



VERIGRAFT

Personalized Transplants

**Personalized tissue-engineered organs
that will revolutionize future medicine**

Petter Björquist, CEO

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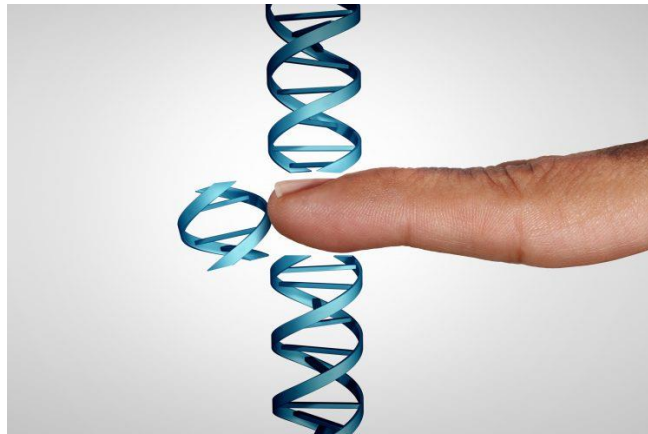
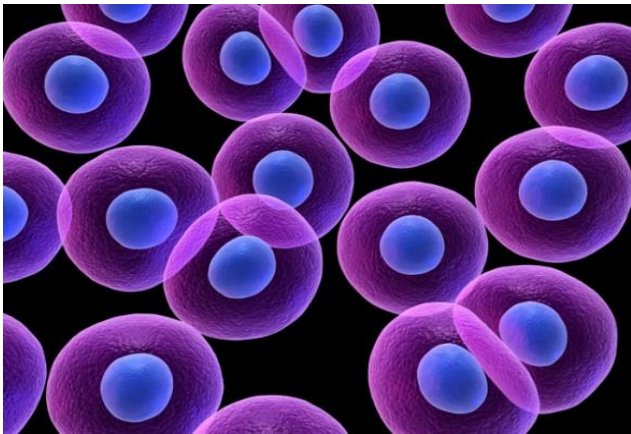
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- **Founded as a University spin-off from the Karolinska Institute in Stockholm**
- **Head quarter and operations in Biotech Center in Gothenburg, Sweden**
- **Privately funded biotech company**
- **Highly experienced and dedicated team**

Advanced therapies – From nothing to one of medicines most promising fields





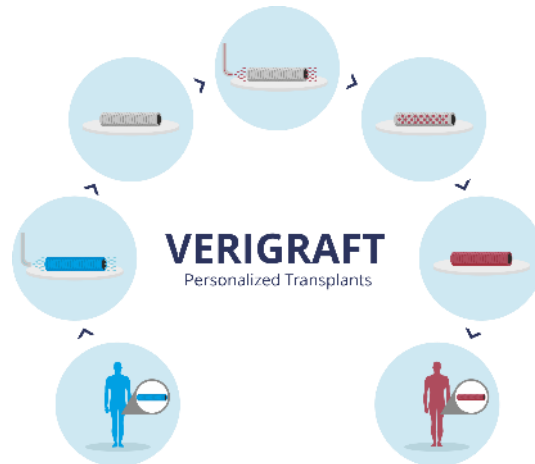
Personalized grafts will revolutionize future medicine



Heart and liver transplantation is common today, but there are big challenges in transplantation:

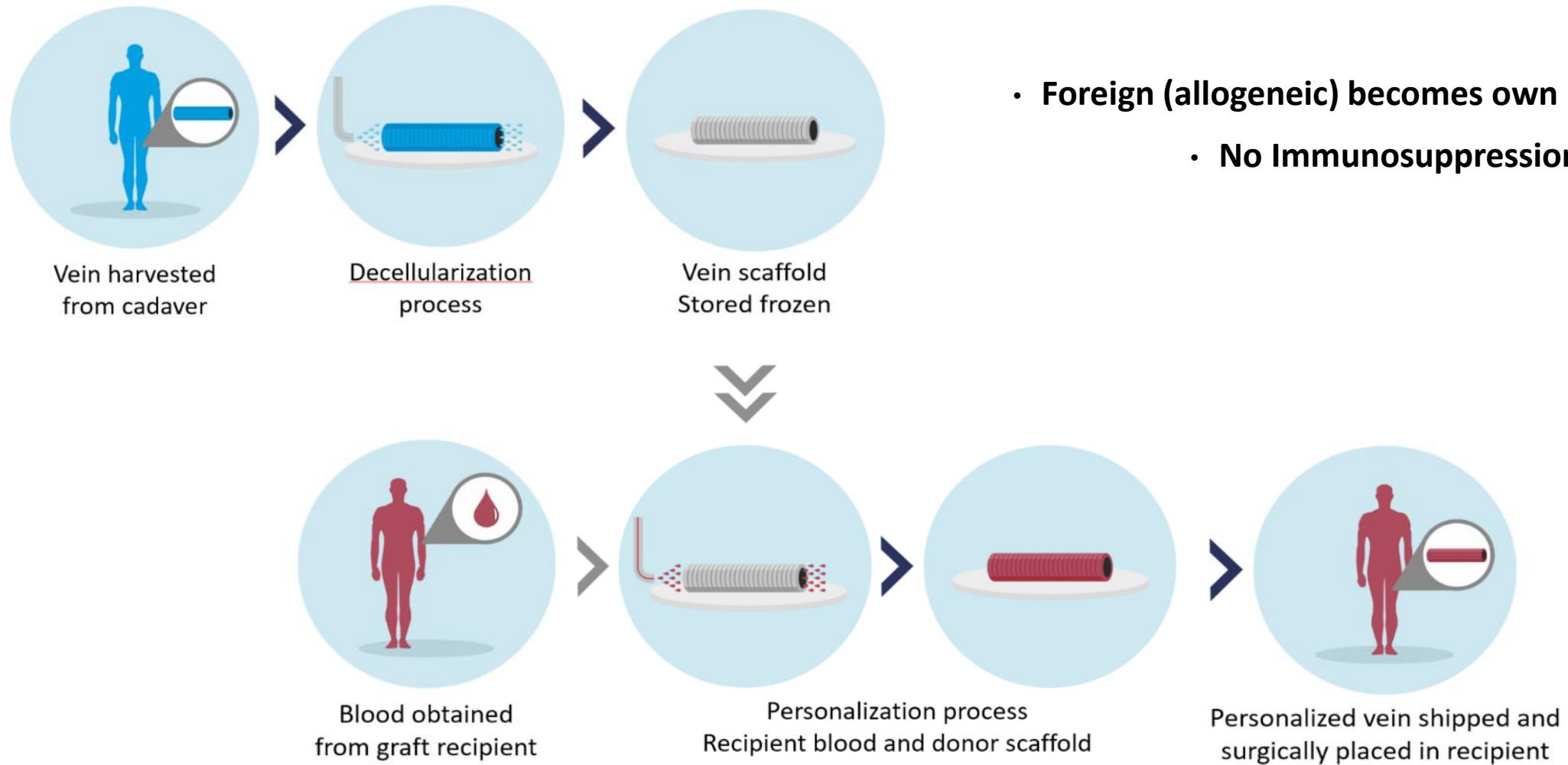
- Chronic lack of transplantable organs
- Transplantation requires life-long immunosuppression with severe side-effects (e.g. cancer)

