

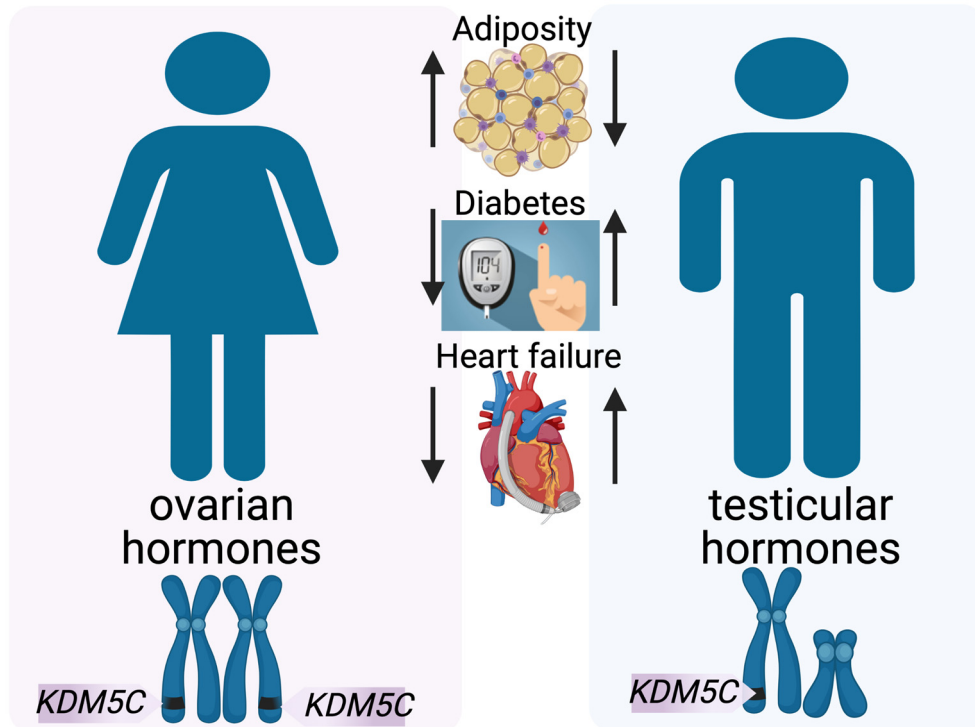
X-linked *Kdm5c* dosage in preadipocytes influences adiposity and food intake

Rozeta Avetisyan, MS, PhD Candidate

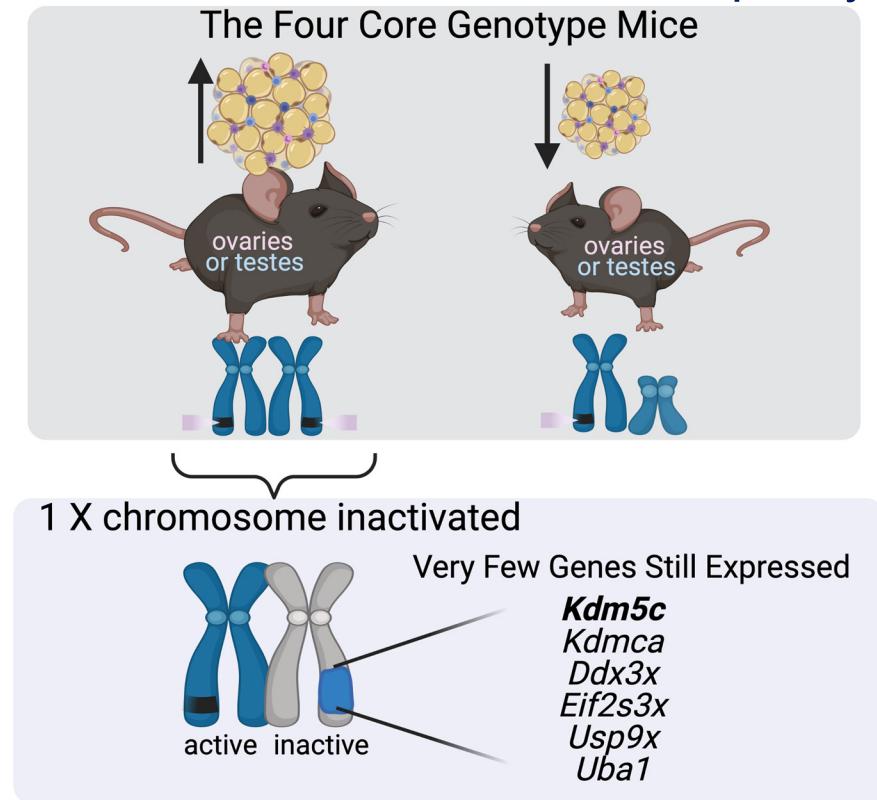
Karen Reue Laboratory

Molecular, Cellular and Integrative Physiology
University of California Los Angeles

