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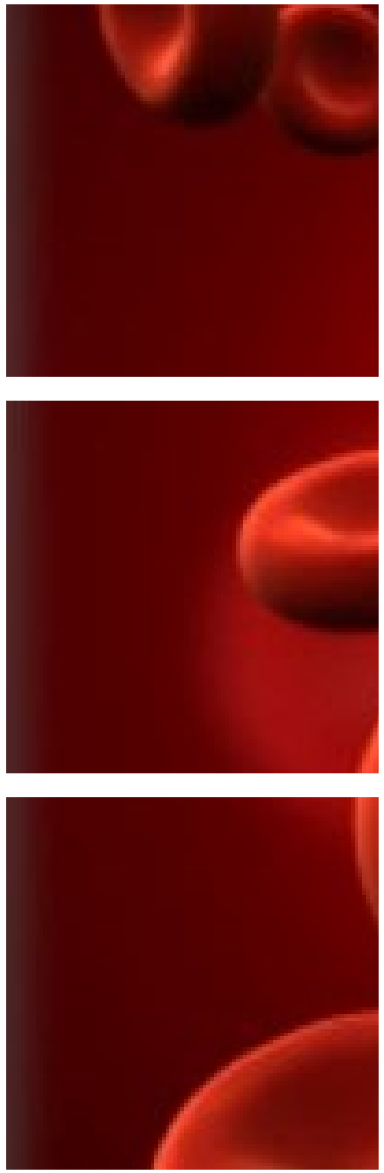
BUSINESS & FINANCIAL UPDATE 1H 2021

September 21, 2021

Forward Looking Statements

The statements made in this presentation may include forward-looking statements regarding the future operations of ERYTECH Pharma S.A., including estimates of target market opportunity, timing of planned clinical trials and results from those trials, regulatory strategy and timing of planned regulatory submissions, manufacturing capabilities and strategy for expansion of the ERYCAPS platform. Although we believe that the expectations contained in this presentation are reasonable, these forward-looking statements are only estimates based upon the information available to ERYTECH Pharma S.A. as of the date of this presentation. The company's expectations regarding the effects of COVID-19 on the Company's trials and development may be incorrect. Except as required by law, we expressly disclaim any responsibility to publicly update or revise our forward-looking statements, whether as a result of new information, future events or otherwise. Thus, the forward-looking statements herein involve known and unknown risks and uncertainties and other important factors such that actual future operations, opportunities or financial performance may differ materially from these forward-looking statements. Undue reliance should not be placed on forward-looking statements, which speak only as of the date hereof. All forward-looking statements contained herein are qualified in their entirety by the foregoing cautionary statement.



ERYTECH 1H 2021 Earnings Call

Introduction and Business Highlights
- Gil Beyen, Chief Executive Officer

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- Eric Soyer, Chief Financial & Chief Operating Officer

Questions & Answers

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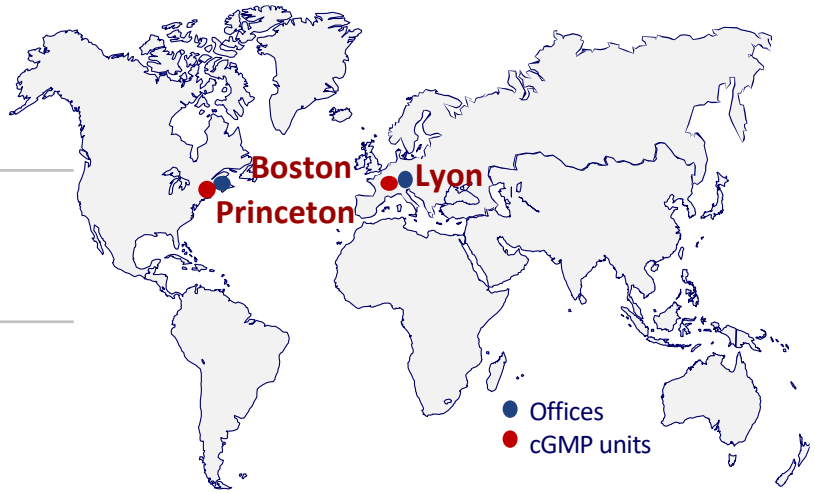
Leader in Red Blood Cell-based Cancer Therapeutics