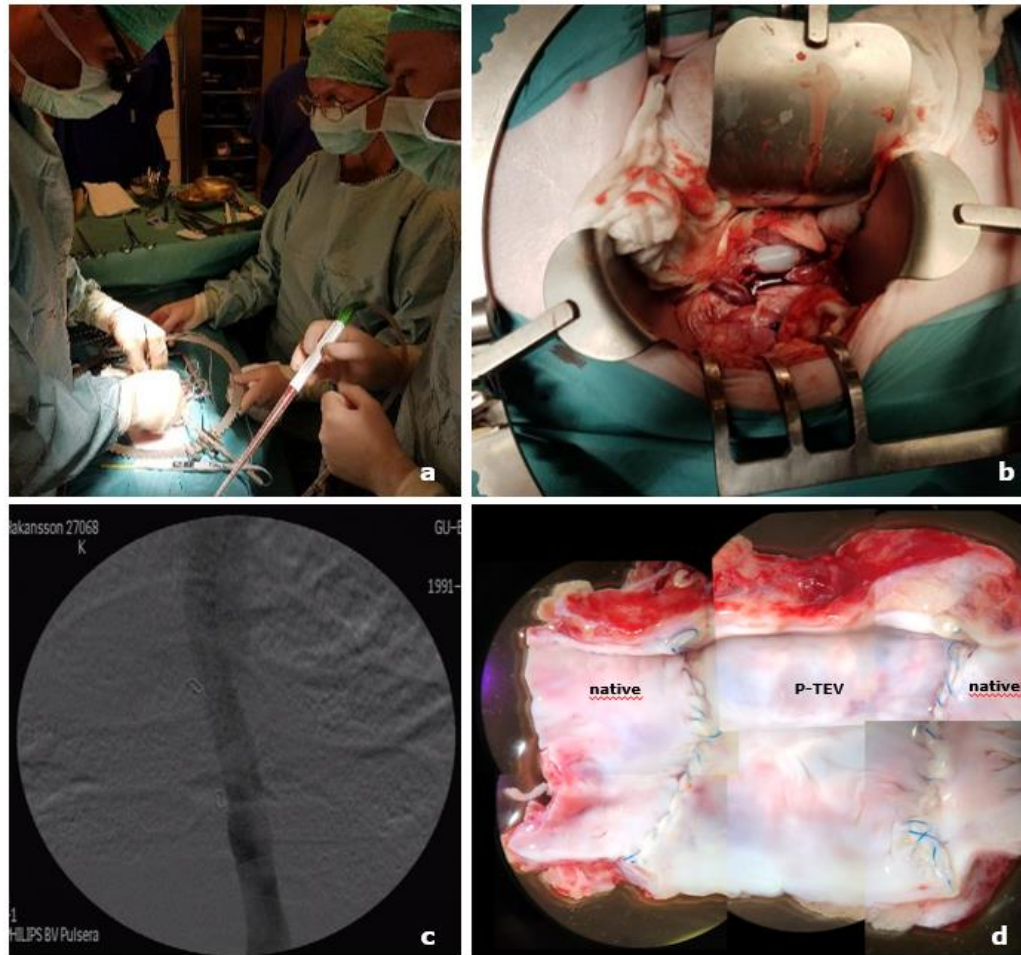
-> In vast majority of cases this is TOO MUCH RISK



VERIGRAFT is developing a solution to these problems

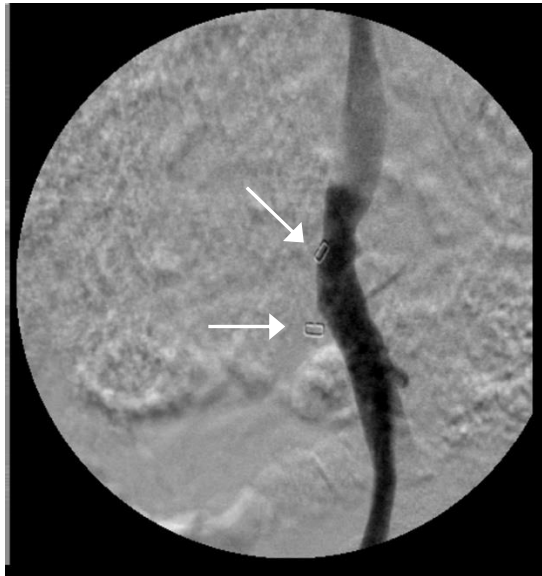
- Personalization of transplants
- No immunosuppression required!



