PRESS RELEASE

Inventiva announces the publication in *Clinical Gastroenterology and Hepatology* of the results of its analysis of new and specific non-invasive signature predictive of histological response in patients with MASH treated with lanifibranor

- Biomarker signatures were developed to predict histological treatment response to lanifibranor treatment in patients with MASH and fibrosis
- The biomarker signatures developed for fibrosis improvement, MASH resolution and composite histological endpoints, suggested better predictive accuracy than other diagnostic scores available including FIB4, FIBC3, ABC3D, NFS, ELF and MACK-3
- The biomarker signatures suggested strong predictive accuracy, with AUROC values above 0.80 that may indicate high reliability in distinguishing responders from non-responders
- The analysis confirmed that histological response to lanifibranor could be assessed with non-invasive signatures based on blood markers

Daix (France), New York City (New York, United States), April 24, 2025 – Inventiva (Euronext Paris and Nasdaq: IVA) (the "Company"), a clinical-stage biopharmaceutical company focused on the development of oral small molecule therapies for the treatment of metabolic dysfunction-associated steatohepatitis ("MASH") and other diseases with significant unmet medical needs, today announced publication in the peer-reviewed medical journal Clinical Gastroenterology and Hepatology, of its analysis on new non-invasive biomarker signatures predictive of histology response following treatment with lanifibranor in patients with MASH and fibrosis.

Pr. Jérôme Boursier, Head of Department Hepato-gastroenterology and digestive oncology at the University Hospital Centre of Angers, stated: *"Our collaboration with Inventiva has been instrumental in addressing the critical need for reliable non-invasive biomarkers in MASH. With the effects of lanifibranor on histological endpoints observed in the NATIVE Phase 2b trial and our encouraging biomarker dataset, we are optimistic about developing robust composite biomarker scores which could predict treatment response and therefore the identification of patients most likely to respond to treatment with lanifibranor. In our analyses, the biomarker signatures were observed to outperform the current scores available in predicting the response to lanifibranor. We look forward to continuing our efforts to further refine these signatures and ultimately transforming patient management in chronic liver disease."*

Pierre Broqua, Chief Scientific Officer and cofounder of Inventiva, commented: "*Our collaboration with Professor Boursier and his team has enabled us to develop robust biomarker signatures that significantly enhance our ability to predict treatment response for patients treated with lanifibranor using a combination of serum-based biomarkers obtained in clinical practice. These signatures were developed and validated using NATIVE and we aim to further our analysis with the data from our Phase 3 clinical trial. The analysis further strengthens our confidence in the potential for lanifibranor to become a liver-targeted backbone treatment for MASH."*

The analysis assessed 71 biomarkers of interest (65 laboratory parameters and 6 diagnostic scores) measured in the Phase 2b NATIVE at baseline and after 24 weeks of treatment with lanifibranor 800mg and 1200mg/daily, in

order to select biomarkers predictive of histological responses: MASH resolution with fibrosis improvement (E1), MASH resolution without fibrosis worsening (E2), and fibrosis improvement alone without worsening of MASH (E3).

The biomarkers included E1-score (baseline adiponectin and ferritin; delta of matrix metalloproteinase 9 and transferrin), E2-score (baseline cytokeratin 18 Fragment M65; delta of hyaluronic acid, fructosamine and ALT) and E3-score (baseline cytokeratin 18 Fragment M65 and gamma-GT; delta of AST, insulin, and urea) representing metabolic, apoptotic and fibrosis aspects of the disease. These signatures were observed to provide good accuracy for the non-invasive identification of histological response under lanifibranor with AUROC at 0.81±0.08, 0.80±0.08 and 0.81±0.08 respectively.

Developing such biomarker signatures could provide a non-invasive method to help physicians identify patients most likely to benefit from lanifibranor treatment. This approach supports precision medicine strategies in liver disease management.

