OCR7557: MicroRNA-based Therapeutic for NASH and NAFLD

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Background: NAFLD is associated with metabolic and cardiovascular disease, insulin resistance, dyslipidemia. MiR-TA1 promotes vascular inflammation, insulin resistance, obesity and fatty liver.

- miR-TA1-/-/Apoe-/- mice are protected against atherosclerosis in mice.
- MiR-TA1 knockout mice are protected against fatty liver (Figure 1).
- We have developed a novel miR-TA1 inhibitor that protects against atherosclerosis and steatosis in the mice.
- The miR-TA1 inhibitor prevents accumulation of fat in arteries and in the liver.

Treatment: In vivo inhibition of miR-TA1 using subcutaneously delivered antagomiR (direct microRNA complementary inhibitor) results in complete rescue of HFD induced NAFLD in mice and normalization of ALT (Figure 2).

- **IP Status:** PRV filed in 2018
- **Innovator**: Hyung J. Chun, MD, FAHA

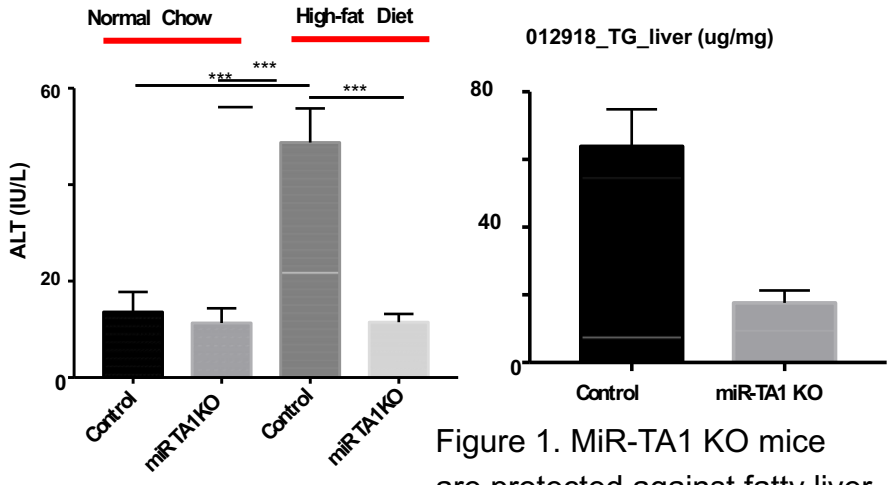

Figure 1. MiR-TA1 KO mice are protected against fatty liver

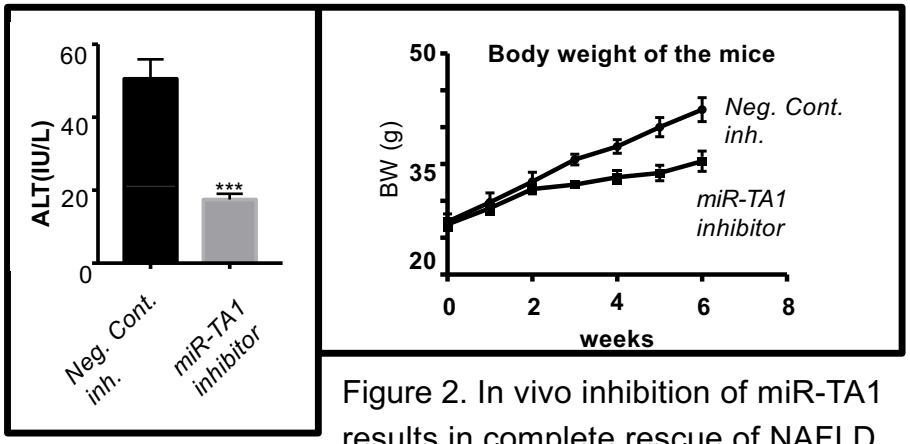

Figure 2. In vivo inhibition of miR-TA1 results in complete rescue of NAFLD in mice and normalization of ALT

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