

# **WE CARE** FOR THE RARE



January 2025

An integrated orphan drug company, focusing on late-stage development for commercialization

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<sup>\*</sup>In-house development of Aladote parked until Emcitate NDA/MAA submissions have been completed

# WE CARE FOR THE RARE

1.

An integrated orphan drug company, focusing on late-stage development for commercialization

# Orphan drug segment – a highly attractive opportunity



#### Shorter clinical development time<sup>1</sup>

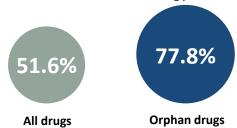
Phase II to launch Average # of years



#### Higher probability of success<sup>3</sup>

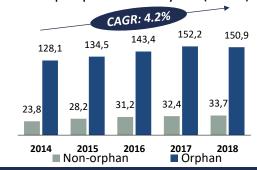
#### Phase III to approval

POS in metabolic/endocrinology indications



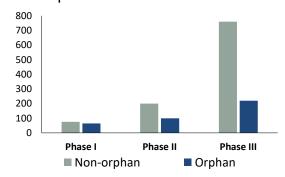
#### Higher attainable prices<sup>2</sup>

Mean cost per patient and year (USDk)

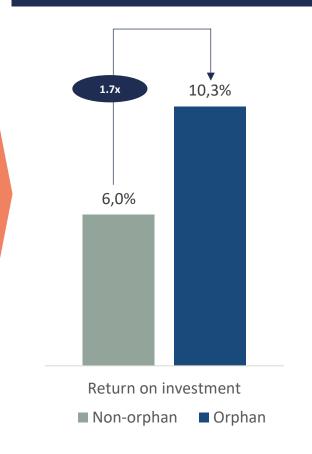


#### Fewer patients for clinical trials<sup>4</sup>

#### Patients per trial



#### **Orphan drugs attractive returns**<sup>5</sup>



Source: (1) Orphan drug development: an economically viable strategy for biopharma R&D, Meekings, Williams & Arrowsmith, 2012; (2) EvaluatePharma; (3) Estimation of clinical trial success rates and related parameters, C. Wong, K. Siah, A. Lo, Biostatistics, 2019; (4) BioMed Central; (5) EvaluatePharma Orphan Drug Report 2013

# An integrated orphan drug company, focusing on late-stage development for commercialization



- Dedicated orphan drug company Two late-stage assets: **Emcitate** and **Aladote\***
- Emcitate received positive CHMP opinion in December 2024 Pivotal trial for *Emcitate* **NDA** is ongoing
- Highly attractive **orphan drug segment**
- Plan to launch through small in-house commercial organization in the EU and North America
- **Strong team** with late-stage orphan clinical development, registration and commercialization experience from:



Listed on NASDAQ Stockholm (EGTX) HQ in Stockholm, Sweden ~40 FTEs















# Building a sustainable orphan drug company

- Successfully develop *Emcitate* for EU & US approvals in 2025/26 and potentially *Aladote* post 2026
- Commercialize *Emcitate* and *Aladote* through an inhouse organization in Europe/ North America and partnerships in RoW
- Realize the full potential of our products via life-cycle management
- Ensure fast and broad access to our products for the benefit of patients worldwide
- Identify further assets that address the significant unmet medical need for patients with rare diseases
- Provide an open culture that encourages Collaboration, Courage & Commitment
- Egetis financial objective is to create increased value for shareholders in the long term

To bring unique therapies to patients with rare diseases that improve and extend life

To create value for patients, society and shareholders by developing and providing a portfolio of unique products for the treatment of rare diseases with substantial medical need



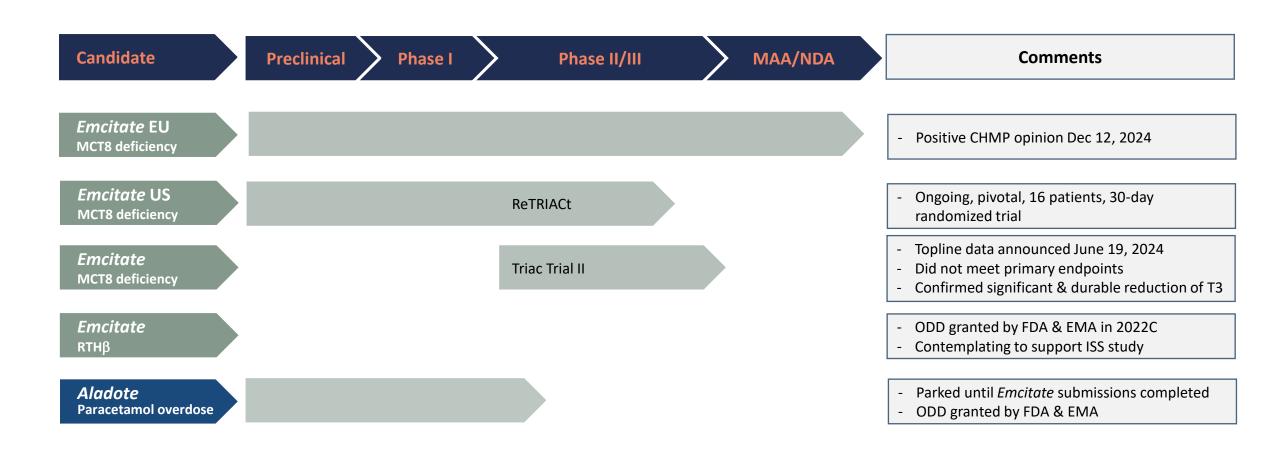




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# **Pipeline overview**

Emcitate - Positive CHMP opinion Dec 2024



## **Emcitate® Overview**



Lead candidate for addressing MCT8 deficiency, a condition with high unmet medical need and no available treatment

Clinical

- Triac Trial I (Phase IIb) completed with significant & clinically relevant effects on T3 levels and chronic thyrotoxicosis
- Erasmus Medical Center cohort study confirms long-term efficacy and safety for up to 6 years
- **Triac Trial II:** Results announced June 2024. Did not meet primary neurocognitive endpoints. Confirmed the significant and durable reduction of T3 levels in all patient
- New study reports tiratricol (Emcitate®) treatment in patients with MCT8 deficiency is associated with survival benefits

Regulatory

- Orphan drug designation in EU & US, US Rare Pediatric Disease Designation eligible for Priority Review Voucher
- Fast track designation granted by FDA
- Received positive CHMP opinion from the EMA in December 2024
- For the US **NDA submission** a 30-day, placebo-controlled study in at least 16 evaluable patients is being conducted to verify the results on T3 levels seen in previous clinical trials and publications

Commercial

- European Thyroid Association recommends tiratricol as long-term therapy for all patients with MCT8 deficiency
- Incidence 1:70k males, no sponsor-initiated trials ongoing in MCT8 deficiency
- Analogue orphan drugs priced at premium
- Launched disease awareness initiatives to support diagnosis of MCT8 deficiency
- Approximately 230 patients are being treated with Emcitate in managed access programs
- Expected market exclusivity is 10 years in EU (ODD), 7 years in US (ODD)

## Several important milestones over the last 6 months





Promising
Innovative
Medicine(PIM)
designation in
the UK

Triac Trial II results ETA guidelines diagnosis and management of MCT8 deficiency Survival
abstract/data
– ETA
Response
EMA D120
questions

Patent
application to
the US PTO "Processes of
Preparation" of
tiratricol

Secured SEK Response EMA 300m Directed D180 LoOI Share Issue EMA approval recommendation for Emcitate® (tiratricol)

# **2.**a Overview of MCT8 deficiency

## MCT8 deficiency results in dysfunctional thyroid hormone trafficking

MCT8 deficiency has two co-manifestations

#### **New Research Sheds Light on Thyroid Hormone Transport**

- In 2003, MCT8 was identified as one of the first thyroid hormone transporters
  - Previously, thyroid hormone was incorrectly believed to be able to passively cross cellular membranes, without the need for a specific transporter
- Several additional transporters have been identified with preferential distribution across different tissue types and cells

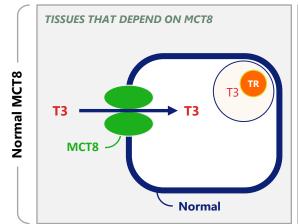
#### MCT8 Plays a Key Role in Neurocognitive Development

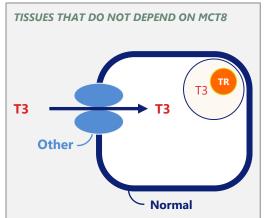
- MCT8 is the only thyroid hormone transporter in the cells of the blood brain barrier and neurons
  - The human brain is dependent on thyroid hormone for its normal development. Absence of thyroid hormone in the CNS leads to disruption of neurocognitive development and results in severe neurocognitive and motor impairment

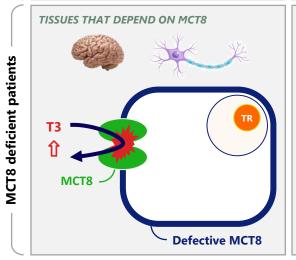
#### **And Causes Many Additional Symptoms**

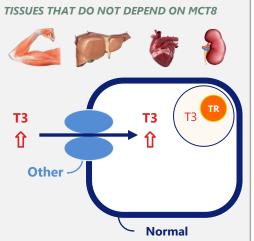
- Disrupted thyroid hormone homeostasis leads to an increase of peripheral serum T3 levels
- Tissues dependent on transport other than MCT8 suffer from too high levels of thyroid hormone:
  - Increased heart frequency, blood pressure and arrhythmias
  - Severe wasting and weight loss
  - Impaired liver / kidney function
  - Altered bone metabolism and blood lipids
  - Increased risk of sudden and premature death

MCT8 deficiency results in simultaneous too high and too low thyroid hormone levels – causing system wide issues









# MCT8 deficiency: a detrimental condition with significant unmet medical need



#### What is MCT8 deficiency?

- · Genetic X-linked disorder
- Impaired thyroid hormone trafficking across cellular membranes
- MCT8 is a key thyroid hormone transporter in the body
- Prevalence 1:70.000 males



Patients with MCT8 Deficiency1)

#### What does it mean?

- Non-functional MCT8 protein: T3 cannot cross blood-brainbarrier
- Low amounts of thyroid hormone in the brain & CNS
- Disrupted feedback loop results in a compensatory increase in circulating thyroid hormone

 Simultaneous too high & too low thyroid hormone in different tissues

#### What are the challenges?

- Patients appear normal at birth
- Initial symptoms within the first months of life
- Severe intellectual disability
- Most patients never able to sit or walk; limited ability to communicate
- Life-long morbidity: agitation, CV symptoms, wasting & impaired life expectancy



 Heavily dependent on caregivers resulting in very high disease burden

## How do you manage the disease?

- No available therapy
- Easy diagnosis once considered with readily available, low-cost lab-test
- Large proportion of patients remain undiagnosed with significant delay to diagnosis



 Significant unmet medical need: humanitarian, health economic, societal

#### Quick facts from natural history<sup>2</sup>

Median onset of symptoms: 4 months

Median age of diagnosis: 10 months

(prior to 2017: 24 months)

Patients surviving into adulthood: 70%

Severe intellectual disability: 100%

Ability to sit independently: 8%

Hypotonia, hypertonia

& persistence of primitive reflexes: 90%

Severe underweight: 75%

Cardiac arrythmias (PAC): 76%

Median life expectancy: 35 years

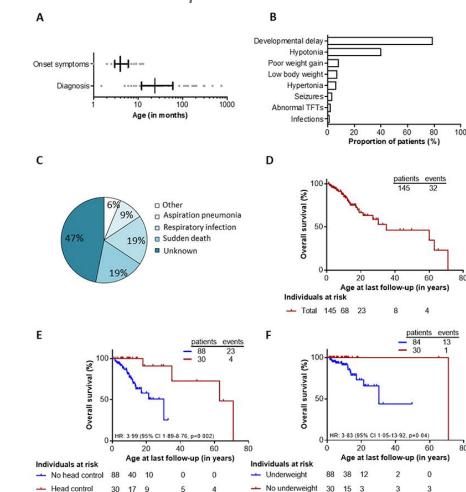
Life long 24-hour care: 100%

# Natural history study revealed poor survival with a high prevalence of treatable underlying risk factors

of

An international, retrospective, multicentre cohort study from 2014-2020 in 151 patients

- 151 patients were enrolled with 73 different MCT8 (SLC16A2) mutations
- Median age at diagnosis was 24.0 months
- 21% patients died; the main causes of mortality were pulmonary infection (six patients or 19%) and sudden death (six patients or 19%)
- Median OS was 35.0 years (95% CI 8.3-61.7)
- Individuals who did not attain head control by age 1.5 years had an increased risk of death compared with patients who did attain head control (p=0.0041)
- Patients who were underweight during age 1-3 years had an increased risk for death (p=0.021)
- The few motor & cognitive abilities of patients did not improve with age, as evidenced by the absence of significant correlations between biological age and scores on the Gross Motor Function Measure-88 and Bayley Scales of Infant Development III
- Tri-iodothyronine concentrations were above the age-specific upper limit in 96 (95%) of 101 patients and free thyroxine concentrations were below the age-specific lower limit in 94 (89%) of 106 patients. 59 (71%) of 83 patients were underweight. 25 (53%) of 47 patients had elevated systolic blood pressure above the 90th percentile, 34 (76%) of 45 patients had premature atrial contractions, and 20 (31%) of 64 had resting tachycardia
- The most consistent MRI finding was a global delay in myelination, which occurred in 13 (100%) of 13 patients