- Reproducible encapsulation of therapeutic compounds in red blood cells with proprietary ERYCAPS® technology
- Focus on oncology, targeting cancer cells' altered amino acid metabolism through encapsulated asparaginase
- Lead product candidate eryaspase, demonstrated safety and efficacy in multiple clinical trials in ALL and pancreatic cancer
- Four clinical programs, two of them potentially pivotal:
  Phase 3 in 2L pancreatic expected to read out in Q4 2021
  Phase 2 IST in hypersensitive ALL, read out positive in Dec 2020
- Industrialized production: own cGMP production facilities in the United States and Europe (>5000 clinical batches produced)
- Listed on Nasdaq and Euronext

Nasdaq ERYP LISTED EURONEXT

ERYCAPS®



ALL: acute lymphoblastic leukemia; PAC: pancreatic cancer; 1L: First line; 2L: second line;
IST: Investigator-sponsored trial; cGMP: current good manufacturing practice

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Continued Progress - Key Highlights YTD

TRYbeCA-1 Phase 3 trial in 2L pancreatic cancer fully enrolled (512 patients); 4th IDMC review held. Top-line results expected Q4'21.

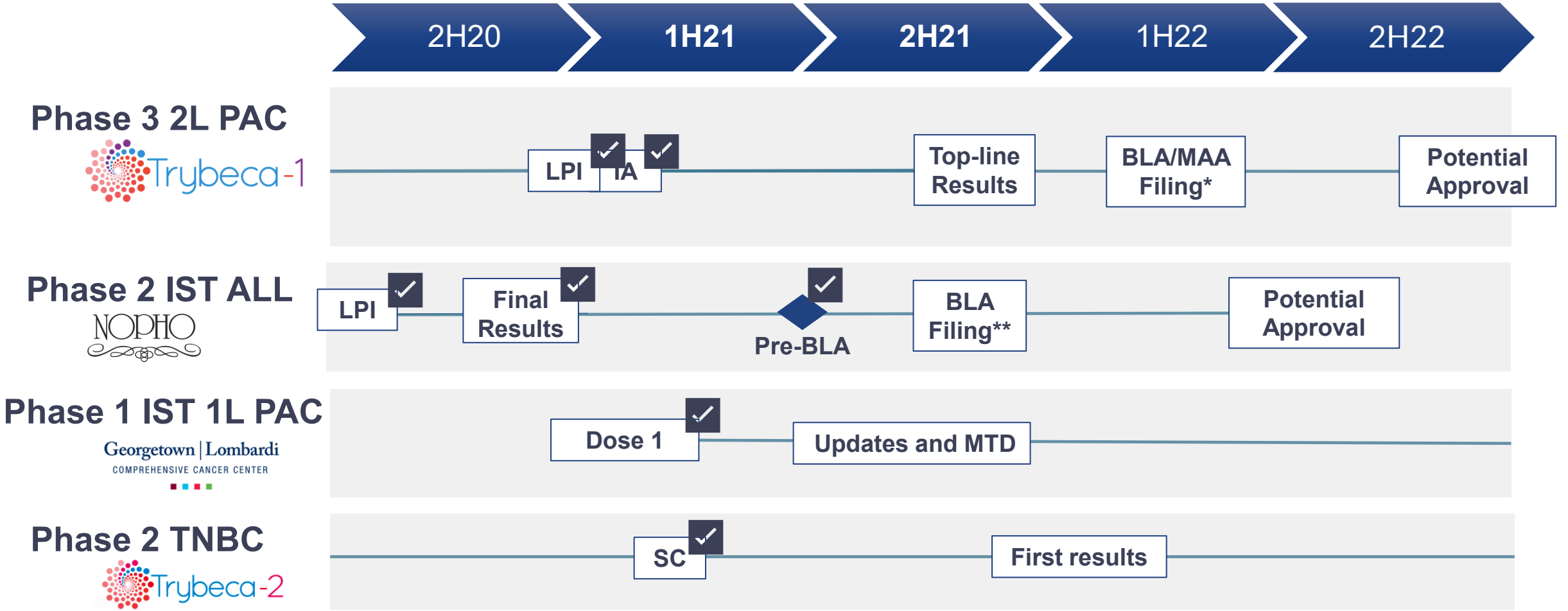
rESPECT Phase 1 IST in 1L pancreatic cancer escalated to 2nd dose cohort (100 U/kg); encouraging clinical activity observed in first patients

