

**Supplementary Figure S1.** Serological liver function tests in female C57BL/6J mice. (A) Alanine transaminase (ALT) activity [U/L] is increased after 2 weeks under litho and litho+hypo conditions as compared to control. (B) Aspartate transaminase (AST) activity [U/L] is increased after 2 weeks under litho+hypo condition. Data are represented as mean±SEM, one-way ANOVA followed by Bonferroni post hoc analysis, # $p<0.0001$ ; n=4/condition.

**Supplementary Figure S2.** Decreased amount of hydrophilic primary bile acids in bile under thyroid hormone deficiency in female C57BL/6J mice. (A) Decreased hydrophilicity (%) of total bile acids in bile under hypo, litho and litho+hypo conditions. (B) Decreased hydrophilicity (%) of biliary primary bile acids under hypo, litho and litho+hypo conditions. (C) Decreased hydrophilicity (%) of biliary secondary bile acids under litho and litho+hypo conditions. n=4-8/condition.

**Supplementary Figure S3.** Hepatic aquaporin gene expression under thyroid hormone deficient and lithogenic condition in female and male C57BL/6J mice. (A-F) mRNA expression (fold-change) of hepatic aquaporin 1 (*Aqp1*), aquaporin 8 (*Aqp8*) and aquaporin 9 (*Aqp9*) under hypo, litho and litho+hypo relative to control (dotted line: fold-change 1) conditions by quantitative RT-PCR. Either *18S* (18S ribosomal RNA), *Ppia* (peptidylprolyl isomerase A, cyclophilin A) and *Rpl13 a* (ribosomal protein L13a) or *18S* and *Ppia* were used as reference genes, efficiency corrected Ct method. Data are represented as mean±SEM, one-way ANOVA followed by Bonferroni *post hoc* analysis, \* $p<0.05$ , \*\* $p<0.01$ , \*\*\* $p<0.001$ , # $p<0.0001$ ; n=6-8/condition.