GS01-2 **The mechanism of angiogenesis via pericyte mobilization in the adipose tissue**

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Accumulation of visceral adipose tissue (AT) induces insulin resistance, a pathophysiology of type 2 diabetes. Although angiogenesis plays a crucial role in AT expansion, the underlying molecular mechanism remains unclear. We have reported that platelet-derived growth factor B (PDGF-B) increases in the obese AT, and stimulates detachment of pericytes (PCs) from vessels, thereby promotes angiogenesis and AT expansion. Recently, we found the expression of stromal cell-derived factor 1 (SDF1) increased in association with PDGF-B in the AT of obese mice. Therefore, we aimed to investigate the functional linkage between SDF1 and PDGF-B in the regulation of AT angiogenesis. In whole-mount immunofluorescence of cultured AT, treatment with SDF1 alone promoted detachment of PCs from vessels. In contrast, SDF1 attenuated PDGF-B-induced PCs detachment from vessels. To investigate the *in vivo* role of SDF1, mice were maintained on HFD with or without Anagliptin (Ana) that inhibits degradation of SDF1. Protein levels of SDF1 in the serum and AT increased in Ana-treated mice. In this condition, association of PCs on vessels was well maintained in the AT of Ana-treated HFD-fed mice. Consistently, HFD-induced body weight gain and AT expansion were attenuated in these mice. In summary, we demonstrated a novel role of SDF1 on the AT angiogenesis in obesity. SDF1 plays a preventive role on AT expansion in obesity by attenuating PDGF-B induced detachment of PCs from vessels.