

肝障害
レポート③

再生医療における
脂肪組織由来間葉
系幹細胞の肝硬変
の治療法 有効性・
安全性を中心に

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Adipose Tissue-derived
Mesenchymal Stem Cells
in Regenerative Medicine
Treatment for Liver Cirrhosis
– Focused on Efficacy and
Safety in Preclinical and Clinical
Studies
: SM Regen Med Bio Eng 3(1): 1012.

Safety issues of AT-MSCs

Preclinical toxicity and tumorigenicity tests of AT-MSCs conducted under Good Laboratory Practice conditions have been reported [56]. Toxicity symptoms were found not to occur for 13 weeks in mice, even at the highest dose of AT-MSCs (2.5×10^8 cells/kg) administered via the tail vein. Similarly, with a subcutaneous injection at the same dose, no evidence of tumorigenicity was found for 26 weeks using the toxicity test in immunodeficient mice. For large animals, a 6-week toxicity study using an intravenous administration route for 2×10^6 and 1×10^7 cells/kg umbilical cord-derived MSCs (UC-MSCs) in cynomolgus monkeys has been reported, and this report suggested that the transplantation of UC-MSCs does not affect the general health of cynomolgus monkeys [57]. Moreover, the intravenous infusion of AT-MSCs in cats has no complications during or after administration [58].