

## Supplemental Figures

### **Bilirubin nanoparticles reduce hepatic steatosis by fat utilization and production ketone $\beta$ -hydroxybutyrate**

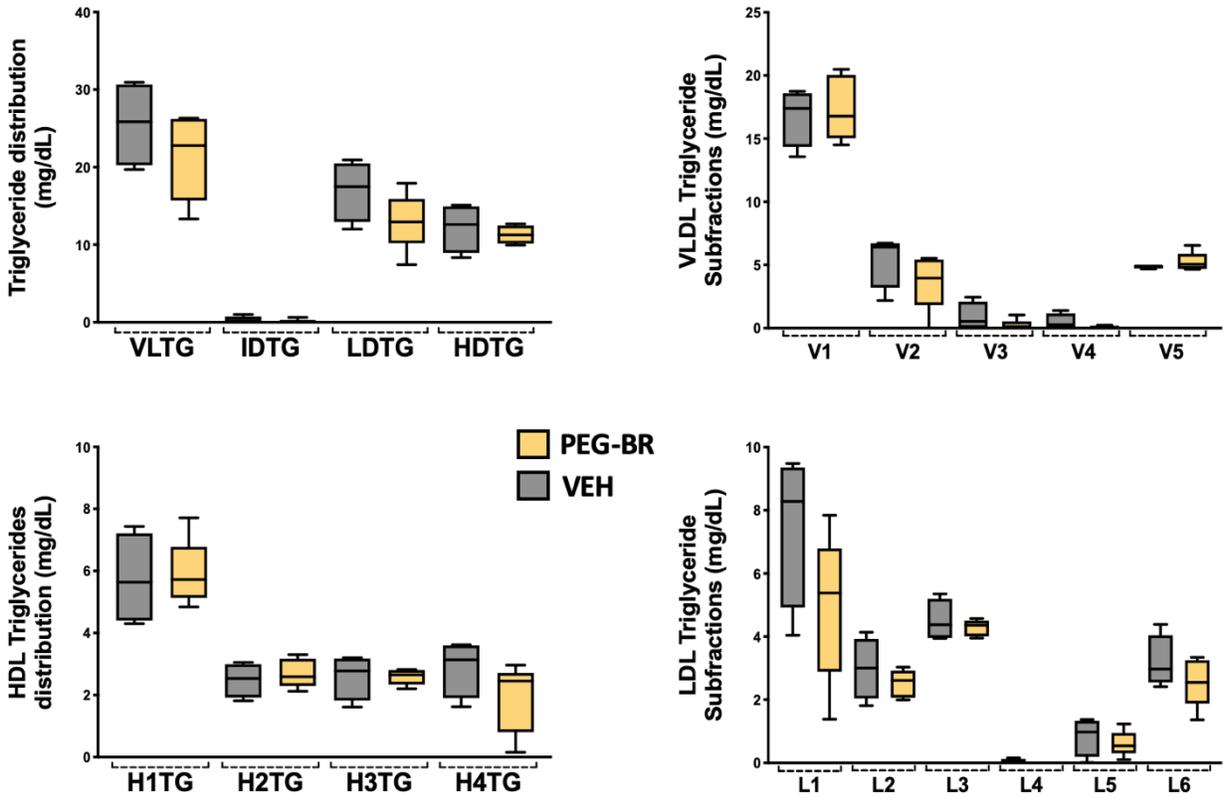
Terry D. Hinds, Jr.<sup>1\*</sup>, Justin Creeden<sup>1</sup>, Darren M. Gordon<sup>1</sup>, Donald F. Stec<sup>2</sup>, Matthew C. Donald<sup>3</sup>, and David E. Stec<sup>3\*</sup>

<sup>1</sup>Department of Pharmacology and Nutritional Sciences, University of Kentucky College of Medicine, Lexington, KY 40508, USA.

