

# Accelerating Rotator Cuff Repairs (RCR)

Therapeutic area

- Orthopedics

Products

- Biomerix PCPU
- Ulteeva Purity™ UHMWPE fibers
- Bionate® PCU

Capabilities

- Biomaterials expertise
- Co-development
- Custom prototyping and sampling



## Partnering for the challenge

Currently, options for RCR are very limited to temporary implants that only last a few weeks. In response to the market’s need for a permanent solution, the Biomedical team at dsm-firmenich created a novel and functional prototype for our partner, one of the largest orthopedic device companies in the world.

## Why it matters

Every year across the globe, more than 400,000 RCR procedures are performed and more than 40% of those procedures ultimately fail. Furthermore, as individuals stay active longer in life, surgeries are becoming more frequent, thus leading to a higher ratio of failed procedures.<sup>1</sup>

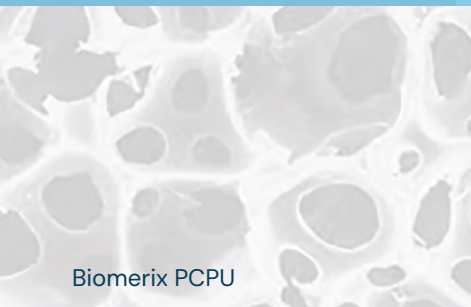
## Our innovation

We combined our 3 proprietary biomaterial platforms:

- ✓ **Biomerix PCPU** as a scaffold for cell ingrowth and tissue integration
- ✓ **Ulteeva Purity™ UHMWPE fibers** for suture retention
- ✓ **Bionate® PCU** as a load-bearing barrier to protect the device from the friction produced in the joint during normal activity

## Our impact

In the end, after working with our partner on 3 different intermediate prototypes, **the functional prototype exceeded their expectations as a potential implantable device for short-term commercialization.** With this prototype, they are now actively collecting feedback from their advisory board with the goal of developing a functional device for a future animal study.



Biomerix PCPU



Ulteeva Purity™ UHMWPE fibers



Bionate® PCU