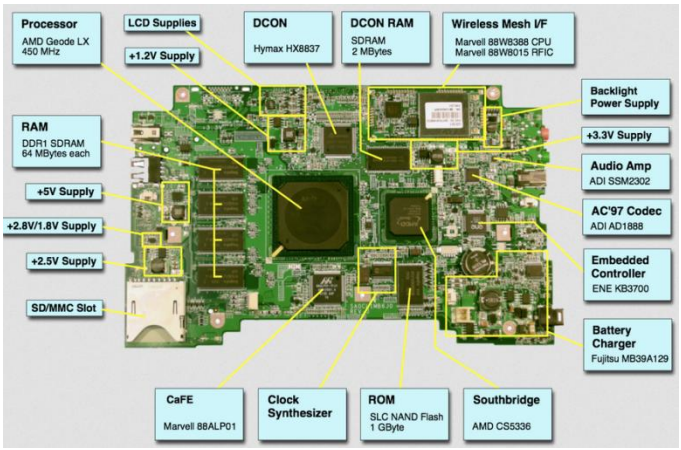
Reasons to Believe In God

Reason 6: Protein Manufacture: Ribosomes Prove the Existence of God

How could we ever live without our laptops and cell phones which are really mini computers? It's hard to believe but computers and cell phones are relatively new technology that did not exist 100-years ago. Its hard for us to realize the incredible foundation of discovery that is required for the computer to even exist, first we need the invention of electricity, then the design of microprocessors, software design, the design of plastic, glass and metal to house the equipment and the list goes on. Each of these revolutions in technology were used to develop the laptop and cell phone many of use for business, home and entertainment. We reap the benefits of years of research and development for the past thousand years of human existence.

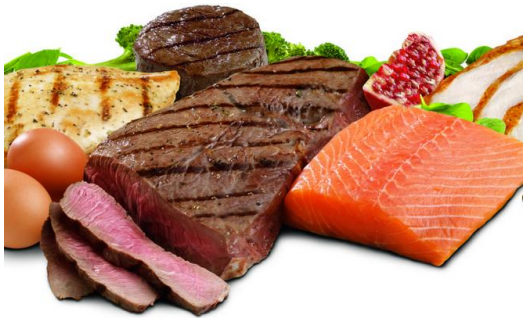
Let's just examine how software and the computer work. How does the computer know what to do? Well inside the computer there is code, a written language known as software. Software instructs the computer how to operate and function when the electricity is flowing through the system.



This software language is written in a binary code using the numbers 0 and 1, in the same way we have 26 letters in the English alphabet the computer has two numbers, these numbers placed in a pattern tell the computer how to operate. These are written instructions that require intelligence and design to work.

Computer or software?

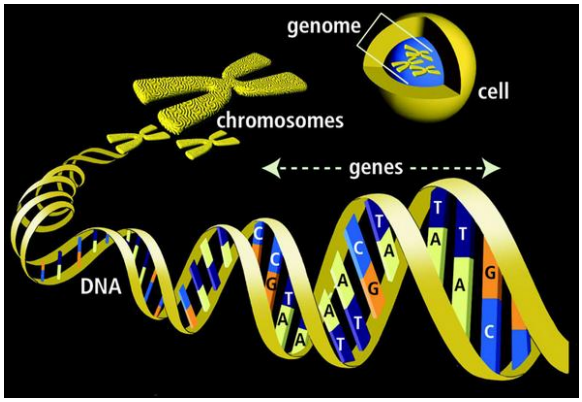
The computer needs the software to tell it what to do, without the software inside it's just a lifeless collection of parts. How is the software written, how is it installed the computer? Most software today is written using computers; it is designed with the computer in mind. The *Operating system software* is at the heart of the computer, it is a specific program that instructs the smartphone or computer how to operate and handle other programs in the memory. *Microsoft Windows* (Vista, 7, 8) is one of the most well known Operating Systems, Apple has *IOS* and Google developed *Android*. These Operating systems instruct their devices how to operate and read the software code. Without this code these devices could not function. The devices require the software to operate and the software requires the computer to be written. Both software and hardware are required by the computer, without the software you have a lifeless collection of equipment and without the hardware you just have code….. *01000100 01101111 01100111* is *dog* in binary code.



