

ABHIJIT CHOWDHURY, MBBS MD DM

Indian Institute of Liver and Digestive Sciences, Sonarpur, Kolkata, India 700150

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EMPLOYMENT / APPOINTMENT

Indian Institute of Liver and Digestive Sciences (IILDS) <i>Professor and Clinical Director - Hepatology</i>	West Bengal, India 2016 – till date
John C Martin Centre for Liver Research and Innovations Department of Disease Biology and Research Integration, IILDS <i>Associate Director and Lead</i>	West Bengal, India 2021 – till date
Society for Health and Demographic Surveillance <i>Project Director</i>	West Bengal, India 2008 – till date
Institute of Post Graduate Medical Education and Research West Bengal Medical Education Service <i>Assistant Professor/ Associate Professor / Professor</i>	West Bengal, India 1998 - till date
<i>Chief</i> , COVID-19 Task Force Government of West Bengal	West Bengal, India 2020
<i>Convenor</i> , Global Advisory Board COVID-19 Containment in West Bengal Government of West Bengal	West Bengal, India 2020

EDUCATION

Postgraduate Institute of Medical Education and Research DM (Gastroenterology) MD	Chandigarh, India 1993 1987
North Bengal University MBBS	West Bengal, India 1983

AREAS OF RESEARCH INTEREST

Non-Alcoholic Fatty Liver Disease (NAFLD)
Epidemiology and Burden of Liver Diseases
Non-Communicable Diseases (NCDs)
Population Impact of Rural Healthcare Delivery Models

FELLOWSHIP/ AWARD

<i>Distinguished Visiting Fellow</i> , Harvard T H Chan School of Public Health, USA	2015
<i>Fellow</i> , Indian National Science Academy (FNA)	2012
<i>Fellow</i> , National Academy of Sciences (FNASc)	2009



RESEARCH PROJECT AND FUNDING

International

Project: Development of research infrastructure
Funding Agency: John C Martin Foundation, USA
Duration: 2022-2027
Role: Principal Investigator
Cost: USD (\$) 7.8 million

Project: Development of Care facility for IILDS, Sonarpur, Kolkata
Funding Agency: John C Martin Foundation, USA
Duration: 2018-2019
Role: Principal Investigator
Cost: USD (\$) 2 million

Project: Infrastructural grant, IILDS, Sonarpur, Kolkata
Funding Agency: Gilead Foundation, USA
Duration: 2016
Role: Principal Investigator
Cost: USD (\$) 2 million

Project: Development of a Care model for HBV IN Arunachal Pradesh
Funding Agency: John C Martin Foundation, USA
Duration: 2012-2016
Role: Principal Investigator
Cost: USD (\$) 1.2 million

Project: Centre for Excellence in rural health care
Funding Agency: Bristol Myers' Squibb Foundation, USA
Duration: 2011-2015
Role: Principal Investigator
Cost: USD (\$) 760, 000

Project: HCV – the Indian Face and Action
Funding Agency: Bristol Myers' Squibb Foundation, USA
Duration: 2009-2012
Role: Principal Investigator
Cost: USD (\$) 222, 000

Project: Science to Society
Funding Agency: Bristol Myers' Squibb Foundation, USA
Duration: 2007-2010
Role: Principal Investigator
Cost: USD (\$) 170, 000

National

Project Title: To identify and validate functionally, variants in immune genes as predictor and microRNA restricting those genes as therapeutic for alcohol induced liver diseases: an in vitro and in vivo study.
Funding Agency: Department of Biotechnology, Government of India
Duration: 2018-2021
Role: Principal Investigator
Cost: INR ₹ 50 Lakhs

Project Title: Assessment of the burden of Metabolic Syndrome linked Diseases in the General population: Organization of a cohort for future studies.
Funding Agency: Department of Science & Technology, Government of West Bengal

Abhijit Chowdhury
28/8/23

Duration: 2015-2018
Role: Principal Investigator
Cost: INR ₹ 30 Lakhs

Project Title: Biology of Hepatitis B virus of genotype D in an integrated clinic-virological Perspective
Funding Agency: Department of Biotechnology, Government of India.
Duration: 2013-2016
Role: Principal Investigator
Cost: INR ₹ 35 Lakhs

