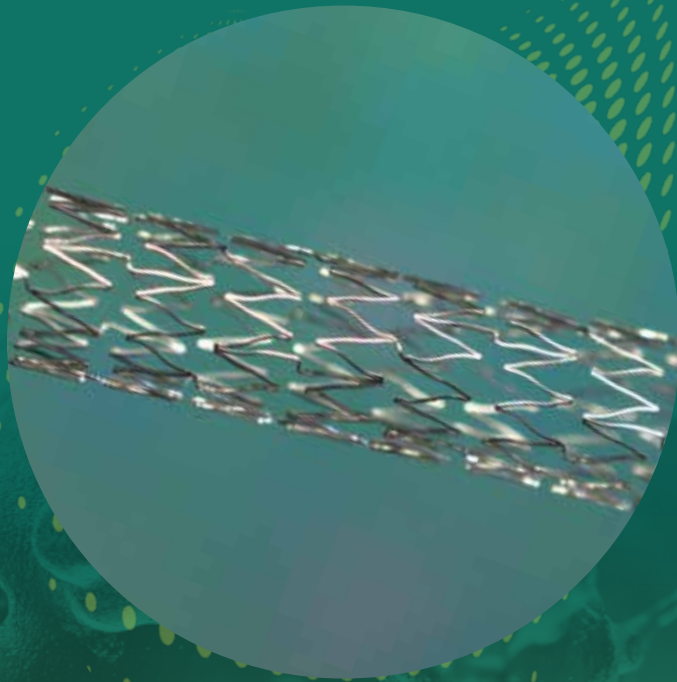


SmartReactors 

Camouflage[™]

Coating Technology for
Medical Implants



Transformative solutions to reduce thromboembolic complications and accelerate tissue healing

www.smartreactors.com



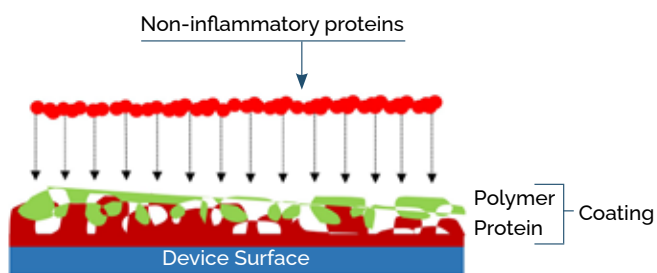
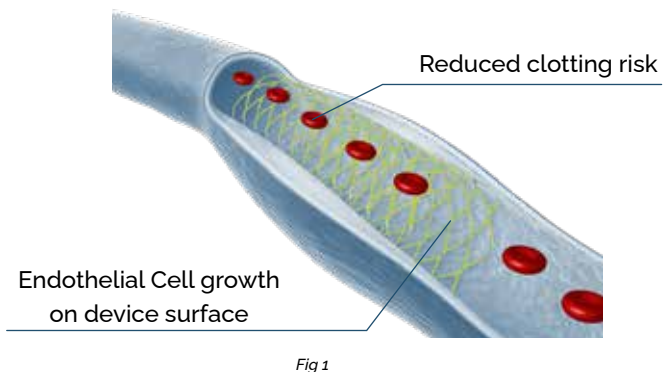
Camouflage™

Coating Technology

Transformative solutions to reduce thromboembolic complications and accelerate tissue healing

Key Properties

- Hemocompatibility
- Anti-inflammatory
- Promotes Endothelialization



Camouflage™ is an innovative coating technology tailored for blood-contacting medical devices. The coating conceals the device surface by using non-inflammatory proteins from the blood. The combination of recombinant protein and synthetic polymer regulates protein adsorption, preventing thrombosis and providing a foundation for endothelial cell attachment. The non-pharmaceutical coating enables a streamlined regulatory pathway (Fig 1 & 2).

Camouflage™ Benefits

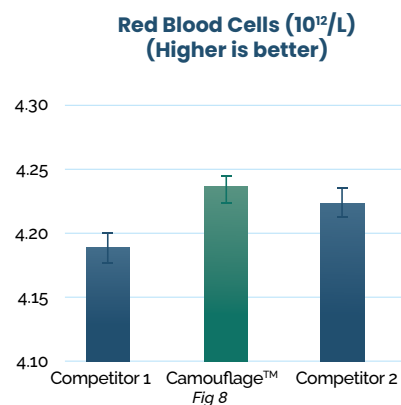
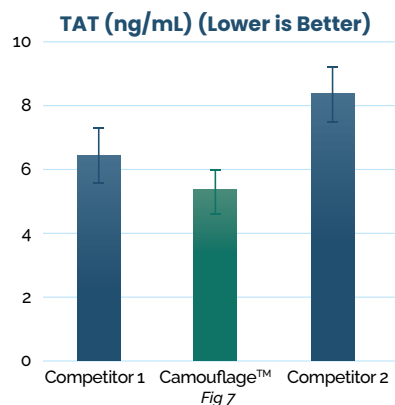
- Adherence to all substrates
- Ultra-thin coating
- Water-based process (solvent-free)
- Long-term durability
- Non-pharmaceutical
- No UV or heat required
- Lean manufacturing process