Hormones & Chromosomes Contribute to Sex Differences in Adiposity in Humans

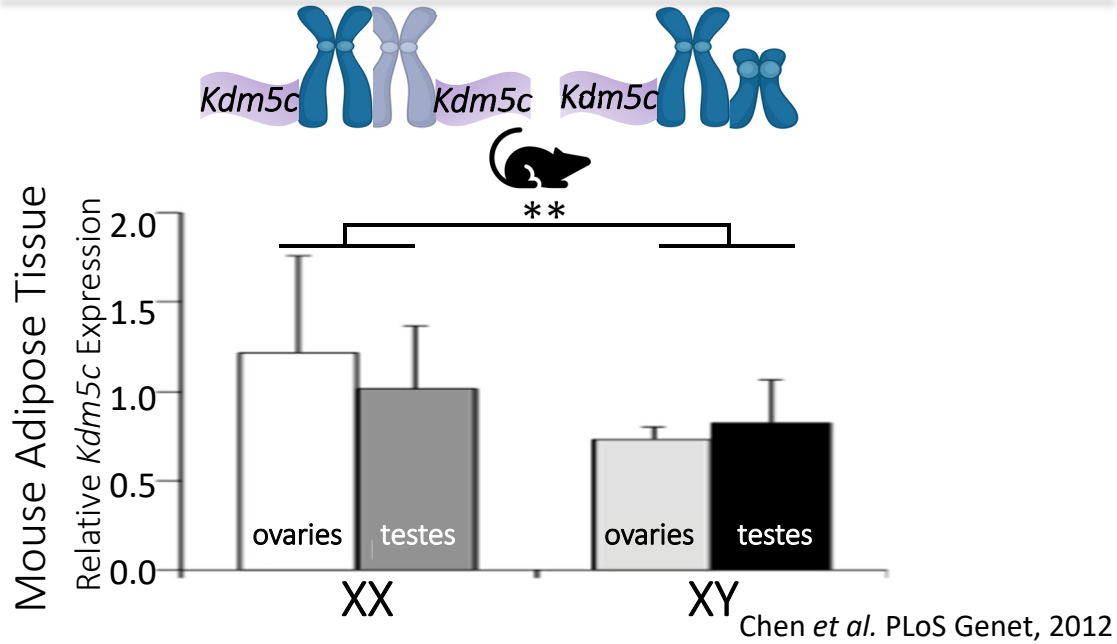


X-chromosome Influences Adiposity

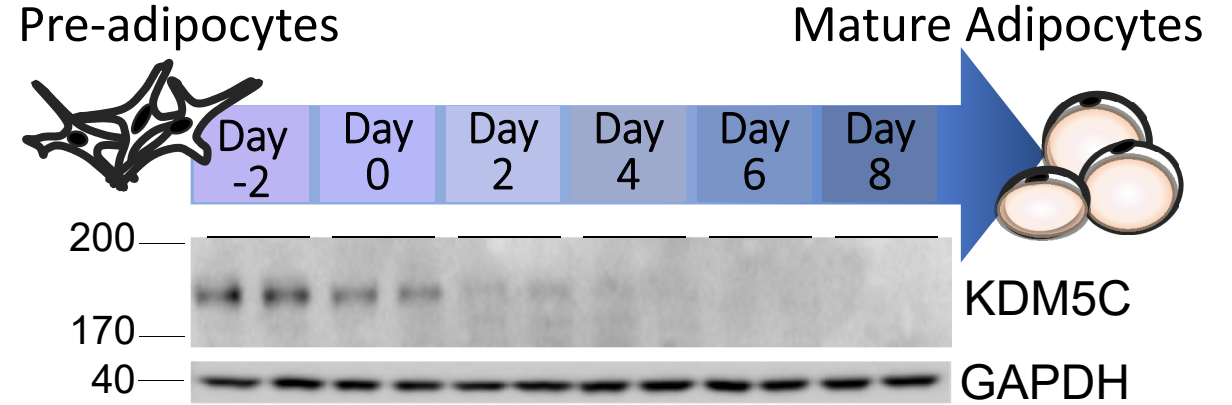


