

Therapeutic area

- **Vascular**

Products

- **ComfortCoat® Hydrophilic Coatings**
- **Ulteeva Purity™ UHMWPE Fiber**

Capabilities

- **Biomaterials expertise**
- **Quality Assurance & Regulatory Affairs (QARA) support**
- **Technical support**



## Partnering for the challenge

Our partner, an innovative, rapidly growing company looking to capture share and grow the market, needed a biomaterial combination to optimize its pulsed field ablation device. The challenge for the Biomedical team at dsm-firmenich was to create a unique, clinically relevant solution that accelerated our partner's product launch.

## Why it matters

After the age of 45, about 1 person in 3 to 5 people has a lifetime risk of developing atrial fibrillation (also called AFib and AF).<sup>1</sup> Using pulsed field ablation to treat AF "can allow for a heart tissue-specific approach to ablation while avoiding collateral injury to structures such as the esophagus or the phrenic nerve," which may result in "safer procedures, shorter ablation times, surrounding tissue protection and successful results."<sup>2</sup>



## Our innovation

Together with our partner, we:

- ✓ Customized our hydrophilic coating application protocol and iteratively prototyped 15+ versions to fine-tune and optimize the application process to align with evolving needs, while our partner worked toward their design freeze milestone.
- ✓ Supported design verification testing (DVT) and clinical trials by delivering ComfortCoat® coated devices in a timely manner while conducting in-house performance tests to ensure highest coating quality.
- ✓ Provided ComfortCoat® FDA Master File authorization and additional documentation to support global regulatory filings.

## Our impact

Our ability to develop and implement the optimal coating application process, utilize proven biomaterial innovations, ComfortCoat® Hydrophilic Coatings and Ulteeva Purity™ UHMWPE Fiber, conduct extensive testing, and provide ongoing technical support fast-tracked our partner's time to market. This comprehensive support, combined with our biomaterial innovations, streamlined their development process, allowing for a faster and more efficient way of working.

**References:** 1. Linz D, Gawalko M, Betz K, et al. Atrial fibrillation: epidemiology, screening and digital health. *The Lancet Regional Health - Europe*. 2024;37:100786-100786. doi: <https://doi.org/10.1016/j.lanepe.2023.100786> 2. Novel pulsed field ablation offers patients safer and faster atrial fibrillation ablation - Mayo Clinic. [www.mayoclinic.org](http://www.mayoclinic.org). <https://www.mayoclinic.org/medical-professionals/cardiovascular-diseases/news/novel-pulsed-field-ablation-offers-patients-safer-and-faster-atrial-fibrillation-ablation/mac-20567834>

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