

BONESUPPORT[™] - CERAMENT[®] G's POTENTIAL TO PREVENT AND MANAGE BIOFILM-RELATED BONE INFECTIONS HIGHLIGHTED IN NEW HIGH-PROFILE PUBLICATION

Lund, Sweden, 08.00 CET, 14 November 2017 – BONESUPPORTTM, an emerging leader in innovative injectable bio-ceramic bone substitute products to treat bone voids caused by trauma, infection, disease or related surgery based on its unique CERAMENT® platform announces the publication of a paper highlighting the anti-biofilm activity of CERAMENT® G in vitro - Colloids and Surfaces B: Biointerfaces 161 (2018) 252–260.

Implant-related bone infections caused by microorganisms that grow in biofilms are extremely difficult to treat and cause persistent and recurring infections. The use of resorbable biomaterials, such as CERAMENT®, as a reservoir for the local release of antimicrobials, such as gentamicin, into the bone and onto the implant is considered as a valid option to achieve high local concentrations of the drug and, therefore, avoid infection relapses and microbial resistance.

In the study reported in the publication "In vitro anti-biofilm activity of a biphasic gentamicin-loaded calcium sulfate/hydroxyapatite bone graft substitute" by Maria Eugenia Butini and Mariagrazia Di Luca from the group of Andrej Trampuz from the Center for Musculoskeletal Surgery, Charité – Universitätsmedizin Berlin, CERAMENT® G beads were assessed for their in vitro antimicrobial activity against bacteria known to cause bone infections, including planktonic and biofilm S. agalactiae, S. aureus, S. epidermidis, E. faecalis and E. coli, using standard methods and ultra-sensitive isothermal microcalorimetry.

The authors found that CERAMENT® G possesses a preventive and bactericidal anti-biofilm activity *in vitro* against some selected bacterial strains that are responsible for bone infections. The authors also believe that high concentrations of gentamicin achieved through the initial burst release from CERAMENT® G within the first 3 hours of its use, together with the retention of a sustained level of antibiotic for at least 24 hours, could effectively suppress an early infection in the first stages of bacterial replication. They concluded, that their *in vitro* study "demonstrated the potential of the gentamicin-loaded bone graft substitute to prevent and treat biofilm-related bone and implant infections".

Dr. Andrej Trampuz from Center for Musculoskeletal Surgery, Charité – Universitätsmedizin Berlin, commenting on his research group's findings, said, "We are excited with the *in vitro* data that we have generated on CERAMENT® G. It clearly shows that CERAMENT® G provides a good solution for orthopaedic surgeons to prevent and manage biofilm-related bone infections. I look forward to seeing this potential being confirmed in clinical practice."

Press Release



Richard Davies, CEO of BONESUPPORT, commented: "This publication demonstrating the *in vitro* activity of CERAMENT® G against multiple bacteria known to cause bone infections and that grow in biofilms, highlights another important potential clinical benefit of this unique injectable bio-ceramic bone substitute. Our investment in supportive clinical and pre-clinical data is key to the continuing rapid adoption of CERAMENT® G by the orthopedic community."

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About BONESUPPORT™

BONESUPPORT is an innovative and rapidly growing commercial stage orthobiologics company, based in Lund, Sweden. The Company develops and commercializes innovative injectable bio-ceramic bone graft substitutes that remodel to the patient's own bone and have the capability of eluting drugs directly into the bone void.

BONESUPPORT's marketed bio-ceramic bone graft substitutes CERAMENT® BONE VOID FILLER (BVF), CERAMENT® G* and CERAMENT® V* are all based on the Company's novel and proprietary CERAMENT technology platform.

The Company's products are targeting a large addressable market opportunity across trauma, chronic osteomyelitis (bone infection), revision arthroplasty (replacement of a joint prosthesis) and infected diabetic foot.

BONESUPPORT's total sales increased from SEK 41 million in 2014 to SEK 105 million in 2016, representing a compound annual growth rate of 60 percent. The Company's financial target is to achieve revenue exceeding SEK 500 million in the financial year 2020, with a gross margin exceeding 85 percent and a positive operating profit.

The Company's research and development is focused on the continuing development and refinement of its CERAMENT technology to extend its use into additional indications by the elution of other drugs and therapeutic agents. The Company currently has a pipeline of preclinical product candidates that have been designed to promote bone growth.

BONESUPPORT is listed on Nasdaq Stockholm and trades under the ticker "BONEX" (ISIN code: SE0009858152). Further information is available at www.bonesupport.com

*CERAMENT G: Not available in the United States, for investigational use only. CERAMENT V: Not available in the United States

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