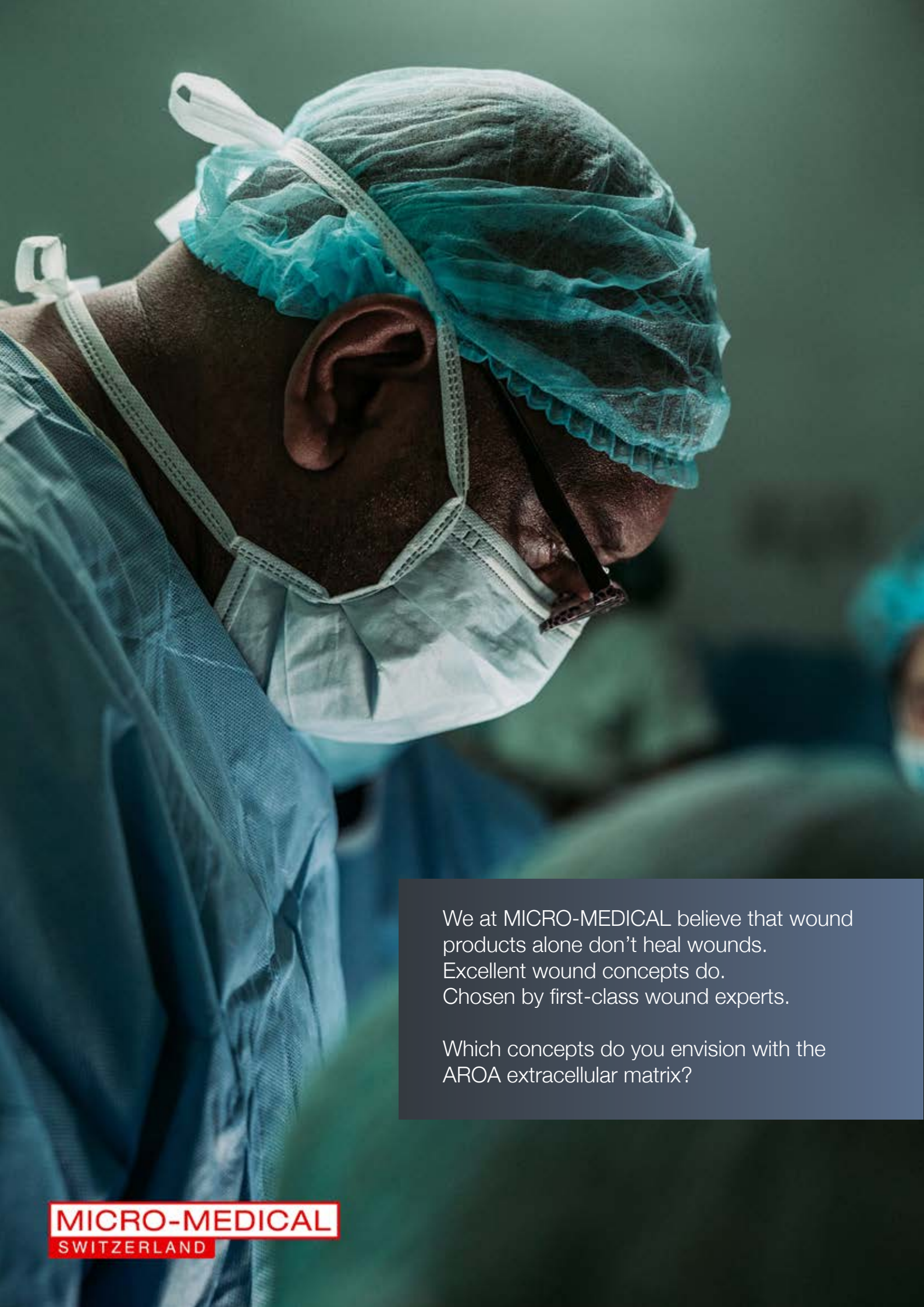




SOFT TISSUE DEFECTS?

Our products don't heal them.
Your concepts do.

MICRO-MEDICAL
SWITZERLAND



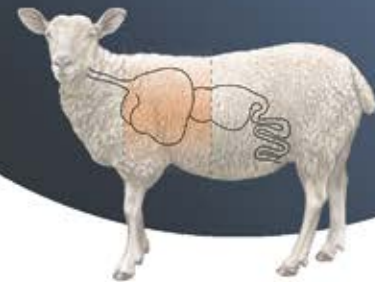
We at MICRO-MEDICAL believe that wound products alone don't heal wounds. Excellent wound concepts do. Chosen by first-class wound experts.

Which concepts do you envision with the AROA extracellular matrix?

AROA Extracellular Matrix (ECM): The world's first extracellular matrix derived from sheep forestomach.

