



Study 3:

# The Miracle of Life

The Case for an Intelligent Designer

**Image Sources:**

- Foreground: <http://www.wikipedia.org> (image by Richard Wheeler)
- Background: <http://www.rpi.edu/dept/bio/tribeta/alumni.html>

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# The Theory of Evolution: A Brief History

- Darwin's finches -> years of research -> *On the Origin of Species* -> widespread acceptance of Natural Selection
- Natural Selection: observable and well-established.
  - Resistant Bacteria
- This is *microevolution* and is well-established empirically.
- *Macroevolution*, on the other hand, is the theory that natural selection and random mutation are responsible for all the diversity of life we see today.

# The Theory of Intelligent Design: A Brief History

- Ad Hoc Origins Committee
  - A group of dissenting scientists, not all of whom were religious.
- Grew in popularity through the arguments and research of scientists.
- Not surprisingly, it has met stiff resistance from scientists committed to a strictly naturalistic explanation.
  - This resistance generally misrepresents or simplifies the arguments of Intelligent Design (ID) theorists.



# ID: Inherently Unscientific?

- ID does involve something nonscientific (a supernatural designer)
  - But this does *not* make its objections to macroevolution unscientific.
  - Neither does it mean the theory itself cannot be supported by science.
- Evolutionist Robert T. Pennock
  - *“One may, of course, retain religious faith in a designer who transcends natural processes, but there is no way to dust for his fingerprints.”*
  - Nonsense!
  - The fingerprints of a designer are precisely what we observe in nature.

# Evolutionists' Naturalist Assumption

*“Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. [...] It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.”*

- Dr. Richard Lewontin



# Bias

- Bias is an accusation that can apply equally to ID theorists as well as to evolutionists.
  - Yes, the judgment of ID proponents could be influenced by theistic presuppositions.
  - But the judgment of evolutionists could be influenced by naturalistic presuppositions.
- A *naturalistic* assumption is not inherently bad, as science is the study of *nature*.
  - But blind adherence to naturalism may very well prevent one from even considering whether our existence is due to God's involvement.
- Ultimately, the focus should be on the facts and arguments on each side, not the motivation of its advocates.

# Science vs. Religion

- Science cannot study the supernatural, but that doesn't mean the supernatural can't explain the natural, or that God hasn't been involved in natural processes.
- Scientists who claim that science and religion cannot mix are ignoring the fact that the concept of God has potential ramifications for any field of science.
- Science should neither assume that that God does nor does not exist. Instead, it should form conclusions based on the evidence, even if this evidence is best explained by an intelligent designer.

# ID Arguments

- Too many to cover in this presentation, so we will focus on just three.
- Approach issue from a scientific, not religious, standpoint.
  - Most do not even mention God specifically, but instead focus on what is directly observable.
  - Evidence points to an “intelligent designer,” but ID theory is not involved in determining who that is.
- ID is not theology.
  - It is a hypothesis for the process by which life developed which, not surprisingly to us, happens to be compatible with a theistic view of existence.



# Irreducible Complexity (1/4)

- *“If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.”*
  - Charles Darwin
- But consider the evolutionary explanation of the eye’s “development”
  - Little more than imagined sequence, based on the assumption that simpler eyes in nature were precursors to more complex ones.
  - Intermediate stages still involve the sudden introduction of completely new components, supposedly due to an incredibly fortuitous mutation.

