

Science

&

The Case for God

(part 4: Macro-Evolution)

Fair Use Notice

Fair Use Notice:

Not-for-profit, Educational Use

This document may contain copyrighted images whose use has not been specifically authorized by the copyright owners. We believe that this not-for-profit, educational use on the Web constitutes a fair use of the copyrighted material (as provided for in section 107 of the US Copyright Law). If you wish to use this copyrighted material for purposes of your own that go beyond fair use, you must obtain permission from the copyright owner.

The text in this presentation

© John M. Kinson

*Recommended
Reading*

There is A God

(How an

Atheist Scientist

changed his mind)



John M. Kinson

Does Science Point to God?

(Is there scientific evidence for God?)

God & Science – Book 2



John M. Kinson

Inexpensive Kindle Books → [Amazon.com](https://www.amazon.com)

Introduction

(part 4: Macro-Evolution)

Introduction

Does Science Point to God?

- Increasing amounts of evidence from Science are pointing towards Intelligent Design of our universe
- This is consistent with the existence of God
- Increasing numbers of scientists and philosophers are coming to this conclusion based on the evidence
- This series of presentations discusses some of the evidence

Part 1

(in part 1, we saw that ..)

The Big Bang points to God

Very unexpected for Atheism

What about Christian Theism ?

Genesis – In the Beginning God created the universe... And he said “let there be light” and there was light...

Part 2

(in part 2, we saw that ..)

The Fine-Tuning of the Universe points to God

Very unexpected for Atheism

But not very surprising
if God exists
& created the universe.

Intelligent Design shows its presence
by specified events of very low probability.

Part 3

(in part 3, we saw that ..)

The Origin of Life points to God

**The impossibly low probabilities
Very unexpected for Atheism**

But not very surprising
if God exists
& created First Life.

Intelligent Design shows its presence
by specified events of very low probability.

Part 4

The Big Bang

Fine-Tuning the Universe

Origin of Life

Macro-Evolution of Life

A Universe Designed for Life

“All the evidence available in the biological sciences supports the core proposition of traditional natural theology–

- that the cosmos is a specially designed whole
- with life and mankind as its fundamental goal and purpose,

- a whole in which all facets of reality, from the size of galaxies to the thermal capacity of water, have their meaning and explanation in this central fact.”

- Michael Denton (agnostic Biochemist)
- Nature’s Destiny, p. 389

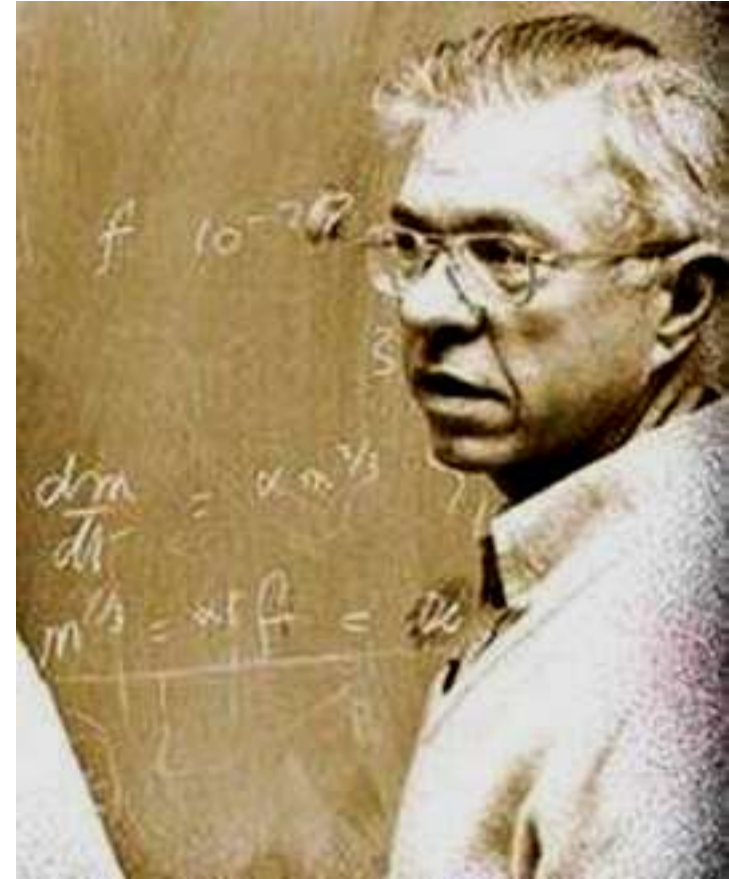


A Universe Designed for Life

A common sense interpretation of the facts suggests that a **superintellect has monkeyed with physics**, as well as with chemistry and **biology**, and that there are no blind forces worth speaking about in nature.

The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion almost beyond question.

(Fred Hoyle, Astrophysicist)



What do you need to create a species

- **A huge amount of information (instruction manuals, books, library)**

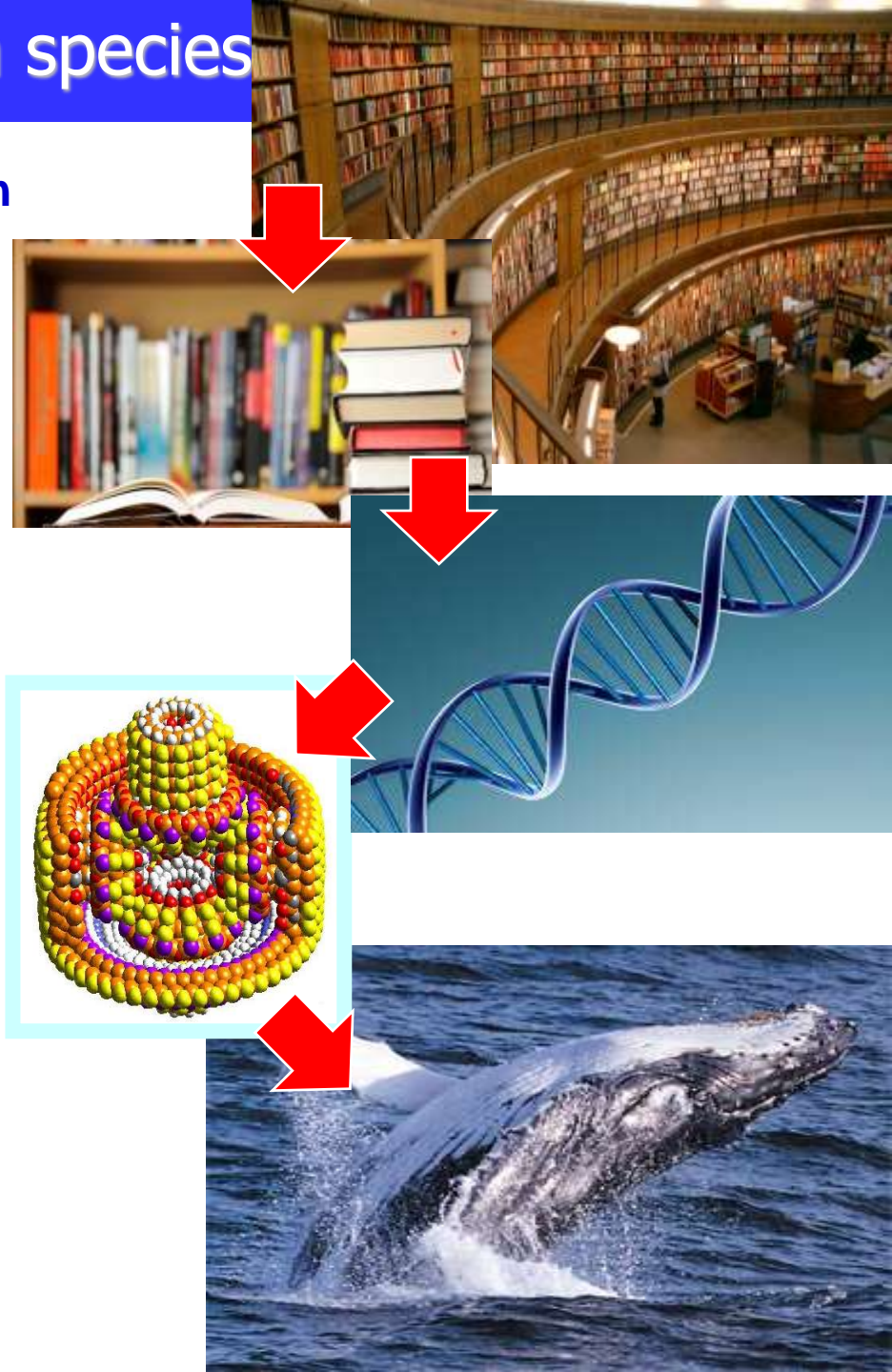
- Instructions to build nano-machines → Genes (to build proteins)
- Instructions for the nano-machines to build larger machines → non-protein-coding DNA (to instruct proteins to form cells, tissues, organs etc)

