



The AMPK plays a crucial role in the protection of renal function upon lipotoxic injuries

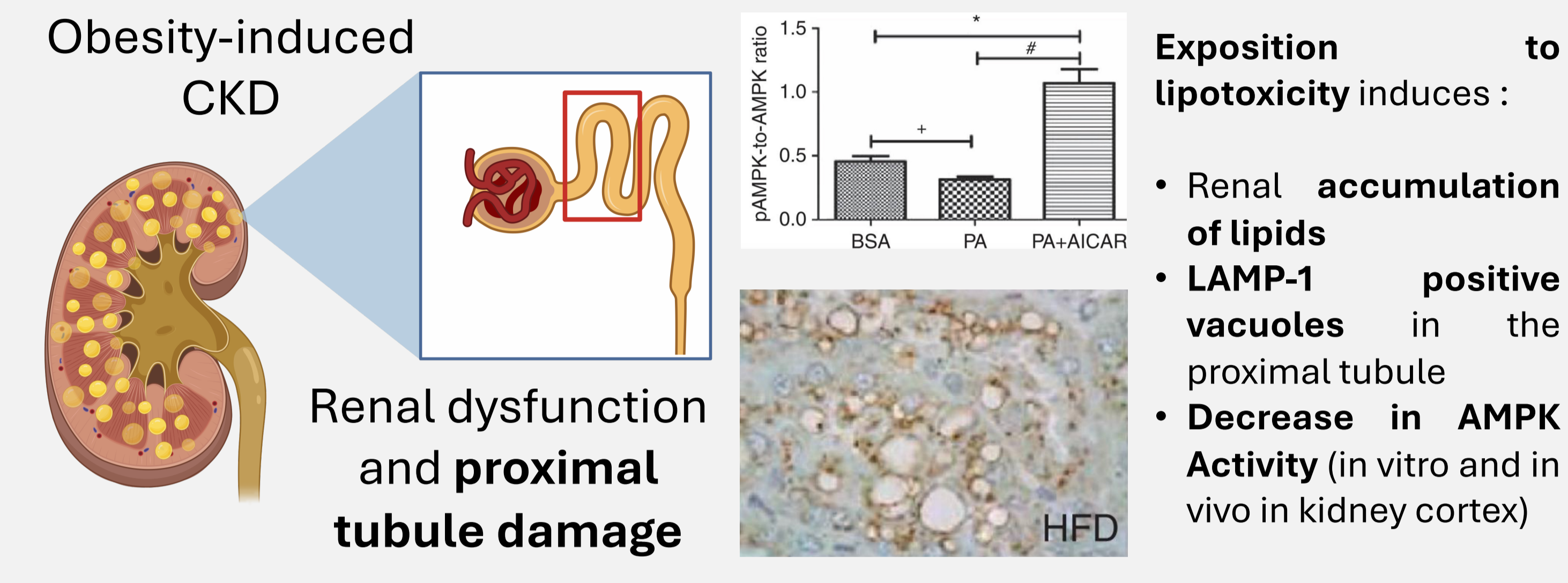
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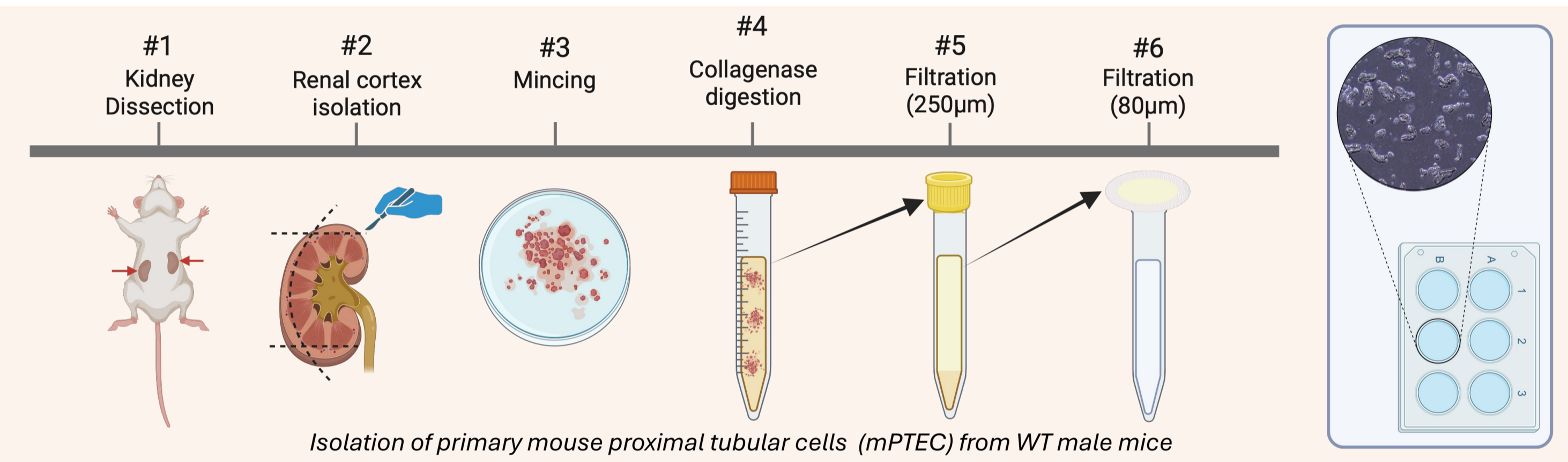
² Laboratory of Biochemistry and Cell Biology, Namur Research Institute for Life Sciences (NARILIS), University of Namur, Namur, Belgium.

