ART
Arterial Remodeling Technologies

*Product Profile 2007*

**ART's bioresorbable stent provides the requisite initial mechanical scaffolding to resist recoil; then, as it dismantles over time in a controlled fashion *because of its polylactic acid makeup*, the possibility of remodeling returns to the artery.**

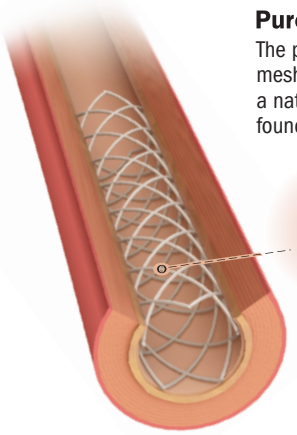
**"The most critical aspect of the degradation process for a bioresorbable stent is the *dismantling-over-time* factor, and *not* total disappearance."**

Patrick Sabaria, CEO, Arterial Remodeling Technologies (ART)

# *ART is developing one of the world's first bioresorbable stents made from a biocompatible lactic acid polymer enabling the ART stent to support an artery triggering only minimal local tissue response causing restenosis.*

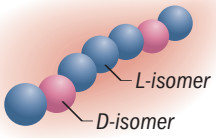
## Bioresorbable stent

A.R.T's stent supports the artery wall long enough for it to remodel itself, and is then simply absorbed by the body.



**Pure polylactic acid**

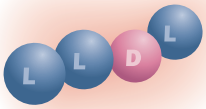
The polymer that forms the stent mesh is derived from lactic acid, a naturally-occurring substance found in the human body.




Two different lactic acid isomers are joined in a chain to create the polylactic acid polymer.

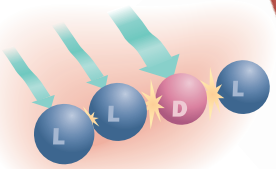
**The right mix**

A specific ratio of L- to D-isomers gives the stent the appropriate stiffness and rate of degradation compatible with the artery healing process and ensures absence of recoil.

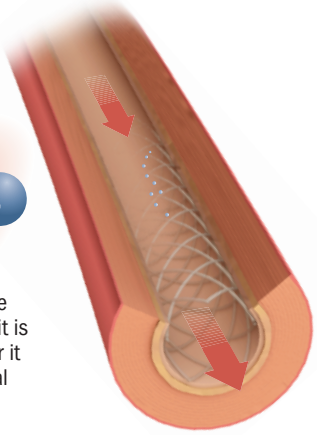



**Biocompatible**

Water from blood enters the polymer and gradually breaks apart the chains.




Because the stent is made only from polylactic acid, it is resorbed by the body after it breaks down, using natural biochemical pathways.



ART's proprietary stent provides the requisite initial acute mechanical scaffolding to resist severe recoil, but as it dismantles due to bioresorbability, the possibility of arterial remodeling returns to the artery. ART's stent technology not only overcomes many disadvantages of metal stents, but is biocompatible and will disappear over time as it bioresorbs. In addition, ART's polymer can be shown to be safe and trigger a minimal inflammatory response. The most important portion of the degradation process is the dismantling event, not total disappearance. *Dismantling* or loss of physical integrity is the process that allows the arterial remodeling mechanism to proceed. "The ART platform provides the added benefit of total disappearance over time (one to two years, or less, if needed) in a safe manner. Arterial walls remodel, naturally, adjusting their size for optimal blood flow. Meanwhile, the stent gradually dismantles into lactic acid molecules, which are carried away via natural biochemical pathways," says Dr. Michel Vert, a scientific advisor to ART who has 30 years of experience working with bioresorbable polymers. "ART's stent is comprised entirely of its specific lactic acid polymer, making the stent non-inflammatory, biocompatible and hemocompatible, as well as mechanically strong and bioresorbable," adds Dr. Vert, a former Director of the research unit specializing in biopolymers at the Univ. of Montpellier I and National Center of Scientific Research headquartered in Paris.

## What one of the world's leading bioresorbability authorities is saying:

**Michel Vert, PhD**
National Center of Scientific Research for Artificial Biopolymers

*"ART's bioresorbable stent is comprised of a single component: polylactic acid, a naturally occurring human substance that is hemo- and bio-compatible. In vivo resorption speed is controllable due to the polymer's composition and formulation. The degradation process releases very minute quantities of lactic acid only, which induces minimal tissue response, or minimal inflammation, so restenosis is not an issue. In addition, the ART stent also induces rapid endotheliazation. The ART stent may make permanent stents obsolete."*

CAUTION: The ART bioresorbable stent is not available in the USA for clinical trials or for commercialization. Non-USA clinical evaluation is in progress. Not available for sale.