CHAPTER 7 HOLDING CELLS TOGETHER THE CYTOSKELETON





CELL FRAMEWORK

- PLANTS, ANIMALS, FUNGI
- MICROTUBULES /LARGE
- MICROFILAMENTS/SMALL
- MADE FROM PROTEIN/TUBULIN
- PROTEIN EXTENSIONS/ 9+2
- CILIA, FLAGELLA, PILI
- CENTRIOLES/CELL DIVISION









Figure 7.24 Ultrastructure of a eukaryotic flagellum or cilium





Figure 7.23x Sea urchin sperm

Figure 7.23 A comparison of the beating of flagella and cilia





Figure 7.22 Centrosome containing a pair of centrioles



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Figure 7.26 A structural role of microfilaments



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Figure 7.29 Extracellular matrix (ECM) of an animal cell





Figure 7.21 Motor molecules and the cytoskeleton





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Figure 7.27 Microfilaments and motility



PLANT CELL CONNECTION

- PRIMARY CELL WALL/CELLULOSE AND HEMICELLULOSE
- DEVELOPS FIRST
- SECONDARY CELL WALL/CELLULOSE AND LIGNIN AND MADE UP OF 3 LAYERS
- PLASMODESMATA



Figure 7.28 Plant cell walls



LINKS BETWEEN CELLS

- DESMOSOMES/THESE ARE PROTEIN CONNECTIONS
- HOLD CELL MEMBRANES TOGETHER
- VARIOUS KINDS OF JUNCTIONS
- HOLD CELL MEMBRANES
 TOGETHER/COMMUNICATION

Figure 7.30 Intercellular junctions in animal tissues





Figure 7.31 The emergence of cellular functions from the cooperation of many organelles