# Multiple sources lead to consistent MCT8 deficiency incidence estimates



#### **Relevant Sources & Data**

Visser et al., Clinical Endocrinology 2013

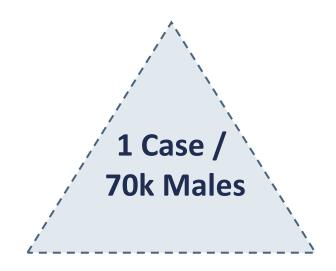
Neonatal Screening - Netherlands

Triac Trial II - Germany

# **Available Data Leads to Consistent MCT8 Deficiency Incidence Estimates**

- Multiple cohorts of patients with Xlinked mental retardation under study
- MCT8 deficiency prevalence in studied populations implies a 1:50k-100k Male incidence perimeter
- 140k births & 70k Males a year with 1-2 diagnosed cases a year on average over the past years
- Implies more than 1:70k incidence
- 20 months of screening and 400k live births yielded 12 patients below 30 months of age
- Implies at least ~1:30k incidence

# Supporting our Conservative Estimate



# **2.**b Clinical experience with Emcitate

## **Orphan drug candidate**

with clear scientific and mechanistic rationale and established safety profile

#### Difference normal MCT8 and deficiency of MCT8

 Thyroid hormone T3 requires transporters such as MCT8 to enter the target cells

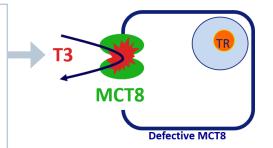
#### Normal MCT8

- Functional thyroid gland producing T3
- Production of functional MCT8
- → T3 cross cell membrane and enters target cell

# T3 MCT8 Normal

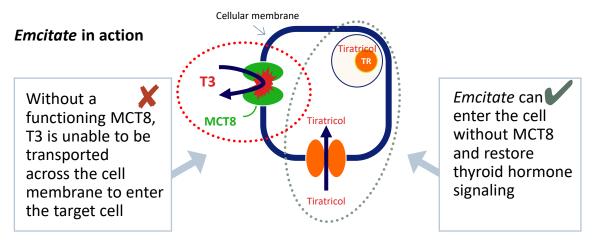
#### Mutated MCT8 X

- Functional thyroid gland producing T3
- Absence or loss of function of MCT8 on the cell surface
- → T3 cannot cross cell membrane and fails to enter cells



#### **Emcitate** (tiratricol) – Addressing MCT8 deficiency

- Tiratricol is a small molecule thyroid hormone T3 analogue
- Unlike T3, tiratricol can cross cellular membranes without a functional MCT8 transporter
- Tiratricol can bypass the problem in patients with MCT8 deficiency, enter MCT8 deficient cells and restore thyroid hormone signalling
- Experience from 40 years on the French market in a different indication, owned and controlled by the Company



# Discovery of *Emcitate* (Triac, tiratricol)



ROSALIND PITT-RIVERS M.Sc., Ph.D. Lond.

Triac (tiratricol)

#### **Preliminary Communication**

PHYSIOLOGICAL ACTIVITY OF THE ACETIC-ACID ANALOGUES OF SOME IODINATED THYRONINES

# Overview of completed Phase IIb – Triac Trial I

**Primary** objective and results

- Evaluate the efficacy and safety of oral administration of tiratricol in male patients with MCT8 deficiency of all ages
- Highly significant primary outcome Change in T3 serum concentrations
- Safe and tolerable
- Results published in The Lancet 2019

Secondary objective and results

- Change in other thyroid hormone function tests, thyrotoxic symptoms and markers
- Significant and clinically relevant effects observed across secondary endpoints

**Description** 

- An international, single-arm, open-label, Phase II trial
- ClinicalTrials.gov identifier: NCT02060474

# of patients

46 MCT8 patients in 9 countries

**Timetable** 

- Initiated in 2014 (first patient in)
- Completed in 2018

## THE LANCET

Effectiveness and safety of the tri-iodothyronine analogue Triac in children and adults with MCT8 deficiency: an international, single-arm, open-label, phase 2 trial

Stefan Groeneweg, Robin P Peeters, Carla Moran, Athanasia Stoupa, Françoise Auriol, Davide Tonduti, Alice Dica, Laura Paone, Mara Rozenkova, Jana Malikova, Adri van der Walt, Irenaeus F.M. de Coa, Anne McGowan, Gret a Lyons, Femke K. Aarsen, Diana Barca, Ingrid M. van Beynum, MariekeM van der Knoop, Jurgen Jansen, Martien Manshande\*, Roelineke J Lunsing, Stan Nowak, Corstiaan A den Uil, M Carola Zillikens, Frank E Visser, Paul Vrijmoeth, Marie Claire Y de Wit, Nicole I Wolf, Angelique Zandstra, Gautam Ambegaonkar, Yogen Singh, Yolanda B de Rijke, Marco Medici, Enrico S Bertini, Sylvia Depositer, Jan Lebl, Marco Cappa, Linda De Meideir\*, Heiko Krude, Dana Craiu, Federica Zibordi, Isabelle Oliver Petit, Michel Polak, Krishna Chatterjee, Theo J Visser\*, W Edward Visser

Background Deficiency of the thyroid hormone transporter monocarboxylate transporter 8 (MCT8) causes severe Lincer Diabetes En intellectual and motor disability and high serum tri-iodothyronine (T<sub>i</sub>) concentrations (Allan-Herndon-Dudley Patients Online syndrome). This chronic thyrotoxicosis leads to progressive deterioration in bodyweight, tachycardia, and muscle wasting, predisposing affected individuals to substantial morbidity and mortality. Treatment that safely alleviates peripheral thyrotoxicosis and reverses cerebral by pothyroidism is not yet available. We aimed to investigate the effects treatment with the T, analogue Triac (3,3',5-tri-iodothyroacetic acid, or tiratricol), in patients with MCT8 deficiency.

Methods In this investigator-initiated, multicentre, open-label, single-arm, phase 2, pragmatic trial, we investigated the "OMARDOR OF THE ADDRESS OF THE AD Europe and one site in South Africa. Triac was administered in a predefined escalating dose schedule-after the initial dose of once-daily 350 µg Triac, the daily dose was increased progressively in 350 µg increments, with the goal of attaining serum total T<sub>3</sub> concentrations within the target range of 1-4-2-5 nmol/L. We assessed changes in several clinical and biochemical signs of hyperthyroidism between baseline and 12 months of treatment. The prespecified Profession MO. primary endpoint was the change in serum T, concentrations from baseline to month 12. The co-primary endpoints MMMedicIMO, ProfT/VaserPt were changes in concentrations of serum thyroid-stimulating hormone (TSH), free and total thyroxine (T.), and total WEVENIMEN, Sephia reverse T, from baseline to month 12. These analyses were done in patients who received at least one dose of Triac and had at least one post-baseline evaluation of serum throid function. This trial is registered with Clinical Trials.gov, number | | Mayon Beyon MD3

Findings Between Oct 15, 2014, and June 1, 2017, we screened 50 patients, all of whom were eligible. Of these patients, four (8%) patients decided not to participate because of travel commitments. 46 (92%) patients were therefore enrolled MMYAI det KROOD MSG. in the trial to receive Triac (median age 7.1 years [range 0.8-66.8]) . 45 (98%) participants received Triac and had at MCY deWith MD, Departn least one follow-up measurement of thyroid function and thus were included in the analyses of the primary endpoints. Of these 45 patients, five did not complete the trial (two patients withdrew [travel burden, severe pre-existing comorbidity], one was lost to follow-up, one developed of Graves disease, and one died of sepsis). Patients required a mean dose of 38.3 µg/kg of bodyweight (range 6.4–84.3) to attain T<sub>3</sub> concentrations within the target range. Serum T<sub>4</sub> (Prof Y B do R 1940 Prof) concentration decreased from 4-97 nmol/L (SD 1-55) at baseline to 1-82 nmol/L (0-69) at month 12 (mean decrease 3-15 nmol/L, 95% CI 2-68-3-62; p<0-0001), while serum TSH concentrations decreased from 2-91 mU/L (SD 1-68) Prof M CERES MO. Example 10. to 1-02 mU/L (1-14; mean decrease 1-89 mU/L, 1-39-2-39; p<0-0001) and serum free T, concentrations decreased Medical Centre, Rotterstain, from 9.5 pmol/L (SD 2.5) to 3.4 (1.6; mean decrease 6.1 pmol/L (5.4-6.8; p<0.0001). Additionally, serum total T. Netherlands, Welkome Trust concentrations decreased by 31 · 6 nmol/L (28 · 0-35 · 2; p < 0 · 0001) and reverse T, by 0 · 08 nmol/L (0 · 05-0 · 10; p < 0 · 0001). Seven treatment-related adverse events (transiently increased perspiration or irritability) occurred in six (13%) patients. 26 serious adverse events that were considered unrelated to treatment occurred in 18 (39%) patients (mostly hospital Cambridge UK (C MOGO MA), admissions because of infections). One patient died from pulmonary sepsis leading to multi-organ failure, which was AMCCOWARM C LYGOR RCA unrelated to Triac treatment

Interpretation Key features of peripheral thyrotoxicosis were alleviated in paediatric and adult patients with MCT8 Necker Children's University deficiency who were treated with Triac. Triac seems a reasonable treatment strategy to ameliorate the consequences of untreated peripheral thyrotoxicosis in patients with MCT8 deficiency.

Funding Dutch Scientific Organization, Sherman Foundation, NeMO Foundation, Wellcome Trust, UK National and Genetics, Children's Institute for Health Research Cambridge Biomedical Centre, Toulouse University Hospital, and Una Vita Rara ONLUS.

of Paediatric Cardiology

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www.thelancet.com/diabetes-endocrinology Published online July 31, 2019 http://dx.doi.org/10.1016/52213-8587(19)30155-3

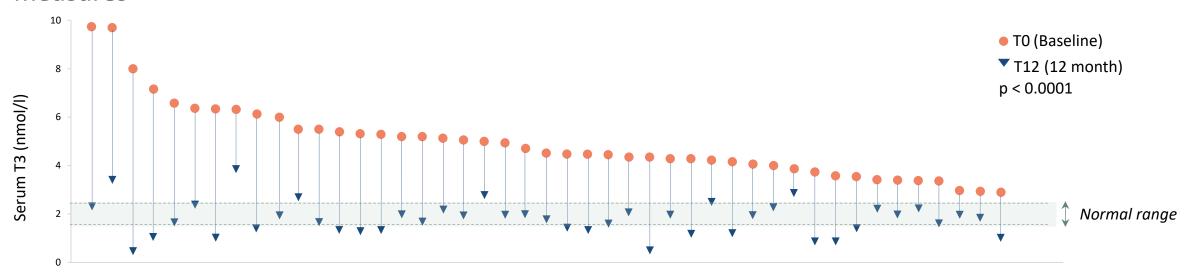
Source: Groeneweg et al, Lancet D&E 2019;

# Consistent, clinically relevant and highly significant results



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Triac Trial I: Reached target level serum T3 & improvements in clinically relevant outcome measures



Endpoints	Baseline mean ( $\pm$ SD)	12 months mean ( $\pm$ SD)	Difference in means (95% CI)	p-value
Serum T3 (nmol/L)	4.97 (± 1.55)	1.82 (± 0.69)	-3.15 (-3.62, -2.68)	<0.0001
Weight to age (z score)	-2.98 ( $\pm$ 1.93)	-2.71 ( $\pm$ 1.79)	0.27 (0.03, 0.50)	0.025
Resting heart rate (bpm)	112 ( $\pm$ 23)	104 ( $\pm$ 17)	-9 <i>(-16, -2)</i>	0.01
Mean heart rate 24 h (bpm)	102 ( $\pm$ 14)	97 ( <i>±</i> 9)	-5 <i>(-9, -1)</i>	0.012
SHBG (nmol/L)	212 ( $\pm$ 91)	178 ( $\pm$ 76)	-35 <i>(-55, -15)</i>	0.0013
Total cholesterol (mmol/L)	3.2 ( $\pm$ 0.7)	3.4 <i>( ± 0.7)</i>	0.2 (0.0, 0.3)	0.056
CK (U/L)	108 ( $\pm$ 90)	161 ( $\pm$ 117)	53 <i>(27, 78)</i>	<0.0001

Source: Groeneweg et al; Lancet D&E 2019

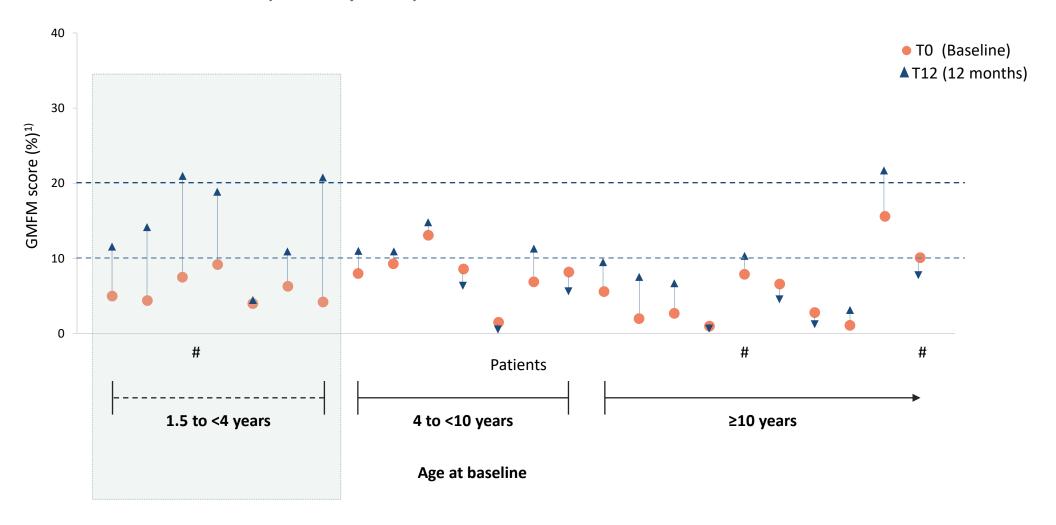
# Triac Trial I: Indication of positive effect on neurocognitive development



