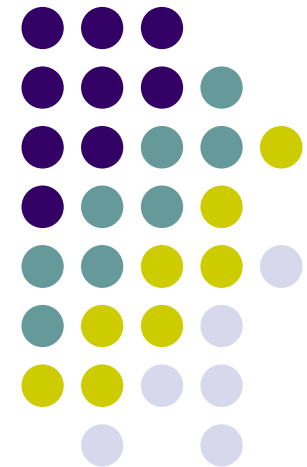


Note: for non-commercial purposes only

Gene expression in the term placenta: the effect of maternal BMI and glucose tolerance on UCP2, TLR4 and DNMT1.



*Martino J., Sebert S., García-Valdés L., Segura MT.,
Anjos T., Marti-Romero MA., Florido J., Budge H.,
Symonds M.E. and Campoy C.*



The University of
Nottingham



ugr

Universidad
de Granada

Maternal obesity

40% pregnant women
(UK, USA, Australia)



↑ Childhood and
adolescent obesity



Physiopathological outcomes

Maternal health
(diabetes, CVD)

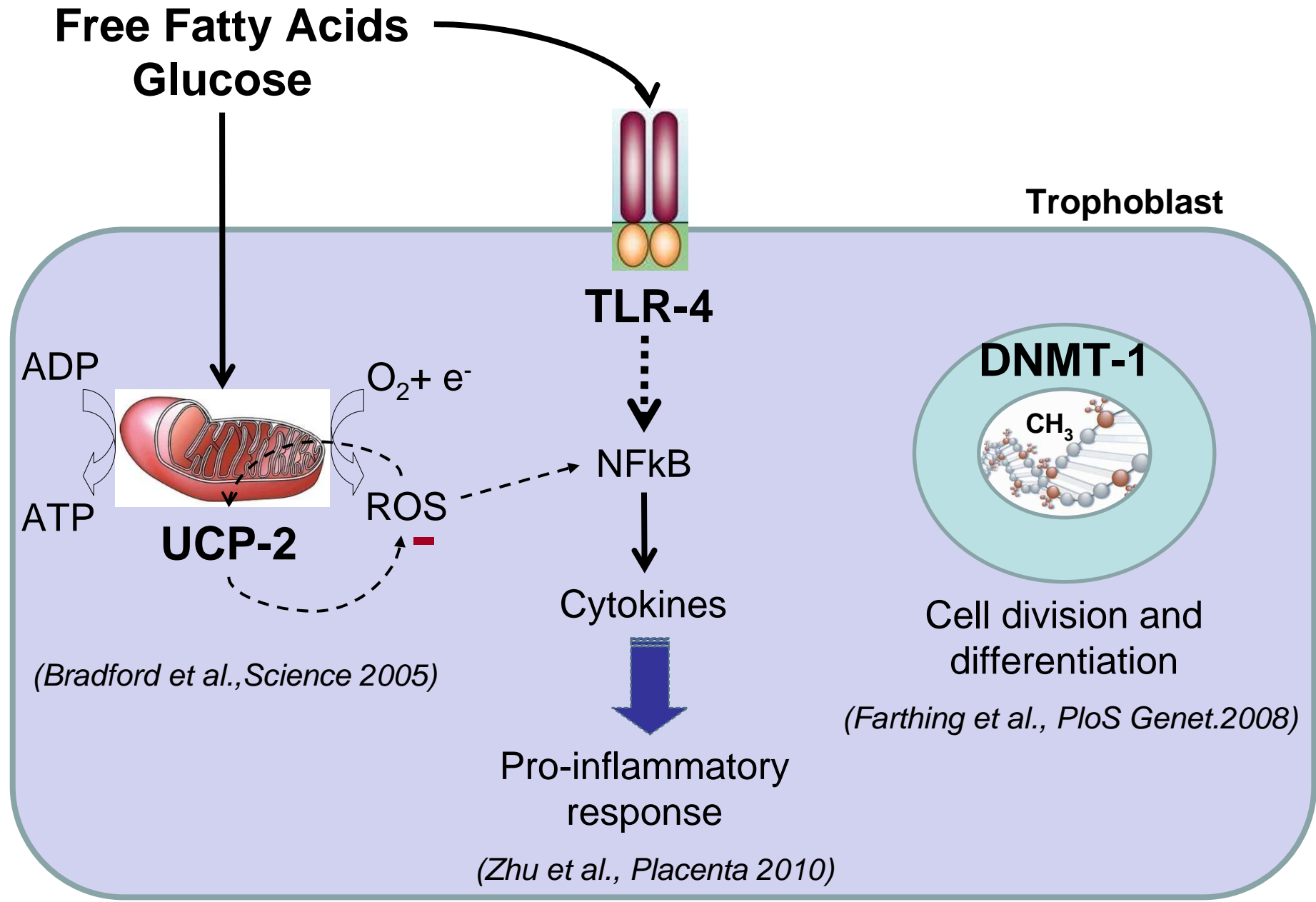


Fetal survival
(miscarriage, preterm)



