
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 6-K

**REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES
EXCHANGE ACT OF 1934**

For the month of December 2022

Commission File Number: **001-39777**

Nanobiotix S.A.

(Translation of registrant's name into English)

60 Rue de Wattignies 75012 Paris, France

(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.
Form 20-F [X] Form 40-F []

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

On December 27, 2022, the Registrant issued a press release, a copy of which is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

[\(c\) Exhibit 99.1. Press release dated December 27, 2022](#)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Nanobiotix S.A.
(Registrant)

Date: December 27, 2022

/s/ Bart Van Rhijn
Bart Van Rhijn
Chief Financial Officer

NANOBIOTIX Announces First Patient Randomized in the United States in Global Phase 3 Pivotal Trial Evaluating Radioenhancer NBTXR3 in Head and Neck Cancer

- Patients randomized in all planned major regions for pivotal phase 3 NANORAY-312 study with the United States added to Europe and Asia
- NANORAY-312 now has sites activated across 80 sites globally
- Phase 3 futility analysis expected in 2H 2023, with interim Phase 3 data expected in 2H 2024

PARIS and CAMBRIDGE, Mass., Dec. 27, 2022 (GLOBE NEWSWIRE) -- NANOBIOTIX (Euronext : NANO — NASDAQ: NBTX – the “**Company**”), a late-clinical stage biotechnology company pioneering physics-based approaches to expand treatment possibilities for patients with cancer, today announced the first patient in the United States has been randomized in NANORAY-312, a global Phase 3 registrational trial evaluating NBTXR3 for the treatment of elderly patients with locally advanced head and neck squamous cell carcinoma (“LA-HNSCC”) who are ineligible for platinum-based chemotherapy. NBTXR3 activated by radiotherapy will be evaluated alone or in combination with cetuximab. NBTXR3 is a potentially first-in-class radioenhancer with broad application across solid tumors, with prioritized focus in head and neck cancer.

“Our pivotal, global Phase 3 NANORAY-312 trial for lead candidate NBTXR3 continues to build momentum with sites now active in the United States, Europe and Asia,” said Laurent Levy, co-founder of Nanobiotix and chairman of the executive board. *“NANORAY-312 is the first of our prioritized registrational trials in head and neck cancer and is designed to prove that our innovation can make a difference for elderly patients around the world, a growing patient population with high unmet medical need. We believe data on survival and anti-tumoral response in our proof-of-concept Phase 1 Study 102 continue to support the potential of NBTXR3 as a single agent activated by radiotherapy for the treatment of elderly patients with head and neck cancer and we look forward to reporting additional milestones from our head and neck cancer franchise studies in 2023.”*

The first patient in NANORAY-312 was randomized in Europe by Nanobiotix in January of 2022, followed by randomization of the first patient in Asia by Nanobiotix’ strategic collaborator LianBio in August of 2022. The addition of the first patient in the United States completes the Company’s planned study initiation milestones in 2022. Nanobiotix remains focused on expanding the trial’s site footprint, building on the 80 sites currently activated; driving patient recruitment; and preparing for planned milestone reporting in 2023.

About NANORAY-312

NANORAY-312 is a global, two-arm, randomized, Investigator’s Choice Phase 3 registrational study that is designed to investigate the efficacy and safety of radiotherapy-activated NBTXR3 with or without cetuximab versus radiotherapy with or without cetuximab in high-risk, platinum-based chemotherapy-ineligible elderly patients with locally advanced head and neck squamous cell carcinoma (LA-HSNCC). Eligible participants will be treated with NBTXR3 at a 1:1 ratio after an Investigator’s Choice of radiotherapy alone or radiotherapy in combination with cetuximab. This pivotal trial is expected to enroll 500 patients globally, with the United States, Europe, and Asia as its major regions. NANORAY-312 is co-led by principal investigators Sue Yom, MD, PhD, Professor and Vice Chair, Strategic Advisory Department of Radiation Oncology; Professor, Otolaryngology-Head and Neck Surgery at The University of California, San Francisco, and Christophe Le Tourneau, MD, PhD, senior medical oncologist and head of the Department of Drug Development and Innovation (D3i) at Institut Curie (Paris).

NANORAY-312 is being conducted in partnership with LianBio. LianBio is leading clinical development in Asia and holds exclusive rights to develop and commercialize NBTXR3 in Greater China, South Korea, Singapore and Thailand. Nanobiotix is leading clinical and commercial development in all other regions.

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; a phase III global registrational study was launched in 2021; and all major regions planned for the study are currently active and enrolling patients. 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—the same population being evaluated in the phase III study.

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.

Given the Company's focus areas, and balanced against the scalable potential of NBTXR3, Nanobiotix has engaged in a strategic collaboration strategy with world class partners 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.

About NANOBOTIX

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, and Germany. Nanobiotix has been listed on Euronext: 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 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," "can," "could," "estimate," "expect," "intend," "is designated to," "may," "might," "on track," "plan," "potential," "predict," "objective," "shall," "should," "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; 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; the risk that the EIB may accelerate the loans under finance contract and its amendment upon the occurrence of customary events of default; the risk that Company may not be able to secure additional capital on attractive terms. Furthermore, many other important risks factors and uncertainties, including those described in our Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission (the SEC) on April 8, 2022 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 8, 2022, (a copy of which is available on www.nanobiotix.com), as well as those set forth in the half-year financial report filed with the AMF on September 28, 2022, 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.

Contacts

Nanobiotix

Communications Department

Brandon Owens

VP, Communications

+1 (617) 852-4835

contact@nanobiotix.com

Investor Relations Department

Kate McNeil

SVP, Investor Relations

+1 (609) 678-7388

investors@nanobiotix.com

Media Relations

FR – Ulysse Communication

Pierre-Louis Germain

+ 33 (0) 6 64 79 97 51

plgermain@ulyse-communication.com

Global – LifeSci Advisors

Ligia Vela-Reid

+44 (0) 7413825310

Lvela-reid@lifesciadvisors.com

Attachment

- 2022-12-27 -- NBTX -- FPI in NANORAY-312 in Head & Neck Cancer -- FINAL -- English.pdf (<https://ml.globenewswire.com/Resource/Download/efc03f6c-1edd-43fa-a9b2-e003cd3b3b28>)