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Triac Trial II did not meet its primary endpoints



# Long-term efficacy and safety of Emcitate® in MCT8 deficiency patients



Published in October, 2021

ACCEPTED MANUSCRIPT

Long-term efficacy of T3 analogue Triac in children and adults with MCT8 deficiency: a real-life retrospective cohort study 3

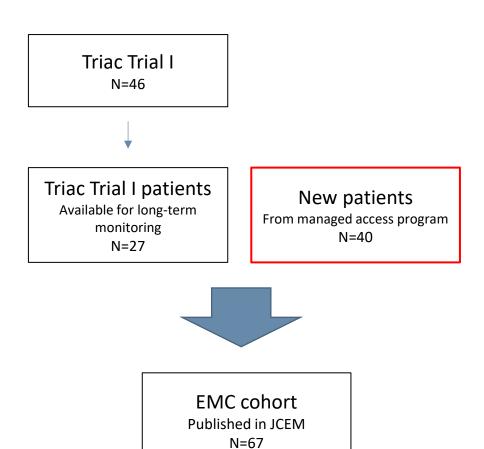


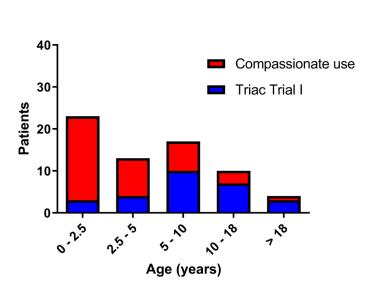
Ferdy S van Geest, Stefan Groeneweg, Erica L T van den Akker, Iuliu Bacos, Diana Barca, Sjoerd A A van den Berg, Enrico Bertini, Doris Brunner, Nicola Brunetti-Pierri, Marco Cappa ... Show more Author Notes

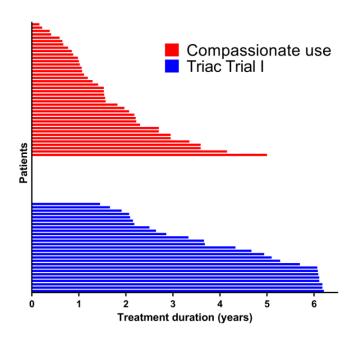
- Investigator-initiated real-world cohort study at 33 sites conducted by the Erasmus Medical Center
- Investigated efficacy and safety of *Emcitate* in 67 patients with MCT8 deficiency
  - Median baseline age of 4.6 years (range: 0.5–66 years) and were treated with tiratricol for up to 6 years, with a median of 2.2 years (range 0.2 – 6.2 years)
  - The primary endpoint in the study was the change in serum T3 concentration from baseline to last-available measurement
  - The pre-specified secondary endpoints were key measurements of clinical complications of chronic peripheral thyrotoxicosis

# New patient cohort of equal size to the Triac Trial I

Long term follow up, up to >6 years



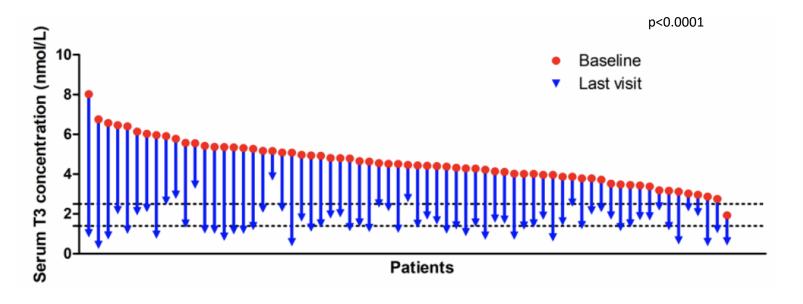


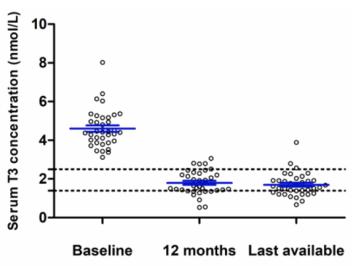


23

# New cohort confirms primary endpoint results in Triac Trial I

Fast and durable normalization of T3 values in almost all patients





# Consistent, clinically relevant and highly significant results

across endpoints

- Data confirm the positive results from previous study, Triac
   Trial I
- Normalization of serum T3 corresponds to improvement in thyroid hormone status in end target tissues
- Beneficial effects are maintained or continue to improve over time, up to six years
- Consistent efficacy seen across key clinical and biochemical parameters that were sustainably alleviated in patients with MCT8 deficiency regardless of age

Table 2: Changes from baseline to last visit in predefined outcomes

	Baseline mean (SD)	Last visit mean (SD)	Mean change (95% CI)	P value
Primary outcome				
T3 (nmol/L; n=67)	4.58 (1.11)	1.66 (0.69)	-2.92 (-3.23 to -2.61)	<0.0001
Secondary outcomes				
Anthropometric parameters and heart rate				
Body weight (kg; n=58)	17.8 (12.1)	23.6 (14.5)	5.7 (4.2 to 7.2)	
Weight-for-age Z score (n=58)	-2.81 (1.94)	-2.64 (1.81)	0.17 (-0.18 to 0.53)	0.3263
Δ Weight-for-age – predicted weight-for-age Z score (n=55)	0.07 (1.83)	0.79 (1.92)	0.72 (0.36 to 1.09)	0.0002
Height (cm; n=44)	101 (21)	116 (23)	15 (12 to 19)	
Height-for-age Z score (n=44)	-1.84 (1.77)	-1.92 (1.51)	-0.09 (-0.50 to 0.32)	0.6705
Δ Height-for-age – predicted height-for-age Z score (n=43)	-0.44 (1.38)	0.14 (1.41)	0.58 (0.12 to 1.05)	0.0139
Weight-for-height Z score (n=44)	-2.02 (2.49)	-1.50 (2.44)	0.52 (-0.35 to 1.39)	0.2358
Heart rate (bpm; n=48)	113 (21)	97 (20)	-17 (-24 to -10)	<0.000
Heart rate-for-age Z score (n=48)	1.59 (0.89)	0.96 (1.01)	-0.64 (- 0.98 to -0.29)	0.0005
Thyroid function tests				
TSH (mU/L; n=62)*	3.32 (2.30)	0.95 (0.73)	-2.38 (-2.98 to -1.77)	<0.000
Free T4 (pmol/L; n=64)	9.5 (2.3)	3.4 (1.6)	-6.1 (-6.7 to -5.4)	<0.000
T4 (nmol/L; n=63)	54.2 (11.8)	18.1 (9.8)	-36.1 (-39.5 to -32.7)	<0.000
Peripheral markers				
Sex hormone-binding globulin (nmol/L; n=48)	245 (99)	209 (92)	-36 (-57 to -16)	0.0008
Creatinine (µmol/L; n=47)	32 (11)	39 (13)	7 (6 to 9)	<0.000
Creatine kinase (U/L; n=47)*	110 (87)	128 (80)	18 (-8 to 45)	0.2166

All outcomes were assessed in all patients who received Triac treatment longer than the mean time to optimal dose (5.0 months; N=64). Data are mean. Body weight-for-age Z scores were calculated using TNO growth calculator and heart rate-for-age Z scores were calculated using the Boston Z score calculator. Abbreviations: T3=tri-iodothyronine. TSH=thyroid-stimulating hormone. T4=thyroxine. \*TSH and creatine kinase concentrations were log-transformed to ensure a normal distribution before paired t tests were done (non-transformed means [SDs] and mean changes [95% CIs] are presented for the sake of interpretability).



## **Triac Trial II objective and design:**

Triac Trial II was designed to investigate a potential additional benefit on neurocognitive development in 22 patients with MCT8 deficiency below 30 months of age treated with Emcitate® (tiratricol) during 96 weeks

#### Primary Objective

- Confirm findings from Triac Trial I in youngest age group
- Improvement in neurocognitive development as measured by GMFM<sup>1</sup> and BSID-III<sup>2</sup> compared to natural history controls

#### Secondary Objective

- Achievement of motor milestones (e.g. hold head, sit independently)
- Normalization of thyroid hormone function tests and markers of thyrotoxicosis

#### Description

- Open label, multi-centre trial in very young children with MCT8 deficiency
- International trial with centres in CZ, DE, NL & US
- Design discussed and anchored with EMA and FDA
- ClinicalTrials.gov identifier: NCT02396459

#### # of Patients

22 children, 0-30 months of age



- Topline 96-week results announced on June 19, 2024
- The trial did not meet its primary endpoints (please see next slide)
- Market approval not dependent on Triac Trial II data



<sup>2.</sup> BSID: Bayley Scales of Infant and Toddler Development



## **Triac Trial II Summary**



- Triac Trial II results:
  - The numerical improvements versus baseline observed on the primary endpoints of neurocognitive development assessed by the GMFM-88 and BSID-III scales did not show a statistically significant improvement versus historical controls.
  - The trial confirmed the significant and durable reduction of T3 levels in all patients relevant to alleviate features of thyrotoxicosis in patients with MCT8 deficiency.
  - Well-tolerated safety profile of tiratricol seen in previous clinical studies.
- The Triac trial II is complementary to the data already submitted and validated in the MAA for Emcitate® (tiratricol) for treatment of MCT8 deficiency, based on the benefit of normalization of thyrotoxicosis which has been demonstrated in patients of all ages, as agreed with the EMA. Results from Triac Trial II were included in the response to EMA 120-day list of questions in August 2024.
- The forthcoming NDA in the USA will also be based on the already observed treatment effects on T3 concentrations and the manifestations of chronic thyrotoxicosis together with results from the ongoing ReTRIACt trial, as acknowledged by the FDA.
- The timeline for regulatory review and approval in EU remain unchanged. For the US, as previously communicated, the Company will update the market with regards to timelines for NDA submission as soon as at least 16 evaluable patients have concluded the ongoing ReTRIACt trial.

# New study reports tiratricol (Emcitate®) treatment in patients with MCT8 deficiency is associated with survival benefits



 Abstract published ahead of the ETA Annual Meeting reports that treatment with tiratricol (Emcitate®) in patients with MCT8 deficiency is associated with a 3x lower risk of mortality.



# New data shows tiratricol (Emcitate®) treatment in patients with MCT8 deficiency is associated with survival benefits

- Retrospective real-world cohort study investigated the effects of tiratricol on mortality in 228 patients with MCT8 deficiency.
- Tiratricol-treated patients had an approximately three times lower risk of allcause mortality (Hazard Ratio= 0.28, 95% Confidence Interval= 0.09–0.91, p-value <0.05).</li>

#### August 21, 2024

- Abstract by F. van der Most et al. published ahead of the 46th Annual Meeting of the European Thyroid Association, to be held in Athens, Greece, on September 7-10, 2024.
- An international real-world cohort study included data from 228 patients collected from 173 sites in 48 countries.
- Treatment with the investigational drug tiratricol (Emcitate®) in pediatric and adult patients with MCT8
  deficiency is associated with an approximately three times lower risk of mortality. This corroborates
  previous findings indicating that tiratricol sustainably alleviated key clinical features resulting from
  peripheral thyrotoxicosis.

**Stockholm, Sweden, August 21, 2024.** Egetis Therapeutics AB (publ) ("**Egetis**" or the "**Company**") (Nasdaq Stockholm: EGTX), today announced the content of an abstract by Dr Floor van der Most and co-authors, Erasmus Medical Center, Rotterdam, The Netherlands, published ahead of the 46th Annual Meeting of the European Thyroid Association, to be held in Athens, Greece, on September 7-10, 2024. In the Abstract, treatment with the investigational drug tiratricol (Emcitate®) in paediatric and adult patients with MCT8 deficiency is associated with an approximately three times lower risk of mortality compared to MCT8 deficiency patients not treated with tiratricol.

# European Thyroid Association (ETA) recommends tiratricol as long-term therapy for all patients with MCT8 deficiency



- ETA recommends the use of tiratricol as long-term therapy for all patients with MCT8 deficiency, and for certain patients with RTH-beta.
- Inaugural 2024 Guidelines were commissioned by the Executive Committee of the ETA and developed by an independent team of experts.



# European Thyroid Association recommends tiratricol (Emcitate®) as long-term therapy for all patients with MCT8 deficiency in new guidelines

July 17, 2024

**Stockholm, Sweden, July 17, 2024.** Egetis Therapeutics AB (publ) ("Egetis" or the "Company") (Nasdaq Stockholm: EGTX), today announced that the European Thyroid Association (ETA) has published new guidelines recommending the use of tiratricol (TRIAC or Emcitate®) as long-term therapy for all patients with MCT8 deficiency, and for certain patients with Resistance to Thyroid Hormone (RTH)-beta, as further outlined in the guidelines.

There are currently no approved treatments for MCT8 deficiency or RTH-beta. Egetis has obtained orphan drug designation for tiratricol for the treatment of MCT8 deficiency and RTH-beta in the EU and the USA, and has submitted a marketing authorisation application in the EU, which is currently under review by the European Medicines Agency.

