

**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 January 2021

Commission File Number: 001-38281

ERYTECH Pharma S.A.

(Translation of registrant's name into English)

60 Avenue Rockefeller
69008 Lyon 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:

S Form 20-F **£** 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): **£**

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): **£**

INCORPORATION BY REFERENCE

This Report on Form 6-K and Exhibit 99.1 to this Report on Form 6-K shall be deemed to be incorporated by reference into the registration statement on Form F-3 (File No. 333-248953) and registration statements on Form S-8 (File Nos. 333-222673, 333-232670 and 333-239429), of ERYTECH Pharma S.A. (the "Company") (including any prospectuses forming a part of such registration statements) and to be a part thereof from the date on which this report is filed, to the extent not superseded by documents or reports subsequently filed or furnished.

INFORMATION CONTAINED IN THIS REPORT ON FORM 6-K

Press Release

On January 25, 2021, ERYTECH Pharma S.A. issued a press release to provide an update on the main achievements of its clinical trials in 2020 and key expected milestones for 2021, and to report its end of year 2020 cash position. A copy of this press release is attached to this Form 6-K as Exhibit 99.1.

EXHIBITS

Exhibit	Description
99.1	Press Release dated January 25, 2021.

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.

ERYTECH Pharma S.A.

Date: January 27, 2021

By: /s/ Eric Soyer

Name Eric Soyer

Title: Chief Financial Officer and Chief Operating Officer

ERYTECH Highlights 2021 Milestones and Provides Update on Cash Position

- **Strong execution and achievement of key milestones in challenging year 2020**
- **Four clinical programs with lead product candidate eryaspase expected to report results and/or regulatory milestones in 2021:**
 - TRYBeCA-1, Phase 3 in 2L advanced pancreatic cancer, expected to report top-line results, potentially at interim analysis in Q1, or at final analysis, in Q4
 - FDA feedback on potential path to approval in hypersensitive ALL, based on positive Phase 2 investigator sponsored trial (IST), expected in 1H
 - TRYbeCA-2, Phase 2 in triple-negative breast cancer, expected to report top-line results in Q4
 - Determination of the maximum tolerated dose (MTD) in rRESPECT trial, Phase 1 IST in 1L advanced pancreatic cancer, expected by the end of the year
- **Cash and cash equivalents of €44.4 million¹ (\$54.4 million) at the end of December 2020**

Lyon (France) and Cambridge, MA (U.S.), January 25, 2021 – ERYTECH Pharma (Nasdaq & Euronext: ERYP), a clinical-stage biopharmaceutical company developing innovative therapies by encapsulating therapeutic drug substances inside red blood cells, today provided an update on main achievements in 2020 and key expected milestones for 2021, and reported its end of year 2020 cash position.

“ERYTECH is entering 2021 with great expectations on its full scope of activities,” said Gil Beyen, CEO of ERYTECH Pharma. “After more than three years of dedicated operational execution on the pipeline of development projects, 2021 is expected to bring results in all four of ERYTECH’s clinical programs, with a potential for market authorization filings in two indications with high unmet medical need.”

Key 2020 Achievements and Expected 2021 Milestones

- **TRYbeCA-1, pivotal Phase 3 clinical trial in second-line metastatic pancreatic cancer**
 - Fast Track designation granted in April 2020
 - Enrollment completed in December 2020; 512 patients enrolled, 6% above enrollment target of 482 patients
 - On track for interim superiority analysis in Q1 2021 with two possible outcomes:
 - Trial can conclude early for superiority if compelling improvement of overall survival demonstrated
 - Trial to continue as planned with final analysis expected to report in Q4 2021
 - If trial concludes at interim, filings for approval in the United States and in Europe targeted by year end 2021
- **NOPHO-sponsored Phase 2 trial in acute lymphoblastic leukemia**
 - Enrollment completed in August 2020
 - Positive results presented at the ASH Annual Meeting in December 2020
 - Ongoing dialogue with FDA to explore path to approval based on positive Phase 2 results; FDA feedback expected in 1H 2021
 - In case of a path to approval, BLA filing expected in 2021

¹ Preliminary unaudited information

- **TRYbeCA-2, Phase 2 clinical trial in triple-negative breast cancer**
 - Trial enrolling patients in three countries in Europe
 - Top-line results expected in Q4 2021
- **rRESPECT, Phase 1 investigator-sponsored trial (Georgetown University) in first-line metastatic pancreatic cancer**
 - Trial initiated in Q4 2020. First patient enrolled
 - Determination of maximum tolerated dose expected by end of 2021

2020 Year-End Cash and Guidance

- As of December 31, 2020, ERYTECH had cash and cash equivalents totaling €44.4 million (approximately \$54.4 million), compared with €73.2 million on December 31, 2019. The €28.8 million decrease in cash position during the twelve months of 2020 resulted mostly from a net cash utilization of €56.3 million and financings totalling €27.5 million and including:
 - The draw down of five tranches of €3 million each under the convertible bond financing agreement with Alpha Blue Ocean, for net proceeds of €14.2 million. All five tranches have already been converted and have resulted in the issuance of 2,430,925 new shares, representing 13% of the Company's outstanding share capital to date.
 - €10 million non-dilutive, state-guaranteed PGE loan from Bpifrance and Société Générale, and €3.3 million in loan and grant milestone payments from Bpifrance on the preclinical R&D Tedac project.

The above information is based on preliminary unaudited financial results as of December 31, 2020. Fourth Quarter and Full-Year 2020 financial results will be disclosed on March 8, 2021.