Kdm5c Dosage Is Important for Adipocyte Differentiation

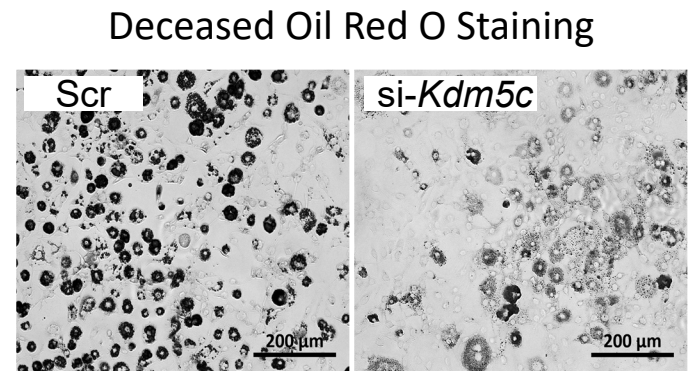
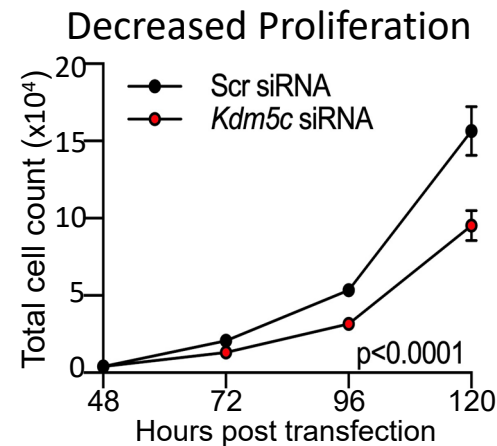
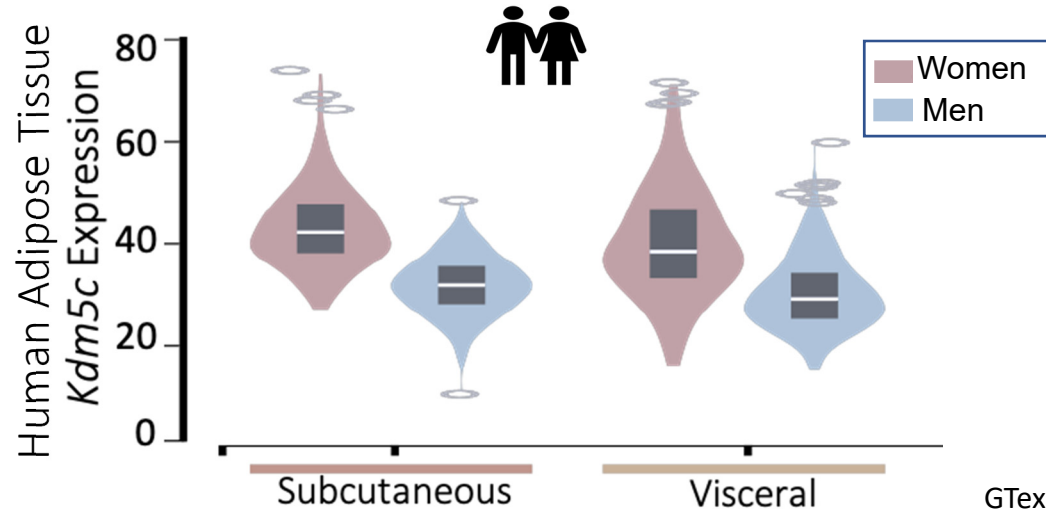
Kdm5c expression is Higher in Females than in Males