Pre-BLA meeting (June) with FDA to discuss the BLA submission in hypersensitive ALL; the Company confirmed its intention to submit a BLA by year end subject to successful completion of remaining activities.
Fast Track designation granted in July.

Closed $30 million registered direct financing

Cash runway extended into Q2 2022

On Track for Key Catalysts Ahead



* Subject to positive results of TRYbeCA-1 trial; ** Subject to completion of remaining activities
LPI last patient in; SC Steering Committee; IA interim analysis; MTD maximum tolerable dose

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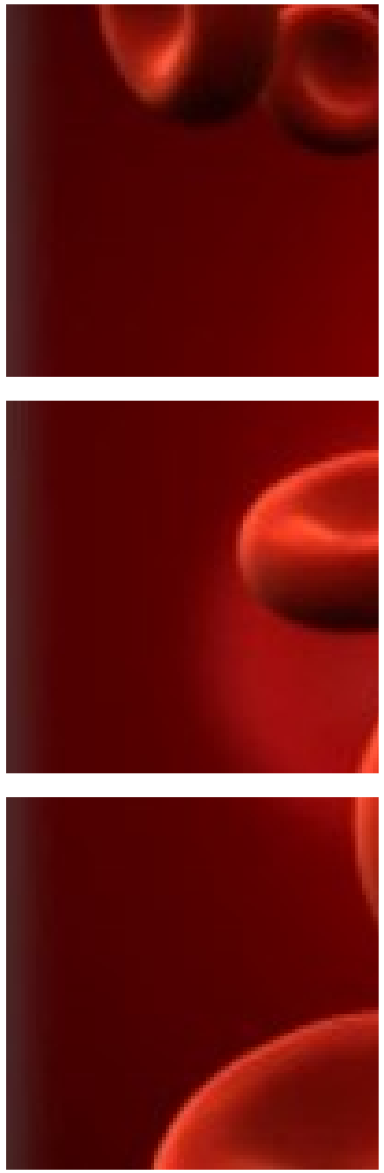

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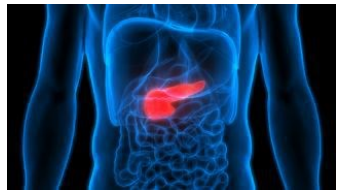
TRYbeCA-1, Pivotal Phase 3 Trial in 2L Advanced Pancreatic Cancer



Pascal Hammel
Co-PI, Hôpital Beaujon, Paris, France

Manuel Hidalgo
Co-PI, Weil Cornell, New York, U.S.

Trybeca-1

Patients (N ≈ 500)

- ≥18 years
- Stage III or IV PAC
- One prior systemic chemotherapy in advanced setting
- Measurable disease
- ECOG PS 0 or 1

Randomize 1:1

Chemotherapy
(gemcitabine+nabpaclitaxel or FOLFIRI)
plus eryaspase

Chemotherapy alone
(gemcitabine+nabpaclitaxel or FOLFIRI)

Stratification by ECOG PS, chemotherapy regimen and time since diagnosis of advanced disease

Primary endpoint

- Overall Survival

Key secondary endpoints

- Progression-free survival
- Objective response rate
- Disease control rate
- Safety and tolerability
- Quality of life

~ 90 clinical sites activated in 11 countries in Europe and the United States.

