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MOUSE MODEL FOR METABOLIC SYNDROME

Patent Status:
Issued patent on knock-out (US 6,777,216)

License Status:
Seeking for licensee and research partners

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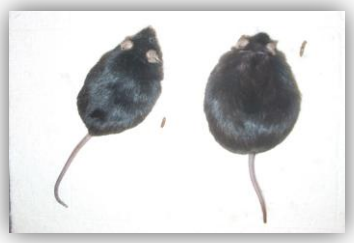

MetS knockout mouse (right) is significantly heavier than its wildtype counterpart (left) 24 weeks after birth

Description:

Metabolic syndrome (MetS) is a combination of metabolic risk factors that increase the risk of developing cardiovascular (CV) disease and type-2 diabetes. Currently, it is estimated that up to 25% of the population in USA suffers from MetS. However, the cause of MetS is not completely understood and very few models exist to study this disease.

A University of Guelph researcher has developed a novel mouse model, which offers a unique opportunity to study disease progression, and examine various therapies and nutraceuticals that are indicated for treating obesity, MetS, diabetes, and other related CV diseases.

Mouse Characteristics:

- Increased body weight gain over time
- Higher blood glucose
- Insulin resistance
- Higher blood VLDL (the bad cholesterol) and triglycerides levels
- Lower metabolic rate
- Fatty liver and increased fat deposition in muscles and skin

Applications:

- A unique animal model to study the molecular mechanism of MetS
- A good research tool to test the effects of various drugs and nutraceuticals on prevention and/or progression of MetS, diabetes, and other CV diseases

Development Status:

- Knockout mouse generated
- Mouse growth and development characteristics well characterized