RUSH

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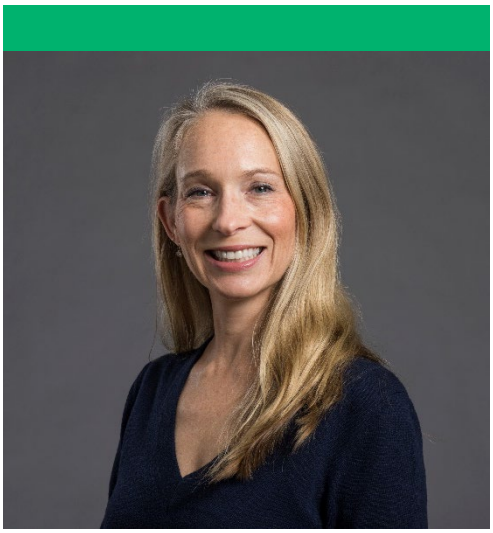
The Richard B. Capps Professor of Hepatology



Advancement of Medicine

In 2023, we continued to improve understanding of and find new treatments for liver disease. Liver disease rates have been steadily increasing over the years and this malady is recognized as the second leading cause of mortality among all digestive diseases in the United States. Highlights of the year included welcoming one additional member to our group, whose role is to support translational investigation of alcoholic liver diseases. In addition, we have refocused part of our efforts on building up a biorepository of biological specimens for patients with chronic liver disease. This Liver Disease Biorepository will be used by our group to translate and validate our basic research observations and will provide a valuable resource for the Rush scientific community.

Research

Funds from the Capps Endowment have been critical in supporting our research projects, which are focused on alcoholic liver diseases and funded by the National Institute on Alcohol Abuse and Alcoholism, or NIAAA, at the National Institutes of Health. Alcohol consumption causes a spectrum of clinical illness and morphological changes that range from fatty liver to hepatic inflammation (alcoholic hepatitis) and progressive fibrosis (alcoholic cirrhosis). Alcoholic liver disease has an incompletely known pathogenesis, and specific treatments are lacking. It is an extremely common disease with significant mortality and morbidity. Decreased resistance to infections and abnormal systemic inflammatory response to infections are common events associated with alcohol consumption. A subset of immune cells called dendritic cells, or DC, are emerging as an important regulator of these effects. Our study investigates phenomena stemming from this finding. The project is due for a competitive renewal process. Your support is critical to provide timely answers to comments in the study section reviews of the renewal request. In addition, support for the biorepository is required to provide translational application of this proposal.

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Clinical Trials

Your generosity supports our vital work establishing Rush University Medical Center's Liver Disease Biorepository. At Rush, a large cohort of patients with liver disease receives care through the Section of Hepatology. Equal to Rush's mission to provide state-of-the-art care for these patients is its research mission. As one of the nation's top leaders in academic medicine, Rush University Medical Center offers many different clinical trials for new therapies for a variety of liver diseases. We aim to expand the research mission to coordinate a wide variety of basic, translational and health services studies.

Crucial to this mission is access to accurate and robust phenotyping of patients through comprehensive patient-level data. With this goal in mind, this protocol has several objectives. The primary objective of this protocol is to create a database for the purpose of supporting researchers' access to patient-level information in a time-efficient and confidential manner to improve quality of care delivered at our institution while also generating new medical knowledge. While the goals of future research utilizing this database are varied, its creation will allow for the collection of necessary patient data that can be used to complete retrospective research studies on all patients who agree to participate in this dataset. The second objective of this protocol is to obtain permission from the database participants to be contacted for participation in future research if they appear eligible for a study based on the medical information available within the database. The third objective of this protocol is to collect biological specimens for use in future basic, translational and clinical investigation. The final objective of this protocol is to collect data on quality of life, functional status, and other relevant data that are not routinely collected during the clinical care of patients with chronic liver disease to include in the database. Your fund supports research protected time for Costica Aloman, MD, and provides the lab personnel with the means to collect and store biological specimens for biorepository.

Finally, your generosity supports research by our residents and fellows, allowing them to design and execute projects that would otherwise not be possible.