Reference: ClinicalTrials.gov: NCT03665441
ECOG, Eastern Cooperative Oncology Group; PS, performance status
FOLFIRI, 5FU/leucovorin/irinotecan; the irinotecan can be Onivyde (nanoliposomal irinotecan or NALIRI)

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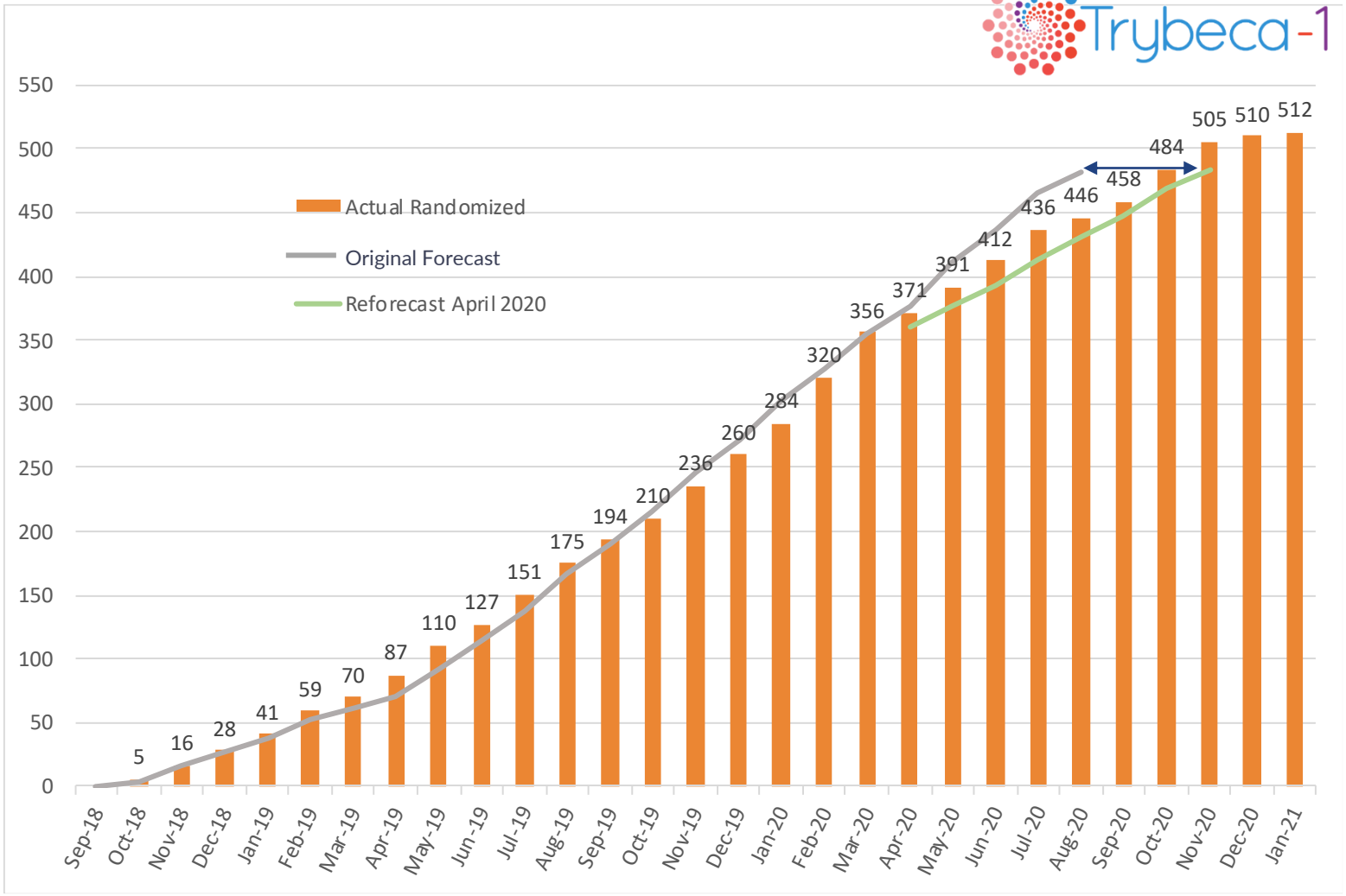
TRYbeCA-1 Fully Enrolled and On Track for Top-line Results in 4Q21