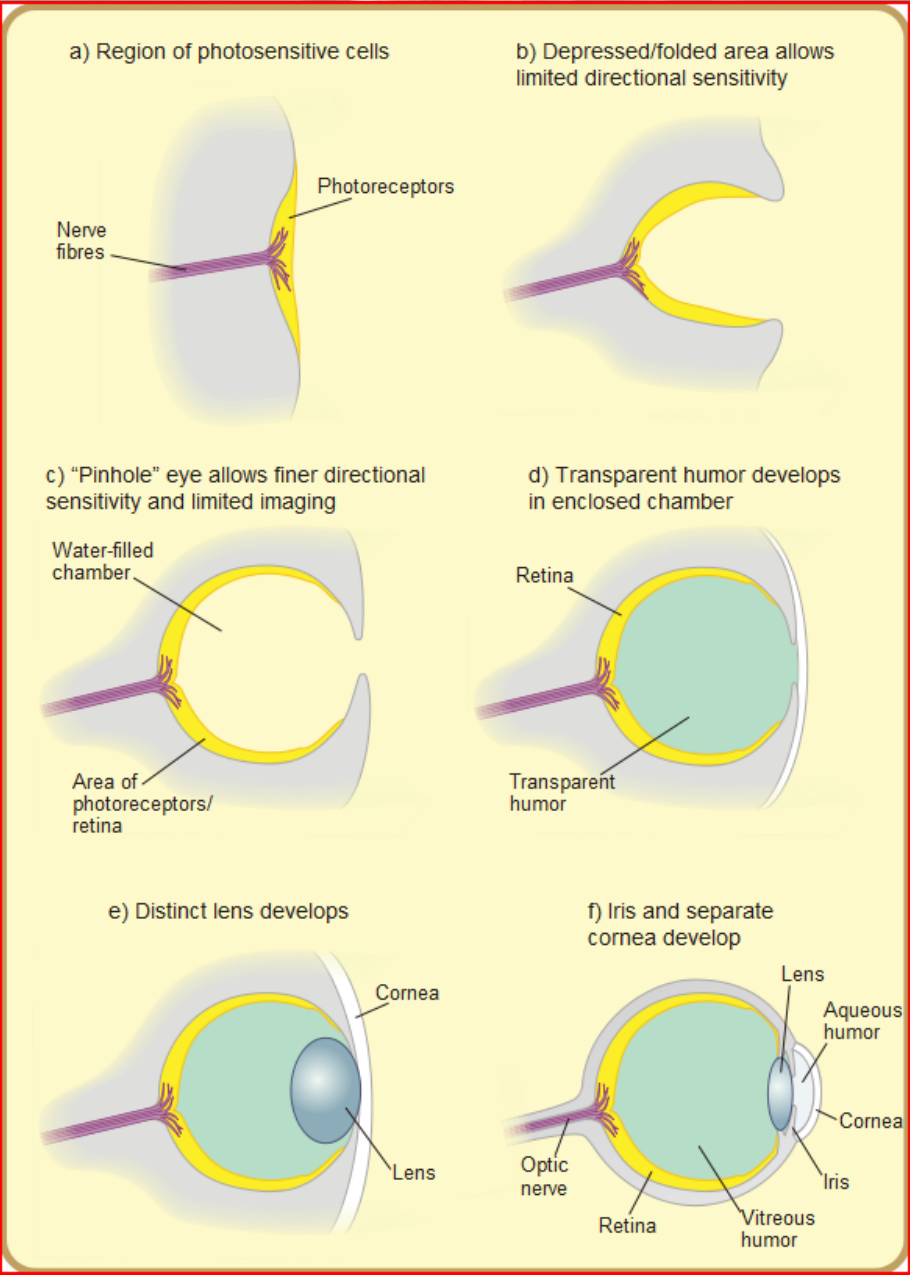


Image source:  
[http://en.wikipedia.org/wiki/Evolution\\_of\\_the\\_eye](http://en.wikipedia.org/wiki/Evolution_of_the_eye)

# Irreducible Complexity (2/4)

- Organs such as the eye are not proven examples of evolution.
- But there are even better examples of a concept called **irreducible complexity**.
- Championed by Lehigh University biochemistry professor Michael Behe in his book *Darwin's Black Box* and other scientific writings.
- Behe's definition of irreducible complexity:
  - *“A single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning.”*



# Irreducible Complexity (3/4)

- Examples
  - Mousetrap (for simplistic illustrative purposes)
  - Blood clotting
  - Bombardier Beetle
  - Flagellum
  - Protein production (more later)

