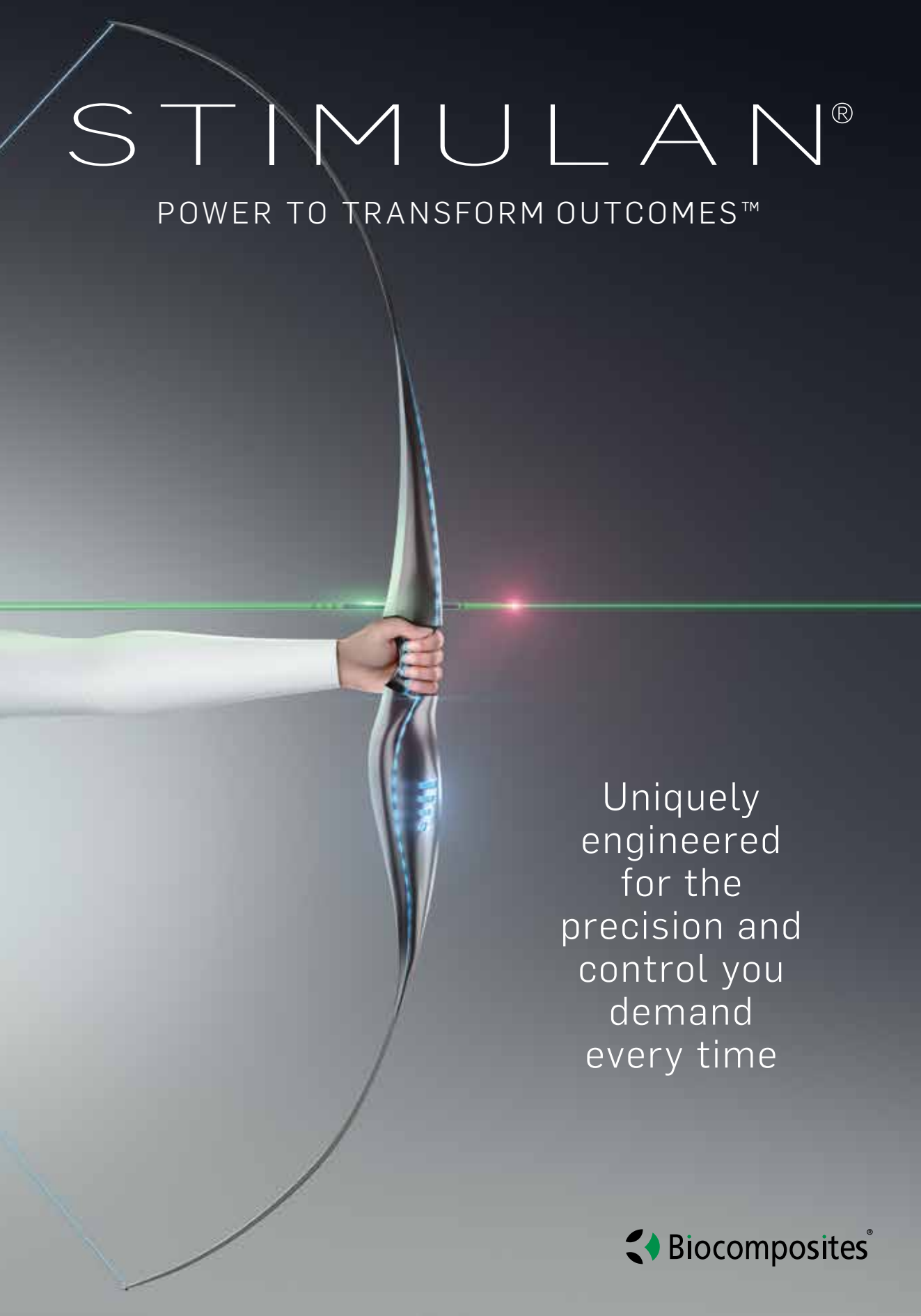
STIMULAN®

POWER TO TRANSFORM OUTCOMES™



Uniquely engineered for the precision and control you demand every time

Biocomposites®

Properties that drive performance

The unique crystal configuration and construction of STIMULAN brings its own set of qualities to fully support your infected cases.[11]

- Easily mixed with liquid and powder antibiotics[1]
- Physiological pH
- Controlled purity (no insoluble impurities)
- No hydroxyapatite

See the STIMULAN difference in your cases

- ✔ Completely absorbs at an optimal rate
- ✔ Proven action against biofilms[12]
- ✔ Flexibility to tailor antibiotic to clinical need
- ✔ Physiological compatibility with the body[5,10,13]
- ✔ No third body damage[2-4]
- ✔ Low levels of drainage[14]

