Knockdown Of Adgrg6 In Adipocytes Leads To Female Fat Distribution In Males

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TECHNOLOGY DESCRIPTION

UNMET NEED: Metabolic diseases such as obesity and type 2 diabetes disproportionately affect males due to their fat distribution patterns. Current treatments often fail to address the root causes of fat distribution differences between genders. There is a pressing need for targeted therapeutics that leverage molecular mechanisms to improve fat distribution and metabolic health in males.

TECHNOLOGY: Our groundbreaking research reveals that reducing the expression of the gene adhesion G protein-coupled receptor G6 (ADGRG6; also known as GPR126) in human and mouse adipocytes can shift fat distribution in males to resemble the female pattern, leading to reduced body weight, lower fat mass, and improved glucose and insulin tolerance.

COMPETITIVE ADVANTAGE:

- **First-of-its-kind approach** targeting ADGRG6 to alter male fat distribution to resemble the female pattern.
- **Versatile therapeutic potential** using ADGRG6 antagonists or molecular knockdown technologies (e.g., siRNA, CRISPRi).
- **Targeted solution for obesity and metabolic diseases**, addressing gender-specific differences in fat distribution and disease risk.

DEVELOPMENT STAGE: This innovative therapeutic approach is currently at the proof-of-concept stage.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

Diabetes, fat distribution, CRISPR, Brown Fat, White Fat

CATEGORIZED AS

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