Lysosomes:

The lysosome is the “toolbox,” __________________ are the “tools”

Multiple types each of:

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- •
- •
- •
- •
Vesicle traffic to/from early endosomes:

Maturation/formation of an active lysosome:
Endocytosis to lysosomes:

Endocytic vesicle forms.

Endocytic vesicle fuses with early endosome; protons lower pH.

Early endosome matures; digestive enzymes received.

Mature lysosome; macromolecules digested.

Using existing lysosomes for phagocytosis & autophagy:

(a) PROCESS: AUTOPHagy

1. Damaged organelle surrounded by membrane.
2. Delivery to lysosome.
3. Small molecules recycled.

(b) PROCESS: PHAGOCYTOSIS

1. Detection.
2. Phagosome formation.
3. Delivery to lysosome and digestion.
4. Small molecules recycled.
What about plant cells, which lack lysosomes?

- __________ assume the function of lysosomes in plants, in addition to roles in osmotic balance and storage.

But Mr. Mehrtens, I want to go to medical school... why is any of this relevant?