- Fully enrolled since January ‘21; 512 patients randomized, slightly above target enrollment of 482 patients
- Four safety reviews by independent data monitoring committee (IDMC), all recommended trial to continue without modification
  - First three, safety review only
  - Last, in February, combined safety and efficacy review
- Top-line results expected in **Q4 2021**



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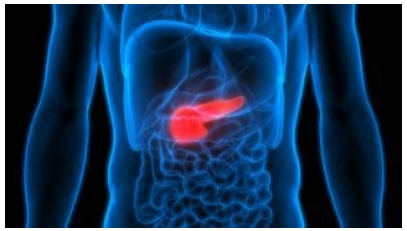
Phase 1 IST in 1L Pancreatic Cancer Escalated to 2nd Dose Cohort

Investigator Sponsored Trial (IST) at Georgetown Lombardi Cancer Center evaluating combination of eryaspase and modified FOLFIRINOX

Patients (N ≈ 18)

- First-line (locally) advanced pancreatic cancer



Primary endpoint

- Safety/MTD

Key secondary endpoints

- Objective response rate
- Progression-free survival
- Overall survival

Dr. Marcus Noel

Georgetown | Lombardi
COMPREHENSIVE CANCER CENTER

- Trial enrolling patients since January ’21
- First dose cohort (75 U/l) completed in Q1 ’21: No DLT observed and treatment was well tolerated
- Trial escalated to next, potentially final dose (100 U/l); Second dose cohort fully enrolled
- Encouraging efficacy signals observed in first patients
- Determination of MTD expected in **2H 2021**

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Key Opinion Leader Webinar – September 1, 2021

PRESENTATIONS FROM:

Dr. Manuel Hidalgo Medina, M.D., Ph.D
(Weill Cornell Medicine/
NewYork-Presbyterian Hospital)

Dr. Marcus Noel, M.D.
Georgetown University

Reply available on website

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Phase 2 Proof of Concept Trial in Metastatic TNBC Ongoing

Randomized Phase 2 trial evaluating eryaspase in combination with chemotherapy versus chemotherapy alone in metastatic TNBC

Patients (N ≈ 64)

- Locally recurrent or metastatic TNBC
- No BRCA1/2 mutation carriers
- Measurable disease
- ECOG PS 0 or 1

Randomize 1:1

Carboplatin/ gemcitabine plus eryaspase

Carboplatin/ gemcitabine

Trybeca-2

Dr. Ahmed Awada

Head of the Medical Oncology Clinic at Jules Bordet Cancer Institute Brussels, Belgium

- Trial enrolling in three countries in Europe
- Steering Committee recommended trial to continue trial without modification after safety review of first 19 patients
- Inclusion criteria modified to include second line patients
- Initial (interim) data are expected to be reported in the **1H 2022**

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Opportunity in ALL Following Positive Phase 2 IST

