We care about cancer

PRESS RELEASE

2017-2020 strategic plan

- Rolling out the strategy of value creation through risk sharing
- Accelerating Oncodesign's internal drug discovery programmes and service activities
- Enhancing the pipeline
- 2020 strategic guidance: €40 million in revenue and profitable

Dijon, France, November 17, 2016 – Oncodesign (FR0011766229 – ALONC), a biotechnology company serving the pharmaceutical industry in the discovery of new therapeutic molecules to fight cancer and other serious illnesses with no known effective treatment, details its 2017-2020 strategic plan in today's Investor Day.

Oncodesign has some unique capabilities in the healthcare field, and has given itself a clear mission to carry out much-needed innovation in order to address unmet medical needs in many therapeutic areas in which there is a serious lack of effective molecules. In pursuit of that mission, the Group is adopting the ambitious plan of identifying the most effective innovative treatments by guiding its clients and partners towards new tools and new therapeutic molecules in precision medicine.

Philippe Genne, CEO and founder of Oncodesign, said: *"With the launch of this new strategic plan, we are writing a new chapter in Oncodesign's history alongside our acquisition of a strategic asset, the François Hyafil research centre. The centre was modernised by GSK in 2010 and offers technologies and expertise that perfectly complement those of Oncodesign as we seek to discover new effective molecules. This three-year strategic plan is firmly focused on innovation. We are very ambitious: we want to step up our technological development and our own drug discovery programmes, and we want our clients – from biotechs to the largest pharma groups – to take advantage of our comprehensive technological platform, offering the highest level of service in all key technological modules. Our approach remains based on the quality of our service and research, and this will enable us to stand out even more and accelerate our growth as part of our unique shared-risk capitalisation strategy. Accordingly, we have adopted the target of increasing revenue to €40 million and generating positive results in 2020, despite heavy R&D spending."*

• Rolling out the strategy of value creation through risk sharing

Unlike traditional biotech companies, which must invest increasing amounts of money to obtain increasingly uncertain results, Oncodesign has developed a unique strategic model based on creating value by sharing risk. Since Oncodesign was created, we have sold services to client-partners in the biopharmaceuticals industry, providing us with financing, knowledge and credibility, while also designing and co-ordinating game-changing collaborative projects allowing pooling resources with partners to jointly develop the most innovative technologies. The appeal of this model is the ability to sign strategic R&D partnerships at an early stage, while being able to negotiate licences with the pharma industry for key advanced research programmes. Time remains a key factor when developing this kind of technology business, and our approach facilitates and strengthens our therapeutic innovation efforts.

This strategic ambition is supported by a unique approach, based on early joint development along with the development of kinase inhibitors for oncology applications until pre-licence clinical proof of concept.

- Early joint development: this strategy applies mainly outside the oncology segment, allowing us to work more intensively and to cover all high-potential molecules resulting from our Nanocyclix technology.

- Development of kinase inhibitors for oncology applications until pre-licence clinical proof of concept: this approach allows us to develop our own molecules as far as possible, ensuring optimal return on investment for our shareholders.

This dual strategy enables us to undertake more projects at the same time, both for pharma groups and Oncodesign itself, while reducing risk for the company and our partners. The industrial approach to new molecule discovery is vital in the early stages of R&D. Finally, the strategy ensures a more rational way of generating economic value from R&D spending, benefiting both shareholders and patients awaiting effective treatments for indications in which medical needs remain completely unmet.