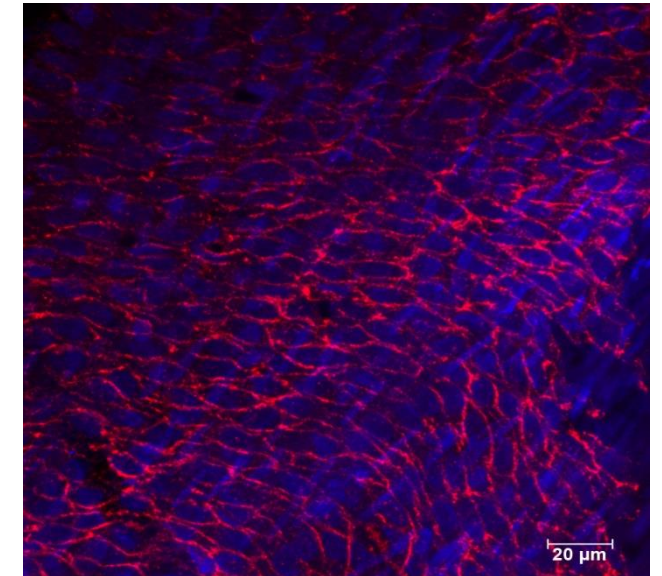
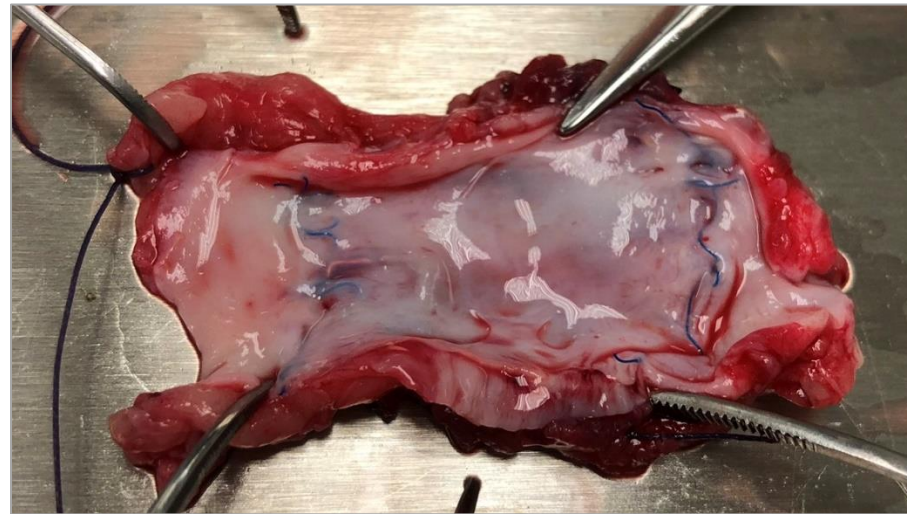


VERIGRAFT personalized grafts in pig models (5 weeks, 6 months, 12 months) became biologically integrated and remained patent. No rejection of the transplant occurred.

P-TEV grafts are open and patent one-year post-integration. There are no signs of thrombosis, rejection, infection or mechanical failure in any of the animals.



Angiography



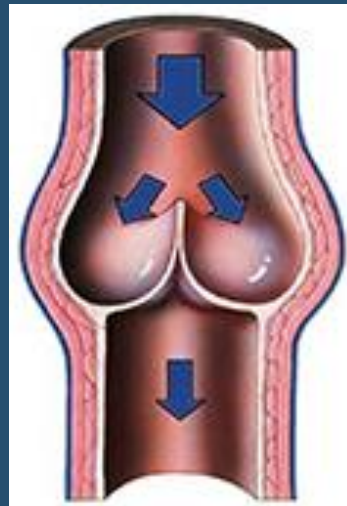
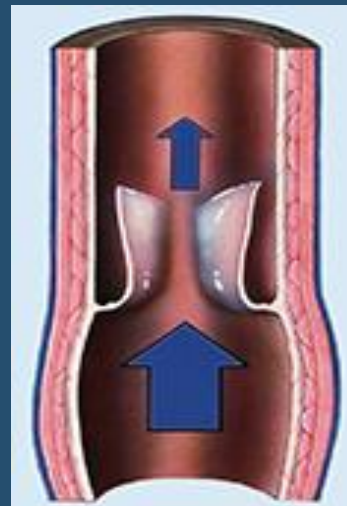
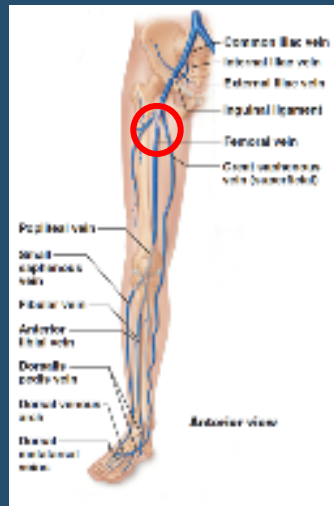
CD31 staining

