

LEADING REGENERATION

**Geistlich**  
Biomaterials



**In partnership,  
we're better**



Your worldwide  
no.1 reference<sup>1-7</sup>

Unique  
biofunctionality<sup>8,9</sup>

Outstanding  
quality<sup>10-13</sup>

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1 US market report suite for dental bone graft substitutes and other biomaterials, iDATA\_USDBGS19\_MS, Published in January 2019 by iData Research Inc., 2019. (Market Research)

2 Europe market report suite for dental bone graft substitutes and other biomaterials, iDATA\_EUDBGS19\_MS, Published in July 2019 by iData Research Inc., 2019. (Market Research)

3 China market report suite for dental bone graft substitutes and other biomaterials, iDATA\_CHDBGS18\_MS, Published in November 2018 by iData Research Inc., 2018. (Market Research)

4 Australia market report suite for dental bone graft substitutes and other biomaterials, iDATA\_AUDBGS18\_MS, Published in November 2018 by iData Research Inc., 2018. (Market Research)

5 India market report suite for dental bone graft substitutes and other biomaterials, iDATA\_INDBGS18\_MS, Published in November 2018 by iData Research Inc., 2018. (Market Research)

# Your magic hands – our excellent products



6 South Korea market report suite for dental bone graft substitutes and other biomaterials, iDATA\_SKDBGS18\_MS, Published in November 2018 by iData Research Inc., 2018. (Market Research)  
7 Japan market report suite for dental bone graft substitutes and other biomaterials, iDATA\_JPDBGS18\_MS, Published in November 2018 by iData Research Inc., 2018. (Market Research)  
8 ISO 13485 certificate, Research and Development. Data on file, Geistlich Pharma AG, Wolhusen, Switzerland. (Certificate)

9 ISO 9001 certificate, Multi-site Quality Management. Data on file, Geistlich Pharma AG, Wolhusen, Switzerland. (Certificate)  
10 Jung R, et al. Clin Oral Implants Res. 2013;Oct;24(10):1065-73. (Clinical study)  
11 Buser D, et al. J Periodontol. 2013;Nov;84(11):1517-24. (Clinical study)  
12 Jensen SS, et al. J Periodontol. 2014;Nov;85(11):1549-56. (Clinical study)  
13 Mordenfeld A, et al. Clin Oral Implants Res. 2010;Sep;21(9):961-70. (Clinical study)

# Geistlich biomaterials – From pioneer to expert



Geistlich company founder, Dr. E. Geistlich's expertise is the origin of what we have become today: no. 1 in regenerative dentistry.<sup>1-7</sup>

Thanks to intensive research and close collaboration with scientists and dentists over 30 years ago, Dr. Peter Geistlich created pioneering products for a new technology, Guided Bone Regeneration (GBR).

Organic components were removed from bone for the first time without alteration to its microstructure and mineral part. This is how Geistlich Bio-Oss<sup>®</sup>, a natural bone mineral replacement material of bovine origin whose structure and chemical composition resembles the mineralized human bone, came into being.

In consequence, Dr. Peter Geistlich achieved another milestone with the development of Geistlich Bio-Gide<sup>®</sup>, a native bilayer collagen membrane. Geistlich Bio-Gide<sup>®</sup> enables surgical treatments to be simplified, replacing non-resorbable e-PTFE membranes. Geistlich Bio-Gide<sup>®</sup> provides optimal wound healing properties for effective bone regeneration.<sup>14</sup>

## EXPERTISE IN COLLAGEN PROCESSING

Along with bone-processing, Geistlich has specialized in the processing of collagen for over 160 years and has refined this expertise from generation to generation. Manufacturing processes and systems have been continually optimized to make them cutting edge in their field. Today's product range comprises many specialized collagen products such as a membrane for hard- and soft-tissue regenerative procedures, (Geistlich Bio-Gide<sup>®</sup>), matrices for soft-tissue regeneration (Geistlich Mucograft<sup>®</sup>, Geistlich Fibro-Gide<sup>®</sup>) and products designed for easy handling (Geistlich Bio-Oss<sup>®</sup> Collagen).



14 Zitzmann NU et al., Int J Oral Maxillofac Implants. 1997 Nov-Dec;12(6):844-52 (Clinical study).

# The Dream-Team: Geistlich Bio-Oss® and Geistlich Bio-Gide®

## Guided Bone Regeneration (GBR) with Geistlich Biomaterials

Guided Bone Regeneration uses the body's regenerative capability to reconstruct missing bone. Compared to other regenerative techniques, GBR has proved to be especially dependable.<sup>15</sup> Predictable results can be obtained both functionally and esthetically, even in complex cases.

The GBR success story is the result of close and inspiring collaboration between Geistlich Biomaterials and leading dental specialists. The combined application of Geistlich Bio-Oss® and Geistlich Bio-Gide® as a part of GBR is today considered the standard treatment for a wide range of clinical procedures.<sup>17</sup>



Prof. Daniel Buser | Bern, Switzerland

**“GBR with biomaterials from Geistlich succeeds esthetically and functionally, is extremely reliable and features minimal risk of esthetic complications.”**

### A POWERFUL COMBINATION

With Geistlich Bio-Oss® and Geistlich Bio-Gide® dentists can have confidence that they are using complimentary products that have extensive scientific documentation and proven effectiveness in millions of clinical applications.

- › High long-term implant survival rate<sup>16</sup>
- › Pleasing esthetic long-term results<sup>17</sup>
- › Easy and safe to use<sup>15-17</sup>



<sup>15</sup> Aghaloo TL et al., Int J Oral Maxillofac Implants. 2007; 22(suppl):49-70 (Clinical study).  
<sup>16</sup> Jung R et al., Clin Oral Implants Res. 2013 Oct;24(10):1065-73 (Clinical study).  
<sup>17</sup> Buser D et al., J Dent Res. 2013 Dec;92(12 Suppl):176S-82S (Clinical study).

