

**HEPATIC OVEREXPRESSION OF HORMONE-SENSITIVE LIPASE AND ADIPOSE TRIGLYCERIDE LIPASE PROMOTES FATTY ACID OXIDATION, STIMULATES DIRECT RELEASE OF FREE FATTY ACIDS AND AMELIORATES STEATOSIS\***

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Running title: HSL and ATGL overexpression ameliorates hepatic steatosis

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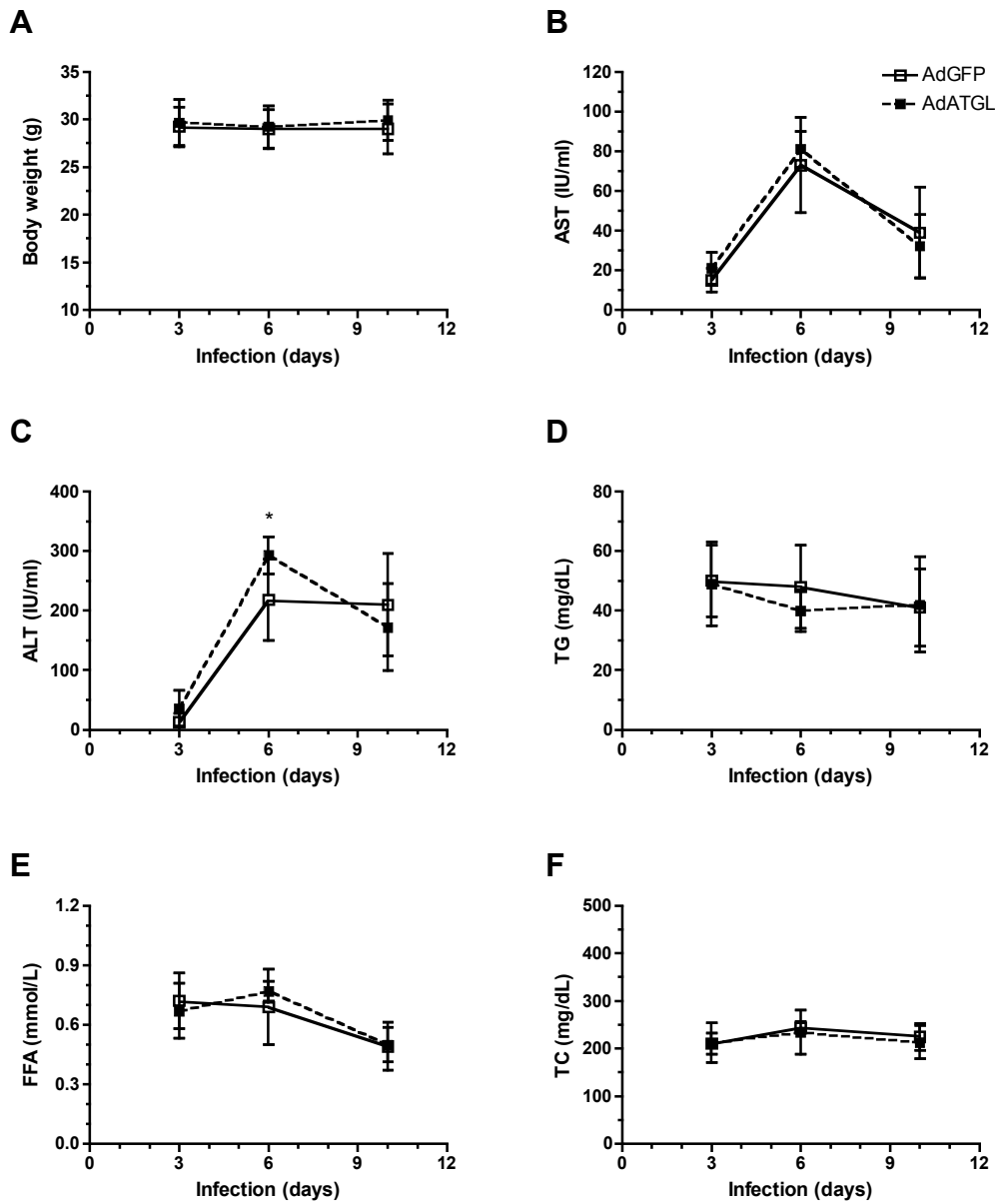
**SUPPLEMENTAL FIGURE LEGEND**

**Supplemental Fig. 1. Body weights and fasting plasma biochemistry in AdATGL-infected DIO mice.** Male B6 mice (n=8-9/group) were fed a WTD for 6 weeks prior to infection with either AdATGL or AdGFP for 10 days. Animals were weighed over the course of infection (A) and bled at indicated time points. Plasma samples were measured for activities of AST (B) and ALT (C) or levels of TG (D), FFA (E) and TC (F). All data are shown as means  $\pm$  SD. Comparisons were made against AdGFP-infected animals by Student's t test. P values: \*p<0.05.