Hemocompatibility



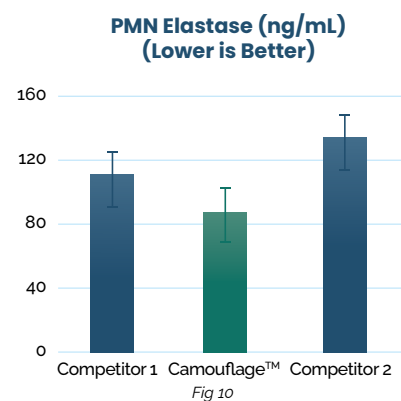
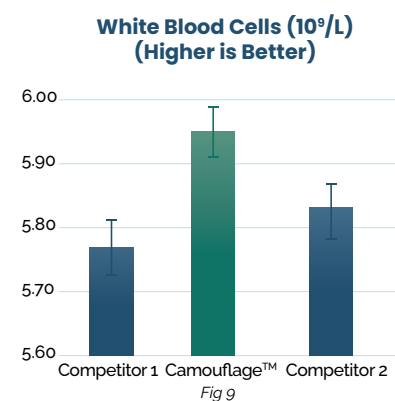
Camouflage™ coating passivates the surface while reducing platelet activation & inhibiting the coagulation cascade. Evidence of minimal progression towards thrombus formation (clot), with red blood cells remaining in suspension (Fig 7 & 8).



Anti-Inflammatory



Camouflage™ coating minimizes the interaction with white blood cells (WBC) and reduces the inflammatory response. Data demonstrates WBC exhibiting minimal adhesion to the surface, with elastase activity remaining at low levels with suppressed inflammatory response (Fig 9 & 10).



Endothelialization



Camouflage™ coating on Nitinol surfaces promotes endothelial cell proliferation when compared to uncoated stents, thereby reducing the device exposure-time to circulating blood. The uptake of HUVEC cells is greater on coated verses uncoated nitinol stents after a 29-hour incubation (Fig 11 & 12).

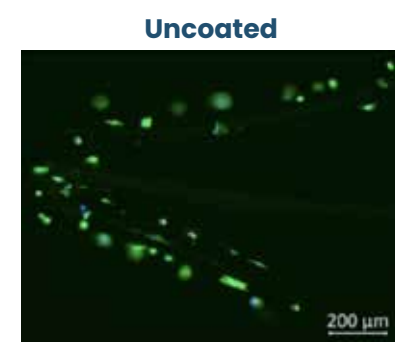


Fig 11 - Stents (uncoated) after 29hr incubation

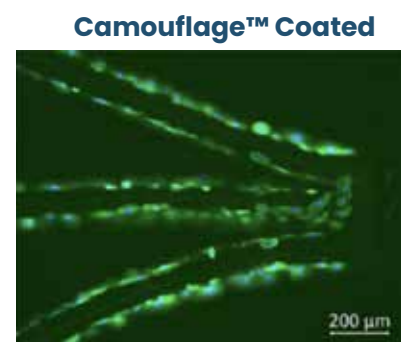


Fig 12 - Stents (coated) after 29hr incubation

Services



Prototype Coating

Enhance device performance with Camouflage™ coating technology.



Design and Development

Expert design and process optimization services.



Manufacturing Transfer

Seamlessly transition from development to full-scale production.

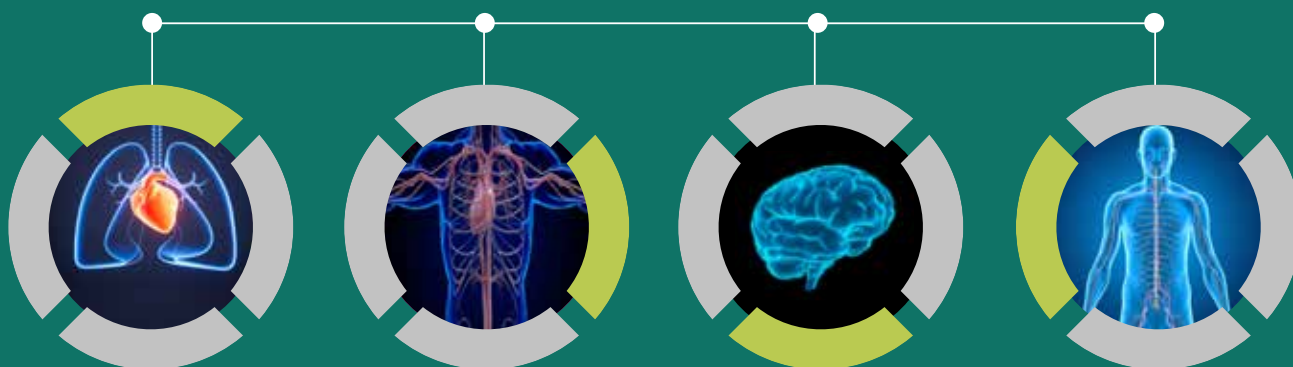


After Sales Support

Ensure long-term success with comprehensive after-sales support.



Camouflage™ Applications



Vascular

- Peripheral stents
- Venous stents
- Grafts
- IVC Filters
- EVAR devices

Structural Heart

- Heart valves
- Septal occluders
- Mitral valve clips
- LAA occluders

Neurovascular

- Flow diverters
- Intracranial stents
- Endovascular shunts
- Intracascular devices

Electrophysiology

- Pacemakers
- ICDs
- Pacing leads



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