Project Title: Genomic and Epigenomic analyses of non-alcoholic fatty liver disease (NAFLD) in the Indian population.
Funding Agency: Department of Biotechnology, Government of India
Duration: 2013-2016
Role: Principal Investigator
Cost: INR ₹ 219 Lakhs

Project Title: Differential expression of NADPH oxidase in activation, senescence and apoptosis of hepatic stellate cells during hepatic fibrosis in mice.
Funding Agency: Indian Council of Medical Research
Duration: 2012-2015
Role: Principal Investigator
Cost: INR ₹ 42 Lakhs

Project Title: Hepatic Stellate Cells (HSCs) activation during Isoniazid induced hepatocytes injury: An in-vitro study.
Funding Agency: Indian Council of Medical Research
Duration: 2011-2014
Role: Principal Investigator
Cost: INR ₹ 92 Lakhs

Project Title: Study of Hepatitis B virus (HBV) resistance patterns in patients with chronic infection during therapy with nucleoside and nucleotide analogues.
Funding Agency: Indian Council of Medical Research
Duration: 2009-2011
Role: Principal Investigator
Cost: INR ₹ 32 Lakhs

Project Title: Multicentric study of Interferon – Glycyrrhizin combination therapy and Interferon - Ribavirin combination therapy in the management of Chronic Hepatitis – C.
Funding Agency: Indian Council of Medical Research
Duration: 2008-2012
Role: Principal Investigator
Cost: INR ₹ 25 Lakhs

Project Title: Insight into pathogenetic mechanisms in Anti-Tuberculosis Drugs (ATD) induced Hepatotoxicity.
Funding Agency: Indian Council of Medical Research
Duration: 2007-2010
Role: Principal Investigator
Cost: INR ₹ 26 Lakhs

Project Title: Epidemiology of Viral Hepatitis in Tribal population.
Funding Agency: Indian Council of Medical Research
Duration: 2006-2009
Role: Principal Investigator
Cost: INR ₹ 10 Lakhs



Project Title: Studies on the Spectrum and Mechanism of Liver Disease in Chronic Arsenic Toxicity.
Funding Agency: Indian Council of Medical Research
Duration: 2006-2008
Role: Principal Investigator
Cost: INR ₹ 42 Lakhs

SELECT PUBLICATION

Total number of Publication: 133
h index: 42

A multi-society Delphi consensus statement on new fatty liver disease nomenclature. *Hepatology*. 2023 Jun 24. doi: 10.1097/HEP.0000000000000520.

Stepwise evaluation for the risk of metabolic unhealthiness and significant non-alcoholic fatty liver disease in India. *Lancet Reg Health Southeast Asia*. 2023; 12:100142.

Diverse facets of MDSC in different phases of chronic HBV infection: Impact on HBV-specific T-cell response and homing. *Hepatology*. 2022; 76(3): 759-774.

Variability in the Responses of Hepatitis B Virus D-Subgenotypes to Antiviral Therapy: Designing Pan-D-Subgenotypic Reverse Transcriptase Inhibitors. *J Virol*. 2022; 96(2): e0180021.

Clinical Profile of Hepatoblastoma: Experience From a Tertiary Care Centre in a Resource-Limited Setting. *Cureus*. 2022; 14(7): e26494.

Epidemiology of Liver Diseases in India. *Clin Liver Dis* (Hoboken). 2022; 19(3): 114-117.

Prevalence and health status of COPD in rural West Bengal. *Lung India*. 2022; 39(3): 242-246.

A Model of Care Optimized for Marginalized Remote Population Unravels Migration Pattern in India. *Hepatology*. 2021; 73(4): 1261-1274.

rs641738C>T near MBOAT7 is associated with liver fat, ALT and fibrosis in NAFLD: A meta-analysis. *J Hepatol*. 2021; 74(1): 20-30.

Exome-wide scan identifies significant association of rs4788084 in IL27 promoter with increase in hepatic fat content among Indians. *Gene*. 2021; 775: 145431.