Consistency is hard earned and uniquely achieved

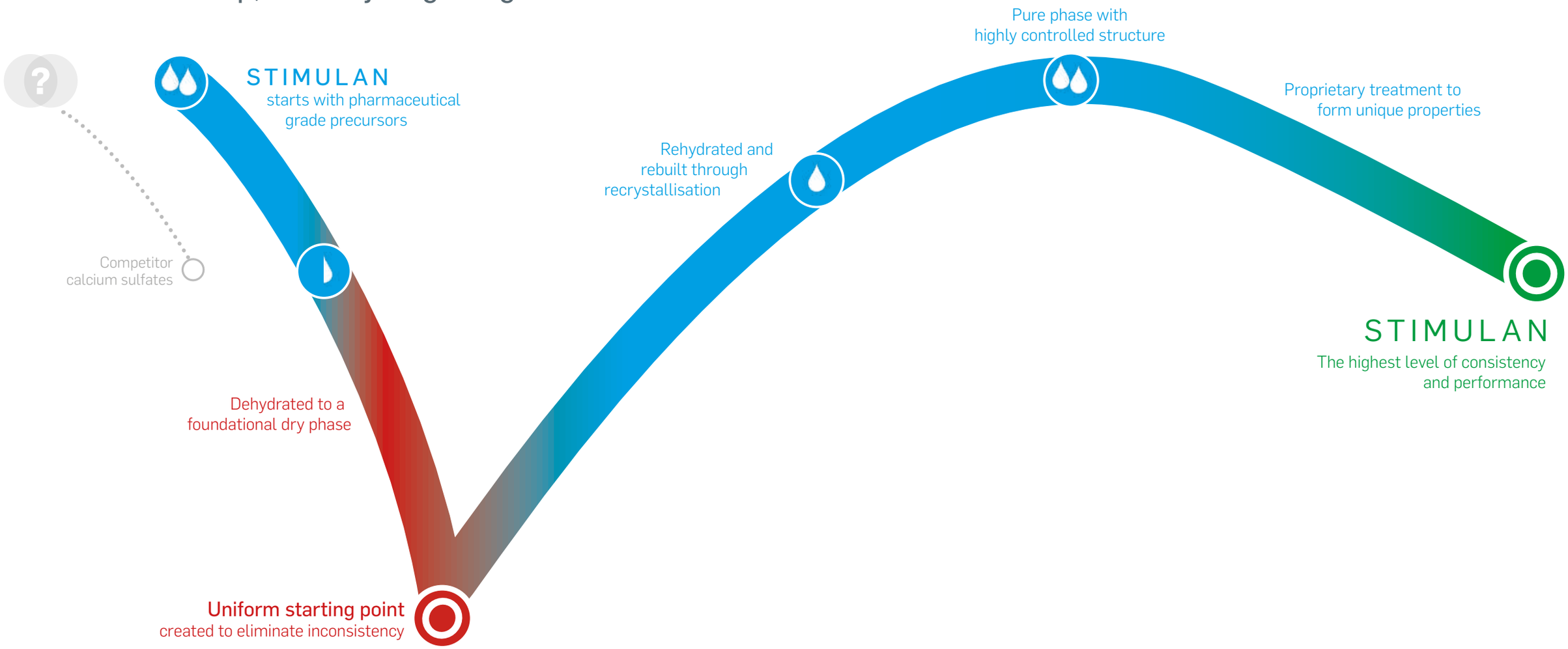
There is no shortcut to perfection. Which is why we go the extra mile to bring you the exceptional performance characteristics of STIMULAN – all made possible through our proprietary DRy26™ methodology.

Each and every synthesis of STIMULAN undergoes a 26 step process that starts with pharmaceutical grade precursors and takes over 6 weeks to reach maturity.

Our unique DRy26™ recrystallisation method dehydrates then rehydrates to precisely restructure the calcium sulfate. This ensures a uniform starting point from which the material is rebuilt under strictly controlled conditions for the highest level of consistency.