There is an amazing correlation between software and computers in building blocks of life known as proteins.

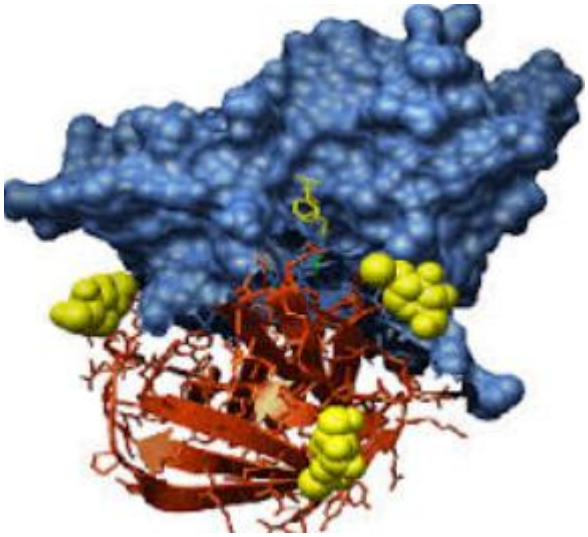
What is a Protein?

When most of us think of protein, we get the impression of protein rich foods like steak, fish and egg whites. Life could not exist without proteins; they are the building blocks of life. All known life requires proteins to exist even the simplest virus.



Using the example of a building, if you think of all the unique structures required to build a skyscraper like the proteins to make life. The concrete is a unique protein, the glass on the surface, the steel, the electrical wires, the carpeting, the air conditioning machines, the heating units, the paint on the walls; each unique building element could be compared to a unique protein in a living organism. Now imagine the technology and design required for each element of the building.

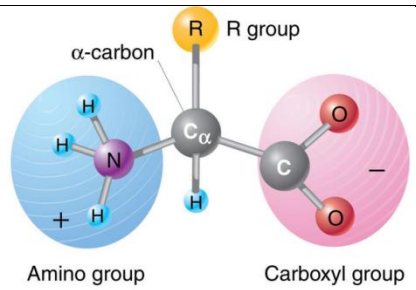
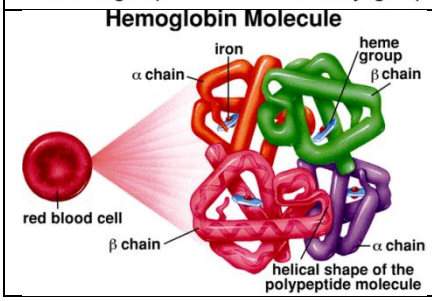
The genes in the DNA are the instructions on how to make the unique proteins required for the cell to live and maintain its life. The DNA itself is language similar to the software in the computer containing the information on how to construct and fold the proteins so they can function.



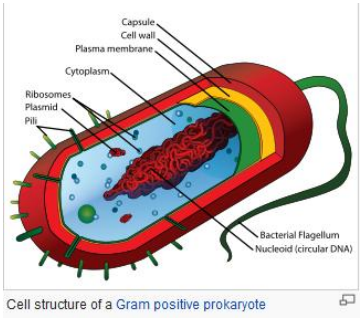
Not only to the proteins have to be assembled in the right combination, they also need to be folded in the proper manner so they can function. A protein could require 1000-amino acids combined and folded it to function. For example when you cook an egg, the egg white is a protein, when cooked the heat alters the shape of the protein causing it to become white and solidify. The folding of the protein is vital to its function, it would be the equivalent of having the steel for an engine but not the structure, only with structure does the protein function. All these instructions are spelled out in the genetic code, how to make the protein and how to fold the protein. This is called *Protein Synthesis*, see below.