- **Information storage systems** → DNA

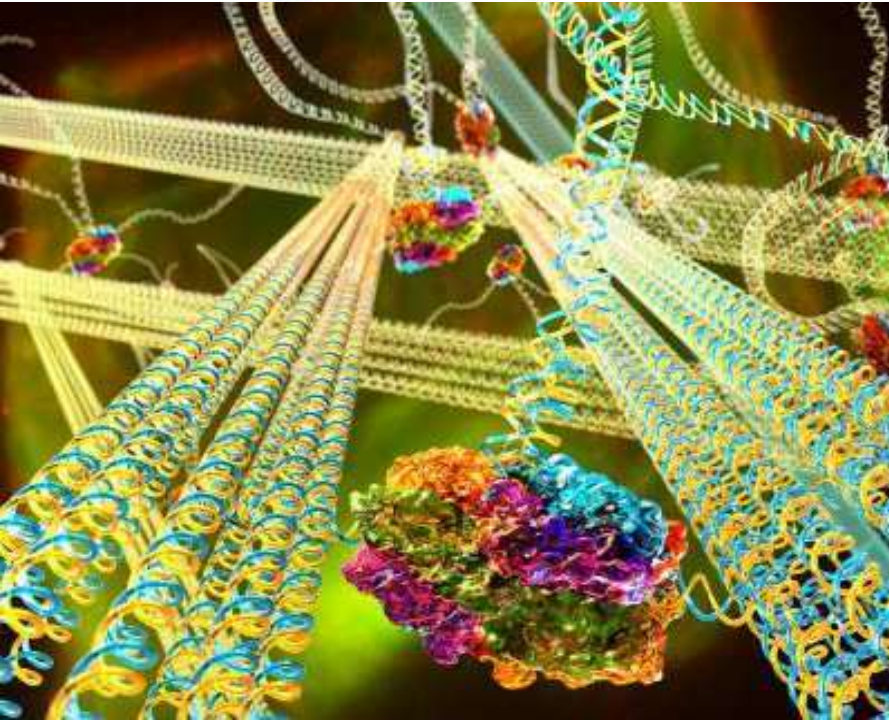
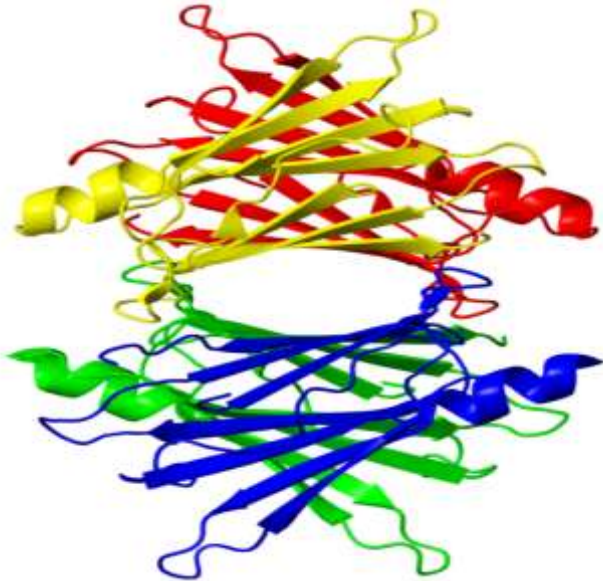
- **Language (or languages)** → [DNA], [proteins]

- **Language Translators** → Ribosomes

- **Nano-machines to work on the info to physically fabricate the creature** → proteins

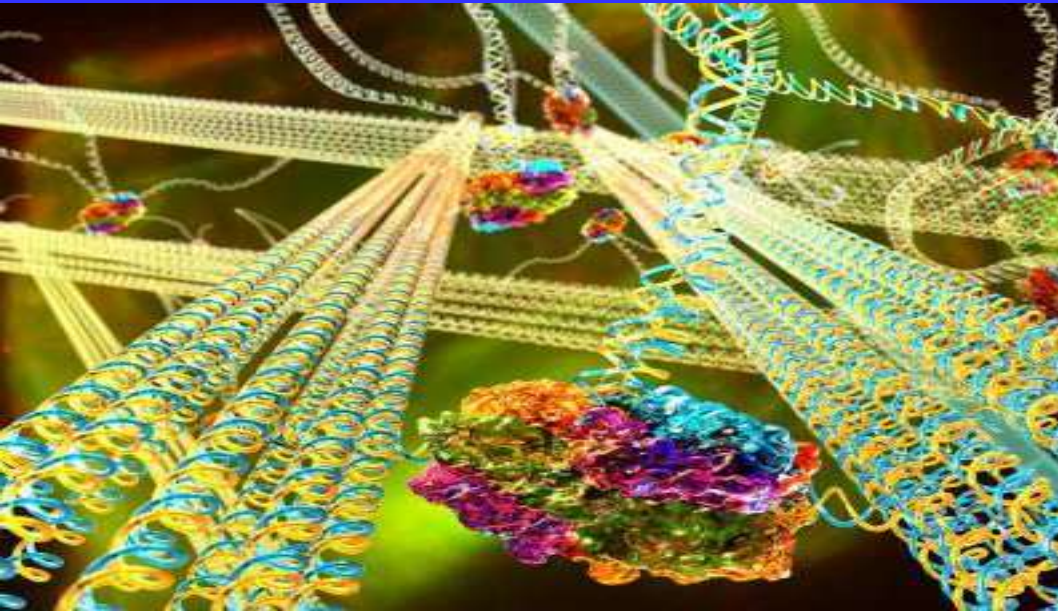


Proteins → Complex Nanomolecular-Machines needed for life



- **catalyze** biochemical reactions, e.g. enzymes;
- act as **messengers**, e.g. neurotransmitters;
- Act as **control elements** that regulate cell reproduction;
- **influence growth** and development of various tissues, e.g. trophic factors;
- **Transport oxygen** in the blood, e.g. hemoglobin; and
- **defend** the body against disease, e.g. antibodies.

Proteins → Cells → Tissues → Organs → Body plans



- **Proteins**

- 1000s of kinds
- build different kinds of cells

- **Cells**

- 1000s of kinds
- Build different kinds of tissues

- **Tissues**

- 100s of kinds
- Build different kinds of organs

- **Organs**

- Dozens of kinds
- In different body plans

- **Animals, plants, bacteria**

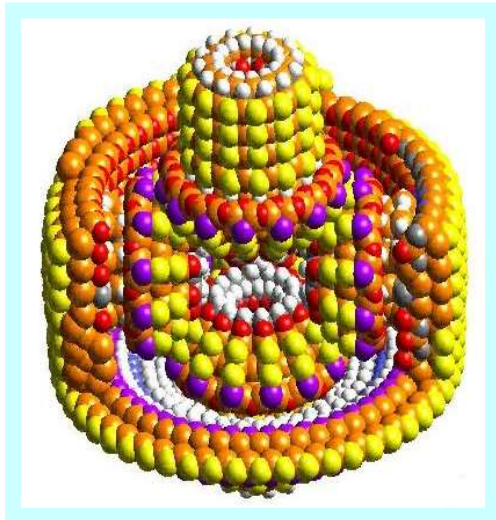
- With different body plans

What is a Gene?

A Gene is the Software

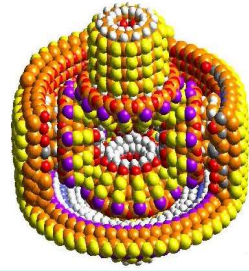
That tells the Hardware (Ribosome)

How to build a Machine (Protein)



- Biosphere
- 8.7 million species
 - 10+ million proteins
 - 10k-30k protein-coding genes/species

Proteins → Cells → Tissues → Organs → Body plans



The proteins are then used

To build different kinds of cells

Which are then used to build different kinds of tissues

Which are then used to build different kinds of organs

Which are then used to build different organ-systems

Which are then used in different body-plans

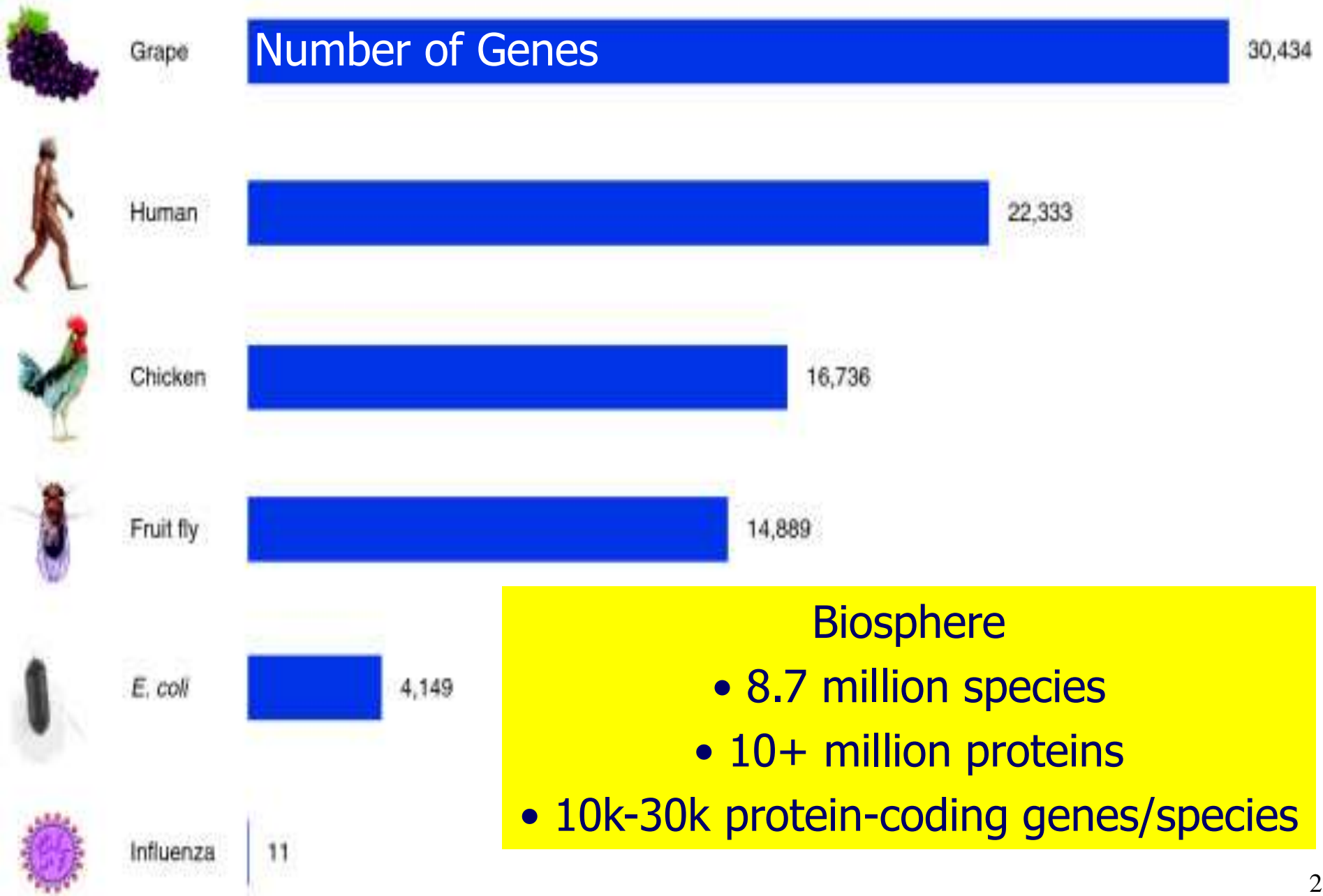
To build the different animals



Biosphere

- 8.7 million species
- 10+ million proteins
- 10k-30k protein-coding genes/species

Genes (instructions in DNA) → Code for Proteins



Orphan Genes (in every investigated Species)

Orphan Gene → Unique to a species (or clade)

Orphan Genes

28,500 genes unique to ants
(not present in other insects)

Each ant species has about

1715 orphan genes (in just that species,
Not present in other species of ants)

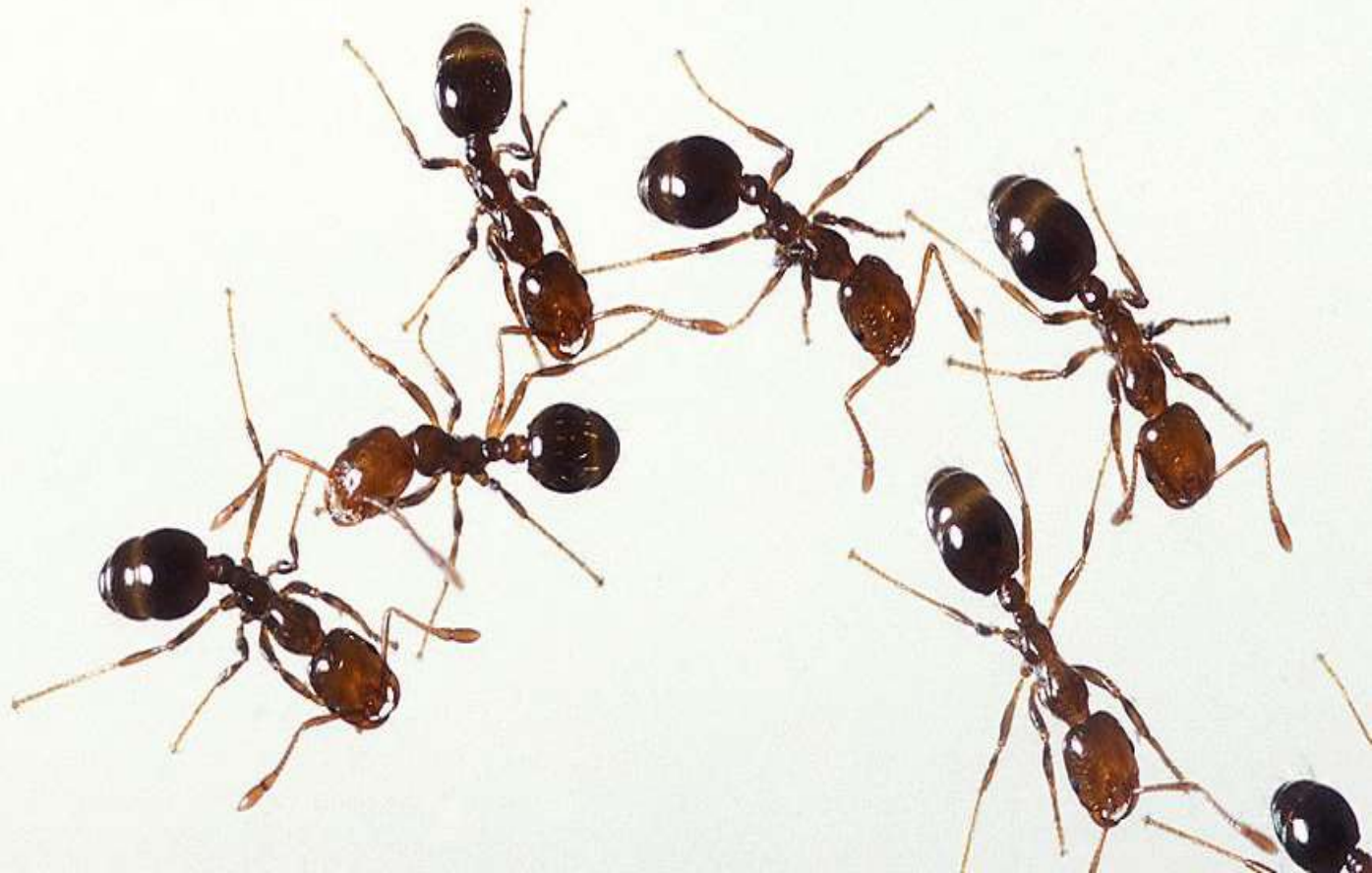
Orphan Genes

10-20%

of each genome

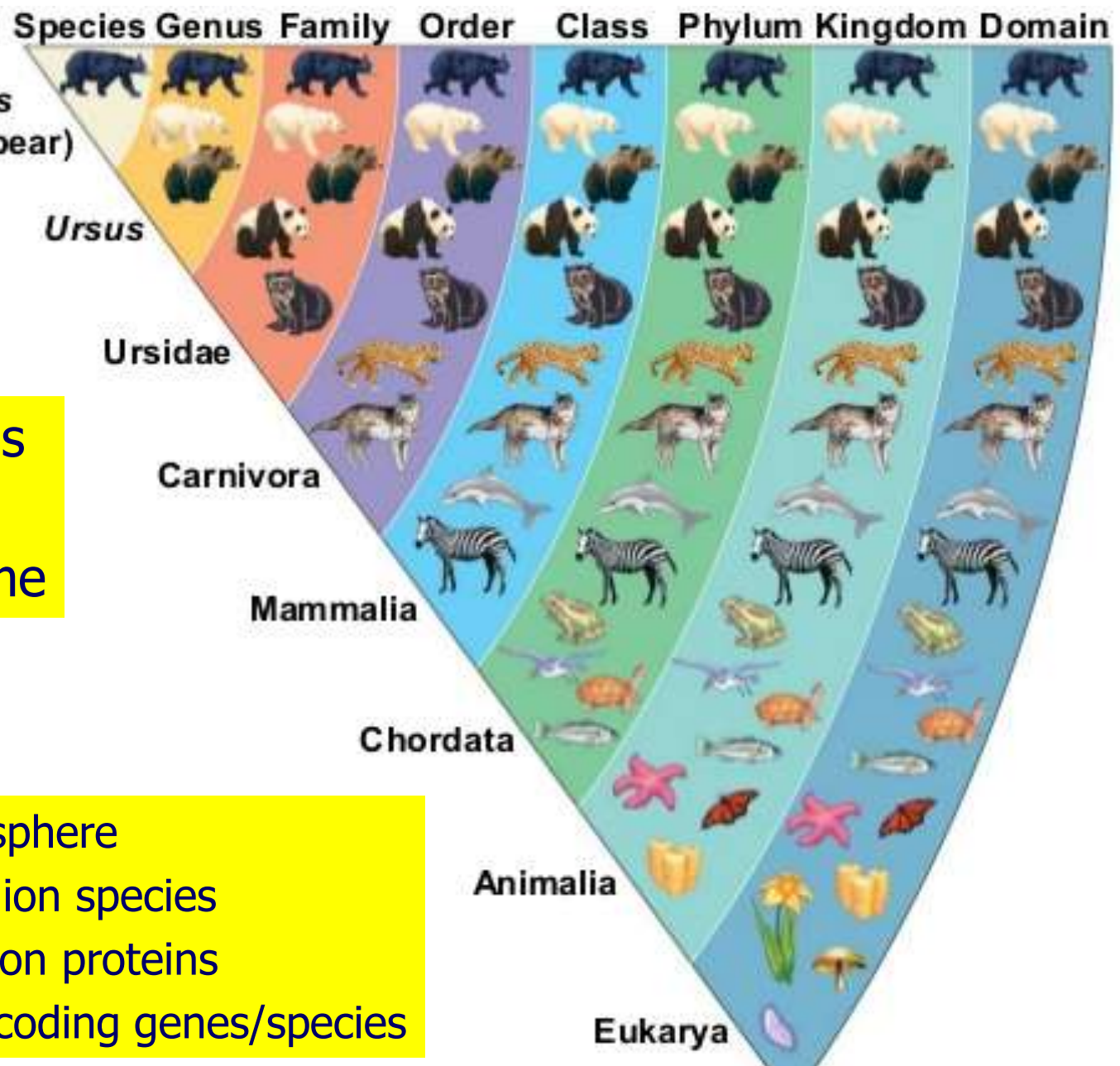
Biosphere

- 8.7 million species
- 10 million proteins
- 10k-30k protein-coding genes/species



Orphan Genes (in every investigated Species)

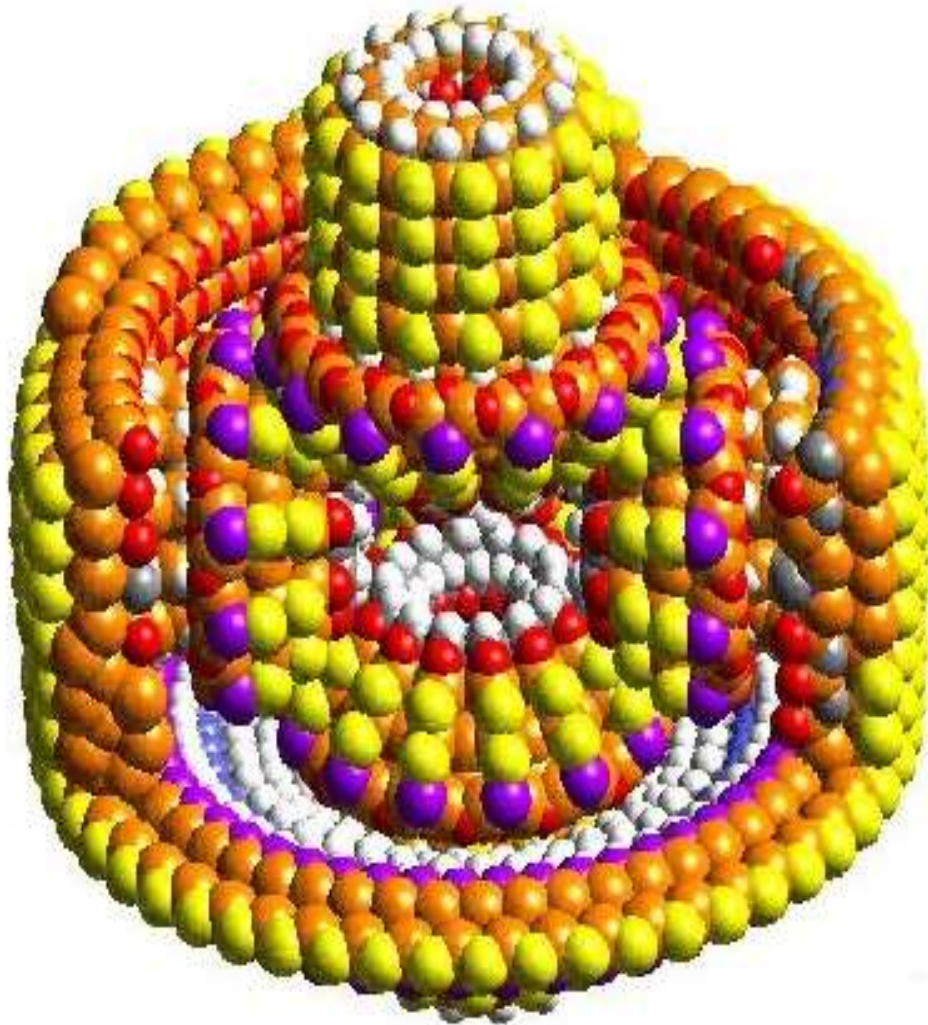
Orphan Genes
10-20%
of each genome



Biosphere

- 8.7 million species
- 10 million proteins
- 10k-30k protein-coding genes/species

