

## Oncodesign announces positive results opening the way for the ALK1 program to advance to the lead optimization phase

- Activin receptor-like kinase 1 (ALK1) is a target involved in angiogenesis with promising applications in cancer therapies
- The program has identified highly targeted inhibitor molecules and produced promising cellular results paving the way for lead optimization to begin

**Dijon, France, November 15, 2017 – 6:00pm CET** – ONCODESIGN (ALONC – FR0011766229), a biopharmaceutical group specialized in precision medicine, is announcing that it has obtained positive results opening the way for the ALK1 kinase inhibitor discovery program to move on to the lead optimization phase.

ALK1 is a kinase involved in angiogenesis. Tumoral angiogenesis is the mechanism by which new blood vessels form and infiltrate tumors to provide nutrients and oxygen and to dispose of the tumor's cellular waste products. Inhibiting this mechanism is a promising line of research in the quest for new treatments for most types of cancer.

The ALK1 program has produced positive cellular results in a mechanistic model as part of the probe to lead phase. Oncodesign has thus decided to advance it to the lead optimization phase and commence an exhaustive series of *in vivo* biological tests, while conducting medicinal chemistry optimization of the inhibitor molecules identified. A medicinal chemistry team dedicated to the project will be set up to implement this decision.

*“At the end of the Lead Optimization phase a drug candidate could be selected for preclinical trials and then clinical development”, said Jan Hoflack, Oncodesign’s Chief Scientific and Operating Officer. “Today, our preclinical portfolio contains no fewer than 12 programs, and ALK1 is joining our most advanced programs. Our goal is to develop a best-in-class drug from this program with the potential to complement other anti-angiogenic approaches, currently a market worth over \$10 billion. The addition of the drug discovery expertise of the François Hyafil research center in Paris-Saclay has enabled us to accelerate our most promising programs significantly. ALK1 is the first example of a project successfully moving on to a major new stage in its development by harnessing this new expertise.”*

After exploring molecules' therapeutic potential in the probe qualification and probe orientation stages, molecules move on to the probe to lead phase. Molecules then undergo a further selection stage after medicinal chemistry optimization of their structure, and the programs are prioritized according to their activity in relevant cell models and their potential to become a drug.

The lead optimization phase aims to identify a drug candidate, a molecule meeting a large number of very exacting criteria to determine its suitability as a future drug. The selection of a drug candidate takes place at the end of the drug discovery phase, and the regulatory development phases then begin. Lead optimization can take up to 36 months, and the success rate is typically around 50%.

### About kinases and Nanocyclix<sup>®</sup> technology:

Kinases are a family of enzymes that play a key role in regulating most cell functions, such as proliferation, cell cycle progression, metabolism, survival/apoptosis, repair of damaged DNA, motility and response to the microenvironment.

Using its Nanocyclix<sup>®</sup> technology module, Oncodesign identifies macrocyclic molecules capable of inhibiting both known and unexplored kinases in a powerful and targeted manner. A large variety of kinase inhibitors are thus explored continuously, and only the most promising inhibitor/targeted kinase combinations are selected for more in-depth investigations.

Oncodesign has built a project portfolio with tremendous potential to treat diseases with very substantial unmet medical needs. This portfolio contains both molecules already at an advanced stage of clinical development (a PET tracer for a specific type of lung cancer) and molecules at an earlier stage of development.



*Vector of innovation.*

**PRESS RELEASE**

**About ONCODESIGN:** [www.oncodesign.com](http://www.oncodesign.com)

Founded over 20 years ago by Dr Philippe Genne, the Company's CEO and Chairman, Oncodesign is a biopharma company dedicated to the precision medicine. With its unique experience acquired by working with more than 600 clients, including the world's largest pharmaceutical companies, along with its comprehensive technological platform combining state-of-the-art medicinal chemistry, pharmacology, regulated bioanalysis and medical imaging, Oncodesign is able to predict and identify, at a very early stage, each molecule's therapeutic usefulness and potential to become an effective drug. Applied to kinase inhibitors, which represent a market estimated at over \$46 billion in 2016 and accounting for almost 25% of the pharmaceutical industry's R&D expenditure, Oncodesign's technology has already enabled the targeting of several promising molecules with substantial therapeutic potential, in oncology and elsewhere, along with partnerships with pharmaceutical groups such as Bristol-Myers Squibb and UCB. Oncodesign is based in Dijon, France, in the heart of the town's university and hospital hub, and within the Paris-Saclay cluster, Oncodesign has 215 employees and subsidiaries in Canada and the USA.

**Contacts**

**Oncodesign**

Philippe Genne  
Chairman and CEO  
Tel: +33 (0)3 80 78 82 60  
[investisseurs@oncodesign.com](mailto:investisseurs@oncodesign.com)

**NewCap**

Investor & Media Relations  
Julien Perez / Nicolas Merigeau  
Tel: +33 (0)1 44 71 98 52  
[oncodesign@newcap.eu](mailto:oncodesign@newcap.eu)