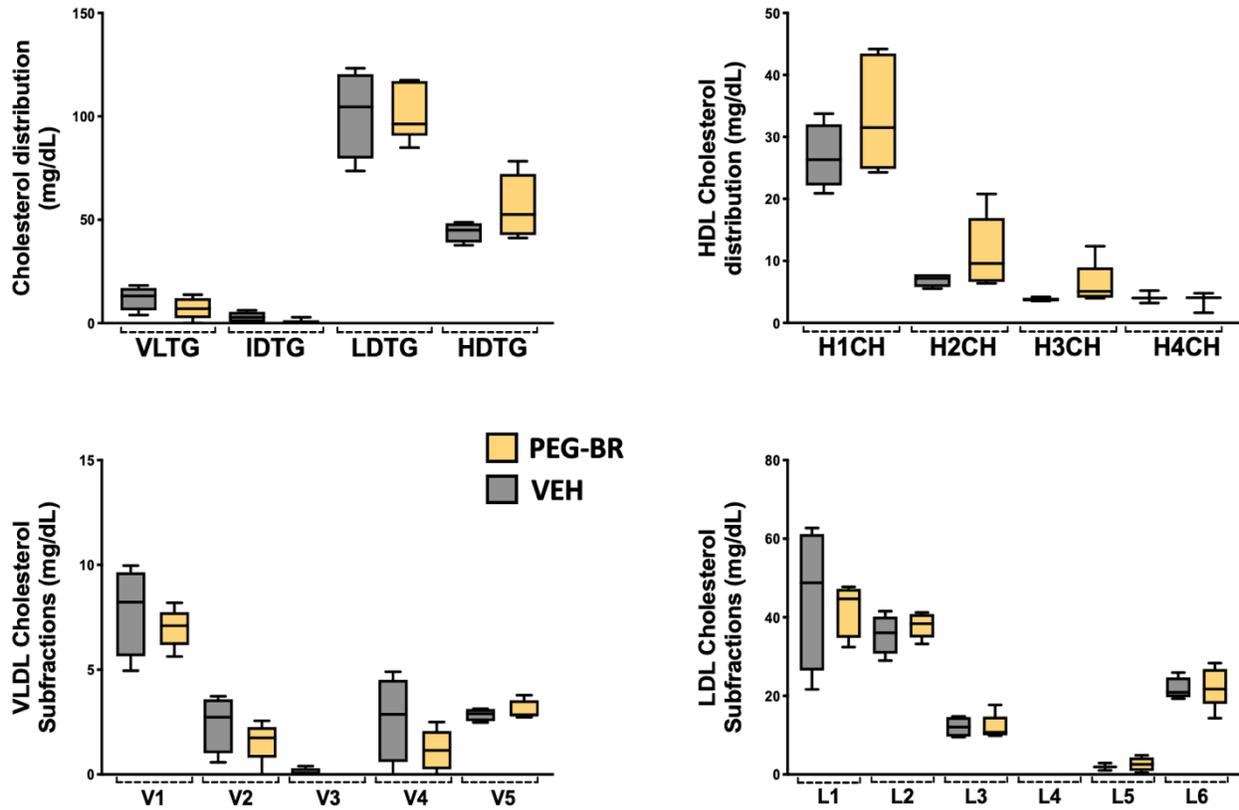
<sup>2</sup>Department of Neurosciences, University of Toledo College of Medicine, Toledo, OH 43614 USA.

<sup>3</sup>Small Molecule NMR Facility Core, Vanderbilt Institute of Chemical Biology, Vanderbilt University, Nashville, TN 37235 USA.

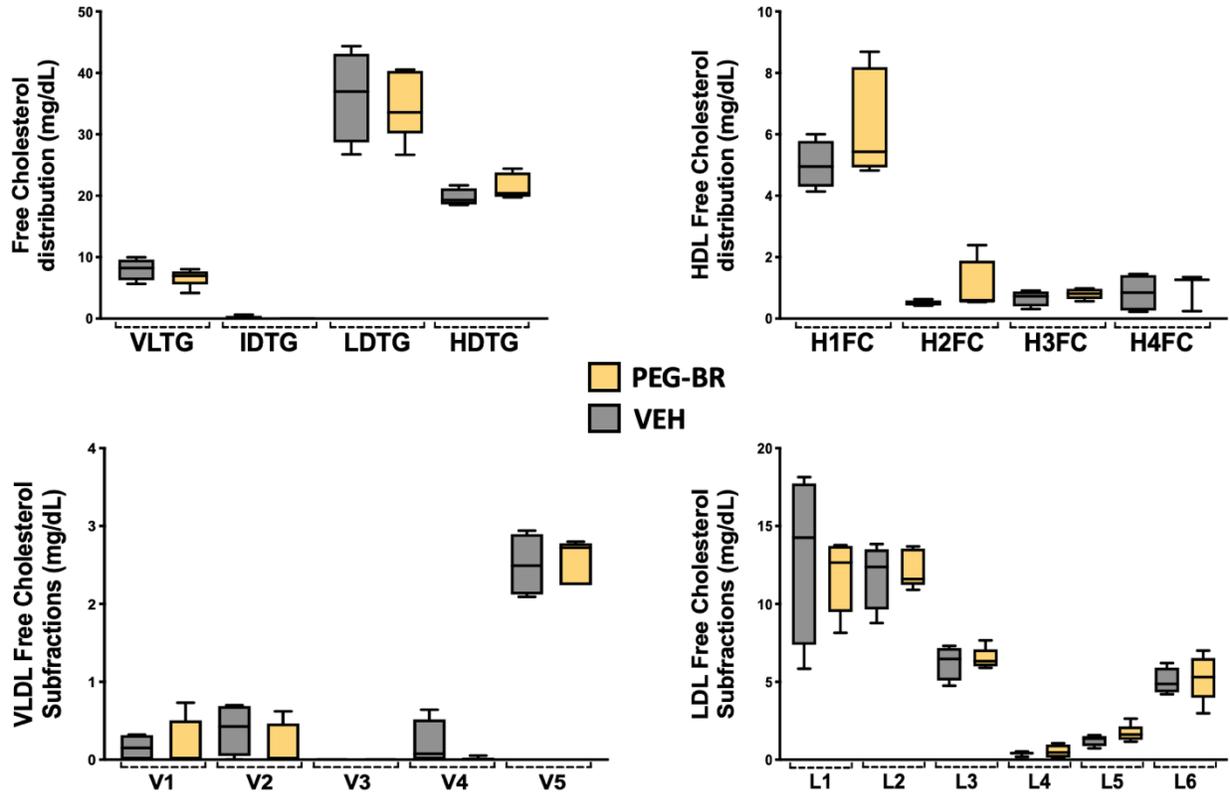
<sup>4</sup>Department of Physiology & Biophysics, Cardiorenal and Metabolic Diseases Research Center, University of Mississippi Medical Center, 2500 North State St, Jackson, MS 39216 USA.