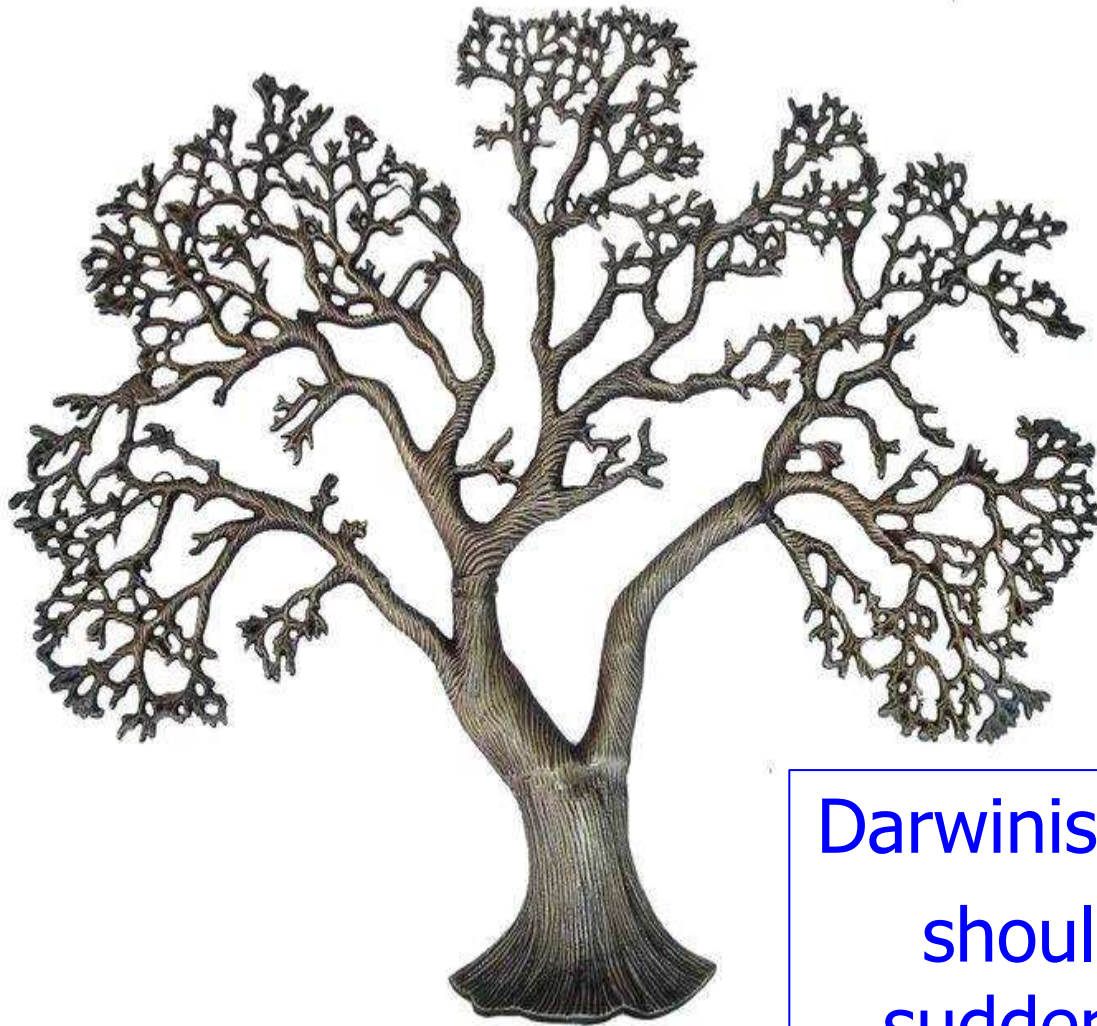
Proteins → very specific shapes (machines)



- Proteins
 - Are made of amino acids, but
- Proteins
 - Have **very specific shapes**
 - Which give them functionality
- A random chain of amino acids
 - Will NOT form a protein



Protein Functionality (expected by Darwinism)



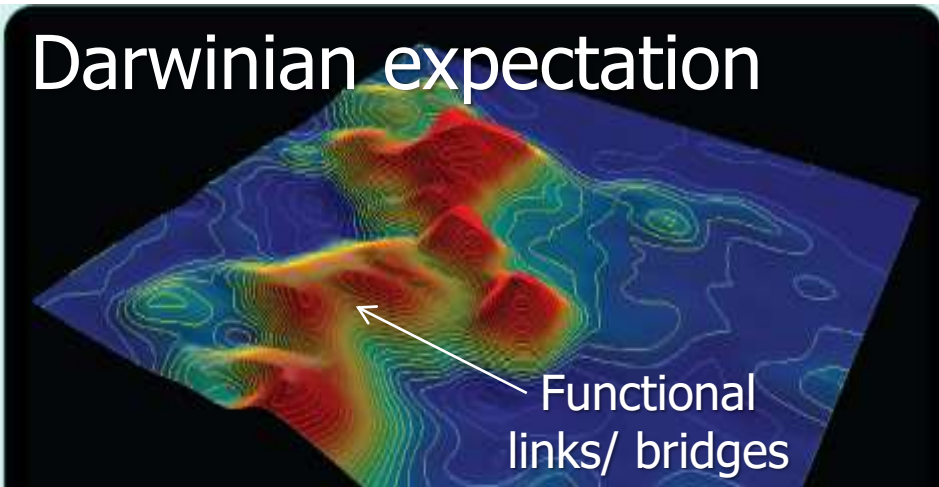
Darwinism →
proteins/genes
should have
gradually
evolved (in a smooth
functional progression)
from 1 or a few
original proteins/genes

Darwinism → Proteins/genes
should not just appear
suddenly out of nowhere

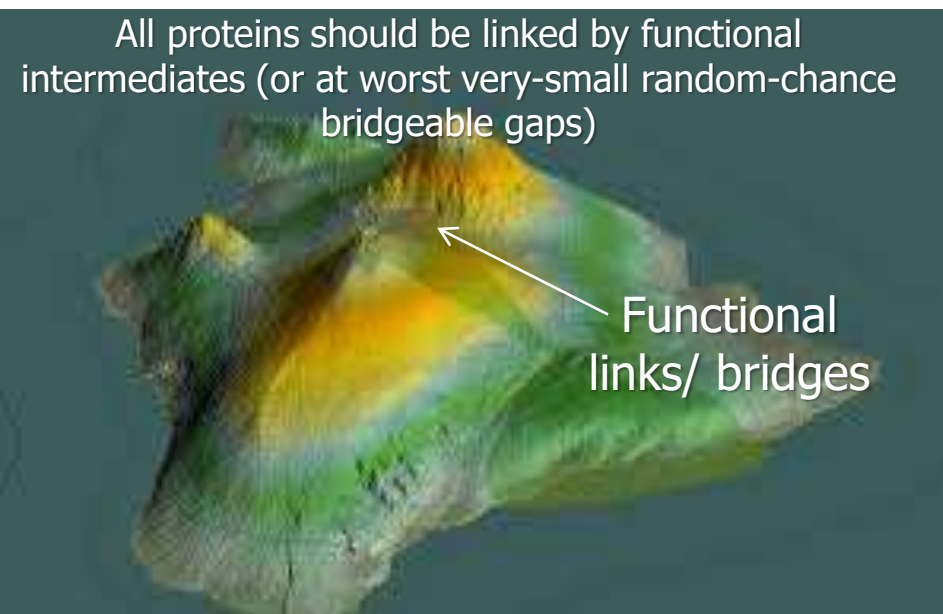
The protein-functionality data does not support Darwinian Macro-Evolution (it supports Intelligent Design)

Protein Functionality (expected by Darwinism vs Actual)

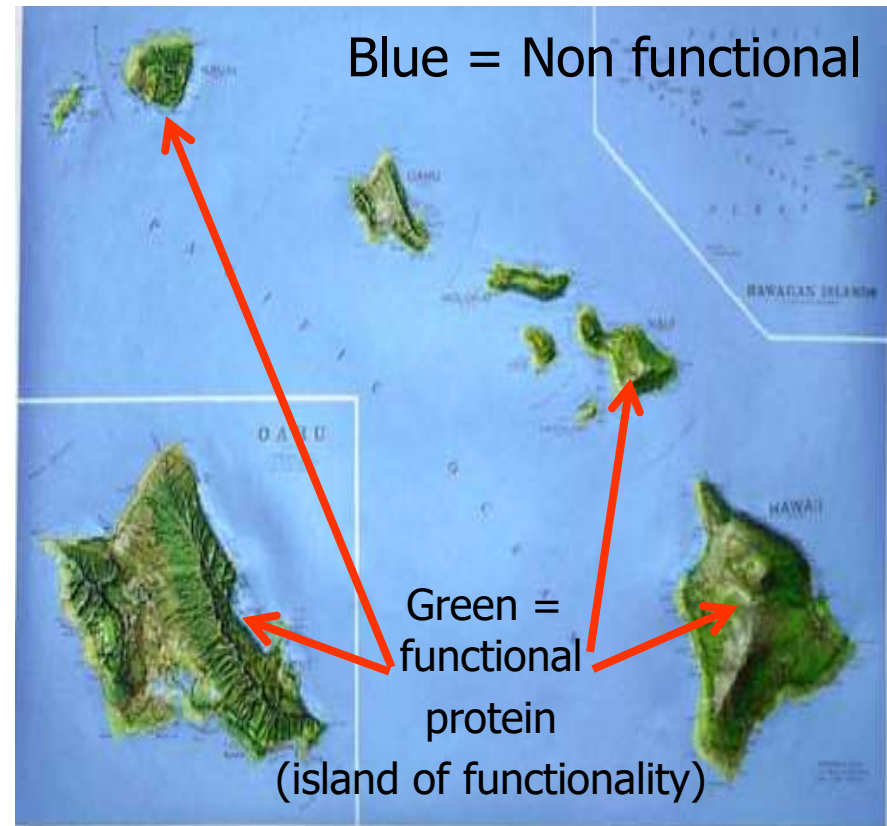
Darwinian expectation



All proteins should be linked by functional intermediates (or at worst very-small random-chance bridgeable gaps)



