A NEW AND UNIQUE LIVER FIBROSIS MODEL

THE NIF MOUSE

Preclinical development and validation of drugs targeting chronic inflammatory and fibrotic conditions
Fibrosis of the heart, liver, lungs and kidneys contribute to approximately 40 percent of deaths in the industrial world. Despite the enormous impact on human health worldwide there are currently no effective agents that can prevent, arrest, or reverse fibrosis. The need has never been greater for new drugs to target this lethal condition.

Inficure Bio wants to be a leader in supporting the launch of new breakthrough drugs. The company has thus set an ambitious aim to become the world leader in preclinical testing of anti-fibrotic drugs. This will be achieved by establishing the NIF mouse as a first choice for efficacy testing of anti-fibrotic drug candidates. The company already has a highly qualified team of experts that with unique expertise in the science of fibrosis development, experimental animals, immunology and autoimmunity. The advantages with the NIF mouse allows Inficure Bio to offer cost-effective preclinical studies in tailored and customized output formats for efficacy tests of fibrotic compounds. This whole-organism model, in combination with Inficure Bio’s expertise, is a new service that has previously been unavailable to the biomedical industry.

REFERENCES

"We are receiving great interest in our NIF model and we are expecting tremendous growth of InfiCure as a result."

Sofia Mayans, CEO
• SPONTANEOUSLY DEVELOPS INFLAMMATION & FIBROSIS
• MIXED TH1/TH2 CYTOKINE PROFILE
• ESTABLISHED FIBROSIS IS TREATABLE

RESULTS

SPONTANEOUS DEVELOPMENT OF CHRONIC INFLAMMATION IN THE LIVER

SPONTANEOUS DEVELOPMENT OF LIVER FIBROSIS

(A) FACS analysis of liver leukocytes from NIF (black bars) and 24αβNOD (gray bars) mice at 3w, 4w, 6w, 8w, 12w and 18w of age. H&E staining of liver from NIF mice at (B) 4w, (C) 8w, and (D) 18w of age.

Picornir Sirius Red staining of liver sections from (A) 4w, (B) 6w, (C) 8w and (D) 18w old NIF mice.

NIF MICE DISPLAY A MIXED TH1/TH2 CYTOKINE PROFILE

TREATMENT WITH PAQUINIMOD REVERSES ALREADY ESTABLISHED FIBROSIS IN THE NIF MOUSE

Cytokine levels (ng/ml) of IFNγ, IL-2, IL-4, IL-5, IL-6 and IL-13 in supernatant after 24h anti-CD3 activation of total liver leukocytes from 24αβNOD and NIF mice. Statistical analysis was performed using unpaired t-test where *<0.05 and **<0.01.

(A) Masson’s trichrome-stained sections of liver from 12 week old non-treated NIF mice, NIF mice treated with Paquinimod for 4 weeks and non-treated 24αβNOD control mice.
(B) Quantification of collagen in the liver based on hydroxyproline measurements.
The non-obese diabetic inflammation and fibrosis (NIF) mouse is a proprietary animal model that spontaneously develops chronic inflammation and fibrosis in multiple organs. Because of the fibrotic component, early onset, spontaneous nature and reproducibility, this novel mouse model provides a unique tool to gain further insight into the underlying mechanisms mediating transformation of chronic inflammation into fibrosis and to evaluate intervention protocols for treating conditions of fibrotic disorders.

- Spontaneous development of inflammation and fibrosis
- Validation of the effects of novel anti-fibrotic drugs
- 100% reproducibility of the phenotype
- Early onset leading to shortened test protocols
About InfiCure Bio AB

InfiCure Bio is a life science company focusing on preclinical development and validation of drugs that target chronic inflammatory and fibrotic conditions.

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