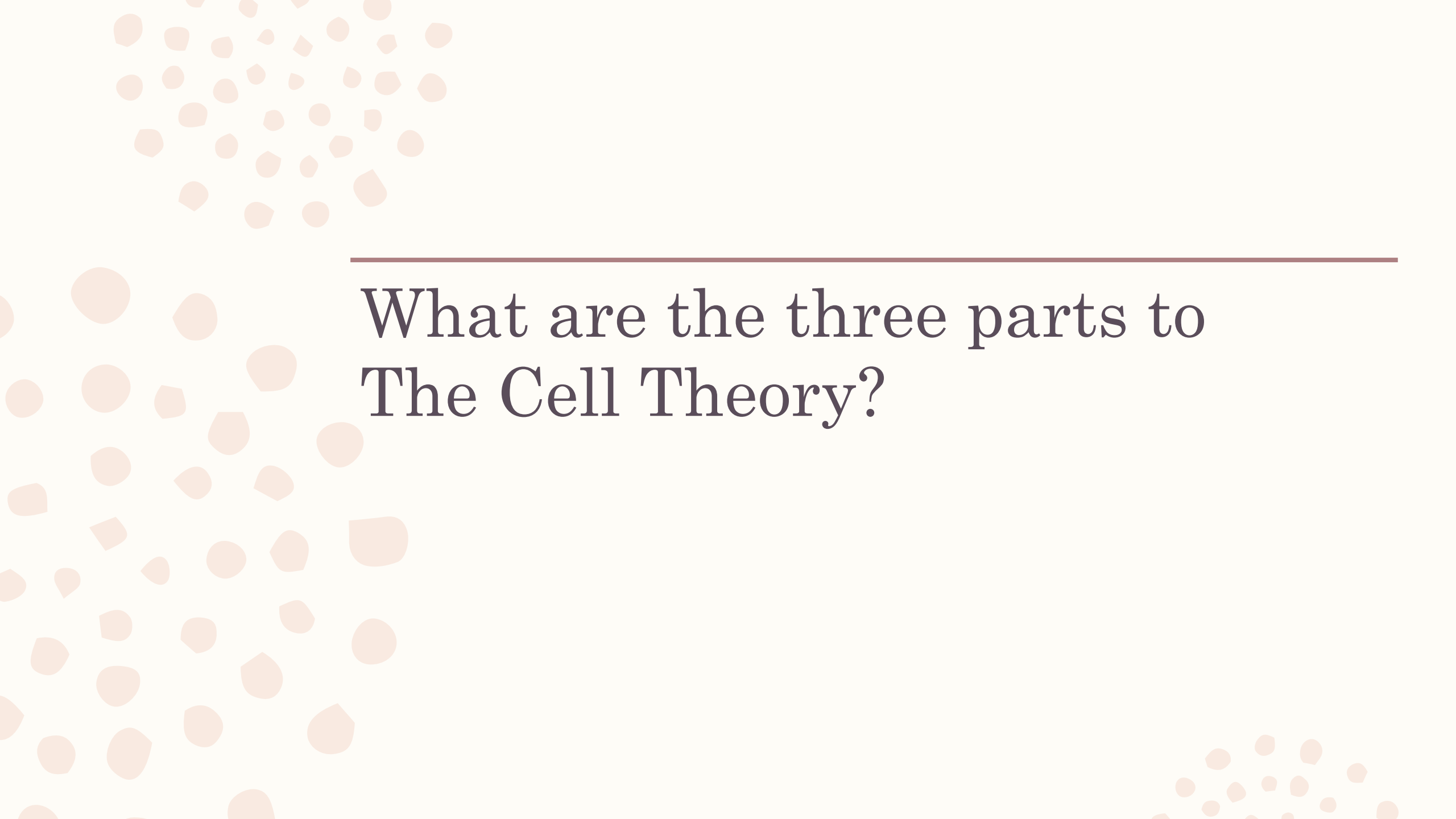
The background of the slide is a light cream color, decorated with a pattern of small, irregular dots in two colors: a muted orange and a dark purple. These dots are scattered across the entire background, with some appearing in small, dense clusters.

# What is The Cell Theory?

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How we came to know about cells.

