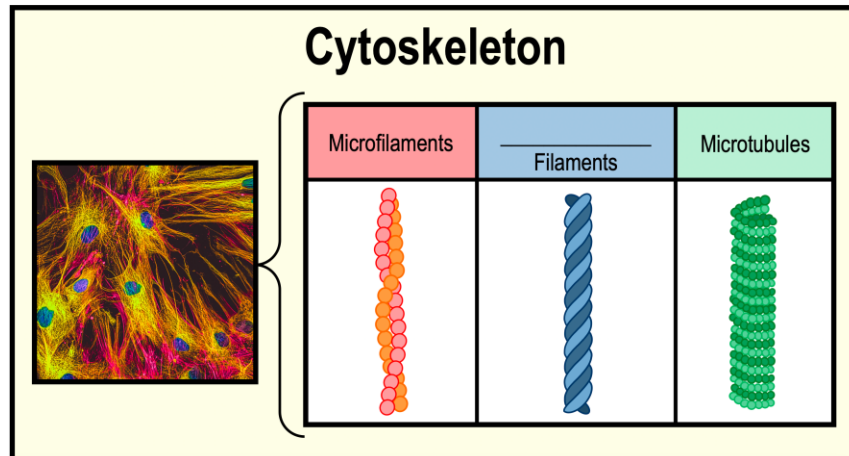


CONCEPT: INTRODUCTION TO THE CYTOSKELETON

- **Cytoskeleton:** a network of elongated proteins in the _____ with multiple functions.
 - *Functions* include providing cell-_____, *structure*, _____, *transportation*, & *biosignaling*.
- _____ major components of the *cytoskeleton*:
 - 1) **Microfilaments:** _____ in size & usually made of thin rods of repeating _____ proteins.
 - 2) **Intermediate Filaments:** _____ in size & made of *variable* proteins.
 - 3) **Microtubules:** _____ in size & forming *tubes* made of repeating _____ proteins.



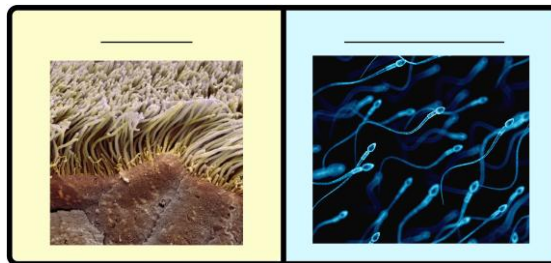
PRACTICE: What component of the cytoskeletons do motor proteins use to transport vesicles?

- a) Actin. b) Microfilaments. c) Microtubules. d) Intermediate filaments.

Cilia & Flagella

- *Microtubules* are a major structural component of _____ & _____, which provide cell *movement*.
 - 1) **Cilia:** multiple _____ “hair-like” structures that move like “oars” to move objects or provide cell movement.
 - 2) **Flagella:** _____ “tail-like” structures that move like a “whip” to provide cell movement.

EXAMPLE: Cilia & Flagella.



PRACTICE: In human cells, _____ are used to move a cell within its environment while _____ are used to move objects in the environment relative to the cell.

- a) Cilia, pseudopodia. b) Flagella; cilia. c) Cilia; flagella. d) Microfilaments; microtubules