**1-YIA-12** YIA

# SMTP-44D improves diabetic neuropathy in mice

Ryosuke Shinouchi[1,2], Keita Shibata[1,2], Shiori Jono[1,2], Terumasa Hashimoto[1,2], Keiji Hasumi[3], Koji Nobe[1,2]

*[1]Div. Pharmacol., Dept. Pharmacol. Toxicol. Ther., Showa Univ. Sch. Pharmacy., [2]Pharmacol. Res. Center., Showa Univ., [3]Dept. Appl. Biol. Sci., Tokyo Univ. of Agricul. and Technol.*

Diabetic neuropathy (DN) is one of the major complications of the diabetes and has a prevalence as high as 50 % of diabetic patients. However, there are few approved effective therapies against painful or insensate DN. In the present study, we evaluated the effect of SMTP-44D in mice model of DN. SMTP-44D (0.3, 3 and 30 mg/kg) was administered to 200 mg/kg streptozotocin (STZ)-induced diabetic mice from the 1st to the 4th weeks after the injection of STZ. The effect of SMTP-44D was evaluated by mechanical allodynia, thermal hyperalgesia, and velocity of conduction and blood flow of sciatic nerve. Furthermore, levels of inflammatory cytokines and oxidative stress in sciatic nerve by administration of SMTP-44D were assessed by ELISA and TBARS assay, respectively. To assess neurological degeneration, the G-ratio and the myelin thickness of Schwann cells in the sciatic nerve were measured. The treatment with SMTP-44D dose-dependently ameliorated allodynia, hyperalgesia, and velocity of conduction and blood flow of sciatic nerve in diabetic mice of DN. Furthermore, levels of inflammatory factors were also improved. These results indicate that SMTP-44D shows potential as a new therapeutic agent for DN.

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