Publication details

Publication title:	"*Biomarkers of histological response in patients with metabolic dysfunction-associated steatohepatitis treated with lanifibranor*"
Authors:	Jérôme Boursier, Hugo Hervé, Marine Roux, Manal F. Abdelmalek, Sven M. Francque, Pierre Broqua, Jean Louis Junien, Jean-Louis Abitbol, Philippe Huot-Marchand, Lucile Dzen, Michael P Cooreman, Sanjaykumar Patel.
Online version:	doi: 10.1016/j.cgh.2024.12.039. Epub ahead of print. PMID: 40107637.

About lanifibranor

Lanifibranor, Inventiva's lead product candidate, is an orally available small molecule that acts to induce antifibrotic, anti-inflammatory and beneficial vascular and 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 PPARα and PPARδ, and a partial activation of PPARγ. 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 for the treatment of MASH. Inventiva believes that lanifibranor's moderate and balanced pan-PPAR binding profile contributes to the favorable tolerability profile that has been observed in clinical trials and pre-clinical studies to date. The FDA has granted Breakthrough Therapy and Fast Track designation to lanifibranor for the treatment of MASH.

About Inventiva

Inventiva is a clinical-stage biopharmaceutical company focused on the research and development of oral small molecule therapies for the treatment of patients with MASH and other diseases with significant unmet medical need. The Company is currently evaluating lanifibranor, a novel pan-PPAR agonist, in the NATiV3 pivotal Phase 3 clinical trial for the treatment of adult patients with MASH, a common and progressive chronic liver disease.
The Company has a scientific team of approximately 90 people with deep expertise in the fields of biology, medicinal and computational chemistry, pharmacokinetics and pharmacology, and clinical development. It owns an extensive library of approximately 240,000 pharmacologically relevant molecules, approximately 60% of which are proprietary, as well as a wholly owned research and development facility.

Inventiva is a public company listed on compartment B of the regulated market of Euronext Paris (ticker: IVA, ISIN: FR0013233012) and on the Nasdaq Global Market in the United States (ticker: IVA). www.inventivapharma.com

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Important notice

This press release contains certain "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this press release are forward-looking statements. These statements include, but are not limited to, Inventiva's expectations with respect to forecasts and estimates with respect to Inventiva's clinical trials and analyses, including design, protocol, duration, and the results and timing thereof and regulatory matters with respect thereto, study data releases and publications, the information, insights and impacts that may be gathered from preclinical studies, clinical trials and analyses, the potential therapeutic benefits of lanifibranor, the potential of biomarker signatures to accurately predict treatment response to lanifibranor and related potential benefits to patient treatment, the expected benefit of having received Breakthrough Therapy Designation and Fast Track Designation, potential regulatory submissions, approvals and commercialization, Inventiva's pipeline and preclinical and clinical development plans, the clinical development of and regulatory plans and pathway for lanifibranor, and future activities, expectations, plans, growth and prospects of Inventiva. Certain of these statements, forecasts and estimates can be recognized by the use of words such as, without limitation, "believes", "anticipates", "expects", "intends", "plans", "seeks", "estimates", "may", "will", "would", "could", "might", "should", "designed", "hopefully", "target", "potential", "opportunity", "possible", "aim", and "continue" and similar expressions. Such statements are not historical facts but rather are statements of future expectations and other forward-looking statements that are based on management's beliefs. These statements reflect such views and assumptions prevailing as of the date of the statements and involve known and unknown risks and uncertainties that could cause future results, performance, or future events to differ materially from those expressed or implied in such statements. Actual events are difficult to predict and may depend upon factors that are beyond Inventiva's control. There can be no guarantees with respect to product candidates that the clinical trial results will be available on their anticipated timeline, that future clinical trials will be initiated as anticipated, that product candidates will receive the necessary regulatory approvals, or that any of the anticipated milestones by Inventiva or its partners will be reached on their expected timeline, or at all. Future results may turn out to be materially different from the anticipated future results, performance or achievements expressed or implied by such statements, forecasts and estimates due to a number of factors, including that interim data or data from any interim analysis of ongoing clinical trials may not be predictive of future trial results, the recommendation of the DMC may not be indicative of a potential marketing approval, Inventiva cannot provide assurance on the impacts of the Suspected Unexpected Serious Adverse Reaction on the results or timing of the NATiV3 trial or regulatory matters with respect thereto, that Inventiva is a clinical-stage company with no approved products and no historical product revenues, Inventiva has incurred significant losses since inception, Inventiva has a limited operating history and has never generated any revenue from product sales, Inventiva will require additional capital to finance its operations, in the absence of which, Inventiva may be required to significantly curtail, delay or discontinue one or more of its research or development programs or be unable to expand its operations or otherwise capitalize on its business opportunities and may be unable to continue as a going concern, Inventiva's ability to obtain financing, to enter into potential transactions, Inventiva's ability to satisfy in part or full the closing