These inaugural 2024 European Thyroid Association Guidelines on diagnosis and management of genetic disorders of thyroid hormone transport, metabolism and action were commissioned by the Executive Committee of the ETA and developed by an independent team of experts. The guidelines can be accessed here:

https://etj.bioscientifica.com/view/journals/etj/aop/etj-24-0125/etj-24-0125.xml

# **2.c** Emcitate® - regulatory pathways in EU and US

# Regulatory features of *Emcitate* for MCT8 deficiency





**Orphan drug designation for MCT8 deficiency** 

Eligibility: Market exclusivity 10y (EU) & 7y (US)

Fast track

**Fast track designation (FDA)** 



Rare pediatric disease designation (FDA)

**Eligibility:** Priority review voucher upon approval\*



MAA: Positive CHMP opinion received in December 2024

NDA: Pivotal ReTRIACt study in 16 evaluable patients ongoing





Orphan drug designation for RTH-beta

<sup>\*</sup>The voucher may be sold to another sponsor (2021-24 range: ~\$100m-\$158m)





# Egetis receives positive CHMP opinion for Emcitate® (tiratricol) for the treatment of MCT8 deficiency

**December 12, 2024** 

Stockholm, Sweden, December 12, 2024. Egetis Therapeutics AB (publ) (Nasdaq Stockholm: EGTX) today announced that the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) has adopted a positive opinion for Emcitate® (tiratricol) for "The treatment of MCT8 deficiency". The European Commission, which grants central marketing authorizations in the European Union (EU), will review the CHMP recommendation and is expected to make a final decision within 67 days. If approved, tiratricol will become the first approved drug which addresses MCT8 deficiency.

# **Emcitate regulatory pathway in EU & US**

Robust data set in an ultra rare genetic disease



#### Triac Trial I

N=46

- Completed 2018 (Groeneweg, 2019)
- Open-label, international, multi-centre study

**EMC** cohort study

N=67

- Completed 2021 (van Geest, 2022)
- N= 27 from Triac Trial I & N= 40 new pts from managed access program

#### **Natural history**

N=151

- Retrospective data, 2003 to 2019 (Groeneweg, 2020)
- Focus on neurocognition, but did not meet its primary endpoints

Open-label,

centre study

96 weeks safety data in young patients

Triac Trial II **Survival study** 

N=22

- Retrospective cohort international, multidata
  - Comparing treated vs untreated patients on survival

N~228

Abstract at ETA by **EMC** 

ReTRIACt Trial

N=16

- N = 16
- Placebo controlled
- Ongoing

Data included in MAA

Included in D120 response

# ReTRIACt: withdrawal of *Emcitate* in males with MCT8 Deficiency

## Pivotal randomized placebo-controlled trial for NDA submission



# Primary endpoint

 Proportion of participants who meet the rescue criterion (serum total T3 > ULN) during the 30-day double-blind Randomized Treatment Period

# Secondary endpoints

Change in cardiovascular variables

Change in serum thyroid hormone variables

#### **Description**

Double-blind, randomized, multicenter placebo-controlled study

- Participants with stable maintenance treatment with Emcitate or treatment naïve patients
- Design agreed with FDA; Clinicaltrials.gov identifier: NCT05579327

# of patients

- At least 16 evaluable patients, > 4 years of age
- Patients from Managed Access program and treatment naïve patients



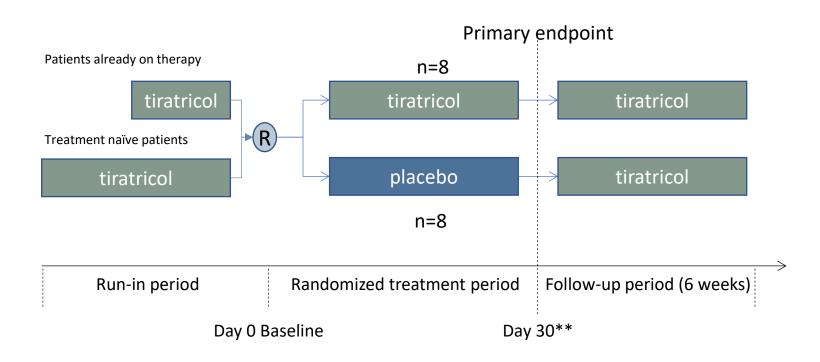
- First patients recruited Q3 2023
- Egetis will update the market as soon as recruitment has been completed, and subsequently when top-line results and NDA filing can be expected



## Design of the ReTRIACt clinical trial

#### Requested by the FDA

- A 30-day, randomized placebo-controlled withdrawal study in 16 patients
- Design agreed with FDA
- The study allows for inclusion of patients that are already on therapy and patients that are treatment naïve
- Treatment naïve patients require a longer run-in period to stabilize T3 levels around normal range before randomization
- A higher proportion of treatment naïve patients will lead to an extended study duration



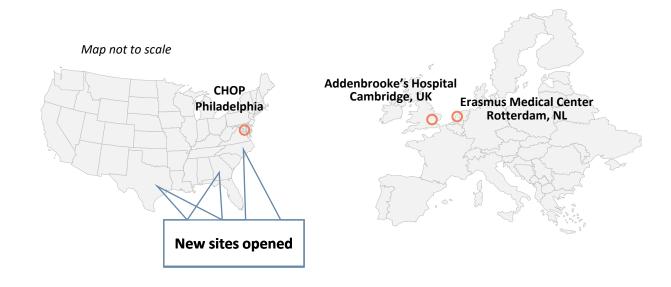
Primary endpoint: Proportion of participants who meet the rescue criterion (T3>ULN\*) during the 30-day double-blind randomized treatment period

<sup>\*</sup> ULN: Upper Limit of Normal

<sup>\*\*</sup> Randomized treatment period ends after 30 days or when rescue criterion (T3 >ULN) is met, whichever comes first

# Current status of ReTRIACt trial (as of Dec. 18, 2024)





- 18 patients have been included so far, of which 8 patients have completed the randomized phase, 1 patient in the randomized phase and 4 patients are in the run-in period.
- 4 patients planned for screening in January and another 6-8 patients under evaluation for study inclusion
- 6 sites currently open, including new sites from mid 2024 in Georgia, North Carolina, Texas.
- Recruitment will continue until at least 16 patients have completed the randomized phase.
- ⇒ Egetis will update the market as soon as recruitment has been completed, and subsequently when top-line results and NDA filing can be expected.

## **Key upcoming milestones 2025-2026**



**Emcitate®** 

#### 2025-2026

MCT8 deficiency

- EU approval and launch
- Topline results ReTRIACt for US NDA
- Filing US NDA priority review
- Middle East & North Africa partnership/s

- Japan Development plan agreed with PMDA
- US Patent granted Processes and compounds
- US approval and launch
- US Rare Pediatric Disease Priority Review Voucher

**RTH-beta** 

 Potential initiation of Investigator Initiated Study - Egetis Industry collaborator

# **2.**d Emcitate® - Commercial opportunity

## Emcitate® – alleviating patient and societal burden

Aiming to provide value for both patients and society



**Patients** 

- Median life-expectancy of MCT8 patients is 35 years<sup>1</sup>
- Patients underweight for age or without ability to hold head have an even increased risk of premature death

Society

- All MCT8 patients have significant neurocognitive disability from early childhood and typically require constant, life-long supportive care
- A recent study in a condition with similar severity (SMA) estimated total healthcare cost (excluding treatment cost) to USD 138k per patient and year<sup>2</sup>



**Emcitate** holds potential to become the **first approved therapy** to address the root cause of MCT8 deficiency, restore thyroid hormone signaling and thereby **prevent disease progression**, alleviate symptoms and **prolong lives** 



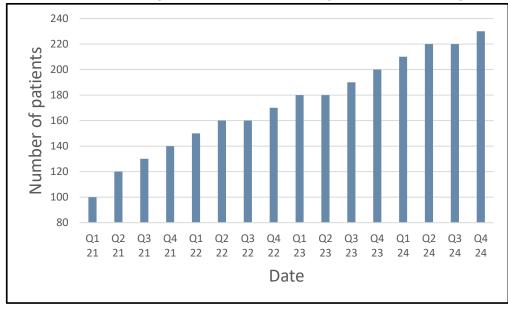
## Emcitate supplied globally in managed access programs

Managed access programs confirm the significant unmet medical need in MCT8 deficiency and the view on how Emcitate addresses it

- Managed access programs
  - mechanisms to allow early access to a medicine prior to regulatory marketing approval
  - granted to pharmaceuticals under development for situations with high unmet medical needs and where no available treatment alternatives exist or are suitable
- FDA approved Expanded Access Program -Simplifies Process for Accessing Emcitate
- *Emcitate* is being supplied in managed access programs, following individual approval from the national medicines agencies, to
  - Around 230 patients
  - Over 25 countries



#### **Patients Receiving Emcitate in Managed Access Programs**







# **Unique setting for Emcitate** in MCT8 deficiency

Addressing unmet medical need

No competition

**KOL** support

**Centralized care guidance** 

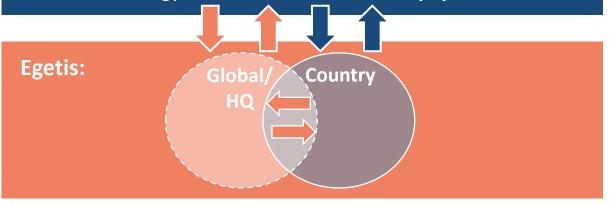
**Global community** 

#### **Seizing opportunity for cost-effective value creation**

- Targeted stakeholder interactions
- Efficiency gains through global-country team coordination

#### **External Key Stakeholders:**

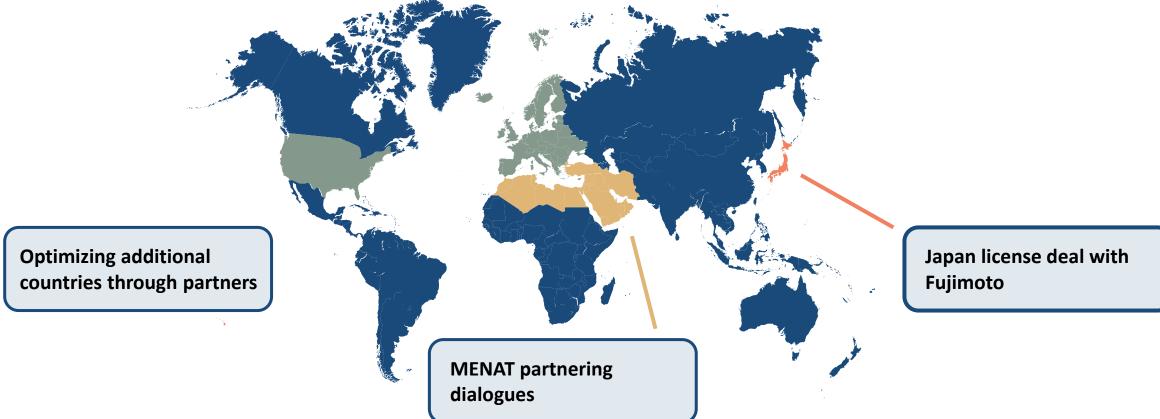
- Caregivers connected through international & national advocacy groups
- International KOLs & physicians at selected specialist centers
- Global strategy and local interactions with payers



# Preparing for Emcitate launch by Egetis and partners

Executing the US & European market preparations and launches through the Egetis team

To optimize the launch, we will focus our own resources on US and Europe (> 70% of sales for most ultra-orphans)



# Step-wise building team to execute on key activities at the right time for launch success

#### Key projects driven by recognized industry talents recruited to the Egetis Commercial & Medical Affairs Team

- Core team brings launch skills and best practices from in total 150+ years at international companies



Henrik Krook, SE VP, Commercial Operations





Anny Bedard, US President Egetis North America





Henna Oittinen Corbinelli, CH Medical Director Europe & International





Ann-Marie Redmond, US
Head of Market Access & Pricing,
North America





Nadia Georges, CH Global Head, Market Access & Pricing





Azza Trad, FR GM France





Susana Roche, FR
Associate Director Global
Medical Affairs Operations





Nigel Nicholls, UK Global Patient Advocacy Director & GM UK, Northern Europe & Iberia





Peter Verwaijen, NL Global Head Brand Strategy & Commercial Business Expansion, GM Benelux





Raymond Francot, NL GM for DACH, IT, Central & Eastern Europe



### **Focusing on Critical Areas for Launch Success**



#### Aiming to Improve the Lives of MCT8 Deficiency Patients and their Caregivers

#### **IDENTIFY PATIENTS**

Boost disease awareness, educate on disease\*, diagnosis and newborn screening



#### **ENSURE ACCESS**

Preparing for broad access to Emcitate as soon as possible after marketing authorization



<sup>\*</sup>Emcitate promotion will start at the time of marketing authorization (in line with legislations). Before that, external initiatives are focused on MCT8 deficiency.