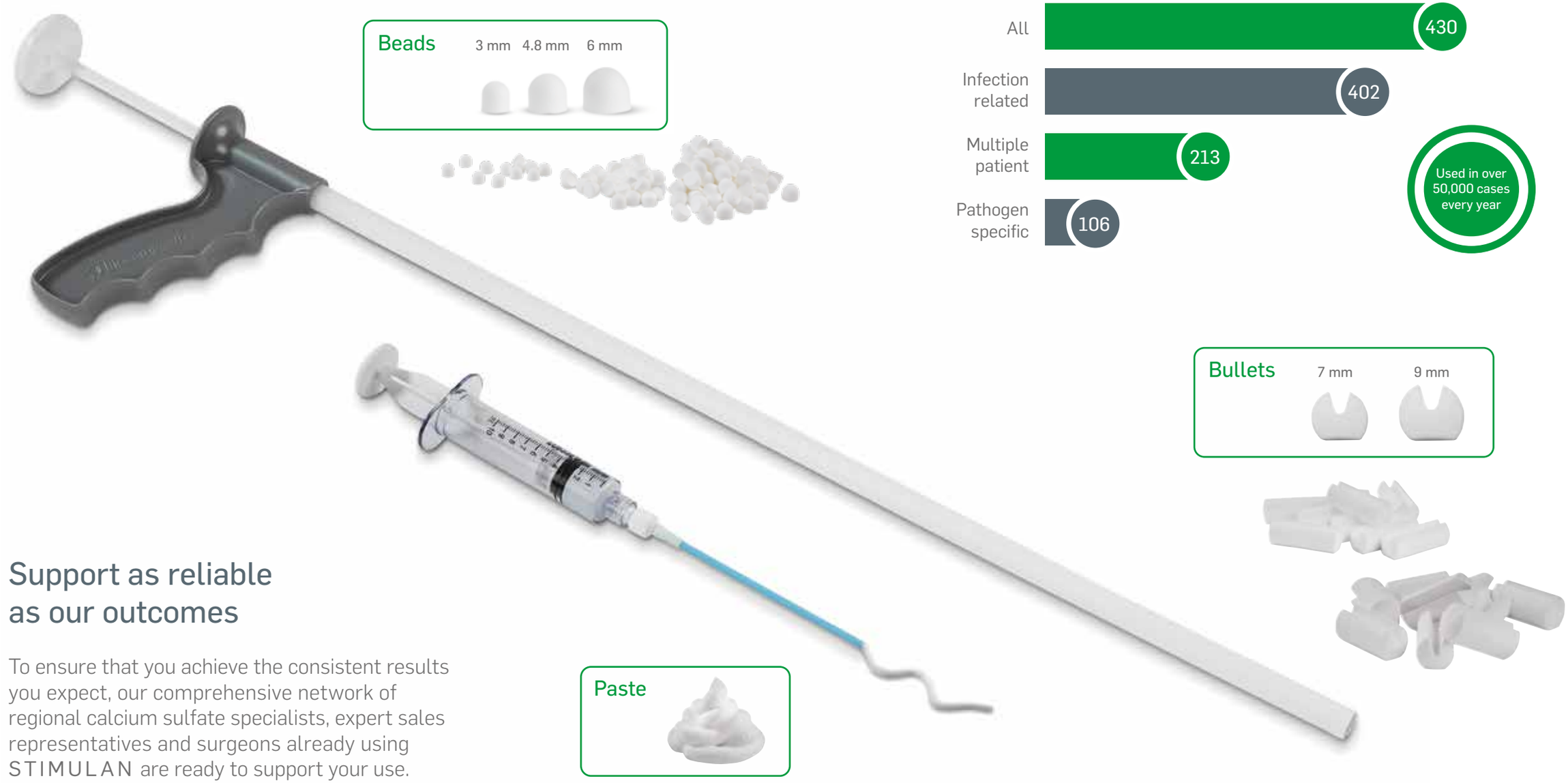
The result is as you would expect from the world's leading expert in innovative calcium technologies.

Where others stop, we are just getting started



Case-by-case flexibility and success

Every part of STIMULAN has been designed to provide simplicity, intra-operative flexibility and optimum results. A variety of formats are available, all convenient to prepare and fast to set.



Support as reliable as our outcomes

To ensure that you achieve the consistent results you expect, our comprehensive network of regional calcium sulfate specialists, expert sales representatives and surgeons already using STIMULAN are ready to support your use.

Unrivalled evidence and expertise brings confidence

With our industry-leading knowledge, dedication and experience, you can be sure that the high level of consistency you demand in your cases will be met.

Control and performance at your fingertips

STIMULAN is a truly absorbable calcium sulfate antibiotic carrier - precision engineered for use in bone and soft tissue.

