



# Substitut osseux

## Putty & MagnetOS



# À PROPOS



## Expertise

GCCI met toute son expertise à votre disposition afin de vous accompagner et de vous proposer une offre sur-mesure.



## Réactivité

Conscients que votre temps est précieux, nous mettons tout en œuvre chaque jour pour vous approvisionner/équiper dans les plus brefs délais.



## Qualité

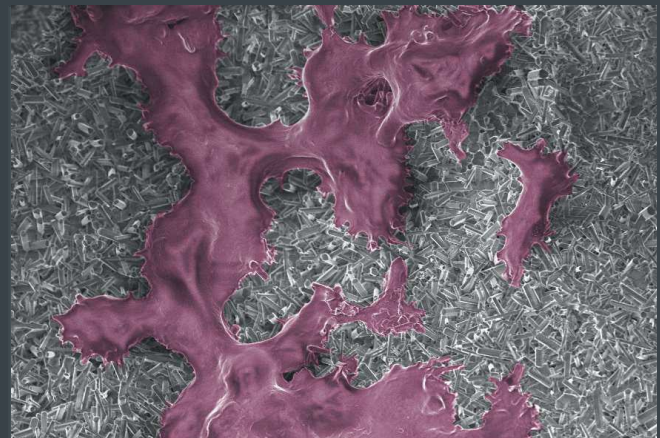
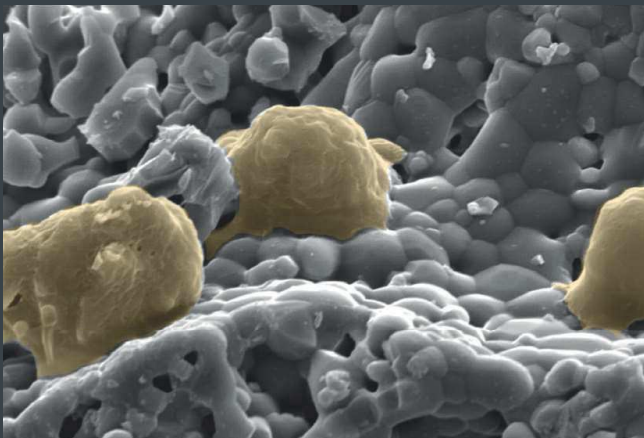
Disposant d'une large gamme à des prix compétitifs, nous veillons à vous présenter uniquement des produits d'excellente qualité.

## Success is in the surface

### Did you know?

The body's natural response to surgery is the upregulation of macrophages, especially the pro-inflammatory M1 phenotype. This can lead to the formation of scar tissue and – ultimately – a non-union.

MagnetOs' unique surface polarises macrophages to the pro-healing M2 phenotype. These, in turn, upregulate mesenchymal stem cells, leading to bone formation instead of scar tissue.<sup>1\*</sup>



Human derived monocytes cultured on Vitoss® and MagnetOs granules (3,000x and 1,500x magnification, respectively).<sup>2</sup> Cells cultured on Vitoss® are displaying an M1 macrophage morphology - they are small and spherical - whereas cells cultured on MagnetOs are displaying the M2 phenotype - they are larger, spread out and fusing together.

## Harness the power of macrophage polarisation and osteoimmunology

MagnetOs is a biphasic calcium phosphate (BCP) bone graft with a unique submicron surface topography.

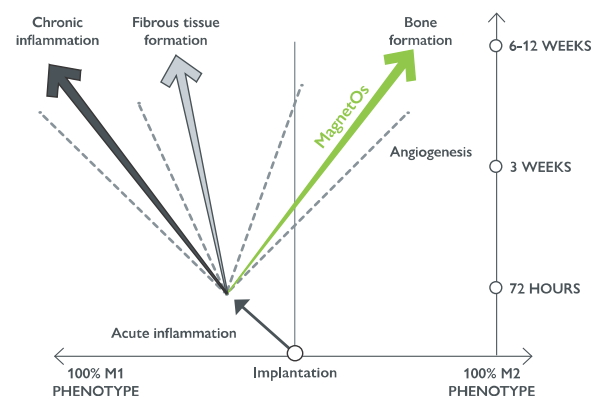
Its needle-shaped submicron features promote attachment and spreading of macrophages, reliably leading to the formation of bone.<sup>1\*</sup>