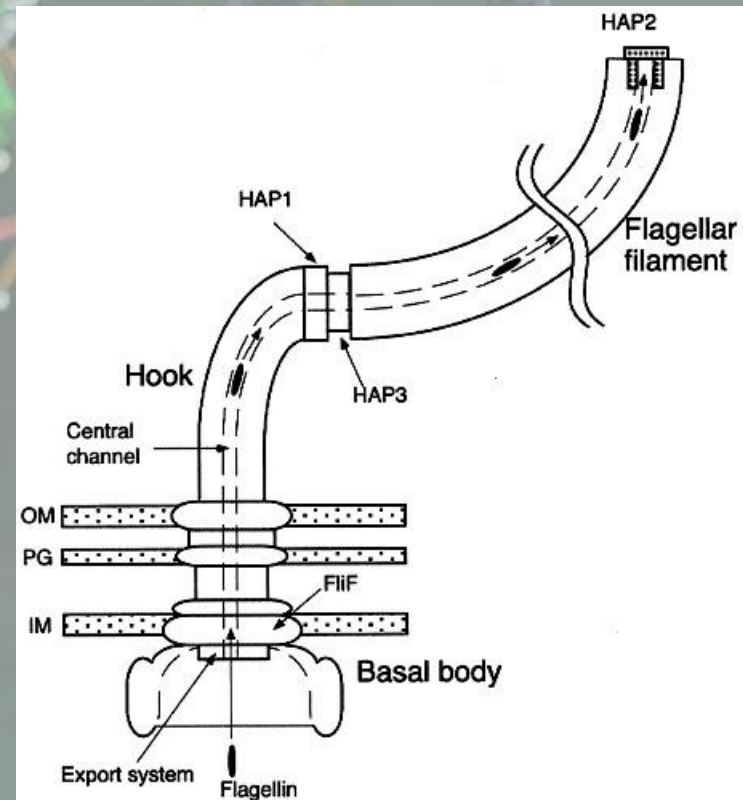


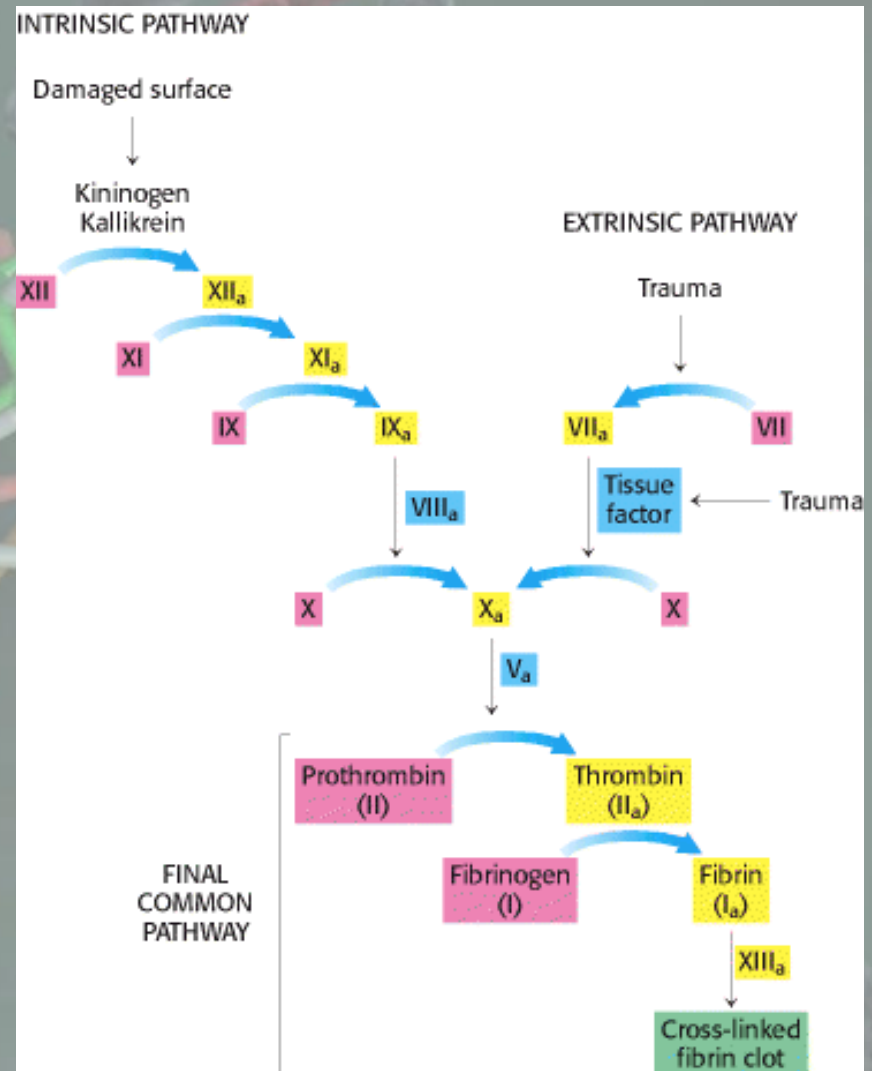
Image sources:

[http://scienceblogs.com/afarensis/2006/02/22/icons\\_of\\_creationism\\_the\\_bomba/](http://scienceblogs.com/afarensis/2006/02/22/icons_of_creationism_the_bomba/)

<http://www.millerandlevine.com/km/evol/design2/article.html> 7 Brian Frantz

# Irreducible Complexity (4/4)

**Blood-Clotting Cascade.** A fibrin clot is formed by the interplay of the intrinsic, extrinsic, and final common pathways. The intrinsic pathway begins with the activation of factor XII (Hageman factor) by contact with abnormal surfaces produced by injury. The extrinsic pathway is triggered by trauma, which activates factor VII and releases a lipoprotein, called tissue factor, from blood vessels. Inactive forms of clotting factors are shown in red; their activated counterparts (indicated by the subscript “a”) are in yellow. Stimulatory proteins that are not themselves enzymes are shown in blue. A striking feature of this process is that the activated form of one clotting factor catalyzes the activation of the next factor.

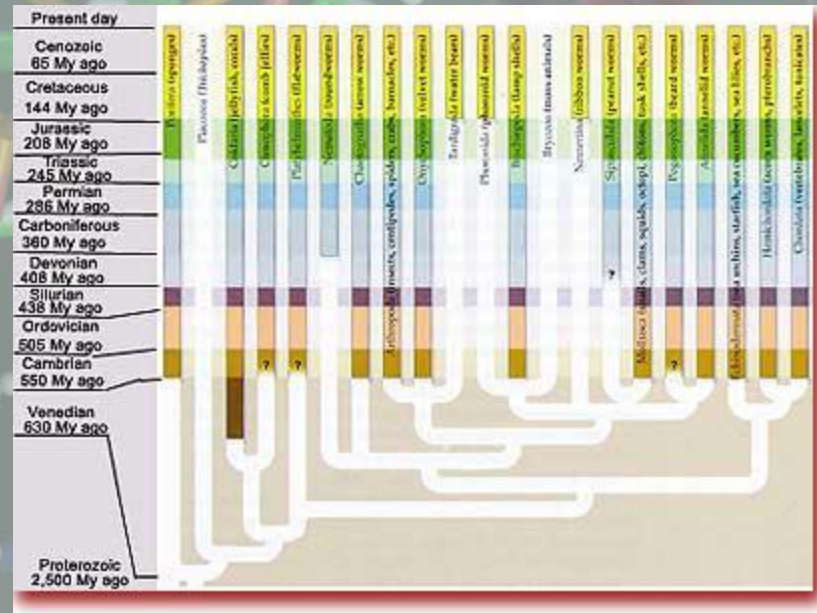


Source:

<http://www.ncbi.nlm.nih.gov/books/bv.fcgi?indexed=google&rid=stryer.figgrp.1401>



# Cambrian Explosion



There are lots of gaps in the fossil record. Evolutionists have theories, particularly that of punctuated equilibrium, for why this is the case. These theories have problems of their own. But the biggest gap (aside from the first appearance of life) is the sudden and diverse onset of new phyla during the Cambrian.

Source:

<http://www.darwinismrefuted.com/20questions02.html> © 2007 Brian Frantz



# The First Life

- *“The living cell is the most complex system known to man. Its host of specialized molecules, many found nowhere else but within living material, are themselves enormously complex. They execute a dance of exquisite fidelity, orchestrated with breathtaking precision.”*
  - Arizona State professor Paul Davies in *The Origin of Life*
- Even if you overlook the other problems with an entirely naturalistic explanation for life, you still have to explain how randomness could ever yield something so complex as the building blocks of life.

