



**UNIVERSITETET  
I OSLO**

**DET ODONTOLOGISKE FAKULTET**  
*Sekretariatet*  
Postboks 1142, Blindern  
0317 Oslo  
*Besøksadresse: Geitmyrsveien 69*

16. November 1999

## **CLINICAL FACULTY SEMINARS**

### **“KLINISKE FELLESSEMINAR”**

**Wednesday November 24th, 16.30 - 18.30**  
**Aud. 2, Geitmyrsveien 69**

## **EVIDENCE-BASED DENTISTRY**

**”Clinical studies on guided tissue regeneration(GTR),  
are the guidelines and recommendations scientifically based?”**

**Coordinator: Stip. Asbjørn Jokstad, UiO**

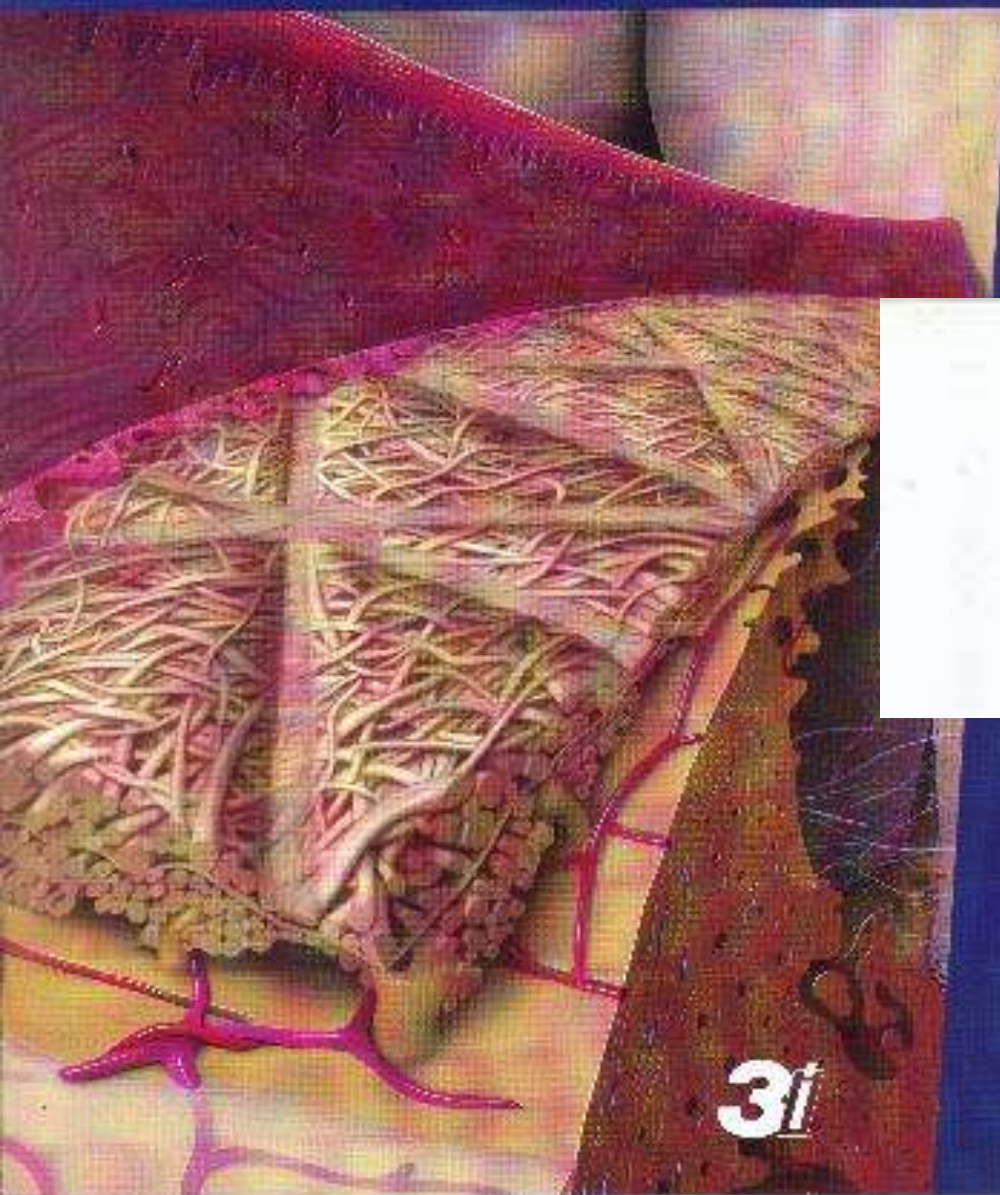
**All postgraduate candidates and other interested faculty members are welcome**

