjab, India with high cure rates regardless of genotype/presence of cirrhosis. ClinicalTrials.gov number: NCT01110447.

2. Direct-acting antiviral (DAA) Therapy Is Safe and Efficacious in Pediatric Patients with Chronic Hepatitis C: Real World Data from the Public Health Perspective

We assessed the efficacy of decentralised public health services and safety of direct-acting antiviral agents (DAAs) in the treatment of pediatric CHC in the Mukh-Mantri Punjab Hepatitis C Relief Fund, a public-health initiative for prevention and control of chronic hepatitis C(CHC) in Punjab, India. In the first

16-months (18thJune 2016 to 31stOctober 2017), 88 children (mean age 15.8 years; 74.3% male, 72.3% rural) were enrolled. Of 57 with completed treatment, SVR12 was achieved in 56(98.2%). Unsafe medical practices (55.5%), IV drug abuse (11.1%) and prior surgery (2.7%) were risk-factors for transmission (n=36). Comparable results were noted in cirrhotic patients (SVR12, 100%) versus non-cirrhotic (SVR12, 97%; P=0.672), and G3 (SVR12, 94.3%) versus non-G3 (SVR-12, 100%; P=0.073). No serious adverse effects like anemia and decompensation, were reported. **Conclusion:** The study demonstrates that the decentralized algorithm-based public-health programme can ensure high efficacy and low-cost DAA based treatment of pediatric patients with CHC.

DEPARTMENTAL

1. Prevalence and risk factors of nonalcoholic fatty liver disease (NAFLD) in patients mono-infected with human immunodeficiency virus (HIV)

Of 100 patients with HIV (stage I-III as per WHO classification) evaluated; prevalence of NAFLD on USG and CAP was 63% and 60% respectively. Fourteen (23.3%) patients had abnormal ALT (>40IU/L) and significant hepatic fibrosis (LSM>7 kPa) was observed in 7(11.6%) of 60 patients with hepatic steatosis. Patients with hepatic steatosis had significantly higher prevalence of overweight, obesity, central obesity, and metabolic syndrome in comparison to patients without hepatic steatosis. There was no significant difference between patients with or without hepatic steatosis in respect to serum triglycerides, serum HDL, type 2 diabetes mellitus, hypertension, duration of HIV infection, duration and type of ART, CD4 count and stage of HIV-AIDS.

2. Comparison of patients with infection related ACLF (i-ACLF) with hepatic insult related ACLF (h-ACLF) amongst patients of alcoholic cirrhosis

In 127 patients with alcohol related ACLF, it was found that with patients with infection related ACLF (i-ACLF) had significantly higher past history of decompensation, and prolonged hospital stay in comparison to patients with hepatic insults related ACLF (h-ACLF). Liver failure was more common in h-ACLF patients, whereas i-ACLF patients had higher frequency of extra-hepatic organ failures.

3. Episodic trend of bacterial infections in patients with acute-on-chronic liver failure (ACLF)

In 113 patients with alcohol related cirrhosis presenting as ACLF, it was found that these patients have multiple episodes of bacterial infections. SBP is the most common first infection and pneumonia is the most common second infection. Patients with infection have higher mortality and occurrence of second infection is an independent predictor of in-hospital mortality in patients with ACLF.

4. Low dose sofosbuvir and full dose daclatasvir are safe and effective in treating patients with CHC and CKD with severe renal impairment.

Sixty-five CHC patients with CKD with eGFR less than 30 mL/min/1.73 m² irrespective of genotype were treated with half-dose Sofosbuvir [200 mg (half tablet of 400 mg)] plus full-dose Daclatasvir (60 mg) given daily for either 12 or 24 weeks. Sixty-four (98.5%) patients achieved ETR, and 65 (100%) patients attained SVR12. All patients tolerated the DAAs well with none of the patients reporting any serious adverse events.

5. Treatment of chronic hepatitis C infection with directly acting antivirals in renal transplant recipients.

A total of 47 CHC infected renal transplant recipients were enrolled in this real life observational cohort analysis. Patients were treated with either Sofosbuvir and Ribavirin or Sofosbuvir and Ledipasvir or Sofosbuvir and Daclatasvir with or without Ribavirin for 12 or 24 weeks. Sustained virological response at 12 weeks was 100% in all groups except in the Sofosbuvir and Ribavirin group (86%). Only serious adverse effect was anemia observed in 8 (57%) patients in the Sofosbuvir and Ribavirin group.

RESEARCH IN PROGRESS

ICMR

1. ApolipoproteinC3 (APO C3) and Patatin like Phospholipase Domain Containing Protein 3 (PNPLA3) Gene polymorphism and expression in patients with Nonalcoholic fatty liver disease (NAFLD).

