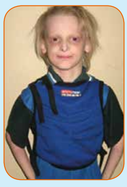
An open-label Phase 2 trial to investigate efficacy and safety of intra-amniotic administrations of ER004 in male subjects with X-linked hypohidrotic ectodermal dysplasia (XLHED)

XLHED, the disease[1]

X-Linked Hypohidrotic Ectodermal Dysplasia (XLHED) is a debilitating genetic rare disease severely impacting the lives of affected boys, who can't sweat. 500 boys are born worldwide each year with XLHED.

> XLHED is like driving in a car with an engine without cooling water
>
> Thomas,
> affected by XLHED*
>
> *German-Swiss-Austrian ED Patient Support Group 03/2011



An XLHED child wearing a cooling vest

XLHED main symptoms

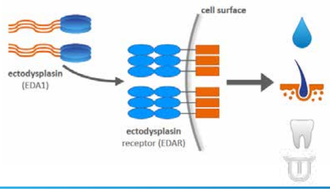
- **98%** Minimal / No sweat
- **33%** are hospitalised for fever
- **19%** have recurrent pneumonia
- **Increased mortality** in the first 3 years of life
- **74%** are missing teeth
- **40%** fail to thrive
- **36%** have dry eyes
- **80%** have reduced hair

ER004, the therapeutic solution

Ectodysplasin (EDA1) is an important protein during fetal development and is missing in XLHED.
ER004 is our experimental treatment. Given at the right time during development, it replaces the missing EDA and structures such as sweat glands develop normally.

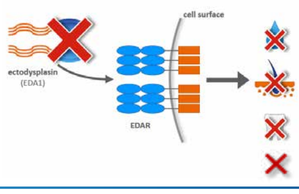
Ectodysplasin under normal development

A protein called "ectodysplasin" is needed for glands, hair, teeth & skin to develop properly.
This is happening early in life.



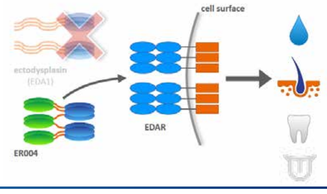
Ectodysplasin (EDA-A1) is missing in XLHED

In XLHED, ectodysplasin is missing. Because of this, glands, hair, teeth & skin do not develop properly.



ER004 as a replacement for Ectodysplasin (EDA-A1)

In animal studies and clinical case studies, ER004 replaced ectodysplasin and helped some XLHED-related structures develop. This is now being tested in an antenatal clinical trial.

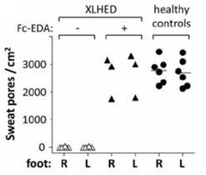


A typical rare disease story[2]

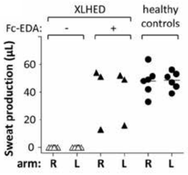
A physician treats 3 patients before birth in a compassionate use manner, and once born, the children can sweat. Other XLHED symptoms also seem alleviated. These results pave the way for a prenatal treatment approach, and the Esperare foundation and the Pierre Fabre group launch a pivotal study.

Results on sweat ability

Sweat density (6 months)

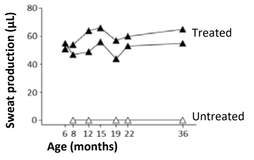


Sweat Production (6 months)



intra-amniotic administration of ER004 normalises sweat pore density and sweat producition in 3 XLHED patients at 6 months of age

Sweat Production over time

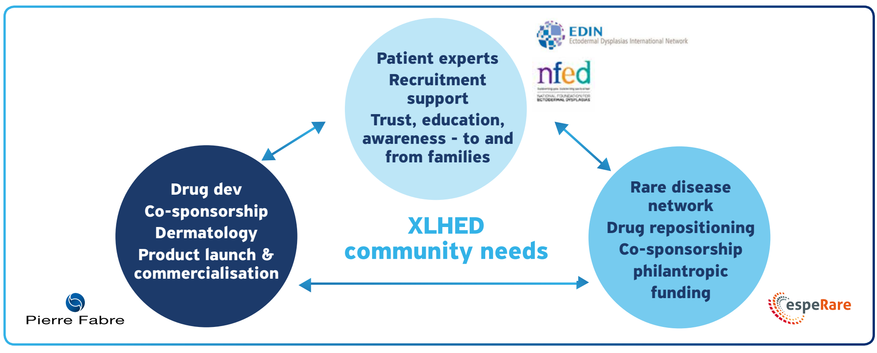


Sweating ability for the is maintained through to 5 years of age

One of the in utero treated children with his mother, undergoing a pilocarpine-induced sweat test

A tailored collaborative approach

A bespoke partnership between patient advocacy, a not-for-profit biotech, EspeRare and a pharmaceutical group, Pierre Fabre, is put into place to better serve the needs of the XLHED community. Also benefits from health agencies' support.



- FDA U.S. FOOD & DRUG ADMINISTRATION
- Orphan Drug Designation (US & Europe)
- Breakthrough Therapy Designation (US)
- Rare Paediatric Disease designation (US)
- PRIME (europe)
- EUROPEAN MEDICINES AGENCY SCIENCE · MEDICINES · HEALTH

A ground-breaking clinical study for XLHED and a new treatment paradigm

Edelife, a pivotal phase study for prenatal treatment of XLHED boys, is underway and recruiting patients worldwide. If successful, this will be the first prenatal treatment approved for a genetic disease, thereby opening up a new way to treat unmet needs.

Study status

- 7 sites in 6 countries
- Travelling from other countries allowed
- No out-of-pocket expenses for participants
- Study start date: Aprill 2022
- Anticipated study completion date: 2029

Treatment

- Intra-amniotic injections
- 3 injections during pregnancy: weeks 25, 28 and 31
- No post-birth treatment planned

Please visit https://edelifeclinicaltrial.com/en-us/ and Clinicaltrials.gov

1. XLHED symptoms statistics as reported by patients (adapted from: Fete M. et al; 2014 Am J Med Genet Part A (10):2437-42). **2.** Full results in Schneider et al. 2018, *New England Journal of Medicine* 378:1604-1610.

For more information SCAN ME

Pierre Fabre

espeRare