**Coffee will be served**

*Clinical studies on GTR  
techniques, are they science-  
based?*

*Asbjørn Jokstad  
Institute of Clinical Dentistry  
University of Oslo*

Introducing **GORE RESOLUT XT**  
Regenerative Material – Bioabsorbable



The commercial pressure on the dental profession has been marked during the last 10 years



There is a concern that SHUKDSV VRPH used in the advertising for GTR can be questioned...

# BioMend™

The proven,  
absorbable  
membrane.



When it comes to regeneration of lost tissue, BioMend is your best choice for aiding in healing up to 8 weeks. BioMend is completely absorbable, biocompatible, and provides excellent handling characteristics.

## THE COLLAGEN Advantage

Derived from bovine Achilles tendon, one of the purest sources of Type I collagen available.

Data from clinical trials demonstrated no immune or sensitivity reactions. (Other types of membranes containing PGA and PLA degrade directly to acids and have been associated with an inflammatory response.)

## CLINICAL Advantage

**Predictability of Results** Stays intact at least 4 weeks, functioning as a barrier during the critical period of wound healing; fully absorbed 8 weeks post-op.



**Bioabsorbable** Eliminates second stage surgery for membrane removal, reducing wound trauma and surgical chair time.

**Cell-Occlusive** Prevents epithelial migration and maintains space for periodontal ligament and bone regeneration.

**3-D Matrix** Allows integration of connective tissue tags and passage of essential nutrients, reducing the likelihood of membrane exposure and gingival recession.

**Wound Stabilization** Helps stabilize and maintain blood clot in the defect space.

## HANDLING Advantages

**Superior Handling** Pliable but not slippery when hydrated; conforms easily to defect morphology.

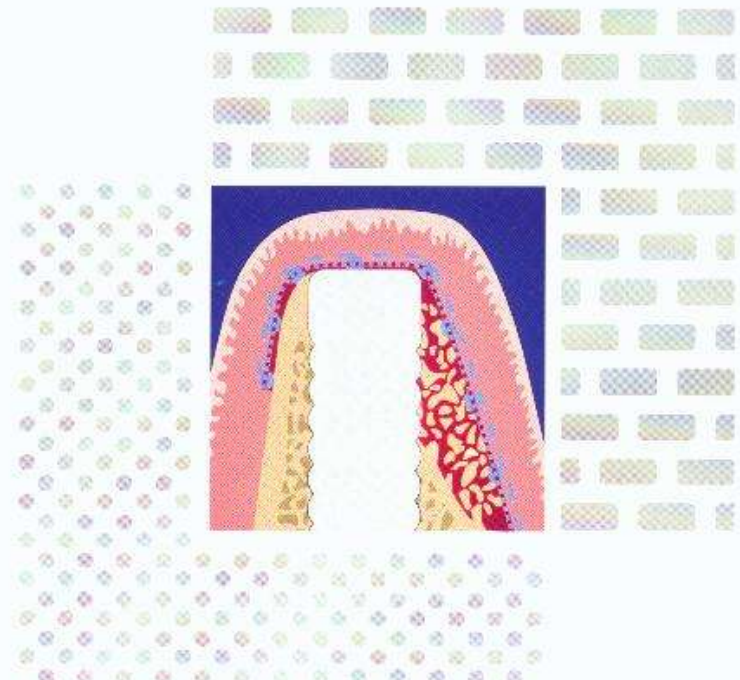
**Predictable Placement** Non-slipable and adjustable can be easily modified and positioned.

