SigmaGraft

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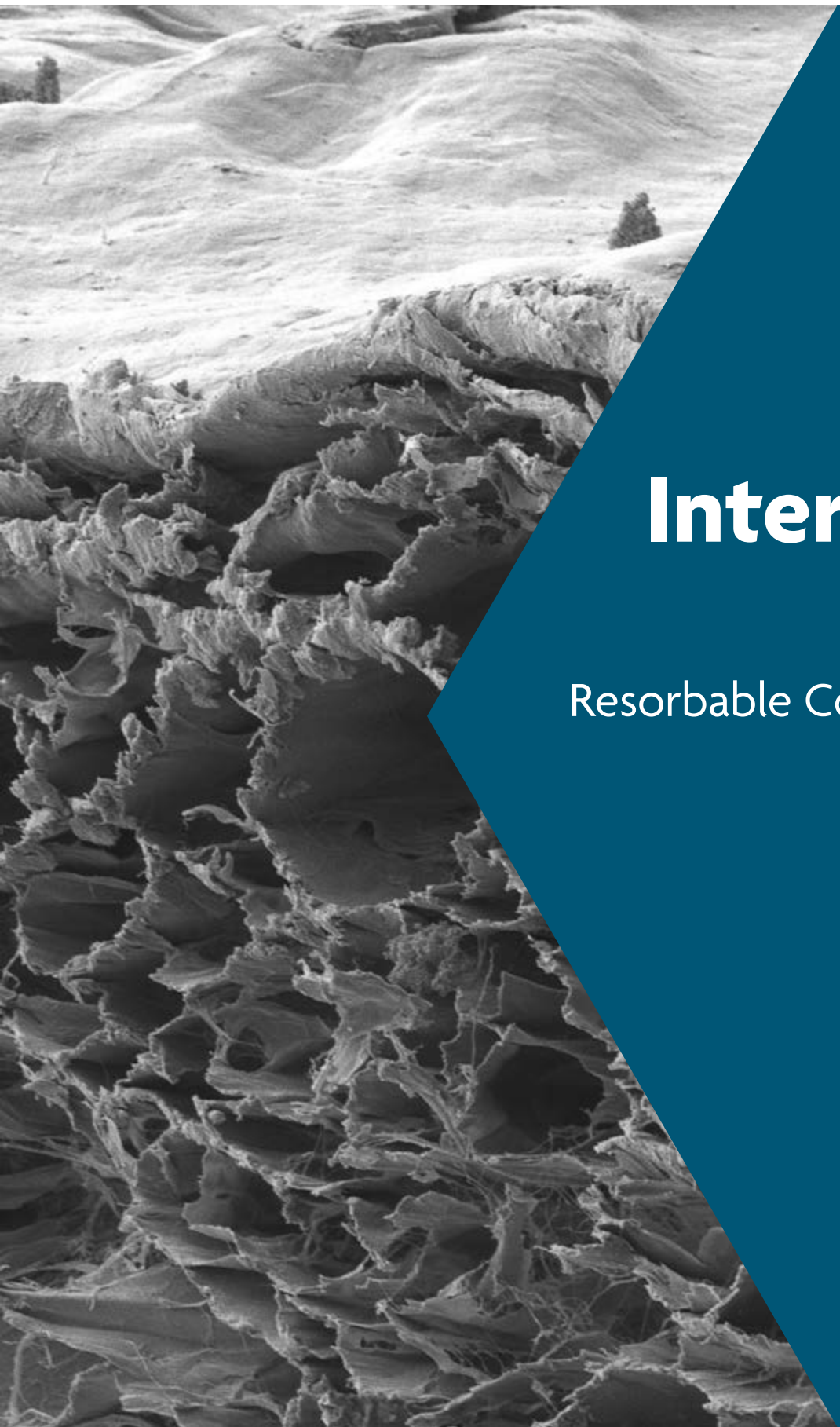


InterCollagen® Guide

Resorbable Collagen Membrane

GRAFT BIOMATERIALS

InterCollagen® Guide

Resorbable Collagen Membrane

InterCollagen® Guide is a porcine-derived resorbable collagen membrane intended for periodontal and/or dental surgeries. When used in conjunction with a graft material for a guided bone regeneration procedure, the membrane acts as a barrier that restricts the entry of rapidly proliferating non-osteogenic cells within the bony defect while allowing the ingrowth of slow-growing bone-forming cells. This resorbable barrier gets remodeled and/or incorporated by the host tissue.