KDM5C levels are highest in adipocyte precursors

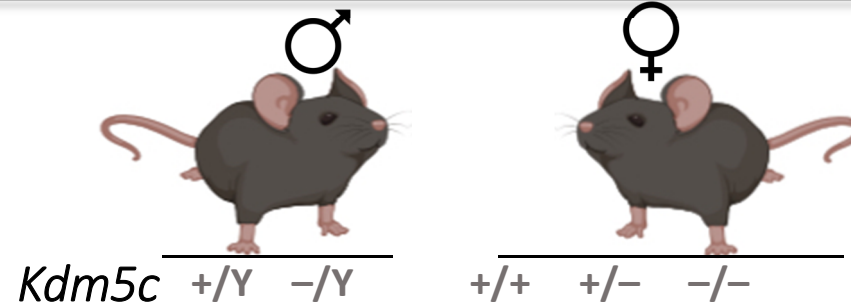


Kdm5c knock-down hinders adipocyte differentiation

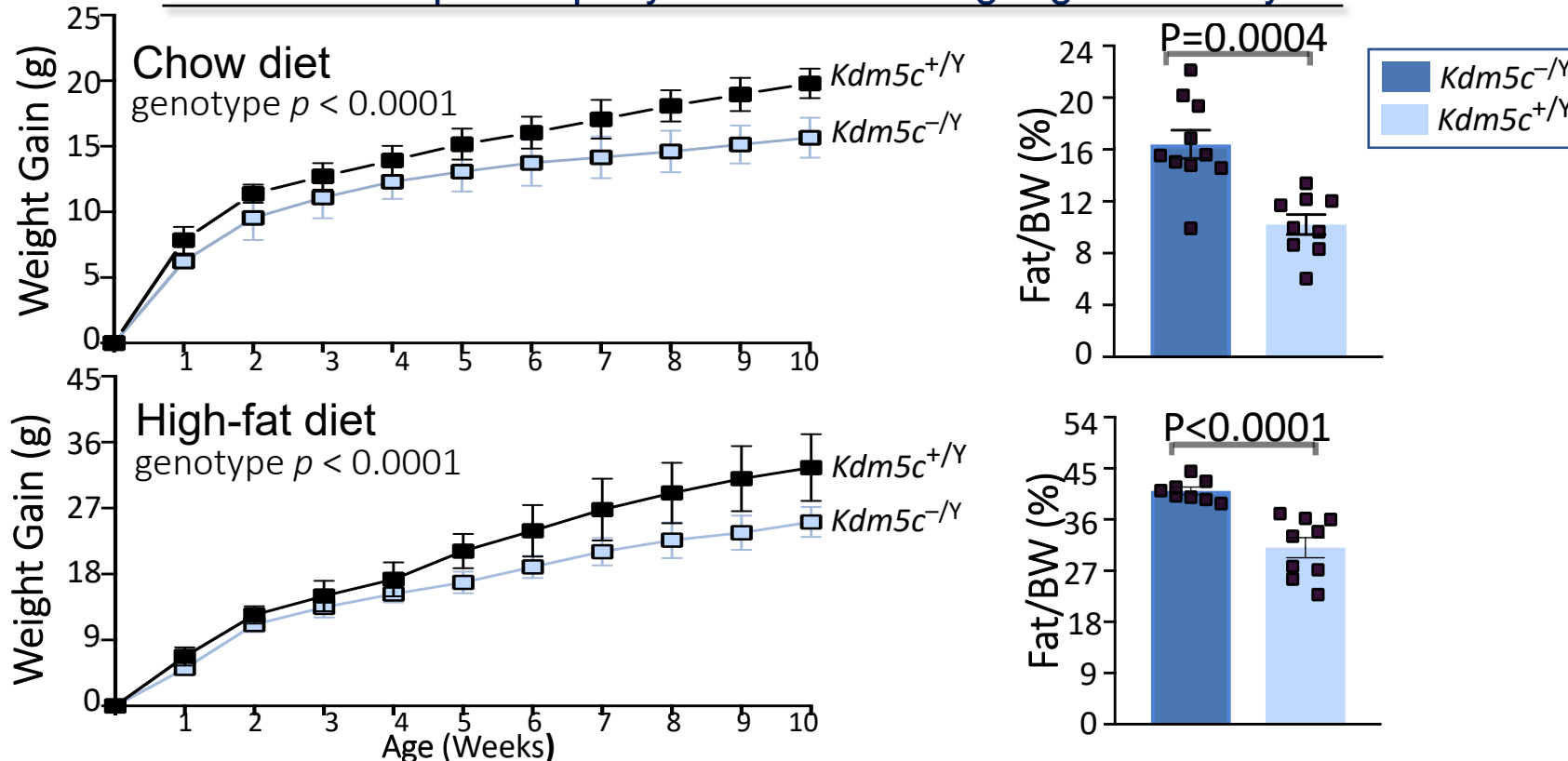


