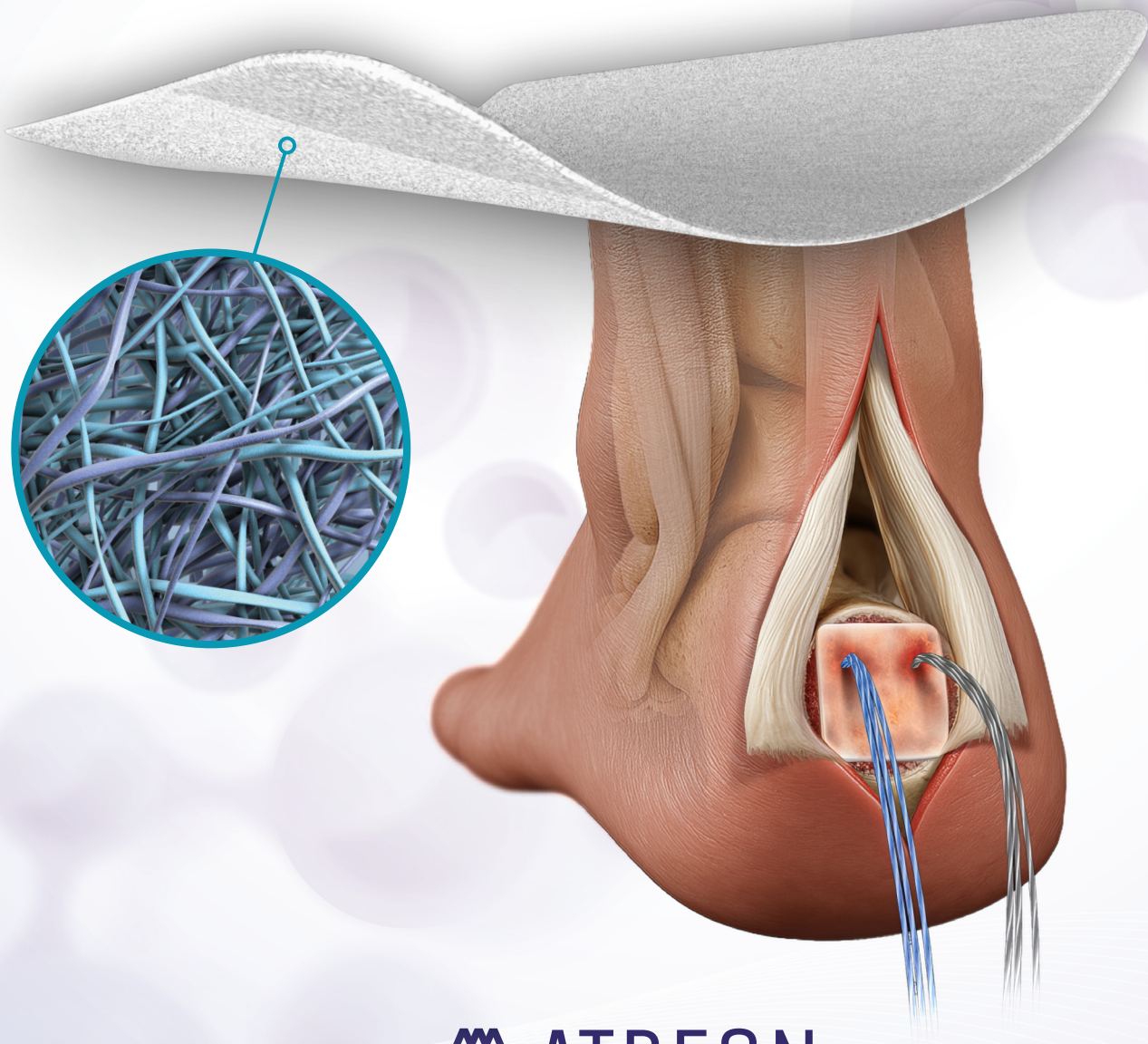


IR ROTIUM[®]

Bioresorbable Wick

FOOT & ANKLE APPLICATIONS



 **ATREON**
ORTHOPEDICS

AUTOBIOLOGIC[™] SCAFFOLDS:
POWERING THE HEALING RESPONSE



ROTIIUM® is a **bioresorbable scaffold** designed to support the healing environment at the tendon-bone or tendon-suture interface by retaining the body's own biologic factors and helping to promote **native tissue integration** without adding surgical time.

