

Universidad de Chile  
Ing en Biotecnología

# Remodelación Tisular

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## Remodelación Tisular

Recambio normal

Desarrollo

Inflamación

Reparación

Invasión tumoral y  
Metástasis

# Vías de Degradación de Moléculas de MEC

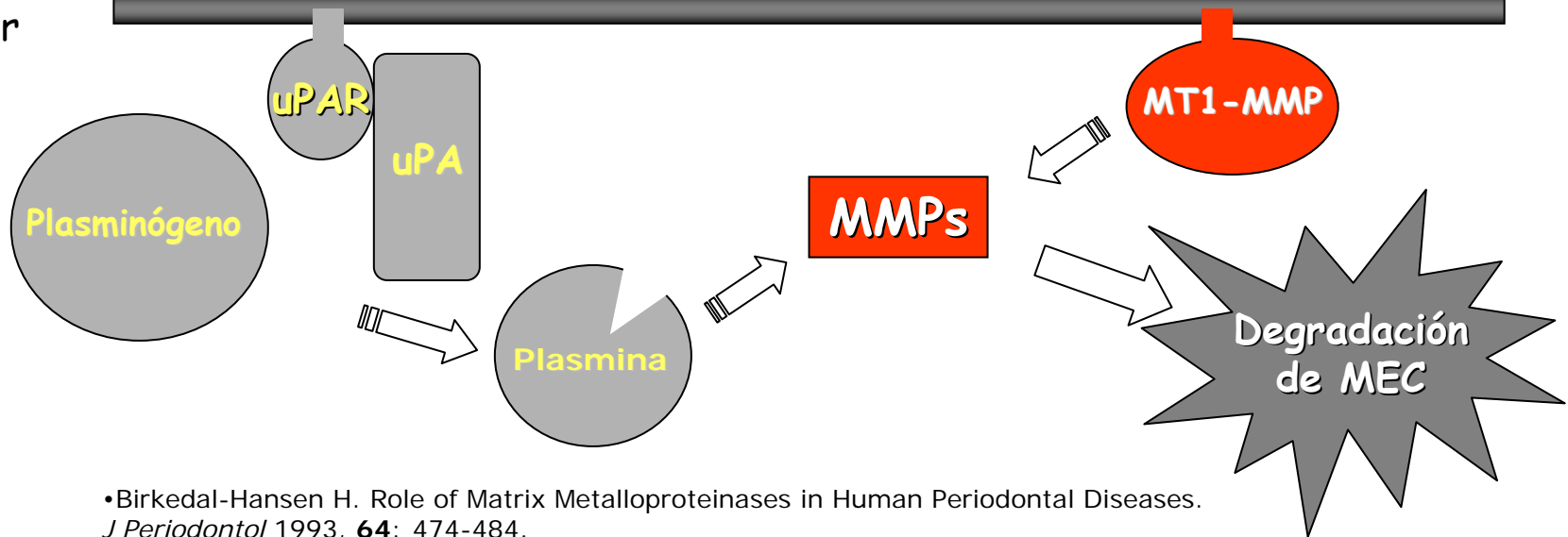
Vía del  
plasminógeno  
Serín-proteasas  
Pericelular

Vía de las  
Metaloproteinasas  
de MEC (MMP)  
Pericelular

Vía Fagocítica  
Catapsinas  
(Intracelular)

Vía  
Osteoclástica  
Catapsinas  
(Pericelular)