AROA ECM is decellularized, freeze-dried and sterilized tissue from sheep forestomach. The patented process ensures that the rich biology, supporting the wound healing process, is preserved while sheep cells are removed.^{1,5,6}

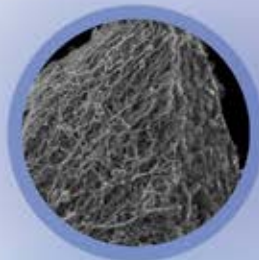
Did you know?
Sheep Forestomach grows 35x in the first 4 months after birth. It is biological tissue, designed for growth.



AROA ECM provides the ideal combination of structure and biology

Essential structure for cell growth^{1,2,4}

Fibroblasts, endothelial and immune cells infiltrate the entire matrix, build new tissue and over time the ECM is completely replaced by the patient's own tissue.



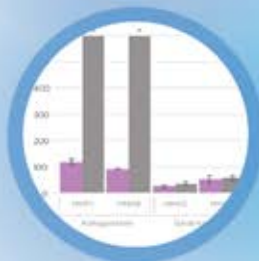
Dense vascularisation^{2,7}

The patient's cells use the ECM tissue as a guide template to form new capillary systems, resulting in well-vascularized granulation tissue.



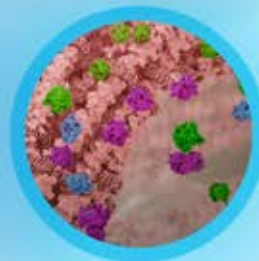
Broad MMP-Regulation^{2,3}

Elevated wound proteases limit healing in chronic wounds by digesting important dermal proteins. AROA ECM targets multiple wound proteases.



Rich biology to accelerate healing⁵

AROA ECM contains more than 150 ECM proteins, including collagen and other secondary molecules that are present in the tissue and support the healing process.



“I am impressed by the results I have achieved with the AROA ECM, even with contaminated wounds.”

Sebastian Kruschwitz, Federal Winner Berlin “Deutschlands beliebteste Pflegeprofis”

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3. Chaffin, A.E., et al., Multi-Centre Clinical Evaluation of a Cell-Conductive Extracellular Matrix Surgical Mesh in Plastics and Reconstructive Surgery – A Case Series. in 41st Annual Boswick Burn & Wound Symposium. 2019. Wailea Beach, Maui, HI
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6. Data on file
7. Greaves, N.S., et al., Acute cutaneous wounds treated with human decellularised dermis show enhanced angiogenesis during healing. *PLoS One*, 2015. 10(1): p. e0113209

Which concepts do YOU envision with AROA extracellular matrix?

Case studies where the AROA ECM fitted into the concepts of your colleagues shown below.

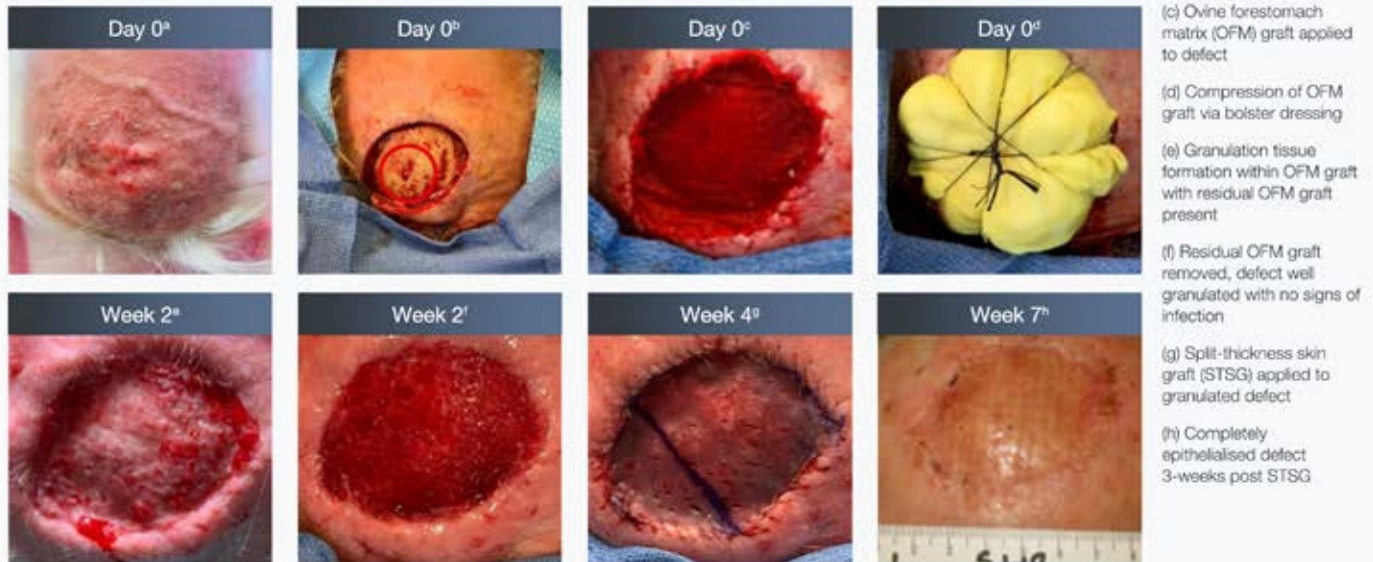
AROA Extracellular Matrix (ECM) to build tissue in complex, hard to heal wounds⁸

