

# Fearfully and wonderfully made

*I will give thanks to You, for I am fearfully and wonderfully made; Wonderful are your works, and my soul knows it very well.*

*Psalm 139:14*

## Under the microscope...let's zoom in

### The Cell

- The cell is the basic structural, functional, and biological unit of all known living organisms
- Inside the cell are “little organs” or organelles that make it functional.
- Each organelle performs a specific task.
- Most cells have an estimated 100,000 “machines” called organelles
  - These parts perform thousands of tasks continuously to stay alive
  - The cell cannot live without all these parts working at the same exact time.
  - The human body has organs that rely on each other to stay alive

*“So that there may be no division in the body, but that the members may have the same care for one another.” 1 Cor 12:25*

### Inside the cell nucleus

- The nucleus takes up about 10% of the cell
- It has pores or “gates” for larger molecules to go through.
- Contains the DNA of the cell

### DNA

- DNA which stands for Deoxyribonucleic Acid. It is found tightly packed inside the nucleus of a cell.
  - This package of DNA is called a chromosome.
- During replication of DNA it unwinds itself so that it can be copied.
  - It also unwinds itself so that its instructions can be copied to make proteins for other biological processes.

**DNA replication video:** <https://www.youtube.com/watch?v=OnuspQG0Jd0>

- If you unwrap all of the DNA you have in all your cells, you could reach the moon 6000 times!
- Researchers were able to store 700 TB of data on a single gram of DNA
- Our entire DNA sequence is called a genome and contains 3,000,000,000 DNA bases.
  - That would fill 3 Gigabytes of storage space

### Proteins

- Proteins are large, complex molecules that have many critical roles in the body. Proteins are made up of amino acids.
- Proteins are made up of hundreds or thousands of amino acids each.
- They are like Legos. You have so many types of bricks with which to build with to make each protein.

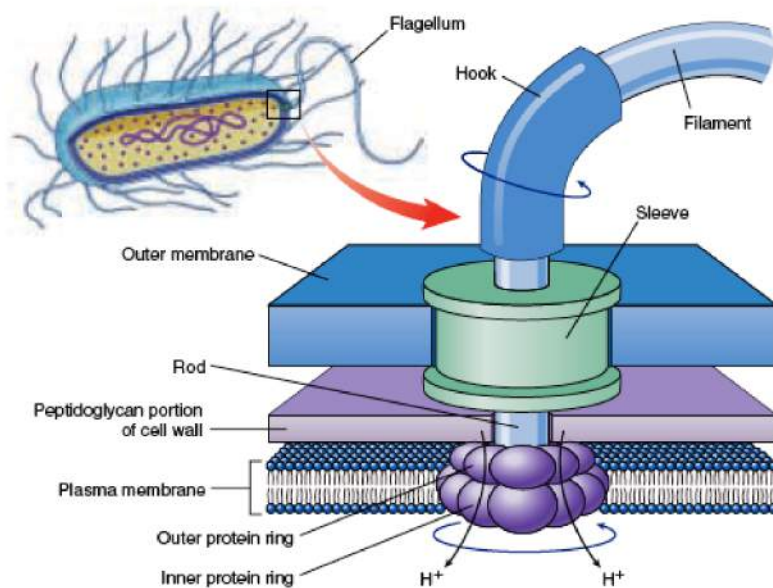
**Protein video:** <https://www.youtube.com/watch?v=gG7uCskUOrA>

Inside the cell	Inside a castle
<ul style="list-style-type: none"> <li>Antibodies- bind to foreign particles, such as viruses and bacteria, to protect the body</li> </ul>	<ul style="list-style-type: none"> <li>Town watch/guard</li> </ul>
<ul style="list-style-type: none"> <li>Enzymes- Carry out almost all of the thousands of chemical reactions that take place in a cell.</li> </ul>	<ul style="list-style-type: none"> <li>Trades people-bakers, teachers, janitors, accountants, farmers,</li> </ul>
<ul style="list-style-type: none"> <li>Structural proteins- these proteins provide structure and support for cells.</li> </ul>	<ul style="list-style-type: none"> <li>Construction works, carpenters, plumbers, electricians, engineers</li> </ul>
Transport proteins- proteins that carry atoms and small molecules within cells and throughout the body.	<ul style="list-style-type: none"> <li>Trains, planes, automobiles, taxis, ferries.</li> </ul>