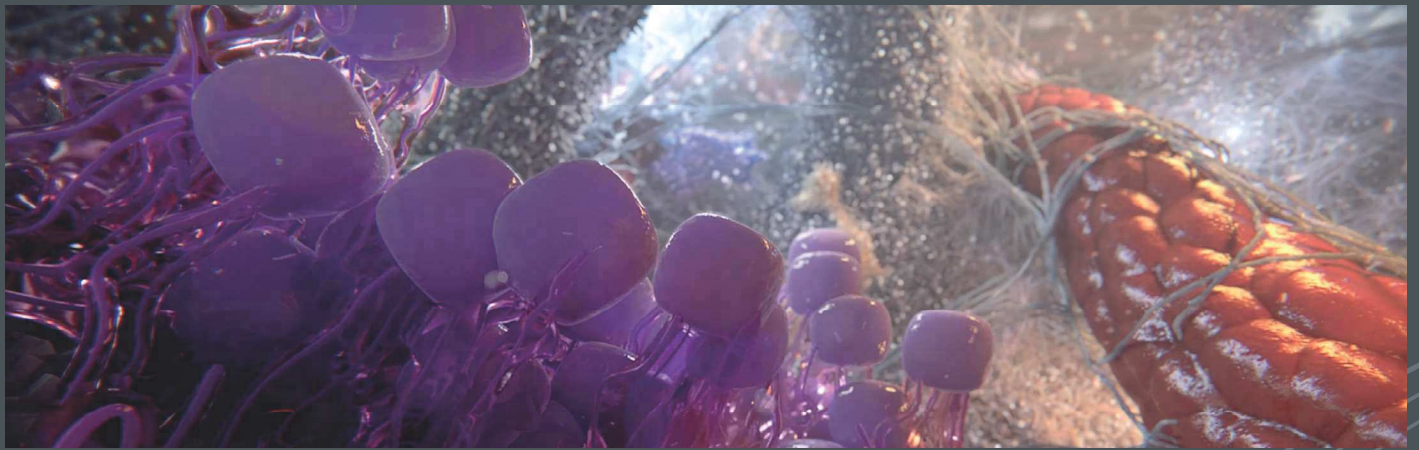
MagnetOs is **osteoinductive**, meaning bone forms throughout the graft without the need for added cells or growth factors<sup>1\*</sup>

Designed to mimic the porous, trabecular structure of cancellous bone; bone formation takes place throughout MagnetOs simultaneously.<sup>3,4,5\*</sup>

**Helping you achieve a uniform, stable and reliable fusion.**<sup>3,4,5\*</sup>

**Successful long-term bone healing is more likely with the M2 macrophage wound-healing response<sup>2</sup>**



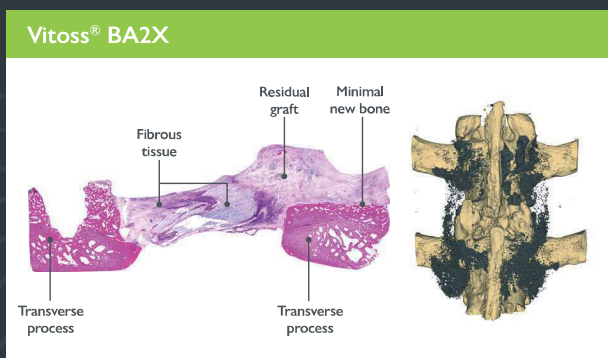
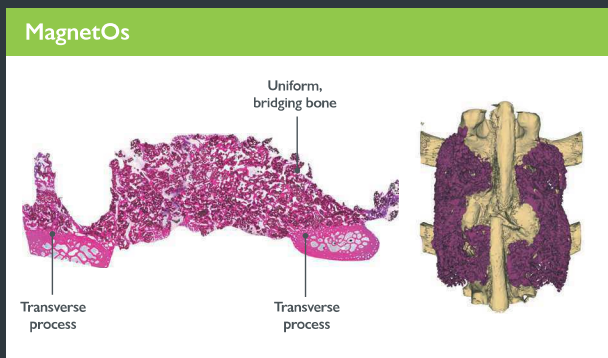


## Eliminate unpredictability and uncertainty with MagnetOs

To prove our confidence in MagnetOs, we tested it against market-leaders Vitoss® BA2X and Novabone Putty®.

In clinically-relevant animal models of spine fusion<sup>5,8</sup>, Vitoss® BA2X and Novabone Putty® appeared to be fused when assessed by X-rays and CT. But further definitive exploration, using histology, uncovered only fibrous tissue.

In contrast, MagnetOs was found to be filled with new bone and radiographically, biomechanically and histologically equivalent to autograft, at all timepoints.<sup>5,8</sup>



## Choose a gold standard graft

Using the most effective bone graft can improve spinal fusion outcomes by up to 60%<sup>6,7</sup> – so be sure to choose the best.

MagnetOs Granules		
Granule size (mm)	Product code	Volume size (cc)
1-2	703-016	5
2-4	703-026	20

MagnetOs Putty		
Granule size (mm)	Product code	Volume size (cc)
1-2	703-029	1
1-2	703-035	5
1-2	703-038	10

## Start safeguarding your patients against non-unions with MagnetOs today

1. Duan R, et al. Eur Cell Mater 2019;37:60-73. 2. Data on file. 3. Loi F, Cordova LA, Zhang R, et al. The effects of immunomodulation by macrophage subsets on osteogenesis in vitro. Stem Cell Res Ther. 2016;7:15. 4. Van Dijk LA, et al. JOR Spine 2018;e1039 5. Van Dijk LA, et al. J Biomed Mater Res B Part B 2019;9999B:1-11. 6. Morris MT, et al. European Spine Journal 2018; 27:1856-1867. 7. Hsu VK, et al. Global Spine J 2012;2:239-248. 8. Van Dijk LA, et al. Clinical Spine Surgery; 2019 (In print). Kuros Biosciences B.V. or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: MagnetOs; Kuros Biosciences. Vitoss® is a registered trademark of Stryker Corp. Novabone Putty® is a registered trademark of Novabone Products LLC.

\* Results from in vitro or in vivo laboratory testing may not be predictive of clinical experience in humans.

Please refer to the instructions for use for a full list of indications, contraindications, warnings and precautions.

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