Case 1 - Medical history

(a) 85-year-old man with reduced general condition; Numerous scalp carcinomas for two years, Non-healing wound at the back of the head after Mohs surgery for a squamous cell carcinoma. Several unsuccessful applications of a cellular, non-living biologically active skin substitute (Epifix), MRI shows osteomyelitis of the outer layer of the calvarium

Approach

(b) Altered scalp region completely excised, Irregular bone consistency of the calvarium with osteomyelitis (circle), Debridement of the outer layer with a bone reamer to create punctual bleeding, Defect size 7 x 6.5 cm, calvarium not intact



- (c) Ovine forestomach matrix (OFM) graft applied to defect
- (d) Compression of OFM graft via bolster dressing
- (e) Granulation tissue formation within OFM graft with residual OFM graft present
- (f) Residual OFM graft removed, defect well granulated with no signs of infection
- (g) Split-thickness skin graft (STSG) applied to granulated defect
- (h) Completely epithelialised defect 3-weeks post STSG

AROA Extracellular Matrix (ECM) used in a contaminated field⁹

Case 2 - Medical history

(a) 59-Year-old male presented from outside hospital after initial debridement for a lower extremity necrotizing soft tissue infection (NSTI), Past medical history significant for Diabetes Mellitus II, peripheral arterial disease, obesity, former nicotine smoker (30+ pack year history). Suffered right leg infection secondary to a puncture wound from a catfish spine envenomation that resulted in a NSTI. Initial debridement wound management and intravenous antibiotics were administered by an outside hospital. The patient was transferred for further wound management and soft tissue reconstruction.



Procedure and Treatment

- Due to persistent necrotic tissue, friable wound edges and areas of undermining an additional debridement occurred resulting in a wound roughly 35 cm x 20 cm x 1 cm.
- (b) Post debridement, the defect had significant depth, irregularity, undermining and exposed structures.
- (c) Myriad Morcells (500 mg) were hydrated and placed over the irregular wound bed surrounding the exposed extensor tendons of the foot
- (d) Myriad Matrix sheets (four devices, measuring 10 x 20 cm each) were placed to cover the entire soft tissue defect. The wound was dressed with a silver silicone contact layer and NPWT (125 mmHg) and scheduled to be evaluated 7 days later.

Clinical Outcomes

1 Week from initial procedure. 100% take of the Myriad Matrix and granulation tissue beginning to proliferate at the edge of the device as the device as it began to incorporate. There was no sign of infection and coverage of the tendons. NPWT was continued. 3 Weeks from initial procedure robust granulation tissue present on the proximal portion of the defect and the volume of the defect. There was no sign of infection or purulence in the wound bed and there was complete coverage of the tendons. The patient continued NPWT following discharge from the rehab center due to lack of insurance coverage. Follow up was continued at an outpatient wound care center. 10 Weeks from initial procedure and there is 95% granulation of the Myriad Matrix. Robust bed of granulation tissue with no signs of infection, 13 Weeks from initial procedure with 100% granulation of the Myriad Matrix. No complications and wound bed sufficiently prepared for a split thickness skin graft to achieve definitive closure (e)

8. Bohn, G.A. and A.E. Chaffin, Extracellular matrix graft for reconstruction over exposed structures.. a pilot case series. J Wound Care, 2020. 29(12): p. 742-749. DOI: <https://doi.org/10.12968/jowc.2020.29.12.742>

9. Chaffin D. CaseReport: Myriad Matrix and Myriad Morcells for Soft Tissue Reconstruction In a Challenging Case of Necrotizing Soft Tissue Infection. HMP Global Learning Network, 2021 <https://www.hmpgloballearningnetwork.com/site/eplasty/case-presentation/how-i-treat>

10. Chaffin A, Buckley M. Extracellular matrix graft for the surgical management of Hurley stage III hidradenitis suppurativa: a pilot case series. Journal of Wound Care; 29(11), 624-630

AROA Extracellular Matrix (ECM) forming soft tissue during the wound healing process¹⁰