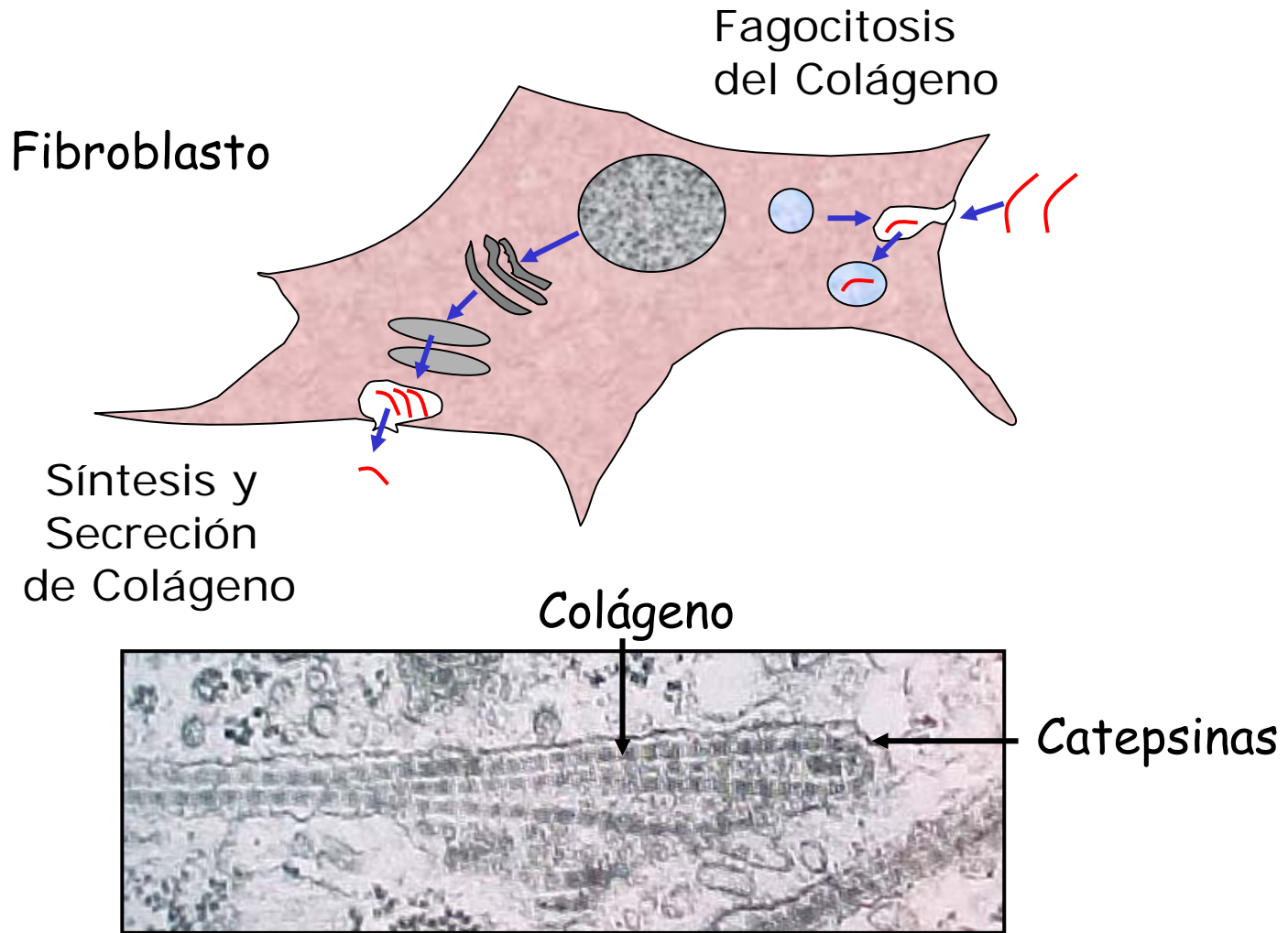
Membrana  
Celular



•Birkedal-Hansen H. Role of Matrix Metalloproteinases in Human Periodontal Diseases.  
*J Periodontol* 1993, **64**: 474-484.

•Murphy G and Gavrilovic J. Proteolysis and cell migration. Creating a path.  
*Curr Opin Cell Biol.* 1999, **11**: 614-621.

# Vía Fagocítica



# Metaloпротеinasas de Matriz Extracelular

## Colagenasas

Colagenasa 1 (MMP-1)  
Colagenasa 2 (MMP-8)  
Colagenasa 3 (MMP-13)

## Gelatinasas

Gelatinasa A (MMP-2)  
Gelatinasa B (MMP-9)

## Estromalisinas

Estromalisina 1 (MMP-3)  
Estromalisina 2 (MMP-10)

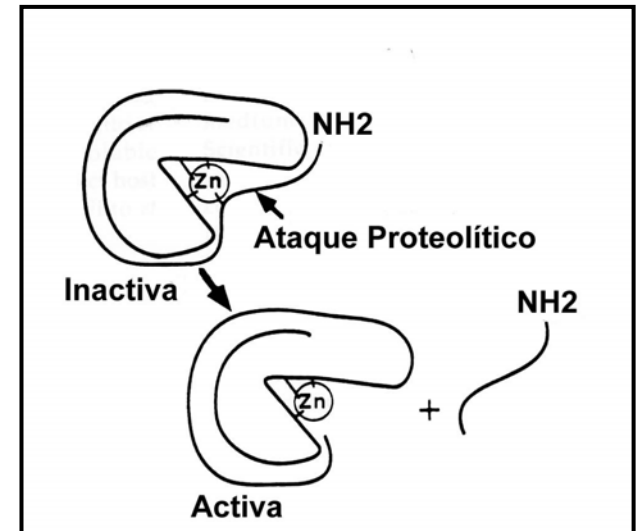
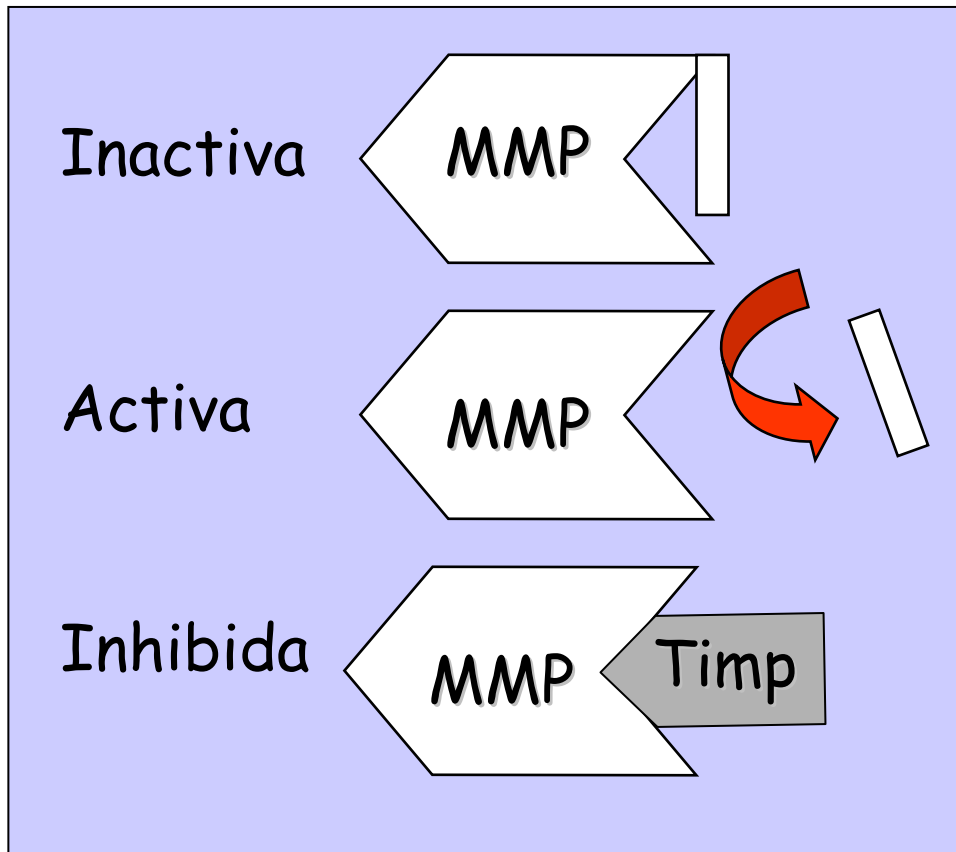
## MMP de membrana