# Work with the no. 1<sup>1-7</sup>

## Your worldwide no. 1 reference<sup>1-7</sup>

Geistlich Bio-Oss® and Geistlich Bio-Gide® are the experts in regenerative dentistry. Some 1,400 pre-clinical and clinical studies<sup>26</sup> prove the successful applications of the biomaterials. No other supplier has the experience of Geistlich Biomaterials when it comes to the number of patients treated and products sold. For almost 30 years Geistlich Biomaterials has been the undisputed no. 1 in regenerative dentistry.<sup>1-7</sup>

## Unique biofunctionality

The excellent results of Guided Bone Regeneration with Geistlich Bio-Oss® and Geistlich Bio-Gide® are largely due to their unsurpassed biofunctionality. The products are perfectly suited to combined use: Geistlich Bio-Oss® forming the scaffold for the in-growing blood vessels and bone-forming osteoblasts while Geistlich Bio-Gide® prevents soft-tissue ingrowth<sup>14,18,19,21,23</sup> supports vascularization<sup>20,23</sup> and wound healing.<sup>14,21,22</sup>

Your worldwide  
no.1 reference<sup>1-7</sup>

Unique  
biofunctionality<sup>8,9</sup>

Outstanding  
quality<sup>10-13</sup>

## Outstanding quality



Quality and safety are at the forefront of the manufacturing process at Geistlich Pharma. At our site in Switzerland we inspect every production stage of our biomaterials; from the raw material selection through to the quality control of the final product. Our products and processes are regularly verified by stringent international agencies.

18 Schwarz F et al. Clin. Oral Implants Res. 2006;17(4):403-409. (Pre-clinical study)  
19 Rothamel D et al. Clin. Oral Implants Res. 2004;15:443-449. (Pre-clinical study)  
20 Schwarz F et al. Clin. Oral Implants Res. 2008;19(4): 402-415. (Pre-clinical study)

21 Tal H et al. Clin Oral Implants Res. 2008; 19(3) : 295-302. (Clinical study)  
22 Becker J et al., Clin. Oral Implants Res. 2009 Jul;20(7):742-9 (Clinical study).  
23 Rothamel D et al., Clin Oral Implants Res. 2005 Jun;16(3):69-378 (Pre-clinical study).

# Not all biomaterials are the same – Take a closer look

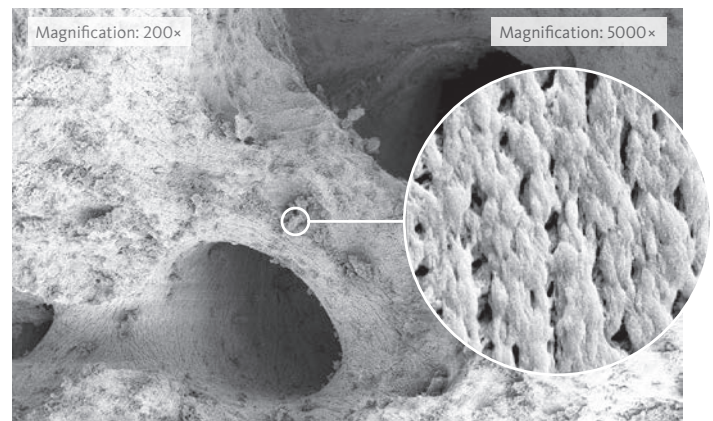


Prof. Mariano Sanz | Madrid, Spain

“Geistlich products have gained my trust down the years.”

## Geistlich Bio-Oss® the bone replacement material with outstanding biofunctionality

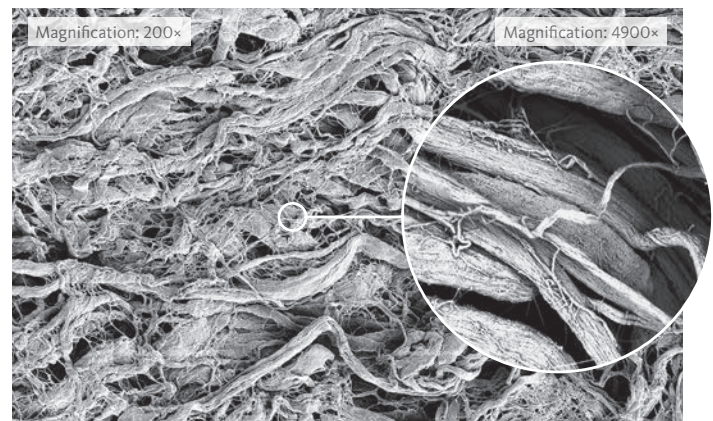
Geistlich Bio-Oss® is chemically as well as structurally comparable to the human bone mineral. The biofunctional biomaterial aids vascularization and the formation of new bone.<sup>24</sup> The slow resorption of Geistlich Bio-Oss® increases the stability of the augmentation material<sup>25</sup> – the best prerequisite for long-term implant survival rates.<sup>26</sup>



Geistlich Bio-Oss®: Unique macro- and micropore structure

## Geistlich Bio-Gide® the unique bilayer collagen membrane

Geistlich Bio-Gide® is a porcine collagen membrane without any artificial cross-linking which closely resembles human collagen. The natural bilayer structure promotes reliable bone regeneration and optimal tissue integration on account of an appropriate barrier duration.<sup>22,27</sup> The soft-tissue heals without scarring and largely without complications.<sup>22</sup>



Geistlich Bio-Gide®: Unique arrangement of collagen fibers (rough side)

24 Galindo-Moreno P et al., Clin Oral Impl Res. 2010;21(2):221-7 (Clinical study).  
25 Orsini G et al., Oral Dis. 2007 Nov;13(6):586-93 (Clinical study).