InterCollagen® Guide's dense fibrous architecture enhances mechanical strength and increases durability, and yet it is easily sutured, highly drapable, and can be trimmed to the required size.

Indications of Use

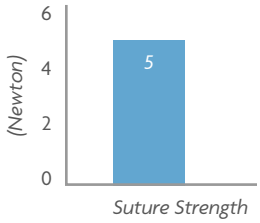
InterCollagen® Guide can be used in guided bone regeneration (GBR) and guided tissue regeneration (GTR) procedures as a biodegradable barrier for:

- After apicectomy, cystectomy, resection of retained teeth, and resection of other bone lesions
- Periodontal bone defects (1-3 wall defects) and furcation defects (class I and II)
- Immediate or delayed augmentation around implants in extraction sockets
- Sinus floor augmentation and support of the Schneiderian membrane
- Maxillary ridge reconstruction for prosthetic treatment
- Extraction sockets after tooth extractions
- Surgical bone defects and bone wall defects
- Maxillary ridge augmentation
- Dehiscence and fenestration defects

Features & Benefits

High Suture Strength

Despite a low thickness of 0.13 mm, the membrane retains a high suture strength of at least 5N due to minimal processing.



Slow Degradation Time

The resorbable membrane is substantially resorbed by 13 weeks in a canine model.

Easy Handling & Application

Can be easily trimmed to size in dry or wet conditions; drapable and can be pinned and sutured.

Dual Function

Bilayer structure provides dual function:

- Smooth side acts as a barrier that prevents soft tissue growth
- Open-pore structure on the rough side facilitates growth of bone forming cells, nerve, and blood vessels

Available in the following sizes

SKU	Size
ICG1520	15 x 20 mm
ICG2030	20 x 30 mm
ICG2525	25 x 25 mm

Application & Handling

Hydration

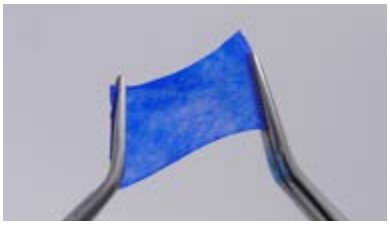
InterCollagen® Guide can be hydrated in blood or sterile saline solution. It can also be applied dry, a common method used with application of the graft material in lateral augmentation of defects on the outer ridge contour. The InterCollagen® Guide can adapt to any surface contours and can be easily repositioned should the need arises.

Placement

InterCollagen® Guide has a bilayer structure which provides dual function. One side has a smooth texture which acts as a barrier to prevent soft tissue growth while the other side, rougher in texture with open pores, facilitates the ingrowth of bone forming cells, nerve, and blood vessels. Although not required, it is recommended to place the smooth side towards the gingiva and the rough side towards the bone for maximum results. Trim and place InterCollagen® Guide to overlap the defect by at least 2-3 mm to prevent lateral ingrowth of gingival connective tissue.

Shaping

InterCollagen® Guide can be trimmed to the desired dimensions using a pair of scissors when needed. It could also be beneficial to use templates when trimming in order to minimize waste.



Fixation

Regardless of the direction of the stretch, InterCollagen® Guide demonstrates an exceptional tear resistance. It can be pinned, sutured, or even screwed effortlessly without rupturing. Because of this reason, additional fixation is unncessary in most cases due to the outstanding drapability of the membrane to the bony walls.

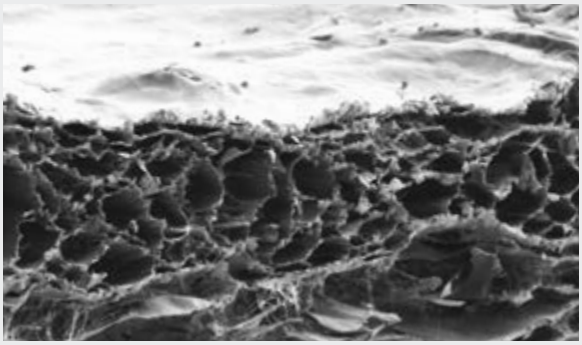
Exposure

As much as possible, avoid the exposure of InterCollagen® Guide since bacterial resorption will substantially decreases the efficacy of the membrane to act as a barrier. Should a dehiscence occur, formation of free granulation tissue usually can still help heal the wound without complications.