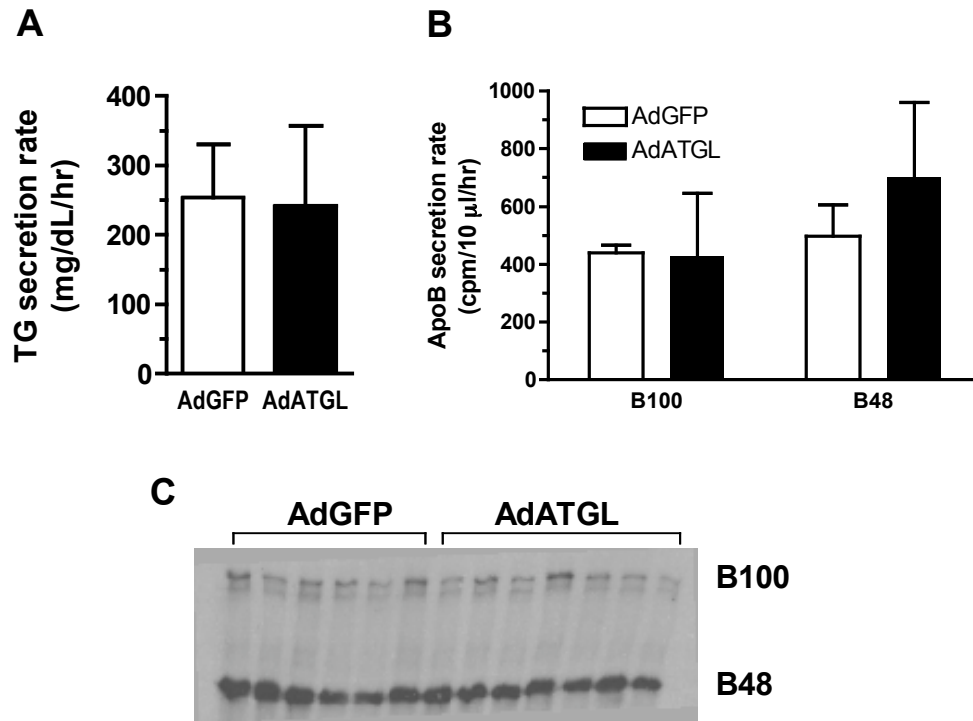
**Supplemental Fig. 2. *In vivo* TG and apoB secretion rates in AdATGL-infected DIO mice.** A: TG secretion rates were assessed, using the Triton WR1339 method, in male DIO mice 10 days after infection with AdATGL or AdGFP. Animals were bled at 0 min (pre-injection) and at 60 min and 120 min post-injection. TG secretion rates are calculated as the increase in TG between 60-min and 120-min time points and expressed in mg/dL/hr ( $\pm$  SD). B: Infected mice were also injected with [<sup>35</sup>S]Promix in addition to Triton WR1339. Blood samples from the 60-min and 120-min time points were subjected to SDS-PAGE followed by fluorography. B100 (left panel) and B48 (right panel) secretion rates represent differences in protein counts between 60-min and 120-min time points and are expressed in cpm/10  $\mu$ l/hr (mean  $\pm$  SD). Representative samples from the 120-min time point are shown in the autoradiogram (C).

**Supplemental Fig. 3. TG secretion in AdHSL- and AdATGL-infected McA-RH7777 cells.** Cells were infected with AdHSL, AdATGL or AdGFP for 24 hours, followed by 16 hours of incubation with a labeling medium containing 0.4mM OA/1.5% BSA and 10  $\mu$ Ci [<sup>3</sup>H]OA. The labeling medium was removed and cells were washed and incubated in the presence of THL with a chase medium containing either 0.4 mM OA/1.5% BSA (A and B) or 1.5% BSA only (C and D) for the indicated amount of time. The experiments were performed in triplicate. All data are presented as means  $\pm$  SD. Cellular [<sup>3</sup>H]TG is expressed in cpm per  $\mu$ g protein (A and C). Medium [<sup>3</sup>H]TG is expressed as percent of cellular [<sup>3</sup>H]TG (B and D). Comparisons were made against AdGFP-infected cells by Student's t test. P values: <sup>a</sup>p=0.05, \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

Supplemental Figure 1



Supplemental Figure 2



Supplemental Figure 3

