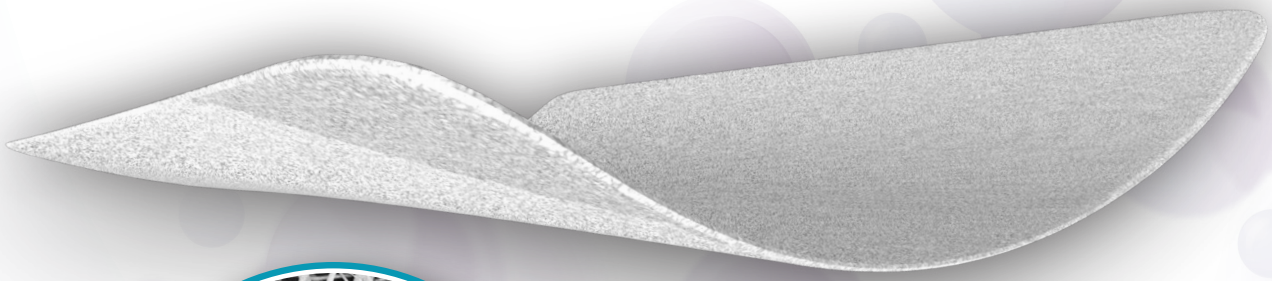
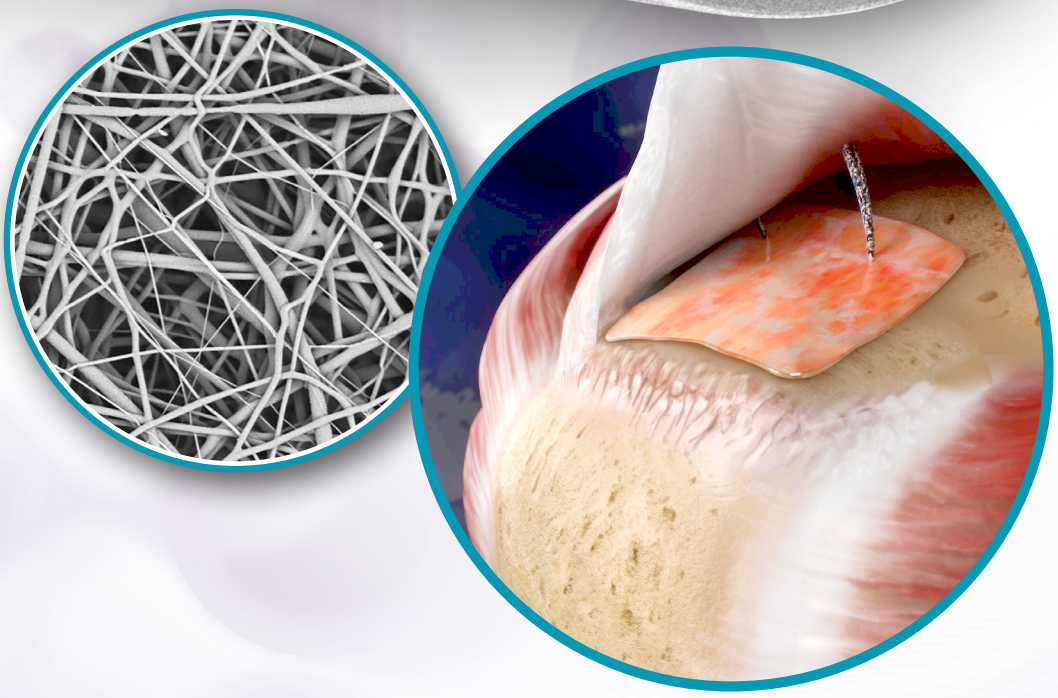
ROTIUM®

Bioresorbable Wick

FOR ROTATOR CUFF REPAIR





ATREON ORTHOPEDICS

AUTOBIOLOGIC™ SCAFFOLDS:
POWERING THE HEALING RESPONSE

ROTIUM®

A bioresorbable wick placed at the tendon-bone interface designed to address the biologic environment for better support of the healing cascade, remodeling of healthy tissue and improvement in long-term outcomes after rotator cuff repair.

Right Environment
Harness Autologous Biology

Right Biology
Improve Tendon Healing

Right Regeneration
Remodel a Healthy Enthesis

THE BIOLOGIC CHALLENGE

Scar tissue formation without a healthy enthesis may increase the chance of biologic failure and lead to inferior healing or inconsistent functional outcomes.