## **Expanding disease awareness momentum**

Amplified by External Efforts





# Scientific community generating more data

# **Example from Annual Meeting of the European Thyroid Association**

Van der Most, F. et al. T3 analogue Triiodothyroacetic acid (Triac) treatment and survival in MCT8 deficiency: an international real-world cohort study

Freund, M. et al. Effect of the T3 analogue Triac on patient-centered outcome measures in patients with MCT8 deficiency: post-hoc analysis of the international Triac Trial I

5 additional abstracts related to MCT8 deficiency

# Great work ongoing by several patient advocacy groups





















# Deliver solid *Emcitate* clinical and economic value proposition to enable reimbursement & broad access



Key for payer assessments to describe burden of disease, unmet need & benefit of treatment

# High burden of MCT8 deficiency

Recently further supported by Egetis sponsored Caregiver study\*



# Significant unmet medical need

Currently no drug developed and regulatory approved for MCT8 deficiency



# Emcitate benefit validated by physicians and regulators

The existing clinical experience and data contributed to:

- European Thyroid Association (ETA) recommending Emcitate as long-term therapy for all patients with MCT8 deficiency
- Positive CHMP opinion

<sup>\*</sup> Posters presented at congresses 2024, at ESPE (European Society of Pediatric Endocrinology) and ISPOR (International Society for Pharmacoeconomics and Outcomes Research).

# **European Thyroid Association (ETA) recommends tiratricol as long-term therapy for all patients with MCT8 deficiency**

- ETA recommends the use of tiratricol as long-term therapy for all patients with MCT8 deficiency, and for certain patients with RTH-beta.
- Inaugural 2024 Guidelines were commissioned by the Executive Committee of the ETA and developed by an independent team of experts.



# European Thyroid Association recommends tiratricol (Emcitate®) as long-term therapy for all patients with MCT8 deficiency in new guidelines

July 17, 2024

**Stockholm, Sweden, July 17, 2024.** Egetis Therapeutics AB (publ) ("Egetis" or the "Company") (Nasdaq Stockholm: EGTX), today announced that the European Thyroid Association (ETA) has published new guidelines recommending the use of tiratricol (TRIAC or Emcitate®) as long-term therapy for all patients with MCT8 deficiency, and for certain patients with Resistance to Thyroid Hormone (RTH)-beta, as further outlined in the guidelines.

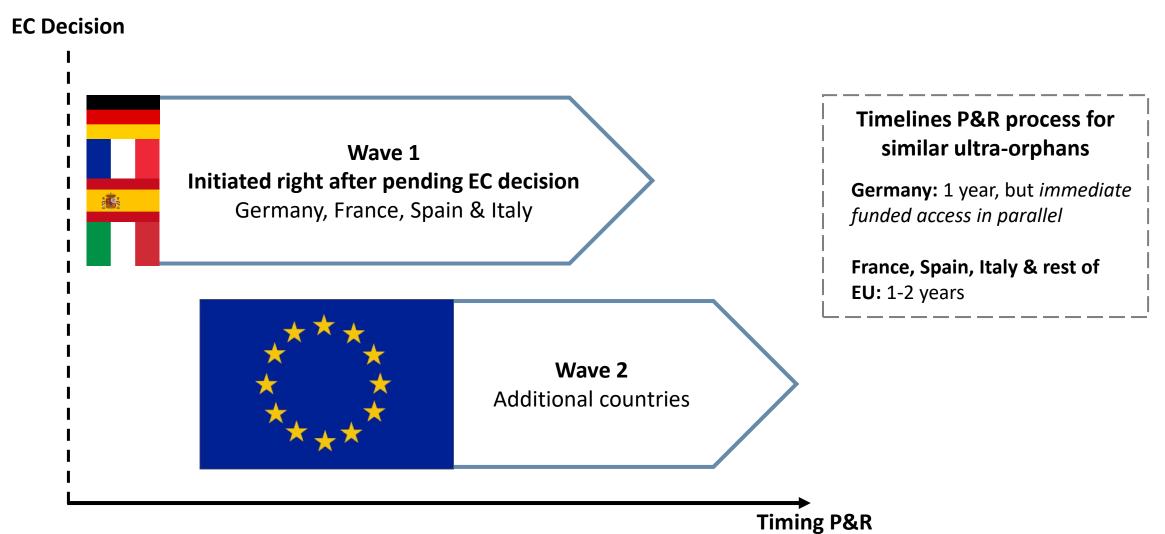
There are currently no approved treatments for MCT8 deficiency or RTH-beta. Egetis has obtained orphan drug designation for tiratricol for the treatment of MCT8 deficiency and RTH-beta in the EU and the USA, and has submitted a marketing authorisation application in the EU, which is currently under review by the European Medicines Agency.

These inaugural 2024 European Thyroid Association Guidelines on diagnosis and management of genetic disorders of thyroid hormone transport, metabolism and action were commissioned by the Executive Committee of the ETA and developed by an independent team of experts. The guidelines can be accessed here:

https://etj.bioscientifica.com/view/journals/etj/aop/etj-24-0125/etj-24-0125.xml

## **Phased EU launch: Germany first**

Pricing & Reimbursement (P&R) strategy execution in 2 waves, starting with EU4



# **Germany Launch Strategy**

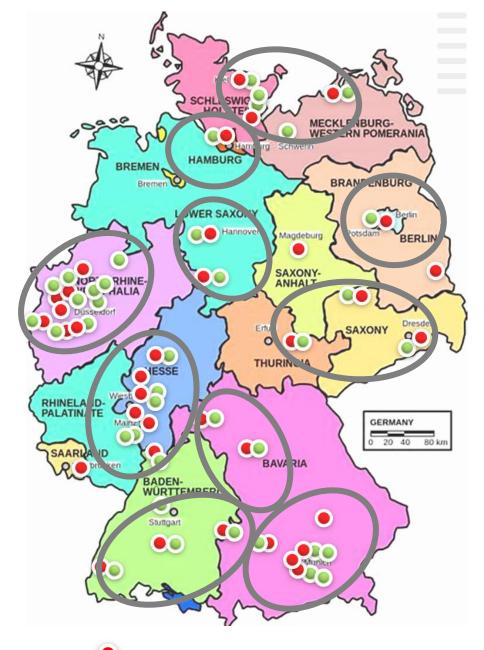
Building strong Expert base to advance management of MCT8 deficiency

#### **MCT8** deficiency Experts

- Engage experts in increasing disease awareness in Germany
- Advance collaborative efforts on monitoring and treatment guidance of MCT8 deficiency
- Support clinical studies and basic research
- Advocate for importance of local publications & clinical training in managing MCT8 deficiency

#### **HCPs** involved in patient journey

- Collaborate with all SPZs and ZSEs involved in MCT8 deficiency patient journey and subsequent disease management
- Increase disease awareness and encourage discussions in local educational training sessions in multidisciplinary HCP teams
- Develop customized awareness campaign to HCPs as well as patient support materials in collaboration with disease advocates



# Our Expanded Access Program is a vital step on our path to commercialization in the US



#### Tiratricol (Emcitate) Expanded Access Program sites



# A significant asset to both the patients and Egetis launch readiness

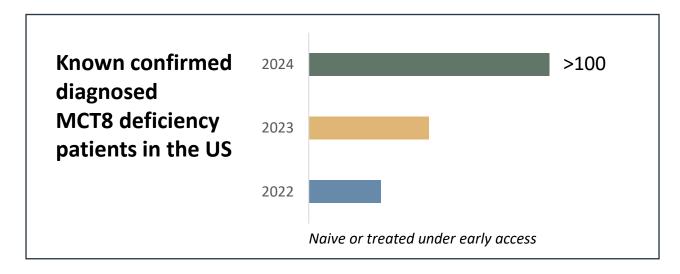
- Provided early and sustainable access to therapy
- Expose physicians to Emcitate prior to commercial approval
- Collect real world data to support payer and regulatory communications

#### **Patient-centric implementation**

- Partnership with AnovoRx
- Personalized support; drug delivered directly to patient home

# Disease awareness activities in the US are bearing fruit







Accelerate patient finding efforts by integrating advanced data-driven insights into our existing initiatives

# **Balancing Annual Treatment Costs and Broad Access**



## **Analogues**

<u>Product</u>	<u>Disease</u> <u>t</u> ı	Estimated annual reatment cost (WAC)
Skyclarys® Small molecule	Friedreich ataxia	~\$400K
Procysbi® Small molecule	Nephropathic cystinosis	~\$550K
Ravicti® Small molecule	Urea cycle disorder	~\$750K
<b>Exondys®</b> Antisense oligonucleotide	Duchenne Muscular Dystrophy	~\$750K

#### Access

#### **Less restrictive**

- Prior Authorization to label
- Genetic Test Attestation/documentation
- Specialist prescribing



#### More restrictive

- Prior Authorization beyond label
- Attestation of clinical benefit
- Medical exception with appeal

# **2.e**Emcitate partnerships

# Advancing rest of world with license agreement with Fujimoto for Emcitate in Japan



#### Highly suitable partner in Fujimoto

- Private company in Osaka, Japan, founded in 1933
- Significant experience from successfully registering and launching medicines for Blood, Neurological and Orphan diseases in Japan

#### Egetis retains significant share of future revenues in Japan

- Upfront, development & regulatory milestones of total JPY 600m (SEK 45m)
- In addition, Fujimoto will finance the necessary development in Japan and be responsible for regulatory interactions
- Egetis retains ~1/3 of future revenues



# Egetis announces exclusive license agreement with Fujimoto to develop and commercialize Emcitate in Japan

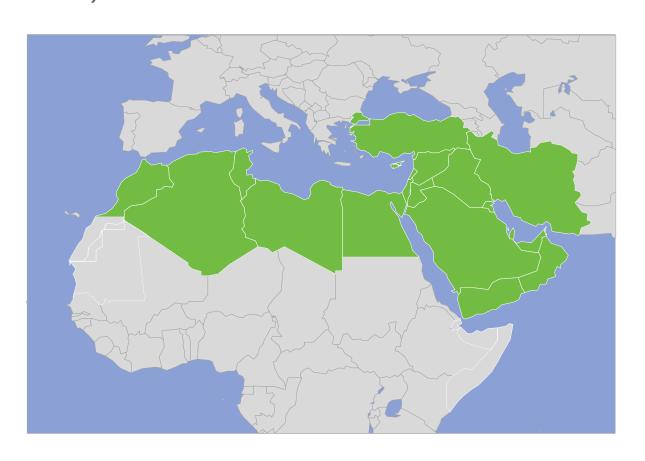
#### November 10, 2023

Stockholm, Sweden, November 10, 2023. Egetis Therapeutics AB (publ) ("Egetis" or the "Company") (Nasdaq Stockholm: EGTX), today announced that the Company, through its wholly-owned subsidiary Rare Thyroid Therapeutics International AB, has entered into an exclusive license agreement with Fujimoto Pharmaceutical Corporation ("Fujimoto") to develop and commercialize Emcitate (tiratricol), for the treatment of MCT8 deficiency, in Japan. Under the terms of the agreement Egetis grants Fujimoto exclusive development and commercialization rights to Emcitate for the treatment of MCT8 deficiency in Japan. Fujimoto will pay upfront, development, and regulatory milestones amounting to JPY 600 million (approximately SEK 45 million). Egetis will supply Fujimoto with product in semi-finished form and will receive approximately one third of the applicable income from Fujimoto. Fujimoto will also finance the development program needed for Emcitate in Japan, which will be clarified after discussions with the Pharmaceuticals and Medical Devices Agency (PMDA). As a future marketing authorisation holder (MAH) Fujimoto will be responsible for regulatory interactions with the PMDA.





Opportunity for patient access based on EMA approval in the Middle-East, North-Africa and Turkey



- MENAT-region has a large population with well established healthcare systems
- EMA approval allows for access in some of the countries without the need for national regulatory submissions
- Different healthcare systems require local knowledge and expertise





Serving patients in the MENAT-region by working together with local partners

- Given that Europe and the US are the priorities for Egetis together with the need for local resources in the MENAT-region, Egetis is currently identifying strategic partners for collaboration and access
- Important criteria for the selection are:
  - Proven track record and reputation
  - Experienced in providing access for rare diseases
  - Full set of functions (Regulatory, Market Access, Medical Affairs, Commercial, Supply Chain and Pharmacovigilance)
     with local representatives
  - Committed to deliver the value of Emcitate<sub>®</sub> to patients in the region
- Egetis' ambition is to sign the first partnership agreement for MENAT in 2025

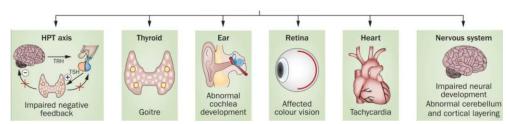
## Resistance to Thyroid Hormone type Beta (RTH-β)

Potential indication expansion for Emcitate into non-overlapping patient population

#### Characteristics of RTH-B

- Caused by mutations in thyroid hormone receptor beta  $(TR\beta)^1$
- Reduced target tissue response to thyroid hormone in TRβ dependent tissues
- Incidence 1:20,000 to 1:40,000 (both genders)
- Clinical heterogeneity, ranging from mild to severe
- Diagnosis: High T3&T4, normal/high TSH; confirmed by sequencing of the TRβ gene
- Clinical phenotypes: goiter, CV issues, failure to thrive, neurocognitive dysfunction

