

TECHNOLOGY OFFER

Inhibitors of Adipose Triglyceride Lipase (ATGL) for treatment of non-alcoholic fatty liver disease (NAFLD)

NAFLD is the most common liver disease globally and is commonly associated with obesity, type II diabetes, dyslipidemia, and metabolic syndrome. The prevalence of NAFLD generally increases, e.g. in the US prevalence increased from 15% in 2005 to 25% in 2010. Currently no approved drugs are available for treatment or prevention of NAFLD. Inhibition of ATGL, the rate limiting enzyme in the degradation of triacylglycerol stores, by small molecule inhibitors was shown to prevent NAFLD in mice. This highlights ATGL as a promising novel drug target enabling the development of pharmaceutical first in class compounds.

BACKGROUND

ATGL is the rate-limiting enzyme in the degradation of triacylglycerol stores and thus crucially affects the concentration of free fatty acids in the circulation. Elevated fatty acids are strongly associated with common metabolic diseases, such as NAFLD and type-2 diabetes. Pharmacological inhibition of ATGL decreases circulating fatty acids, prevents NAFLD, and improves insulin sensitivity in mouse models. This highlights ATGL as a promising target for pharmacological intervention.

TECHNOLOGY

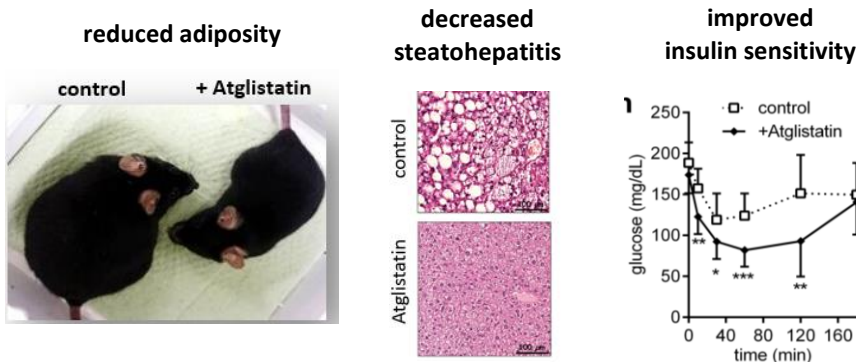
We have synthesized and characterized potent, selective, non-toxic, small molecule inhibitors for human ATGL. We have proof-of-concept data demonstrating reduced adiposity, ameliorated steatohepatitis, and improved insulin sensitivity in mice.

ADVANTAGES

- Novel drug target - enabling first in class medicine
- Outstanding research background
- Technology platform for *in-vitro* and *in-vivo* efficacy, and safety screening

MARKET

NAFLD is recognized as the most prevalent chronic liver disease worldwide. The total market volume estimation for therapy of NAFLD is estimated at 19 billion USD for 2022. Despite increasing efforts from pharma industry, no approved drugs are currently available.



KEYWORDS:

ADIPOSE TRIGLYCERIDE LIPASE
ATGL
FATTY LIVER
NAFLD
NASH
METABOLIC SYNDROME

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COOPERATION OPTIONS:

SEEKING INVESTMENT
LICENSE AGREEMENT
OWNERSHIP AGREEMENT
R&D AGREEMENT

DEVELOPMENT STATUS:

PRECLINICAL TESTING

STATUS OF PATENTS:

PATENTS GRANTED

- EP1765997 VALIDATED IN CH, DE, ES, FR, GR, GB, SE, IT, NL
- US9206115
- EP2948433 VALIDATED IN DE, FR, GB

PATENTS FILED/PENDING

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- EP19189199.3

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