Kdm5c Dosage in Pre-adipocytes Affects BW & Adiposity

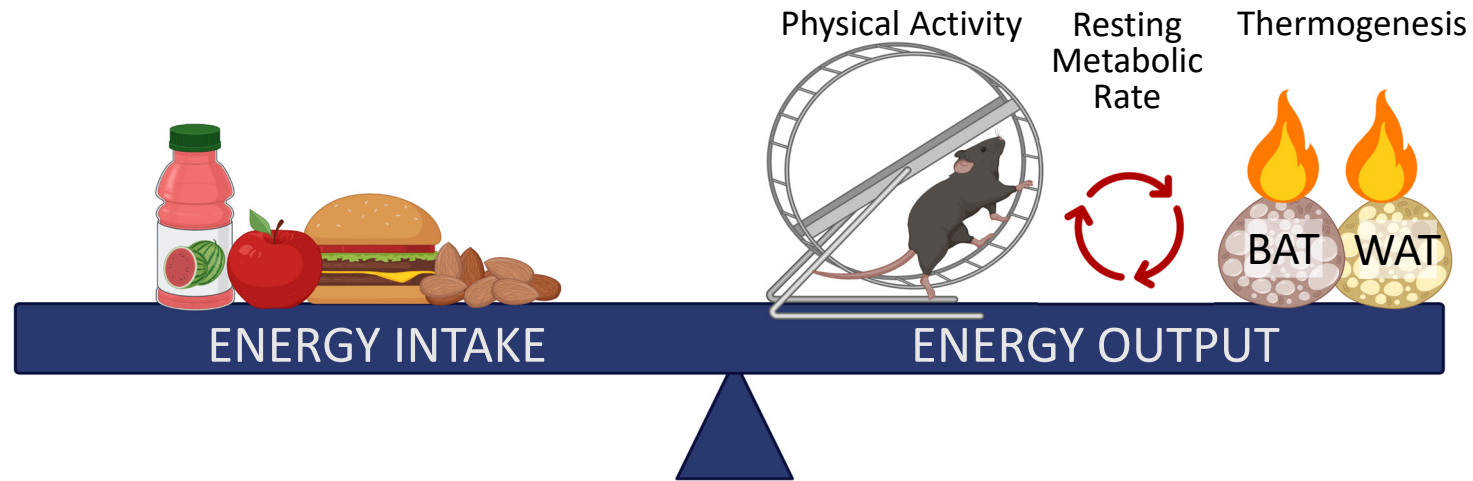
Targeting *Kdm5c* dosage in pre-adipocytes (*Pdgfra-Cre*)