26 NCBI Pubmed, October 2019, Search term: Bio-Oss OR Bio-Gide, PubMed Filter "Species: Humans" (817 hits) or "Other animals" (660 hits) (Market research).  
27 Schwarz F et al., Clin Oral Implants Res. 2014 Sep;25(9):1010-5 (Clinical study).

# Complementary processes in bone regeneration


## 1 UNIQUE STRUCTURES

### Optimal protection for bone regeneration


Geistlich Bio-Gide® is a unique bilayer collagen membrane comprising a porous and a dense surface.<sup>28</sup>

## 2 BIOLOGICAL INTERACTION

### Uneventful wound healing<sup>22</sup>

The dense layer orientated towards the soft-tissue, favors the growth of fibroblasts  1. Whilst the barrier function prevents the ingrowth of soft-tissue into the newly forming bone beneath.<sup>4,23,27</sup>

### Optimum bone healing<sup>27</sup>

The porous layer orientated towards the bone, functions as a three-dimensional scaffold for osteoblasts growth  2.<sup>23</sup>

### Prompt and homogeneous vascularization<sup>23</sup>

The natural collagen structure of Geistlich Bio-Gide® permits prompt and homogeneous vascularization and so brings about optimum tissue integration and wound stabilization.

### Geistlich Bio-Gide®

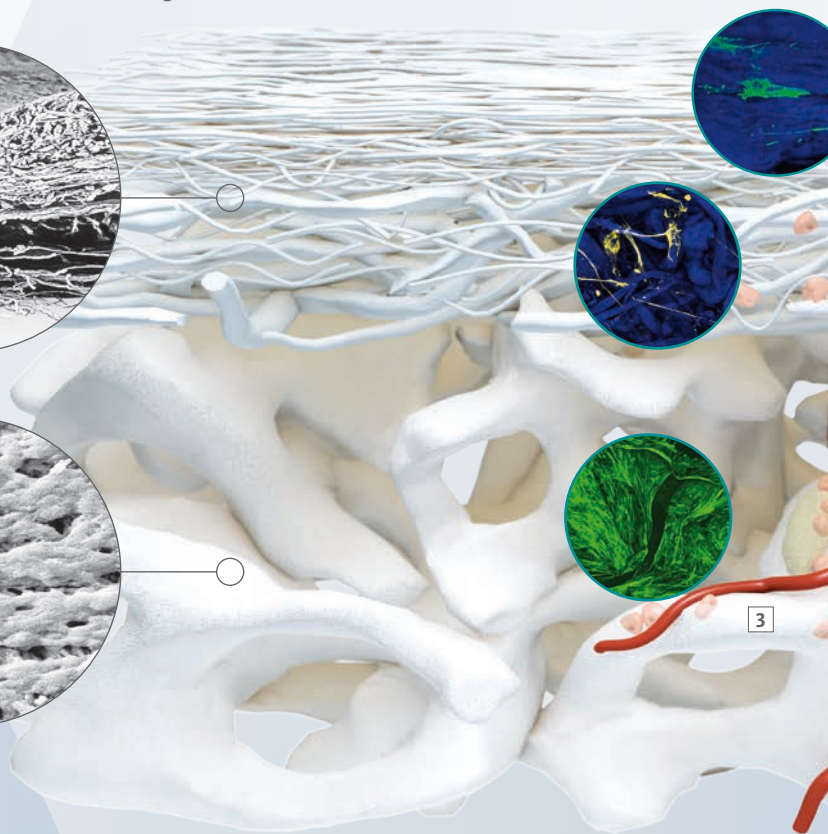
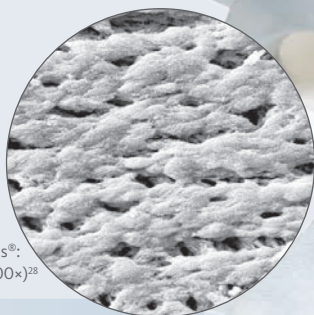
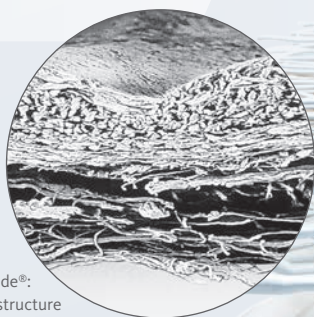


Geistlich Bio-Gide®:  
Unique bilayer structure  
(100×)<sup>28</sup>

### Geistlich Bio-Oss®



Geistlich Bio-Oss®:  
Micropores (5000×)<sup>28</sup>



### Ideal environment for forming new bone<sup>32</sup>

Geistlich Bio-Oss® consists of a unique interlinked pore system. The micropores ensure an efficient fluid intake. The macropores permit unimpeded migration of cells.

### Plenty of space for vascularization and bone formation<sup>34,35</sup>

The pore system and surface morphology of Geistlich Bio-Oss® favors the growth of osteoblasts. The porous structure serves as a scaffold for in-growing blood vessels and bone growth.

Fluorescently-labelled hMSCs\* grown on Geistlich Bio-Oss® particles for 3 weeks  3.

28 Data on file. Geistlich Pharma, Wolhusen, Switzerland. (Preclinical study).

29 Rothamel D et al., Int J Oral Maxillofac Implants. 2012 Jan-Feb;27(1):146-54 (Preclinical study).

30 Kim M et al., In Vivo. 2008; 22(2):231-6 (Preclinical study).

31 Gielkens PFM et al., Clin Oral Implants Res. 2008; 19:516-521 (Pre-clinical study).

32 Berglundh T, Lindhe J, Clin Oral Implants Res. 1997 Apr;8(2):117-24 (Preclinical study).

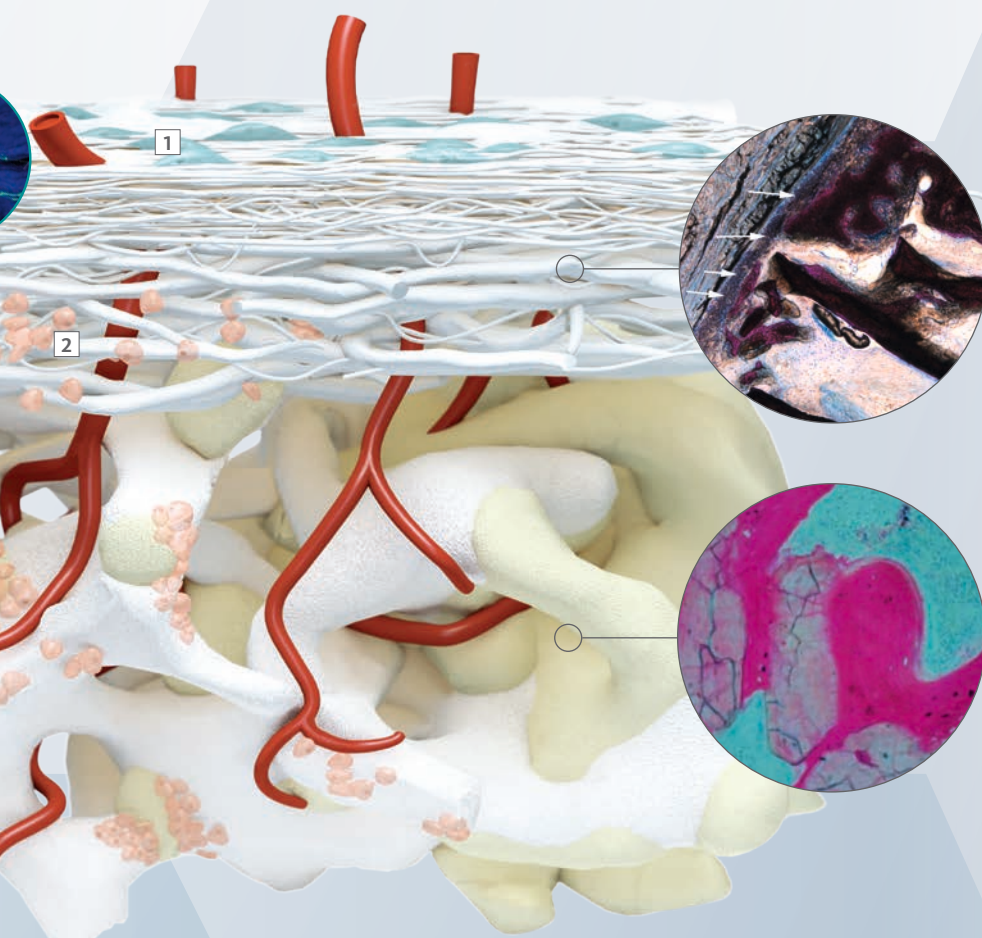
34 Weibrich G et al., Mund Kiefer Gesichtschirurg. 4, 2000 May;148-52 (Preclinical study).



## 3 INTEGRATION

### Optimal barrier time

Optimal barrier instead of unnecessary blockade! Once the protective function of Geistlich Bio-Gide® has been fulfilled, the membrane resorbs and the natural complex structure of the soft-tissue, with all the intrinsic components such as the periosteum, forms.<sup>14,29-31</sup>



### Stable scaffold for new bone<sup>36-39</sup>

Thanks to its biofunctionality, Geistlich Bio-Oss® is integrated into the natural bone remodelling process. Geistlich Bio-Oss® and the newly formed bone make a stable scaffold which favors long-term clinical success.

## 4 CLINICAL LONG-TERM SUCCESS

Implant survival rate with Geistlich Bio-Oss® & Geistlich Bio-Gide®

**96%**

Aghaloo et al. 2007

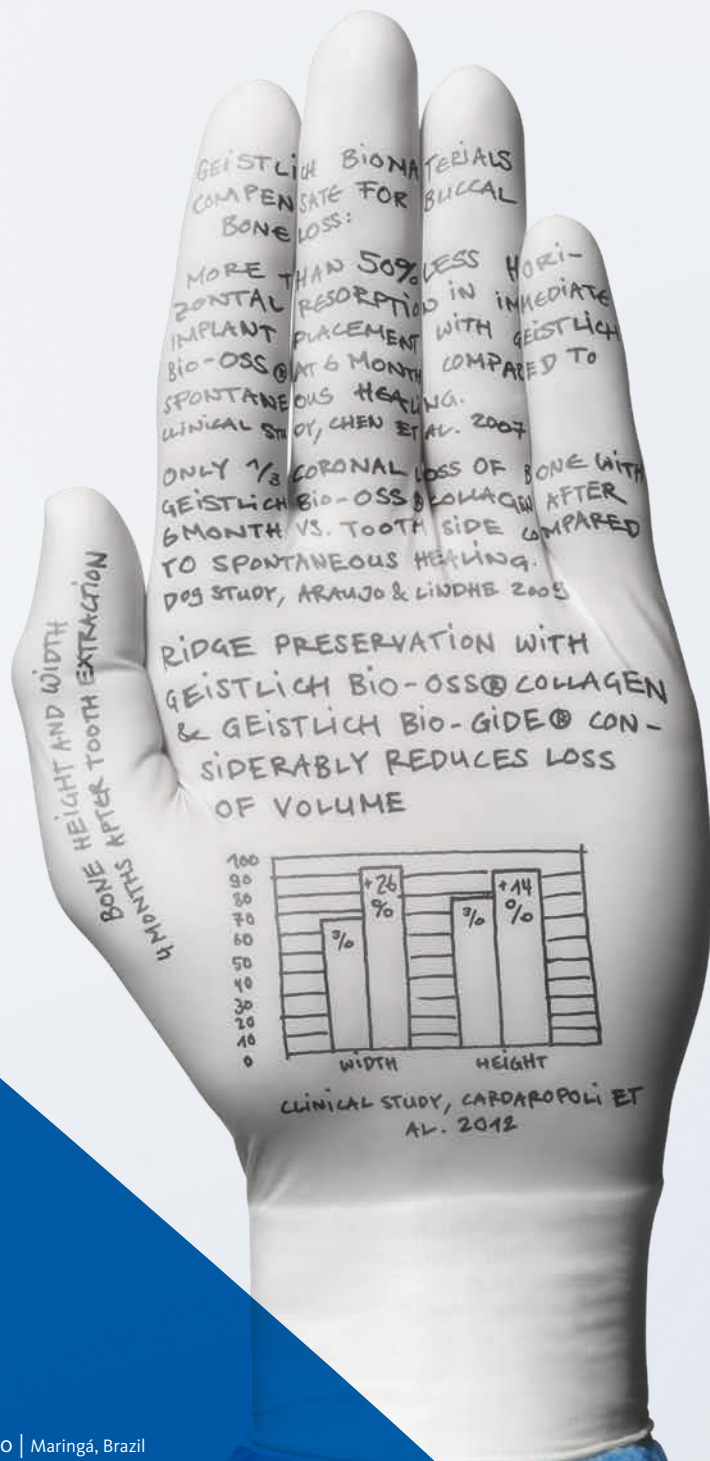
### ► Clinical long-term success in combination

The slow resorption of Geistlich Bio-Oss® and the ideally matched protective function of Geistlich Bio-Gide® promote the long-term volume stability<sup>13</sup> of the augmentation material and ensure high implant survival rates.<sup>16</sup>

35 Degidi M et al., Oral Dis. 2006 Sep;12(5):469-75 (Clinical study).  
 36 Orsini G et al., J Biomed Mater Res B Appl Biomater. 2005 Jul(1);448-57 (Clinical study).  
 37 Piattelli M et al., Int J Oral Maxillofac Implants. 1999 Nov-Dec;14(6):835-40 (Clinical study)

38 Sartori S, et al., Clin Implants Res. 2003 Jun;14(3):369-72 (Clinical study).  
 39 Traini T et al., J Periodontol. 2007 May; 78(5):955-61 (Clinical study).  
 40 Jensen SS et al., J Periodontal. 2014 Nov;85(11):1549-56 (Clinical study).

\* Human mesenchymal stem cells



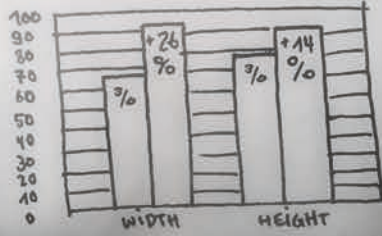
GEISTLICH BIOMATERIALS COMPENSATE FOR BUCCAL BONE LOSS:

MORE THAN 50% LESS HORIZONTAL RESORPTION IN IMPLANT PLACEMENT WITH GEISTLICH BIO-OSS® AT 6 MONTHS COMPARED TO SPONTANEOUS HEALING. CLINICAL STUDY, CHEN ET AL. 2007

ONLY 1/3 CORONAL LOSS OF BONE WITH GEISTLICH BIO-OSS® COLLAGEN AFTER 6 MONTH VS. TOOTH SIDE COMPARED TO SPONTANEOUS HEALING. DOG STUDY, ARAUJO & LINDHE 2008

RIDGE PRESERVATION WITH GEISTLICH BIO-OSS® COLLAGEN & GEISTLICH BIO-GIDE® CONSIDERABLY REDUCES LOSS OF VOLUME

4 MONTHS AFTER TOOTH EXTRACTION BONE HEIGHT AND WIDTH



CLINICAL STUDY, CARDAROPOLI ET AL. 2012



Prof. Maurício Araújo | Maringá, Brazil

“I have faith in Geistlich Biomaterials because they are scientifically proven and have been used successfully in practice for years.”

# All our science in your hands

## Numerous studies prove excellent long-term results

After 12–14 years implants that were placed in bones augmented with Geistlich Bio-Oss® and Geistlich Bio-Gide® show a similar survival rate as implants in pristine bone.<sup>16</sup>

► **Reliable:** 91.9% implant survival rate after 12–14 years<sup>16</sup>

### Implant survival rate (%)



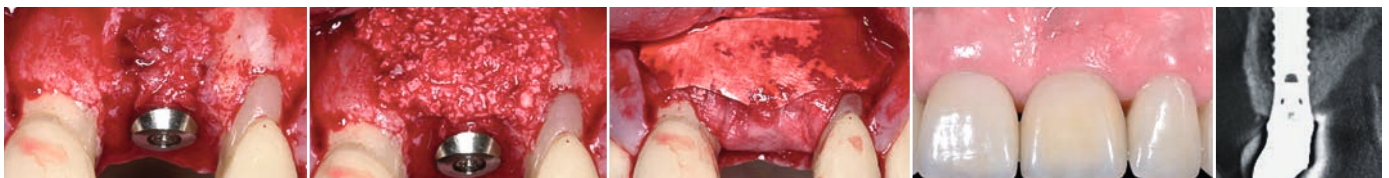
## ...and stable esthetic results

Guided Bone Regeneration with Geistlich Bio-Oss® and Geistlich Bio-Gide® yield reliable results in esthetic terms. Due to the contour augmentation the facial bone wall was able to be preserved in 95% of patients over a period lasting from 5 to 9 years.<sup>17,40</sup>

