

## New results on lanifibranor to be presented at the International Liver Congress™ 2019

- ▶ New study in NASH concludes that lanifibranor administration combines the beneficial effects of single PPAR agonists, and may have more potent effects on inflammation and disease progression

**Daix (France), February 4, 2019** – Inventiva S.A. (“Inventiva”), a biopharmaceutical company developing innovative therapies in nonalcoholic steatohepatitis (“NASH”), systemic sclerosis and mucopolysaccharidosis (“MPS”), today announced that the abstract submitted by Pr Frank Tacke<sup>1</sup> MD, PhD, to the European Association for the Study of the Liver comparing in a mouse model the effects on the disease characteristics of NASH of the pan-PPAR agonist lanifibranor against the effects of certain single PPAR $\alpha$ , PPAR $\gamma$  and PPAR $\delta$  agonists has been accepted for an oral presentation at the International Liver Congress™ 2019 (April 10-14, 2019, Vienna, Austria).

The study, led by Pr Frank Tacke, found that administration of lanifibranor was associated with a combination of beneficial effects on many NASH characteristics, as well as with more potent effects on inflammation and disease progression than the tested single PPAR agonists. More specifically, administration of lanifibranor was associated with increased circulating adiponectin, reduced triglycerides and attenuated hepatocyte ballooning. Additionally, administration of lanifibranor and, to a lesser extent the tested single PPAR $\alpha$  agonist, were associated with improvements in steatosis and lobular inflammation. Administration of lanifibranor was also associated with a more pronounced improvement of fibrosis than all of the other tested single PPAR agonists, suggesting that lanifibranor may combine the beneficial effects of single PPAR agonists and may counter inflammation and disease progression more potently. As a result, the study suggests that pan-PPAR agonists, such as lanifibranor, have the potential for more therapeutic effectiveness than single-PPAR agonists in the treatment of NASH.

The abstract, which is entitled “*Differential therapeutic effects of pan- and single PPAR agonists on steatosis, inflammation, macrophage composition and fibrosis in a murine model of non-alcoholic steatohepatitis,*” will be presented on April 11<sup>th</sup>. The details of the presentation are as follows:

<b>Event:</b>	International Liver Congress™ 2019, Vienna, Austria
<b>Date:</b>	Thursday, April 11 <sup>th</sup> , 2019
<b>Time of the presentation:</b>	5.30 pm to 5.45 pm (Central European Time)
<b>Session:</b>	NAFLD Pathophysiology - Target identification
<b>Speakers:</b>	Sander Lefere <sup>2</sup>

### Background on PPARs

Peroxisome proliferator-activated receptors (“PPARs”) are nuclear receptors essential for the regulation of glucose and lipid metabolism in the liver and adipose tissue. They are also expressed in immune cells, notably macrophages, where they act as modulators of inflammation and fibrogenesis. Various single or dual PPAR agonists have been clinically evaluated in NASH, yielding variable effects on aspects of NASH pathogenesis.

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**About Inventiva :** [www.inventivapharma.com](http://www.inventivapharma.com)

Inventiva is a biopharmaceutical company specialized in the development of product candidates interacting with nuclear receptors, transcription factors and epigenetic modulators. Inventiva's research engine has the potential to open up novel therapies against fibrotic diseases, cancers and orphan diseases with substantial unmet medical needs.

Lanifibranor, its lead product candidate, is an anti-fibrotic treatment acting on the alpha, gamma and delta PPARs, which play key roles in controlling the fibrotic process. Its anti-fibrotic action targets two initial indications with substantial unmet medical need: NASH, a severe and increasingly prevalent liver disease already affecting over 30 million people in the United States, and systemic sclerosis, a disease with a very high mortality rate and for which there is no approved treatment to date.

Inventiva is also developing a second clinical program with odiparcil for the treatment of patients with mucopolysaccharidosis type VI (or Maroteaux-Lamy syndrome), a rare and severe gene disease affecting children. Odiparcil has also the potential to address other MPS types, characterized by the accumulation of chondroitin or dermatan sulfate (MPS I or Hurler/Sheie syndrome, MPS II or Hunter syndrome, MPS IVa or Morquio syndrome and MPS VII or Sly syndrome). Inventiva is also developing a portfolio of early research projects in the field of oncology.

Inventiva benefits from partnerships with world-leading research entities, such as the Institut Curie in the field of oncology. Two strategic partnerships have also been established with world-class major pharmaceutical companies, AbbVie and Boehringer Ingelheim, in the fields of autoimmune diseases (specifically in psoriasis) and fibrosis, respectively. These partnerships provide milestone payments to Inventiva upon the achievement of pre-clinical, clinical, regulatory and commercial milestones, in addition to royalties on any approved products resulting from the partnerships.

Inventiva employs over 100 employees and owns R&D facilities near Dijon, which were acquired from the international pharmaceutical group Abbott. The company owns a proprietary chemical library of over 240,000 molecules as well as integrated biology, chemistry, ADME and pharmacology platforms.

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