Kdm5c KO in pre-adipocytes leads to weight gain & body fat

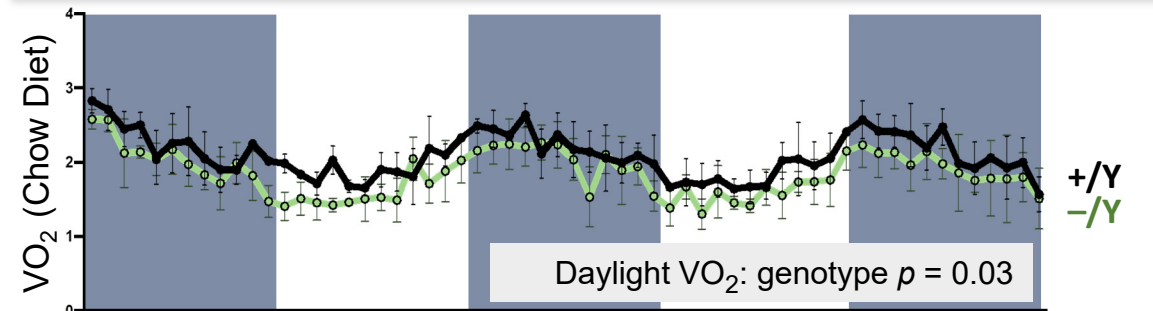
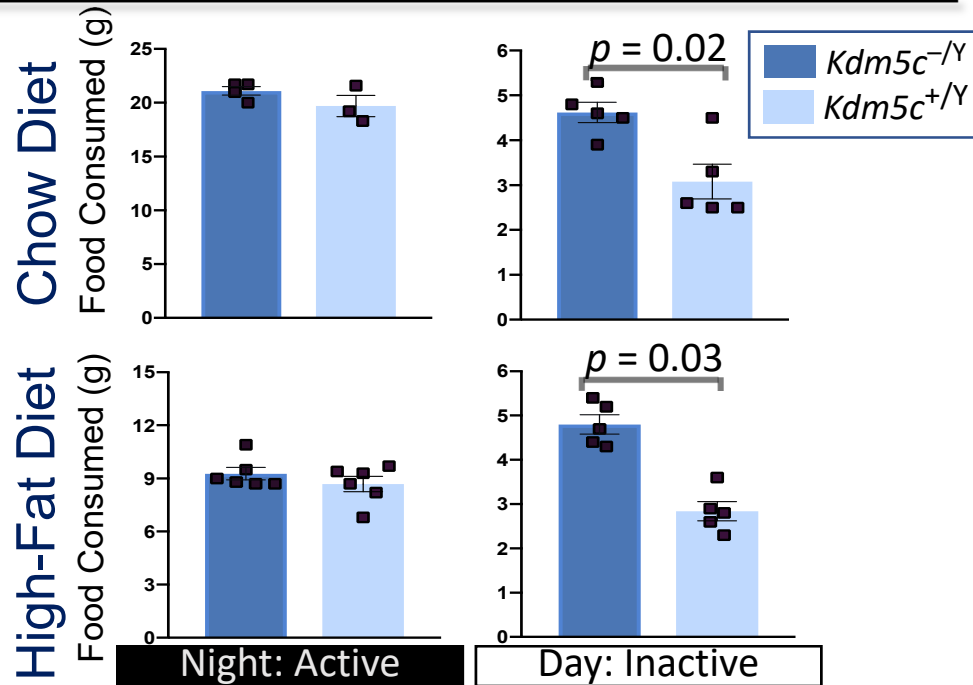