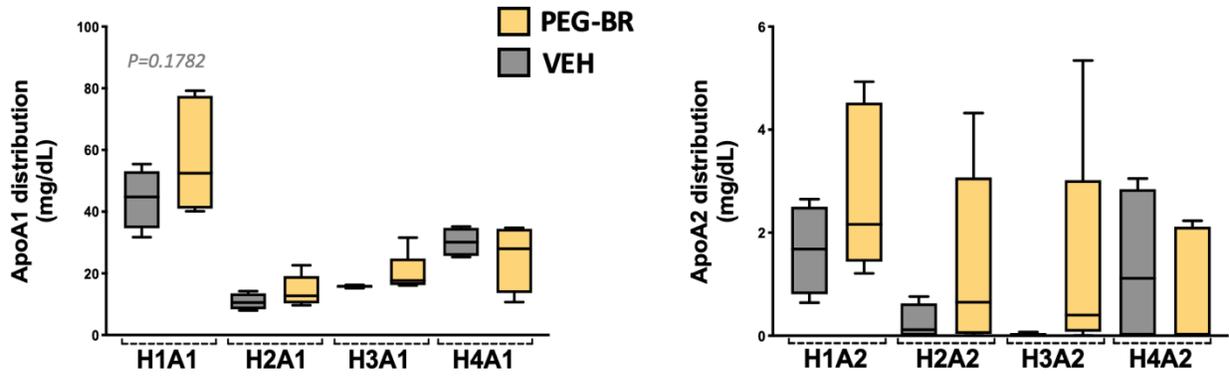
**Supplemental Figure 1. Triglyceride distribution and subfractions in the plasma vehicle (VEH) and pegylated bilirubin (PEG-BR) treated mice.** Triglyceride distribution (A). High-density lipoprotein (HDL) free triglyceride distribution (B). Very-low density lipoprotein (VLDL) triglyceride distribution (C). Low-density lipoprotein (LDL) triglyceride distribution (D). (VEH, n=4 and PEG-BR, n=5).



**Supplemental Figure 2. Cholesterol distribution and subfractions in the plasma vehicle (VEH) and pegylated bilirubin (PEG-BR) treated mice.** Cholesterol distribution (A). High-density lipoprotein (HDL) cholesterol distribution (B). Very-low density lipoprotein (VLDL) cholesterol distribution (C). Low-density lipoprotein (LDL) cholesterol distribution (D). (VEH, n=4 and PEG-BR, n=5).



**Supplemental Figure 3. Free cholesterol distribution and subfractions in the plasma vehicle (VEH) and pegylated bilirubin (PEG-BR) treated mice.** Free Cholesterol distribution (A). High-density lipoprotein (HDL) free cholesterol distribution (B). Very-low density lipoprotein (VLDL) free cholesterol distribution (C). Low-density lipoprotein (LDL) free cholesterol distribution (D). (VEH, n=4 and PEG-BR, n=5).



**Supplemental Figure 4. Apolipoprotein A (ApoA) subfractions in the plasma vehicle (VEH) and pegylated bilirubin (PEG-BR) treated mice.** Apolipoprotein A1 (ApoA1) distribution (A). Apolipoprotein A2 (ApoA2) distribution (B). (VEH, n=4 and PEG-BR, n=5).