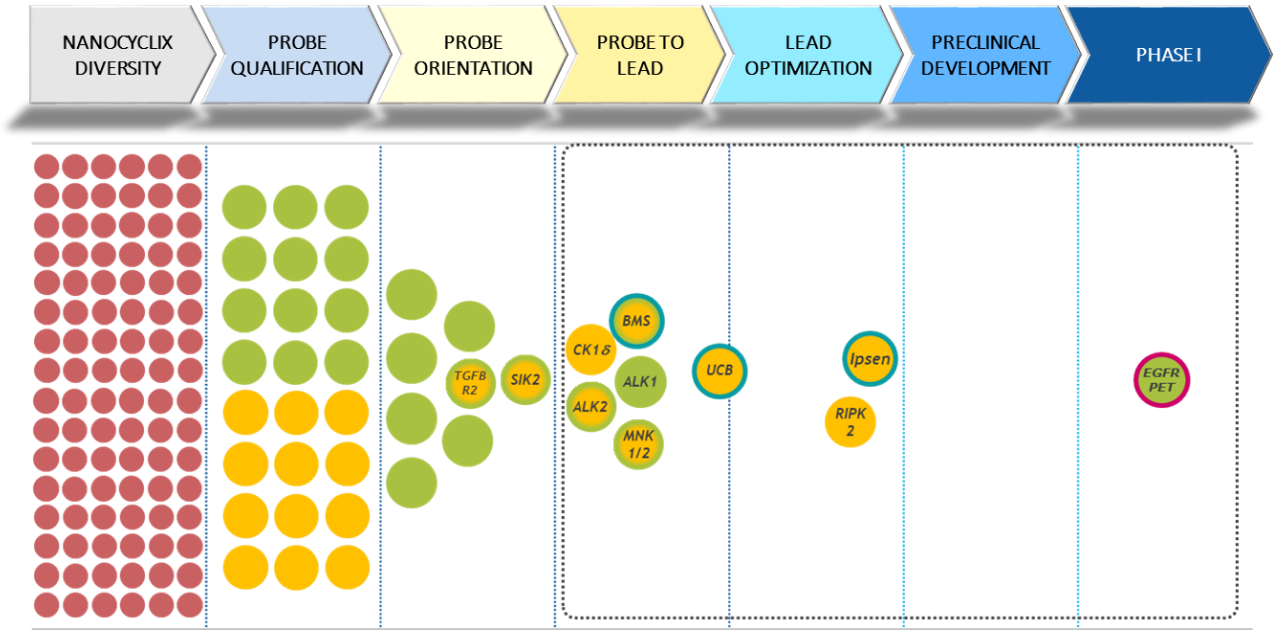
Oncodesign's development model therefore involves three main types of revenue, which complement each other, i.e. services, partnerships and licensing. We also have three strategic business activities, i.e. Experimentation (pharmacology), Discovery (chemistry) and Studies (clinical big data mining), with the latter generating therapeutic research leads for the first two.

• Accelerating Oncodesign's internal drug discovery programmes and service activities

Oncodesign's acquisition of GSK's François Hyafil research centre in Paris, France fits perfectly with the Oncodesign approach. The deal will extend our technologies and expertise in multiple therapeutic areas (see press release of September 28, 2016), but will also enhance all projects in our pipeline.

• Enhancing the pipeline

Oncodesign is developing its drug and biomarker discovery programmes using its proprietary Nanocyclix® medicinal chemistry technology. Using this technology, we are now building on a library of **more than 8,000 macrocyclic inhibitor molecules,** allowing us to target kinases that remain largely unexplored and that show high potency and specificity.



Oncodesign's priority discovery programmes are as follows:

EGFR radiotracer: Oncodesign started its first clinical trial involving its first EGFR radiotracer in lung cancer sufferers. This phase I clinical trial on radiotracer ODS2004436, discovered through Oncodesign's research as part of the IMAkinib project and developed and produced by Cyclopharma, enrolled its first patient in September 2016 at the early-stage unit of the Georges-François Leclerc regional cancer centre (CGFL) in Dijon, France, which is promoting the trial. Four other projects are also planned as part of the IMAkinib programme.

LRRK2 inhibitors for Parkinson's Disease: the collaboration established with Ipsen in 2012 is continuing, with the aim of selecting the most promising drug candidate to inhibit the LRRK2 kinase in the brain. The results from an initial series of molecules have already demonstrated the full potential of our chemistry, and they were published during the Neurosciences 2015 meeting in Chicago, USA. The programme will be accelerated following the acquisition of the François Hyafil research centre and its expertise in this area. A drug candidate is expected within a maximum of two years, and a biomarker approach involving a PET tracer is currently being investigated.

RIPK2 inhibitors in autoimmune diseases such as Crohn's, rheumatoid arthritis and multiple sclerosis: in 2015, the RIPK2 programme produced encouraging pre-clinical results, which were presented in the 10th Drug Discovery Chemistry conference in San Diego, USA. Based on these promising results, Oncodesign started looking for a partner for its preclinical programme in 2015. With the acquisition of the François Hyafil research centre and its expertise in autoimmune diseases, and due to this programme's major potential given all the possible therapeutic areas and the already high level of interest from pharma groups, Oncodesign has chosen to continue the programme internally, before licensing it at a later stage in the next three years.