► **Predictable:** Well preserved facial bone wall after 5–9 years<sup>17,40</sup>

### Minor bone augmentation

Prof. D. Buser

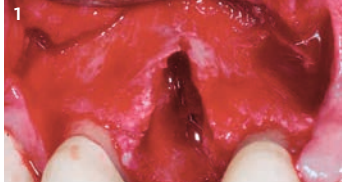


# The right solution for every challenge

## Extraction sockets with defective socket

► Product solution: Geistlich Bio-Oss® Collagen | Geistlich Bio-Gide®

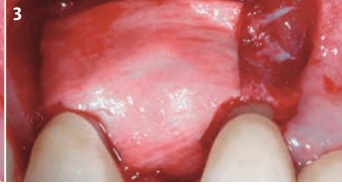
Prof. M. Araújo



1 Clearly visible buccal bone dehiscence after extraction of tooth 14 and forming a flap.



2 Augmentation with Geistlich Bio-Oss® Collagen.



3 A Geistlich Bio-Gide® is applied to cover the augmentation material.



4 4 months after extraction: abundant newly formed buccal bone.

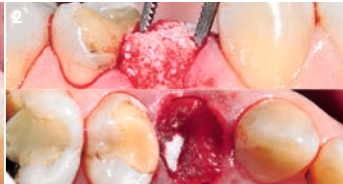
## Extraction sockets with intact socket

► Product solution: Geistlich Bio-Oss® Collagen | Geistlich Mucograft® Seal

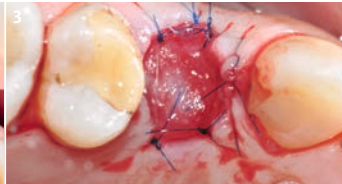
Dr. R. Cavalcanti



1 Initial situation before extracting tooth 14.



2 Extraction socket filled with Geistlich Bio-Oss® Collagen and sealed with Geistlich Mucograft® Seal.



3 Geistlich Mucograft® Seal sutured using single interrupted sutures.



4 Final restoration 7 months after tooth extraction.

## Minor bone augmentation

► Product solution: Geistlich Bio-Oss® Collagen | Geistlich Bio-Gide®

Prof. K.-L. Ackermann †



1 Bone loss showing apical implant threads.



2 Application of Geistlich Bio-Oss®.



3 Application of Geistlich Bio-Gide®.

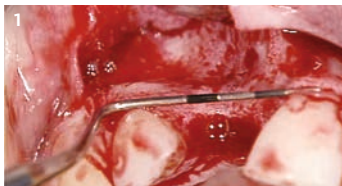


4 Good healing of the hard and soft-tissue 13 months after surgery.

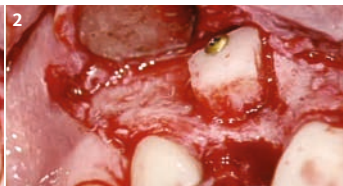
## Major bone augmentation

► Product solution: Geistlich Bio-Oss® | Geistlich Bio-Gide®

Prof. D. Buser



1 Defect with pronounced horizontal bone loss.



2 Cortico-cancellous bone transplant from the chin area.



3 Contouring with Geistlich Bio-Oss® and coverage with Geistlich Bio-Gide®.

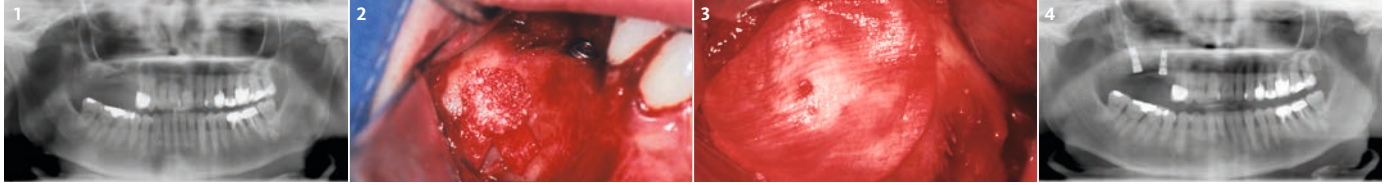


4 Suitable bone bed for implant placement 6 months after surgery.

## Sinus floor elevation

► **Product solution:** Geistlich Bio-Oss® Pen | Geistlich Bio-Gide®

Dr. P. Valentini



1 Atrophied posterior maxilla with insufficient bone height (<2–3 mm).

2 Geistlich Bio-Oss® completely fills the lateral window orientated to the buccal bone wall.

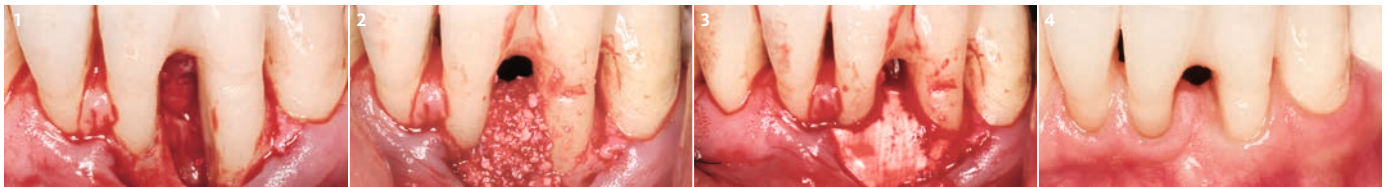
3 The lateral window is covered with a Geistlich Bio-Gide® membrane.

