

1.

10

가

가 가

가

2.

가

(

가

(tissue removal)

10

10 20%  
1,000

가

(tissue replacement)

(tissue regeneration)



1980

( )

1982

( )

1985

Alfred University

( )

1990

Vermont

( )

1991

Vermont

(Post - Doc)

1994

Toronto

1999

### Development of Bone Tissue for Musculoskeletal Reconstruction

(Sukyoung Kim, School of Materials Engineering, Yeungnam University, 214 - 1 Dae - Dong, Kyongsan, Kyongbuk, Korea)



1.

1.

( 1 1).

2.1

가

(transplantation)

(implantation)

가

(autograft),  
graft, xenograft)

(homograft),

(hetero-

가

가 가

가

가

2,3

가

가

(donor)

가

가

가

, AIDS

2.2

가

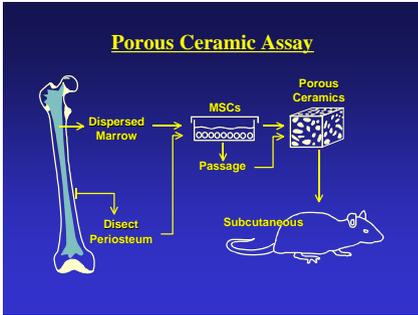
가

가

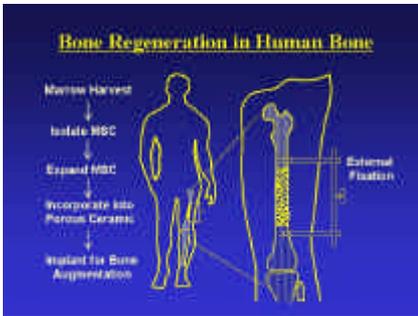
가

가

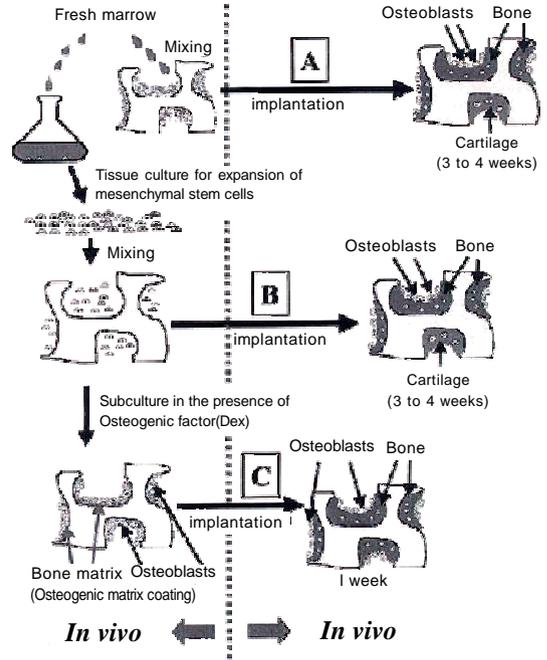
(scaffold)



(A)



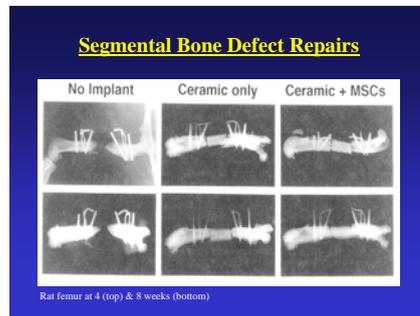
(B)



3.

4.

2.



4.

4, 8

5.

( 2 ).

(1) in vitro

-

in vivo

(2) in vitro

-

in vivo

- in vitro

Ohgushi

가

가

5.

4

8

가

가

가

가

가

( 3-4 ),

가

2.3

2-3

( , , )

가

가

Ca/P

1)

EO 가

γ-

Ca/P  
6,7

2)

가

HA (Ca/P = 1.67)

(coralline

HA, Interpore 200®)가

가

200 - 400 μm 가

, 3

(open pore)

(TCP, Ca/P = 1.5)가

tricalcium phosphate

TCP

3)

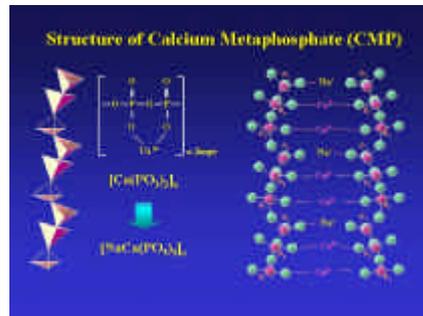
가

4)

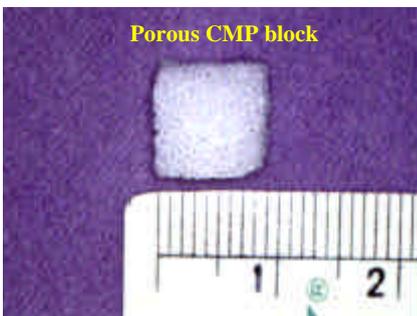
가

5)

2.4



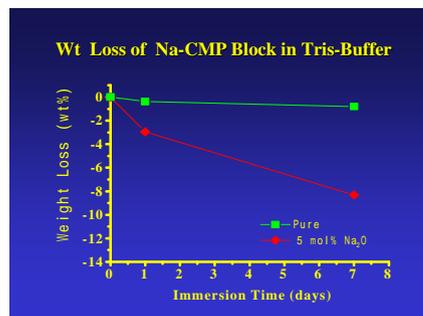
6. CMP



5.

(Ca/P = 0,5).

CMP

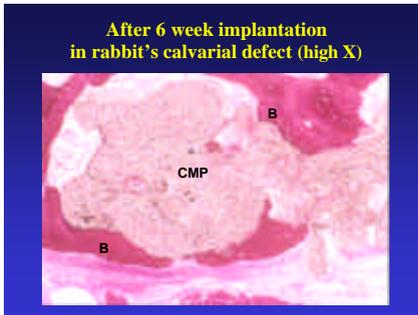


7.

CMP

Buffer

( ).



8. 4, 6

가

calcium metaphosphate (CMP, Ca/P = 0,5)  
( 5).

CMP

200 - 1,000  $\mu$ m

Na<sub>2</sub>O

가

6 7 CMP

4 6 CMP

( 7).<sup>8</sup>

HA HA/TCP

3.

CMP

4 6 CMP

가

가

. CMP

HA HA/TCP

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