



## **NANOBIOTIX PRESENTS NBTXR3 PRECLINICAL DATA DEMONSTRATING ITS POTENTIAL USAGE AS IN SITU VACCINE FOR CANCER AT THE SOCIETY FOR IMMUNOTHERAPY OF CANCER ANNUAL MEETING**

**Paris, France and Cambridge, Massachusetts, USA, November 14, 2016 – NANOBIOTIX (Euronext: NANO – ISIN: FR0011341205)**, a late clinical-stage nanomedicine company pioneering novel approaches for the local treatment of cancer, today announces preclinical data demonstrating that its leading radioenhancer nanoparticle, NBTXR3, actively stimulates the host immune system to attack tumor cells. These data from the ongoing NBTXR3 immuno-oncology preclinical program were presented at one of the leading global immuno-oncology conferences, the 31st Annual Meeting of the Society for Immunotherapy of Cancer (SITC), being held November 9-13, 2016 in National Harbor, Maryland, USA (Paris S., Pottier A., Levy L., and Lu B. Hafnium oxide nanoparticles, a radiation enhancer for in situ cancer vaccine).

Laurent Levy, CEO of Nanobiotix, commented: *“These exciting data show that NBTXR3 could be a potential game changer in Immuno-oncology combination landscape. This raises the possibility of synergies between NBTXR3, radiotherapy and immunotherapies. On the top of existing core developments of our product as a single agent, this is opening new doors for industrial collaborations.”*

### **Data presented showing the potential of NBTXR3 in Immuno-Oncology**

During the presentation, Nanobiotix scientists and Dr. Bo Lu, MD, Director of the Molecular Radiation Biology in the Department of Radiation Oncology at the Thomas Jefferson University Hospital in Philadelphia, presented study results which demonstrate that radiotherapy with NBTXR3 elicits a marked enhancement of Immunogenic Cell Death (ICD) compared to radiotherapy alone across different cancer cell lines, in radioresistant or radiosensitive models.

In a second experiment, the phenomenon known as the abscopal effect was evaluated (i.e. an effect outside the scope of the localized treatment). Two tumors were implanted on both sides of mice, and subsequently only one tumor was treated with NBTXR3-radiation therapy. As a result, both tumors demonstrated volume shrinkage. Specifically, the study showed that use of NBTXR3 in combination with radiotherapy resulted in a control on the untreated tumor and a statistically significant increase of overall survival. No abscopal effect was observed in control groups and group treated with radiation therapy alone.

A third experiment has demonstrated that NBTXR3 combined with radiotherapy could be used to create a vaccine *ex vivo* with a higher rate of long term vaccination success when compared to radiotherapy alone.

Elsa Borghi, CMO of Nanobiotix commented: *“Although immunotherapies hold great promise in treating cancer, one of the main barriers is that most of tumors do not provoke an immune response, which renders immunotherapy ineffective in many patients. The findings from this research indicate that NBTXR3 could have the potential to transform a tumor into an in situ vaccine. It could convert an immunologically ‘cold’ tumor, which does not provoke an immune response, to a ‘hot’ tumor, which induces an immune response and therefore provokes a host immune response to attack tumor cells.”*

### **NBTXR3 competitive positioning in Immuno-Oncology**

Radiotherapy is an established standard of care in many solid tumor types (approximately 60% of all cancer patients receive radiotherapy). Compared to other products used for priming of the tumor, currently in development for Immuno-Oncology, NBTXR3 could have a number of advantages: a physical and universal mode of action that could be

used widely across oncology, one time local injection, a good fit within existing medical practice already used a base for cancer treatment, limited or no systemic toxicity, and a well-established manufacturing process.

Radiotherapy is often given within the first lines of cancer treatment, compare to most current positioning of immuno-oncology development in a later stage treatment. A successful approach using NBTXR3 in immuno-oncology could make it a key player by offering treatment options in earlier stages of the disease.

Taken together, these data indicate that radiotherapy in combination with NBTXR3 could play a key role in immuno-oncology and could be used in synergy with several immuno-oncology approaches to increase patient responses across many different types of cancer.

## **NBTXR3 current clinical development as a single agent**

Outside immuno-oncology field and as a single agent, NBTXR3 is in late stage clinical development, for its capability to enhance the dose of radiotherapy within the tumor and more efficiently destroy cancer cells. Worldwide clinical development is currently covering seven patient populations and a first market approval has been filed in EU in August 2016.



### **About NBTXR3**

Nanobiotix's lead product, NBTXR3, is a first-in-class radio-enhancer nanoparticle designed for direct injection into cancerous tumors. It has been engineered to increase the dose and efficacy of radiotherapy without increasing toxicity or causing damage to surrounding healthy tissues. NBTXR3 is currently in late-stage clinical development as a single agent.

Worldwide clinical development of NBTXR3 now includes trials across 7 patient populations:

- **Soft Tissue Sarcoma (STS)**  
Phase I/II trial completed  
Phase II/III "Act.in.Sarc." global trial (including EU, South Africa and Asia-Pacific region)
- **Head and Neck Cancer**  
Phase I/II trial in France and Spain; NBTXR3 + Radiotherapy alone  
Phase I/II trial by PharmaEngine in Asia-Pacific; NBTXR3 + Radiotherapy & Chemotherapy
- **Prostate Cancer**  
Phase I/II trial in the U.S
- **Liver Cancers**  
Phase I/II Hepatocellular Cancer trial in France  
Phase I/II Liver Metastases trial in France
- **Rectal Cancer**  
Phase I/II trial by PharmaEngine in Asia-Pacific

First market approval has been filed in the EU and could be obtained in 2017.

### **About NANObIOTIX: [www.nanobiotix.com](http://www.nanobiotix.com)**

Nanobiotix (Euronext: NANO / ISIN: FR0011341205) is a late clinical-stage nanomedicine company pioneering novel approaches for the local treatment of cancer. The Company's first-in-class, proprietary technology, NanoXray, enhances radiotherapy energy with a view to provide a new, more efficient treatment for cancer patients.

NanoXray products are compatible with current radiotherapy treatments and are meant to treat potentially a wide variety of solid tumors including soft tissue sarcoma, head and neck cancers, liver cancers, prostate cancer, breast cancer, glioblastoma, etc., via multiple routes of administration.

Nanobiotix's lead product NBTXR3, based on NanoXray, is currently under clinical development for soft tissue sarcoma, head and neck cancer, prostate cancer, and liver cancers (HCC and liver metastases) as well as head and neck and rectal cancers under trial by

PharmaEngine. The Company has filed in August 2016 for market approval (CE Marking) in Europe for its lead product NBTXR3. The Company has partnered with PharmaEngine for clinical development and commercialization of NBTXR3 in Asia.

Nanobiotix is listed on the regulated market of Euronext in Paris (ISIN: FR0011341205, Euronext ticker: NANO, Bloomberg: NANO:FP). The Company Headquarter is based in Paris, France. Affiliate in Cambridge, United States.

For more information, please visit [www.nanobiotix.com](http://www.nanobiotix.com)

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