

GrOwnValve Bioresorbable Stent



PRINCIPAL INVESTIGATORS/COLLABORATORS

Boris Schmitt

Leoni Pulling

Charité

Katrin Schrimpf

MED. TECH

Cardiology

SUMMARY

Currently, there is no heart valve designed specifically for children born with congenital heart valve defects.

All available heart valve prostheses lack durability, are inadequate for pediatric use and require repeated open-heart surgeries as the child grows.

Existing heart valve options, xenogenic or mechanical, have major limitations: xenogenic valves degrade quickly, while mechanical valves require lifelong blood thinners and constant monitoring.

The aim of this project is to develop a bioresorbable stent to anchor a patient-specific valve that offers lifelong durability and growth potential for minimally invasive heart-valve replacements.

PROJECT GOALS

- Perform a large-animal trial to assess stent resorption and hemodynamics, as well as growth potential of the autologous tissue in the stent-valve combination

LONG-TERM GOALS

- Deploy bioresorbable stents for once-in-a-lifetime, minimally invasive heart valve replacement.
- Enter the market with a patient-specific, autologous, and durable heart valve for both, children and adults.