A SOLUTION TO A WEAK LINK IN TENDON HEALING

➤ **Foot and ankle tendons** endure high loads and have limited blood supply —when injured, they often heal through scar formation, which compromises strength and function.



A BREAKTHROUGH HEALING SOLUTION



Interpositional Wick

Mimics extracellular matrix (ECM) & holds active biology at the repair site
Kickstarts a pro-healing environment



Synthetic & Bioresorbable

Biphasic absorption encourages cellular integration & proliferation
Organic acid resorption known to facilitate healthy tissue remodeling



Smart Economics & Simplified Technique

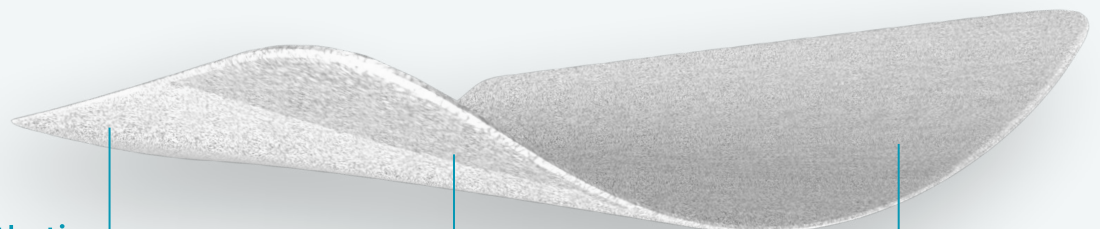
Priced for use on every repair
Easily incorporated into current surgeries without disposables



Reproducible Clinical Success

Promotes the natural healing process
Delivers consistent long-term results & restoration of function

DESIGNED AS A SCAFFOLD

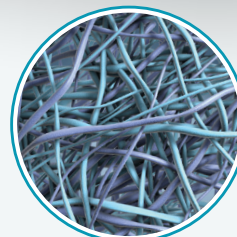


100% Synthetic

PGA – Poly-Glycolic Acid
PLCL – Poly-Lactide co-caprolactone

Footprint Coverage

20x20 mm | 40x30 mm
25x50 mm | 60x30 mm
25x70 mm | 25x30 mm
0.85 mm & 0.45mm thickness



85% Porous

Microfiber matrix

Absorbable

3 - 4 months

SUPPORTS HEALING ACROSS MANY PROCEDURES

- Achilles Tendon (Haglund's deformity & mid-substance Repair)
- Peroneal Tendon Repair
- Posterior Tibial Tendon Repair
- FHL transfer
- Kidner procedure



INTERPOSITIONAL OR ONLAY PLACEMENT

Placed at the tendon-bone interface or wrapped around a tendon



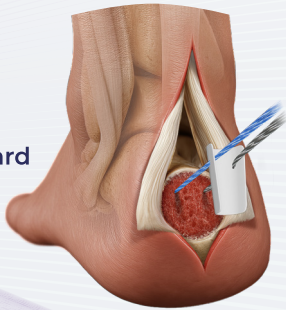
EASILY WRAPPED OR SUTURED

Robust scaffold with optimized handling characteristics that wicks biology at the repair site

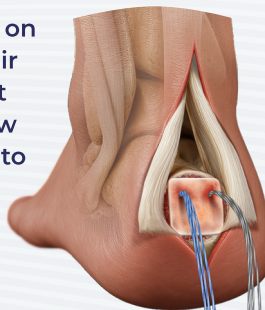
VERSATILE & SIMPLIFIED TECHNIQUE

INLAY APPLICATION

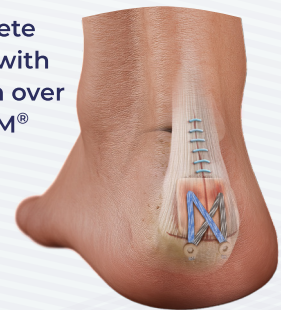
- 1** Pass suture through scaffold and slide down sutures toward repair site