Diseases in adulthood
(long-term outcomes)





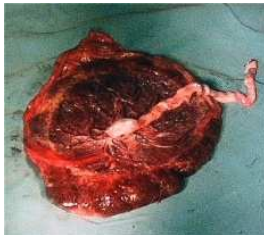
Study Objective



Effect of BMI and glucose tolerance on the expression of DNMT-1, TLR-4 and UCP-2

Study design

Pregnant women (102)



RNA extraction



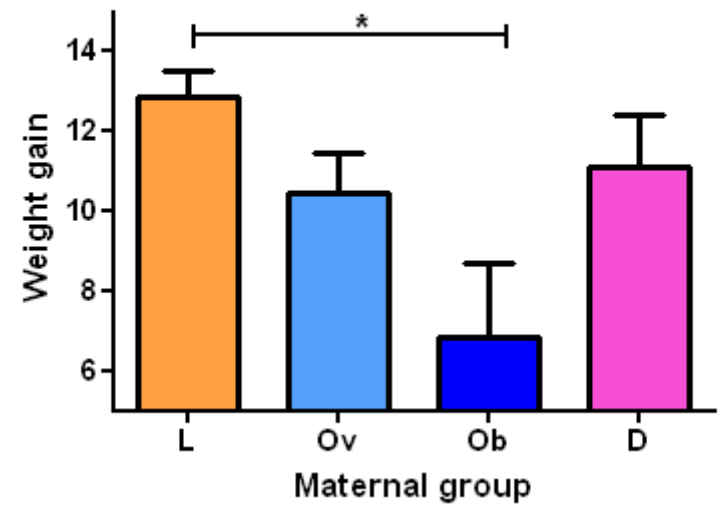
cDNA



Real Time PCR

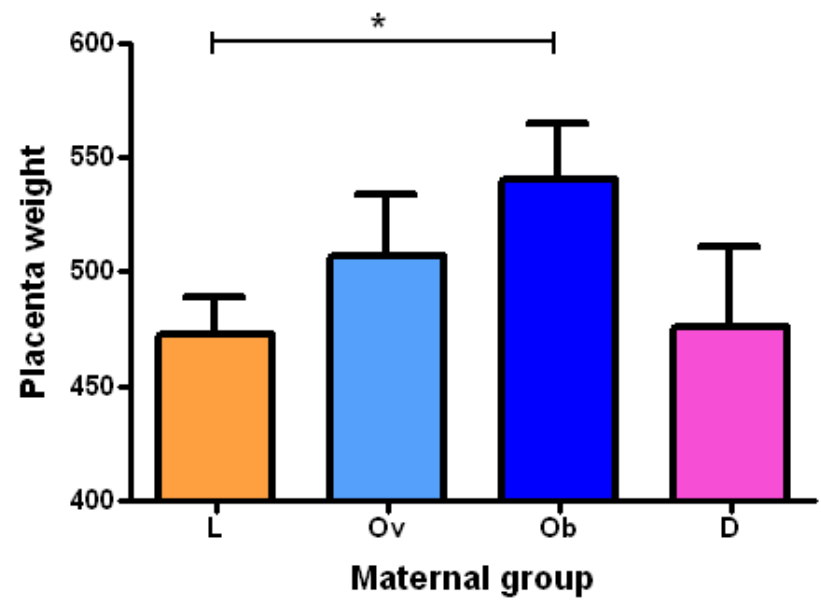
1. **Lean** (56): BMI < 25 kg/m²
2. **Overweight** (23): 25 < BMI < 30 kg/m²
3. **Obese** (12): BMI > 30 kg/m²
4. **Gestational Diabetes** (11): BMI < 25 kg/m²,
glucose intolerant

