Technology: Genetically modified mouse lacking diacylglycerol acyltransferase-1 (DGAT-1) activity

VA ID Number: 99-017

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Location: San Francisco, CA

Topic: Endocrine

USPTO Issue Date: 6/29/2010

Patent Number: 7,745,691

The VA has a joint ownership interest with The Regents of the University of California

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Abstract Methods and compositions for modulating carbohydrate metabolism in a host are provided. In the subject methods, diacylglycerol acyltransferase (DGAT) activity (specifically DGAT1 activity) is modulated, e.g., reduced or enhanced, to achieve a desired insulin and/or leptin sensitivity, thereby modulating carbohydrate metabolism, e.g., increasing or decreasing blood glucose levels, glucose uptake into cells and assimilation into glycogen. Also provided are pharmaceutical compositions for practicing the subject methods. The subject methods and compositions find use in a variety of applications, including the treatment of hosts suffering conditions associated with abnormal carbohydrate metabolism, such as obesity or diabetes.