Experimental data shows
Islands of protein functionality
(contradicts Darwinian Prediction)



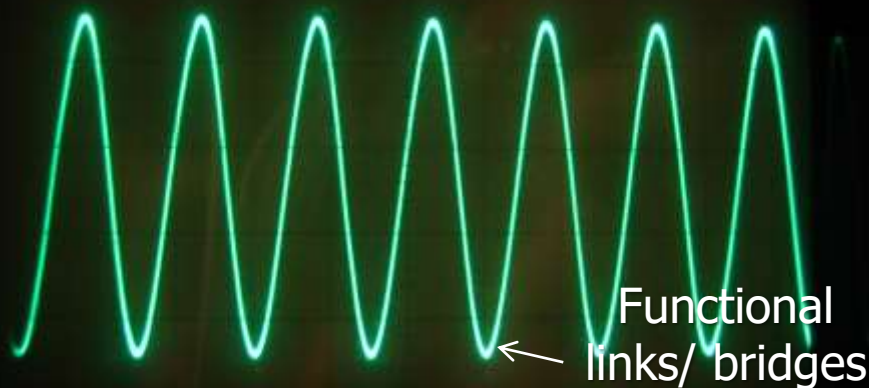
The protein-functionality data does not support Darwinian Macro-Evolution (it supports Intelligent Design)

Protein Functionality (expected by Darwinism vs Actual)

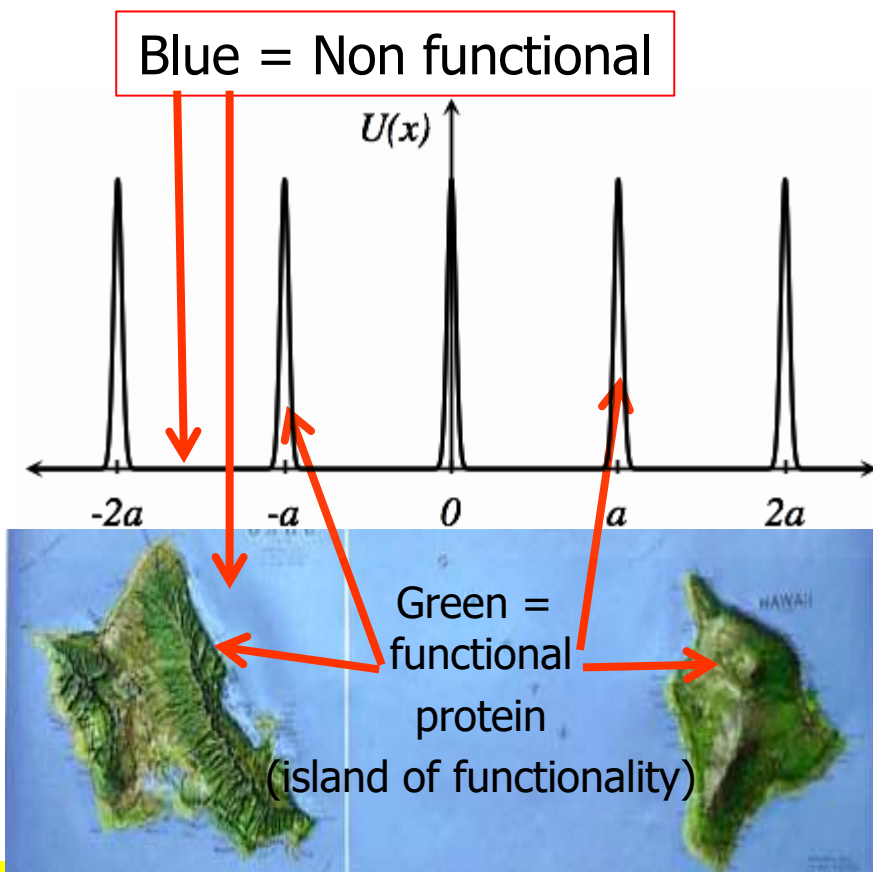
Darwinian expectation



All proteins should be linked by functional intermediates (or at worst very-small random-chance bridgeable gaps)



Experimental data shows
Islands of protein functionality
(contradicts Darwinian Prediction)



The protein-functionality data does not support Darwinian Macro-Evolution (it supports Intelligent Design)

Neo-Darwinism = Random Blind Search

The core of neo-Darwinism is

- Random chance mutations
- Natural Selection

Of these,

- Random-chance is the creative force
- Whereas Natural-selection just kills off anything that has lowered fitness

I.e., Random-Chance is the Creator;
Natural-selection is the Destroyer.

So neo-Darwinism has to depend on
Random Chance to do the creating
(of new genes, new proteins, new cells,
new tissues, new organs, new organ
systems, new body plans, new species,
new genera, new phyla)

This means that neo-Darwinism is a blind
search through phase-space

- gene-space
- protein-space
- morphology-space

So, each protein (for instance) has to be
formed (discovered) through random-
chance assembly of Amino-Acids.

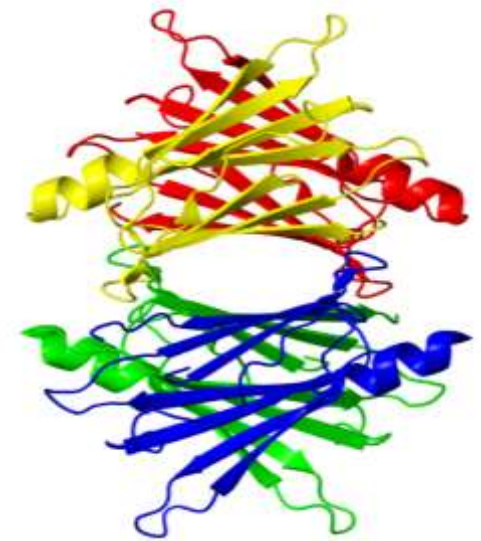
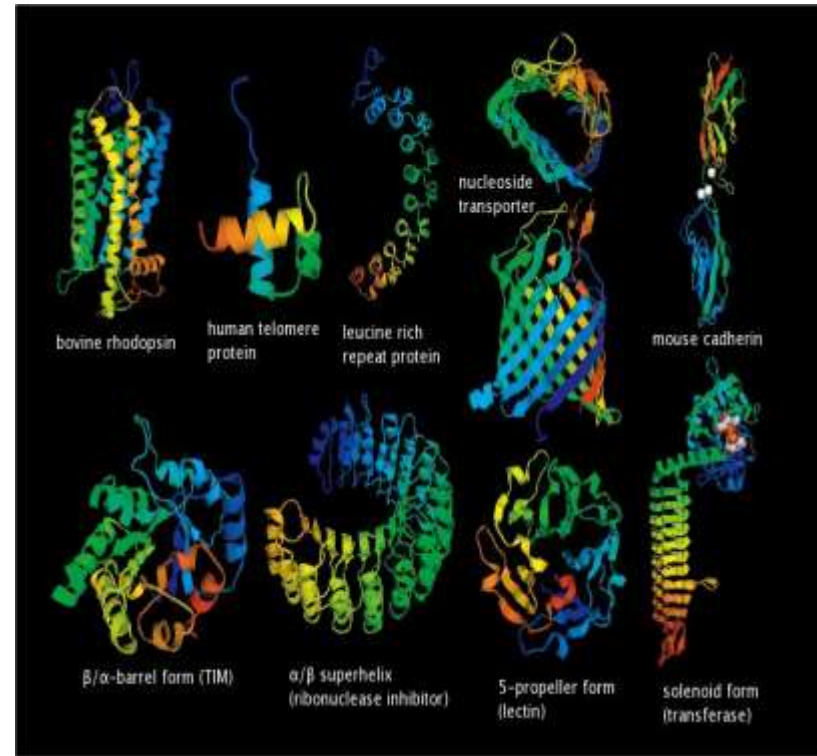
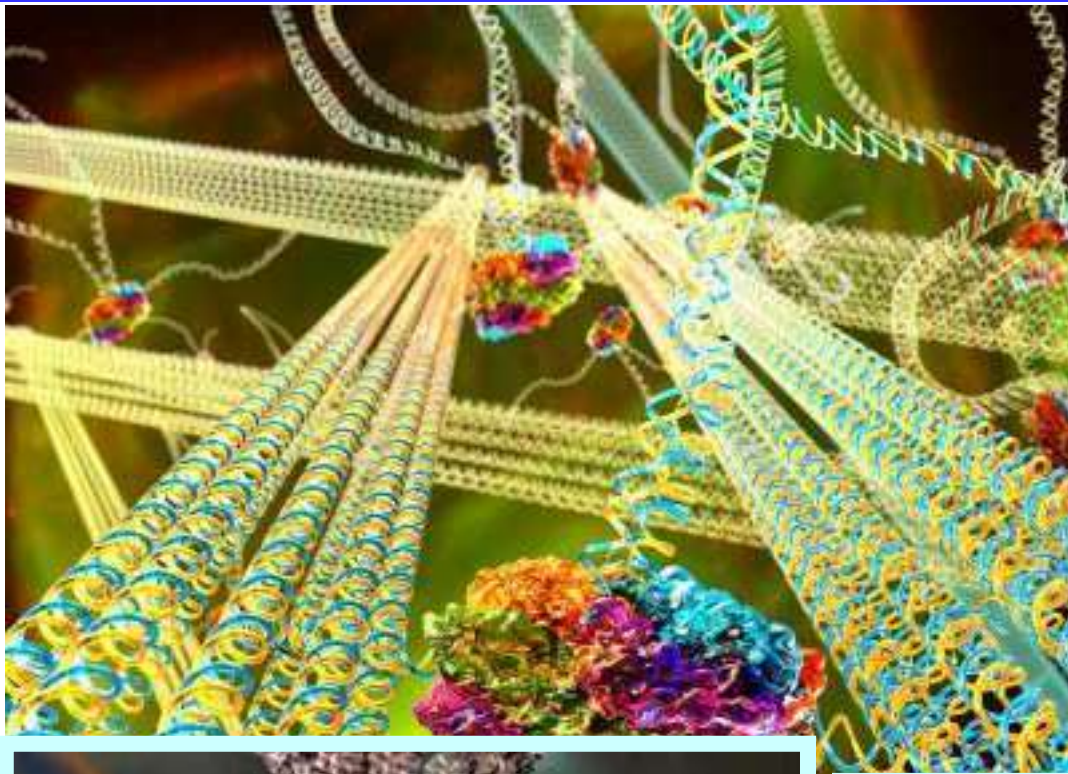
It is only once a protein forms by random-
chance that it can be available for natural-
selection to select it (or not).