- The Company believes that its cash position and cash equivalents as of December 31, 2020 can fund its planned operating expenses and current programs into the third quarter of 2021, and together with the remaining option of potential proceeds available under the convertible bonds financing and its ATM program, until the end of 2021.

Financial Calendar 2021

- Business Update and Financial Highlights for the Fourth Quarter and Full Year 2020: March 8, 2021 (after U.S. market close), followed by a conference call & webcast on March 9, 2021 (2:30pm CET/8:30am ET)
- Business Update and Financial Highlights for the First Quarter of 2021: May 4, 2021 (after U.S. market close), followed by a conference call & webcast on May 5, 2021 (2:30pm CET/8:30am ET)
- Business Update and Financial Highlights for the Second Quarter of 2021: September 20, 2021 (after U.S. market close), followed by a conference call & webcast on September 21, 2021 (2:30pm CET/8:30am ET)
- Business Update and Financial Highlights for the Third Quarter of 2021: November 15, 2021 (after U.S. market close), followed by a conference call & webcast on November 16, 2021 (2:30pm CET/8:30am ET)

About ERYTECH and eryaspase

ERYTECH is a clinical-stage biopharmaceutical company developing innovative red blood cell-based therapeutics for severe forms of cancer and orphan diseases. Leveraging its proprietary ERYCAPS® platform, which uses a novel technology to encapsulate drug substances inside red blood cells, ERYTECH is developing a pipeline of product candidates for patients with high unmet medical needs. ERYTECH's primary focus is on the development of product candidates that target the altered metabolism of cancer cells by depriving them of amino acids necessary for their growth and survival.

The Company's lead product candidate, eryaspase, which consists of L-asparaginase encapsulated inside donor-derived red blood cells, targets the cancer cells' altered asparagine and glutamine metabolism. Eryaspase is in Phase 3 clinical development for the treatment of second-line pancreatic cancer and in Phase 2 for the treatment of triple-negative breast cancer. An investigator sponsored Phase 2 trial in acute lymphoblastic leukemia recently reported positive results.

ERYTECH produces its product candidates for treatment of patients in Europe at its GMP-approved manufacturing site in Lyon, France, and for patients in the United States at its GMP manufacturing site in Princeton, New Jersey, USA. Eryaspase is not an approved medicine.

ERYTECH is listed on the Nasdaq Global Select Market in the United States (ticker: ERYP) and on the Euronext regulated market in Paris (ISIN code: FR0011471135, ticker: ERYP). ERYTECH is part of the CAC Healthcare, CAC Pharma & Bio, CAC Mid & Small, CAC All Tradable, EnterNext PEA-PME 150 and Next Biotech indexes.

For more information, please visit www.erytech.com

Forward-looking information

This press release contains forward-looking statements including but not limited to statements with respect to the clinical development plans of eryaspase; the clinical trials of the Company's product candidates, including the timeline for patient enrollment as well as expected timing of the availability of results and interim superiority analysis; potential impacts of the ongoing coronavirus (COVID-19) pandemic on the Company's clinical trials, including TRYbeCA-1 clinical trial; the possible sales of ADSs pursuant to the ATM program; and the Company's anticipated cash runway as extended by its convertible bond financing and ATM facility. Certain of these statements, forecasts and estimates can be recognized by the use of words such as, without limitation, "believes", "anticipates", "expects", "intends", "plans", "seeks", "estimates", "may", "will" and "continue" and similar expressions. Such statements, forecasts and estimates are based on various assumptions and assessments of known and unknown risks, uncertainties and other factors, which were deemed reasonable when made but may or may not prove to be correct. Actual events are difficult to predict and may depend upon factors that are beyond ERYTECH's control. There can be no guarantees with respect to pipeline product candidates that the candidates will receive the necessary regulatory approvals or that they will prove to be commercially successful. Therefore, actual results and timeline may turn out to be materially different from the anticipated future results, performance or achievements expressed or implied by such statements, forecasts and estimates. Further description of these risks, uncertainties and other risks can be found in the Company's regulatory filings with the French *Autorité des Marchés Financiers* (AMF), the Company's Securities and Exchange Commission (SEC) filings and reports, including in the Company's 2019 *Document d'Enregistrement Universel* filed with the AMF on March 18, 2020 and in the Company's Annual Report on Form 20-F filed with the SEC on March 18, 2020 and future filings and reports by the Company. Given these uncertainties, no representations are made as to the accuracy or fairness of such forward-looking statements, forecasts and estimates. Furthermore, forward-looking statements, forecasts and estimates only speak as of the date of this press release. Readers are cautioned not to place undue reliance on any of these forward-looking statements. ERYTECH disclaims any obligation to update any such forward-looking statement, forecast or estimates to reflect any change in ERYTECH's expectations with regard thereto, or any change in events, conditions or circumstances on which any such statement, forecast or estimate is based, except to the extent required by law. In addition, the COVID-19 pandemic and the associated containment efforts have had a serious adverse impact on the economy, the severity and duration of which are uncertain. Government stabilization efforts will only partially mitigate the consequences. The extent and duration of the impact on the Company's business and operations is highly uncertain, and that impact includes effects on its clinical trial operations and supply chain. Factors that will influence the impact on the Company's business and operations include the duration and extent of the pandemic, the extent of imposed or recommended containment and mitigation measures, and the general economic consequences of the pandemic. The pandemic could have a material adverse impact on the Company's business, operations and financial results for an extended period of time.

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