# Stanley Miller's Experiment

- In 1953, Miller produced amino acids by combining heat, electricity and hypothetical early atmosphere (hydrogen, water, methane and ammonia).
- Whether this is an accurate assumption of the earth atmosphere has been the subject of debate since then.
- What this tells us is that the acids which comprise proteins *may have been* produced through natural means.
- But a laboratory environment in which heat and electricity are used in order to produce an amino acid is hardly proof of anything.
- Even the hypothetically natural presence of amino acids, while necessary, hardly makes it easier to explain life.

# Protein

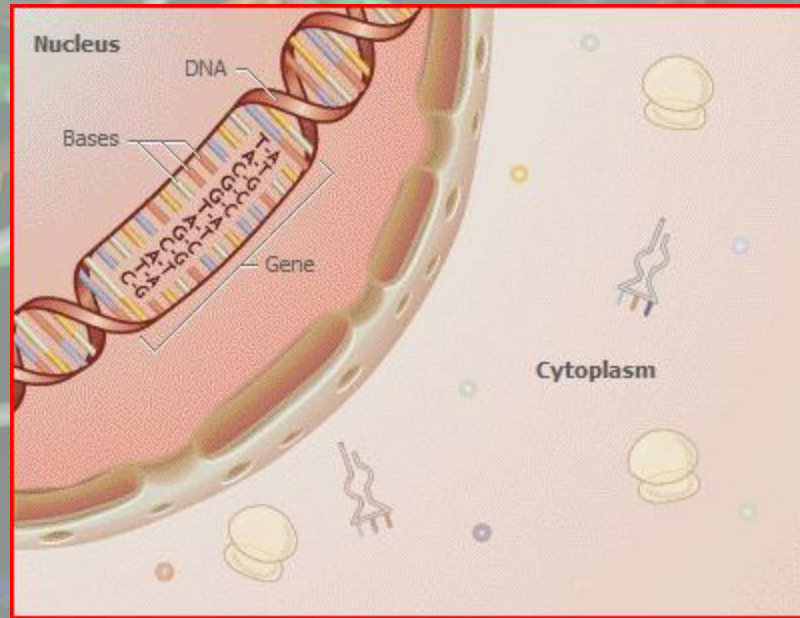


*“Proteins play essential roles in the cells of all living creatures—they serve as building blocks of cells, control chemical reactions, and transport materials to and from cells. Proteins are composed of long chains of amino acids. The specific sequence of amino acids in a chain determines the exact function of the protein.”*

- MSN Encyclopedia Encarta

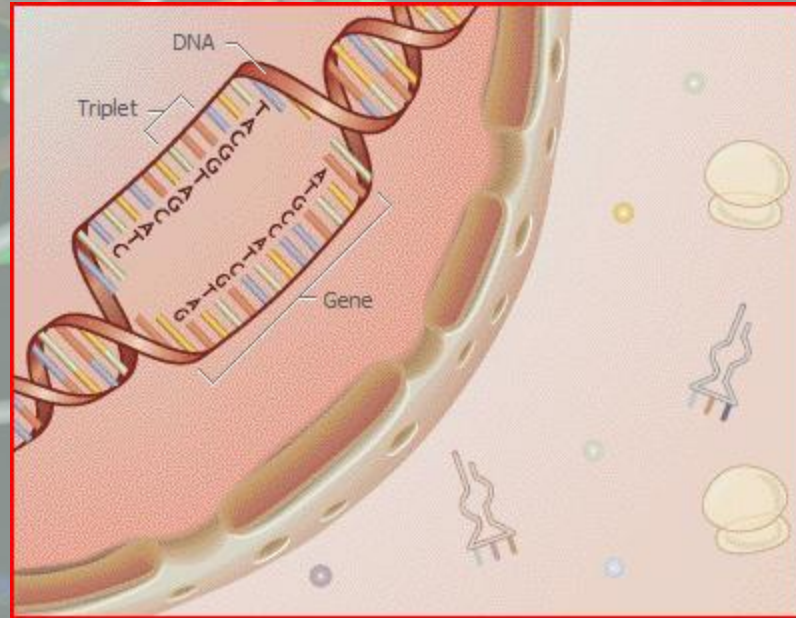


# Protein Production: (1/9)



Genes, individual sections of the coiled molecule DNA (deoxyribonucleic acid), contain a specific sequence of nucleotides. This sequence determines the kind of protein that can be produced.

