



Showcasing research from Professor Henry Yu's Translational Mechanobiology laboratory, Yong Loo Lin School of Medicine, National University of Singapore, Singapore.

LEADS – a comprehensive human liver-on-a-chip for non-alcoholic steatohepatitis (NASH) drug testing

We developed a liver-on-a-chip– the LEADS chip– via co-culture of adult human liver stem cell-derived hepatobiliary organoids, iPSC-derived Kupffer cells and iPSC-derived hepatic stellate cells. By careful optimization of co-culture and induction conditions, we recapitulated all essential features of NASH, particularly the various pathological states of steatosis. We tested candidate drugs for NASH on the LEADS chip and observed results matching to clinical responses. In the race for drug testing for NASH, our LEADS model leads the race leaving behind other *in vitro* models.

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As featured in:



See Henry Yu *et al.*,
Lab Chip, 2025, **25**, 3444.