

### **Contributions that led to the discovery of cells and the formation of the cell theory:**

- **Francesco Redi** (1629-1697) performs an experiment to show that maggots will not appear on rotting meat if flies are kept away.
  - **Spallanzani** (1729-1799) skeptical of Needham and boils broth for a longer period of time. No life appeared.
  - **Louis Pasteur** (1822-1895) designs and performs an experiment that shows that microorganisms that appear in a sterilized meat broth actually come from microorganisms found in the air and do not form spontaneously from the nonliving broth.
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- **Robert Hooke** (1665) using a primitive set of lenses to form a simple microscope, observes “empty room like apartments” in samples of once living tree bark. Hooke names these compartments **cells**.
  - **Anton van Leeuwenhoek** (1667) designs his own microscopes that are far more powerful than any of the primitive forms at the time. Over the next number of years Leeuwenhoek writes extensively about his observations of tiny living organisms.
  - **Robert Brown** (1831) observes a darker region in all cells near the centre and named it the nucleus.
  - **Mathias Jacob Schleiden** (1838) writes, “All plants are made of cells”.
  - **Theodor Schwann** (1839) writes “All animals are made up of cells” and further goes on to state that “All living things are made up of cells”.
  - **Alexander Carl Henrich Braun** (1845) wrote “the cell is the basic unit of life”.
  - **Rudolph Virchow** (1858) stated all living cells arise from pre-existing cells.