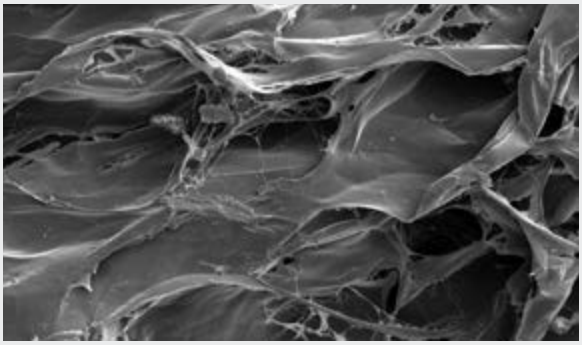
Properties

Attribute	Description
Source	Porcine pericardium
Composition	Native collagen type I and III
Thickness	0.1 - 0.3 mm
Structure	Natural multilayered collagen structure
Storage temperature	59 - 86 °F / 15 - 30 °C
Degradation time	13 weeks in a canine model
Fixation	Generally not required due to good surface adaptation, but possible (pinning, suturing, screwing)

The multi-scale porous structure provides favorable environment for the growth of cells and tissues and formation of extracellular matrix (ECM) while also allowing nutrient exchange and blood vessel ingrowth.



15µm



20µm

Ankylosed tooth extraction and socket preservation

Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

Objective

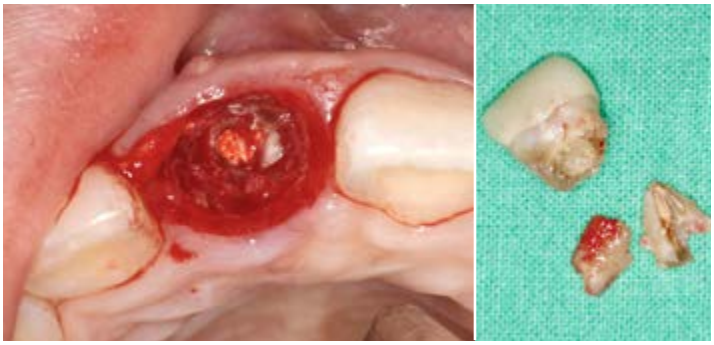
Maintaining the form of the socket post-extraction was necessary as the #11 tooth had been traumatized and internal resorption was seen in the long-term follow-up.

Conclusion

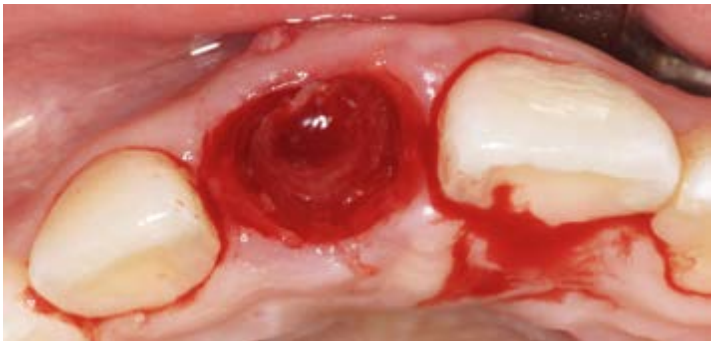
Two InterOss® Collagen blocks were inserted and an InterCollagen® Guide was applied to cover them. Although a chronic fistula was seen, a socket graft procedure can be performed as long as no acute inflammation nor suppuration were identified. The blocks were firm enough to maintain the socket form and were easy to handle and trim with a scalpel.

Pre-operative X-ray.

Chronic fistula detected near the affected tooth.



Extraction of ankylosed tooth.

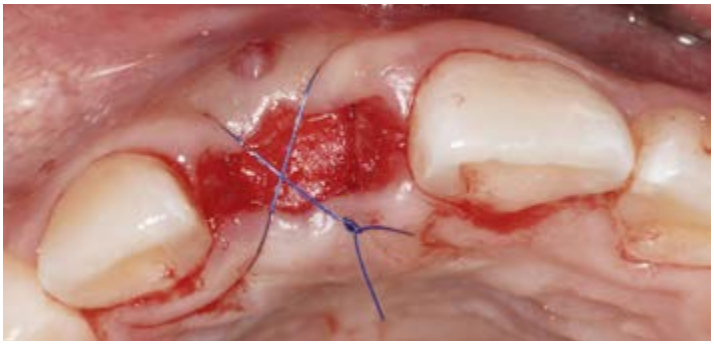


Post-extraction view.

