



● TECHNOLOGY BROCHURE

## LipoCoat®

The world's first bio-inspired coating delivering high performance without toxic substances. Setting a new standard in medical device coatings.

A solution of  
The Lipocoat Group

# Bio-inspired medical coatings



# We do things differently

Traditional coating solutions may be market-approved and historically effective, but they inevitably trigger severe long-term complications. We knew there had to be a better way. One that is smoother, thinner, safer, and more durable. By combining cell biology with nanotechnology, we developed the world's first bio-inspired coating that is completely free of toxic or synthetic chemicals.

# How does a bio-inspired approach outperform traditional medical coatings?

To understand the impact of LipoCoat® platform technology, it is essential to compare its mechanical and biological properties with existing industry standards. Discover how our coating compares to traditional solutions across key performance indicators below.

|                                     | • Active coatings                                               | • Synthetic coatings                                                              | • LipoCoat® coating                                                                            |
|-------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Material composition & Architecture | Often contains heavy metals (silver/copper) or chemical agents. | Synthetic polymers e.g. PVP, PTFE and Polyacrylamide                              | A bio-inspired phospholipid bilayer that mimics the natural cell membrane                      |
| Spatial profile                     | Macroscopic / variable dimensions.                              | Micrometric & fluctuating (10 to >100 µm).                                        | Nanoscale (from a single layer of 5 nm. up to multiple layers).                                |
| Mechanism of Action (MoA)           | Kills cells by releasing toxins.                                | Hydration layer that reduces bacterial adhesion without killing or tissue damage. | Ultra-smooth hydration layer that reduces bacterial adhesion without killing or tissue damage. |
| Integrity & tolerance               | Risk of Antimicrobial Resistance (AMR).                         | High risk of flaking (delamination) under friction.                               | Extremely low friction. 100% biocompatible, no flaking risks                                   |
| Ease of integration                 | Complex integration and demands high investments                | Intensive, multi-step integration required                                        | Simple dip-coating process at room temperature. No UV-curing needed                            |



## Validate LipoCoat® and upgrade your portfolio.

Connect with our engineering team to set up a pilot and see exactly how our coating performs under your specific testing parameters. Our coating can be easily tested without special procedures for handling, use, or disposal.

Request an R&D sample kit via our website:

