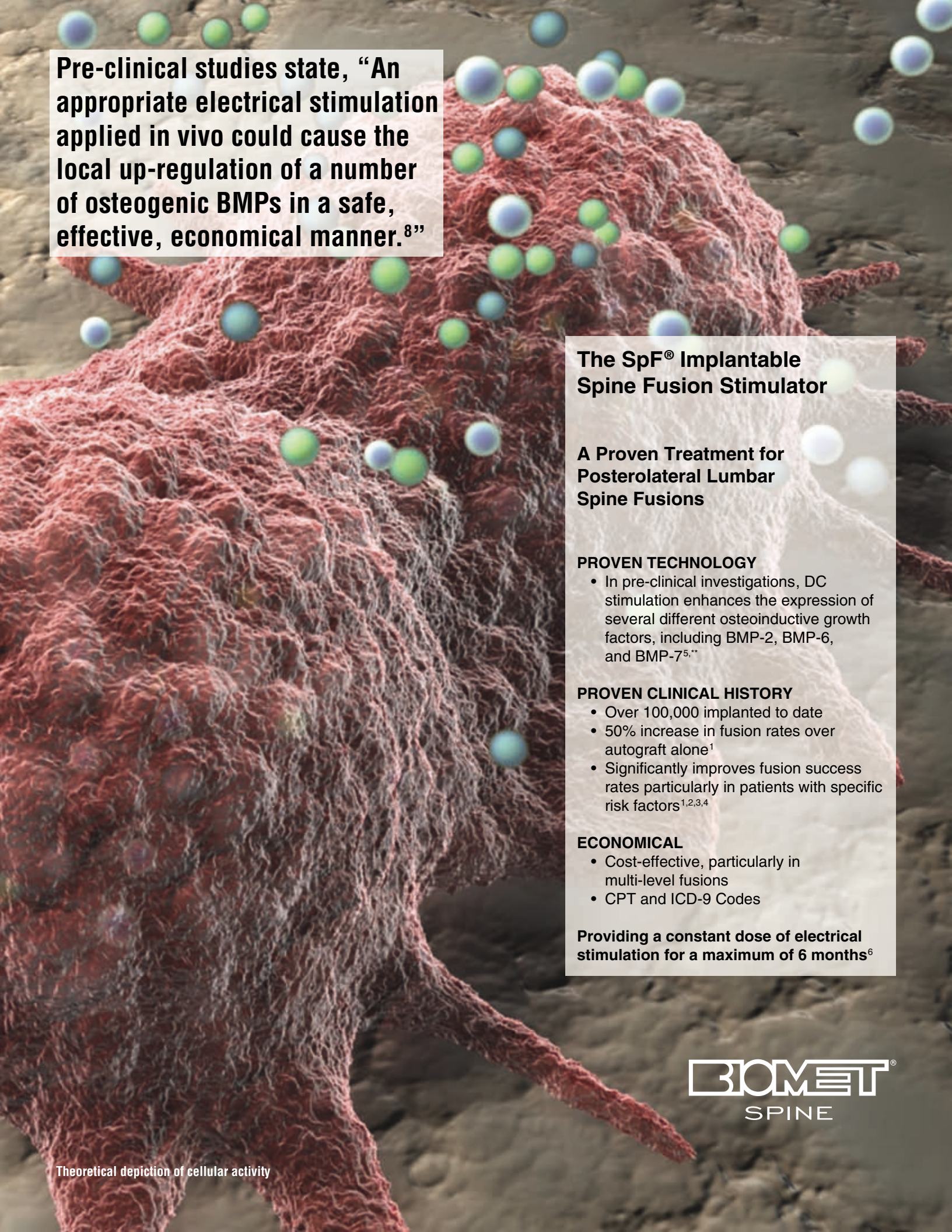


Pre-clinical studies state, "An appropriate electrical stimulation applied in vivo could cause the local up-regulation of a number of osteogenic BMPs in a safe, effective, economical manner.[8]"

The SpF® Implantable Spine Fusion Stimulator

A Proven Treatment for Posterolateral Lumbar Spine Fusions

PROVEN TECHNOLOGY

- In pre-clinical investigations, DC stimulation enhances the expression of several different osteoinductive growth factors, including BMP-2, BMP-6, and BMP-7[5,**]

PROVEN CLINICAL HISTORY

- Over 100,000 implanted to date
- 50% increase in fusion rates over autograft alone[1]
- Significantly improves fusion success rates particularly in patients with specific risk factors[1,2,3,4]

ECONOMICAL

- Cost-effective, particularly in multi-level fusions
- CPT and ICD-9 Codes

Providing a constant dose of electrical stimulation for a maximum of 6 months[6]

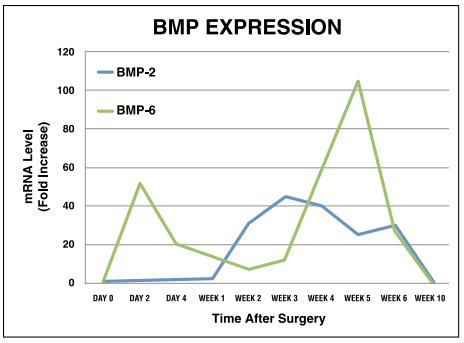
BIOMET® SPINE

Theoretical depiction of cellular activity

Pre-clinical animal studies have shown the following:

Bone Morphogenetic Protein (BMP) Expression**

Prospective animal study of posterolateral lumbar spine fusion comparing autograft to autograft with rhBMP-2[7]

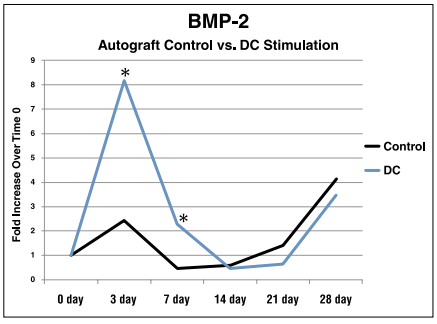


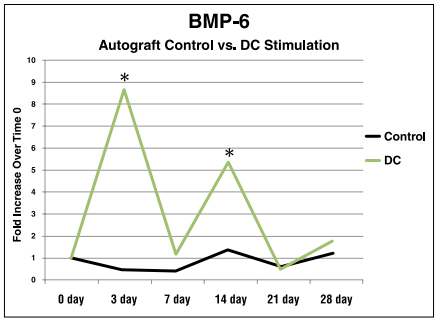
- Not all BMPs expressed immediately post-op
- Each BMP has a specific time and pattern of expression
- BMP-2 mRNA is expressed later and to a lesser extent than BMP-6
- ***BMP-6 appears to play a unique role as the earliest bone morphogenetic protein expressed during spine fusion healing***

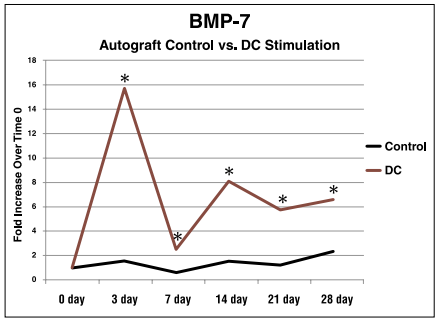
Direct Current (DC) Stimulation: BMP mRNA Upregulation**

Prospective animal study of posterolateral lumbar spine fusion comparing autograft to autograft with direct current (DC) stimulation[5]

- ***DC Stimulation up-regulates the gene expression of BMP-2, BMP-6 and BMP-7***
- DC stimulation up-regulates the normal physiologic expression of not just one, but various factors
  - Allows synergistic relationships between growth factors
  - Enhances fusion success without the potential concerns associated with single growth factor treatments
- ***Cathode placement against and across the decorticated transverse processes resulted in enhanced bone formation throughout the entire fusion mass rather than just along the transverse processes***







100 Interpace Parkway • Parsippany, NJ 07054 • 800.526.2579 • www.biomet.com • BOS231008L 12/11

1 Kane, W.J. Direct current electrical bone growth stimulation for spinal fusion. Spine (Phila Pa 1976), 1988.13(3): p. 363-5.
2 Rogozinski, A. and Rogozinski, C. Efficacy of implanted bone growth stimulation in instrumented lumbosacral spinal fusion. Spine (Phila Pa 1976), 1996. 21(21): p. 2479-83.
3 Kucharzyk, D.W. A controlled prospective outcome study of implantable electrical stimulation with spinal instrumentation in a high-risk spinal fusion population. Spine (Phila Pa 1976), 1999. 24(5):p. 465-8;discussion 469.
4 Source: SpF® Implantable Spinal Fusion Stimulator Technical Monograph, BSP196276L 05/10.
5 Fredericks, D.C., Smucker, J., Petersen, E.B., Bobst, J.A., Gan, J.C., Simon, B.J., and Glazer, P. Effects of direct current electrical stimulation on gene expression of osteopromotive factors in a posterolateral spinal fusion model. Spine (Phila Pa 1976), 2007. 32(2): p. 174-81.
6 P850035/S020/S022/S031/S033 Approved FDA Trade Names: SpF® PLUS-Mini (60 µA/W), SpF® PLUS-Mini (60 µA/M) and SpF® XL IIb Implantable Spinal Fusion Stimulator. Certain models of the SpF® Implantable Spinal Fusion Stimulator have approved trade names preceded with "EBI" designating the former sponsor and/or applicant.
7 Morone, M.A. et al. Gene Expression During Autograft Lumbar Spine Fusion and the Effect of Bone Morphogenetic Protein 2. CORR. 1998;351: 252-265.
8 Wang Z, Clark CC, and Brighton CT. Up-Regulation of Bone Morphogenetic Proteins in Cultured Murine Bone Cells with Use of Specific Electric Fields. J. Bone Joint Surg Am. 88:1053-1065, 2006.

* Denotes significant difference.
** *In vitro* cellular and pre-clinical animal studies may not be indicative of human clinical outcomes.