So just how does the Protein get made? How do we transfer the information from the DNA to the final product? Going back to the software illustration, how do we get the software to the computer to produce the end result? The answer is the Ribosome. The Ribosome is a real problem for those who want to believe in a universe without God.

Hydrogen Carbon Nitrogen Oxygen Sulfur	**4 elements** make up Amino Acids Carbon, Nitrogen, Hydrogen, Oxygen These 4 elements are organized into 20 Unique Amino Acids

	**20 Amino Acids** are combined and folded to form proteins; these are the building blocks of life. The instructions to make proteins are in the Genes of the organism. The coding to construct the unique combinations are coiled up in the DNA.
	Over 100,000 unique proteins are involved in human life, and a typical human cell has 9,000 unique proteins. Over 4,000 unique proteins are required for a bacterium to function. Proteins are complex combinations of amino acids folded into distinct systems to accomplish very specific tasks, such as Keratin used to make hair, nails and skin. Other proteins such as Hemoglobin allow the blood to transport oxygen

The Simple Bacterial Cell has over 4000 Unique Proteins

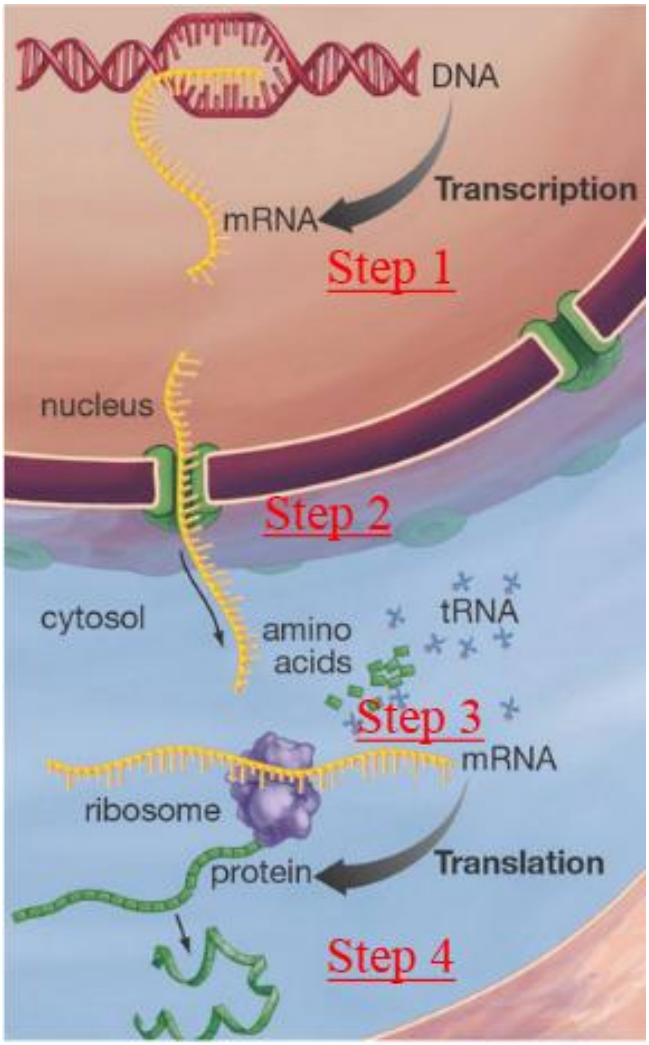


Cell structure of a Gram positive prokaryote

A bacterial cell may seem simple but it's actually a complex structure - a gel-like matrix of the cytoplasm, surrounded by both a lipid bilayer cell membrane and a cell wall. The cell must perform many functions including the intake of nutrients, the metabolism of those nutrients, growth, cell division, and the excretion of wastes. What molecules are involved? Although the cytoplasm contains water, proteins, carbohydrates, various ions, and assorted other molecules, proteins do most of the work. A typical bacterium requires more than 4,000 proteins for growth and reproduction. Not all of the proteins are made at the same time and some are made only under special conditions, such as when the cell is stressed or finds itself in a novel environment. The complement of proteins found in this single cell in a particular environment is the proteome. Proteomics is the study of the composition, structure, function, and interactions of the proteins directing the activities of each living cell.