### Laminin

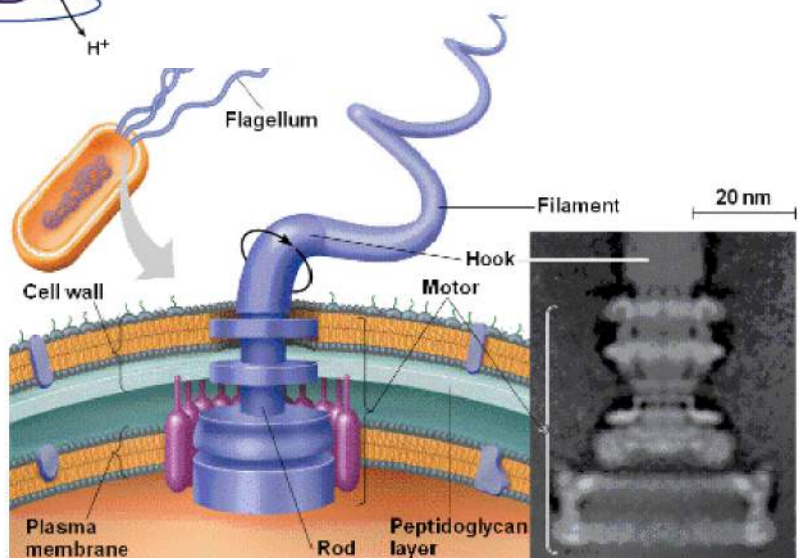
- Binding protein (protein equivalent of glue, but behaves differently than actual glue)
- "He is before all things, and in Him all things hold together." Col 1:17*

### Eubacterial flagellum

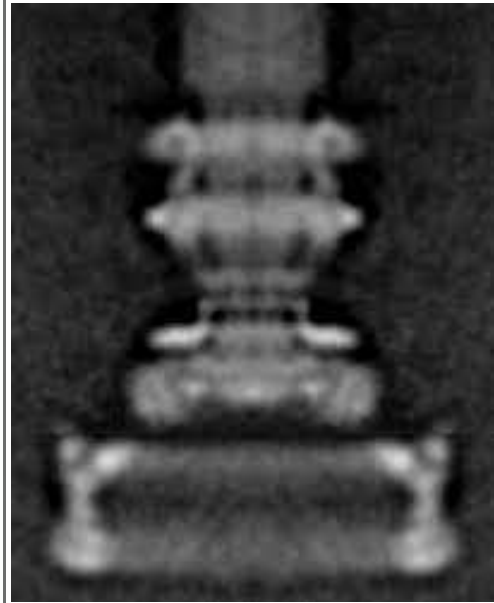
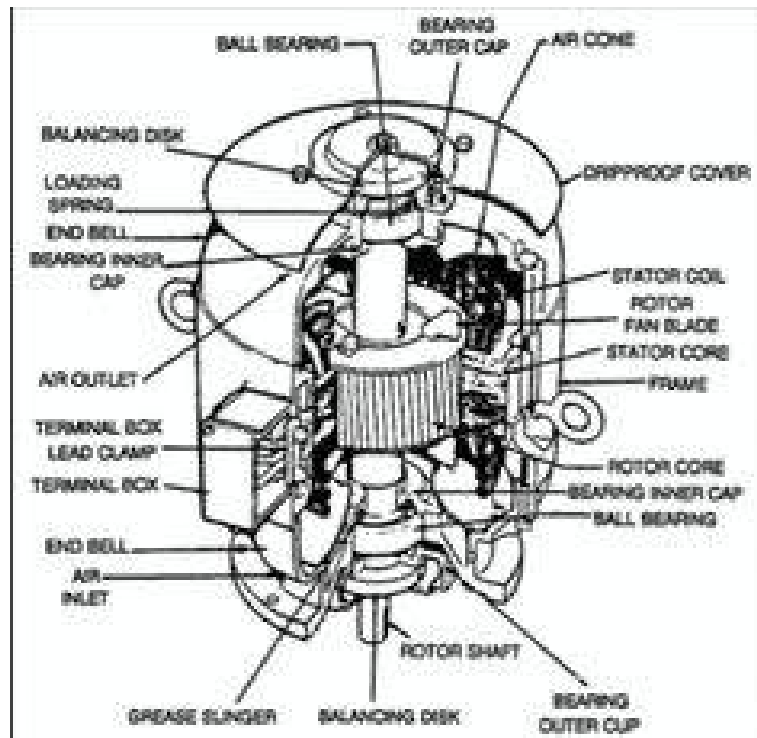


### Flagellum parts

- Made up of many different proteins, looks very close to a modern motor
- Moves about 10 body lengths per second.
  - A human being sprinting at a proportional rate would complete the 100-meter dash in slightly more than 5 seconds
  - Self assembling and repairing



## PSC Motor



### God Humbles Job

- Where you there when I laid the foundation of the earth? Job 38:4
- Do you give the horse his might? Job 39:19
- Is it by your understanding that the hawk soars? Job 39:26
- Is it at your command that the eagle mounts up and makes his nest on high? From there he spies out food; His eyes see it from afar. Job 39:27-29
- Behold the Behemoth which I made as well as you; Can anyone capture him when he is on watch? Job 40:15-24
- I will not keep silence concerning his (Leviathans) limbs, Nothing on earth is like him, One made without fear. Job 41:34

*Yet you made him a little lower than the angels, and you crown him with glory and majesty!*  
*Psalm 8:5*

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### Sources

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