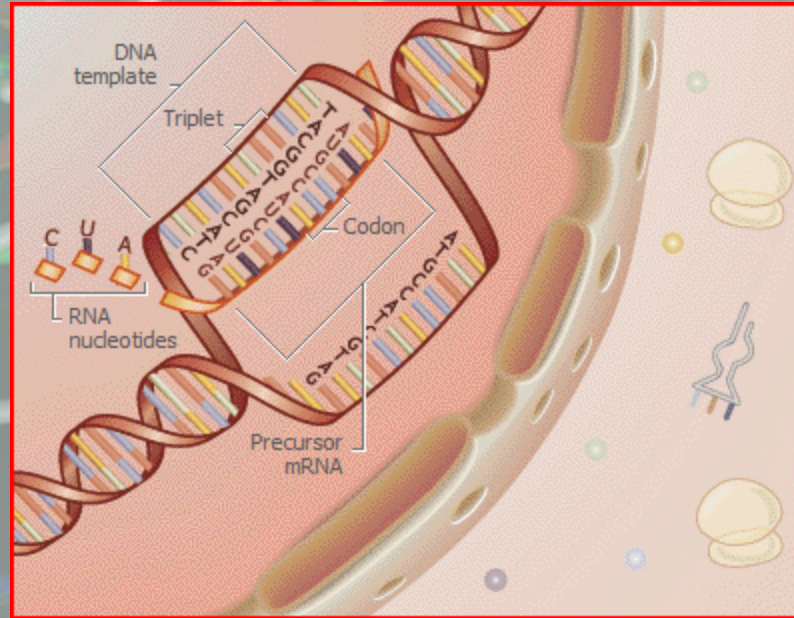
# Protein Production: (2/9)



Genes do not themselves make proteins, however, and must separate to allow mRNA (messenger ribonucleic acid) to be produced by pairing with one half of the gene.



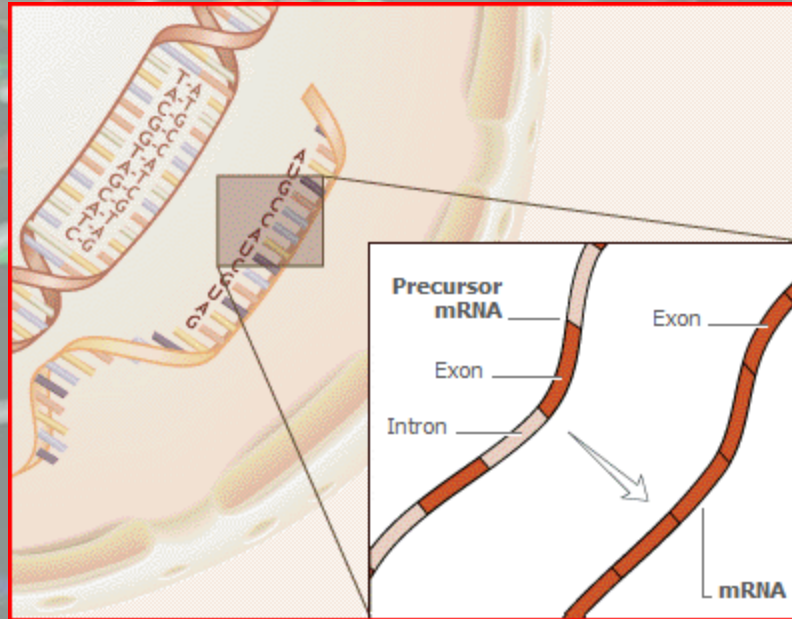
# Protein Production: (3/9)



Precursor mRNA forms out of nearby RNA nucleotides which pair up in a specific way with part of the separated gene.