So, we can calculate the probabilities of
random-chance formation of the proteins
needed to make new species (to see if it
is reasonable to assume that they formed
by Naturalistic (Atheistic) Evolution).

Probability

(of formation of 1 protein)

Proteins → Complex Nano-Machines



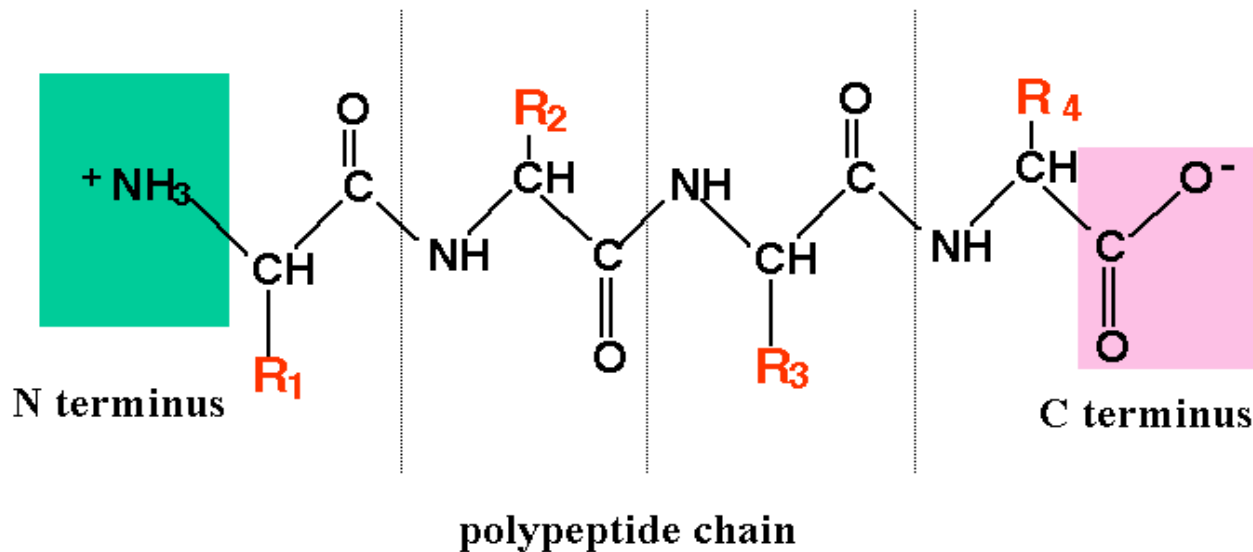
Probability calculations

The following probability calculation assumes an environment with

- only the 20 amino-acids needed for life
- only formation of peptide bonds (even though in real life the probability of peptide-bond formation is 50% since other bonds can also form, and such bonds would prevent protein formation)
- only left-handed molecules (even though in real life the molecules can be both left handed and right handed and mixtures would prevent protein formation)

Linking Amino-acids does NOT automatically make Proteins

Peptide = chain of amino acids



Average
human
protein has
480 amino-
acids

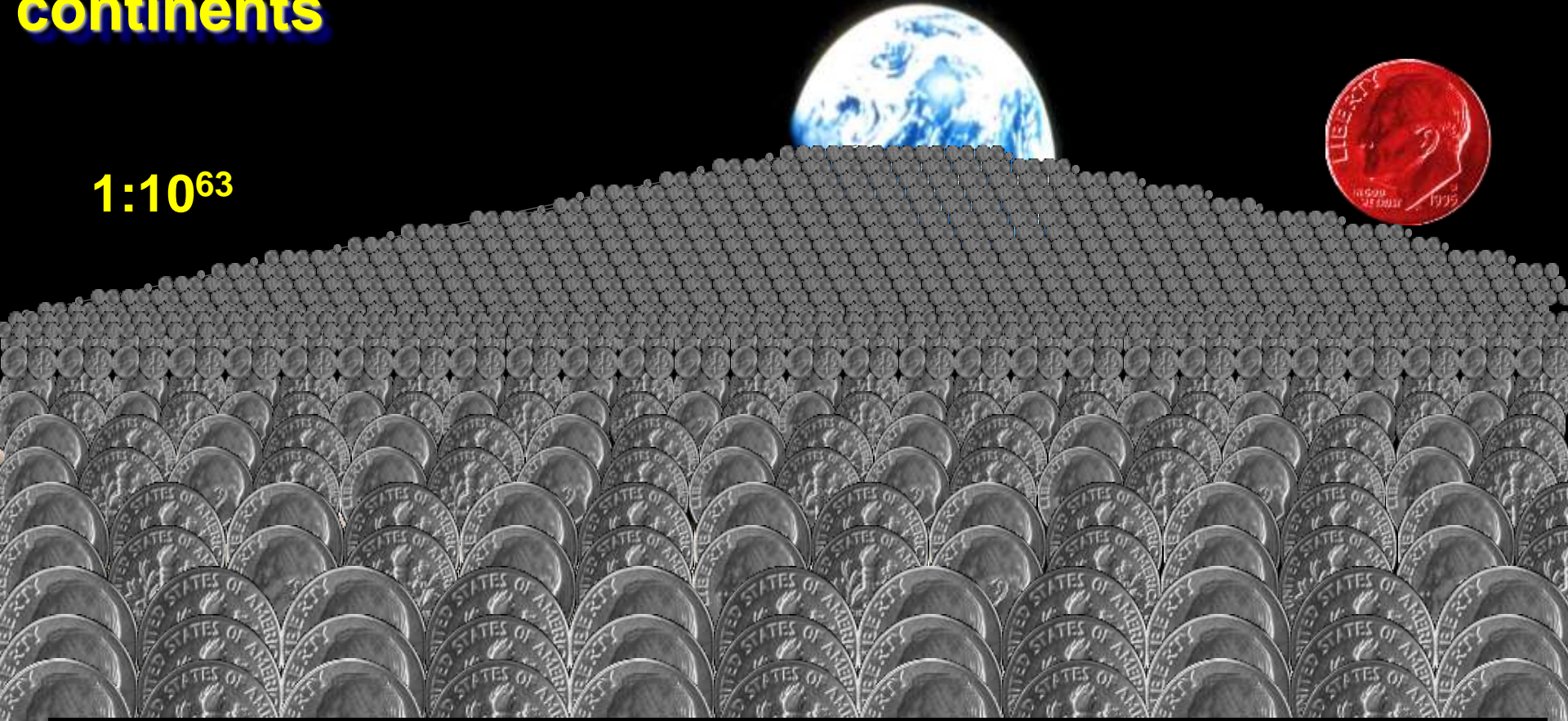
--
Median Eukaryote
protein 361 AA
Bacteria 267 AA
Archaea 247 AA

Only **~1 in 10⁶³** poly-peptides can fold into a functional protein
(for 92 amino-acid poly-peptides)

Only **~1 in 10⁷⁷** poly-peptides can fold into a functional protein
(for 150 amino-acid poly-peptides)

To form a 92-Amino-Acid protein → 10 million billion continents

1:10⁶³



- Cover NorthAm with dimes to the moon, 239k mi
- Cover 10 million billion such continents with dimes.
- Hide 1 red dime in the middle of all of these.
- Get blind-folded friend to pick one at random.

Probability calculations

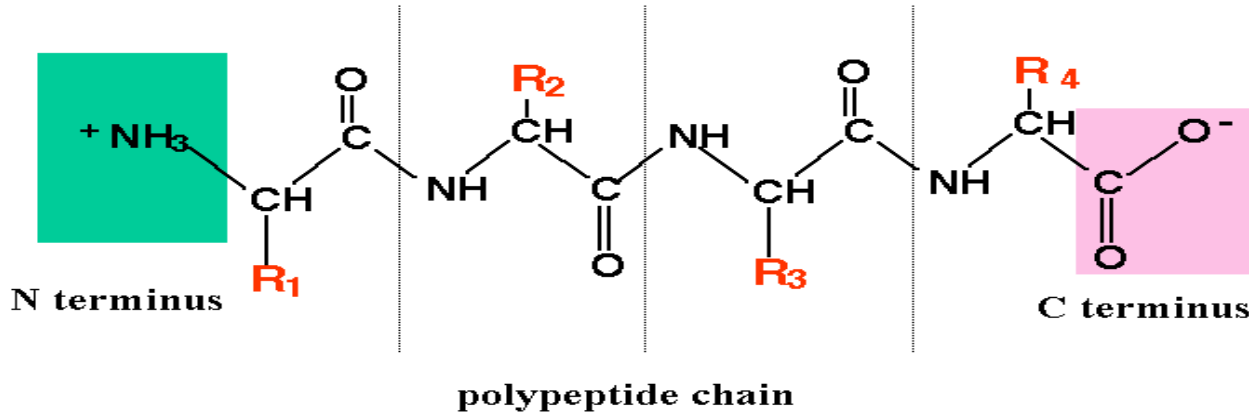
The following probability calculation is more realistic in that it takes into account

- The 50% probability of formation of peptide bonds (probability of peptide-bond formation is 50% since other bonds can also form, and such bonds would prevent protein formation)

- The 50% probability of each amino-acid molecule that is selected being left-handed (since in real life the molecules can be both left handed and right handed and mixtures would prevent protein formation)

Linking Amino-acids does NOT automatically make Proteins

Peptide = chain of amino acids



Average human protein has 480 amino-acids

--
Median Eukaryote protein 361 AA
Bacteria 267 AA
Archaea 247 AA

Only **~ 1 in 10^{63}** poly-peptides can fold into a functional protein
(for 92 amino-acid poly-peptides)
→ for each amino-acid bond,
we have 50% chance of peptide bond, and
50% chance of left-handed chirality (needed for life)

→ **Probability of formation of 1 functional protein** from a random collection of amino acids = $10^{-63} \cdot 2^{-92} \cdot 2^{-92} = \mathbf{10^{-118}}$