Other Extramural projects in progress

Gilead/Klinera

1. GS-US-384-1944- A phase 3 , Randomised, double blind, placebo controlled study evaluating the safety and efficacy of selonsertib in subjects with compensated cirrhosis due to non alcoholic steatohepatitis (NASH).
2. GS-US-334-1775: "GS-US-334-1775, "A multicentre, prospective observational, post marketing surveillance study to evaluate the safety and efficacy of sofosbuvir- based regimens in clinical practice for the treatment of patients with chronic hepatitis C virus infection in India".
3. GS-US-334-0110: "A Phase 3, Randomized, Double-Blind Study to Evaluate the Safety and Efficacy of Tenofovir Alafenamide (TAF) 25 mg QD versus Tenofovir Disoproxil Fumarate (TDF) 300 mg QD for the Treatment of HBeAg Positive, Chronic Hepatitis B."

4. Cadila Healthcare Limited, Zydus Cadila

A Prospective, multi-centre, double – blind, randomized trial of Saroglitazar 4mg vs Placebo in patients with Nonalcoholic steatohepatitis -

5. International Multicenter Study

Role of diet on gut microbiota alterations in liver disease: An international multi centric multiethnic study – Funding Agency

PGIMER Departmental

6. Role of neuroinflammation (by microglial activation) in patients with acute liver failure and in patients with cirrhosis of liver and hepatic encephalopathy: An autopsy-based study.
7. Role of microRNA as autophagy inhibitor in sorafenib resistant hepatocellular carcinoma.
8. Faecal microbiota transplantation in severe alcoholic hepatitis - Assessment of impact on prognosis and short-term outcomes
9. Role of faecal microbiota transplantation in the treatment of decompensated cirrhosis of liver.

10. Multidrug resistant infections in acute decompensation of cirrhosis
11. Treatment of hepatitis C patients in a public health care setting under MukhMantri Punjab Hepatitis C Relief Fund (MMPHCRF)
12. Resistant associated variants in hepatitis C patients who have failed to sofosbuvir-based treatment
13. G-CSF in alcoholic hepatitis.
14. G-CSF in cirrhosis.
15. G-CSF and NAC in alcoholic hepatitis.
16. Growth hormone therapy in decompensated cirrhosis.
17. A Registry Study to Assess Patient Reported Outcomes in Patients with Liver Diseases (CLD-PRO Global Registry Study).
18. Validation of AARC score in patients with decompensated cirrhosis
19. Surveillance for the fraction of cirrhosis and hepatocellular carcinoma attributable to chronic hepatitis B and C in clinical centers of excellence: A multicentre approach.
20. Dynamic assessment of patient with acute on chronic liver failure as per Asia pacific and European definitions
21. Investigating the role of Phyllanthin in elucidating the fatty liver disease pathway by different gene expression and protein level in mice model fed on MCDD diet.

INDEXED PUBLICATIONS

1. Agrawal S, Rana BS, Mitra S, Duseja A, Das A, Dhiman RK, Chawla Y. A Case of Acute-on-Chronic Liver Failure (ACLF) due to an uncommon acute and chronic event. *J ClinExpHepatol* 2018;8:95-97.
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- al. The Asia-Pacific Working Party on Non-alcoholic Fatty Liver Disease guidelines 2017-Part 2: Management and special groups. *J GastroenterolHepatol* 2018; 33:86-98.
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 8. Gupta T, Dhiman RK, Ahuja CK, Agrawal S, Chopra M, Kalra N, Duseja A, Taneja S, Khandelwal N, Chawla Y. Characterization of cerebral edema in acute-on-chronic liver failure. *J ClinExpHepatol* 2017;7:190-97.
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Part I

Awards and Honours

Dr. Dhiman is Secretary-General of INASL for a term 2015-2018. He is Editor-in-Chief of *Journal of Clinical and Experimental Hepatology (JCEH)*, which is an international peer reviewed official Journal of Indian National Association for the Study of Liver (INASL). He is the Chairman of Technical Expert Group (TEG) of the National Action Plan (NAP) for care, support and treatment on integrated initiative on prevention and control of viral hepatitis. He is also Consultant to Punjab Govt. for MukhMantri Punjab Hepatitis C Relief Fund (MMFHCRF), which has been created to treat hepatitis C patients free of cost in Punjab. He is also the Chairman of Punjab State Technical Expert Group (TEG) on injection safety.

Part II- Departmental Highlights

In order to encourage the Liver Transplantation at the PGIMER, Chandigarh and also to take care of Liver Transplant patients on a priority basis, the Department has started the Liver Transplantation Clinic on November 21st, 2017. The Department organised the 25th Silver Jubilee Annual conference of 'The Indian National Association of Study of the Liver' at New Delhi on August 3-6, 2017. The department in association with Department of Gastroenterology, AIIMS, New Delhi organised 16th Current Perspectives in Liver Diseases (CPLD) with single theme meeting on 'Interventions in Hepatology' at AIIMS, New Delhi on October 7-8, 2017. All lab reports of Liver Lab has been made online and is available on daily basis. Department in association with surgical Liver

Transplantation team has performed the first Combined Liver Kidney Transplantation (CKLD).