BACKGROUND

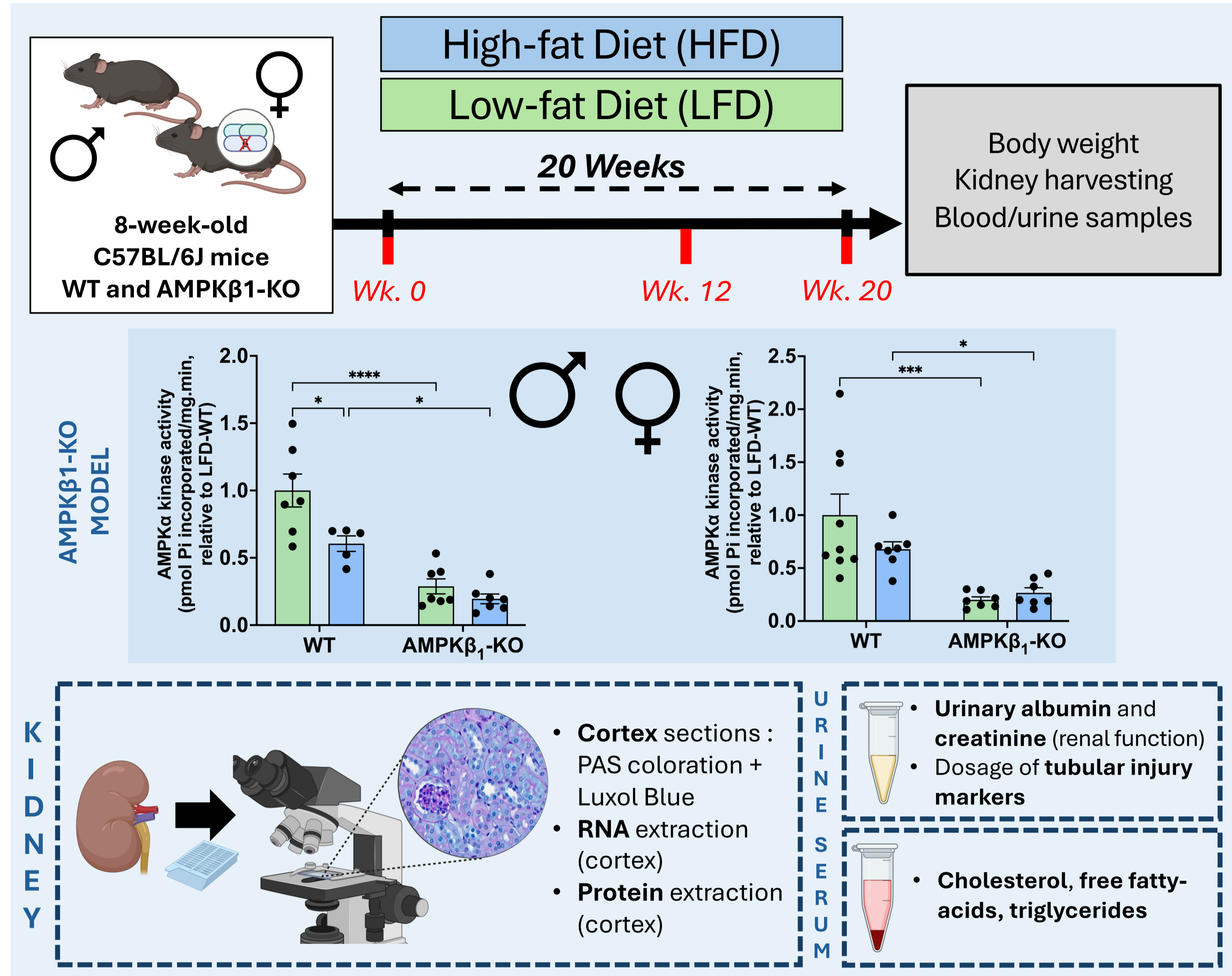
Declèves et al., 2014, Juszczak et al., 2020