MT1-MMP (MMP-14)  
MT2-MMP (MMP-15)  
MT3-MMP (MMP-16)  
MT4-MMP (MMP-17)

## Matrilisina y otras MMPs

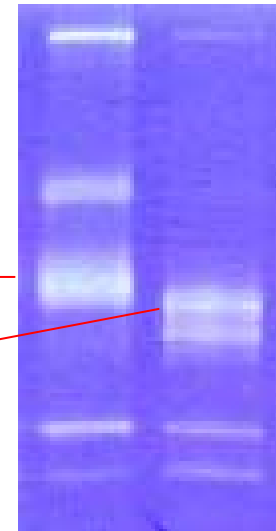
Matrilisina (MMP-7)  
Estromalisina-3 (MMP-11)  
Metaloelastasa (MMP-12)  
Enamelisina (MMP-20)

# Regulación de la actividad de las MMPs



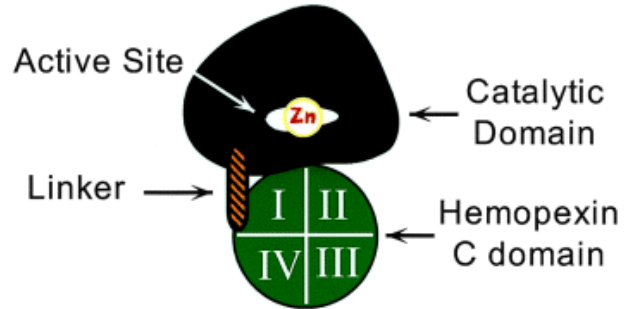
Pro-MMP-9

MMP-9 activa

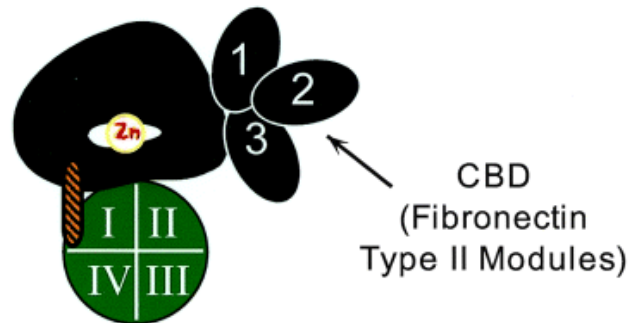


# Regulación de la actividad de las MMPs

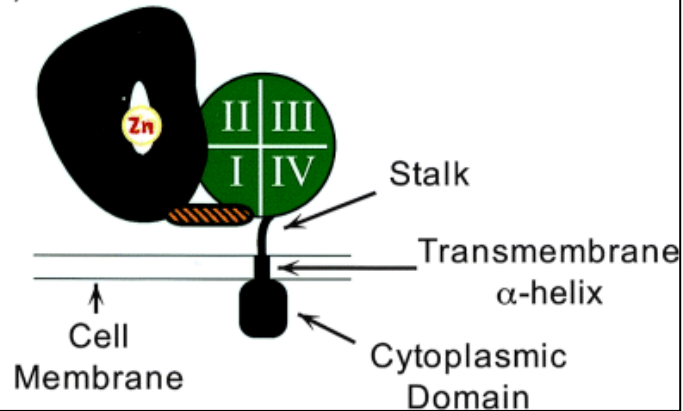
a) Archetypal MMP Structure



