More Powerful Than a Locomotive? PEPCK-C^{mus} Supermouse vs. Wild Type

attività fisica

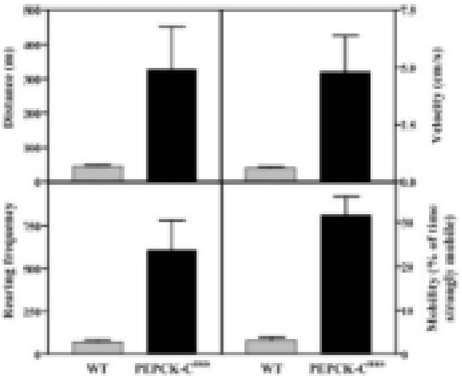


FIGURE 2. The home cage activity of PEPCK-C^{mus} mice. The activity of PEPCK-C^{mus} mice and controls (WT), maintained with a 12-h light/dark cycle, was determined as outlined under "Experimental Procedures." The measurements made over 22 h included the distance covered, the velocity of the movement, the rearing frequency, and the percentage of time the mice were strongly mobile.

lunghezza della corsa

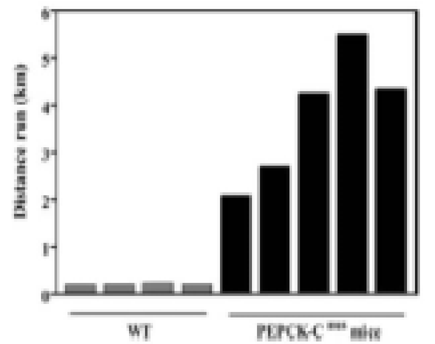


FIGURE 3. PEPCK-C^{mus} mice run for a long distance on a treadmill. Untrained 3-month-old PEPCK-C^{mus} mice and controls (WT) were tested for their ability to run long distances. The mice were placed on a treadmill (at a grade of 0°) and run at 20 m/min until exhaustion, as described in the first protocol under "Experimental Procedures." In the supplemental data, please note that a video is available that documents the remarkable ability of the PEPCK-C^{mus} mice to run for long distances.

acido lattico

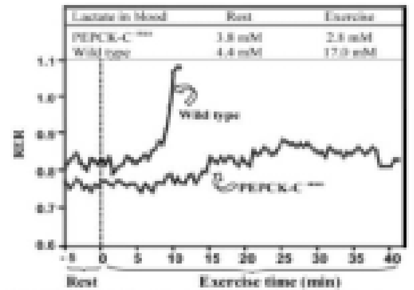


FIGURE 4. A graphical plot of fuel utilization by a PEPCK-C^{mus} and control mouse during strenuous exercise. This figure is a graphical plot of the alterations in the RER of an untrained PEPCK-C^{mus} mouse and a control animal. The data are drawn from a larger group of PEPCK-C^{mus} mice (n = 9) and control littermates (n = 10) that is presented in Table 3. The RER was assessed using a speed-ramped treadmill entirely enclosed in an environmental chamber and equipped to measure changes in oxygen consumption and carbon dioxide output. The mice were acclimated to the chamber for 64 min, after which the speed of the treadmill (set at a 25° slope) was set at 10 m/min and for 30 min and then increased 2 m/min every 2 min until the mice reached exhaustion (see the second protocol described under "Experimental Procedures"). A blood sample was taken before and after exercise for the measurement of lactate. Both the rate of oxygen consumption and the rate of carbon dioxide generation by the mice were monitored continuously throughout the exercise period.

