Therapeutic benefit of adipose-genomic heterogeneity and clonal super-enhancer-associated master cell phenotype in vivo, suggesting the stem cell-assisted ulcer healing may not rely on cell differentiation (IDDF2018-ABS-0194 Figure 1. H, I). A further experiment with submucosal injection of MSC-derived secretome revealed that the therapeutic efficacy of NSAIId-related gastric ulcer was comparable to stem cell transplantation (IDDF2018-ABS-0194 Figure 2. A, B). Profiling analysis showed significant up-regulation of genes associated with inflammation, granuloma and extracellular matrix remodelling (IDDF2018-ABS-0194 Figure 2. C, D). In addition, the Erk1/2-MAPK pathway was activated by injection of ADMSCs or MSC-derived secretome (IDDF2018-ABS-0194 Figure 2. E, F).

Conclusions Our results showed that endoscopic submucosal injection of ADMSCs served as a novel approach to promote healing of NSAIId-related gastric ulcer, while the paracrine activity of stem cell played a more important role in this process (IDDF2018-ABS-0194 Figure 2. G).

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**IDDF2018-ABS-0037** THERAPEUTIC BENEFIT OF ADIPOSE-DEPLETED STROMAL VASCULAR FRACTION CELL TRANSPLANTATION IN RATS OF ACUTE-ON-CHRONIC LIVER FAILURE

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Background Adipose-derived stromal vascular fraction (SVF) cells, a rich source of primary stem/stromal cells, are promising for administering cell therapy for patients with acute-on-chronic liver failure (ACLF). We evaluated the therapeutic effects of CD34+/CD34- SVF cells in hepatocyte cotenplantation in a rat model of ACLF.

Methods ACLF was induced in Sprague-Dawley rats by temporary bile duct ligation and d-galactosamine administration. Donor hepatocytes and SVF cells (labelled with the PKH26 fluorescent dye) were freshly isolated from Tg(UBC-emGFP) rats and human adipose tissues, respectively. Sorted CD34+ and CD34- SVF cells were separated using a magnetic bead system. Rat hepatocytes and SVF cells (untreated and sorted) were intraperitoneally transplanted into ACLF rats. The surviving animals were sacrificed at 1 and 2 weeks after transplantation. Results ACLF was evidenced by the development of acute coagulopathy and hepatocyte necrosis in fibrotic livers. Compared with the control group, the unsorted group showed less biliary ductular proliferation and fibrosis at 1 week after transplantation. Prominent biliary ductular proliferation and significantly increased fibrosis were observed in the CD34+ group than in the CD34+ group at 1 week. At 2 weeks, the serum level of alkaline phosphatase was significantly lower in the CD34+ group than in the CD34+ group. The transplanted SVF cells were found in the periporal regions at 1 week, whereas donor hepatocytes were rarely detected. Conclusions Compared with CD34- SVF cells, cotransplantation of CD34+ SVF cells resulted in the early amelioration of liver fibrosis and biliary ductular proliferation in ACLF rats.