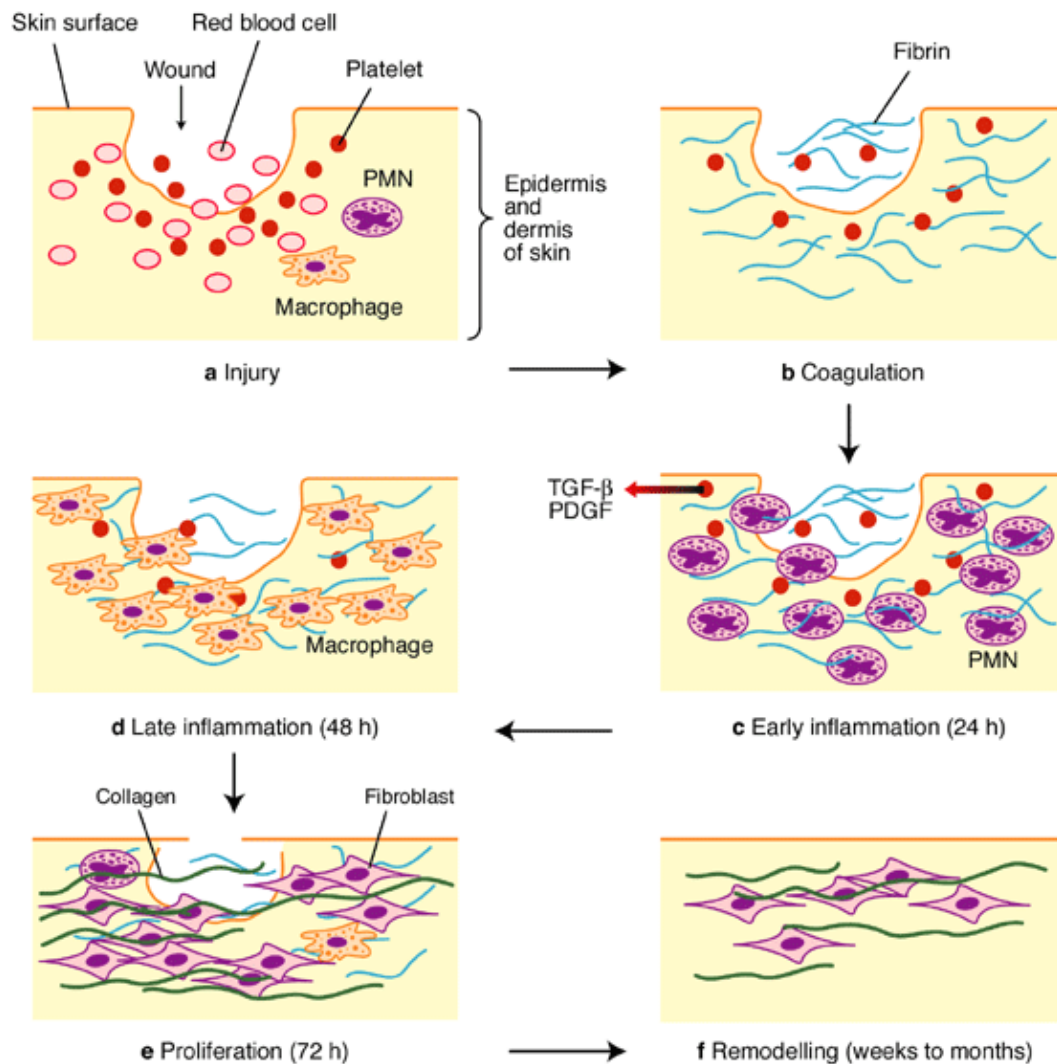
b) Gelatinases



c) MT-MMPs



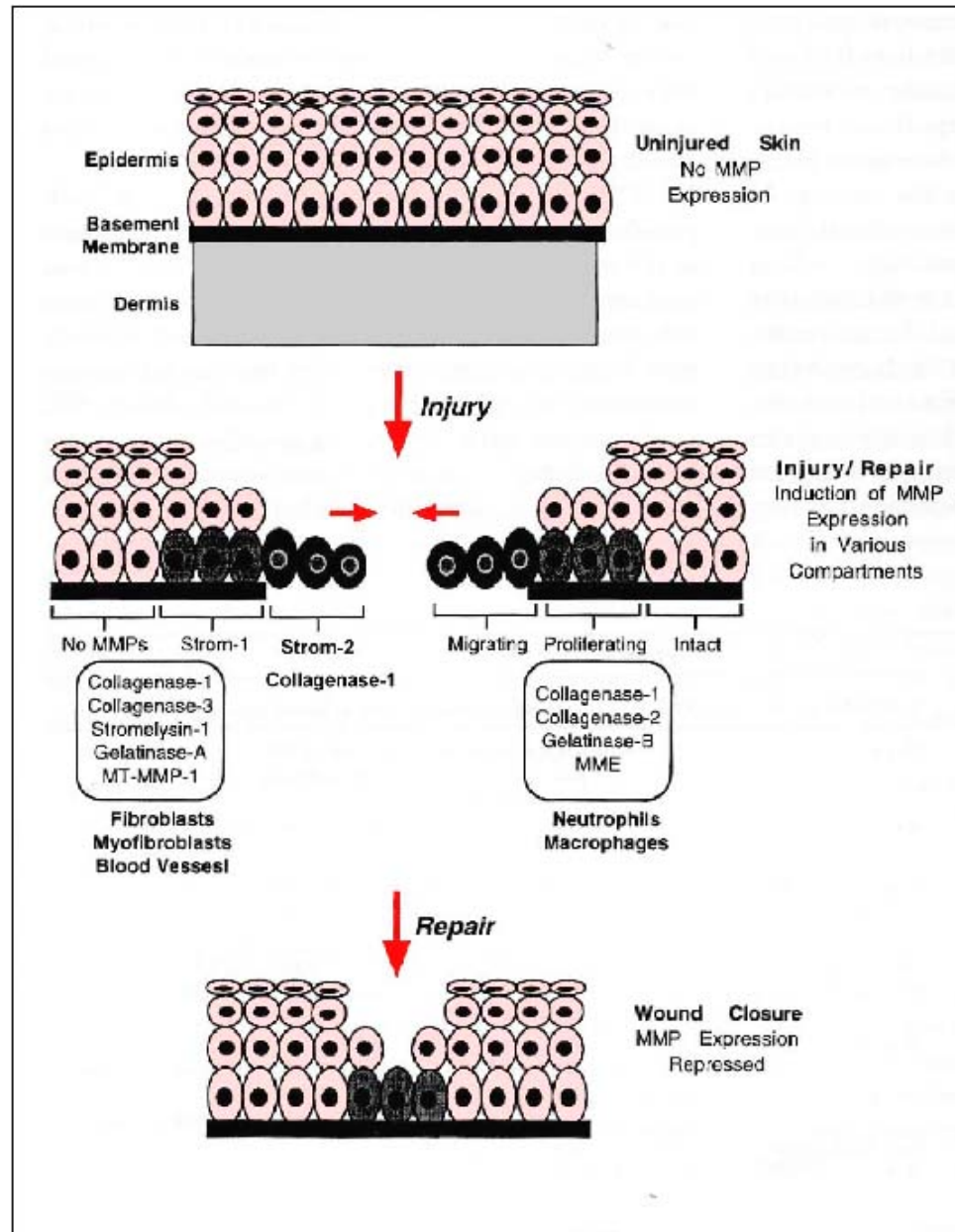
# Reparación Tisular



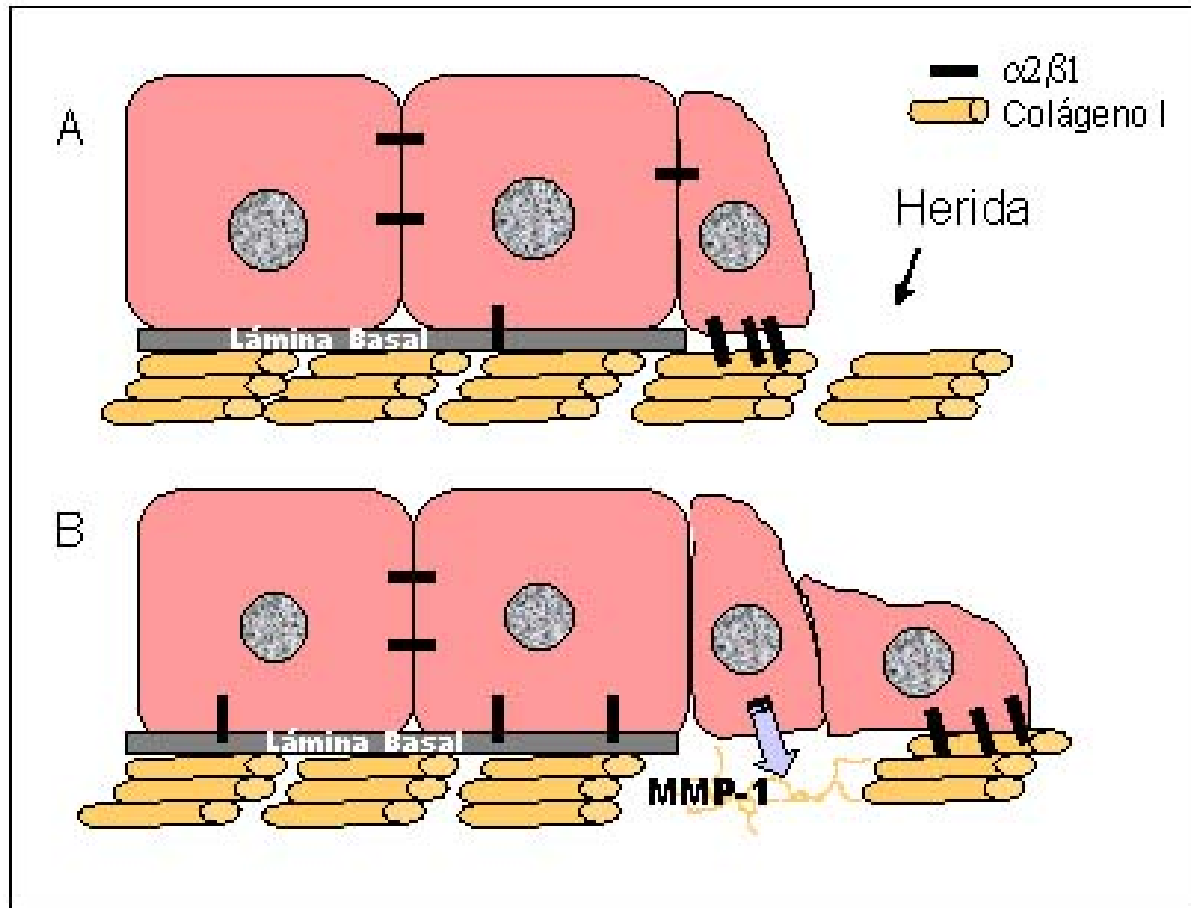
The phases of cutaneous wound healing