If a bacterial cell needs more than 4,000 proteins, how many can we expect to find in animals? Mammals, including humans, have probably more than 100,000 proteins.[1]

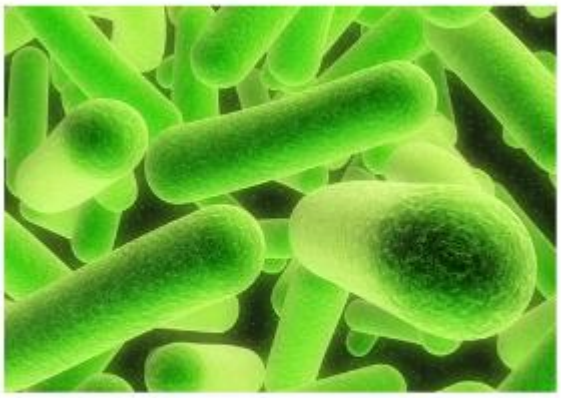
[1] http://www.learner.org/courses/biology/textbook/proteo/proteo_1.html



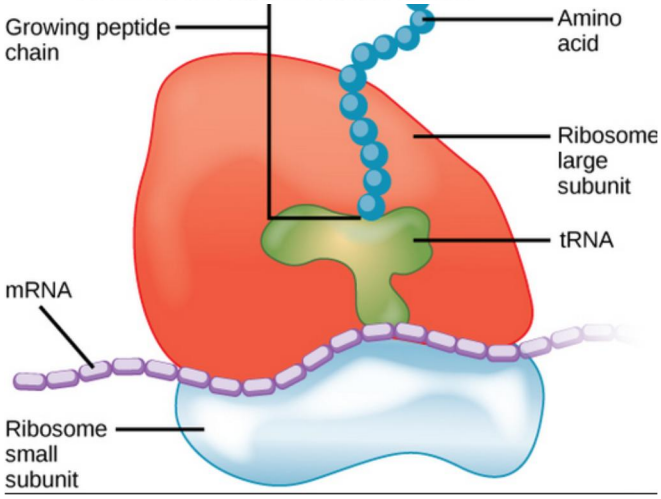
What is Protein Synthesis?

Steps	Protein Synthesis
1.	DNA Instructions to build protein is in the Nucleus of the cell. The coding for the protein to be manufactured is located on a specific "Gene" First a copy must be made of the gene, this copy transcribed to mRNA
2	The copy of the "Gene" is led out of the nucleolus of the cell through one of the portals. tRNA binds to the amino acids
3.	The mRNA is directed to the Ribosome where the Gene instructions are matched to the corresponding amino acids, Protein creation is taking place
4.	Protein is folded to the proper shape; it is either used by the cell or packaged and exported.

The Ribosome Problem



E.Coli Cell's Ribosome has 56 unique proteins



If you think the Protein itself seems incredibly complex, just imagine the process of how a protein is manufactured occurs. How do we get a protein from the DNA? This is where there Ribosome Machine comes in. What is a Ribosome Machine? The Ribosome is an organelle operating inside the cell it assembles and organizes the amino acids from the mRNA into protein. The Ribosome is made of two parts a large and small subunit, these two unites are made of unique proteins. For example an E. Coli bacteria, has Ribosomes made of 56 unique complex proteins. Proteins are only made through the Ribosomes located in the cell. Here is the problem:

1. Proteins are complex combinations of Amino acids requiring design and intelligence.
2. Proteins require Ribosomes to be constructed
3. The Problem is Ribosomes are made of over 50-unique proteins
4. Without the Ribosome you cannot have Proteins, and without Ribosome Proteins you cannot have Ribosomes.
5. Ribosomes require intelligence to be able to assemble Proteins from mRNA.

The computer requires software to operate, the computer is designed to respond to the software, the DNA is the software, the Ribosome reads the DNA and responds with the manufacture of proteins according to the genetic instructions. The Ribosome machine is designed to read the DNA code.