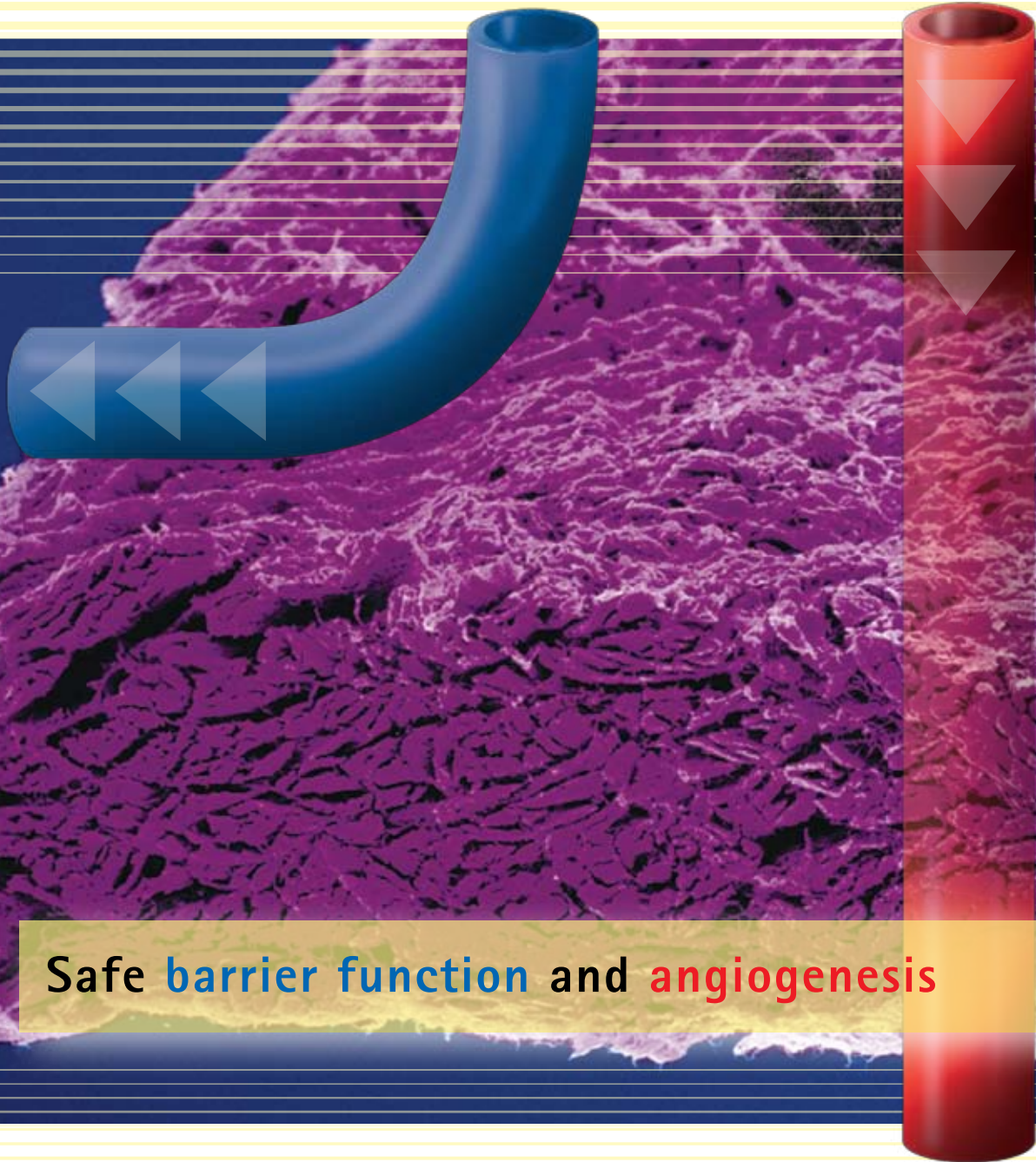
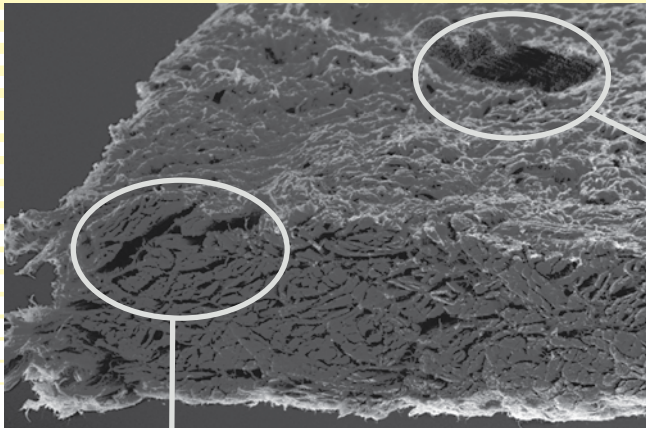