4 The postoperative x-ray shows the augmented region and the implants placed.

## Periodontal defects

► **Product solution:** Perio-System Combi-Pack

Prof. M. Christgau



1 Intraoperative view of the elongated twin-wall defect.

2 The basal defect is filled with autologous bone chips and augmented with Geistlich Bio-Oss® Collagen.

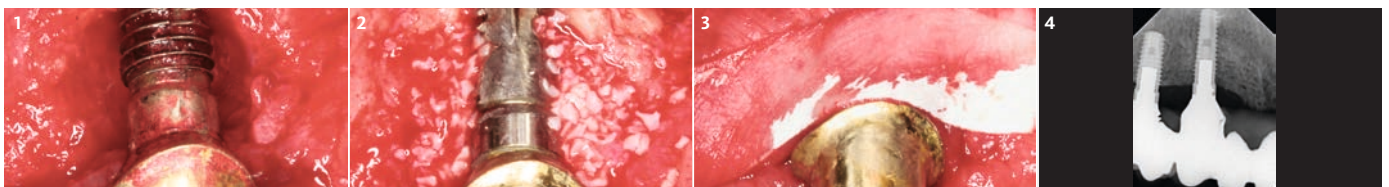
3 Coverage with Geistlich Bio-Gide® Perio membrane cut to size and applied without fixing.

4 Clinical situation 6 years after surgery shows a long-term stable condition.

## Peri-implantitis

► **Product solution:** Geistlich Bio-Oss® | Geistlich Bio-Gide®

Prof. F. Schwarz\*



1 Class Ic\* defect configuration.

2 Class Ic defect component after application of Geistlich Bio-Oss®.

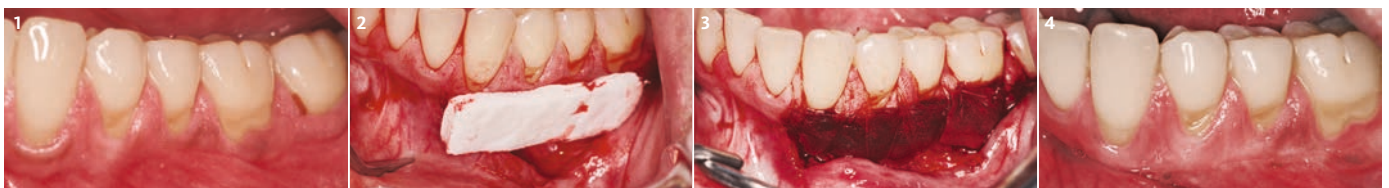
3 "Double layer" membrane technique with Geistlich Bio-Gide® on vestibular and lingual aspect.

4 Radiographic findings after 12 months show a gain in bone.

## Soft-tissue regeneration

► **Product solution:** Geistlich Mucograft®

Dr. M. K. McGuire\*\*



1 Initial situation: Patient with insufficient keratinized tissue.

2 Geistlich Mucograft® is cut to the size of the defect and placed onto the recipient site in a dry state.

3 Geistlich Mucograft® is sutured with 5-0 sutures and absorbs the blood from the receiving site.

4 Gain in keratinized gingiva and excellent color and texture match to the adjacent tissue after 6 months.

\* Schwarz F et al. Clin Oral Implants Res. 2007 Apr;18(2):161–70 (Clinical study).

\*\* McGuire MK & Scheyer ET. J Periodontol. 2014 J Periodontol. 2014 Oct;85(10):1333–41 (Clinical study).

# Treatment & product solutions

|   | Extraction sockets with intact socket | Extraction sockets with defective socket | Minor bone augmentation | Major bone augmentation | Sinus floor elevation | Periodontal defects | Peri-implantitis | Soft-tissue regeneration |
|---|---------------------------------------|--|-------------------------|-------------------------|-----------------------|---------------------|------------------|--------------------------|
| <b>BONE REPLACEMENT MATERIALS</b>   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 0.25-1 mm<br>0.25 g ~ 0.5 cm <sup>3</sup>                                   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 0.25-1 mm<br>0.5 g ~ 1.0 cm <sup>3</sup>                                    |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 0.25-1 mm<br>1.0 g ~ 2.0 cm <sup>3*</sup>                                   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 0.25-1 mm<br>2.0 g ~ 4.0 cm <sup>3</sup>                                    |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 1-2 mm<br>0.5 g ~ 1.5 cm <sup>3</sup>                                       |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 1-2 mm<br>1.0 g ~ 3.0 cm <sup>3†</sup>                                      |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Granules 1-2 mm<br>2.0 g ~ 6.0 cm <sup>3</sup>                                       |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Block<br>1 x 1 x 2 cm ~ 2.0 cm <sup>3</sup>  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss Pen® Granules 0.25-1 mm<br>0.25 g ~ 0.5 cm <sup>3</sup>                               |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss Pen® Granules 0.25-1 mm<br>0.5 g ~ 1.0 cm <sup>3</sup>                                |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss Pen® Granules 1-2 mm<br>0.5 g ~ 1.5 cm <sup>3</sup>                                   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Collagen<br>50 mg (2.5 x 5.0 x 7.5 mm)   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Collagen<br>100 mg (5.0 x 5.0 x 7.0 mm)  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Collagen<br>250 mg (7.0 x 7.0 x 7.0 mm)  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Oss® Collagen<br>500 mg (10.0 x 10.0 x 7.0 mm)  |                                       |  |                         |                         |                       |                     |                  |                          |
| <b>MEMBRANES</b>  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Gide®<br>25 x 25 mm   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Gide®<br>30 x 40 mm   |                                       |  |                         |                         |                       |                     |                  |                          |
| Bio-Gide® Compressed<br>13x25 mm, 20x30 mm  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Gide® Perio<br>16 x 22 mm   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Bio-Gide® Shape<br>14 x 24 mm   |                                       |  |                         |                         |                       |                     |                  |                          |
| <b>COMBI-KITS</b>   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Combi-Kit Collagen<br>Geistlich Bio-Oss® Collagen 100 mg<br>+ Geistlich Bio-Gide® 16 x 22 mm  |                                       |  |                         |                         |                       |                     |                  |                          |
| Perio-System Combi-Pack<br>Geistlich Bio-Oss® Collagen 100 mg<br>+ Geistlich Bio-Gide® Perio 16 x 22 mm |                                       |  |                         |                         |                       |                     |                  |                          |
| <b>MATRICES</b>   |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Mucograft® Seal<br>8 mm diameter, 12 mm diameter  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Mucograft®<br>15 x 20 mm, 20 x 30 mm, 30 x 40 mm  |                                       |  |                         |                         |                       |                     |                  |                          |
| Geistlich Fibro-Gide®<br>15 x 20 x 6 mm, 20 x 40 x 6 mm   |                                       |  |                         |                         |                       |                     |                  |                          |