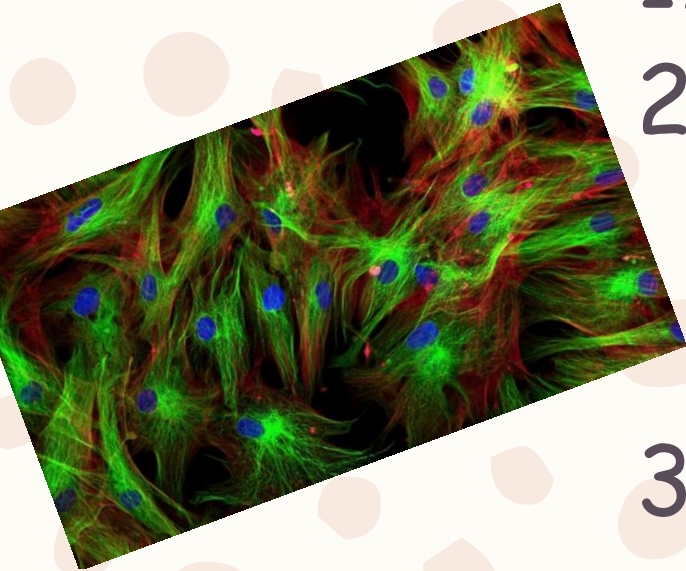


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What are the three parts to  
The Cell Theory?

# What are the three parts to The Cell Theory?

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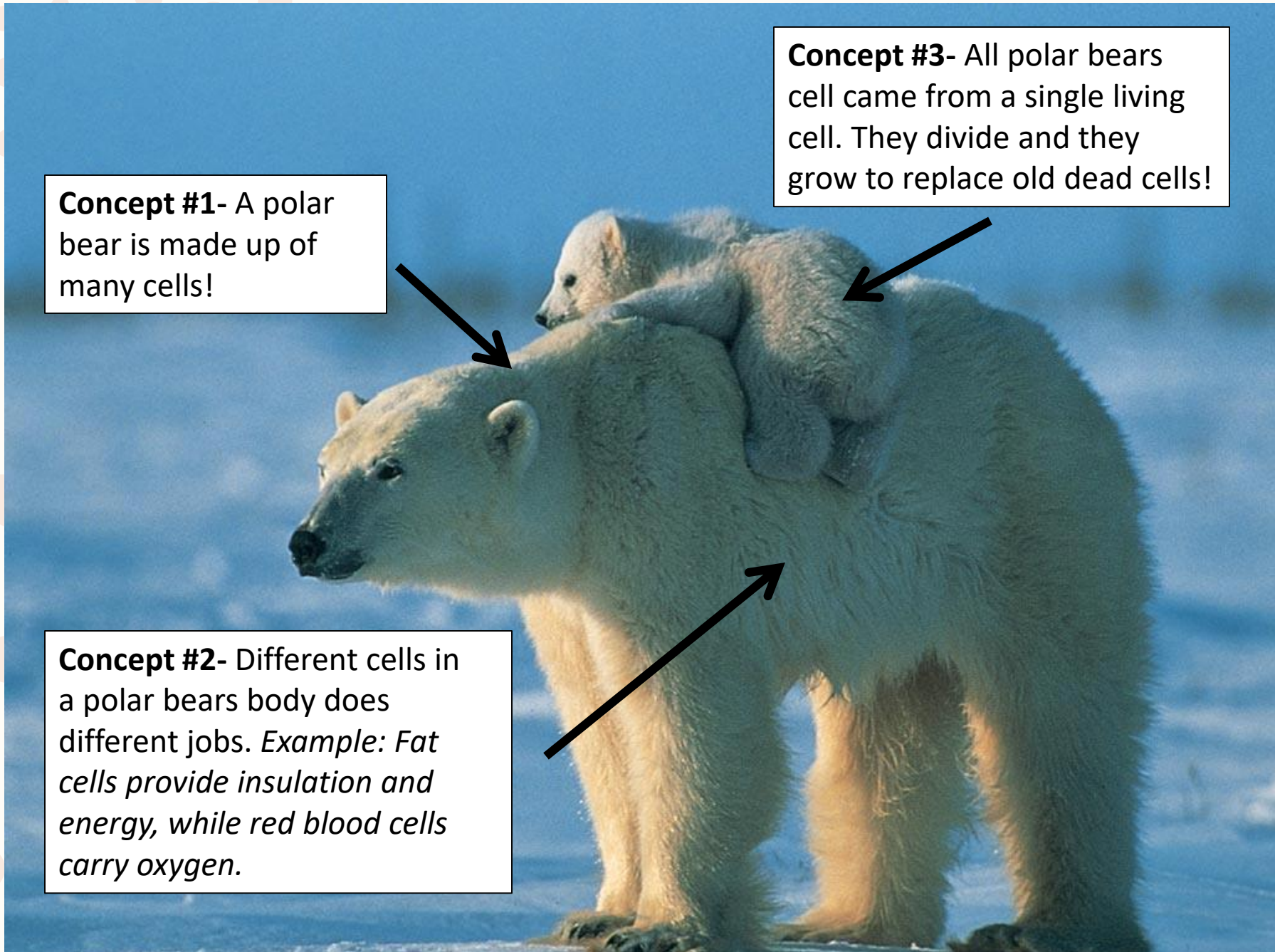


1. All living things are made of cells.
2. Cells are the basic units of structure and function in living things.  
(structure = *form*; function = *purpose*)
3. Living cells only come from other living cells.