Kdm5c Dosage Affects Energy Balance at Multiple Points

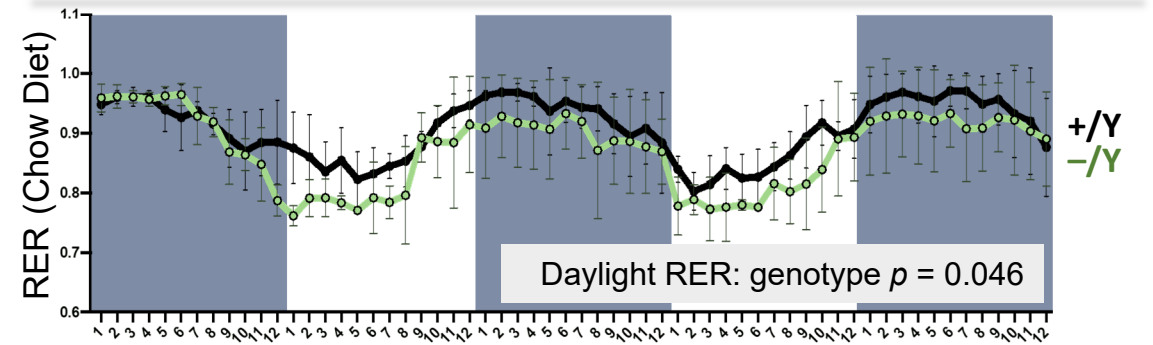


Kdm5c KO leads to ↓ food intake during the inactive cycle

Kdm5c KO leads to ↓ O_2 consumption during the inactive cycle

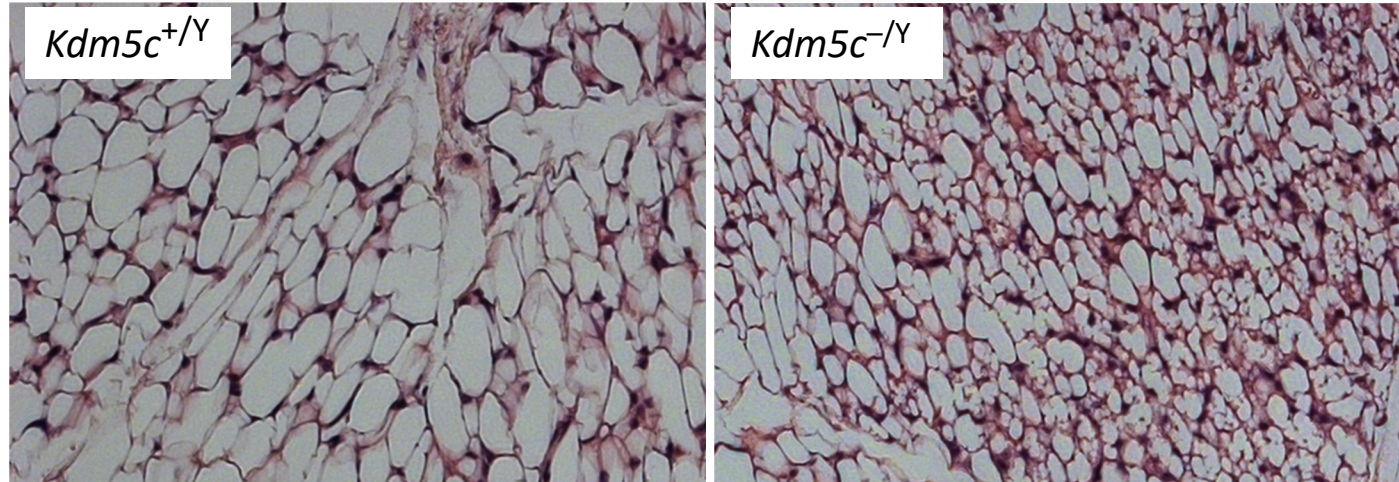


Kdm5c KO leads to Switch in Fuel Utilization to FFAs

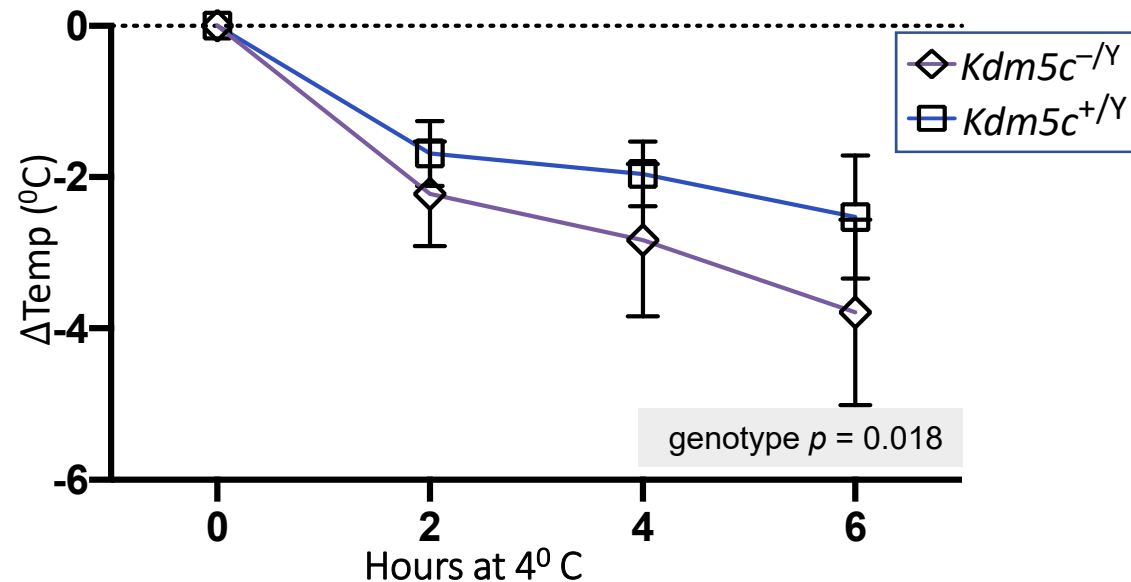


Pdgfra-Cre *Kdm5c* KO Mice are Resistant to Acute Cold Exposure

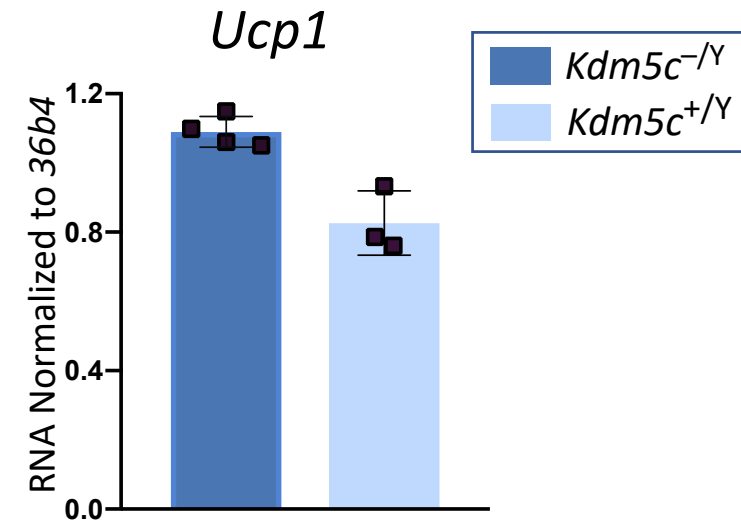
Kdm5c KO mice have multilocular white adipocytes



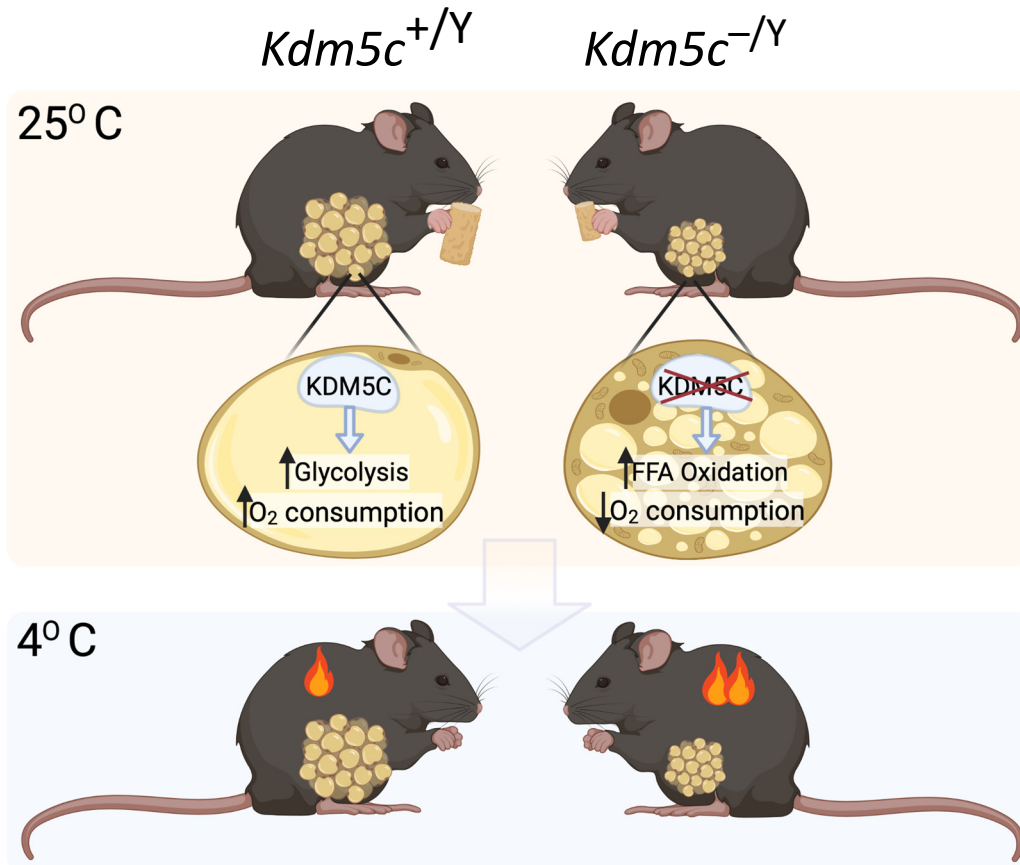
Kdm5c KO mice are resistant to acute cold exposure



BAT of mice after 6-hr cold exposure



Summary



Kdm5c dosage in pre-adipocytes affects adiposity

Kdm5c dosage in pre-adipocytes leads to altered lipid droplet morphology

Kdm5c dosage affects “both sides” of energy balance

- decreased diurnal food intake
- decreased O₂ consumption
- fuel utilization switched from carbohydrate-based to FFA-based

Kdm5c dosage influences thermogenesis due to acute cold exposure

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