



PRESS RELEASE

Ipsen announces withdrawal of palovarotene NDA, confirming intention to re-submit following additional data analyses

- This follows ongoing dialogue with the U.S. FDA regarding the palovarotene NDA review, initiated in May 2021

Paris (France), Friday 13 August, 2021 – Ipsen (Euronext: IPN; ADR: IPSEY) today announced, following very recent discussions with the U.S. Food and Drug Administration (FDA), withdrawal of the New Drug Application (NDA) for palovarotene. This follows ongoing dialogue with the FDA following the acceptance of the NDA for Priority Review which was announced on 28 May 2021. During the review and ongoing dialogue between Ipsen and the FDA, it was recognized that additional analyses and evaluation of data collected from Ipsen's Phase III MOVE and FOP program would be required to progress and complete the review process. It was agreed between Ipsen and the FDA that it would not be possible to complete this within the current NDA review cycle. As a result, Ipsen has therefore confirmed their withdrawal of the NDA for palovarotene. After recent discussion with FDA, Ipsen plans to resubmit to the FDA upon completion of the additional data analyses.

Dr. Howard Mayer, Executive Vice President and Head of Research and Development, Ipsen, said "We remain committed to the FOP community through our clinical programs for Ipsen's two investigational therapies palovarotene and IPN60130. We recognize the urgency from this community to bring a much-needed treatment option to people living with FOP around the world. Unfortunately, as there is no regulatory mechanism to "pause" the current ongoing review process, we have taken the decision to withdraw the NDA for palovarotene to undertake the additional analyses and evaluation needed, with plans to resubmit the data for palovarotene as soon as possible."

Palovarotene is an oral, investigational, selective RAR γ agonist for the prevention of heterotopic ossification (new bone formation) as a potential treatment for people living with fibrodysplasia ossificans progressiva (FOP). The target regulatory action date assigned by the FDA under a Priority Review status for palovarotene was 30 November 2021.

FOP is an ultra-rare genetic disorder with an estimated prevalence of 1.36 per million individuals globally; however, the number of confirmed cases varies by country.^{1,2} It is characterized by new bone formation outside of the normal skeletal system, like in soft connective tissues, a process known as heterotopic ossification (HO),³ which can be preceded by painful soft-tissue swelling or "flare-ups".² Flare-up episodes are common and are a substantial contributor to the formation of new HO, however HO can form in the absence of a flare-up. HO, once formed, is irreversible and leads to loss of mobility and shortened life expectancy.³

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About the palovarotene FOP clinical program

The Phase III MOVE (NCT03312634) trial is an ongoing open-label, single-arm trial evaluating the efficacy and safety of a chronic/flare-up dosing regimen of palovarotene, which comprises a 5mg daily dose that is increased at the start of a flare-up to 20mg for four weeks, followed by 10mg for eight weeks. At the end of the flare-up dosing period, the dose returns to the chronic 5mg daily dose. All dosing is weight-adjusted in skeletally immature participants (those under the age of 18 years with less than 90% skeletal maturity on hand/wrist x-rays performed at screening). The trial is being conducted in Argentina, Australia, Brazil, Canada, France, Italy, Japan, Spain, Sweden, the United Kingdom, and the United States.⁴ There are two ongoing Phase II (PVO-1A-202 [NCT02279095] and PVO-1A-204 [NCT02979769]) extension trials: 1) Study 202, an open-label extension of Study 201, the initial Phase II randomized, double-blind, multi-center trial; and 2) Study 204, an open-label trial to evaluate the safety and efficacy of different palovarotene dosing regimens in patients with FOP in France.

In December 2019, a partial clinical hold was applied to participants under the age of 14 years participating in the Phase II (PVO-1A-202/204 and PVO-2A-201) and Phase III (PVO-1A-301) studies at all clinical sites globally. This was due to reports of premature physeal closure (PPC). A decision to pause dosing of palovarotene in all

remaining participants in the global Phase III MOVE trial (PVO-1A-301), as well as the ongoing Phase II (PVO-1A-202/204) extension studies in FOP was made by Ipsen on January 24, 2020, based on results of a futility analysis as part of the pre-specified interim analysis (Bayesian compound Poisson analysis with square root transformation of the new HO volume data).

*Encouraging therapeutic activity was observed in post hoc analyses of interim data for the Phase III MOVE trial and shared with, and acknowledged by, the Independent Data Monitoring Committee (IDMC). Post hoc analyses included Bayesian compound Poisson analysis without square-root transformation, and weighted linear mixed-effects models (with/without square-root transformation of the new HO volume data). As such, the Company amended the protocol for the Phase III MOVE trial to include updates to the statistical-analysis section, including additional analyses requested by the IDMC, to be performed in addition to the primary pre-specified analysis. The protocol amendments are based on the IDMC's observation that the protocol pre-specified statistical model may have negatively affected the efficacy analysis and appears to have shifted the statistical conclusion from significant therapeutic benefit to showing futility of the treatment. Dosing for eligible study patients ≥14 years of age has resumed as of March 26, 2020 across the Phase II and Phase III programs for palovarotene in FOP.

