

Inventiva achieves a major milestone by completing patient recruitment for its Phase IIb clinical study with lanifibranor in NASH

- ► Last patient randomized in the Phase IIb NATIVE trial evaluating lanifibranor in NASH patients
- ▶ 247 patients randomized in the study, exceeding the initial target of 225 patients
- Publication of the study results expected in H1 2020

Daix (France), September 4, 2019 — Inventiva (Euronext: IVA), a clinical-stage biopharmaceutical company developing oral small molecule therapies for the treatment of diseases in the areas of fibrosis, lysosomal storage disorders and oncology, today announced the successful completion of patient recruitment for its Phase IIb NATIVE (*NASH Trial to Validate IVA337 Efficacy*) clinical trial evaluating lanifibranor, the Company's lead product candidate, for the treatment of non-alcoholic steatohepatitis (NASH).

A total of 247 patients have been randomized in the Phase IIb NATIVE trial, exceeding the initial target of 225 patients following an acceleration of inclusions over the last months. Patients were mainly recruited in sites located in Australia, Canada, Europe and the United States. The objective to recruit patients with a severe form of NASH was met as approximately 73% among them have a NAS score greater than or equal to six and 76% have a F2 or F3 fibrosis score. In addition, the study population includes more than 40% of patients with type 2 diabetes (T2DM), allowing Inventiva to conduct the planned subanalyses in this key patient group, where lanifibranor as an insulin sensitizer should be particularly beneficial. It is estimated that approximately half of the NASH patients globally have T2DM, and are at greater risk of poor clinical outcomes. To date, 146 patients have already successfully completed the six-month study confirming that the treatment is well tolerated.

Having reached this key recruitment milestone, the publication of the study's headline results is expected for H1 2020.

The completion of patient recruitment follows three meetings of the NATIVE DSMB (Data Safety Monitoring Board), which had reviewed patient safety data and repeatedly recommended the continuation of the trial without changing the protocol, confirming the favorable safety profile of lanifibranor. These positive outcomes are consistent with the results of long-term toxicological studies and Phase I and Phase II clinical trials, as well as with the FDA's decision in May 2019 to lift the peroxisome proliferator-activated receptor (PPAR) target class-related clinical hold for lanifibranor.

Prof. Sven Francque, M.D., Ph.D. from the Antwerp University Hospital and Co-Principal Investigator of the study, said: "Since the PPAR mechanism of action has already widely been validated for the treatment of NASH, and given lanifbranor's unique profile as a pan-PPAR agonist, this drug candidate should be able to reduce NASH and the fibrosis associated with it as well as to provide metabolic benefits. The analysis of patients with type two diabetes will also be of importance to confirm that lanifibranor is particularly suited to this population."

Prof. Manal Abdelmalek, M.D., M.P.H. from Duke University and Co-Principal Investigator of the study, stated: "The completion of patient recruitment in this international study is excellent news. The study has been well



conducted, and given the preclinical and clinical results generated by lanifibranor so far, we are confident that this treatment will prove to be a valuable approach to treat NASH patients."

Marie-Paule Richard, M.D., Chief Medical Officer of Inventiva, added: "A great thank-you to all of the clinicians and patients participating in this international trial. The safety profile of lanifibranor and the way the study has been conducted so far are very encouraging. We are confident that this trial will reach its primary endpoint and we are looking forward to publishing the results in the first half of 2020, which, if positive, will support lanifibranor's entry into the pivotal Phase III."

About lanifibranor

Lanifibranor, Inventiva's lead product candidate, is an orally-available small molecule that acts to induce antifibrotic, anti-inflammatory and beneficial metabolic changes in the body by activating all three peroxisome proliferator-activated receptor ("PPAR") isoforms, which are well-characterized nuclear receptor proteins that regulate gene expression. Lanifibranor is a PPAR agonist that is designed to target all three PPAR isoforms in a moderately potent manner, with a well-balanced activation of PPAR α and PPAR α , and a partial activation of PPAR α . While there are other PPAR agonists that target only one or two PPAR isoforms for activation, lanifibranor is the only pan-PPAR agonist in clinical development. Inventiva believes that lanifibranor's moderate and balanced pan-PPAR binding profile contributes to the favorable safety and tolerability profile that has been observed in clinical trials and pre-clinical studies to date.