Weight gain



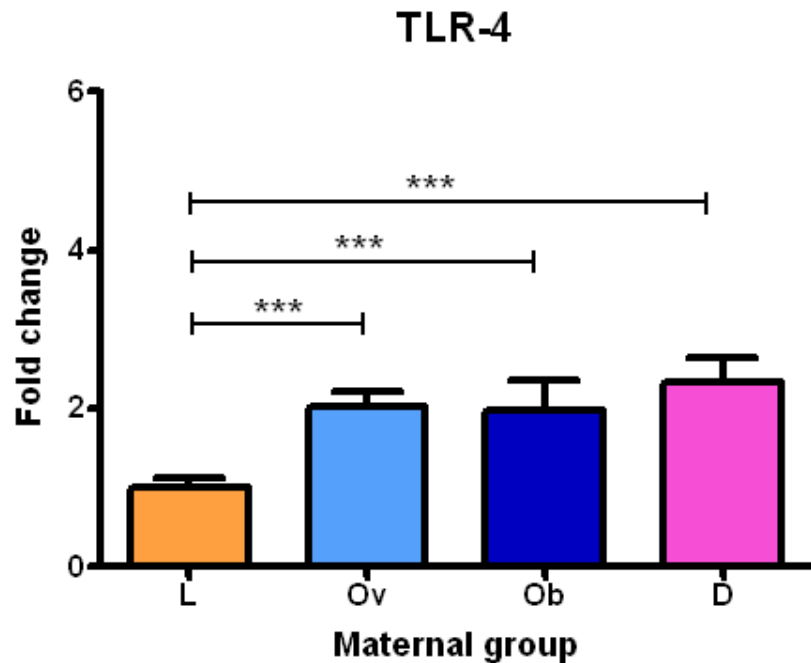
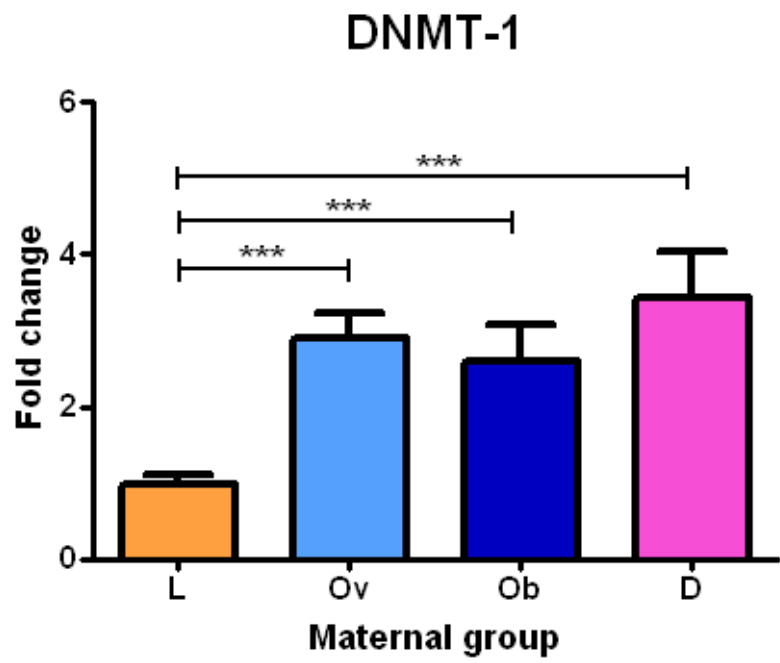
✓ Lower weight gain in obese women