massima velocità

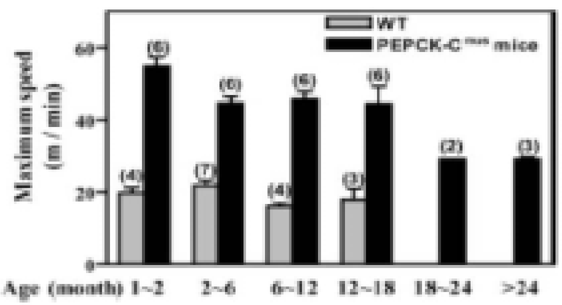
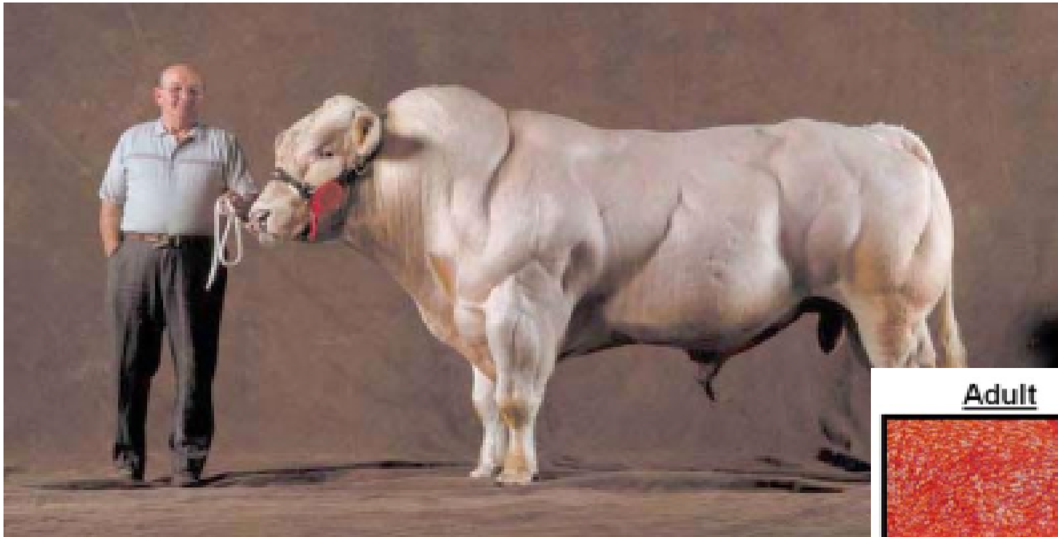
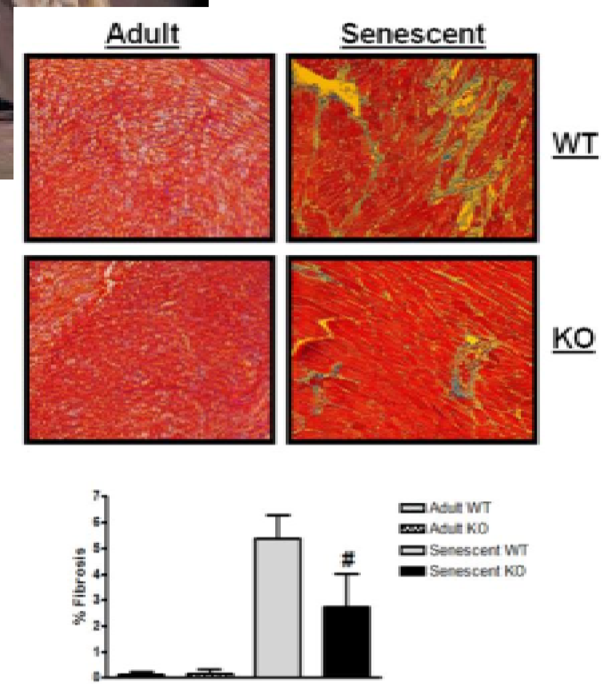


FIGURE 9. Running ability of PEPCK-C^{mus} mice with age. Trained PEPCK-C^{mus} mice and controls (WT) of varying ages were tested for their ability to run on a treadmill using the third protocol as described in detail under "Experimental Procedures." The mice were acclimated to the treadmill (at a grade of 0°) for 30 min at a speed of 10 m/min, after which time the speed of the treadmill was increased 1 m/min every min, until the mice reached exhaustion. The number of animals tested is indicated in *parentheses*.