#### Overview of tissues affected in RTH-β



#### **Emcitate** as potential treatment for RTH-β

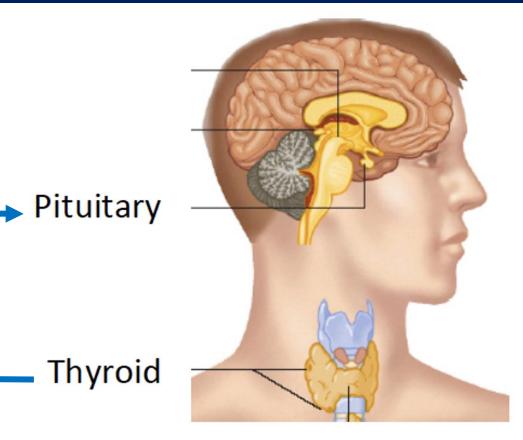
- Emcitate efficacious in restoring signaling in majority of TR $\beta$  mutations in vitro
- Initial clinical experience demonstrates positive effects on key clinical symptoms in RTH-β patients, including cardiovascular, thyrotoxic and neuropsychiatric symptoms<sup>2</sup>
- Mechanistic rationale: *Emcitate* has a higher affinity than T3 for several TRβ-mutants identified
- Emcitate received orphan drug designation for RTH-β from FDA and EMA in 2022
- Development plan for *Emcitate* in RTH-β under evaluation

#### References:

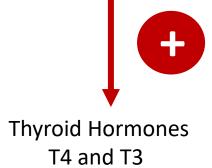
- 1. Pappa & Refetoff (2021) Front. Endocrinol. 12, 656551
- 2. Anzai et al. (2012) Thyroid 22, 1069-1075



# "The Feedback Loop" in RTH $\beta$



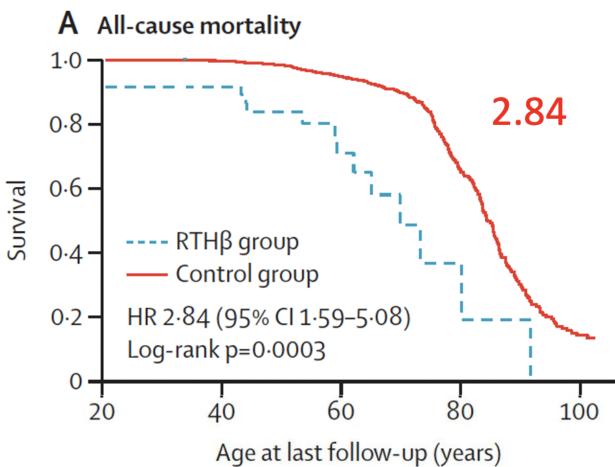
Thyroid Stimulating Hormone (TSH)



		Example levels	Normal Levels
TSH	NORMAL RANGE	4.0	0.27-4.2
T4	HIGH	45	12-22
T3	HIGH	22	3.1-6.8

# Increased Mortality RTH $\beta$

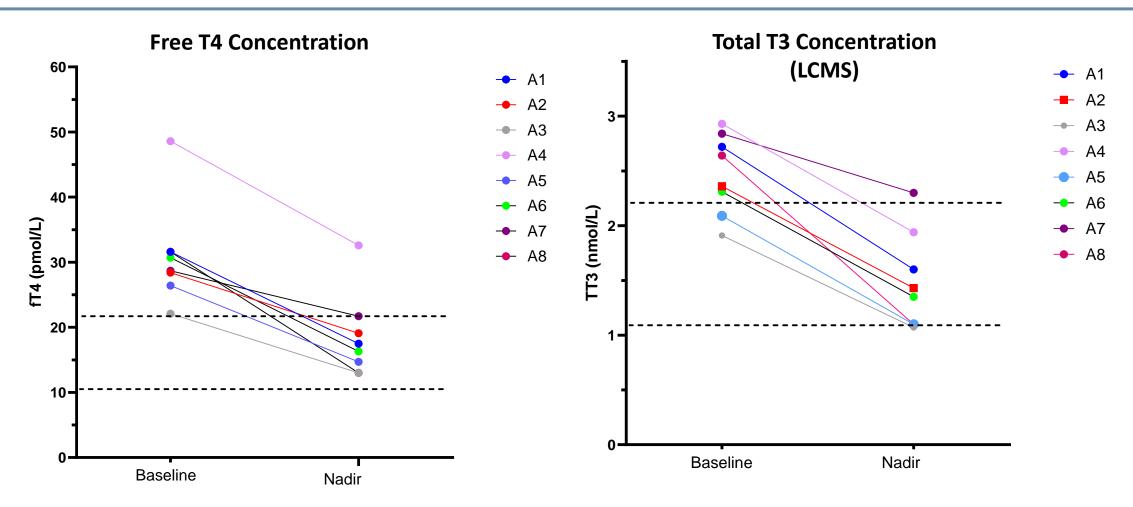




Welsh cohort
55 patients RTH Beta
2750 Age and sex matched controls
Median age 1<sup>st</sup> event 56 vs 67

# Thyroid Hormone Concentration on Triac Treatment





Financials 62

# Egetis secured long-term financing of SEK 462m and added top-tier US specialist investor as largest shareholder



Announcement published on October 10, 2023



- Unique combined long-term financing, comprising SEK 172m private placement at a premium and SEK 290m debt financing
  - First in its class in a Swedish biotech setting, limiting dilution to existing shareholders and strengthening shareholder base



- Private placement led by top-tier US healthcare specialist investor Frazier
   Life Sciences
  - Demand for the new shares significantly exceeding the size of the private placement
  - Frazier Life Sciences new largest strategic shareholder in EGTX and brings significant sector expertise



- SEK 290m debt financing obtained from BlackRock (formerly Kreos)
  - Divided into two tranches, EUR 10m ("Tranche A") and EUR 15m ("Tranche B") which will become
    available provided that the Company reaches certain milestones, inter alia related to the phase III
    ReTRIACt study for Emcitate for Tranche B.
  - Egetis drew down Tranche A of the Debt Financing on November 30, 2023

# Egetis carried out directed share issuances amounting to SEK 300 million (USD 30 million)



Announcement published on September 30, 2024

- Led by Frazier Life Sciences with a USD 10 million investment.
- Supported by international and Swedish specialist healthcare funds.
- Subscription price at market price.



# Egetis Therapeutics has successfully carried out directed share issuances amounting to SEK 300 million

#### September 30, 2024

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Stockholm, Sweden, September 30, 2024. The Board of Directors of Egetis Therapeutics AB (publ) ("Egetis" or the "Company") (Nasdaq Stockholm: EGTX) has resolved on directed share issuances of in total 66,666,667 new ordinary shares at a subscription price of SEK 4.50 per share, corresponding to a 0.1 percent premium to the 5 day volume weighted average price (VWAP) preceding this announcement (the "Directed Issue"), through which the Company receives SEK 300 million (approximately USD 30 million) before transaction costs. The Directed Issue was oversubscribed and included both existing and new international and Swedish institutional investors. It was led by US healthcare investor Frazier Life Sciences with a USD 10 million investment, and supported by the international healthcare specialist Invus (USA/France), Platinum Asset Management (Australia), The Fourth Swedish National Pension Fund, Handelsbanken Fonder AB through the investment fund Hälsovård Tema (Sweden), Unionen (Sweden), HealthInvest Partners AB (Sweden) and Cidro Förvaltning AB (Sweden).

## FDA granted Rare Pediatric Disease designation to Emcitate®

US Rare Pediatric Disease Priority Review Voucher (PRV) provides a ~\$100m opportunity

#### **Overview of PRV**

- The FDA grants Rare Pediatric Disease designation (RPD) to therapies for serious or life-threatening diseases affecting fewer than 200,000 people in the USA
- Sponsors holding a RPD can apply to receive Priority Review Voucher (PRV) upon approval
- Provides accelerated FDA review of a new drug application for another drug candidate, in any indication, shortening time to market in the US
- The voucher may be sold or transferred to another sponsor
- During 2021-24 PRVs have been sold ranging from \$100m-\$158m

#### **Examples of PRVs sold**

Seller	Buyer	Value	Year
Rhythm Pharmaceuticals	Undisclosed	\$100M	2021
Albireo	Undisclosed	\$105M	2021
Biomarin	Undisclosed	\$110M	2022
BridgeBio	Undisclosed	\$110M	2022
Mallinckrodt	Novartis	\$100M	2022
Marinus Pharmaceuticals	Novo Nordisk	\$110M	2022
Ipsen	Undisclosed	\$158M	2024
PTC Therapeutics	Undisclosed	\$150M	2024

## **Share Register, Cash and Market Cap**



#### **Largest shareholders**

#	Owner	EGTX	Value (MSEK)	Capital	Votes
1	Frazier Life Sciences	38675501	263,0	13,22%	13,22%
2	Peter Lindell	36084817	245,4	10,04%	10,04%
3	Peder Walberg	33776221	229,7	9,40%	9,40%
4	Fjärde AP-fonden	26942859	183,2	6,94%	7,44%
5	Avla Holding AB	17668330	120,1	4,92%	4,92%
6	Unionen	14366015	97,7	4,00%	4,00%
7	Handelsbanken Fonder	13021165	88,5	3,35%	3,60%
8	RegulaPharm AB	10531660	71,6	2,93%	2,93%
9	Linc AB	7532021	51,2	2,10%	2,10%
10	Flerie Invest AB	7205035	49,0	2,01%	2,01%
11	Avanza Pension	6882678	46,8	1,92%	1,92%
12	HealthInvest Partners	6622463	45,0	1,84%	1,84%
13	Swedbank Robur Fonder	5511555	37,5	1,42%	1,52%
14	Mats Blom	3134762	21,3	1,07%	1,07%
15	Nordnet Pensionsförsäkring	2543919	17,3	0,71%	0,71%

- Cash position September 30, 2024: SEK 130M
- Directed issue September 30, 2024: SEK 282M (net)
- Number of outstanding shares: 359,238,126
- Market Cap: ~SEK 2.4 billion\*
- Listing venue: Nasdaq Stockholm, Main Market
- Ticker: EGTX

## **Egetis submits patent application to the USPTO**

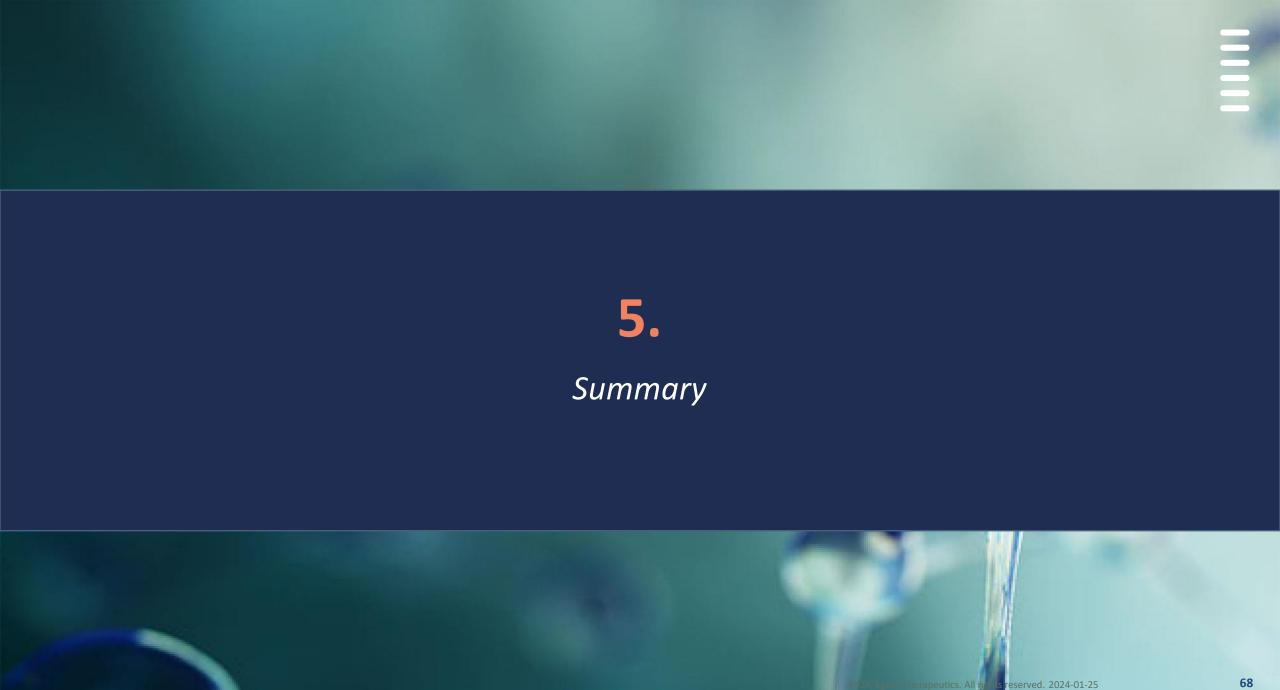
- Patent application for "Processes of Preparation" of tiratricol
- Processes and compounds described in the patent application
- If granted, this would be a significant patent for Egetis



# Egetis submits a patent application to the United States Patent and Trademark Office for "Processes of Preparation" of tiratricol

Stockholm, Sweden, September 19, 2024. Egetis Therapeutics AB (publ) ("Egetis" or the "Company") (Nasdaq Stockholm: EGTX), today announced that it has submitted a patent application with the United States Patent and Trademark Office (USPTO) for "Processes of Preparation" of tiratricol. If granted, this would be a significant patent Egetis has obtained for the investigational drug tiratricol.

Tiratricol is an endogenously available metabolite of thyroid hormone, with similar bioactive properties as the active thyroid hormone T3. Tiratricol enters the cell independently of the monocarboxylate transporter 8 (MCT8), bypassing the pathophysiologic defect in MCT8 deficiency. Clinical trials for the use of tiratricol for the treatment of MCT8 deficiency are ongoing and in October 2023 Egetis submitted a marketing authorisation application (MAA) in the EU. Accordingly, new and more efficient synthetic routes leading to tiratricol are needed. The processes and compounds described in the patent application help meet these and other needs.