conditions for subsequent tranches of the structured financing announced on October 14, 2024 (the "Structured Financing"), on the expected timing or at all, and whether and to what extent the prefunded warrants issued in connection with the Structured Financing may be exercised and by which holders, Inventiva's future success is dependent on the successful clinical development, regulatory approval and subsequent commercialization of its product candidate, lanifibranor, preclinical studies or earlier clinical trials are not necessarily predictive of future results and the results of Inventiva's and its partners' clinical trials may not support Inventiva's and its partners' product candidate claims, Inventiva's expectations with respect to its clinical trials may prove to be wrong and regulatory authorities may require additional holds and/or additional amendments to Inventiva's clinical trials, Inventiva's expectations with respect to the clinical development plan for lanifibranor for the treatment of MASH may not be realized and may not support the approval of a New Drug Application, Inventiva and its partners may encounter substantial delays beyond expectations in their clinical trials or fail to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities, the ability of Inventiva and its partners to recruit and retain patients in clinical studies, enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be made more difficult or rendered impossible by multiple factors outside Inventiva's and its partners' control, Inventiva's product candidates may cause adverse drug reactions or have other properties that could delay or prevent their regulatory approval, or limit their commercial potential, Inventiva faces substantial competition and Inventiva's business, and pre-clinical studies and clinical development programs and timelines, its financial condition and results of operations could be materially and adversely affected by geopolitical events, such as the conflict between Russia and Ukraine and related sanctions, the conflict in the Middle East and the related risk of a larger conflict, health epidemics, and macroeconomic conditions, including developments in international trade policies, global inflation, fluctuations in interest rates, uncertain financial markets and disruptions in banking systems. Given these risks and uncertainties, no representations are made as to the accuracy or fairness of such forward-looking statements, forecasts, and estimates. Furthermore, forward-looking statements, forecasts and estimates only speak as of the date of this press release. Readers are cautioned not to place undue reliance on any of these forward-looking statements.

Please refer to the Universal Registration Document for the year ended December 31, 2024, filed with the Autorité des Marchés Financiers on April 15, 2025, and the Annual Report on Form 20-F for the year ended December 31, 2024, filed with the Securities and Exchange Commission (the "SEC") on April 15, 2025 for other risks and uncertainties affecting Inventiva, including those described under the caption "Risk Factors", and in future filings with the SEC. Other risks and uncertainties of which Inventiva is not currently aware may also affect its forward-looking statements and may cause actual results and the timing of events to differ materially from those anticipated. All information in this press release is as of the date of the release. Except as required by law, Inventiva has no intention and is under no obligation to update or review the forward-looking statements referred to above. Consequently, Inventiva accepts no liability for any consequences arising from the use of any of the above statements.

Please note that this press release does not pertain to conditions precedent relating to the €348 million Structured Financing announced on October 14, 2024. Important information relating to the second tranche of the Structured Financing will be the subject of a press release from the Company at the applicable time.