InterOss® Collagen placement.

InterCollagen® Guide placement.

InterCollagen® Guide wrapped over the block.



Immediate post-operative view.

Vertical ridge augmentation through sinus floor elevation

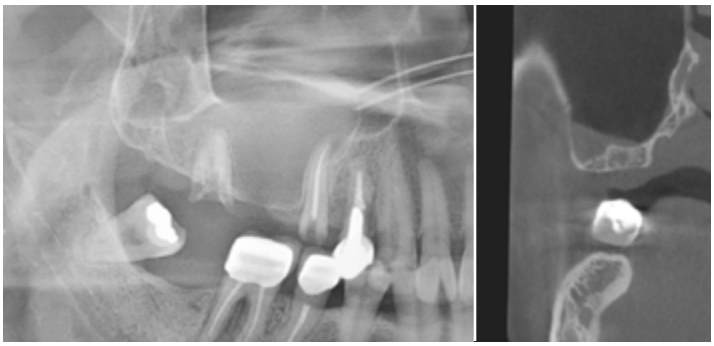
Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

Objective

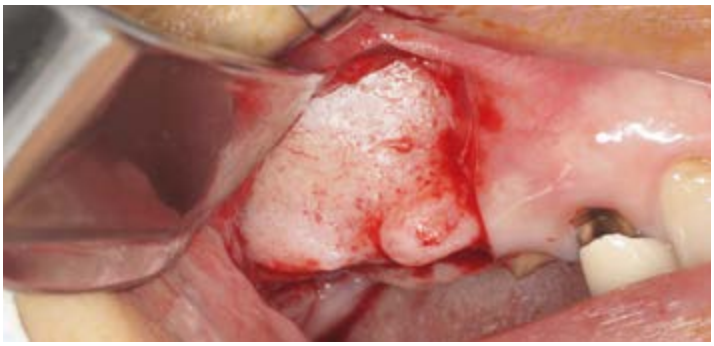
In order to reconstruct the missing teeth in the right posterior maxilla, a sinus lift surgery was planned via lateral window technique because of major loss of alveolar bone in the region.

Conclusion

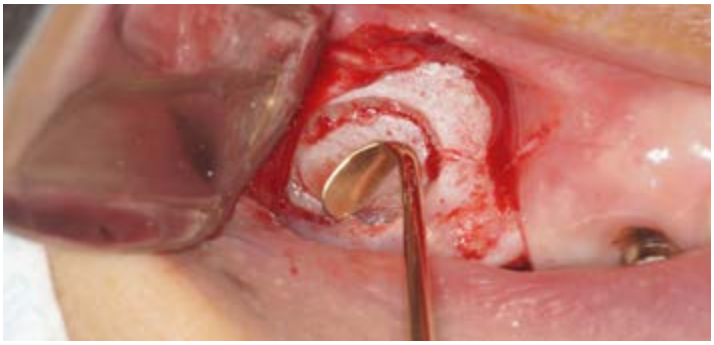
A lateral window sinus lift is a safe and predictable procedure, and InterOss® is a good bone substitute with good handling. To prevent the soft tissue ingrowth to the graft, the window in the lateral wall should be covered by an InterCollagen® Guide.



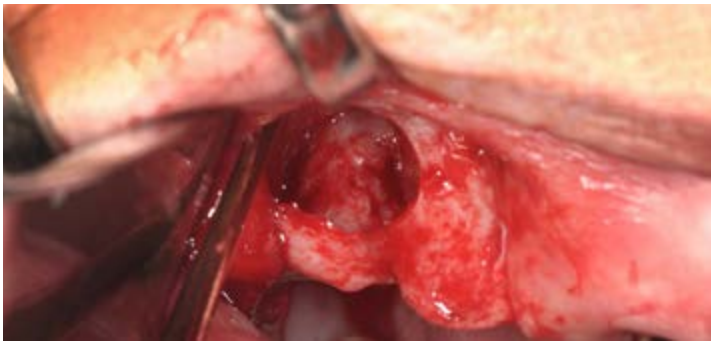
Pre-operative X-ray and CBCT scan.