Inventiva is currently evaluating lanifibranor in a Phase IIb clinical trial for the treatment of non-alcoholic steatohepatitis ("NASH"), a common and progressive chronic liver disease, for which there is currently no approved therapy.

About the NATIVE Phase IIb trial

The NATIVE (NAsh Trial to Validate IVA337 Efficacy) clinical trial is a 24-week randomized, double-blind, placebo-controlled Phase IIb clinical trial evaluating lanifibranor in the treatment of patients with non-alcoholic steatohepatitis ("NASH"). The goal of the trial is to assess the effect of lanifibranor on the improvement in liver inflammation and ballooning, which are two of the markers of the resolution of NASH. To be considered for inclusion, patients must have: a diagnosis of NASH confirmed by liver biopsy; a cumulative score of inflammation and ballooning (as measured using the steatosis, activity and fibrosis, or "SAF", scoring system) of three or four out of four, indicating the presence of moderate to severe inflammation and ballooning; a steatosis score greater than or equal to one, indicating the presence of moderate to severe steatosis; and a fibrosis score less than four, indicating the absence of cirrhosis. The primary endpoint of the trial is a reduction in the combined inflammation and ballooning score of two points compared to baseline, without worsening fibrosis. Secondary endpoints include NASH resolution, improvements in each of the steatosis, inflammation, ballooning and fibrosis scores from baseline as measured using the SAF score, improvements in various other fibrosis measures, improvements in several metabolic markers, improvements in steatosis, inflammation and ballooning as measured using the "NAS" score, and safety.

The trial has randomized 247 patients with NASH at more than 70 sites in Australia, Canada, Europe, Mauritius and the United States. Results of the trial are expected in the first half of 2020.

About Inventiva

Inventiva is a clinical-stage biopharmaceutical company focused on the development of oral small molecule therapies for the treatment of diseases with significant unmet medical needs in the areas of fibrosis, lysosomal storage disorders and oncology.



Leveraging its expertise and experience in the domain of compounds targeting nuclear receptors, transcription factors and epigenetic modulation, Inventiva is currently advancing two clinical candidates – lanifibranor and odiparcil – in non-alcoholic steatohepatitis ("NASH") and mucopolysaccharidosis ("MPS"), respectively, as well as a deep pipeline of earlier stage programs.

Lanifibranor, its lead product candidate, is being developed for the treatment of patients with NASH, a common and progressive chronic liver disease. Inventiva is currently evaluating lanifibranor in a Phase IIb clinical trial for the treatment of this disease for which there are currently no approved therapies.

Inventiva is also developing odiparcil, a second clinical-stage asset, for the treatment of patients with MPS, a group of rare genetic disorders. The Company is currently investigating odiparcil in a Phase IIa clinical trial for the treatment of patients with the MPS VI subtype.

In parallel, Inventiva is in the process of selecting an oncology development candidate for its Hippo signalling pathway program. The Company has established two strategic partnerships with AbbVie and Boehringer Ingelheim in the areas of autoimmune diseases and idiopathic pulmonary fibrosis ("IPF") respectively. AbbVie has started the clinical development phase of ABBV-157, a drug candidate for the treatment of moderate to severe psoriasis resulting from its collaboration with Inventiva. Both collaborations entitle Inventiva to receive milestone payments upon the achievement of pre-clinical, clinical, regulatory and commercial milestones, in addition to royalties on any approved products resulting from the partnerships.

The Company has a scientific team of approximately 70 people with deep expertise in the fields of biology, medicinal and computational chemistry, pharmacokinetics and pharmacology a well as in clinical development. It also owns an extensive library of approximately 240,000 pharmacologically relevant molecules, around 60% of which are proprietary, as well as a wholly-owned research and development facility.

Inventiva is a public company listed on compartment C of the regulated market of Euronext Paris (Euronext: IVA – ISIN: FR0013233012). www.inventivapharma.com

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