

### Cerebrolysin® reduces hemorrhagic transformation after recanalization

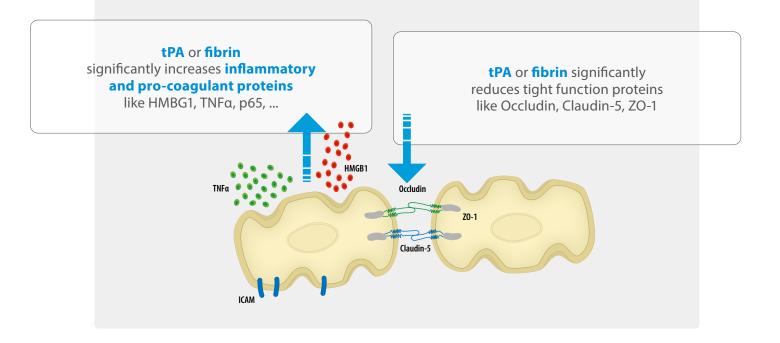
- Cerebrolysin® reduces hemorrhagic transformations
- Cerebrolysin® reduces consequences of reperfusion syndrome
- Cerebrolysin® enhances safety for recanalization
- Reduction of mortality



#### **Complications after stroke treatment**

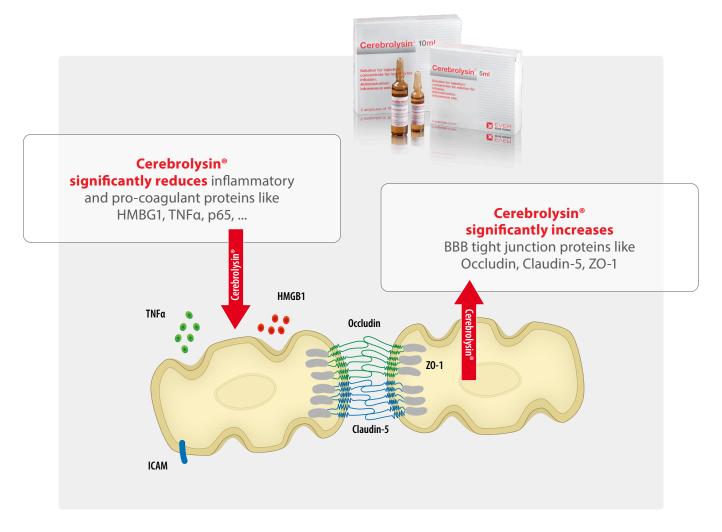
GOLDEN STANDARD = RECANALISATION THERAPY rtPA or thromectomy

BUT it leads to hemorrhagic complications
BUT 60% of patients does not show expected clinical results



#### **Drug which reduces these mechanisms**

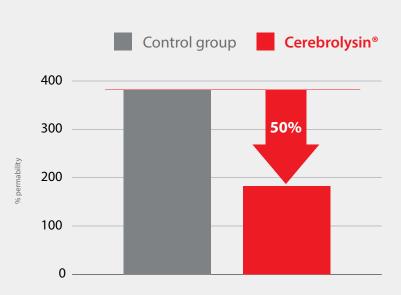
## **Cerebrolysin**®



## Preclinical study

### From the laboratory...

### Significantly reduction of rtPA augmented permeability by more than 50%



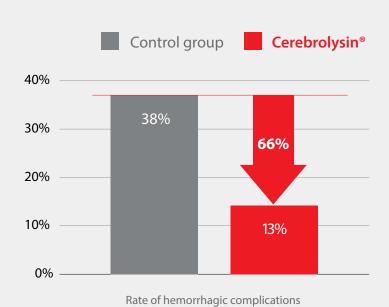
The effect of Cerebrolysin® combined with tissue plasminogen activator (tPA) on endothelial monolayer permability, #P<0.001 vs. tPA

- Significant effects with Cerebrolysin®
- Cerebrolysin® decreases inflammation and increases tight junctions
- Cerebrolysin® improves BBB integrity

#### **Clinical study**

#### ...into the clinic

## Cerebrolysin® reduces risk of hemorrhagic complication by 66% after 12 months



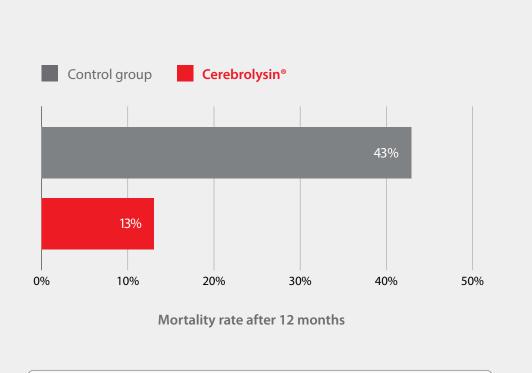
Significantly lower rate hemorrhagic transformation with Cerebrolysin®

after 12 months

- **Only 13%** with hemorrhagic complications in Cerebrolysin® group vs. 38% in control group
- Cerebrolysin® reduces risk of hemorrhagic transformation by -66%

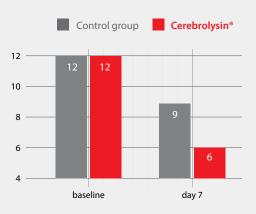
# Patient benefits Reduction leads to beneficial results





- Significant survival benefit in Cerebrolysin® group
- Cerebrolysin® reduces risk of mortality by -60%
- Confirmed by other studies (e.g. Bornstein)

#### **Early recovery**



Median value of NIHSS score at different time points

- Early effect of Cerebrolysin®
- Already on day 7 clearly better NIHSS in Cerebrolysin® treated patients
- Cerebrolysin® improves NIHSS by 50%, placebo only by 25%

#### Regained independence



mRS after 12 months, long term follow up

- Significant better mRS-Shift in Cerebrolysin® group
- 73% patients treated with Cerebrolysin® can live an independent life vs. only 48% in the placebo group



#### Cerebrolysin® dosage for stroke patients

Daily dosage	Initiation of treatment	Treatment Duration
20 – 50 ml	as soon as possible	10 – 21 days

#### Cerebrolysin® reduces hemorrhagic transformation – References



Title: Therapeutic effect of Cerebrolysin on reducing impaired cerebral endothelial cell

permeability **Author:** Teng, Hua, et al.

Journal: NeuroReport 32.5 (2021): 359-366

URL: https://journals.lww.com/neuroreport/Fulltext/2021/03020/Therapeutic\_effect\_of\_

Cerebrolysin\_on\_reducing.4.aspx



**Title:** Efficacy and safety of Cerebrolysin after futile recanalisation therapy in patients with

severe stroke

**Author:** Z.Poljakovic, et al.

**Journal:** Clinical Neurology and Neurosurgery Volume 207, August 2021, 106767

**URL:** https://doi.org/10.1016/j.clineuro.2021.106767

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