

PRIMARY CELL CULTURE

Hepatocytes cells

In vitro model of primary hepatocyte culture is a important tool used in basic research on liver function, disease, pharmacology and other related subjects specially in the early preclinical phase of drug development. The method is based on two-step collagenase perfusion for isolation of intact hepatocytes¹.

Species, strain, sex: rats, Sprague Dawley, male or female

Others: upon request:

Cell types: primary hepatocytes cells

Main read-outs: viability, morphological characterization, enzymatic measurements and others.

Facultative read-outs: immunocytochemistry/ immunofluorescence, western blotting analysis, RT-PCR analysis of biomarker messenger RNA and others.

Validation Data

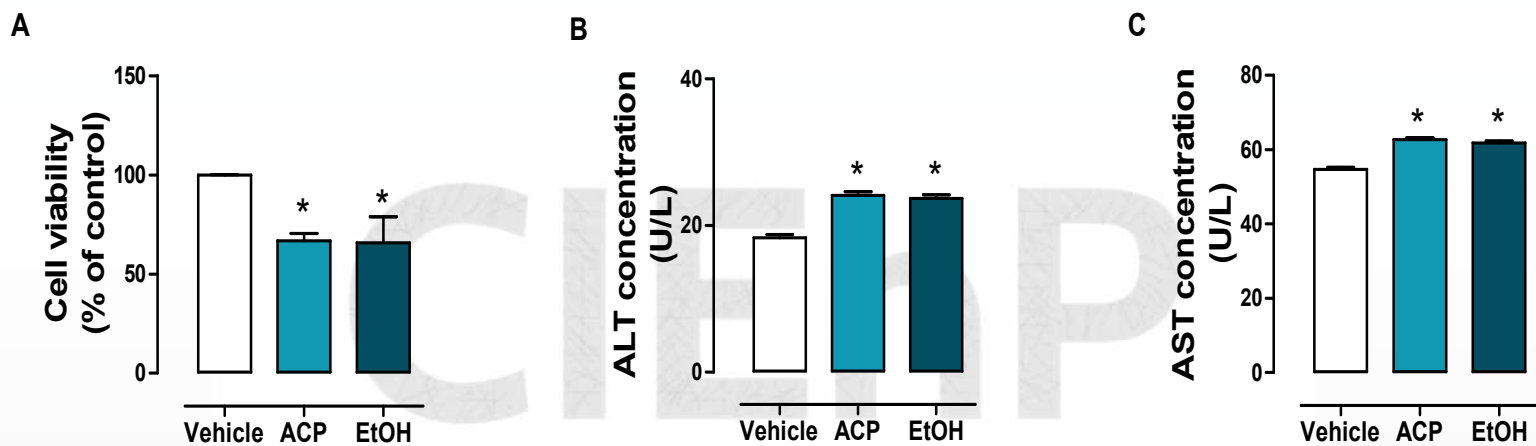


Figure 1: Primary cell culture hepatocytes of rats. (A) Evaluation of toxicity in rat hepatocytes after treatment with acetaminophen (ACP, 100 mM) or ethanol (EtOH, 80 ul/ml). Determination of liver enzyme levels (B) ALT (alanine transaminase) and (C) AST (aspartate transaminase) in cell supernatant. Statistical analyses used was one-way ANOVA with a *post-hoc* Dunnett's. *P < 0.05, versus vehicle group.

Rat colony from Charles River Laboratories are breed and maintained in SPF conditions. The project includes study plan and final report. Raw data are inspected by quality assurance unity. The experimental procedures was previously approved by the CIEnP Committee on the Ethical Use of Animals.

References:

¹Shen, L., Hillebrand, A., Wang, D.Q.H., Liu, M. Isolation and Primary Culture of Rat Hepatic Cells. J. Vis. Exp. (64), e3917(2012).