**Concept #1-** A polar bear is made up of many cells!

**Concept #2-** Different cells in a polar bears body does different jobs. *Example: Fat cells provide insulation and energy, while red blood cells carry oxygen.*

**Concept #3-** All polar bears cell came from a single living cell. They divide and they grow to replace old dead cells!



# Cell Theory Concept #3: Living cells **only come from other living cells.**

People believed that maggots mysteriously appeared on decaying meat. Some thought that the meat actually created maggots.

1. Redi placed meat in two identical jars. He left one jar uncovered and allowed flies to come into contact with the meat. He covered the other jar with a cheese cloth or other cloth that allowed air to pass through. Contact with the air allowed the meat to decay, just as the other would.
2. After a short period of time Redi observed maggots (fly larvae) on the decaying meat of the open jar. There were no maggots on the meat in the covered jar
3. Redi concluded that the flies laid eggs on the meat in the open jar which caused the maggots



**Controlled Experiments were born**



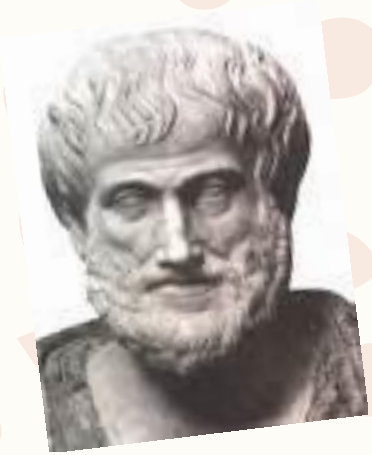
Who were the cell scientists?



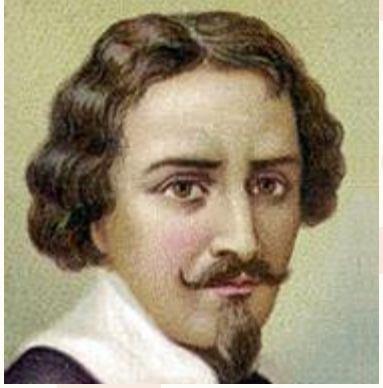
# Who were the cell scientists?

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## 1. Aristotle



- 334 B.C.E. (B.C.E.= Before Common Era)
- Observed nature directly
- Classified all known organisms as either *plants or animals*



# Who were the cell scientists?

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## 2. Hans & Zacharias Janssen

- 1595
- Produced the first microscope by lining up two lenses

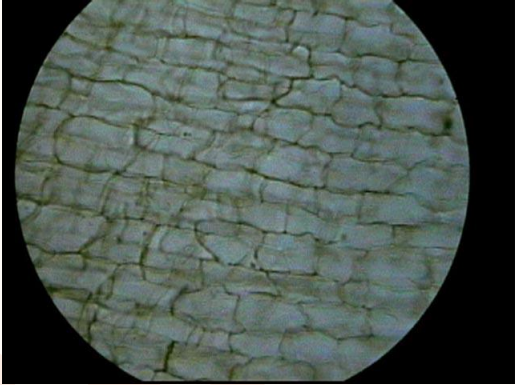


The First  
Compound  
Microscope  
(circa 1595)



# Who were the cell scientists?

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## 3. Robert Hooke

- 1665
- Observed cork cells through a compound microscope which revealed empty cells
- First to call the spaces in the cork "cells"





# Who were the cell scientists?

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## 4. Anton van Leeuwenhoek

– 1675

– Observed **living** cells (bacteria) through a simple microscope





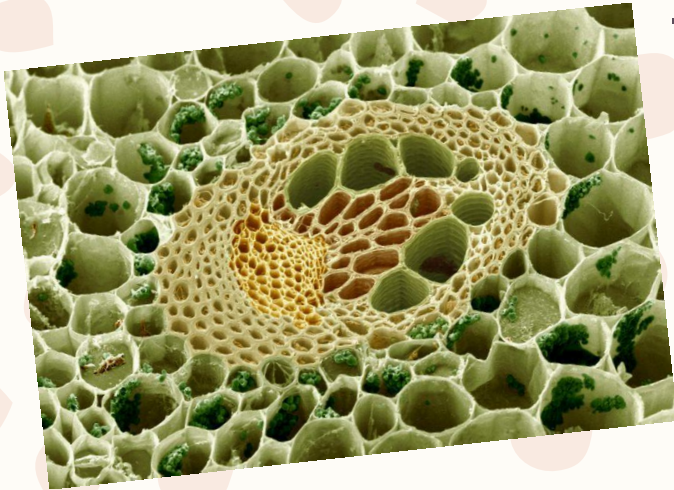
# Who were the cell scientists?

