

# NANOBIOTIX

## EXPANDING LIFE

### NANOBIOTIX Announces Publication of New Preclinical Immunotherapy Data Showcasing the Combination Potential of NBTXR3 With anti-PD-1 and anti-CTLA-4

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[Data published in the International Journal of Nanobiotechnology](#)

- Peer-reviewed preclinical data in an anti-PD-1 resistant lung cancer model show that adding NBTXR3 to a combination of radiotherapy, anti-PD-1, and anti-CTLA-4 produced significant antitumor effects against both primary and secondary tumors, improved the mouse survival rate from 0 to 50%, and induced long term antitumor memory
- Data suggest that the potential immune priming effect of NBTXR3 may scale beyond anti-PD-1, and could merit further investigation in preclinical and clinical settings

PARIS & CAMBRIDGE, Mass.--(BUSINESS WIRE)--Jan. 26, 2022-- Regulatory News:

[NANOBIOTIX](#) (Euronext: NANO – NASDAQ: NBTX – the “**Company**”) (Paris:NANO) (NASDAQ:NBTX), a late-stage clinical biotechnology company pioneering physics-based approaches to expand treatment possibilities for patients with cancer, today announced the publication of new preclinical immunotherapy data for novel, potentially solid tumor- and therapeutic combination-agnostic radioenhancer NBTXR3 in the *Journal of Nanobiotechnology*.

The Nanobiotix preclinical program aims both to provide a deeper understanding of the NBTXR3 mechanism of action and to discover new pathways for the radioenhancer to potentially improve treatment outcomes for patients. Given preclinical and early clinical data suggesting a potential immune priming effect triggered by radiotherapy (RT)-activated NBTXR3 and the medical unmet need for patients with primary or secondary resistance to immune checkpoint inhibitors, Nanobiotix and The University of Texas MD Anderson Cancer Center are exploring several therapeutic combinations involving checkpoint inhibitors, radiotherapy, and NBTXR3.

“We believe that we have only scratched the surface of opportunity for NBTXR3 as a potentially-ideal combination agent with immune checkpoint inhibitors,” said Laurent Levy, co-founder and chairman of the executive board at Nanobiotix. “As the industry continues to advance development of these powerful immunotherapy agents, we feel there is an urgent need for novel combinations that can help improve efficacy for naïve patients and overcome resistance for non-responders. Our view is that the results presented in this new publication add to the growing body of data suggesting therapeutic potential for NBTXR3 in combination with immune checkpoint inhibitors, and we look forward to further investigation in the lab and in the clinic.”

Following previously reported positive preclinical data on the addition of NBTXR3 to a combination of radiotherapy and anti-PD-1 in anti-PD-1 sensitive and resistant lung cancer models, this evaluation investigated the addition of NBTXR3 to a combination of radiotherapy, anti-PD-1, and anti-CTLA-4 in an anti-PD-1 resistant model. Mice were inoculated with metastatic lung cancer cells in their right (primary tumor) and left (secondary tumor) legs. They were then treated with various combinations of anti-PD-1, anti-CTLA-4, NBTXR3, and radiotherapy in an effort to isolate the effect of adding NBTXR3, modifying the RT protocol, or both. Mice surviving after 178 days were rechallenged with tumor cells and monitored for tumor growth.

The evaluation showed that both modifications to RT protocol and the addition of NBTXR3 improved outcomes of combination therapy, and that the cohorts in which NBTXR3 was included in the regimen outperformed all others. Of note, the cohort treated with NBTXR3 and modified RT together showed that the therapy had significant antitumor effects against both primary and secondary tumors, improving the mouse survival rate from 0% to 50%. None of the re-challenged survivor mice developed tumors, and they had higher percentages of memory T cells versus control, suggesting the induction of long-term antitumor immune memory. The authors concluded that NBTXR3 in combination with radioimmunotherapy significantly improved anti-PD-1 resistant lung tumor control in mice by promoting antitumor immune response.

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#### About NBTXR3

NBTXR3 is a novel, potentially first-in-class oncology product composed of functionalized hafnium oxide nanoparticles that is administered via one-time intratumoral injection and activated by radiotherapy. The product candidate’s physical mechanism of action (MoA) is designed to induce significant tumor cell death in the injected tumor when activated by radiotherapy, subsequently triggering adaptive immune response and long-term anti-cancer memory. Given the physical MoA, Nanobiotix believes that NBTXR3 could be scalable across any solid tumor that can be treated with radiotherapy and across any therapeutic combination, particularly immune checkpoint inhibitors.