- ✔ Approved for mixing with vancomycin, gentamicin and tobramycin[1]
- ✔ The only calcium matrix approved for use in bone and soft tissue[1]
- ✔ No hydroxyapatite, insoluble impurities or PMMA debris
  - Does not cause third body damage[2-4]
  - Does not prevent use in articulating surfaces[2-4]
  - Does not act as a nidus for infection[5-10]

STIMULAN®

When you need it – STIMULAN delivers every time

- Approved for mixing with vancomycin, gentamicin and tobramycin[1]
- Approved for use in bone and soft tissue[1]
- Uniquely engineered through our DRy26™ recrystallisation method[11]
- Optimal absorption profile[5-10]
- No hydroxyapatite, insoluble impurities or PMMA debris[5-10]
- Does not cause third body damage[2-4]
- Does not prevent use in articulating surfaces[2-4]
- Does not act as a nidus for infection[5-10]

Find out more at **biocomposites.com**

References: 1. Biocomposites, STIMULAN Instructions for Use (EU). **2.** Cowie, R.M., et al., Influence of third-body particles originating from bone void fillers on the wear of ultra-high-molecular-weight polyethylene. Proc Inst Mech Eng H, 2016. 230(8): p. 775-83. **3.** Cowie, R.M., et al., The Influence of Third Body Damage by a Calcium Sulfate Bone Void Filler on the Wear of Total Knee Replacements., in Orthopaedic Research Society Annual Meeting. 2016: Orlando, FL. p. 103. **4.** Lewicki, K., et al., The Effect of Absorbable Calcium Sulfate on Wear Rates in Ultra-high-Molecular-weight Polyethylene: Potential Implications for Its Use in Treating Arthroplasty Infections. J Am Acad Orthop Surg, 2017. **5.** Somasundaram, K., et al., Proximal humeral fractures: the role of calcium sulphate augmentation and extended deltoid splitting approach in internal fixation using locking plates. Injury, 2013. 44(4): p. 481-7. **6.** Lei, D., et al., Treatment of Distal Radius Bone Defects with Injectable Calcium Sulphate Cement., in Bone Grafting, A. Zorzi, Editor. 2012, InTech. p. 125-134. **7.** Lei, D., L. Jing, and S. Yang-yong, Calcium sulfate versus calcium phosphate in treating traumatic fractures. JOURNAL OF CLINICAL REHABILITATIVE TISSUE ENGINEERING RESEARCH., 2008. 12. **8.** Lei, D., Z. Ma, and X. Jing, Treatment of bone defect with injectable calcium sulfate powder in distal fractures of radius. Chinese Journal of Bone Tumor and Bone Disease, 2007. **9.** Aiken, S.S., J.J. Cooper, and S. Zhou, Osseointegration of a calcium sulphate bone substitute in a large animal model, in The 5th International Congress of Chinese Orthopaedic Association. 2010: Chengdu, China. **10.** Lazarou, S.A., G.B. Contodimos, and I.D. Gkegkes, Correction of alveolar cleft with calcium-based bone substitutes. J Craniofac Surg, 2011. 22(3): p. 854-7. **11.** Cooper, J.J., Method of producing surgical grade calcium sulphate; Patent. 1999. **12.** Delury, C., Aiken, S., Thomas, H., et al., Determining the Efficacy of Antibiotic-loaded Calcium Sulfate Beads against Pre-Formed Biofilms: An In Vitro Study. Poster presented at ASM Microbe 2019, 20-24 June 2019, Moscone Center, San Francisco, CA, USA. **13.** Biocomposites, Data on file. **14.** Sandiford, N. A. (2020). "Complication rates are low with the use of Stimulan calcium sulphate based antibiotic delivery system in the management of patients with hip-related PJI: early results of a consecutive case series." HIP International 30(IS): 3-6.

For indications, contraindications, warnings and precautions see Instructions for Use. Concurrent use of locally administered antibiotics may affect setting time, absorption characteristics and/or bone formation. It is the surgeon/healthcare professional's responsibility to give due consideration to the details in the medicinal product marketing authorisation in deciding whether it is appropriate for the patient under his/her care. The relevant Summary of Product Characteristics (SmPC) must be consulted. The type and dose of medicinal substance should also be assessed according to the individual patient's clinical circumstance.

This brochure may include the use of STIMULAN or techniques that go beyond the current clearance/approval granted by the relevant regulatory authority. Please contact your local representative for further information.

Patents granted: GB2367552, EP 1204599 B1, US 6780391, EP 2594231 B1, US 8883063, CN ZL201210466117.X, GB2496710, EP 3058899 B1, US 10390954, US 10,588,748, CN ZL201610089710.5

Patents pending: GB1502655.2, GB1704688.9, EP 18275044.8, US 15/933936, CN 108619579A

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