

Whole body FFA turnover

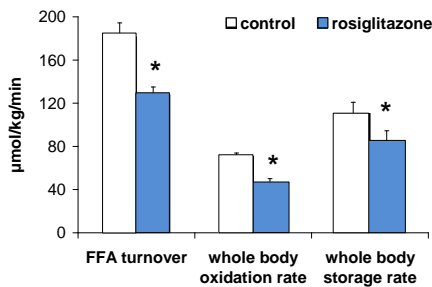
A gold-standard technique for quantifying drugs affecting FFA oxydation and/or lipogenesis related to type 2 diabetes and obesity.

Key benefits :

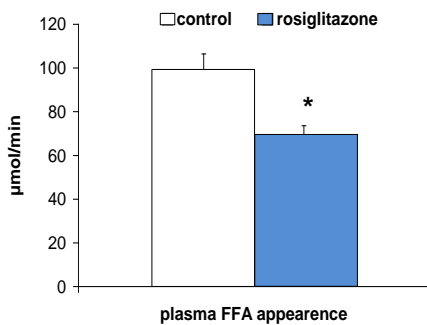
- ✓ *In vivo* validation on impaired **free fatty acid (FFA) metabolism**
- ✓ Sensitivity (15%) sufficient to detect a statistically significant impact of your compound on lipid trafficking: a lack of significant results for plasma FFA does not imply your drug compound doesn't improve FFA turnover
- ✓ Predictive of individual tissue **lipotoxicity**

DESCRIPTION AND PARAMETERS EVALUATED

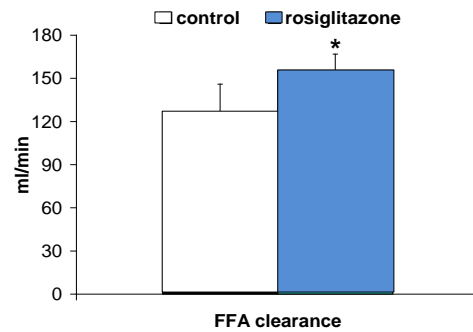
- Species: rat, mouse
- FFA fluxes
- FFA turnover
 - Whole-body oxidation rate
 - Whole-body storage rate
- Plasma FFA appearance
- FFA clearance rate



Rats with diet-induced insulin resistance (10 mg/kg rosiglitazone for 15 days)



* p<0.05 vs vehicle



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ADD-ON STUDIES

- Individual tissue FFA storage rate: a whole-body tissue-by-tissue overview of the effect of your compound on lipotoxicity
- Hepatic VLDL-TG production
- Whole body glucose turnover: complete the overview of your drug compound's impact on glucose metabolism

REFERENCES

Girousse A, Tavernier G, Valle C, Moro C, Mejhert N, Dinel AL, Houssier M, Roussel B, Besse-Patin A, Combes M, Mir L, Monbrun L, Bézaire V, Prunet-Marcassus B, Waget A, Vila I, Caspar-Bauguil S, Louche K, Marques MA, Mairal A, Renoud ML, Galitzky J, Holm C, Mouisel E, Thalamas C, Viguier N, Sulpice I, Burcelin R, Arner P, Langin D. Partial inhibition of adipose tissue lipolysis improves glucose metabolism and insulin sensitivity without alteration of fat mass. PLOS Biology. 2013 Feb;11(2)