Reciprocal interplay between asporin and decorin: Implications in gastric cancer prognosis. *PLoS One*. 2021; 16(8): e0255915.

Messages on COVID-19 Prevention in India Increased Symptoms Reporting and Adherence to Preventive Behaviors Among 25 Million Recipients with Similar Effects on Non-recipient Members of Their Communities. *NBER Working Paper*, w27496. July 2020.

Non-communicable diseases are the leading cause of mortality in rural Birbhum, West Bengal, India: a sex-stratified analysis of verbal autopsies from a prospective cohort, 2012-2017. *BMJ Open*. 2020; 10(10): e036578.

A novel microRNA boosts hyper- β -oxidation of fatty acids in liver by impeding CEP350-mediated sequestration of PPAR α and thus restricts chronic hepatitis C. *RNA Biol*. 2020: 1-12.

The exosome encapsulated microRNAs as circulating diagnostic marker for hepatocellular carcinoma with low alpha-fetoprotein. *Int J Cancer*. 2020; 147(10): 2934-2947.



Incidence of Prehypertension and Hypertension in Rural India, 2012-2018: A Sex-Stratified Population-Based Prospective Cohort Study. *Am J Hypertens*. 2020; 33(6): 552-562.

The transcontinental variability of nonalcoholic fatty liver disease. *Hepatology Res* 2020;6:72.

Singal Prevalence and Profile of Nonalcoholic Fatty Liver Disease in Lean Adults: Systematic Review and Meta-Analysis. *Hepatology Communications* 2020; 4 ; 953-972.

Indian National Association for the Study of the Liver Consensus Statement on Acute Liver Failure (Part 1): Epidemiology, Pathogenesis, Presentation and Prognosis. *J Clin Exp Hepatol*. 2020; 10(4): 339-376.

Isoniazid and Rifampicin Produce Hepatic Fibrosis through an Oxidative Stress-Dependent Mechanism. *Int J Hepatol*. 2020; 2020: 6987295.

Epidemiology of non-alcoholic and alcoholic fatty liver diseases. *Transl Gastroenterol Hepatol*. 2020; 5: 16.

Double burden of malnutrition among adolescents in rural West Bengal, India. *Nutrition*. 2020; 79-80: 110809.

Sociodemographic Determinants of Preterm Birth and Small for Gestational Age in Rural West Bengal, India. *J Trop Pediatr*. 2019; 65(6): 537-546.

Non-alcoholic fatty liver disease in lean individuals. *JHEP Rep*. 2019; 1(4): 329-341.

CD8⁺CD28⁻ T cells: key cytotoxic players impacting disease pathogenesis in chronic HBV infection. *Clin Sci (Lond)*. 2019; 133(17): 1917-1934.

Acute-on-chronic liver failure: consensus recommendations of the Asian Pacific association for the study of the liver (APASL): an update. Version 2. *Hepatol Int*. 2019; 13(4): 353-390.

Myeloid-derived suppressor cells induce regulatory T cells in chronically HBV infected patients with high levels of hepatitis B surface antigen and persist after antiviral therapy. *Aliment Pharmacol Ther*. 2019; 49(10): 1346-1359.

Sofosbuvir-velpatasvir single-tablet regimen administered for 12 weeks in a phase 3 study with minimal monitoring in India. *Hepatol Int*. 2019; 13(2): 173-179.

Sociodemographic Determinants of Preterm Birth and Small for Gestational Age in Rural West Bengal, India. *J Trop Pediatr*. 2019; 65(6): 537-546.

Range of Normal Liver Stiffness and Factors Associated With Increased Stiffness Measurements in Apparently Healthy Individuals. *Clin Gastroenterol Hepatol*. 2019; 17(1): 54-64.e1.

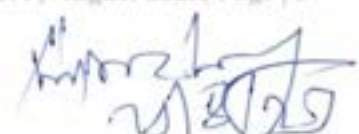
Prospective cohort study of overweight and obesity among rural Indian adults: sociodemographic predictors of prevalence, incidence and remission. *BMJ Open*. 2018; 8(8): e021363.

Distinctiveness in virological features and pathogenic potentials of subgenotypes D1, D2, D3 and D5 of Hepatitis B virus. *Sci Rep*. 2018; 8(1): 8055.

