

Figure S4

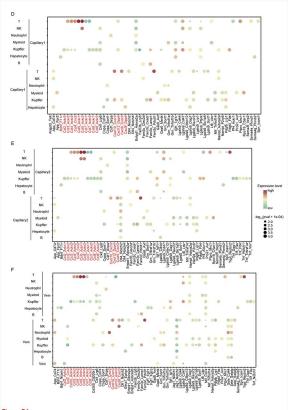


Figure S4

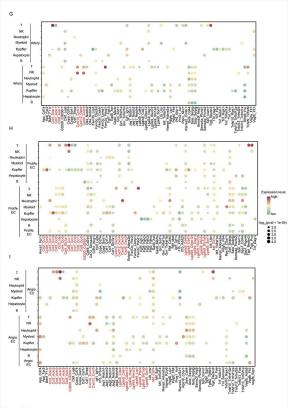


Figure S4

## Figure S4. CellPhoneDB analysis of cell-cell interaction in young and old hepatic vascular niche.

- vascular nuce.
  (A) Cell-cell interaction analysis between Aged EC and other ECs in the old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate protein
- interactions.

  (B) Up-regulated cell-cell interaction between Hepatocyte and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate
- protein interactions.

  (C) Cell-cell interaction analysis between Proinfla EC and indicated ECs in the old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate
  - levels of ligands and receptors. We carried out the mRNA assay to extrapolate protein interactions.

    (D) Up-regulated cell-cell interaction between Capillary1 and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate
  - hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate protein interactions.

    (E) Up-regulated cell-cell interaction between Capillary2 and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression

protein interactions.

levels of ligands and receptors. We carried out the mRNA assay to extrapolate

(F) Up-regulated cell-cell interaction between Vein and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate protein

- interactions.

  (G) Up-regulated cell-cell interaction between Artery and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression lever texpression lever of ligands and receptors. We carried out the mRNA assay to extrapolate protein interactions.

  (H) Up-regulated cell-cell interaction between Prolife EC and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are
- (H) Up-regulated cell-cell interaction between Profile EC and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate protein interactions.
  Up-regulated cell-cell interaction between Anoio.EC and indicated ECs in old
- protein interactions.

  (1) Up-regulated cell-cell interaction between Angio.EC and indicated ECs in old hepatic vascular niche. Ligand-receptor pairs are labeled in x-axis. P values are indicated by the circle sizes while different colors represent different expression levels of ligands and receptors. We carried out the mRNA assay to extrapolate protein interactions.