BIOLOGICAL FRAMEWORKS FOR ENGINEERS

Session #18 [µm: Cell-Cell and Cell-ECM Interactions]

General Objectives:

- ✓ Examine cell-cell and cell-ECM interactions.
- ✓ Discuss the importance of each connection from a physiologic perspective.

Central Framework:

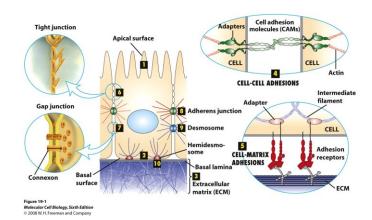
✓ Cell-cell interactions facilitate integrated responses and the passing of mechanical information.

Session Outline:

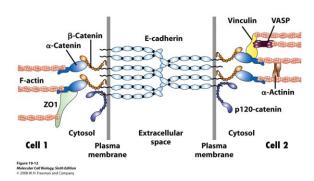
A. Cell-to-Cell

Tight Junctions

Gap Junctions



Adherens Junctions



B. Cell-to-ECM

Basal Lamina (Basement Membane)

Glycoaminoglycans (GAGs)

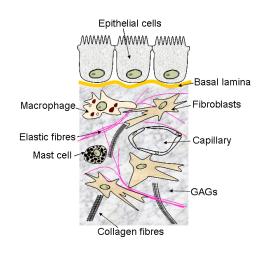
<u>Elastin</u>

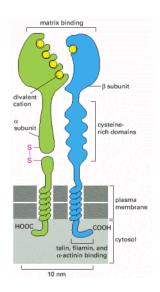
<u>Collagen</u>

<u>Laminin</u>

Fibronectin

<u>Integrins</u>





Focal Adhesions