- NOPHO-sponsored Phase 2 trial: Evaluation of safety and activity of eryaspase in combination with chemotherapy in ALL patients who developed hypersensitivities to pegylated asparaginase
  - Positive results presented at ASH 2020 Annual Meeting in December 2020
- Hypersensitivity to peg-asparaginase represents significant medical need
  - Estimated annual treatable population: 15-20% of patients treated with pegylated asparaginase develop hypersensitivity
  - Two products approved, Erwinaze (Clinigen), facing supply shortages, and Rylaze (Jazz), newly approved in June 2021
- Eryaspase has convenience benefit: 2 injections per month versus 12-15
- Step towards seeking US approval initiated
  - Pre-BLA meeting with FDA took place in June
  - Fast Track designation granted in July
  - BLA submission currently expected in **Q4 2021**, pending successful completion of remaining activities

Birgit Klug Albertsen MD PhD
Aarhus University Hospital
Denmark

NOPHO

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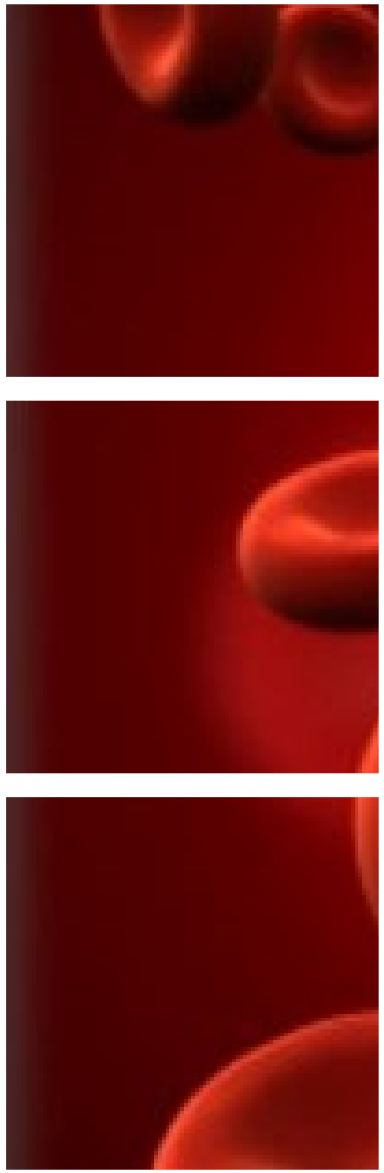

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1H 2021 Financial Results – P&L

- Net loss of €28.0 million in 1H 2021, down €7.0 million (-20%) year-over-year
  - €6.4 million decrease (-18%) in operating loss
  - €0.6 million increase in financial income

- Of the €6.4 million decrease in operating loss:
  - €5.6 million decrease in preclinical and clinical development expenses
  - €0.3 million decrease in general and administrative expenses,
  - €0.4 million increase in operating income

In thousands of euros	1H 2021 (6 months)	1H 2020 (6 months)
Revenues	—	—
Other income	2,270	1,849
Operating income	**2,270**	**1,849**
Research and development	(23,209)	(28,846)
General and administrative	(8,027)	(8,372)
Operating expenses	**(31,236)**	**(37,218)**
Operating loss	**(28,966)**	**(35,369)**
Financial income	2,807	672
Financial expenses	(1,791)	(265)
Financial income (loss)	**1,016**	**407**
Income tax	(2)	-
Net loss	**(27,952)**	**(34,962)**

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1H 2021 Financial Results – CASH

- As of June 30, 2021: total cash position of €46.3 million (approximately $54.9 million) compared with €44.4 million ($54.4 million) on December 31, 2020

- €1.9 million increase in cash position during the first half of 2021, with:
  - Net cash utilization of €32.9 million in Operating and Investing activities
  - Net cash generation of €34.1 million in Financing activities, including:
    - €6.4 million through the Company's at-the-market (ATM) equity financing program
    - €22.9 million net proceeds from a $30 million Registered Direct offering with specialized healthcare investors
    - €5.7 million through the draw down of two tranches under the convertible notes (OCABSA) financing agreement with Alpha Blue Ocean
  - $/€ positive currency exchange impact of €0.7 million

