

Halt-RONIN:

The Project:

Discovering chronic inflammation biomarkers that define key stages in the Healthy-to-NASH (non-alcoholic steatohepatitis) transition to inform early prevention and treatment strategies.

Excellence:

NAFL (non-alcoholic fatty liver) is the most widespread subtype of NAFLD, a highly prevalent inflammation-related disease, characterized by steatosis, relatively benign and reversible condition, which can progress to the more serious progressive stage of non-alcoholic steatohepatitis (NASH), in which steatosis is accompanied by lipotoxicity, mitochondrial dysfunction and a high state of inflammation and fibrosis.

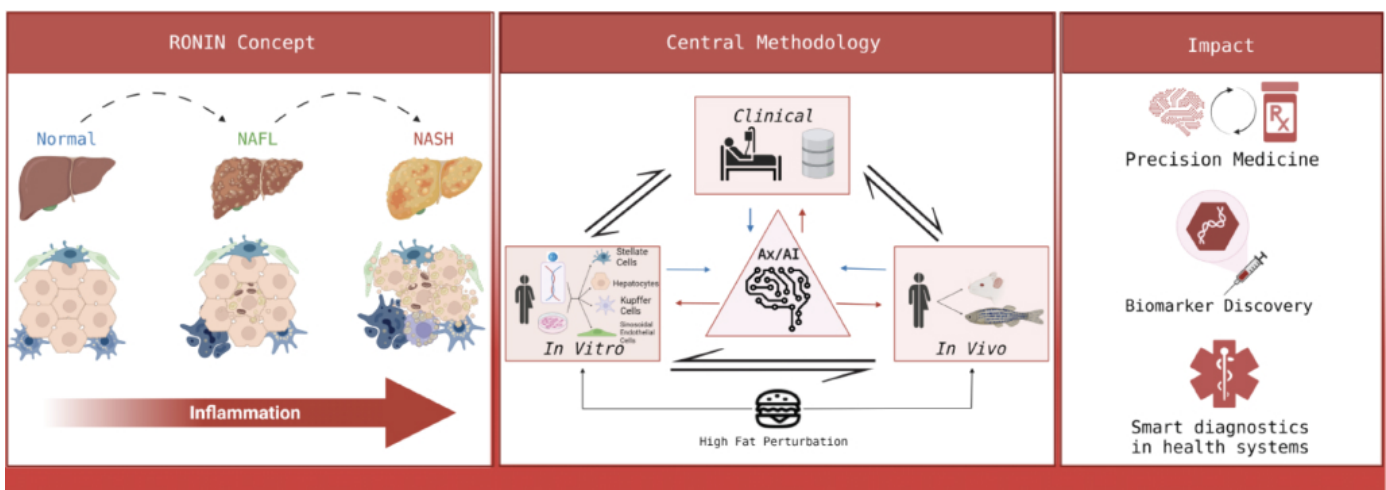
However, detection of this transition is extremely challenging, hindering personalized intervention opportunities. Moreover, the mechanisms underlying the sensitization of NAFL to multiple hits that culminate in NASH are ill defined, largely due to the lack of models that recapitulate the human disease.

What does Halt-RONIN propose?

Halt-RONIN proposes a cohesive, multimodal multiscale approach utilizing advanced preclinical models with complementary analysis to integrate diverse data on multiple pathogenic factors (i.e., molecular, including transcriptional, proteomic and metabolic biomarkers, but also dietary influence) affecting SCI, to overcome the inherent challenge of modelling inflammation in complex diseases such as NAFL-to-NASH.

The Strategy:

Halt-RONIN proposes a cohesive multi-level approach utilizing clinically-validated advanced preclinical models with multi-dimensional analysis to collect diverse data driving chronic inflammation in the health-to-disease transition – from simple steatosis to NASH – providing a blueprint to inform optimal intervention strategies.



IMPACT:

Halt-ROIN will develop novel models that can be used to advance the understanding of **NAFL-to-NASH progression**, the discovery of **novel biomarkers** and the development of **targeted and (cost-) effective drugs** against the disease.

Optimizing processes:

A better understanding of the disease progression and risk factors will lead to the **reduction of healthcare costs** and shorter treatment times by enabling a faster drug development, facilitating the development of personalized treatment options and finally **limiting the prevalence of NAFL/NASH**.