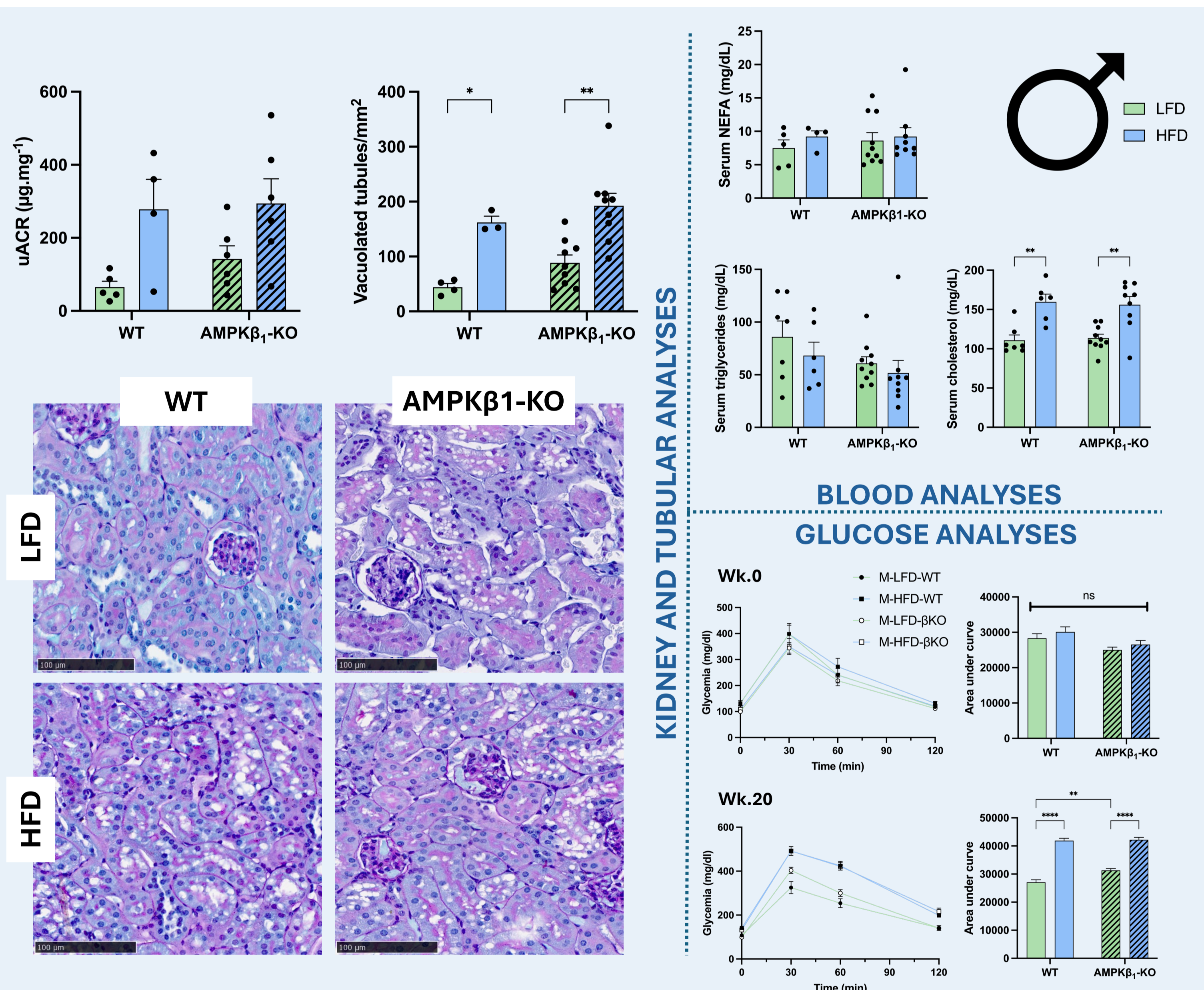
IN VITRO PRIMARY CELL MODEL



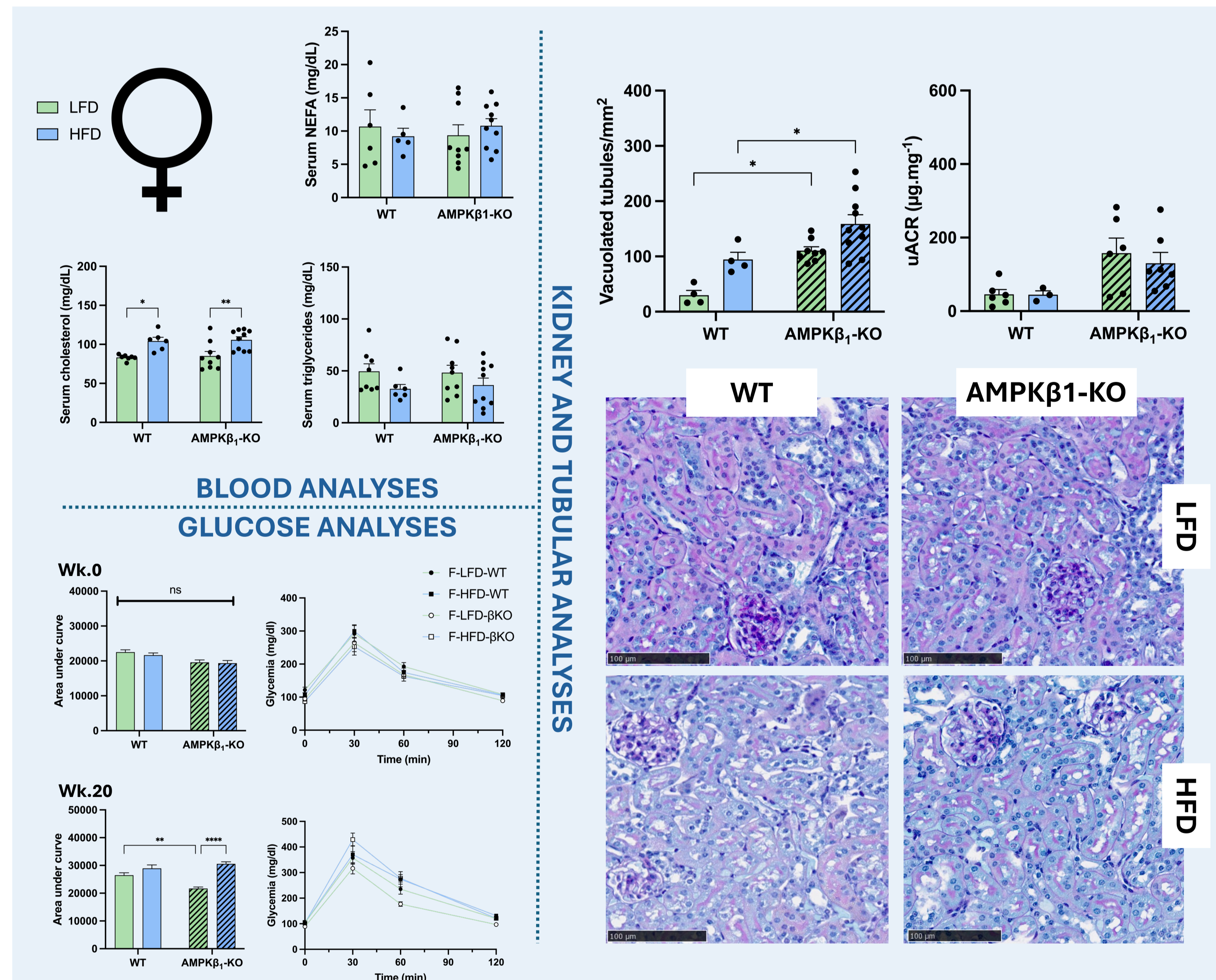
IN VIVO MOUSE MODEL



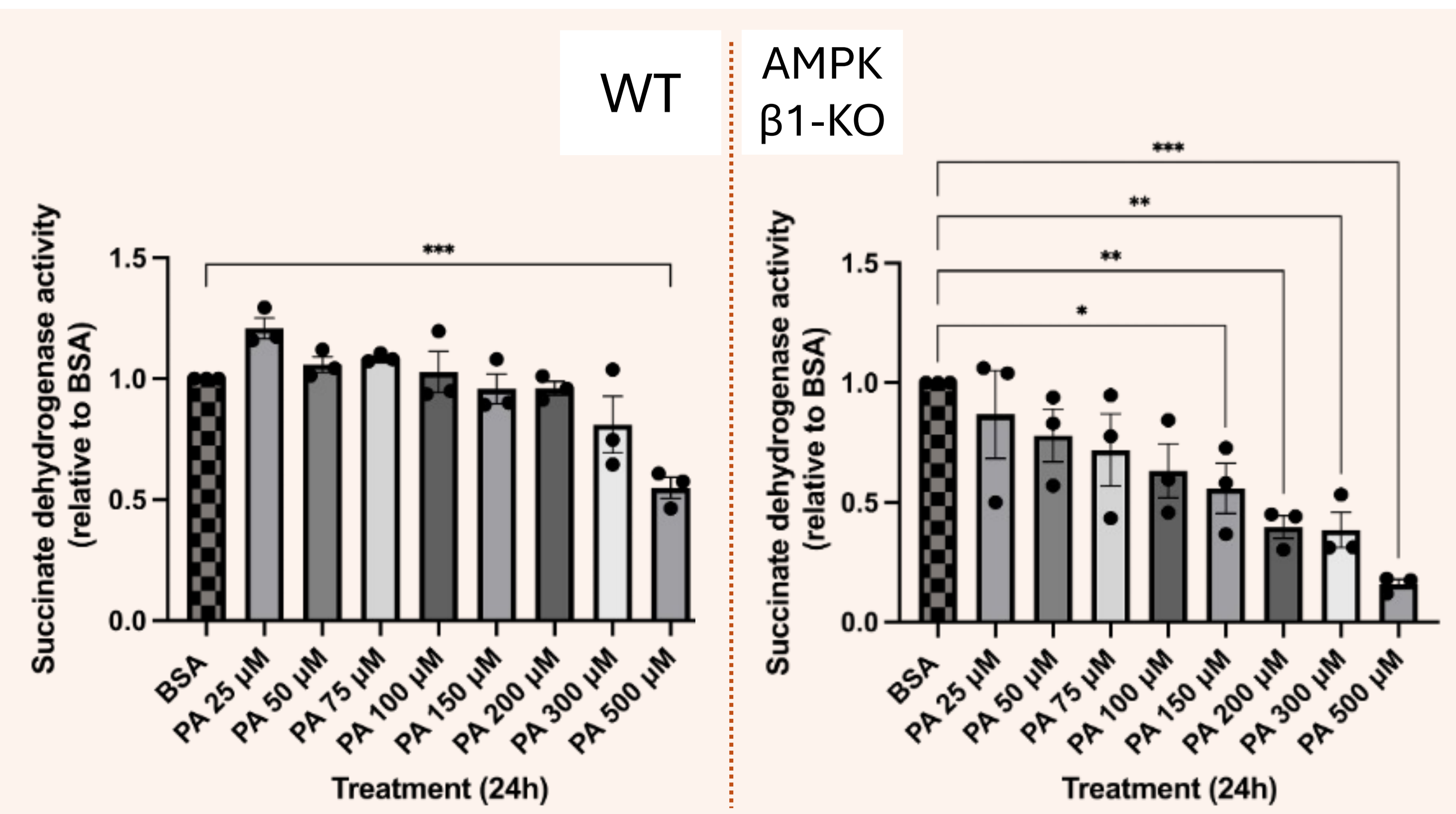
CURRENT RESULTS



IN VIVO

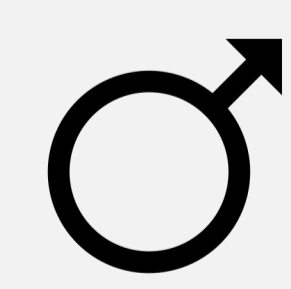


IN VITRO



CONCLUSION

Main phenotype driver : **HIGH-FAT Diet** whether the genotype. Drives lipid accumulation in kidney cortex and worsens glucose response.



→ **AMPKβ1-KO** : Possible **worsening of lipotoxicity effects** (to a lesser extent than females). Primary PTECs' metabolism is **more sensitive** to PA-induced lipotoxicity



WT female mice are **Nephroprotected** (Juszczak, et al. (2020), Biology of Sex Differences).

AND this nephroprotection is **mediated by AMPK**.

→ **AMPKβ1-KO** : Apparition of renal parenchyma alterations and renal function impairments

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