Expert Reviews in Molecular Medicine©2003 Cambridge University Press

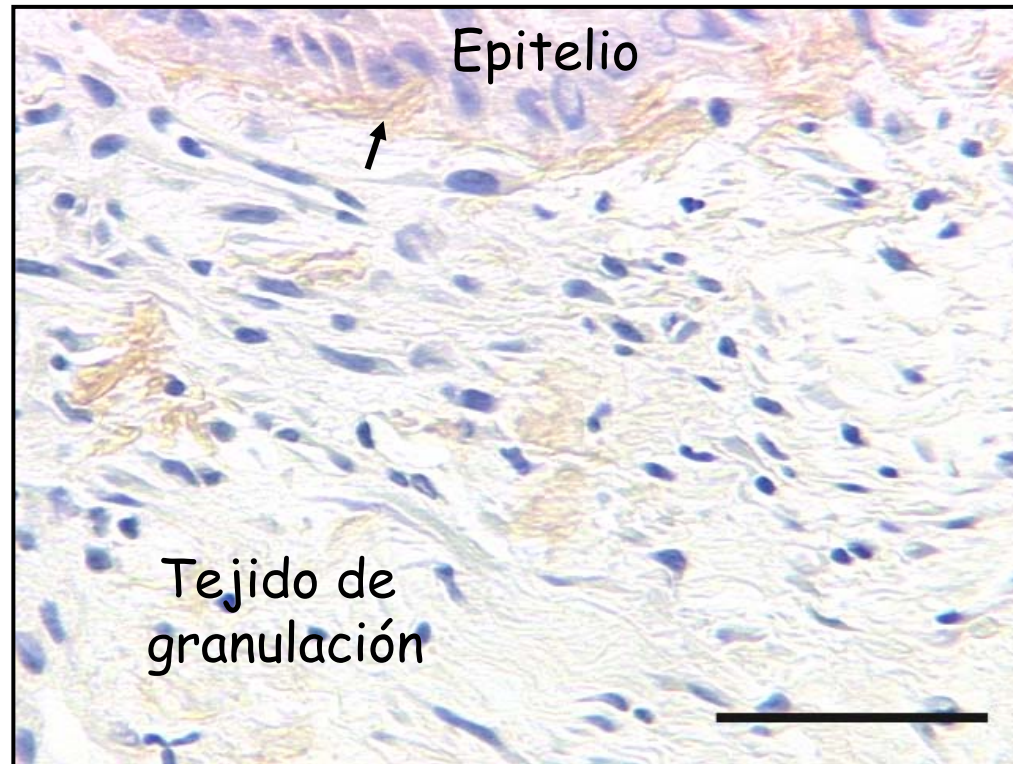
# Reparación Tisular



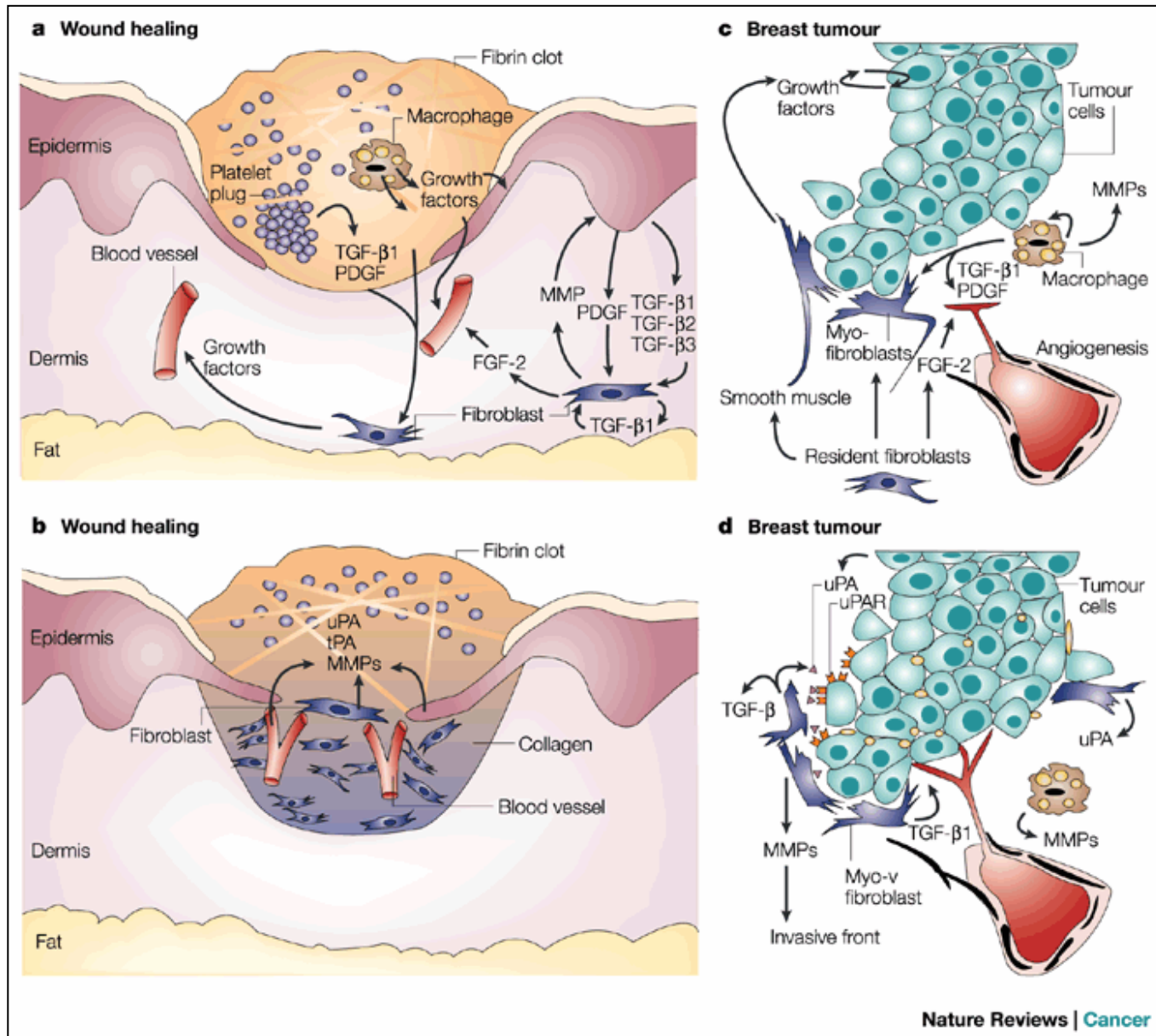
# Reparación Tisular



# Reparación Tisular



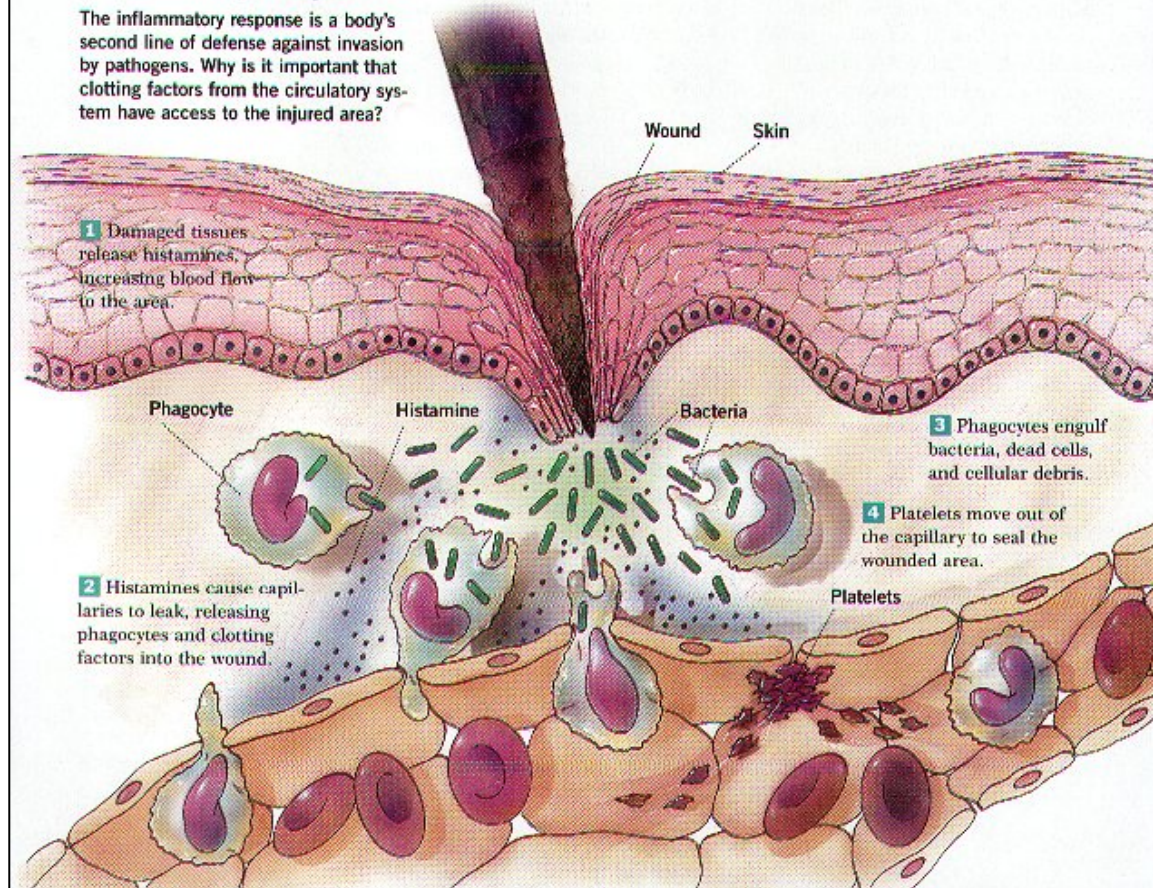