## Selective permeable membrane

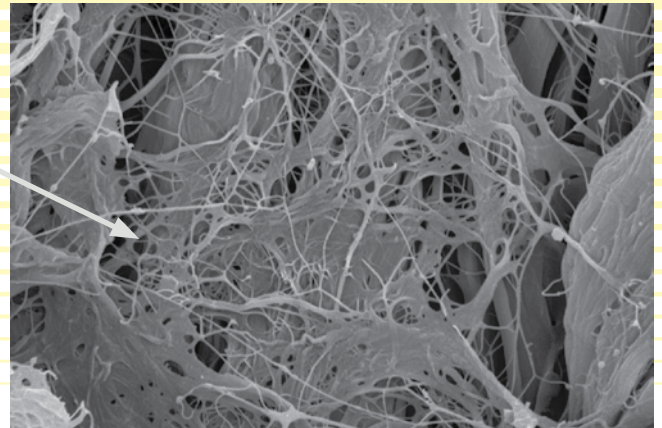


Safe barrier function and angiogenesis

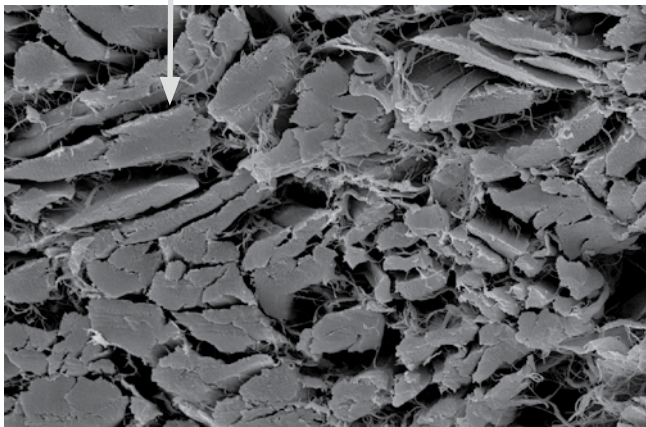
## Safe barrier function and angiogenesis



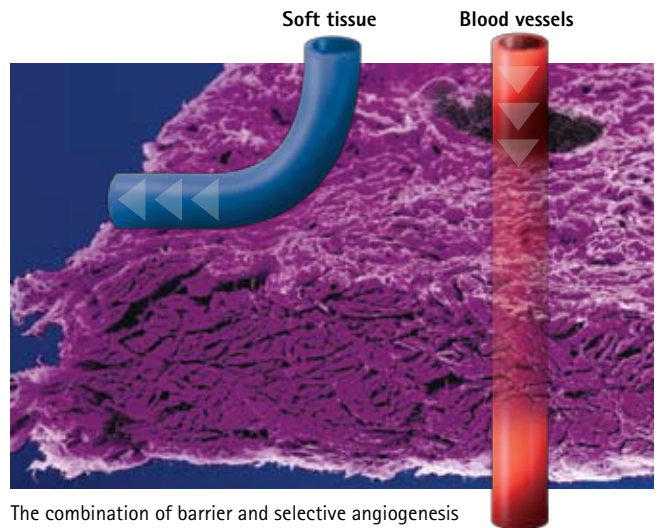
One can clearly recognise the fibrillar collagen structure with the retractions of the angiogenic pores.



The micro-fibrillar collagen within the "angiopores" is quickly absorbed and serves as a 'guide rail' for proliferating.