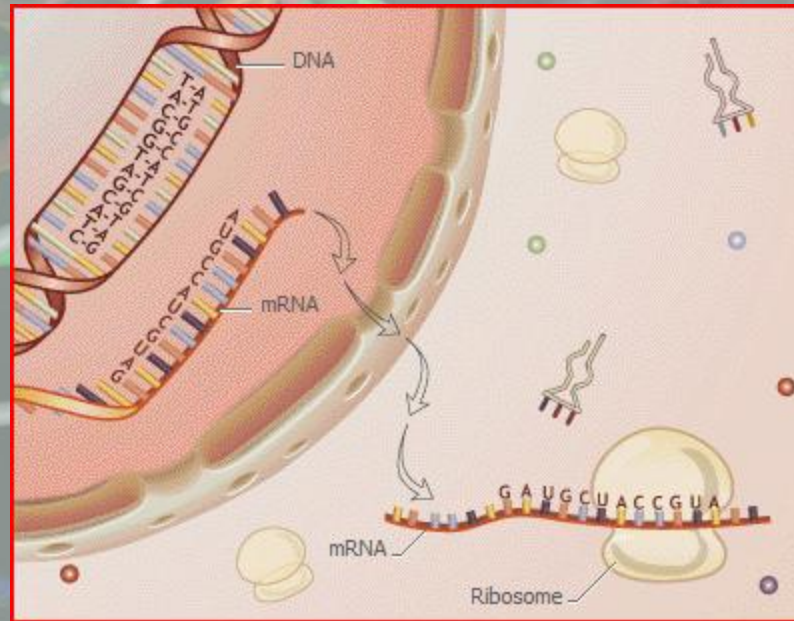


# Protein Production: (4/9)



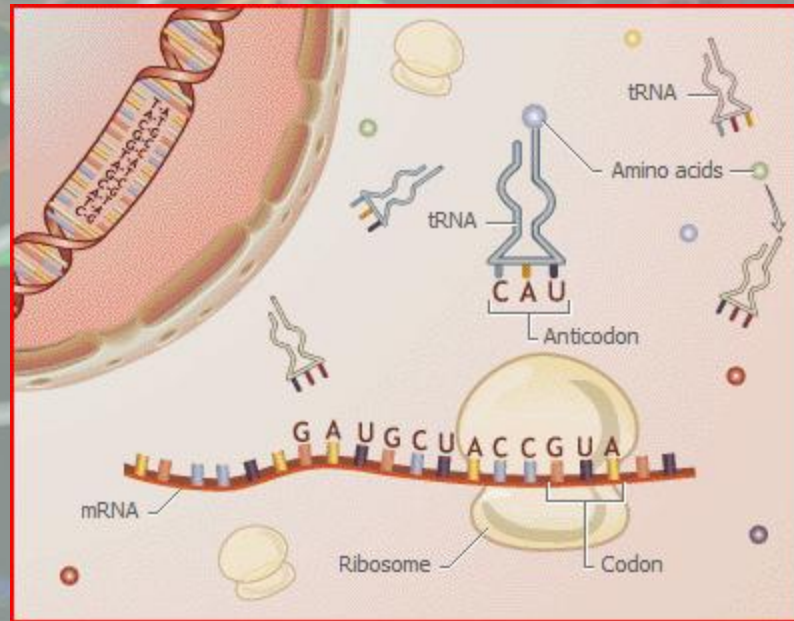
Each coded region (exon) of the precursor mRNA is separated by a non-coded region (intron), which drop out of the strand leaving only exons. The remaining strand is mRNA.

# Protein Production: (5/9)



The mRNA exits the cell nucleus and attaches to a ribosome, which is where the protein synthesis occurs.