# Rely on our products for peace of mind

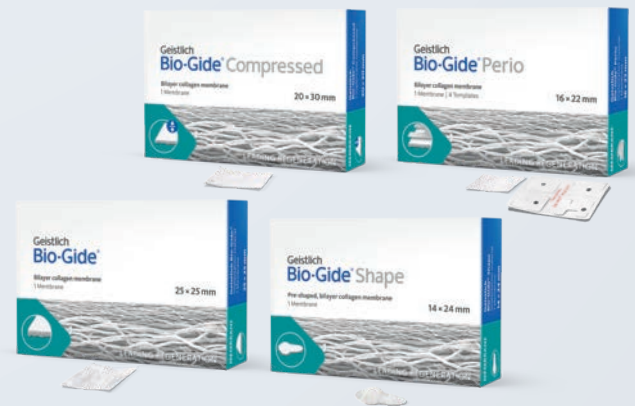


## GEISTLICH BIO-OSS®

- › Geistlich Bio-Oss® is the most used and – with over 1,000 studies<sup>41</sup> – the most documented bone replacement material in regenerative dentistry.
- › The biofunctional biomaterial aids vascularization and the formation of new bone.<sup>24</sup> The slow resorption of Geistlich Bio-Oss® increases the stability of the augmentation material<sup>9</sup> – the best prerequisite for a long-term high implant survival rate.<sup>16</sup>
- › Geistlich Bio-Oss® Collagen and the Geistlich Bio-Oss Pen®\* provide enhanced handling.

## GEISTLICH BIO-GIDE®

- › Geistlich Bio-Gide® is the most documented collagen membrane in regenerative dentistry.<sup>42</sup>
- › Geistlich Bio-Gide® Compressed is the product twin to Geistlich Bio-Gide® with firmer in touch.<sup>28</sup>
- › Geistlich Bio-Gide® Shape is a ready-to-use and pre-shaped membrane indicated for use in combination with Geistlich Bio-Oss® Collagen for application in extraction sockets with defective buccal bone walls.<sup>28</sup>
- › Geistlich Bio-Gide® Perio facilitates cutting when dry and eases application in guided tissue regeneration during surgery due to its firmer material.<sup>28</sup>



## GEISTLICH FIBRO-GIDE® AND GEISTLICH MUCOGRAFT®

- › Geistlich Fibro-Gide® is a volume-stable collagen matrix, designed to be used specifically in soft-tissue augmentation procedures.<sup>28</sup>
- › Geistlich Mucograft® / Geistlich Mucograft® Seal is unique collagen matrix that has been specially developed for soft-tissue regeneration.<sup>28</sup>
- › Geistlich Mucograft® / Geistlich Mucograft® Seal is intended to be used in closed and open healing situations to close wounds of oral mucosa / support wound healing and regeneration processes in case of oral mucosa defects and deficiencies.
- › Geistlich Mucograft® Seal is available in a convenient circular shape and indicated for use in combination with Geistlich Bio-Oss® Collagen for sealing extraction sockets with preserved buccal walls.
- › Both Geistlich Fibro-Gide® and Geistlich Mucograft® / Geistlich Mucograft® Seal are proven alternatives to autologous soft-tissue grafts.<sup>43–47</sup>



41 NCBI Pubmed, October 2019, Search term "Bio-Oss" (1,141 hits) (Market research).  
 42 NCBI Pubmed, October 2019, Search term "Bio-Gide" (339 hits) (Market research).  
 43 Cardaropoli D, et al. J Periodontol. 2012 Mar;83(3):321–8 (Clinical study).  
 44 Sanz M et al., J Clin Periodontol. Okt. 2009 Oct;36(10):868–76 (Clinical study).

45 Thoma DS, et al. J Clin Periodontol. 2016 Oct; 43(10): 874–85 (Clinical study).  
 46 Zeltner M, et al. J Clin Periodontol. 2017 Apr; 44(4): 446–453 (Clinical study).  
 47 Huber S, et al. J Clin Periodontol. 2018 Apr;45(4):504–512 (Clinical study).

\* Geistlich Pharma AG practice test, Nov 2011.



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## Geistlich Biomaterials

As a result of its longstanding tradition the Swiss family firm Geistlich Biomaterials is now one of the **leading global suppliers in regenerative dentistry**. Dentists and dental specialists in nearly **90 markets** on **6 continents** place their faith in the reliable and peerless quality of Geistlich Bio-Oss® and Geistlich Bio-Gide®. More than **600 employees** in **12 locations** ensure that the pioneering products remain at the top of their field: Through **intensive scientific research** endeavours and the sustainable refinement of **solutions** with our users in mind.

From experts. For experts.