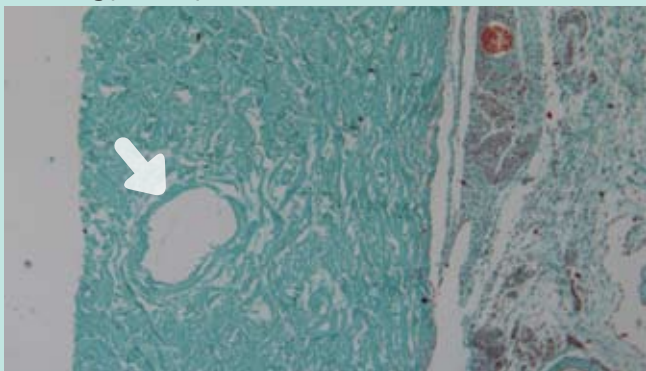


The compact fibre structures guarantee an ideal barrier function, in order to prevent fast growing soft tissue infiltrating the defect.



The combination of barrier and selective angiogenesis permits early vascularisation with shielding of the augmentation at the same time.

### Histology: 7 days



After seven days, good tissue integration into adjacent tissues can already be established. The "angiopores" (arrow) which are appropriated for revascularisation are well differentiated.

### Histology: 4 weeks



Naturally occurring "angiopores" in the membrane serve infiltrating blood vessels (arrow) with erythrocytes as a 'guide rail' and ensure fast vascularisation of the underlying augmentation.

## Functionality of angiopore

The selective permeable membrane angiopore promotes bone formation in a special manner. On the one hand, the compact fibre structure protects the augmentation from the connective tissue so that the bone has sufficient time to regenerate itself. On the other hand, the micro-fibrillar "angiopores" serve as a 'guide rail' for the infiltration of blood vessels so that the regeneration of the bone is also supported from the membrane side.

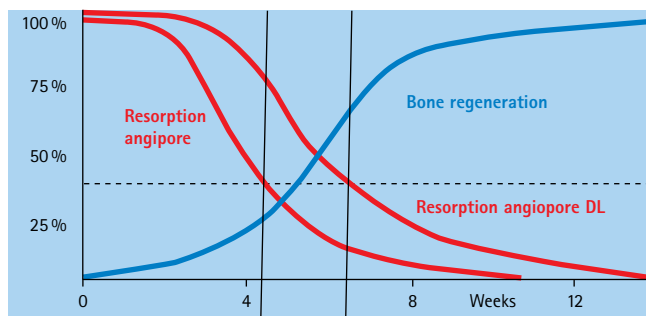
The angiopore membrane in a thickness 0.3 to 0.5 mm with a barrier function of approx. 4 to 5 weeks is particularly suitable

- for younger patients with good wound healing,
- in combination with autogenic or allogenic bone grafting material,
- for small lateral augmentations and bone defects,
- with intact periosteum
- for covering perforated nasal mucus membranes

The angiopore DL membrane in the thickness 0.6 to 0.8 mm with the extended barrier function of approx. 6 to 7 weeks is particularly suitable

- for the treatment of older patients
- when using synthetic or bovine bone grafting material
- for large augmentations
- in case the periosteum is damaged

### Adequate barrier function for GBR/GTR applications



Barrier function angiopore

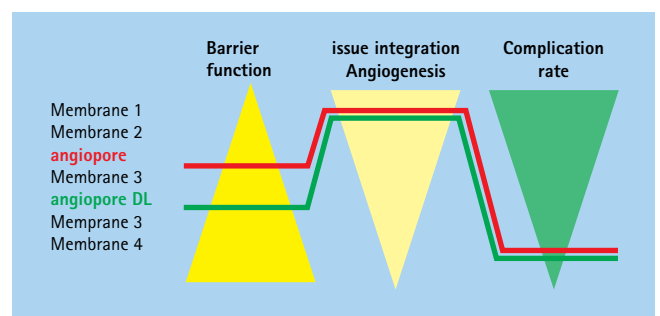
4 - 5 weeks

Barrier function angiopore DL

6 - 8 weeks

The duration of the barrier function depends on the thickness of the membrane and the rate of the remodelling process, which is very strongly dependent upon the patient. In the duration of the barrier function mentioned, maintenance of 45% to 50% of the original thickness is taken as a basis.