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Publications – Abbreviated

- "Evaluation of liver disease in pregnancy," *Clinical Liver Disease* (2023).
- "Clinical advances: pregnancy in gastroenterologic and hepatic conditions," *Gut* (2023).
- "Use of Tecovirimat for Mpox infection followed by JYNNEOS vaccination postinfection in a liver transplant recipient," *Transplant Infectious Diseases* (2023).
- "More questions than answers-response to the POP-NEXT project," *Hepatology* (2023).
- "A real-world effectiveness of 8-week glecaprevir/pibrentasvir in treatment-naïve, compensated cirrhotic HCV patients," *Infectious Disease Therapy* (2023).
- "Improving the management of hepatorenal syndrome–acute kidney injury using an updated guidance and a new treatment paradigm," *Gastro and Hepatology Journal* (2023).
- Delta Cure 2022 Working Group. "Hepatitis D virus infection: Pathophysiology, epidemiology and treatment. Report from the first international delta cure meeting 2022," *Journal of Hepatology* (2023).
- "The spectrum of hepatic critical care during pregnancy: A clinical review," *Clinical Obstetrics and Gynecology*, (2023).

Presentations

In addition to my 15 speaking engagements aimed at sharing our research at congresses and workshops from Chicago to India and Paris to Dubai, our group presented this research at the following conferences:

- Digestive Disease Week (DDW) 2023 in Chicago, IL: Rifaximin plus lactulose is more efficacious than lactulose alone for the prevention of overt hepatic encephalopathy (OHE) in patients with or without ascites; Improvement of hepatitis D screening rates: Who are we screening and is it sufficient?; An expanded cohort of patients with autoimmune hepatitis and non-alcoholic fatty liver disease.
- European Association for the Study of Liver (EASL) In Vienna, Austria: Assessing treatment outcomes in an AIH/NAFLD overlap cohort; Week 48 results of the phase 3 D-LIVR study, a randomized double-blind, placebo-controlled trial evaluating the safety and efficacy of Lonafarnib-boosted with Ritonavir with or without Peginterferon Alfa in patients with chronic hepatitis delta; The impact of hepatitis D virus infection on health-related quality of life and

fatigue in patients untreated for HDV: Descriptive results from a cross-sectional study across Italy, Germany, Spain and the U.S.; Cost-effectiveness analysis of a new paradigm to simplify testing, monitoring and treatment of hepatitis C virus in the United States; Qualitative interviews to assess the impact of chronic hepatitis delta virus infection on health-related quality of life in untreated patients from the U.S., Italy, Spain and Germany.

- American College of Gastroenterology meeting (ACG); Vancouver, Canada: Characterizing outcomes in a large vohort of Latinx patients with autoimmune hepatitis; An unusual presentation of progressive thrombocytopenia and splenomegaly following liver transplantation; The need for caregiver support in patients with hepatitis D virus infection: Descriptive results from a cross-sectional study in Italy, Germany, Spain and the U.S.; and another abstract on the combined health-related quality of life and fatigue severity scale results from the qualitative and quantitative streams: Assessing the use of the hepatitis quality of life questionnaire (HQLQ) and fatigue severity scale (FSS) in hepatitis delta virus patients across Italy, Germany, Spain and the U.S.
- American Association for the Study of Liver Diseases (AASLD); 2023 in Boston, MA: A hepatitis C (HCV) test and treat initiative in resident associated academic primary care clinic: Updates in an era of expanded screening guidelines; Prevalence of hepatitis B and D virus among a nationally representative insured population in the U.S.

The Year Ahead: 2024 and Beyond

Liver morbidity and mortality are driven by three primary etiologies: liver cancer, metabolic dysfunction associated steatotic liver disease, or MASLD, and alcohol use disorder. Over the next year we will continue to build our Weight Intervention in Liver Disease, or WILD, program and work to improve our liver cancer pathway under Sheila Eswaran, MD, MS, and our Alcohol Use Disorder pathway, which is a multidisciplinary endeavor with hepatology, solid organ transplant and addiction. This work includes several resident and fellow projects, which have been designed to facilitate screening for liver disease and alcohol use disorder in primary care and GI clinics.

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With Gratitude

Your altruism truly embodies the spirit of Richard B. Capps. He was both a dedicated scholar as well as a master clinician. He dedicated his life to the advancement of science while also uplifting amazing patient care. The patient was always the center of his mission, and his patients allowed his legacy to continue. As such, our department prioritizes patient-centered research and trainee education in deploying this generous funding in his memory.