The burden of iron-deficiency anaemia among women in India: how have iron and folic acid interventions fared? *WHO South East Asia J Public Health*. 2018; 7(1): 18-23.

Antimicrobial activity of ellagic acid against *Helicobacter pylori* isolates from India and during infections in mice. *J Antimicrob Chemother*. 2018; 73(6): 1595-1603.

Metabolic syndrome among rural Indian adults. *Clin Nutr ESPEN*. 2018; 23: 129-135.



Oncogenic potential of hepatitis B virus subgenotype D1 surpasses D3: significance in the development of hepatocellular carcinoma. *Carcinogenesis*. 2018; 39(2): 283-292.

Underweight among rural Indian adults: burden, and predictors of incidence and recovery. *Public Health Nutr*. 2018; 21(4): 669-678.

Effects of atorvastatin on portal hemodynamics and clinical outcomes in patients with cirrhosis with portal hypertension: a proof-of-concept study. *Eur J Gastroenterol Hepatol*. 2018; 30(1): 54-59.

Preference in place of delivery among rural Indian women. *PLoS One*. 2017; 12(12): e0190117.

Etiology and mode of presentation of chronic liver diseases in India: A multi centric study. *PLoS One*. 2017; 12(10): e0187033.

Probable psychiatric disorder in a rural community of West Bengal, India. *Soc Psychiatry Psychiatr Epidemiol*. 2017; 52(12): 1495-1500.

Synergistic impact of mutations in Hepatitis B Virus genome contribute to its occult phenotype in chronic Hepatitis C Virus carriers. *Sci Rep*. 2017; 7(1): 9653.

MiRNA199a-3p suppresses tumor growth, migration, invasion and angiogenesis in hepatocellular carcinoma by targeting VEGFA, VEGFR1, VEGFR2, HGF and MMP2. *Cell Death Dis*. 2017; 8(3): e2706.

HBV quasispecies composition in Lamivudine-failed chronic hepatitis B patients and its influence on virological response to Tenofovir-based rescue therapy. *Sci Rep*. 2017; 7: 44742.

Helicobacter pylori Adapts to Chronic Infection and Gastric Disease via pH-Responsive BabA-Mediated Adherence. *Cell Host Microbe*. 2017; 21(3): 376-389.

Tenofovir alafenamide versus tenofovir disoproxil fumarate for the treatment of HBeAg-positive chronic hepatitis B virus infection: a randomised, double-blind, phase 3, non-inferiority trial. *Lancet Gastroenterol Hepatol*. 2016; 1(3): 185-195.

Natural killer cells contribute to hepatic injury and help in viral persistence during progression of hepatitis B e-antigen-negative chronic hepatitis B virus infection. *Clin Microbiol Infect*. 2016; 22(8): 733.e9-733.e19.

The impact of training informal health care providers in India: A randomized controlled trial. *Science*. 2016; 354(6308). pii: aaf7384.

Socio-economic disparities in tobacco consumption in rural India: evidence from a health and demographic surveillance system. *Perspect Public Health*. 2016; 136(5): 278-287.

Alcohol Use-Related Problems Among a Rural Indian Population of West Bengal: An Application of the Alcohol Use Disorders Identification Test (AUDIT). *Alcohol Alcohol*. 2016; 51(2): 215-223.

Tobacco use and self-reported morbidity among rural Indian adults. *Prim Health Care Res Dev*. 2016; 17(5): 514-523.

Genetic Association and Gene-Gene Interaction Reveal Genetic Variations in ADH1B, GSTM1 and MnSOD Independently Confer Risk to Alcoholic Liver Diseases in India. *PLoS One*. 2016; 11(3): e0149843.

Hepatic miR-126 is a potential plasma biomarker for detection of hepatitis B virus infected hepatocellular carcinoma. *Int J Cancer*. 2016; 138(11): 2732-2744.



Hepatitis B Virus X Protein Upregulates hELG1/ ATAD5 Expression through E2F1 in Hepatocellular Carcinoma. *Int J Biol Sci.* 2016; 12(1): 30-41.