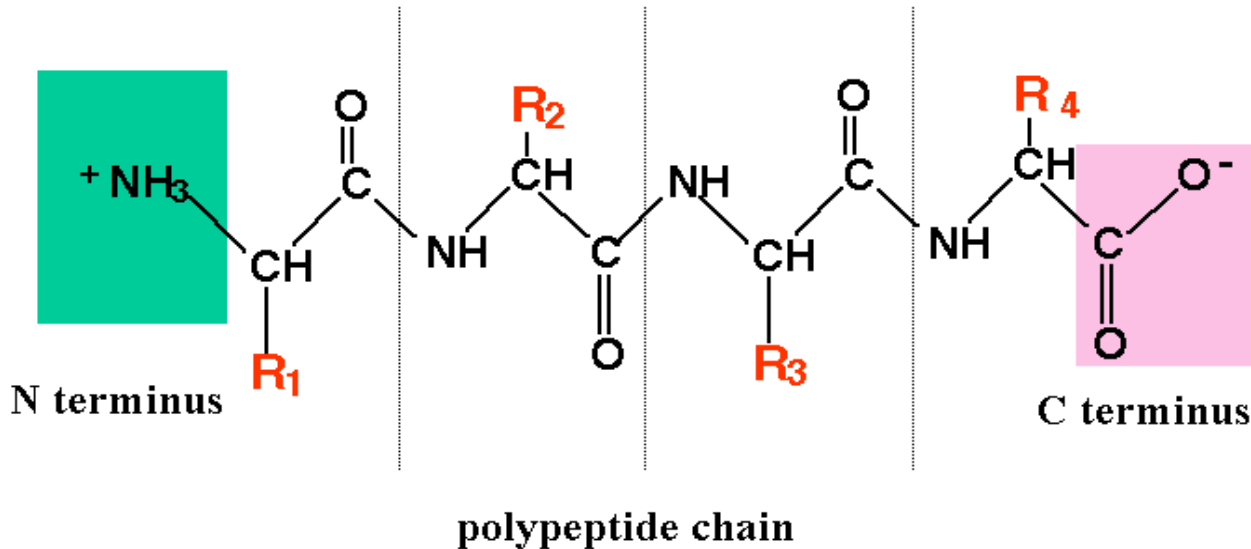
Probability calculations

The following probability calculation assumes an environment with

- only the 20 amino-acids needed for life
- only formation of peptide bonds (even though in real life the probability of peptide-bond formation is 50% since other bonds can also form, and such bonds would prevent protein formation)
- only left-handed molecules (even though in real life the molecules can be both left handed and right handed and mixtures would prevent protein formation)

Linking Amino-acids does NOT automatically make Proteins

Peptide = chain of amino acids



Average
human
protein has
480 amino-
acids

--
Median Eukaryote
protein 361 AA
Bacteria 267 AA
Archaea 247 AA

Only ~ 1 in 10^{63} poly-peptides can fold into a functional protein
(for 92 amino-acid poly-peptides)

Only ~ 1 in 10^{77} poly-peptides can fold into a functional protein
(for 150 amino-acid poly-peptides)

To form a 150-Amino-Acid protein → 1000 billion billion billion continents

1:10⁷⁷



Comparison:
~10⁸⁰ particles
in entire universe

- Cover NorthAm with dimes to the moon, 239k mi
- Cover 1000 billion billion billion such continents with dimes.
- Hide 1 red dime in the middle of all of these.
- Get blind-folded friend to pick one at random.

Probability calculations

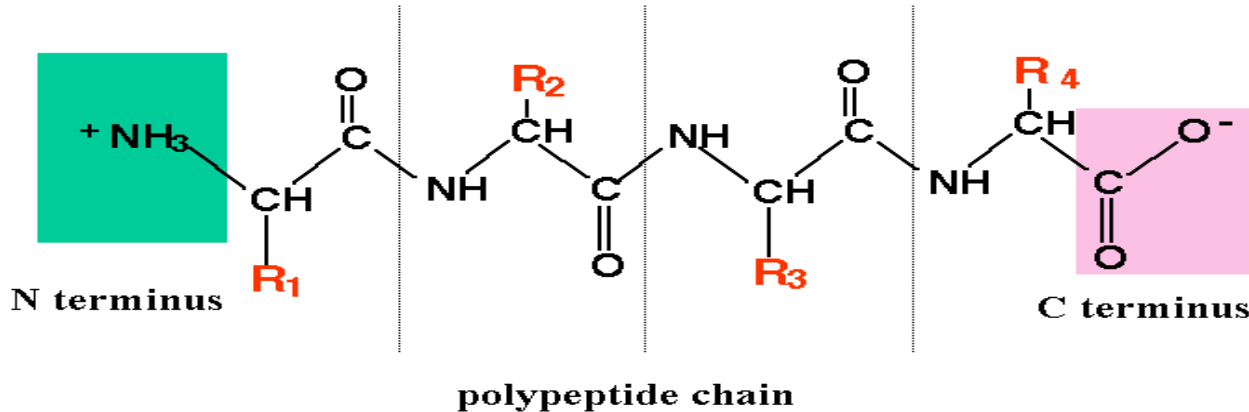
The following probability calculation is more realistic in that it takes into account

- The 50% probability of formation of peptide bonds (probability of peptide-bond formation is 50% since other bonds can also form, and such bonds would prevent protein formation)

- The 50% probability of each amino-acid molecule that is selected being left-handed (since in real life the molecules can be both left handed and right handed and mixtures would prevent protein formation)

Linking Amino-acids does NOT automatically make Proteins

Peptide = chain of amino acids



Average human protein has 480 amino-acids

--
Median Eukaryote protein 361 AA
Bacteria 267 AA
Archaea 247 AA

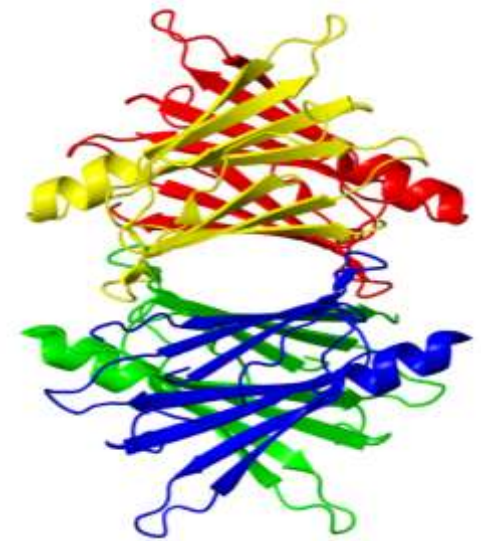
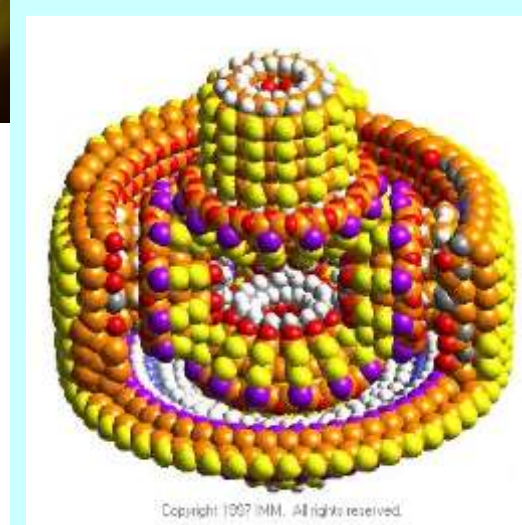
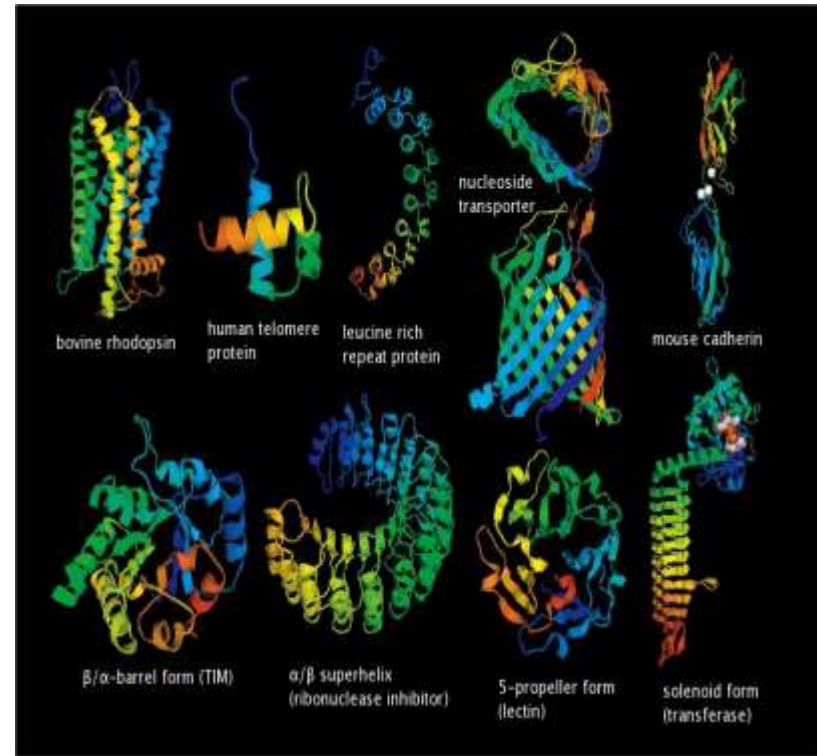
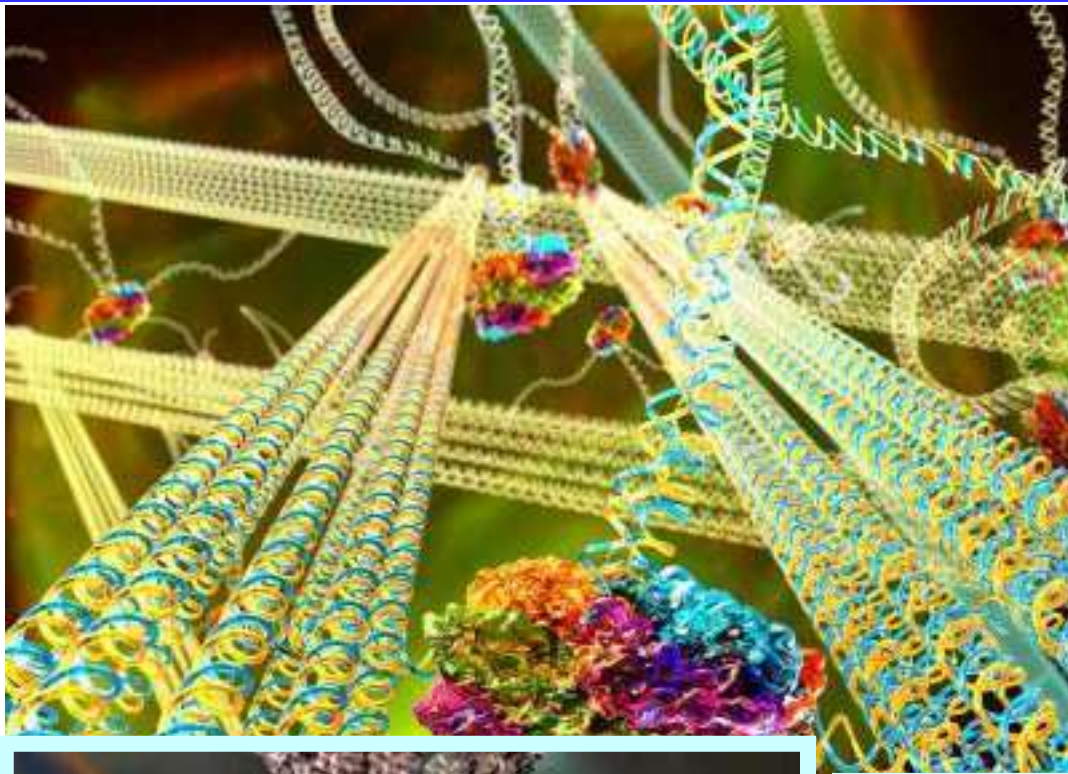
Only **~ 1 in 10^{77}** poly-peptides can fold into a functional protein
(for 150 amino-acid poly-peptides)
→ for each amino-acid bond,
we have 50% chance of peptide bond, and
50% chance of left-handed chirality (needed for life)