**Reduced Contamination Risk** Sterile templates allow pre-shaping; membrane need only be placed in the defect site once, reducing contamination risk.

BioMend™ Vs. Gore-Tex® Periodontal Material  
Parodontal Defects:  
Matched Pairs - 12 Month Evaluation (20 cases)



A new concept in  
guided bone regeneration



Several commercial  
companies are active, with  
Gore, Guidor, and Calcitek  
being the biggest actors.

**GUIDOR**

THE BIOSORBABLE MATRIX BARRIER

Sulzer Calcitek Inc.

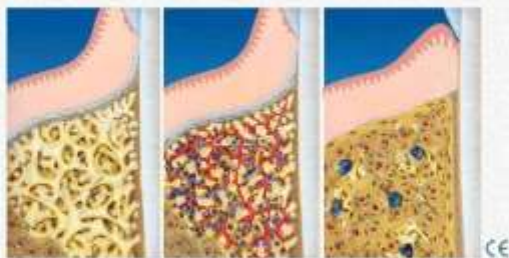
# A Longer Lasting Membrane

## BioMend Extend™

Maintains an Effective Barrier Longer!



### System for Periodontal Tissue Regeneration



The well-established system for natural bone regeneration, Bio-Oss® and Bio-Gide®, has been expanded to include a system for periodontal tissue regeneration: the PERIO-System, which uses Bio-Oss® COLLAGEN and Bio-Gide® PERIO. Many years of clinical experience and international scientific study trials provide proof of its compatibility for use in periodontal indications.

The new Bio-Gide® PERIO is a cell-occlusive, resorbable bilayer membrane which forms an effective barrier for shielding and protecting the periodontal



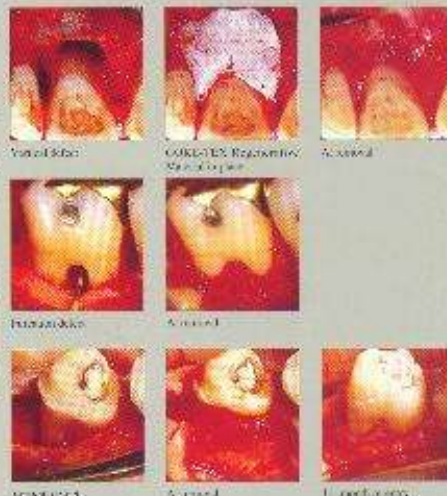
GORE-TEX™ REGENERATIVE MATERIAL

TRANSGINGIVAL CONFIGURATIONS



Geistlich Biomaterials

ions are for applications involving a structure that extends through the oral environment. Transgingival is an open microstructure "collar" designed to promote growth of connective tissue and inhibit the epithelium through a phenomenon known as "A partially occlusive pectin protects the competing tissues and maintains a space in 1 cm occur.



Bioclay collagen



# SVENSK VÄRLDSNYHET FÖR BEHANDLING AV TANDLOSSNING

Svensk forskning har resulterat i ett g...  
en sjukdom som dräbba...

KARL-GUSTAF EDUNG

Behandling av tandlossning (periodontit)  
alla vuxna svenskar.

Rehabilitering för att under 1990-talet  
många stora USA  
myndighet med  
ca 40 pro...



Figur 1. GUMDORF...  
under tandköttsreparatur.  
Den periodontala vävnaden  
är mörkblått färgad och  
den som är röd och  
gul är inflammerad.  
Den blåa strukturen är  
en GTR-film som  
bildas vid tandköttsreparatur.  
Den gula strukturen är  
den gamla GTR-filmen som  
har varit förlorad och  
som har ersatts av en  
ny GTR-film.

Guided Tissue Regeneration (GTR) är  
ett nytt behandlingsförfarande som  
har varit framgångsrikt vid behandling  
av tandköttsreparatur och vid  
behandling av tandköttsreparatur.

Från ett stort antal kliniska studier  
har man sett att den nya GTR-tekniken  
ger ett resultat som är jämförbart med  
andera metoder. Detta är ett viktigt  
bidrag till den kliniska behandlingen  
av tandköttsreparatur och vid  
behandling av tandköttsreparatur.  
GTR-tekniken är ett viktigt  
bidrag till den kliniska behandlingen  
av tandköttsreparatur och vid  
behandling av tandköttsreparatur.