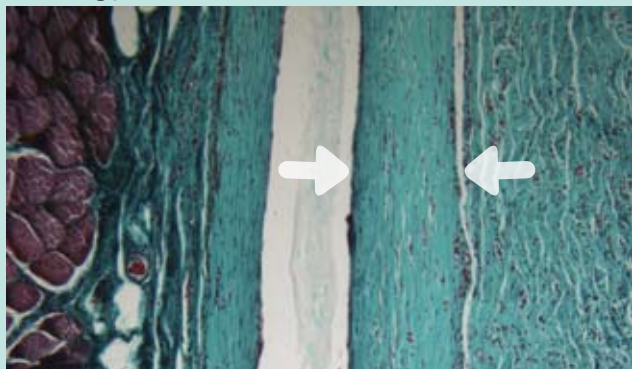
### Properties of different collagen membranes Resorption



Modified according to Rothamel et. al. (Clinical Oral Implants Research 2008, 16:369-378)

In comparison to other membranes, the barrier function of angiopore lies in the midfield. That of angiopore DL is approx. 1 to 2 weeks longer than with angiopore. In angiogenesis both membranes are in the top group. The same is also true for the complication rate, which is extremely low.

### Histology: 3 months



56 days after subcutaneous implantation in the rat, the membrane is seen to be fully integrated into adjacent tissues, the fibrillar collagen structure is completely abolished.

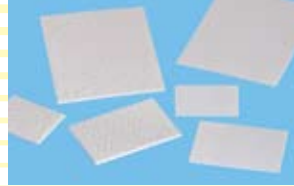
Histological examinations at the University of Cologne showed that the membrane was already integrated into adjacent tissues after only a short period of time.

After 4 weeks, vascularisation of "angiopore" could be determined in the membrane - the barrier function was still intact.

After 3 months, the membrane was completely integrated into adjacent tissues.

## angiopore selective permeable membrane

- Compact fibre structures for the safe barrier function towards quickly infiltrating soft tissue
- Pores with micro-fibrillar collagen as a 'guide rail' for angiogenesis
- Two thicknesses with different lengths of barrier function
- Low complication rate



### angiopore selective permeable membrane

Double sterile packed (pouch in pouch)

Gamma sterilized

| Thickness            | Size       | REF      |
|----------------------|------------|----------|
| approx. 0,3 - 0,5 mm | 15 x 20 mm | AP051520 |
| approx. 0,3 - 0,5 mm | 20 x 30 mm | AP052030 |
| approx. 0,3 - 0,5 mm | 35 x 45 mm | AP053545 |
| approx. 0,6 - 0,8 mm | 15 x 20 mm | APDL1520 |
| approx. 0,6 - 0,8 mm | 20 x 30 mm | APDL2030 |
| approx. 0,6 - 0,8 mm | 35 x 45 mm | APDL3545 |

## ossceram nano

- The  $\beta$ -TCP portion is quickly replaced by newly formed bone in a short time
- The optimised HA-portion preserves the volume of the augmentation
- The nano-structure promotes new bone formation by optimum attachment of serum proteins



### ossceram nano in 2 particle sizes

| Particle size | Volume | REF      | Colour |
|---------------|--------|----------|--------|
| 0,5 - 1,0 mm  | 0,5 cc | OSSY1005 | Green  |
| 0,5 - 1,0 mm  | 1,0 cc | OSSY1010 | Green  |
| 0,8 - 1,5 mm  | 1,0 cc | OSSY1510 | Red    |
| 0,8 - 1,5 mm  | 2,0 cc | OSSY1520 | Red    |

## alveoprotect for socket preservation

- Maintains and stabilises the jaw bone and simplifies implantation later on
- The pH neutrality positively influences soft tissue regeneration and reduces inflammatory effects
- Supports the formation of coagulum and is an ideal framework for the adhesion of thrombocytes, fibroblasts and osteoblasts



### Technical data:

|                      |             |
|----------------------|-------------|
| pH value             | 7,0 neutral |
| Barrier function     | yes         |
| Haemostyptic         | yes         |
| Soft tissue reaction | positive    |
| Resorption           | 2-4 weeks   |

### alveoprotect collagen fleece

12 membranes 20 x 20 mm, individually sterile packed

REF AP2x2x12

## HELBO-Therapie

Biofilm is the cause of inflammation in the oral cavity, which leads to loss of hard and soft tissue. It has been confirmed in many scientific studies that with HELBO therapy, pathogenic germs and the danger of inflammation can be reliably reduced.



HELBO®*Professional-Set Plus*

REF HE109020

HELBO®*Premium-Set Endo Plus*

REF HE108040

