Qi Wang, et al. Macrophage ATG16L1 suppresses NASH



Supplementary Figure 3. Ata1611 knockout promotes macrophage inflammatory responses, glycolysis, and mitochondrial metabolism disorders. Proinflammatory gene expression in activated Atq16l1<sup>n/m</sup> and Atq16l1<sup>n/m</sup> BMDMs treated with CM from PAOA-stimulated hepatocytes. (B) ELISA results showing the levels of TNF-α, IL-6, and IL-1β in the supernatants of activated *Atg1611<sup>n/n</sup>* and *Atg1611<sup>ΔMφ</sup>* BMDMs treated with CM from PAOA-stimulated hepatocytes. (C) The extracellular acidification rate (ECAR) of stimulated Atg1611<sup>4/A</sup> and Atg1611<sup>AM\$/A</sup> BMDMs was assessed by a Seahorse assay; n=3/group. (D1 and D2) The oxygen consumption rate (OCR) of stimulated Ata1611<sup>1.01/0</sup> and Ata1611<sup>0.04/0</sup> BMDMs was assessed by a Seahorse assay before and after the sequential addition of oligomycin, FCCP, rotenone, and antimycin; n=3/group. (E) The protein expression levels of ATG16L1 in liver tissues, hepatocytes and BMDMs from Atg1617<sup>0/#</sup> and Atg1617<sup>0/#</sup> mice. (F) Schematic diagram showing that primary hepatocytes with or without PAOA stimulation isolated from Ata161<sup>n/n</sup> mice were cocultured with LPS-primed primary BMDMs from Ata161<sup>n/n</sup> and Atg16l1<sup>0E</sup> mice. (G) The expression of proinflammatory genes in activated Atg16l1<sup>n/n</sup> and Atg16l1<sup>0E</sup> BMDMs treated with CM from PAOA-stimulated hepatocytes. (H) ELISA results showing the levels of TNF-a, IL-6, and IL-1β in the supernatants of activated Atg16/1<sup>0////</sup> and Atg16/1<sup>0/E</sup>BMD-Ms treated with CM from PAOA-stimulated hepatocytes. (I) The ECAR of stimulated Atg16I1<sup>n/n</sup> and Atg16I1<sup>oE</sup> BMDMs was assessed by a Seahorse assay; n=3/group. (J1, J2) The OCRs of stimulated  $Atg1611^{n/n}$  and  $Atg1611^{OE}$  BMDMs were assessed by a Seahorse assay before and after the sequential addition of oligomycin, FCCP, rotenone, and antimycin; n=3/group. (K) The expression of genes that affect the IFN-I response. (L) Western blotting was performed to analyze the expression levels of the inflammatory proteins p-p65 (Ser536), p65, p-lkBa, lkBa, TNF-a, IL-6, cleaved IL-1β, and pro-IL-1β in stimulated Atg16/1<sup>π/π</sup> and Atg16/1<sup>0ε</sup> BMDMs. ATG16L1, autophagy-related protein 16-like 1; BMDMs, bone marrowderived macrophages; PAOA, palmitic acid- and oleic acid; CM, conditioned media. The data are expressed as the mean±SD. \*P<0.05 (unpaired t test or ANOVA).