Correlates of disease-specific knowledge among patients with chronic hepatitis B or hepatitis C infection in India. *Hepatol Int.* 2016; 10(6): 988-995.

Hepatic steatosis is associated with cardiometabolic risk in a rural Indian population: A prospective cohort study. *Int J Cardiol.* 2016; 225: 161-166.

Physiological and behavioral risk factors of type 2 diabetes mellitus in rural India. *BMJ Open Diabetes Res Care.* 2016; 4(1): e000255.

Health & Demographic Surveillance System Profile: The Birbhum population project (Birbhum HDSS). *Int J Epidemiol.* 2015; 44(1): 98-107.

Comparative analyses of genetic risk prediction methods reveal extreme diversity of genetic predisposition to nonalcoholic fatty liver disease (NAFLD) among ethnic populations of India. *J Genet.* 2015; 94(1): 105-13.

Immune-driven adaptation of hepatitis B virus genotype D involves preferential alteration in B-cell epitopes and replicative attenuation—an insight from human immunodeficiency virus/hepatitis B virus coinfection. *Clin Microbiol Infect.* 2015; 21(7): 710.e11-20.

Gut microbiomes of Indian children of varying nutritional status. *PLoS One.* 2014; 9(4): e95547.

Distinct distribution pattern of hepatitis B virus genotype C and D in liver tissue and serum of dual genotype infected liver cirrhosis and hepatocellular carcinoma patients. *PLoS One.* 2014; 9(7): e102573.

Novel point and combo-mutations in the genome of hepatitis B virus-genotype D: characterization and impact on liver disease progression to hepatocellular carcinoma. *PLoS One.* 2014; 9(10): e110012.

New HBV subgenotype D9, a novel D/C recombinant, identified in patients with chronic HBsAg-negative infection in Eastern India. *J Viral Hepat.* 2013; 20(3): 209-218.

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Genetic variants of TNF α , IL10, IL1 β , CTLA4 and TGF β 1 modulate the indices of alcohol-induced liver injury in East Indian population. *Gene.* 2012; 509(1): 178-88.

Tracking the naturally occurring mutations across the full-length genome of hepatitis B virus of genotype D in different phases of chronic e-antigen-negative infection. *Clin Microbiol Infect.* 2012; 18(10): E412-418.

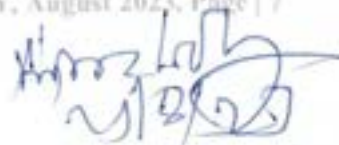
Normal liver stiffness measure (LSM) values are higher in both lean and obese individuals: a population-based study from a developing country. *Hepatology* 2012; 55: 584-593.

A Genome-Wide Search for Non-UGT1A1 Markers Associated with Unconjugated Bilirubin Level Reveals Significant Association with a Polymorphic Marker Near a Gene of the Nucleoporin Family. *Ann Hum Genet.* 2012; 76: 33-41.

Significant association of the dupA gene of *Helicobacter pylori* with duodenal ulcer development in a South-east Indian population. *J Med Microbiol.* 2012; 61(Pt 9): 1295-302.

Distinct repeat motifs at the C-terminal region of CagA of *Helicobacter pylori* strains isolated from diseased patients and asymptomatic individuals in West Bengal, India. *Gut Pathog.* 2012; 4(1): 4.

Multiple infection and microdiversity among *Helicobacter pylori* isolates in a single host in India. *PLoS One.* 2012; 7(8): e43370.



Intact cag pathogenicity island of *Helicobacter pylori* without disease association in Kolkata, India. *Int J Med Microbiol.* 2011; 301(4): 293-302.

IL1B induced Smad 7 negatively regulates gastrin expression. *PLoS One.* 2011; 6(3): e14775.

Obscure GI bleeding in the tropics: impact of introduction of double-balloon and capsule endoscopies on outcome. *Gastrointest Endosc.* 2010; 72: 292-300.

Course of disease and survival after onset of decompensation in Hepatitis B Virus (HBV) related cirrhosis. *Liver Int* 2010; 30: 1033–1042.

Nonobese population in a developing country has a high prevalence of nonalcoholic fatty liver and significant liver disease. *Hepatology.* 2010; 51: 1593 – 1602.

