Remember that some cells divide more often than others e.g. hair is every 18 hours

Apoptosis- programmed cell death

Somatic cells- of the body

- 5. Respond to stimuli
  - Cytochemotaxis- cells move in response to chemicals
  - Phagocytic cells e.g. macrophages can ingest material See http://www.youtube.com/watch?v=JnIULOjUhSQ
  - Divide (in response to mitogens) • Mitogen -chemical substance normally a protein that stimulates a cell to divide

## When and how were cells discovered? 1665- Hooke 1673- Leeuwenhoek Philosopher, architect, polymath Scientist Coined the term "cell" to describe Invented 25 types of hand-made "boxes" in the cork he examined as microscopes he thought it resembled the rooms Submitted findings by letter monks lived in Royal Solie Correct unicellular microorganisms Thought cells only existed in plants From N and fungi (animalcules) in pond water **Observed RBC in vertebrates** ew 01074- identified protozoans 1838- Schleiden 1676- visualise and identify bacteria 1677- visualise and identify vacuole anist Concluded all plant parts are made of 1677- visualise and identify cells spermatozoa 1682- visualise and identify striated muscle fibres 1839- Schwaan Physiologist 1854- Virchow Stated all animal tissue are made of Physician cells Didn't accept theory of spontaneous generation Concluded cells arise from pre-19<sup>th</sup> Century- cell theory existing cells All organisms consist of one or more 1950- Watson and Crick cells Discovered the structure of DNA The cell is the basic structural unit of all organisms Found that the cell contains hereditary All cells arise from pre-existing cells info (DNA) This is passed on in cell division So it's the basic unit of life, smallest living Modern biology is at cross-roads of entity and is the basis of reproduction cytology, genetics, biochemistry – i.e. they are big areas and each is a subject

in their own place