# Invasión tumoral y metástasis



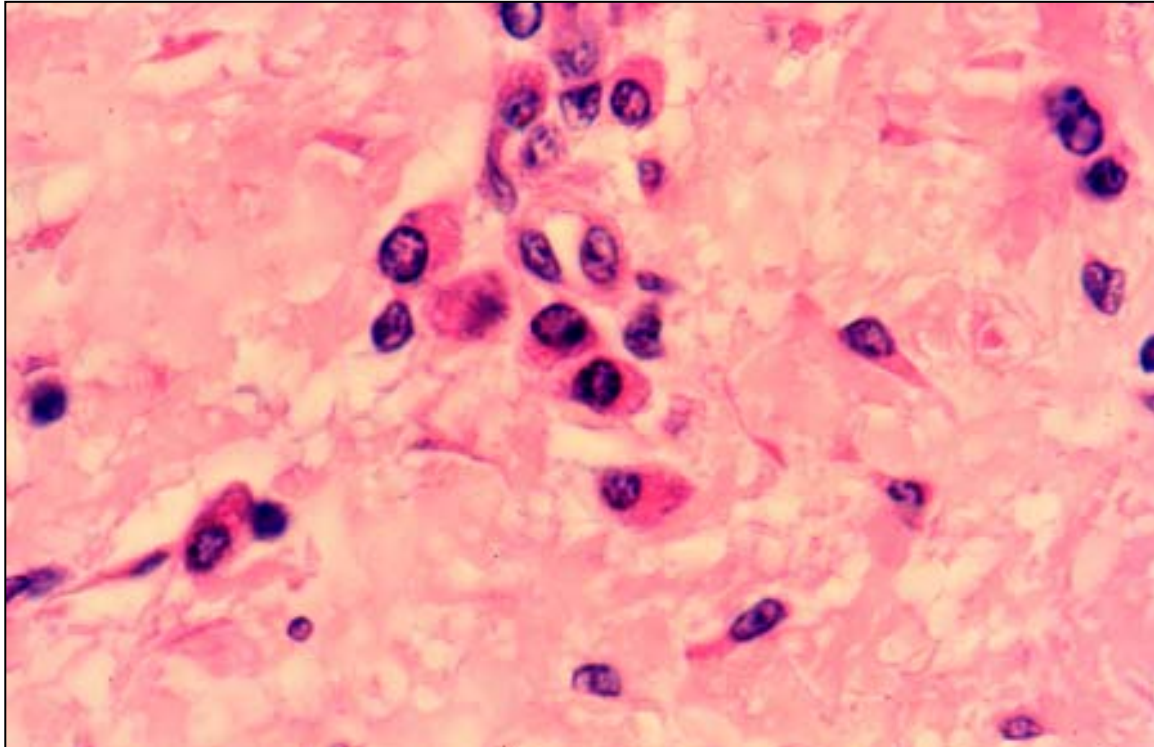
# Inflamación

## Steps of the Inflammatory Response

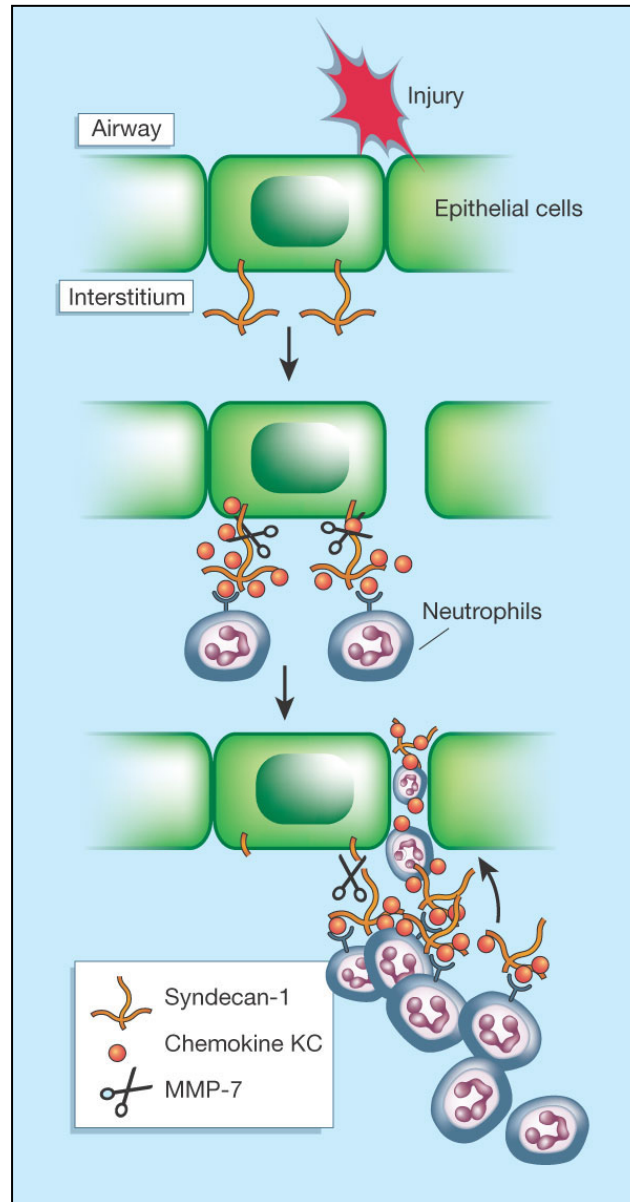
The inflammatory response is a body's second line of defense against invasion by pathogens. Why is