Placenta weight



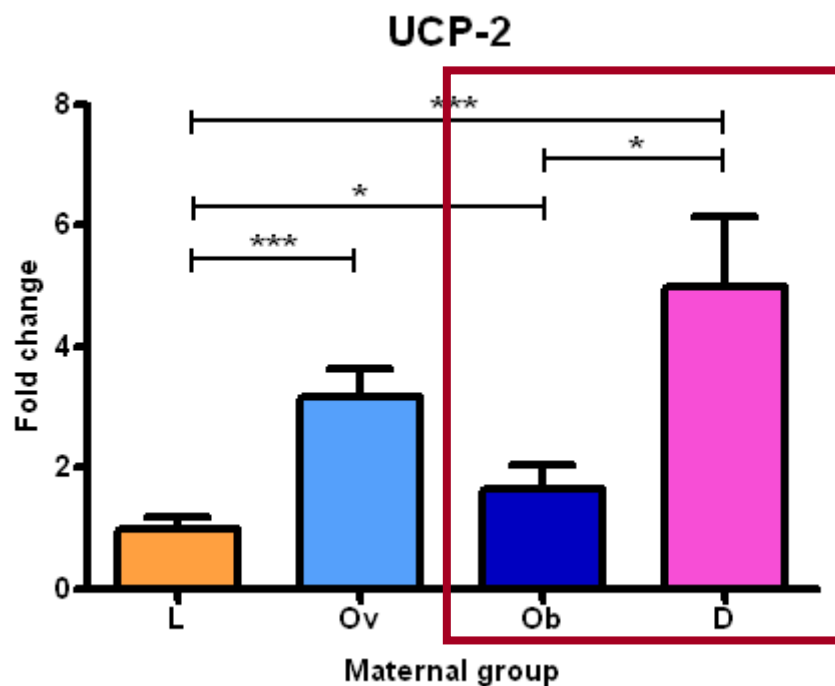
✓ Increase placenta weight with BMI

Gene expression



✓ Increase with BMI and diabetes

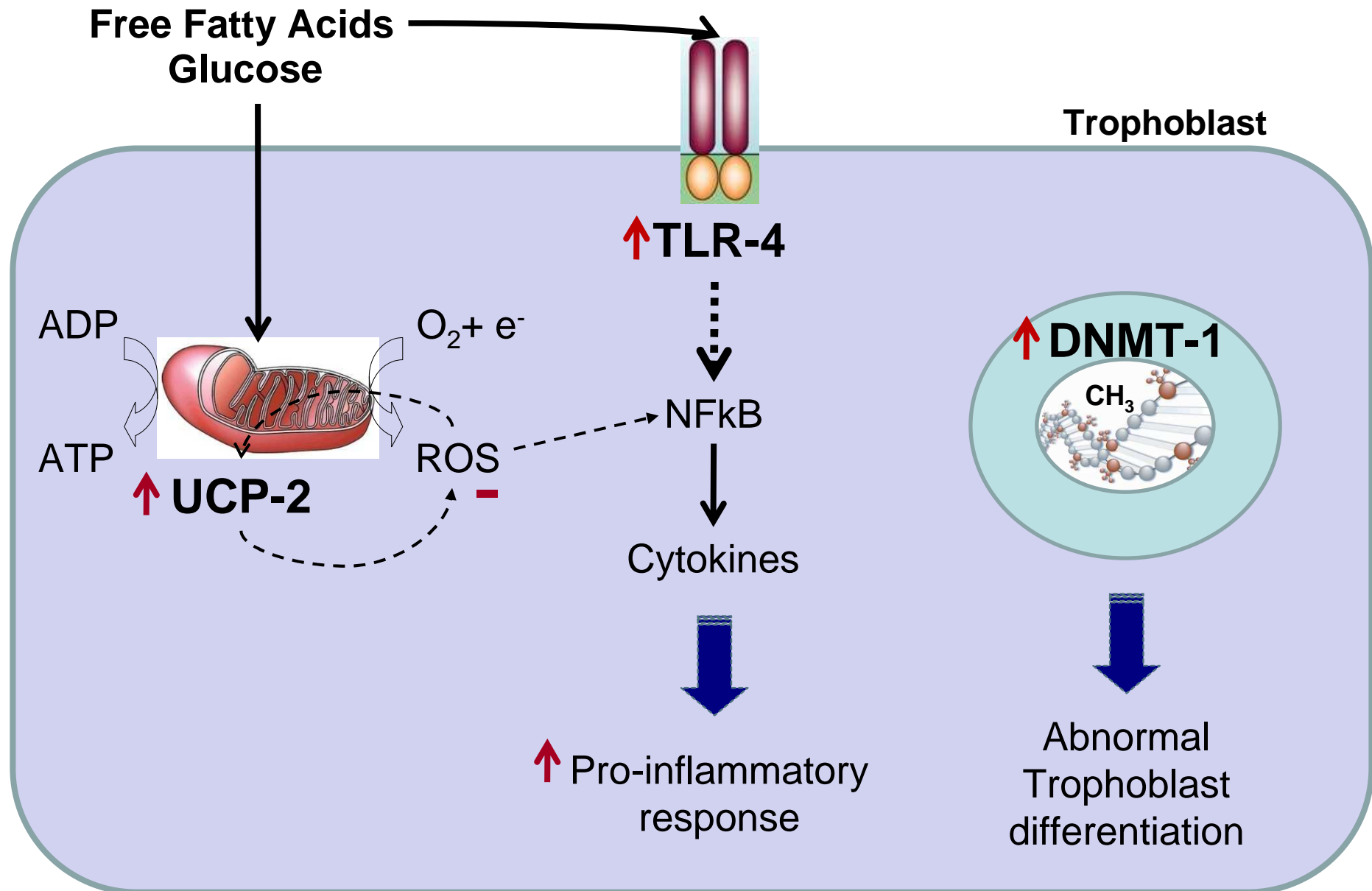
Gene expression



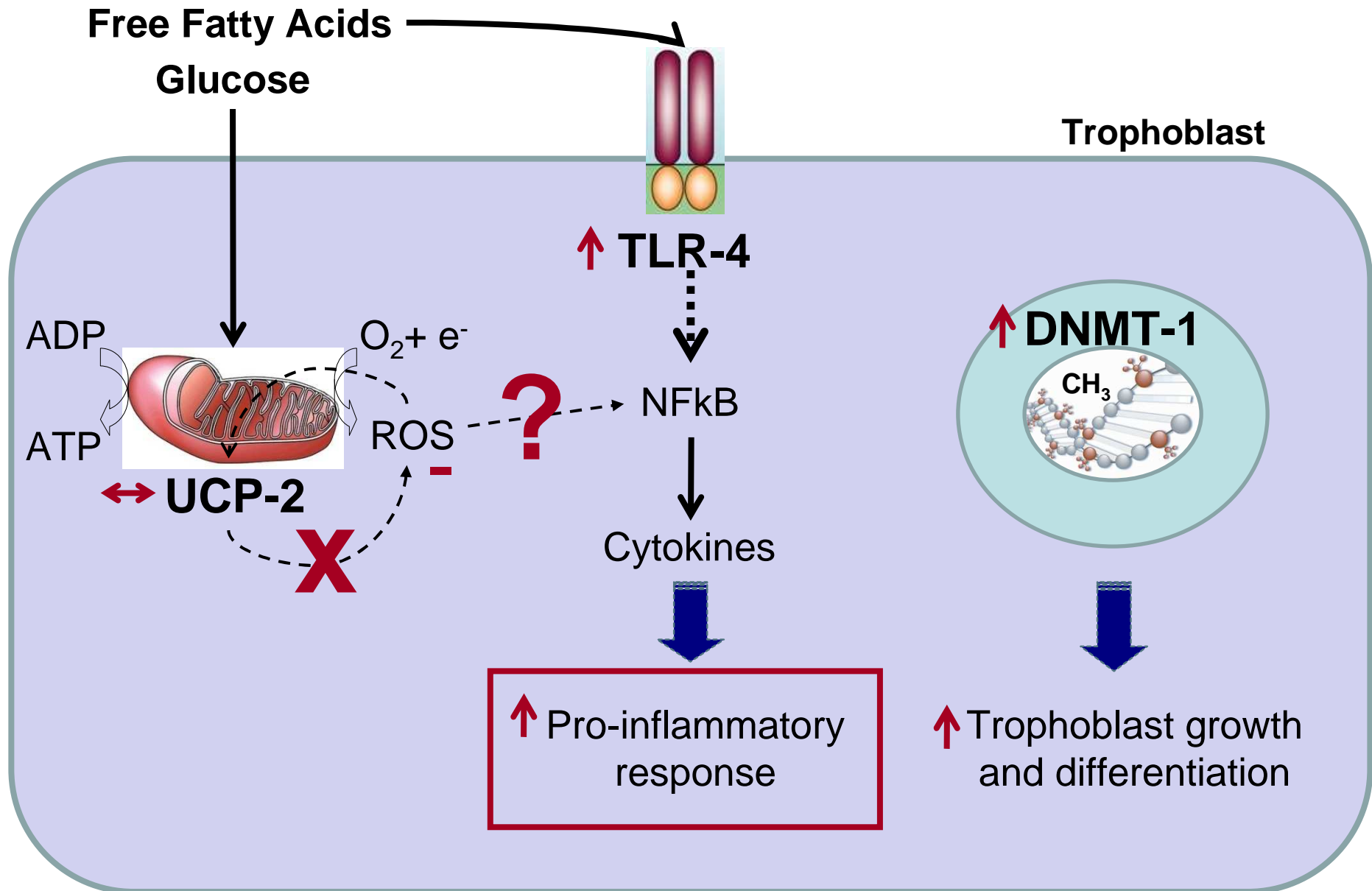
✓ Different response Ob-D

- ✓ Increase with BMI and diabetes
- ✓ Decrease at highest BMI

OVERWEIGHT & GESTATIONAL DIABETES



OBESITY



Many Thanks to:



Euristiko Research Group

- Prof. **Cristina Campoy**
- **PREOBE Team**

Early Life Nutritional Academy

- Prof. **Michael Symonds**
- Dr. **Helen Budge**
- Dr. **Sylvain Sebert**