NBTXR3 is being evaluated in locally advanced head and neck squamous cell carcinoma (HNSCC) as the primary development pathway. The company-sponsored phase I dose escalation and dose expansion study has produced favorable safety data and early signs of efficacy. In February 2020, the United States Food and Drug Administration granted regulatory Fast Track designation for the investigation of NBTXR3 activated by radiation therapy, with or without cetuximab, for the treatment of patients with locally advanced HNSCC who are not eligible for platinum-based

chemotherapy.

Nanobiotix has also prioritized an Immuno-Oncology development program—beginning with a Company sponsored phase I clinical study evaluating NBTXR3 activated by radiotherapy in combination with anti-PD-1 checkpoint inhibitors for patients with locoregional recurrent or recurrent/metastatic HNSCC and lung or liver metastases from any primary cancer eligible for anti-PD-1 therapy either naïve or resistant to prior PD-1 (either primary or secondary as per SITC criteria).

Given the Company's focus areas, and balanced against the scalable potential of NBTXR3, Nanobiotix has engaged in strategic collaborations to expand development of the product candidate in parallel with its priority development pathways. Pursuant to this strategy, in 2019 Nanobiotix entered into a broad, comprehensive clinical research collaboration with The University of Texas MD Anderson Cancer Center to sponsor several phase I and phase II studies to evaluate NBTXR3 across tumor types and therapeutic combinations. In 2021, the Company entered into an additional strategic collaboration agreement with LianBio to support its global phase III study in Asia along with four future registrational studies.

### **About NANOBIOTIX**

Nanobiotix is a late-stage clinical biotechnology company pioneering disruptive, physics-based therapeutic approaches to revolutionize treatment outcomes for millions of patients; supported by people committed to making a difference for humanity. The company's philosophy is rooted in the concept of pushing past the boundaries of what is known to expand possibilities for human life.

Incorporated in 2003, Nanobiotix is headquartered in Paris, France. The company also has subsidiaries in Cambridge, Massachusetts (United States), France, Spain, Germany and Switzerland.

Nanobiotix has been listed on the regulated market of Euronext in Paris since 2012 and on the Nasdaq Global Select Market in New York City since December 2020.

Nanobiotix is the owner of more than 30 umbrella patents associated with three (3) nanotechnology platforms with applications in 1) oncology; 2) bioavailability and biodistribution; and 3) disorders of the central nervous system. The company's resources are primarily devoted to the development of its lead product candidate— NBTXR3 —which is the product of its proprietary oncology platform and has already achieved market authorization in Europe for the treatment of patients with soft tissue sarcoma under the brand name Hensify®.

For more information about Nanobiotix, visit us at [www.nanobiotix.com](http://www.nanobiotix.com) or follow us on [LinkedIn](#) and [Twitter](#).

### **Disclaimer**

*This press release contains certain "forward-looking" statements within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as "at this time," "anticipate," "believe," "expect," "intend," "on track," "plan," "scheduled," and "will," or the negative of these and similar expressions. These forward-looking statements, which are based on our management's current expectations and assumptions and on information currently available to management, include statements about the timing and progress of clinical trials, the timing of our presentation of data, the results of our preclinical and clinical studies and their potential implications. Such forward-looking statements are made in light of information currently available to us and based on assumptions that Nanobiotix considers to be reasonable. However, these forward-looking statements are subject to numerous risks and uncertainties, including with respect to the risk that subsequent studies and ongoing or future clinical trials may not generate favorable data notwithstanding positive early clinical results and the risks associated with the evolving nature of the duration and severity of the COVID-19 pandemic and governmental and regulatory measures implemented in response to it. Furthermore, many other important factors, including those described in our Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission (the SEC) on April 7, 2021 under "Item 3.D. Risk Factors" and those set forth in the universal registration document of Nanobiotix filed with the French Financial Markets Authority (Autorité des Marchés Financiers – the AMF) on April 7, 2021, each as updated in our Half-Year Financial Report filed with the AMF and the SEC on September 8, 2021 (a copy of which is available on [www.nanobiotix.com](http://www.nanobiotix.com)), as well as other known and unknown risks and uncertainties may adversely affect such forward-looking statements and cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.*

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Nanobiotix

### **Communications Department**

Brandon Owens

VP, Communications

+1 (617) 852-4835

[contact@nanobiotix.com](mailto:contact@nanobiotix.com)

### **Investor Relations Department**

Kate McNeil

SVP, Investor Relations

+1 (609) 678-7388

[investors@nanobiotix.com](mailto:investors@nanobiotix.com)

Media Relations

### **FR – Ulysse Communication**

Pierre-Louis Germain

+ 33 (0) 6 64 79 97 51

[plgermain@ulyse-communication.com](mailto:plgermain@ulyse-communication.com)

US – **Porter Novelli**

Dan Childs

+1 (781) 888-5106

[Dan.childs@porternovelli.com](mailto:Dan.childs@porternovelli.com)

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