

# Fearfully and Wonderfully Made

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- I. Introduction
  - a. 8<sup>th</sup> Grade Biology
    - i. Cell
      - 1. Cell membrane
      - 2. Nucleus
      - 3. Mitochondria
      - 4. Endoplasmic Reticulum
      - 5. Golgi Apparatus
      - 6. Vesicles
      - 7. Lysosomes
    - b. Ps. 139:14
- II. Key Thought: When we examine human life at the cellular level, we are fearfully and wonderfully made.
- III. Amazing things
  - a. Problem –
    - i. You are a cell in the wall of a blood vessel, and it has come to your attention that there is an infection nearby.
      - 1. You need the clean up crew of the body to come do something about it
      - 2. What do you do?
      - 3. You can't call them on the telephone
      - 4. You can't send a signal to the brain
        - a. There is no conscious thought involved in using our body's immune system
        - b. Each part of the immune system acts virtually independently in accomplishing its important work
      - 5. You are literally going to raise a red flag and hope that the white blood cell sees it.
    - b. The White Blood Cells
      - i. They are all over the body, traveling through the blood stream
        - 1. B/c of this, They are never far away from a source of infection
        - 2. But how do you get their attention?
      - ii. Traveling along the wall of the blood vessel
        - 1. b/c of God's Velcro
          - a. The cells of the blood vessel wall has the hooks
          - b. The white cells have eyes
          - c. They are made to fit together
            - i. Strongly enough
              - 1. the white blood cell sticks to the wall of the blood vessel

- ii. But not too strong
      - 1. Or the white blood cell would not be able to keep moving on its patrol of the body
    - iii. There is a reason it travels like that
      - 1. When a cell in the wall of the blood vessel
      - 2. Raises a red flag
      - 3. The White blood cell stops to respond
  - c. The skin of the cell
    - i. Mostly water on both sides
      - 1. Water dissolves almost everything
      - 2. The universal solvent
      - 3. How do you keep the machinery of life organized?
      - 4. The cell membrane
    - ii. This skin or membrane is the difference between life and death
      - 1. Lipid Bi-layer
        - a. Double-Bubble
        - b. The Velcro is embedded in the cell membrane so the white blood cells can roll along it
      - 2. It is not just a bubble, it performs amazing functions
        - a. Letting things in or out based on the constantly changing needs of the cell's function
        - b. Displaying information on its surface to communicate with other cells
        - c. Holds machines that can move the cell in a particular direction
        - d. Deploys a wide range of sensors to make the cell aware of changing condition in its environment so it can respond to them
        - e. Gives shape and structure to the cell
          - i. This shape could be constant
          - ii. Or constantly changing based on the function of the cell and the condition of its surroundings
  - d. The data repository of the cell
    - i. The Nucleus
    - ii. Inside is the DNA
      - 1. it has a pattern or blueprint for making red flags
      - 2. it has a pattern for everything the cell may need to build to perform all of its functions
  - e. The factories of the cell – Ribosomes
    - i. They is designed to assemble the raw materials called amino acids to build anything specified by the DNA blueprints
    - ii. They could just build proteins and turn them loose inside the cell, but like most factories, their products are usually built to be delivered someplace specific

- iii. In our case, there is an infection, so we need a large order of red flags delivered to the surface of the cell to get the attention of the white blood cells
- iv. “And the cell will actually manufacture the parts that it needs on the fly, from information that's brought from the nucleus by molecules that read the genes. No life, from the smallest life to everybody here, would be possible without these little micro-machines.”
- f. The tractor trailers of the cell
  - i. When you have a factory and you need your goods delivered to where they can be used or sold, what do you do?
    - 1. You hire a shipping company
      - a. They will send a fleet of tractor-trailers
      - b. Trailer – is the container that holds the goods
      - c. Tractor – is the 18-wheeled Semi-tractor that pulls the goods over the road to their destination
      - d. It works the same in the cell
        - i. You have produced lots of red flags
        - ii. Now you need them taken to the surface of the cell
    - ii. The trailer full of manufactured goods is called a vesicle. It is like a bubble made of the same material as the cell membrane.
      - 1. When it reaches the cell membrane,
        - a. It will fuse with the membrane
        - b. And in essence, turn inside out.
          - i. So what is floating inside the vesicle will be release out of the cell into it's environment,
            - 1. This is how all of our cells release their products,
              - a. Stomach acid to digest food
              - b. Insulin to regulate blood sugar
              - c. Millions of different specialized proteins that do everything from controlling the temperature of the body to making sure that a mother's body maintains the perfect conditions for a baby to develop inside the womb.
            - ii. What is lodged in the wall of the vesicle will become an attached part of the cell membrane
      - 2. In our case, we want to
        - a. Make a general, wide-spread alert



2. Leave the blood stream
3. Travel to the site of the infection
4. And go to work
  - a. Devouring bacteria
  - b. Releasing anti-microbial chemicals
  - c. Immobilizing bacteria with traps referred to as NETs
5. Does anyone really understand how the cell manages to do that?
  - a. No human being
  - b. Our best minds are working on figuring it out
  - c. In doing so, they are seeking to understand the creative genius of the One who made them and all things
6. “And these micro-machines really are at the heart of life. These micro-machines, which are the envy of nanotechnologists the world over, are self-directed, powerful, precise, accurate devices that are made out of strings of amino acids. And these micro-machines power how a cell moves, they power how a cell replicates, they power our hearts, they power our minds.
7. “These are expressions of truth as awe-ful things, by meaning, they are things you can worship. They are ideals that are powerful, they are irreducible, they are unique, they are useful -- sometimes, often a long time, after the fact.”

V. Conclusion

- a. Are we fearfully and wonderfully made?
  - i. YES
- b. Does my soul know God’s works are marvelous?
  - i. Only the fool would say there is no God!
  - ii. There is only one possible explanation for what you have seen today – Gen. 2:7
- c. Based on what you know of the 1% of cellular mechanics that scientists have figured out so far, do you think it is likely that the other 99% will demonstrate that an intelligent Creator was unnecessary for the formation of life?
- d. Does the part of my life that is under my control demonstrate the wisdom of God’s will as well as the part that is not under my control?
- e. If I know that God’s works are marvelous, do I also consider His thoughts to be precious?
  - i. Ps. 139: 13-17
    1. Your marvelous works is parallel to Your precious thoughts
    2. Both are wonderful
- f. If I cannot know His thoughts from His creation, where can I find them out?

- i. Only from His word!!
- g. INVITATION