

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 polarizes macrophages to the pro-healing M2 phenotype. These, in turn, upregulate mesenchymal stem cells, leading to bone formation instead of scar tissue.^{1*}





Human derived monocytes cultured on Vitoss® and MagnetOs granules (3,000x and 1,500x magnification, respectively).² 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 polarization 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.^{1*}

Bone forms, even in soft tissue, without the need for added cells or growth factors. $^{1\!\!\!\!\!\!\!\!\!^{1\!+}_{1\!\!\!\!\!\!}}$

Designed to mimic the porous, trabecular structure of cancellous bone; bone formation takes place throughout MagnetOs simultaneously.^{3,4,5*}

Helping you achieve a uniform, stable and reliable fusion.^{3,4,5*}





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^{5,8}, 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.^{5,8}



Vitoss[®] BA2X



Choose a gold standard graft

Using the most effective bone graft can improve spinal fusion outcomes by up to $60\%^{6,7}$ – so be sure to choose the best.

MagnetOs Granules			
Granule size (mm)	Product code	Volume size (cc)	
1-2	703-021-US	10	
1-2	703-045-US	20	
2-4	703-026-US	20	

MagnetOs Putty			
Granule size (mm)	Product code	Volume size (cc)	
1-2	703-029-US	1	
1-2	703-035-US	5	
1-2	703-038-US	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 WK, 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. [‡]MagnetOs is not cleared by FDA as an osteoinductive bone graft. Please refer to the instructions for use for a full list of indications, contraindications, warnings and precautions.

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