

## PRESS RELEASE



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### FIRST-IN-CLASS CD39 CHECKPOINT INHIBITOR PRESENTED AT THE AACR MEETING

- ***Novel, potent anti-CD39 antibody, IPH52, validated in preclinical models.***

**Marseille and Lyon, April 19, 2016**

Innate Pharma and OREGA Biotech today presented preclinical data on IPH52, a new CD39 checkpoint inhibitor program, at the American Association for Cancer Research (AACR) Annual Meeting 2016 in New Orleans, Louisiana, USA.

Poster #3222 presents IPH52, Innate's humanized anti-CD39 blocking antibody. This novel antibody exhibits high affinity and specificity for CD39 and potently inhibits ATPase activity in *in vitro* assays and *ex vivo* models with patient biopsies. In a murine tumor model, treatment with anti-CD39 antibody results in a significant decrease in tumor volume, and improved survival.

Poster #3218 presents for the first time the impact of CD39 disruption on the efficacy of other cancer therapeutics by comparing their effects in wildtype versus CD39 knock-out mice. The results revealed that CD39 deficiency sensitized to anti-PD1 treatment in animals that failed to respond to anti-PD-1 treatment. The antitumor efficacy of CD39 disruption is further improved when combined with an immunogenic chemotherapy. In animals bearing PD-1 insensitive tumors, combination of immunogenic chemotherapy, anti-PD1 antibody and CD39 disruption led to complete tumor eradication and long term protection (specific anti-tumor immunity) in most animals. The efficacy of an ADCC-inducing cytotoxic antibody was also improved in CD39 knock-out mice compared to wildtype.

Nicolai Wagtmann, CSO of Innate Pharma, said: *"Taken together, the data presented by Innate and our partner OREGA Biotech form a very promising body of evidence supporting the development of this new, first-in-class checkpoint inhibitor antibody. The results presented today raise exciting perspectives for the development of IPH52, both as single-agent and in combination with other checkpoint inhibitors, and we are eager to now take this first-in-class candidate forward into the preclinical development phases"*.

Jeremy Bastid, COO of OREGA Biotech, further commented: *"CD39 mediates immunosuppression through a different mechanism than other immune checkpoints and may broadly impede the efficacy of cancer therapies. The exciting data released today using both antibody blockade and genetic CD39 deficiency shed light on the capacity of CD39 disruption to drive antitumor immune responses, either alone or in combination with PD-1 checkpoint blockers, ADCC antibodies and immunogenic chemotherapy, suggesting broad development potential"*.

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Reminder:

Nicolai Wagtmann, Chief Scientific Officer of Innate Pharma, will hold a **conference call** to the attention of analysts and portfolio managers to discuss the data published and Company's innovative pipeline.

Time and dial in: **Tuesday, April 19<sup>th</sup> 10:30am Eastern Time**

USA: 888 504 7963

International: +1 719 325 2452

Access code: 1890466

Webcast: <http://urlz.fr/3pxC>

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### **About IPH52:**

IPH52 is an anti-CD39 antibody licensed from OREGA Biotech. CD39 is a membrane-bound extracellular enzyme overexpressed on both regulatory T cells and several cancer types. It plays a major role in promoting immunosuppression through the pathway degrading adenosine triphosphate (ATP) into adenosine. Within the tumor microenvironment, ATP promotes immune cell-mediated killing of cancer cells. In contrast, adenosine accumulation causes immune suppression and dysregulation of immune cell infiltrates resulting in tumor spreading.

Blockade of CD39 may therefore stimulate anti-tumor immunity across a wide range of tumors\* by promoting the accumulation of ATP and preventing the production of adenosine in the tumor microenvironment<sup>†</sup>. IPH52 is a CD39-blocking antibody aiming at restoring a pro-inflammatory micro-environment and is currently in preclinical development.

### **About Innate Pharma**

Innate Pharma S.A. is a biopharmaceutical company discovering and developing first-in-class therapeutic antibodies for the treatment of cancer and inflammatory diseases.

Innate Pharma specializes in immuno-oncology, a new therapeutic field that is changing cancer treatment by enhancing the capability of the body's own immune cells to recognize and kill cancer cells.

The Company has pioneered the development of antibodies that block inhibitory checkpoint receptors on NK cells. Today, Innate Pharma has three first-in-class antibodies in clinical development in immuno-oncology and a pipeline of preclinical candidates to novel targets and mechanisms.

Its innovative approach has translated into alliances with leaders in the biopharmaceutical industry such as Bristol-Myers Squibb and AstraZeneca, Sanofi and Novo Nordisk A/S.

Based in Marseille, France, Innate Pharma had 118 employees as at December 31, 2015. The company is listed on Euronext Paris.

Learn more about Innate Pharma at [www.innate-pharma.com](http://www.innate-pharma.com).

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\* CD39 is expressed in several human cancers, including kidney, lung, ovarian, pancreatic, thyroid, testicular, endometrial, and prostate tumors, as well as in lymphoma and melanoma.

<sup>†</sup> Bastid et al., *Cancer Immunol Res.* 2015 ; Bastid et al., *Oncogene* 2013

## About OREGA Biotech

OREGA Biotech specializes in the discovery and the development of first-in-class monoclonal antibodies for cancer immunotherapy. With a specific focus on tumor microenvironment, OREGA's Target Discovery Program aims at discovering and validating novel clinically-relevant cancer targets.

Incepted in 2010, OREGA Biotech is based on the research conducted by its academic cofounders Nathalie Bonnefoy, Armand Bensussan and Jean-François Eliaou. OREGA's business strategy is to bring its R&D programs up to preclinical proof of concept, IND or early clinical stages and then to license them out to larger biotech or pharmaceutical companies. Funded by initiative Octalfa, SHAM Innovation Santé, Rhône-Alpes Création and INSERM-Transfert Initiative, the company is managed by Gilles Alberici, CEO and Jeremy Bastid, COO.

For more information: [www.orega-biotech.com](http://www.orega-biotech.com)

## Practical Information about Innate Pharma's shares:

**ISIN code** FRO010331421  
**Ticker code** IPH

## Disclaimer:

This press release contains certain forward-looking statements. Although the company believes its expectations are based on reasonable assumptions, these forward-looking statements are subject to numerous risks and uncertainties, which could cause actual results to differ materially from those anticipated. For a discussion of risks and uncertainties which could cause the company's actual results, financial condition, performance or achievements to differ from those contained in the forward-looking statements, please refer to the Risk Factors ("Facteurs de Risque") section of the *Document de Reference* prospectus filed with the AMF, which is available on the AMF website or on Innate Pharma's website.

This press release and the information contained herein do not constitute an offer to sell or a solicitation of an offer to buy or subscribe to shares in Innate Pharma in any country.

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