Unique hepatitis B virus subgenotype in a primitive tribal community in eastern India. *J Clin Microbiol.* 2010; 48: 4063-4071.

Oxidative stress and hepatic stellate cell activation are key events in arsenic induced liver fibrosis in mice. *Toxicol Appl Pharmacol.* 2010; 251: 59-69.

Indistinguishable cellular changes in gastric mucosa between *Helicobacter pylori* infected asymptomatic tribal and duodenal ulcer patients. *World J Gastroenterol.* 2009; 15: 1105-1112.

promoter polymorphism regulates the expression of gastric acid stimulating hormone gastrin. *Int J Biochem Cell Biol.* 2009; 41: 1502-1510.

Irritable bowel syndrome: an international study of symptoms in eight countries. *Eur J Gastroenterol Hepatol.* 2008; 20:659-667.

Alterations in natural killer cells and natural killer T cells during acute viral hepatitis E. *J Viral Hepat.* 2008; 15: 910-916.

Arsenic induces apoptosis in mouse liver is mitochondria dependent and is abrogated by N-acetylcysteine. *Toxicol Appl Pharmacol.* 2007; 220: 146 – 155.

Gilbert's syndrome: High frequency of the (TA)_n TAA Allele in India and its interaction with a novel CAT insertion in the promoter of the gene for bilirubin UDP-glucuronosyltransferase 1 (UGT1A1). *World J Gastroenterol.* 2006; 12: 2269– 2275.

Mitochondrial oxidative stress and permeability transition in Isoniazid and Rifampicin induced liver injury in mice *J Hepatol.* 2006; 45: 117–126.

Interaction between IL1B gene promoter polymorphisms in determining susceptibility to *Helicobacter pylori* associated duodenal ulcer. *Hum Mutat.* 2006; 27: 411- 419.

Immune response to an indigenously developed r-Hepatitis B vaccine in mixed population: Study of an accelerated vaccination schedule. *World J Gastroenterol.* 2005; 11:1037-39.

Diagnosis and Genotyping of *Helicobacter pylori* by Polymerase Chain Reaction of Bacterial DNA from Gastric juice. *J Gastroenterol Hepatol.* 2005; 20:1253-1259.

Community based epidemiology of Hepatitis B virus Infection in West Bengal, India: Prevalence of HBsAg negative infection and associated viral variants. *J Gastroenterol Hepatol.* 2005; 20: 1712–1720.



Molecular epidemiology of HCV infection among acute and chronic liver disease patients in Kolkata, India. *J Clin Virol.* 2005; 32:38-46.

Hepatitis B infection in Eastern Indian families: need for screening of adult siblings and mothers of adult index cases. *Public Health.* 2005; 119:647-654.

Most *Helicobacter pylori* strains of Kolkata in India are resistance to metronidazole but susceptible to other drugs commonly used for eradication and ulcer therapy. *Aliment Pharmacol Ther.* 2005; 22: 51-57.

Nucleic acid sequence analysis of basal core promoter/precore/core region of hepatitis B virus isolated from chronic carriers of the virus from Kolkata, eastern India: low frequency of mutation in the precore region. *Intervirology.* 2005; 48: 389 -399.

Multiplex PCR assay for rapid detection and genotyping of *Helicobacter pylori* directly from the biopsy specimens. *J Clin Microbiol.* 2004; 42: 2821-2824.

Ethnic differences in allele distribution for the IL8 and IL1B genes in populations from eastern India. *Hum Biol.* 2004; 76: 153-159.

Anti-*Helicobacter pylori* therapy in India: differences in eradication efficiency associated with particular alleles of vacuolating cytotoxin (*vacA*) gene. *J Gastroenterol Hepatol.* 2003; 18: 190-195.

Hepatitis C virus infection in general population: A rural community based study in West Bengal, India. *Hepatology.* 2003; 37: 802-809.

Virulence genes and natural DNA markers of *Helicobacter pylori* isolated from different ethnic communities of West Bengal, India. *J Clin Microbiol.* 2003; 41: 3737-3743.

EDITORIAL BOARD MEMBER

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