35% AVERAGE RETEAR RATE

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 acids known to facilitate healthy tissue remodeling

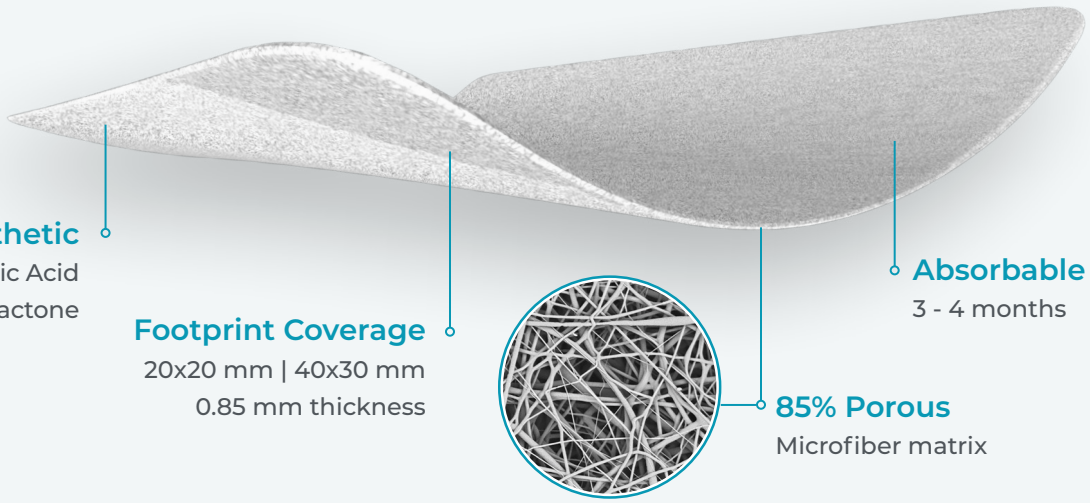
Smart Economics & Simplified Technique
Priced for use on every repair

Easily incorporated into current RTC 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
0.85 mm thickness

Absorbable
3 - 4 months

85% Porous
Microfiber matrix

THE POWER OF HEALTHY INTERFACE

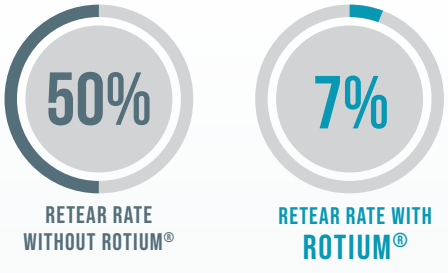
» IMPROVED OUTCOMES

Retrospective Study (OJSM)[4]

- 33 Patients
- Small - Large Tear Sizes
- 91% Success Rate

Prospective Study (JOEI)[2]

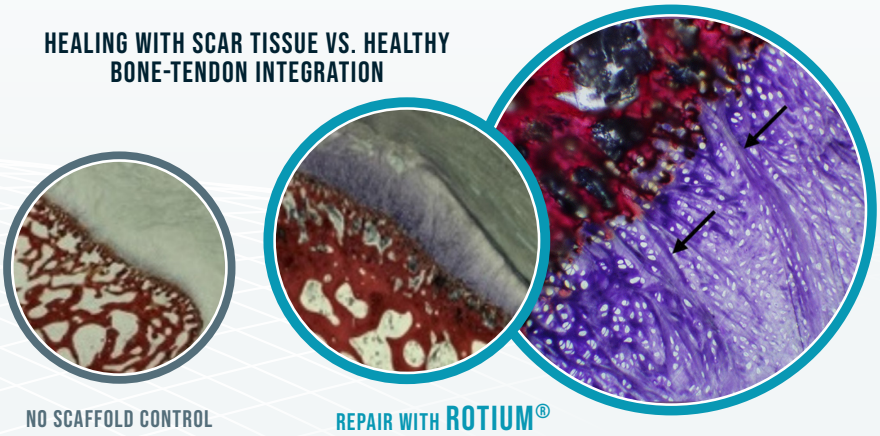
- 30 Patients - Randomized
- Small - Large Tear Sizes
- 93% Success Rate



» IMPROVED HEALING

Sheep CSU Study (JSES)[3]

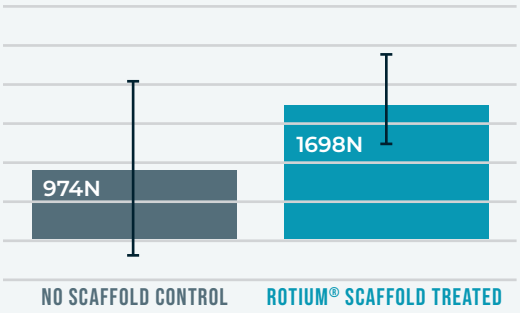
- Development of Sharpey's like fibers at the tendon-bone interface (vs. the control group)
- Remodeled enthesis with characteristics similar in thickness & organization to native tendon



