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## OBJECTIVES

- Vitamin K inhibits vascular calcification by activation of Matrix Gla Protein (MGP)
- Vitamin K serves as a cofactor for carboxylation of proteins, e.g. osteocalcin (OCN) and MGP
- After absorption, vitamin K can be found in all lipoprotein fractions with vitamin K1 being mainly found in chylomicron remnants and VLDL whereas vitamin K2 is mainly distributed by LDL
- Interaction of apolipoprotein E (ApoE) with the LDL receptor mediates cellular uptake.  
→ **We investigated the cellular vitamin K content in mice deficient of ApoE and the LDL receptor (LDLR) after a vitamin K rich diet**

## METHODS

C57BL/6:

Vitamin K<sub>1</sub> 5 mg/kg

Low dose

ApoE<sup>-/-</sup>:

Vitamin K<sub>1</sub> 5 g/kg + MK4 500 mg/kg

High dose

LDLR<sup>-/-</sup>:

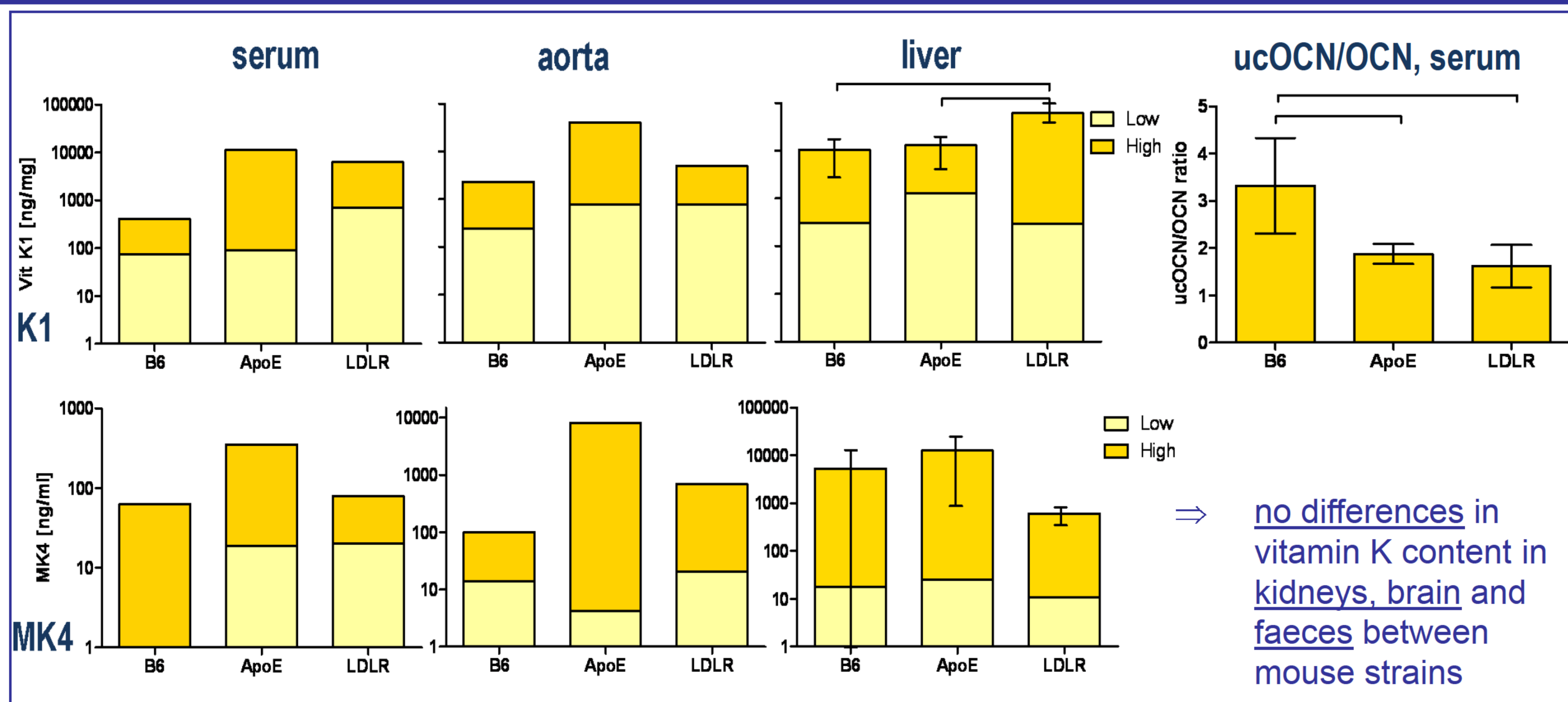
4 Weeks

blood collection, organ harvest

rp-HPLC, ELISA



## RESULTS



## CONCLUSIONS

Our data support the theory of tissue specific uptake of vitamin K isoforms. Contrary to the current opinion this uptake is independent of ApoE or LDLR protein.