it important that clotting factors from the circulatory system have access to the injured area?



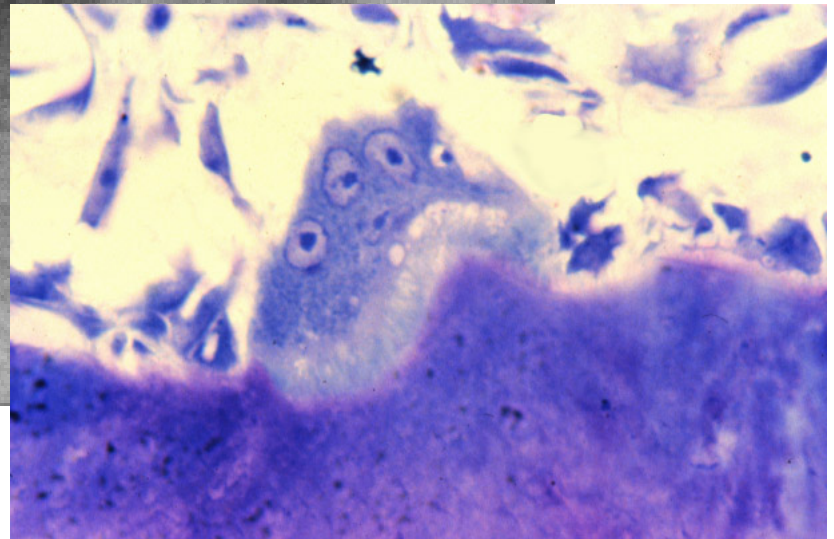
# Inflamación



# Inflamación



# Inflamación





## Regulación de la actividad de factores de crecimiento