- 2** Position on the repair footprint and allow scaffold to wick

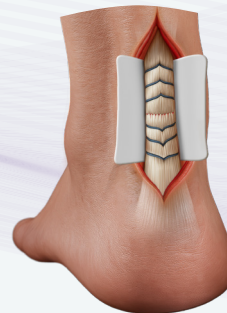


- 3** Complete repair with tendon over ROTIUM®



ONLAY/WRAPPED APPLICATION

- 1** Position ROTIUM on or around the tendon and suture in place



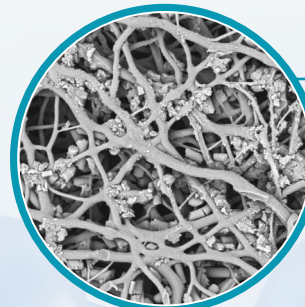
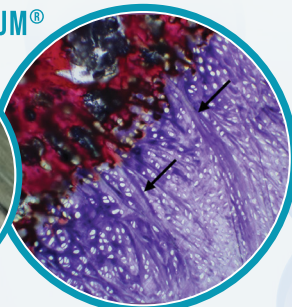
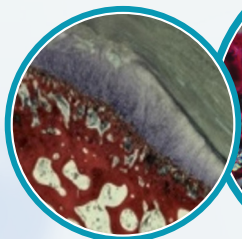
SUPPORTED BY SCIENTIFIC & CLINICAL DATA

» MIMICS NATIVE ECM: Promotes Healing Through Cellular Proliferation and Integration

NO SCAFFOLD CONTROL



REPAIR WITH ROTIUM®



Proliferation of human tenocytes into ROTIUM® scaffold after 4 weeks (Data on file)

HEALING WITH SCAR TISSUE VS. HEALTHY BONE-TENDON INTEGRATION

Sheep CSU Study (JSES, 2022), Winner of the 2023 Neviaser Award for Basic Science by ASES & JSES: **Development of Sharpey's like fibers at the tendon-bone interface** using an interpositional nanofiber scaffold.

CONFIDENCE IN SYNTHETICS*

ROTIUM supercharges tendon healing by promoting cellular interactions to drive tissue remodeling. Organic acid polymer contributions:

GLYCOLIC ACID

- Anti-Inflammatory properties
- Increases fibroblast proliferation & production of collagen & HA

LACTIC ACID

- Modulates inflammation & accelerates cellular migration
- Promotes ECM deposition & reparative angiogenesis

