In the U.S., alcohol-associated liver disease (ALD) impacts millions and is a major healthcare burden, with nearly $50 billion annually in medical expenses. While the pathology of ALD is unmistakable, the molecular mechanisms underlying alcohol hepatotoxicity are not fully understood. Research in the Fritz lab focuses on how alcohol metabolism alters protein biochemistry in the liver utilizing cutting-edge metabolomics, proteomics, and genomic technologies. Ultimately, our goal is to translate research findings from the bench to the bedside through an integrated translational approach using murine models and patient explant tissues. By discovering novel diagnostic biomarkers, we aim to contribute to the development of innovative therapeutics for ALD.