About palovarotene

Palovarotene is an oral investigational, selective retinoic-acid receptor gamma (RAR γ) agonist being developed as a potential treatment for people living with the debilitating ultra-rare genetic disorder fibrodysplasia ossificans progressiva (FOP). Palovarotene, which received rare pediatric disease and breakthrough therapy designations from the FDA for the potential treatment of FOP, was acquired by Ipsen through the acquisition of Clementia Pharmaceuticals in April 2019. The palovarotene NDA was accepted by the U.S. FDA for Priority Review on 28 May 2021.

About fibrodysplasia ossificans progressiva (FOP)

Fibrodysplasia ossificans progressiva (FOP) is an ultra-rare genetic disorder characterized by bone that forms outside the normal skeleton, in muscles, tendons, or soft tissue.³ FOP has an estimated prevalence of 1.36 per million individuals globally; however, the number of confirmed cases varies by country.^{1,2}

Ipsen

Ipsen is a global, mid-sized biopharmaceutical company focused on transformative medicines in Oncology, Rare Disease and Neuroscience; it also has a well-established Consumer Healthcare business. With Total Sales of over €2.5bn in FY 2020, Ipsen sells more than 20 medicines in over 115 countries, with a direct commercial presence in more than 30 countries. The Company's research and development efforts are focused on its innovative and differentiated technological platforms located in the heart of leading biotechnological and life-science hubs: Paris-Saclay, France; Oxford, U.K.; Cambridge, U.S.; Shanghai, China. Ipsen has c.5,700 colleagues worldwide and is listed in Paris (Euronext: IPN) and in the U.S. through a Sponsored Level I American Depository Receipt program (ADR: IPSEY). For more information, visit ipsen.com.

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Ipsen's forward-looking statements

The forward-looking statements, objectives and targets contained herein are based on Ipsen's management strategy, current views and assumptions. Such statements involve known and unknown risks and uncertainties that may cause actual results, performance or events to differ materially from those anticipated herein. All of the above risks could affect Ipsen's future ability to achieve its financial targets, which were set assuming reasonable

macroeconomic conditions based on the information available today. Use of the words 'believes', 'anticipates' and 'expects' and similar expressions are intended to identify forward-looking statements, including Ipsen's expectations regarding future events, including regulatory filings and determinations. Moreover, the targets described in this document were prepared without taking into account external growth assumptions and potential future acquisitions, which may alter these parameters. These objectives are based on data and assumptions regarded as reasonable by Ipsen. These targets depend on conditions or facts likely to happen in the future, and not exclusively on historical data. Actual results may depart significantly from these targets given the occurrence of certain risks and uncertainties, notably the fact that a promising product in early development phase or clinical trial may end up never being launched on the market or reaching its commercial targets, notably for regulatory or competition reasons. Ipsen must face or might face competition from generic products that might translate into a loss of market share. Furthermore, the Research and Development process involves several stages each of which involves the substantial risk that Ipsen may fail to achieve its objectives and be forced to abandon its efforts with regards to a product in which it has invested significant sums. Therefore, Ipsen cannot be certain that favorable results obtained during pre-clinical trials will be confirmed subsequently during clinical trials, or that the results of clinical trials will be sufficient to demonstrate the safe and effective nature of the product concerned. There can be no guarantees a product will receive the necessary regulatory approvals or that the product will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements. Other risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; Ipsen's ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of Ipsen's patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions. Ipsen also depends on third parties to develop and market some of its products which could potentially generate substantial royalties; these partners could behave in such ways which could cause damage to Ipsen's activities and financial results. Ipsen cannot be certain that its partners will fulfil their obligations. It might be unable to obtain any benefit from those agreements. A default by any of Ipsen's partners could generate lower revenues than expected. Such situations could have a negative impact on Ipsen's business, financial position or performance. Ipsen expressly disclaims any obligation or undertaking to update or revise any forward-looking statements, targets or estimates contained in this press release to reflect any change in events, conditions, assumptions or circumstances on which any such statements are based, unless so required by applicable law. Ipsen's business is subject to the risk factors outlined in its registration documents filed with the French Autorité des Marchés Financiers. The risks and uncertainties set out are not exhaustive and the reader is advised to refer to Ipsen's 2020 Registration Document, available on ipsen.com.

References

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- ⁴ ClinicalTrials.gov. An efficacy and safety study of palovarotene for the treatment of fibrodysplasia ossificans progressiva. (MOVE), clinicaltrials.gov, viewed March 2021, <<https://clinicaltrials.gov/ct2/show/NCT03312634>>.