# Skandinavisk verdensnyhet i behandlingen av tannkjøttsykdommen periodontitt

KARL-GUSTAF EDUNG

Skandinavisk forskning har resulterat i et gjennombrudd i behandlingen av akutt fordrøkt av periodontitt,  
infektjøttsykdommen som rymmer over 50% av alle voksne nordmenn.



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under tandköttsreparatur.  
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den gamla GTR-filmen som  
har varit förlorad och  
som har ersatts av en  
ny GTR-film.

Den nye behandlingsmetoden  
eller Guided Tissue Regeneration  
er den mest effektive metoden  
for å behandle akutt fordrøkt  
av periodontitt. Dette er et  
viktig bidrag til den kliniske  
behandlingen av periodontitt.  
GTR-tekniken er et viktig  
bidrag til den kliniske  
behandlingen av periodontitt.

den nye GTR-teknikken utviklet og  
testet i 1990-årene GTR-produkter i et  
stort antall kliniske studier i  
USA og Canada.

GTR-teknikken har nå utviklet seg  
til en effektiv metode for  
behandling av akutt fordrøkt av  
periodontitt. Dette er et viktig  
bidrag til den kliniske  
behandlingen av periodontitt.

## Periodontitt - en folkesykdom

Periodontitt er en av de vanligste  
infeksjonssykdomene. Til tross for at  
sykdommen er svært vanlig er  
den fortsatt lite kjent. Over 50%  
av alle voksne nordmenn har  
periodontitt i en eller annen form.  
Studier tyder på at ca. 10%  
av alle personer har sykdommen i  
et så alvorlig grad at de  
trenger behandling hos spesialist  
Periodontist.

Review papers are in some cases  
modified to make the topic appealing  
WR W KH ' W DU J H W ' J U R X  
Swedish(left) or Norwegian (right)  
dentists.

# *Guided Tissue Regeneration -*

## *MESH Definition (1992):*

The repopulating of the periodontium, after treatment for periodontal disease. Repopulation is achieved by guiding the periodontal ligament progenitor cells to reproduce in the desired location by blocking contact of epithelial and gingival connective tissues with the root during healing. This blocking is accomplished by using synthetic membranes or collagen membranes.

# *Emdogain- publication review (n=31)*

- 1997: 3 - 1998: 18 - 1999: 4
- Case report / series 11 papers
- Reviews 9 papers
- Clinical trials 4 papers
  - 3 RCT (10), (16), (33)
  - 1 Cohort study (107-33)
- In vitro studies 3 papers
- Animal studies 3 papers
- Meeting abstract 1 paper



Key words: Millipore filter - new attachment - periodontal ligament - wound healing

Accepted for publication May 21, 1981

## New attachment following surgical treatment of human periodontal disease

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\*Department of Periodontology, Faculty of Odontology, University of Gothenburg, Gothenburg, Sweden, and

\*\*Department of Periodontology, Royal Dental College, Aarhus, Denmark

**Abstract.** The present experiment was undertaken to test the hypothesis that new connective tissue attachment may form on a previously periodontitis involved root surface provided cells originating from the periodontal ligament are enabled to repopulate the root surface during healing.

A mandibular incisor with advanced periodontal disease of long standing (the distance between the cemento-enamel junction and the alveolar bone crest was 9 mm) was subjected to periodontal surgery using a technique which during healing prevented the dentogingival epithelium and the gingival connective tissue from reaching contact with the curetted root surface. Preference was hereby given to the periodontal ligament cells to repopulate the previously diseased root surface. After 3 months of healing a block biopsy containing the incisor and surrounding tissue was sampled. The histological analysis revealed that new cementum with inserting principal fibers had formed on the previously diseased root surface. This new attachment extended in coronal direction to a level 5 mm coronal to the alveolar bone crest. This finding suggests that new attachment can be achieved by cells originating from the periodontal ligament and demonstrates that the concept that the periodontitis affected root surface is a major preventive factor for new attachment is invalid.

























































































