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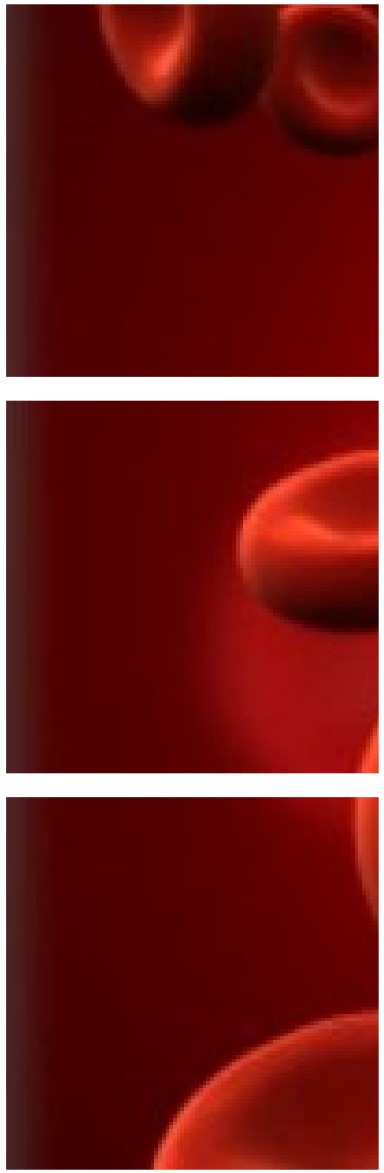
April 29, 2021 Equity Financing

- **Successful registered direct round of $30 million in gross proceeds**
  - Ordinary shares in the form of American Depositary Shares at $7.25 (€6.01) per ADS
  - Associated with 75% of 2-year warrants, with an exercise price of €7.50 ($9.05) per share

- **Cash horizon extended to Q2 2022**
  - Current cash position can fund planned operations and current programs into the second quarter of 2022.
  - Cash horizon could be further extended into Q3 2022 with the convertible note financing agreement with Alpha Blue Ocean and/or the ATM facility, subject to 20% regulatory dilution limit

Key News Flow and Milestones Expected Over the Next 12 Months

- Top-line results from TRYbeCA-1 Phase-3 trial of eryaspase in 2L PAC (Q4 2021)
- Potential BLA filing of eryaspase in hypersensitive ALL (Q4 2021)
- Determination of the maximum tolerated dose in rESPECT, Phase 1 IST in 1L PAC (Q4 2021)
- Potential BLA filing of eryaspase in 2L pancreatic cancer (1H 2022)
- Initial data from the randomized Phase 2 TRYbeCA-2 trial of eryaspase in TNBC (1H 2022)



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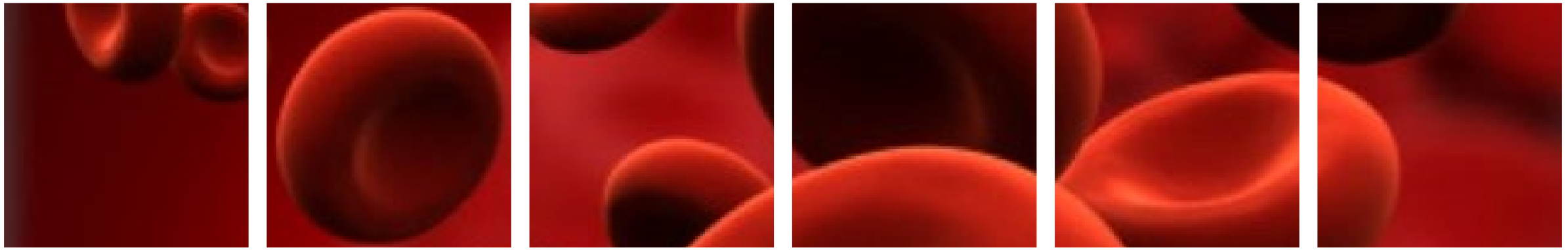

Thank you!

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