Exposure of the defect site.

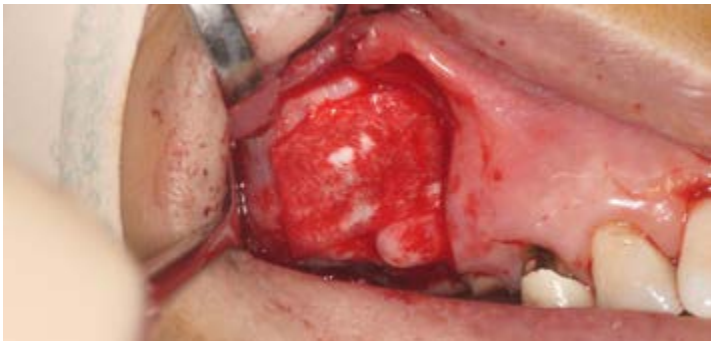


Lateral window preparation (continued).

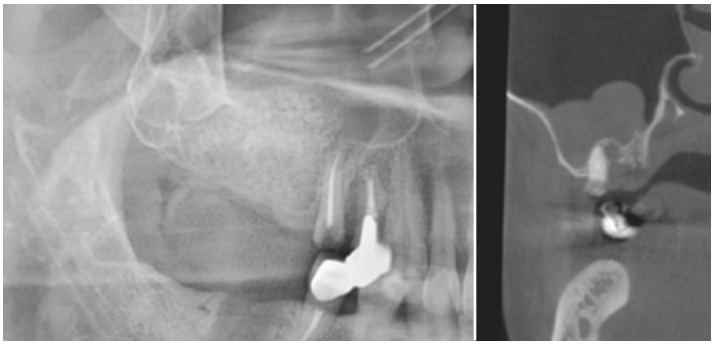


Exposure of the sinus cavity.

InterOss® placement.



InterCollagen® Guide placement.



Post-operative X-ray and CBCT scan.

Secondary guided bone regeneration at previously grafted site

Dr. Yong Dae Kwon
Kyung Hee University, School of Dentistry
South Korea

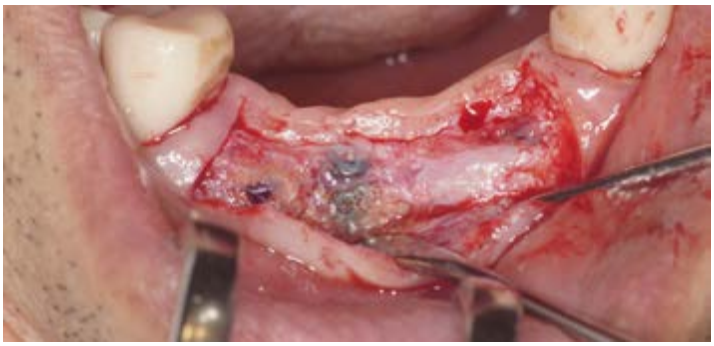
Objective

Local inflammation and compromised healing may cause focal loss of bone graft. To repair the loss, a secondary focal bone grafting can be done.

Conclusion

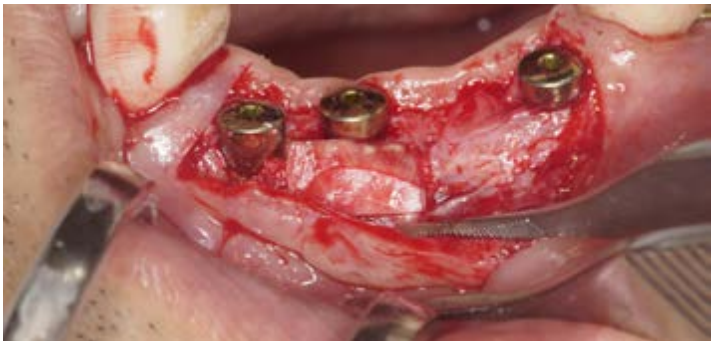
To maintain the additional bone substitute on the defected area, a malleable block-type of bone graft may be a good option rather than particulate-type. Coverage with an InterCollagen® Guide membrane can reduce soft tissue ingrowth.

Post-operative view.