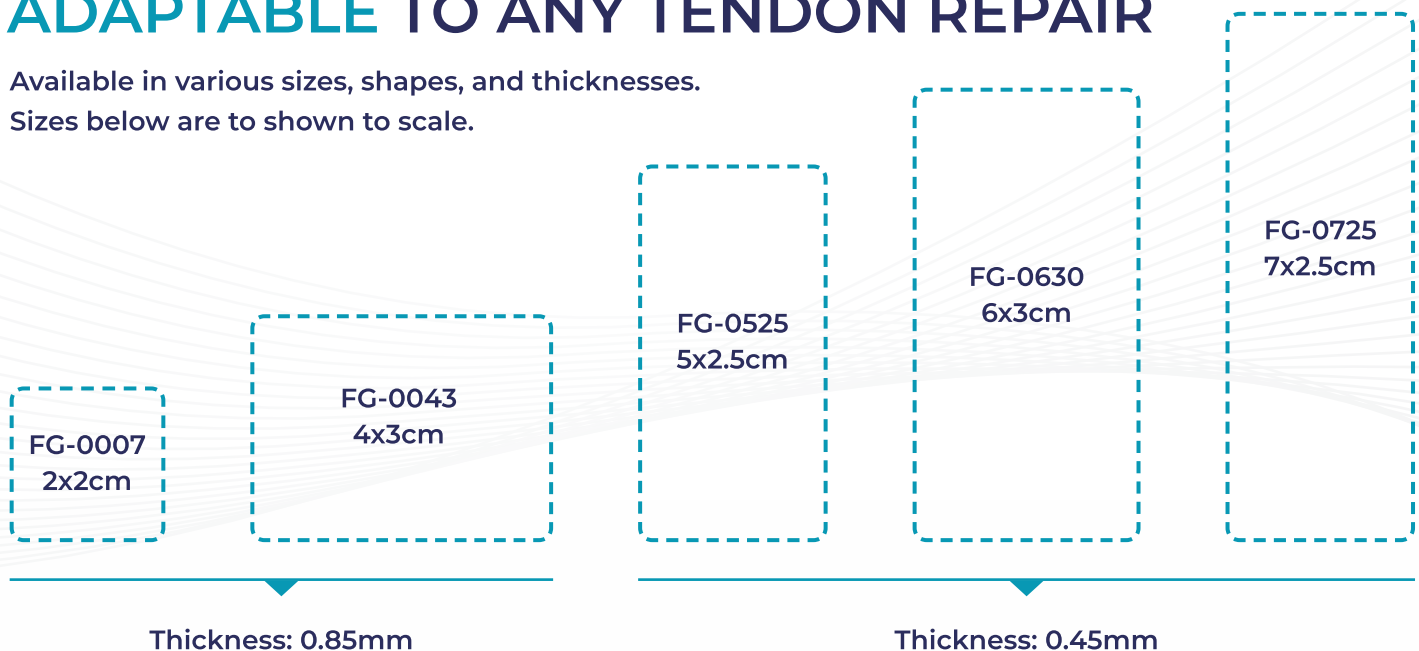
CAPROIC ACID

- Anti-microbial properties
- Anti-inflammatory properties

**Studies available upon request*

ADAPTABLE TO ANY TENDON REPAIR

Available in various sizes, shapes, and thicknesses.
Sizes below are to shown to scale.



Legal Manufacturer: Nanofiber Solutions

Distributed by: Atreon Orthopedics 5164 Blazer Pkwy. Dublin, OH 43017 USA
614-429-1471 | www.atreonortho.com

Biomechanical enhancement in rotator cuff repairs: the impact of innovative nanofiber technology. Johnson, James et al. JSES International, Volume 9, Issue 1, 116 - 122
Beleckas, C. M., Minetos, P., & Badman, B. L. (2023). Short-term radiographic and clinical outcomes of arthroscopic rotator cuff repair with and without augmentation with an interpositional nanofiber scaffold. Journal of Orthopaedic Experience & Innovation. <https://doi.org/10.60118/001c.84269>

Romeo, A., Easley, J., Regan, D., Hackett, E., Johnson, J., Johnson, J., Puttlitz, C., & McGilvray, K. (2022). Rotator cuff repair using a bioresorbable nanofiber interposition scaffold: A biomechanical and histologic analysis in sheep. Journal of Shoulder and Elbow Surgery, 31(2), 402-412. <https://doi.org/10.1016/j.jse.2021.07.018>

Seetharam A, Abad J, Baessler A, Badman BL. Use of a Nanofiber Resorbable Scaffold During Rotator Cuff Repair: Surgical Technique and Results After Repair of Small- to Medium-Sized Tears. Orthop J Sports Med. 2022 May 13;10(5):23259671221094848. doi: 10.1177/23259671221094848. PMID: 35601733; PMCID: PMC9118444.

Mazzocca A. Data on file. University of Connecticut; 2016

Docheva D, Müller SA, Majewski M, Evans CH. Biologics for tendon repair. Adv Drug Deliv Rev. 2015 Apr;84:222-39. doi: 10.1016/j.addr.2014.11.015. Epub 2014 Nov 21. PMID: 25446135; PMCID: PMC4519231.

Leong NL, Kator JL, Clemens TL, James A, Enamoto-Iwamoto M, Jiang J. Tendon and Ligament Healing and Current Approaches to Tendon and Ligament Regeneration. J Orthop Res. 2020 Jan;38(1):7-12. doi: 10.1002/jor.24475. Epub 2019 Sep 30. PMID: 31529731; PMCID: PMC7307866.

♦ All claims supported by data on file § References available upon request

© 2025 Atreon Orthopedics

View U.S. patent information at <https://nanofibersolutions.com/technology/>

AW-0053 Rev. A, August 2025

CONTACT US info@atreonortho.com

VISIT OUR WEBSITE

