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Author LIANG-HAO CHANG
Author's Email Address No Public.
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Abstract
Diabetic mellitus is the most serious chronic disease in the world and about 90% diabetic patients are type II diabetic mellitus; moreover, the number of patients with diabetes mellitus is increasing year by year all over the world and insulin resistance has long been associated with type II diabetes mellitus. Insulin resistance will induce insulin resistance syndrome(IRS), and the complications including obesity, hyperlipidemia, hypertension etc.

Animal models play a major role in researches related to diabetes, because animal model can imitate human disease conditions and scientists can control environment and drug dose accurately. Several kinds of gene knock-out mice have been developed as animal models for type II diabetes in recent years. In the present study, we set up type II diabetes animal models using non-genetic deficient mice, which are more cheaper and simple breed than gene knock-out mice. Moreover, type II diabetic animal models can divide into genetic defects mice models and non-genetic defects ones; however, fewer studies focus on diabetes order of severity. We feed high-fat diet for 8 weeks to induce hyperglycemia KK/HIJ mice (over 150mg/dl, fasting period)as well as 8 weeks HF-Diet combining with sterptozotocin(STZ50mg/Kg) and nicotinamide (NA200mg/Kg) induce hyperglycemia ICR and C57BL/6 mice.

In this research, we study effect of ethanol extract from Cordyceps sinensis in diabetic mouse models. According to weight, oral glucose tolerance test, insulin tolerance test and plasma insulin concentration, we conjectured that C57BL/6's insulin receptor have lower sensitivity than ICR mice, and C57BL/6 mice have higher plasma insulin concentration than ICR mice, on the other hand, Cordyceps sinensis can enhance kidney and Na+-K+ ATPase activity in KK/HIJ mice. Finally, we divide three strain in different diabetes conditions, KK/HIJ mice belong to the middle stage of type II diabetes, C57BL/6 mice belong to the middle-later stage of type II diabetes and ICR mice belong to type I diabetes.
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