The programme in partnership with UCB in the field of neurological diseases is continuing on schedule. After an 18-month exploratory study in 2014, UCB exercised its licensing option in 2015, giving rise to a milestone payment. A large-scale collaboration programme has now been launched to optimise molecules, with the aim of selecting a drug candidate in the next three years.

ALK1 inhibitors improve the efficacy of anti-angiogenic treatments, which is an important approach in cancer therapies representing a market of $10 billion per year. ALK1 inhibitors offer a possible way of sensitising non-responders for VEGF-based treatments and could be applied to a number of important indications. Thanks to Nanocyclix, *in vitro* proof of concept has been achieved in a vessel formation test. No specific ALK1 inhibitor is currently known.

ALK2 inhibitors are a treatment for stone man disease (FOP), a very rare genetic disease (2,500 cases worldwide) that manifests around the age of 4-5 years and for which there is no known treatment. No small molecule or specific inhibitor is currently known. Thanks to Nanocyclix, *in vitro* proof of concept has been achieved in an ex-vivo mineralisation test. ALK2 inhibitors may also be a treatment for other indications such as cancer-related anemia, anemia of inflammation and rare cancers.

MNK1/2 is a specific cancer cell target, with limited risk of side-effects. MNK1 is overexpressed in leukemias and other cancers. MNK1/2i aims to inhibit the development mechanism of major cancers, particularly acute myeloblastic leukemia (AML), which is one of the most common forms of adult acute leukemia (25% survival at five years after induction treatment, 5-10% in the event of relapse). Thanks to Nanocyclix, *in vitro* proof of concept has been achieved in an eIF4E phosphorylation inhibition test; eIF4E is the substrate for MNK1/2 that initiates protein translation after phosphorylation and is involved in some of the most important cancer pathways.

CK1δ is a highly promising Alzheimer's target, that has the potential to be in addition an early biomarker for the disease. There is a strong link with neurodegenerative diseases linked to the aggregation of tau protein (tauopathies). Inhibiting **CK1**δ has the potential to prevent aggregation of tau protein at both early and later stages. Nanocyclix has enabled Oncodesign to identify some extremely specific inhibitors in the CK1 family. This early project is currently being validated with experts in the area, and is attracting major interest as a potential PET tracer for imaging purposes.

The strategic partnership with Bristol-Myers Squibb, announced in early 2016, is in the build-up phase. The three-year partnership may be extended to five years, and covers multiple targets of interest to Bristol-Myers Squibb. So far, a first collaboration target has been declared by the partners, and others are currently under investigation.

Oncodesign's pipeline consists of many other programmes currently awaiting or undergoing assessment. Given the enhanced pipeline of molecules, certain programmes such as TGFβR2 and SIK2 have been de-prioritised and are being replaced by the more promising programmes described above.

• 2020 strategic guidance: €40 million in revenue and profitable

As part of the 2017-2020 strategic plan, our objectives are clear:

- Successfully integrating the François Hyafil research centre
- Advancing the portfolio of oncology products in order to take a therapeutic molecule into clinical development between now and 2020

- Starting clinical development of non-oncology molecules (with Ipsen and UCB) and RIPK2
- Continuing and expanding the strategic partnership with BMS (both within and outside oncology)
- Developing the Group's presence in the USA

Oncodesign's growth target involves generating revenue of €40 million in 2020. Oncodesign is also aiming for positive results, after investing in R&D, in 2020.

The full presentation of the strategic plan unveiled during the Investor Day will be available on Oncodesign's website: www.oncodesign.com

Next financial publication: Full-year 2016 revenue, Tuesday January 31, 2017 (after the market close)

About Oncodesign: www.oncodesign.com

Founded over 20 years ago by Dr Philippe Genne, the Company's CEO and Chairman, Oncodesign is a biotechnology company that maximises the pharmaceutical industry's chances of success in discovering new therapeutic molecules to fight cancer and other serious illnesses with no known effective treatment. 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, advanced animal modelling 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 $40 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, Ipsen and UCB. Oncodesign is based in Dijon, France, in the heart of the town's university and hospital hub. It has 108 employees and subsidiaries in Canada and the USA.

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