## Egetis – a de-risked biotech with substantial unlocked potential



- Late stage biotech "under the radar", developing the first therapy for a devastating genetic disorder
  - Strong team with established track record in the orphan drug space, including SOBI, Alexion, Biomarin, Biogen, Vertex,
     Sarepta, Shire and Wilson Therapeutics
- Strong data in clinical trials, demonstrating significant effects on key clinical outcomes
  - Supported by strong mechanistical rationale and data from animal models
- First approval expected in 2025, already passed most of typical drug development risks
  - Received positive CHMP opinion for Emcitate for MCT8 deficiency in EU December 12, 2024
  - A small trial reconfirming the effect on biomarker T3 under way to complete the US NDA dossier
- Significant market opportunity with potential for premium orphan drug pricing
  - Disease awareness activities already bearing fruit
  - Continuous expansion of the Emcitate Managed Access Program confirms high unmet medical need
- Opportunity for indication expansion into RTH-beta
- Eligible for priority review voucher upon US approval, which can be sold for  $\sim$ 100-150 MUSD

## **Key upcoming milestones 2025-2026**



**Emcitate®** 

#### 2025-2026

MCT8 deficiency

- EU approval and launch
- Topline results ReTRIACt for US NDA
- Filing US NDA priority review
- Middle East & North Africa partnership/s

- Japan Development plan agreed with PMDA
- US Patent granted Processes and compounds
- US approval and launch
- US Rare Pediatric Disease Priority Review Voucher

**RTH-beta** 

Potential start of Investigator Initiated
 Study - Egetis Industry collaborator

# An integrated orphan drug company, focusing on late-stage development for commercialization



- Dedicated orphan drug company Two late-stage assets: **Emcitate** and **Aladote\***
- Emcitate received positive CHMP opinion in December 2024 Pivotal trial for *Emcitate* **NDA** is ongoing
- Highly attractive **orphan drug segment**
- Plan to launch through small in-house commercial organization in the EU and North America
- **Strong team** with late-stage orphan clinical development, registration and commercialization experience from:



Listed on NASDAQ Stockholm (EGTX) HQ in Stockholm, Sweden ~40 FTEs





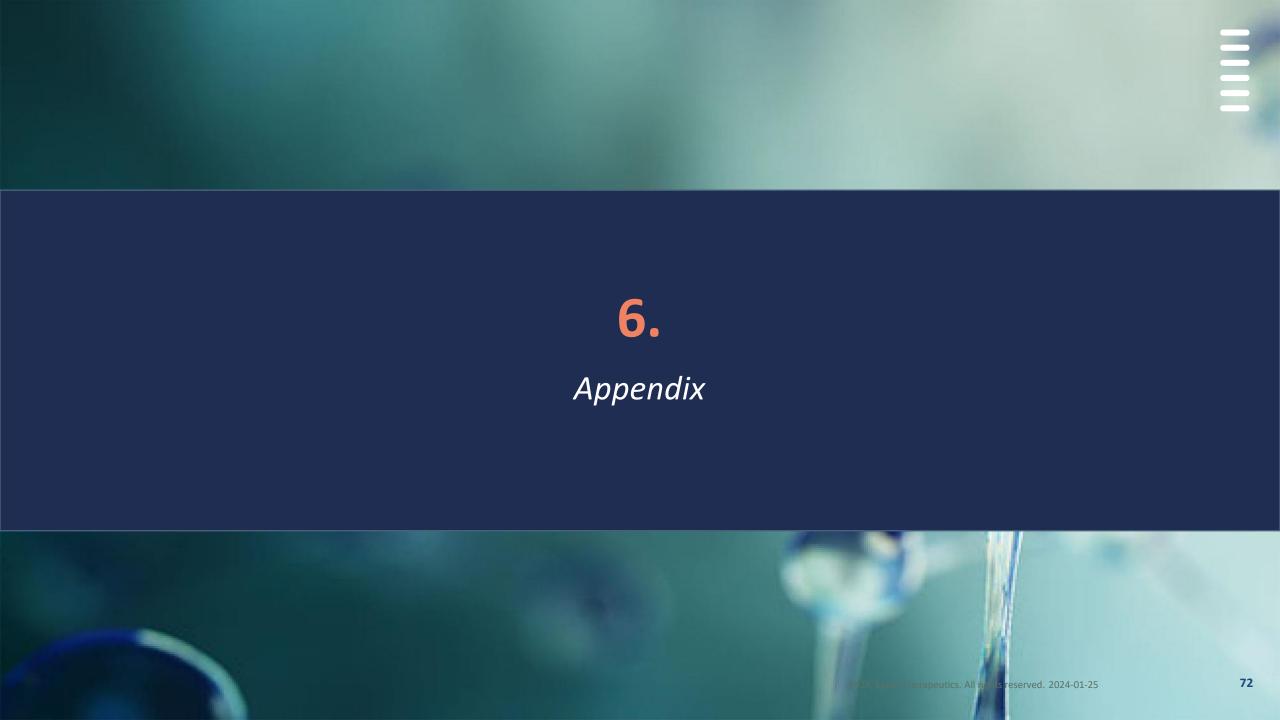












#### Orphan drug segment – a highly attractive opportunity



Orphan drug designation is awarded to products targeting limited disease populations<sup>1</sup>

More than 7,000 known rare diseases

Approx. 10% of the general population may be affected by a rare disease

Substantial unmet medical need for patients, only 5% of rare diseases have an approved therapy

Development

- Less extensive clinical trials
- Agile and faster development process
- Lower costs
- Lower development risk

Registration

- Free regulatory advice
- Reduced fees
- Expedited review
- Market exclusivity

Market

- No or few competitors
- Highly focused target groups
- Premium pricing

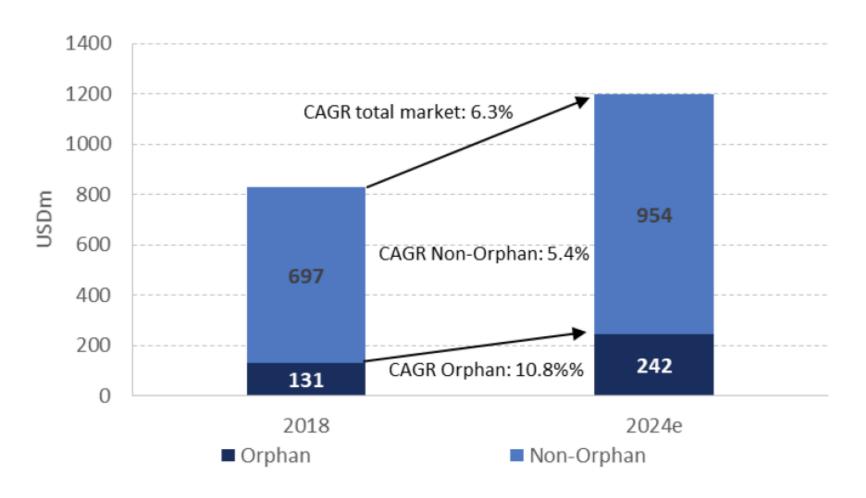
Well-defined patient populations with substantial unmet medical need

# CAGR estimates of total pharmaceutical market vs orphan



75

The global orphan or rare disease market size was valued at an estimated USD 140 - 150 bn and is expected to grow at 10-14% CAGR over the coming five years.



Source: EvaluatePharma, Pareto. 2024 Egetis Therapeutics. All rights reserved.

## Leadership team with global experience & proven track record





Nicklas Westerholm

- Joined 2017
- AstraZeneca 1995-2017
- VP Late-stage development CVMD
- Executive Officer & VP Japan Operations
- Director Investor Relations



**Desiree Luthman** 

VP Regulatory Affairs

- Joined 2023
- Global regulatory professional, >25y experience
- Passage Bio, Verona Pharma, Sanofi, BMS, Celgene, AstraZeneca



Katayoun Welin-Berger, PhD

**VP Technical Operations** 

- Joined 2023
- VP Operations at Calliditas Therapeutics
- Previously at BioGaia and AstraZeneca



Yilmaz Mahshid, PhD CFO

- Joined 2021
- Investment Manager & Controller at Industrifonden
- Sell-side analyst at Pareto & Öhman
- CEO Medivir



Kristina Sjöblom Nygren, MD

- Joined 2020
- CMO, Head of Development at Santhera
- 18 years at SOBI, Wyeth & AstraZeneca
- Worked as physician in clinical positions



**Anny Bedard** *President Egetis North America* 

- Joined 2022
- Commercial leadership roles at Shire and Sarepta



**Christian Sonesson, PhD** *VP Product Strategy & Development* 

- Joined 2017
- AstraZeneca 13 years
- Late-stage development expertise from FORXIGA, MOVANTIK, ONGLYZA, BRILINTA & QTERN



Henrik Krook, PhD

VP Commercial Operations

- Joined 2020
- Commercial roles at Alexion, Novartis, Roche and Affibody



**Nils Hallen** *Global Head of HR* 

- Joined 2021
- Adjunct professor in work & organizational psychology



**Laetitia Szaller** 

General Counsel & Head of Compliance

- Joined 2023
- Senior legal roles at AM Pharma, UCB & Zoetis



Karl Hård, PhD

VP IR & Business Development

- Joined 2022
- Redx Pharma, Optimum Strategic Communications, Kiadis, AstraZeneca

#### **Board of directors**





**Mats Blom** 

Chair of the board since 2024

- Shares in Egetis: 3,134,762
- BA, Business Administration & Economics, Lund University;
   MBA, IESE University of Navarra
- Other assignments: CFO NorthSea Therapeutics, Board member Hansa Biopharma, Auris Medical, Altamira Therapeutics & Pephexia Therapeutics



**Gunilla Osswald** 

Board member since 2017

- Shares in Egetis: 40,000
- PhD in biopharmacy and pharmacokinetics
- Other assignments: CEO BioArctic AB



**Behshad Sheldon** 

Board member since 2023

- Shares in Egetis: 0
- BS in neuroscience
- Other assignments: Chair of the Board of FORCE (Female Opioid Research and Clinical Experts) in Princeton, NJ, Board Member, Camurus AB and Maxona Pharmaceuticals; EVP & MD, Biotech Value Advisors



**Thomas Lönngren** 

Board member since 2021

- Shares in Egetis: 283,158
- MSc in social and regulatory pharmacy and a degree in Pharmacy, University of Uppsala.
- Previously Executive Director of the European Medicines Agency
- Other assignments: Board member Compass Pathways & NDA Group



**Elisabeth Svanberg** 

Board member since 2017

- Shares in Egetis: 37,676
- MD, PhD, Assoc Professor in surgery
- Other assignments: Chief Development Officer Ixaltis SA.
   Board member Leo Pharma, Amolyt Pharma, Galapagos and EPICS Therapeutics

#### Termination of discussions regarding a potential acquisition of the Company



Announcement published on May 23, 2023

- Discussions, triggered by an unsolicited approach by an external party, have taken place between certain external parties and Egetis regarding a potential acquisition of the Company
- Discussions have now been terminated as the Board believes the contemplated offer and terms, while
  providing a premium to the current share price, considerably undervalued the long-term prospects of
  the Company
- "A transformative period for the Company, with several near-term value creating milestones and the Board of Egetis believes that the strategy to build an independent sustainable rare-disease company life remains the most long-term value creating alternative for our shareholders"
- As a consequence of this intense process and discussions, the timeline for the submission of the marketing authorisation application (MAA) for *Emcitate* (tiratricol) to the European Medicines Agency (EMA) has been extended from the second quarter to the early autumn of 2023\*

<sup>\*</sup> Emcitate MAA filed in October 2023. Positive CHMP opinion received in December 2024.

# 6.c

Paracetamol/Acetaminophen overdose and clinical experience with Aladote

\* In-house development of Aladote has been parked until Emcitate MCT8 deficiency submissions have been completed

#### Aladote® – To prevent acute liver injury caused by paracetamol poisoning\*



- Paracetamol poisoning is one of the most common overdoses with >175,000 hospital admissions globally per annum
- No adequate treatment exists for increased risk patients
- Orphan drug designation (ODD) granted in the US & EU
- Successful results from Phase Ib/IIa study in paracetamol overdosed patients
- Pivotal Phase IIb/III study planned for marketing authorization application in both US and EU
- No competing products in clinical development
- In-house development parked until *Emcitate* submissions have been completed for MCT8 deficiency

## Paracetamol/acetaminophen poisoning

no adequate treatment for increased-risk patients



What is paracetamol/ acetaminophen poisoning?

Minimum toxic dose of paracetamol/acetaminophen in adults is only 7.5g

Risk factors include malnutrition, alcoholism and consumption of other medications

• Paracetamol/acetaminophen poisoning can lead to acute liver failure, liver transplant or death

How many does it affect?

• 19 billion units of paracetamol /acetaminophen packages are sold in the US alone every year

• >175,000 patients hospitalised globally per annum driven by 89,000 cases/year of paracetamol overdose in the US and 105,000 cases/year in the UK (~ 50% hospitalised)

~50% of paracetamol overdose cases are unintentional

Why is current treatment inadequate?

