PRESS RELEASE

ERYTECH announces publication of two articles describing clinical results with ERY-ASP/GRASPA

Lyon (France), October 20th 2015 – ERYTECH Pharma (Euronext Paris: ERYP), the French biopharmaceutical company that develops innovative 'tumor starvation' treatments for acute leukemia and other oncology indications with unmet medical needs, announces the publication of two peer-reviewed manuscripts describing clinical results obtained with ERY-ASP/GRASPA®.

The first article, published in the September 2015 issue of the American Journal of Hematology, entitled *"A Phase 2 study of L-asparaginase encapsulated in erythrocytes in elderly patients with Philadelphia chromosome negative acute lymphoblastic leukemia: the GRASPALL/GRAALL-SA2-2008 study"* describes the results of a dose-escalating Phase 2 study, evaluating the safety and efficacy of GRASPA in thirty patients ≥ 55 years of age with newly diagnosed Philadelphia negative acute lymphoblastic leukemia (ALL). The study concludes that the addition of GRASPA to standard induction chemotherapy regimen, especially at the 100 IU/kg dose level, is feasible in elderly patients without excessive toxicity and associated with durable asparagine depletion.

The article can be found on-line at: http://www.ncbi.nlm.nih.gov/pubmed/26094614

The second article, published in the October 2015 issue of Pancreas, entitled *"Asparagine Synthetase Expression and Phase I Study With L-Asparaginase Encapsulated in Red Blood Cells in Patients With Pancreatic Adenocarcinoma"* evaluates the expression of asparagine synthetase (ASNS) in over 500 pancreatic cancer tumor biopsies and presents the results of a Phase 1 study in 12 patients with metastatic pancreatic cancer. 79.4% of tumor biopsies analyzed had no or low ASNS expression with high concordance between primary tumor and metastases. In the Phase 1 study, ERY-ASP was well tolerated and no dose limiting toxicities were identified.

The article can be found on-line at: http://www.ncbi.nlm.nih.gov/pubmed/26355551

Iman El-Hariry, Chief Medical Officer of ERYTECH, comments: *"Both studies provide additional support for the potential use of our lead product candidate ERY-ASP/GRASPA in very difficult to treat patient populations. The use of asparaginase in elderly ALL patients and metastatic pancreatic cancer patients has been limited by excessive toxicity so far. The favorable safety profile observed with ERY-ASP in these patients provided support for our ongoing Phase 1 study in adult ALL in the United States, our ongoing Phase 2 studies in acute myeloid leukemia patients over 65 years of age and our ongoing Phase 2 study in metastatic pancreatic carcinoma."*

About ERYTECH and ERY-ASP (GRASPA®): www.erytech.com

Created in Lyon, France in 2004, ERYTECH is a clinical-stage biopharmaceutical company developing innovative therapies for rare forms of cancer and orphan diseases. Leveraging its proprietary ERYCAPS platform, which uses a novel technology to encapsulate therapeutic drug substances inside red blood cells, ERYTECH has developed a pipeline of product candidates targeting markets with high unmet medical needs. ERYTECH's initial focus is on the treatment of blood cancers, including acute lymphoblastic leukemia (ALL) and acute myeloid leukemia (AML), by depriving tumors of nutrients necessary for their survival. ERYTECH has recently announced positive efficacy and safety results from its completed Phase 2/3 pivotal clinical trial in Europe with its lead product candidate, ERY-ASP, also known under the trade name GRASPA®, in children and adults with relapsed or refractory ALL. ERYTECH also has an ongoing Phase 1 clinical trial of ERY-ASP in the United States in adults with newly diagnosed ALL, and a Phase 2 clinical trial in Europe evaluating GRASPA as a first-line therapy for the treatment of elderly patients with AML, each in combination with chemotherapy.

ERY-ASP consists of an enzyme, L-asparaginase, encapsulated inside donor-derived red blood cells. L-asparaginase depletes asparagine, a naturally occurring amino acid essential for the survival and proliferation of cancer cells, from circulating blood plasma.

Every year over 50,000 patients in Europe and the United States are diagnosed with ALL or AML. For about 80% of these patients, mainly adults and relapsing patients, current forms of L-asparaginase cannot be used due to their toxicity or as a result of allergic reactions. ERYTECH believes that the safety and efficacy profile of ERY-ASP/GRASPA®, as observed in its Phase 2/3 pivotal clinical trial, offers an attractive alternative option for the treatment of leukemia patients.

ERYTECH believes that ERY-ASP has the potential as a treatment approach in solid tumors and is conducting a Phase 2 clinical trial in Europe in patients with metastatic pancreatic cancer. In addition to its current product candidates that focus on using encapsulated enzymes to induce tumor starvation, ERYTECH is exploring the use of its platform for developing cancer vaccines and enzyme replacement therapies.

The EMA and the U.S. Food and Drug Administration (FDA) have granted orphan drug designations for ERY-ASP/GRASPA for the treatment of ALL, AML and pancreatic cancer. ERYTECH produces ERY-ASP at its own GMP-approved and operational manufacturing site in Lyon (France), and at a site for clinical production in Philadelphia (USA). ERYTECH has entered into licensing and distribution partnership agreements for ERY-ASP for ALL and AML in Europe with Orphan Europe (Recordati Group), and for ALL in Israel with TEVA, who will market the product under the GRASPA® brand name.

ERYTECH is listed on Euronext regulated market in Paris (ISIN code: FR0011471135, ticker: ERYP) and is part of the CAC Healthcare, CAC Pharma & Bio, CAC Mid & Small, CAC All Tradable, EnterNext PEA-PME 150 and Next Biotech indexes. ERYTECH is also listed in the U.S. under an ADR level 1 program (OTC, ticker EYRYY).

CONTACTS

ERYTECH
Gil Beyen
Chairman and CEO
Tel: +33 4 78 74 44 38
investors@erytech.com

NewCap
Julien Perez / Emmanuel Huynh
Investor relations
Nicolas Merigeau
Press relations
Tel: +33 1 44 71 98 52
erytech@newcap.fr

ERYP LISTED EURONEXT

OTCMarkets Ticker : EYRYY

Forward-looking information

This document may contain forward-looking statements and estimates with respect to the financial position, results of operations, business strategy, plans, objectives and anticipated future performance of ERYTECH and of the market in which it operates. 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. They include all matters that are not historical facts. 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 the 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 may turn out to be materially different from the anticipated future results, performance or achievements expressed or implied by such statements, forecasts and estimates. Documents filed by ERYTECH Pharma with the French Autorité des Marchés Financiers (www.amf-france.org), also available on ERYTECH's website (www.erytech.com) describe such risks and uncertainties. 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 the publication of this document. 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 the 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.