A view of the bone defect.

InterOss® Collagen placement.



InterCollagen® Guide placement.

Flap has been apically positioned.

Additional transpositional flap created from the palate.

Notes

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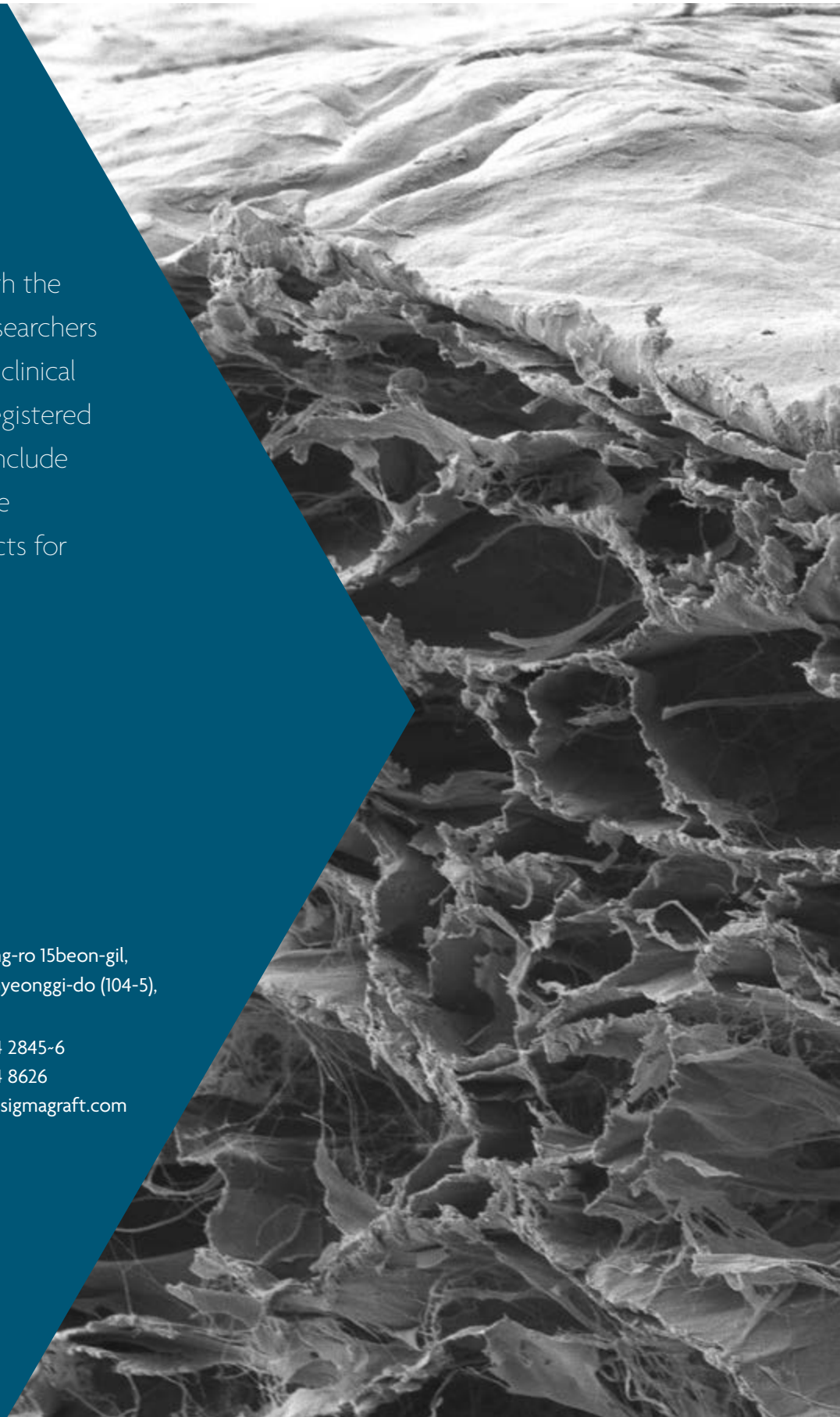

SigmaGraft®, based in Fullerton, California, USA, collaborates with the world's leading clinicians and researchers to innovate products and build clinical experience. Our products are registered and sold worldwide, and they include bone grafting products for bone regeneration, membrane products for tissue regeneration, and more.

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