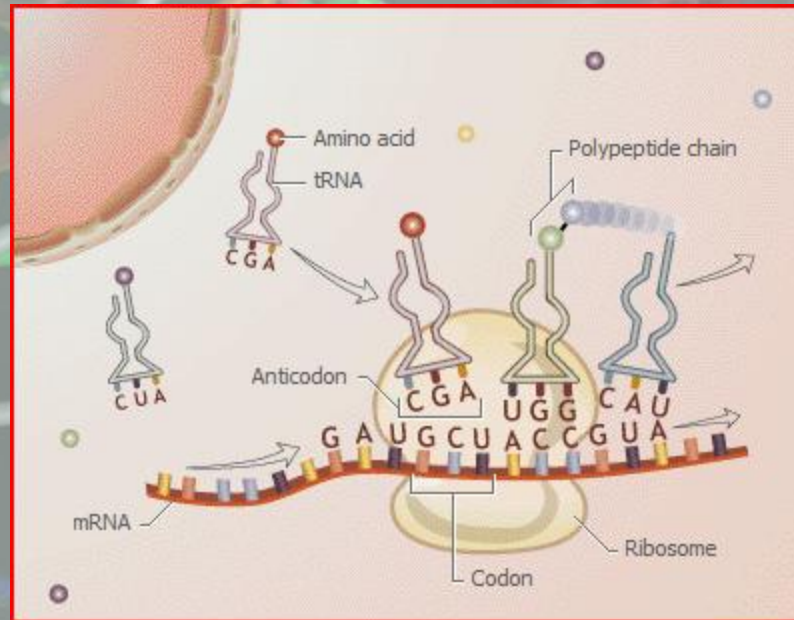
# Protein Production: (6/9)



Nearby tRNA (transfer ribonucleic acid) attaches to amino acids, the type determined by its anticodon.

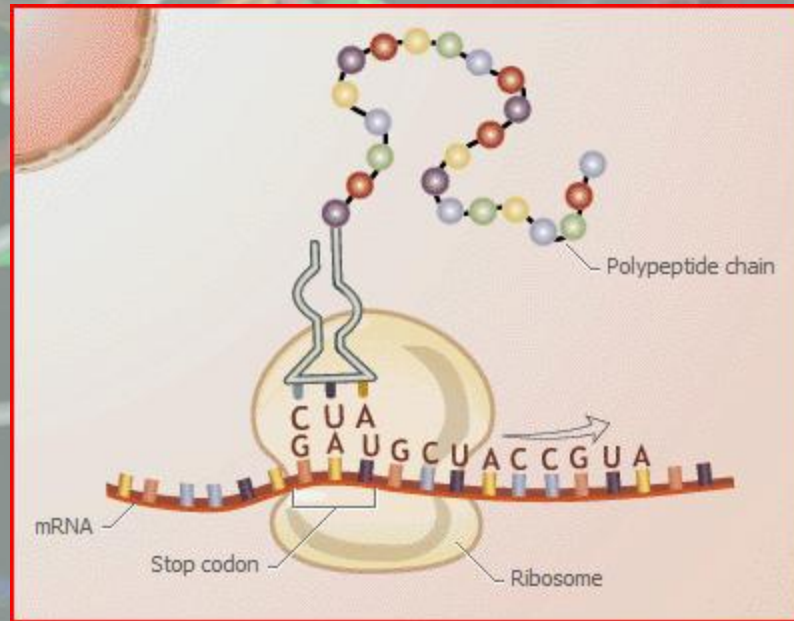


# Protein Production: (7/9)



tRNA with the correct anticodon is attracted to the portion of the mRNA that is contained by the ribosome. As the ribosome moves. As the ribosome moves to attract new tRNA, the old ones transfer their amino acids to the new and then detach.

# Protein Production: (8/9)



This process continues until the stop codon is reached. The stop codon tells the ribosome that the protein is finished.

# Protein Production: (9/9)



The finished protein is an exact replica of the original coded structure.



# Evolutionist Explanations

- Earlier, proteins did not originate in DNA, but just in RNA.
- This hardly simplifies the process as it just makes RNA fill more roles: now it's not just a tool in protein production, but also long-term storage of the design.
- In fact, the process that forms RNA and DNA is itself extremely complex, so to simply split DNA in half and call that a precursor is relatively meaningless in solving the question of how these incredibly complex biological structures and process could have incrementally developed unaided.
- There are many other questions, such as where the information coded in the DNA came from in the first place, and what determined it to be meaningful before there was a larger system to put the proteins to use.

# Conclusion

- The theory of macroevolution, though based upon the scientific concept of natural selection, has so far been inadequate at explaining the large jumps in complexity we see throughout the fossil record.
- More importantly, it cannot address the problem of irreducible complexity, especially at the cellular level.
- Thus, it is unreasonable to conclude based on the evidence that life could exist without the involvement of an Intelligent Designer.