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## 5. Matthias Schleiden

– 1838

– Discovered that plants were made of cells





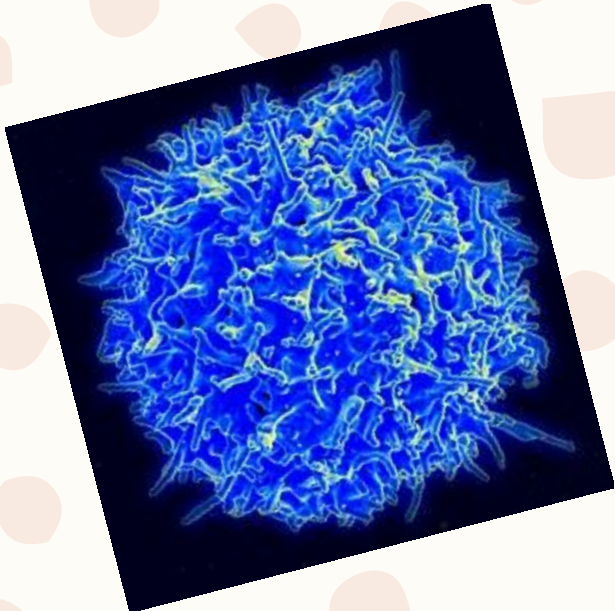
# Who were the cell scientists?

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## 6. Theodor Schwann

- 1839

- Discovered all animals were made of cells



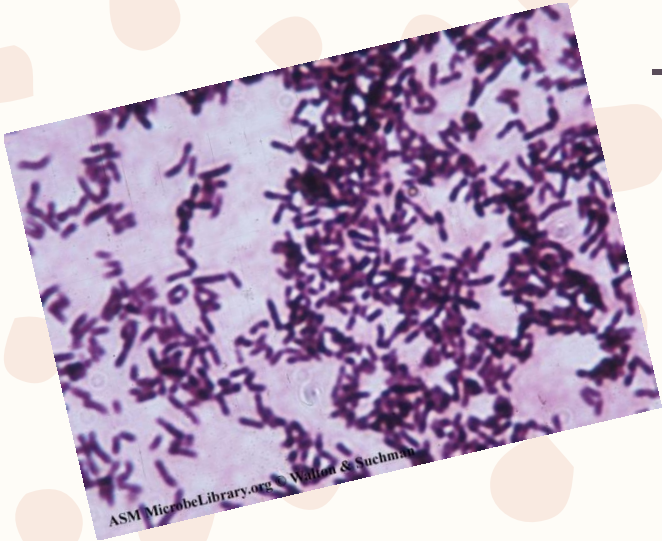


# Who were the cell scientists?

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## 7. William Henry Perkin

- 1856
- Developed a purple dye which is used to stain slide to show cells





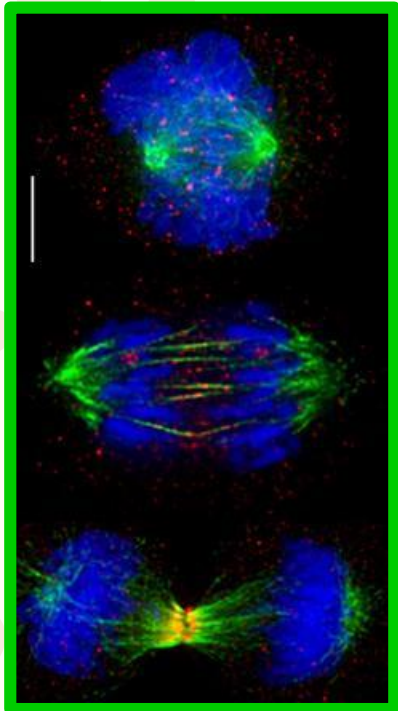


# Who were the cell scientists?

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## 8. Rudolph Virchow

- 1858
- Stated that cells can **only** arise from pre-existing cells



"Cells are the last link in a great chain that forms tissues, organs, systems, and individuals. Where a cell exists, there must have been a preexisting cell."





<https://www.youtube.com/watch?v=4OpBylwH9DU>

# Create a Cell Theory Poster

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Assignment: Create a poster to explain the three parts of the cell theory to someone who does not understand it

Your poster must have:

- Color
- All three parts of the cell theory IN YOUR OWN WORDS
- Pictures
- Brief description of how we got the cell theory (its history and who did what) that is IN YOUR OWN WORDS