Hakimi P, 2007-08



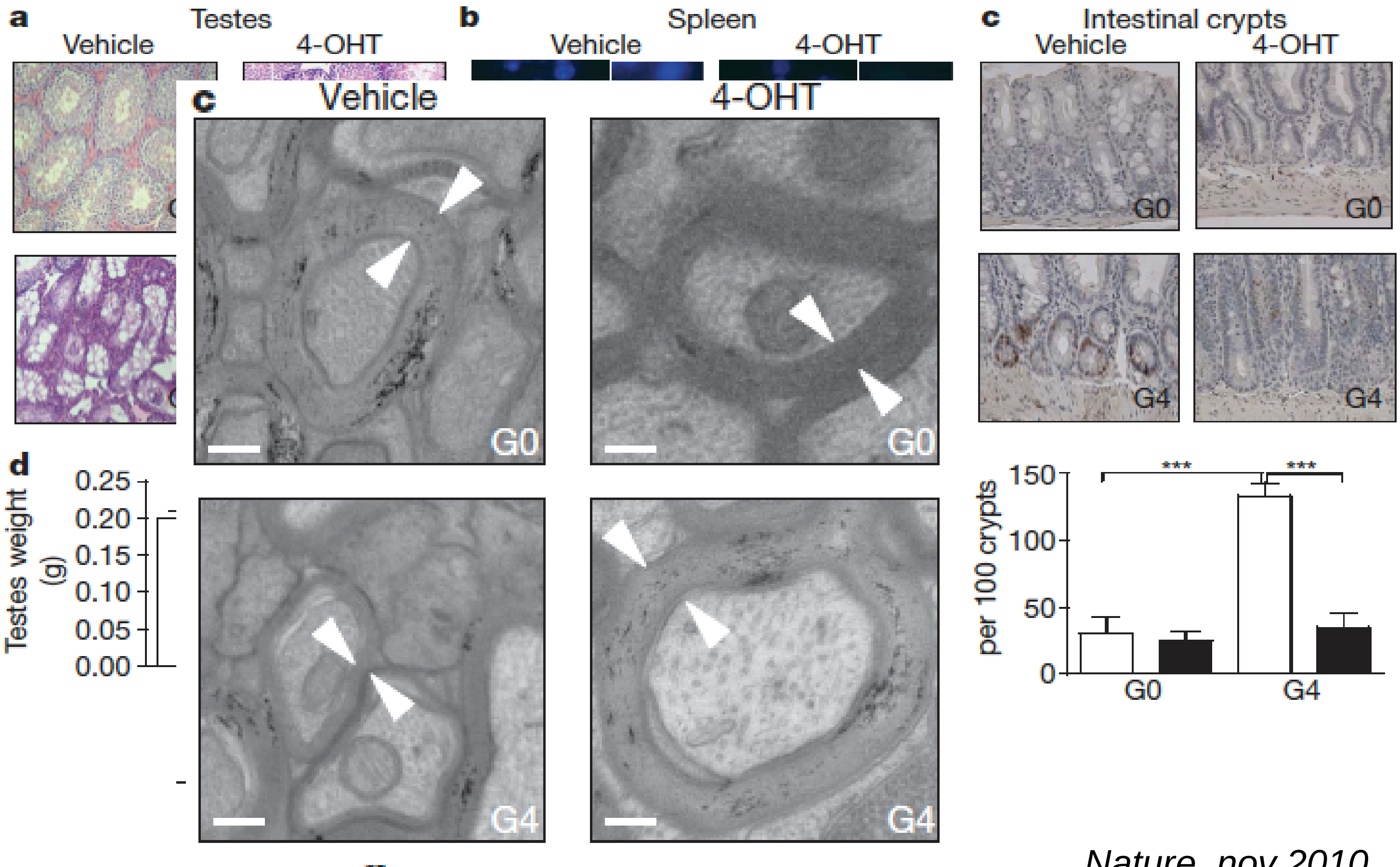
Schwarzenegger Super Cows
(delezione gene miostatina)



Morissette M, 2009

Telomerase reactivation reverses tissue degeneration in aged telomerase-deficient mice

Mariela Jaskelioff[1], Florian L. Muller[1], Ji-Hye Paik[1], Emily Thomas[1], Shan Jiang[1], Andrew C. Adams[2], Ergun Sahin[1], Maria Kost-Alimova[1], Alexei Protopopov[1], Juan Cadiñanos[1], James W. Horner[1], Eleftheria Maratos-Flier[2] & Ronald A. DePinho[1]



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Ordovás JM, Smith CE.

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An epigenetic hypothesis of aging-related cognitive dysfunction.
Penner MR, Roth TL, Barnes CA, Sweatt JD.

9.45-12.00 Sessione di Biogerontologia

INVECCHIAMENTO E LONGEVITÀ: PIÙ GENI O PIÙ AMBIENTE?

9.45-10.15 Lettura

NON TUTTO È SCRITTO NEI GENI: L'EPIGENETICA DELL'INVECCHIAMENTO

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