Chronic venous insufficiency

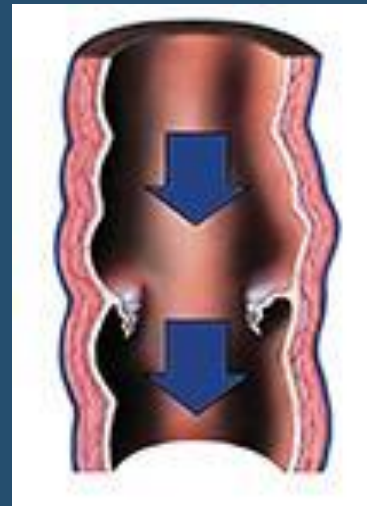
- Valves in deep veins do not work
- Swollen legs, pain, non-healing ulcers
- 1% of the population has CVI

Huge unmet medical need

- No cure, only symptomatic treatments on the market
- Allotransplantation is not possible due to rejection

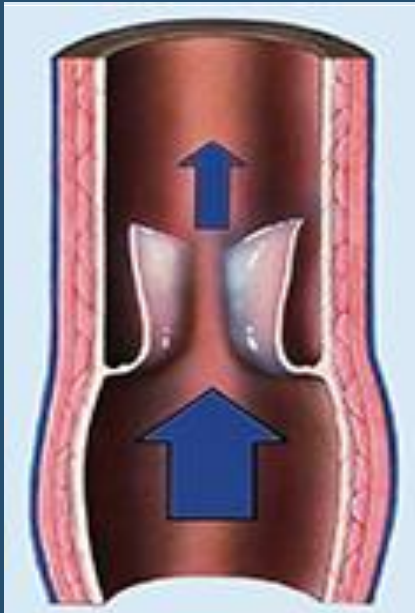


Normal Function



Insufficient Valve





Personalized Tissue-Engineered Vein

P-TEV

- 4-6 cm long vein segment
- Contains one functional valve
- Grafting by simple end to end anastomosis



More than 500 000 cycles.

Phase I/II clinical trial in Europe

- 15 Patients with severe CVI
- Replacement surgery
- Open vein segment with incompetent valve
- Graft P-TEV with functional valve
- Safety endpoints evaluated after 4 weeks
- Safety and efficacy at 3, 6 and 12 months



First clinical trial of its kind worldwide is now ongoing!

First patient implanted with P-TEV graft

- First patient included in TECVI-1 clinical trial in December 2021
- P-TEV implantation surgery performed January 2022
- Four-weeks safety evaluation performed February 2022; no safety concerns identified
- Three-month safety evaluation performed April 2022; no safety concerns identified
- The valve is functional, and the patient's clinical status is improved
- Staggered inclusion now continues
- 15 patients will be included in TECVI-1 during 2022



- Huge costs associated with CVI patients
- ATMP on the EU market, expanding to USA
- Strong reimbursement model
- No competition and no other cure in development

Venous Ulcers – Big Five and US Annually

1 Million Suffering

Billion € Market

Personalized Tissue-Engineered Arteries (P-TEA):

- Safe and efficacious in large animals
- Peripheral and cardiac bypass grafting
- Clinical trials to be started within 2-3 years



Personalized Tissue-Engineered Nerves (P-TEN):

- Large animal study in sheep recently finished
- Positive data confirm peripheral nerve repair



Both products are addressing multi-billion EUR markets!

Today

Donated human tissue
Decellularization

Next

Xenogeneic tissue
Decellularization

Then

3D printed ECM scaffolds

Platform for the personalization of xenogeneic and 3D printed tissue scaffolds



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- **EU Horizon 2020 SME Instrument (2017-2019, Euro 2,2M):**
Clinical trial program (P-TEV for treatment of chronic venous insufficiency)
- **EU Eurostars (2016-2020, Euro 0,5M):**
Tissue engineered and personalized nerves for use in regenerative medicine
- **EU Marie Curie (2017-2020, Euro 0,2M):**
A PhD-student financed to work with personalized tissue engineered blood vessels
- **Swedish foundation grant (2019-2021, Euro 0,24M):**
Proteomics analysis of personalized tissue engineered blood vessels
- **EU Eurostars (2021-2023, Euro 0,4M):**
Tissue engineered personalized arteries for use in regenerative medicine
- **Swedish governmental grant (2022-2024, Euro 0,2M):**
Platform for the personalization of xenogeneic and 3D printed tissue scaffold



eurostars™



Horizon 2020
European Union funding
for Research & Innovation

KK-stiftelsen ><



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