- Efficacy of current NAC (N-acetylcysteine) treatment decreases with time
- Approximately 25% of patients are late arrivals to hospitals (>8h) late arrivals are at increased risk
- There is no effective treatment option for patients at increased risk

A new standard of care is needed

 Aladote® aims to become a new standard of care for patients with increased risk for liver injury in combination with NAC

#### **Orphan drug candidate**

with clear scientific and mechanistic rationale

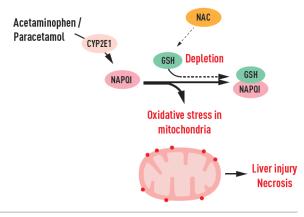
# Early presenters (<8h) NAC treatment effective against liver injury

 Liver glutathione (GSH) replenished by NAC, toxic NAPQI metabolite excreted as GSH conjugate



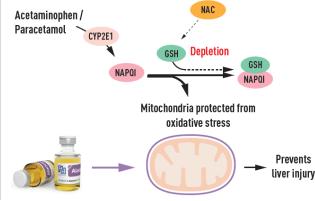
# Late presenters (>8h) are at increased-risk for liver injury NAC treatment + Aladote® to prevent liver injury

 Under NAC treatment alone liver GSH stores depleted by the toxic NAPQI metabolite -> oxidative stress, mitochondrial dysfunction and liver injury (necrosis)



 In most cases NAC effectively prevents liver injury i.e. limited need for Aladote®





Aladote® (calmangafodipir)
 prevents ROS and RNS formation,
 restores mitochondrial energy
 production and prevents liver
 injury

Source: Akakpo et al. 2020, Burke et al. 2010.

Reactive nitrogen species (RNS), Reactive Oxygen Species (ROS)

#### Overview of completed Phase Ib/IIa



 Met primary endpoint of safety tolerability in the combination of Aladote<sup>®</sup> and NAC

- Results presented at the 58th Annual Meeting of the Society of Toxicology, EASL ILC in April, Vienna and published in Lancet's journal EBioMedicine in 2019
- Presented at, American College of Medical Toxicology (ACMT) and Society of Toxicology (SOT), as novel emerging treatments for acetaminophen/ paracetamol toxicity in 2021

Secondary objectives and results

 Measurements of Alanine transaminase (ALT), international normalised ratio (INR), keratin-18, caspase-cleaved keratin-18 (ccK18) and microRNA-122 (mir122) and glutamate dehydrogenase (GLDH) indicates that Aladote® reduce liver injury

Description

- An open label, rising-dose, randomized study exploring safety and tolerability of Aladote® co-treatment with NAC
- ClinicalTrials.gov identifier: NCT03177395

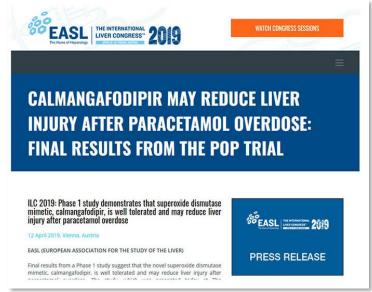
# of patients

 Single ascending dose study in 3 dosing cohorts of 8 patients (N=24) as add-on to NAC regime

**Timetable** 

- Initiated in June 2017 (first patient in)
- Completed in September 2018





#### Positive proof-of-principle Phase Ib/IIa results

Indicates that Aladote may reduce liver injury



#### Safety & tolerability

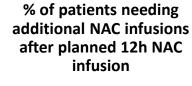
Event	NAC alone	NAC + 2 μmol/kg Aladote	NAC + 5 μmol/kg Aladote	NAC + 10 μmol/kg Aladote
Any AE	6 (100%)	6 (100%)	6 (100%)	6 (100%)
Any SAE	2 (33%)	4 (67%)	2 (33%)	3 (50%)
SAE Starting within 7 days	1 (17%)	1 (17%)	1 (17%)	2 (33%)

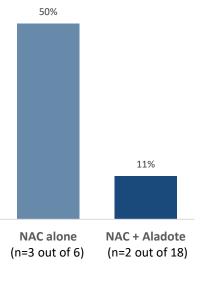
- Met primary endpoint of safety tolerability in the combination of Aladote® and NAC
- No AE or SAE probably or definitely related to Aladote®

#### Liver injury – ALT<sup>1</sup> pre-defined secondary outcome

Event	NAC alone	NAC + 2 μmol/kg Aladote	NAC + 5 μmol/kg Aladote	NAC + 10 μmol/kg Aladote
50% ALT increase	2 (33%)	0 (0%)	0 (0%)	1 (17%)
100% ALT increase	1 (17%)	0 (0%)	0 (0%)	1 (17%)
ALT >100 U/L at 10 hours	2 (33%)	0 (0%)	0 (0%)	0 (0%)
ALT >100 U/L at 20 hours	2 (33%)	0 (0%)	0 (0%)	0 (0%)

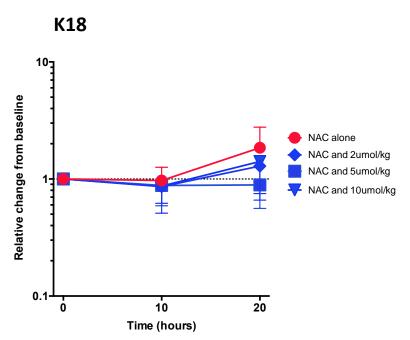
• ALT >100 U/L is the indication to stay in hospital



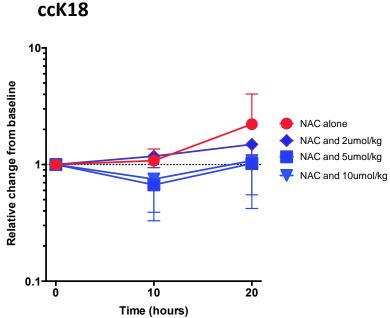


# Aladote® demonstrates consistent results of reduced liver injury as measured by exploratory biomarkers

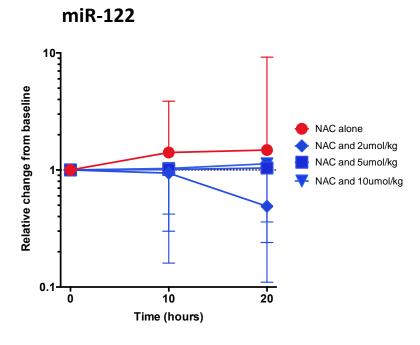




K18 is a measure of cell death and correlate with peak ALT activity during the hospital stay



ccK18, is a measure of cell death and correlate with peak ALT activity during the hospital stay



miR-122 is a liver specific early marker (micro-RNA) for acute liver injury which predicts a rise in ALT activity following paracetamol overdose

3.

Aladote® - Regulatory pathway to submissions in EU and US\*

\* In-house development of Aladote has been parked until Emcitate MCT8 deficiency submissions have been completed

#### **ALBATROSS:** Phase IIb/III study for US/EU regulatory submission\*



Patient population

Patients who have overdosed on paracetamol with increased risk of liver damage due to late arrival at hospital (> 8h) who need treatment with NAC

**NAC** regimen

Approved 21 hours NAC regimen

Treatment groups

 4 groups in combination with NAC: Aladote high dose; Aladote middle dose; Aladote low dose; Placebo

Initiation of active treatment

• IV (bolus) as soon as possible after randomization and after starting NAC treatment (but no later than 4 hours after starting NAC treatment)

**Interim analysis** 

 Interim analysis after 35 patients per treatment group, which includes a futility analysis, dose selection and analysis of continued study size (number of patients)

**Study size** 

250 patients planned

Efficacy endpoints

- Primary: Combination of ALT and INR
- Number (%) of patients who need extended NAC treatment after 21 hours
- Length of hospital stay
- Explorative biomarkers: K18, miR-122 and GLDH



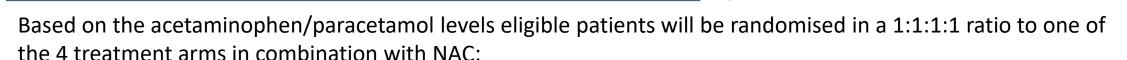
**Study countries** 

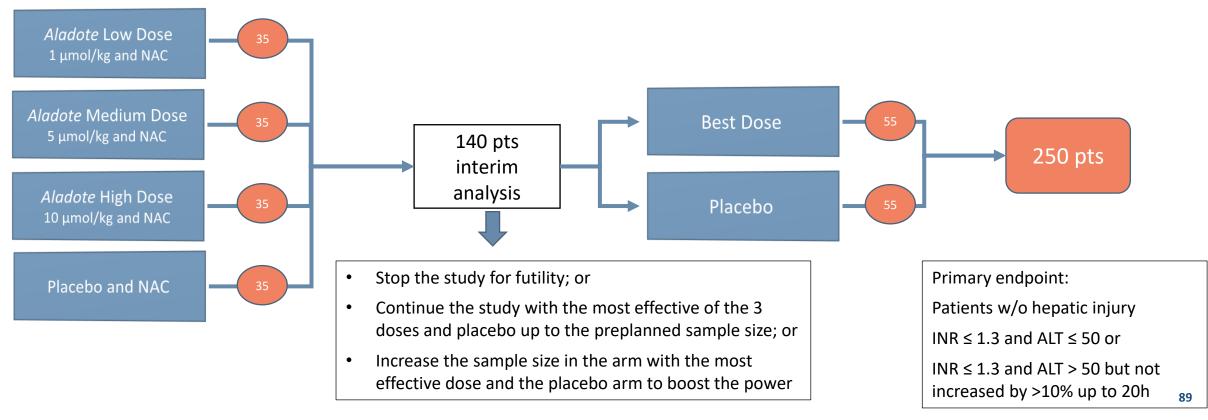
EU, UK and USA

#### ALBATROSS: Aladote Phase IIb/III study design



#### Seamless Phase IIb/III design





#### Aladote clinical development timelines



- Orphan Drug
  Designation EU
- CTA pivotal
  Phase IIb/III study

- Interim analysis
- Recruitment completed and topline results

2022 **tbc** 

 Start pivotal Phase IIb/III study (after Emcitate submissions have been completed) tbc

- Regulatory submissions
- Europe/US approvals and launch

Europe/US

tbc

 Regulatory submissions ROW



Orphan drug designation in US and EU Composition of matter patent expires in 2032 Method of use patent until 2037

## Aladote- alleviating patient and societal burden

Aiming to provide value for both patients and society

# burden

#### POD is a life threatening condition with remaining medical needs

#### **Patients**

- POD (paracetamol/acetaminophen overdose) can lead to acute liver failure, liver transplant or death
- In US and UK together, yearly > 500 deaths due to POD and more people registered for liver transplantation

#### Society

- In the US the annual cost has been estimated at > \$1bn to treat patients with POD1
- The POD Emergency Department and inpatient cost is approximately USD 13-40k<sup>1</sup>
- The average POD inpatient length of stay is 3.1 days with a variance of +4.4 days for the most severe cases<sup>1</sup>
- US liver transplant costs USD 125-473k<sup>1</sup>



With **Aladote**, the ambition is to **reduce hepatic injury** of POD and thereby contribute to **fewer hospitalization days**, **prevent need** for liver transplantation and **increase survival** 

Source:; (1) Adapted from: Altyar A. Clinical and economic characteristics of emergency department visits due to acetaminophen toxicity in the USA BMJ Open 2015;5;



# Commercialisation of *Aladote* for high-risk POD patients

Very cost-effective since possible to launch through members of Emcitate team



#### **Favorable conditions for launch success**

Addressing unmet medical need



**Leading KOL support** 



Centralized, focused target groups of specialists eager to improve care



Treatment choice highly protocol driven



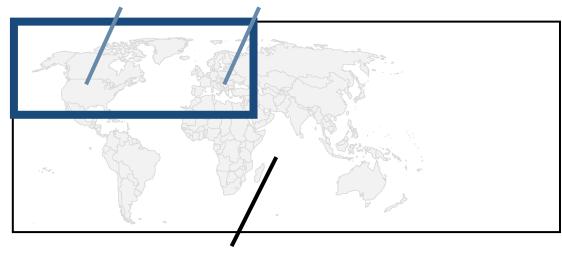
No competition



#### Addressing life-threatening condition

- Anologue antidotes priced at \$3.5k 50k
- National emergency hospital stocking guidelines gives opportunity to work through small team and still ensure rapid sales uptake

Hospitalized POD patients per year
US: > 40,000\* patients Europe: > 140,000\* patients



Commercialization in rest of world managed through partners

<sup>\*</sup>Annual number of POD (paracetamol/acetaminophen overdose) cases hospitalized and receiving i.v. antidote (NAC currently the only option), 25% late arrivals (>8h)

#### Analogue antidotes priced at \$ 3.5k - 50k



National emergency hospital stocking guidelines - opportunity for rapid market penetration

- Various antidotes, e.g. vs. drug overdosing, metal poisoning, snake bites and reversal of anticoagulant treatment effects
- Limit morbidity/mortality when used within appropriate time
- National recommendations for stocking of antidotes at hospitals providing emergency care
  - For getting payer/formulary committee acceptance to be stocked, antidotes are in general priced lower than traditional orphan drugs, despite
     often having orphan status
  - Getting included provides great opportunity for rapid market penetration
    - Praxbind stocked in 3,200 US hospitals < 3 years from launch</li>
    - Andexxa sales \$112mn in US alone second year on market
- Analogue antidotes for comparable settings as Aladote have global average costs of \$ 3.5k 50k per treatment

	Naloxone hydrocloride	Praxbind	Andexxa/Ondexxya	Aladote (target profile)
Year of first approval	1971	2015	2018	NA
Poisoning indication	Opioid toxicity	Reversal of anticoagulant effects of the NOAC dabigatran	Reversal of anticoagulant effects of the factor Xa inhibitors apixaban & rivaroxaban	Paracetamol/ acetaminophen toxicity
Cost per treatment	Low since generic	\$ 3.5k – 4.5k	\$ 25k – 50k	TBD





#### Thank you!

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