Case 3 - Medical history

39-year-old male patient, with uncontrolled diabetes and a heavy smoker presented with bilateral HS lesions to the axilla. The patient underwent a wide excision down to the fascia, leaving excision sites of 17x12cm (right) and 20x12cm (left). OFM graft ('Thin') was trimmed to size, rehydrated and placed into the defect. The grafts were sutured to the perimeter of the defect and additional mattress sutures placed in the centre of the graft to tightly approximate this to the underlying tissue. The grafts were dressed with a non-adherent contact layer, then NPWT (125mmHg, continuous) used for 1.5 weeks. The grafts were 100% granulated at three weeks, but an STSG was deferred until the patient's diabetes and nicotine use were controlled. Instead, ECM wound dressing (Endoform Natural, Aroa Biosurgery Limited) was applied weekly to aid epithelialisation of the granulation tissue, covered with a GV/MB foam. At 15 weeks the right and left defects had reduced to 5.6x11cm and 3.5x11cm, respectively, and at 22 weeks STSGs were placed on the bilateral axillae, with 100% graft take at 23 weeks. Both defects were healed by week 26.



(a) Bilateral reconstruction of axilla hidradenitis suppurativa using ovine forestomach matrix (OFM) graft as a dermal substitute. Surgical sites on the right (R) and left (L) axilla. Defect sizes were 17x12cm and 20x12cm, respectively.

(b) Surgical excision.

(c) OFM graft placement and fixation with sutures at the periphery and mattress sutures at the centre.

(d) At three weeks post-operation, 100% granulation tissue.

(e) At 15 weeks post-operation and weekly extracellular matrix (ECM) treatment, defects reduced in size to 5.6x11cm (R) and 3.5x11cm (L).

(f) At 22 weeks post-operation, before vent of split-thickness skin graft (not shown)

Since 2011, AROA Extracellular Matrix (ECM) has been used over 6 Mio. times worldwide.



13 yrs
clinical
experience



>6 Mio.
devices
applied in
patients



8+
peer rev.
clinical
studies



8+
peer rev.
clinical
papers



80+
conference
proceedings

The AROA ECM can be used every time soft tissue needs to be built up

- ☑ Necrotizing soft tissue infections
- ☑ Deep partial burns
- ☑ Hidradenitis suppurativa
- ☑ Pilonidal sinus disease
- ☑ Complex non-healing wounds
- ☑ Volumetric soft tissue reconstruction
- ☑ Compartment syndrome/ fascial reconstruction
- ☑ Maxillofacial reconstruction
- ☑ Suture line reinforcement
- ☑ Muscle or dermal flap stabilization
- ☑ Metatarsal amputation
- ☑ Flap donor sites – radial or tibial
- ☑ Muscle apposition
- ☑ Tumor resections

MICRO-MEDICAL
SWITZERLAND

exclusive
partner of



AROA™ Endoform™ Myriad Matrix™

What does a 40 Dollar pencil and the AROA ECM have in common?

In the 1930s, a pencil unlike any other was born—the Blackwing 602. Crafted by the Eberhard Faber Pencil Company, it's graphite was a deep black. The famous slogan was "Half the pressure, twice the speed".

Quickly, it became more than just a tool; it was a companion to visionaries having legendary Grammy, Emmy, Pulitzer and Academy Award winners as loyal fans. Legends like John Steinbeck, Chuck Jones, and Disney animator Shamus Culhane, who wished to be buried with his Blackwing 602, wielded this remarkable pencil.

The Blackwing 602 was discontinued in 1998, leaving a void that enthusiasts tried to fill by paying exorbitant sums for remaining stocks. Single pencils were sold on eBay for up to 40 \$. Inspired by the longing of artists and writers, the California Cedar Products Company, rich in pencil-making heritage, acquired the brand and revived the Blackwing 602 in 2010 using genuine incense-cedar and premium Japanese graphite.

Now, what began as a single pencil has grown into a culture of mindful creation. And while the producers of this pencil, just like MICRO-MEDICAL, are obsessed with quality, our motivation lies not only in coming up with the best product possible. But in seeing what others will achieve using it.



About MICRO-MEDICAL Switzerland

We are a newly founded family business of Horst & Elisabeth Bruckmoser from Germany and Samis & Andreas Hofmann from Switzerland. Our business is based on the existing MICRO-MEDICAL Instrumente GmbH from Germany.

Together with Daniel Thorvaldsen and the team, we are united in the mission of "Creating meaning, creating added value and providing quality of life" and we stand for "together for each other". Trust and cohesion are close to our hearts and form the basis for sustainably effective innovations in medical technology and our corporate culture.



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Horst Bruckmoser
President



Andreas Hofmann
Managing Partner



Watch the full story

*Get your personal
BLACKWING 602
at our booth or here*

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