» IMPROVED STRENGTH AND CONSISTENCY

Safe and Effective

- Increased strength with reproducible repair outcomes
- Synthetic polymers have demonstrated excellent biocompatibility & no reported adverse effects



MEDIAN ULTIMATE BREAKING STRENGTH (N) AT 12 WEEKS[3]

74%

INCREASE

CONFIDENCE IN SYNTHETICS

ROTIUM aims to solve the ROOT CAUSE of tendon failures and is designed for widespread case use for all tear sizes by addressing the weak link in tendon-bone healing. Organic acid polymer contributions:

Glycolic Acid [6,7,9]

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

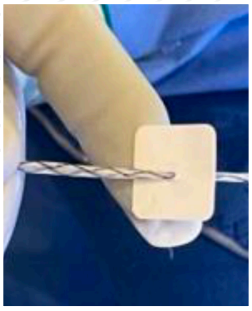
Lactic Acid [5,8,10]

- Stimulates VEGF & collagen gene expression
- Modulates inflammation & accelerates cellular migration
- Promotes ECM deposition & reparative angiogenesis

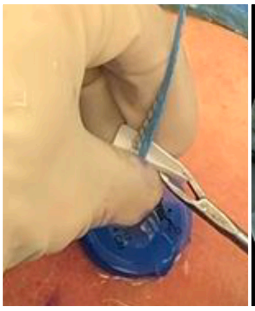
Caproic Acid [7]

- Anti-microbial properties
- Anti-inflammatory properties

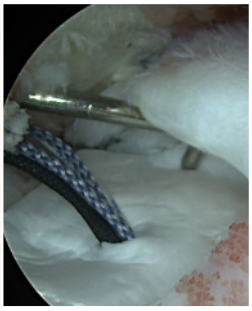
VERSATILE & SIMPLIFIED TECHNIQUE



1 Pass suture through scaffold



2 Taco & push through cannula



3 Position on the repair footprint

4 Complete repair with cuff over ROTIUM®

> "ROTIUM enables the regeneration of the bone-to-tendon interface (Sharpey's fibers) which PRP, stem cells and dermal allografts have never been able to do."
>
> *Anthony A. Romeo, MD*

> "ROTIUM stimulates and enhances native biological activity at the repair site, is quick & easy to apply, and significantly improves the biological integrity of my repairs."
>
> *Brian L. Badman, MD*

CONTACT YOUR ATREON REPRESENTATIVE

Ask for the detailed ROTIUM Surgical Technique Guide. A manuscript of this surgical procedure can also be found in the Techniques in Arthroscopy Techniques Journal[1]

PART NUMBER	DESCRIPTION	QTY	UNIT OF MEASURE
FG-0007	ROTIUM® Bioresorbable Wick Implant - 2cm x 2cm	1	Each
FG-0043	ROTIUM® Bioresorbable Wick Implant - 4cm x 3cm	1	Each
FG-0525	ROTIUM® Bioresorbable Wick Implant - 5cm x 2.5cm	1	Each
FG-0630	ROTIUM® Bioresorbable Wick Implant - 6cm x 3cm	1	Each
FG-0725	ROTIUM® Bioresorbable Wick Implant - 7cm x 2.5cm	1	Each

INDICATIONS

The ROTIUM® Bioresorbable Wick is intended to be used in conjunction with suture anchors for the reattachment of tendon to bone in rotator cuff repairs. Please refer to the instructions for use for a complete list of indications, contraindications, warning and precautions.

WARNING

Please also refer to the package insert(s) or other labeling associated with the devices identified in this brochure for additional information.

CAUTION

Rx Only

ATREON ORTHOPEDICS

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

[1] Beleckas, C. M., Bishai, S.K., & Badman, B. L. (2021). Rotator Cuff Repair Augmented with Interpositional Nanofiber Scaffold. Arthroscopy Techniques. https://doi.org/10.1016/j.eats.2022.08.061
[2] 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
[3] 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
[4] 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.
[5] Beckert, S., et al., Lactate stimulates endothelial cell migration. Wound Repair Regen, 2006. 14(3): p. 321-4.
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[10] Zhang, D., et al., (2020). Endothelial Lactate Controls Muscle Regeneration from Ischemia by Inducing M2-like Macrophage Polarization. Cell Metab. 31. 1136-1153 e7

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

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

AW-0043 rev. C, September 2025