→ **Probability of formation of 1 functional protein** from a random collection of amino acids = $10^{-77} \cdot 2^{-150} \cdot 2^{-150} = \mathbf{10^{-167}}$

Probability

*(of formation of proteins
for one simple cell)*

Proteins → Complex Nano-Machines



Origin of Proteins for Simple Animal Cell ($10^{-40,000}$)

Simple Animal Cell

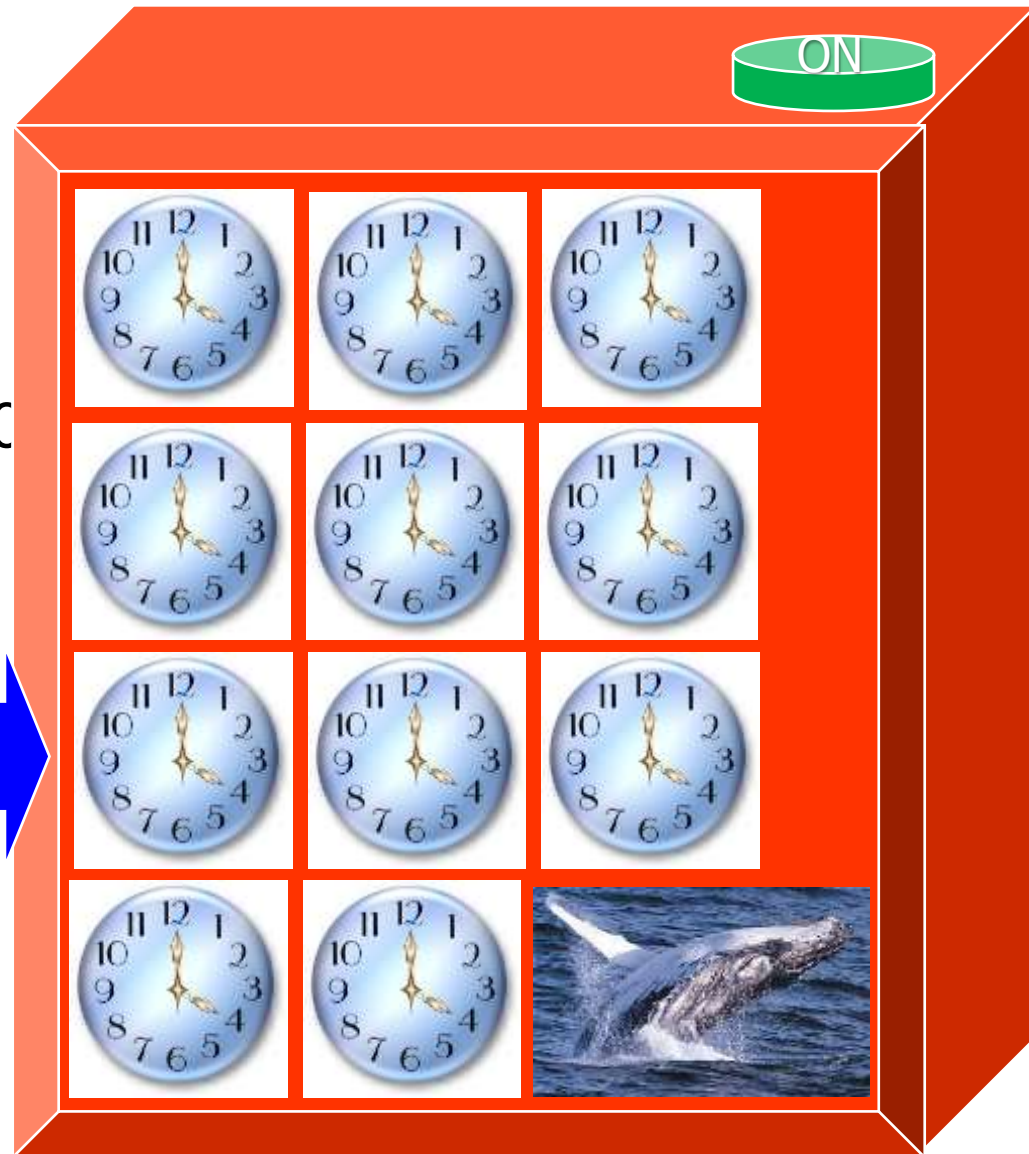
> 2000 proteins

Probability ($10^{-40,000}$)
by Random Chance

0.00000 00000 0000 000000
... 00000 00001
(39,999 zeros before 1)

22,495 dials →

- With 60 divisions (like a clock face)
- Have to be precisely set



If even 1 dial is off by 1 second → Kaput; no cell

Proteins for simple cell $\rightarrow 10^{39,972}$ continents

1:10^{40,000}

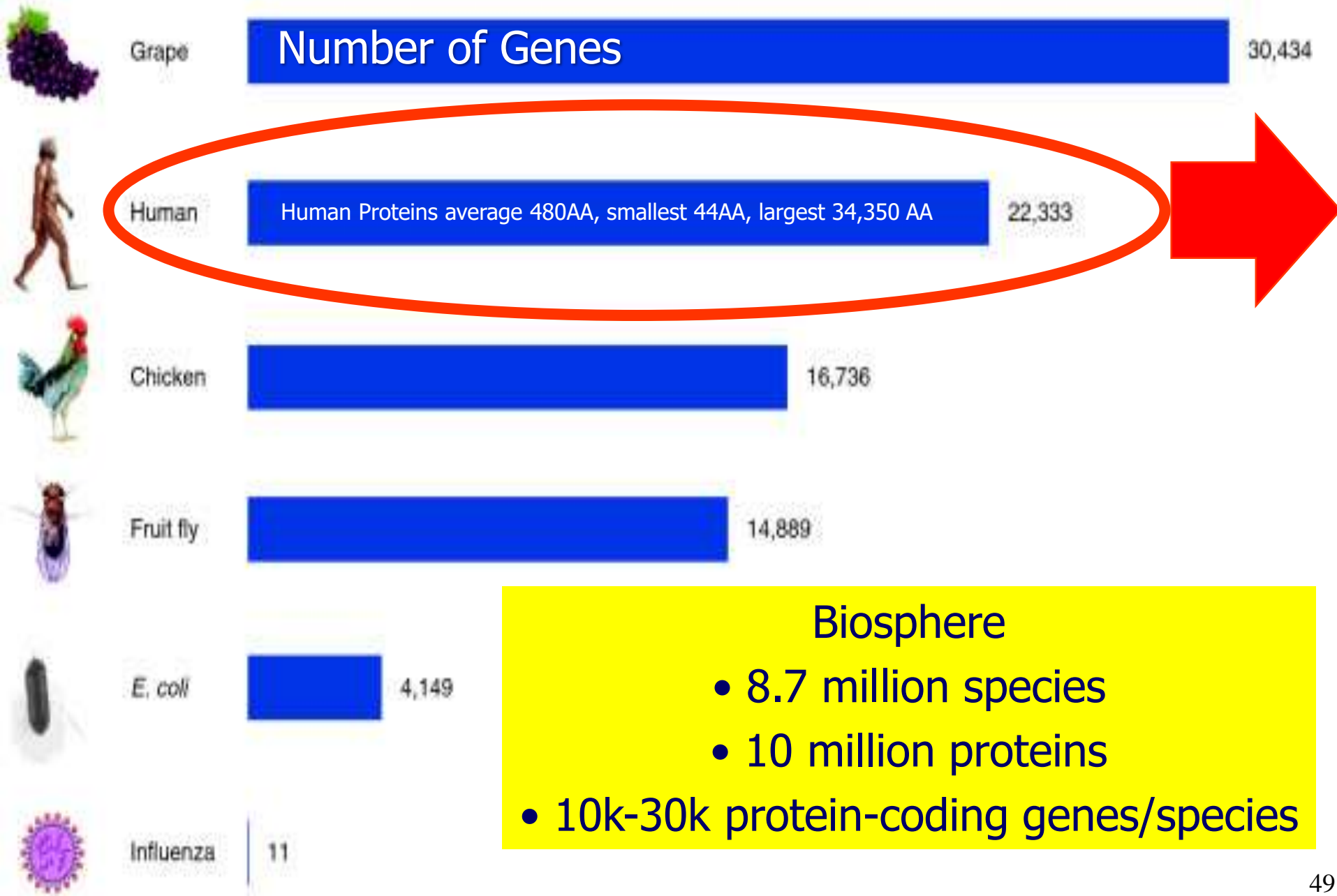
Comparison:
 $\sim 10^{80}$ particles
in entire universe

- Cover NorthAm with dimes to the moon, 239k mi
- Cover $10^{39,972}$ such continents with dimes.
- Hide 1 red dime in the middle of all of these.
- Get blind-folded friend to pick one at random.

Probability

*(of formation of proteins
for a human being)*

Genes (instructions in DNA) → Code for Proteins



Proteins for human $\rightarrow 10^{399,972}$ continents

1:10^{400,000}



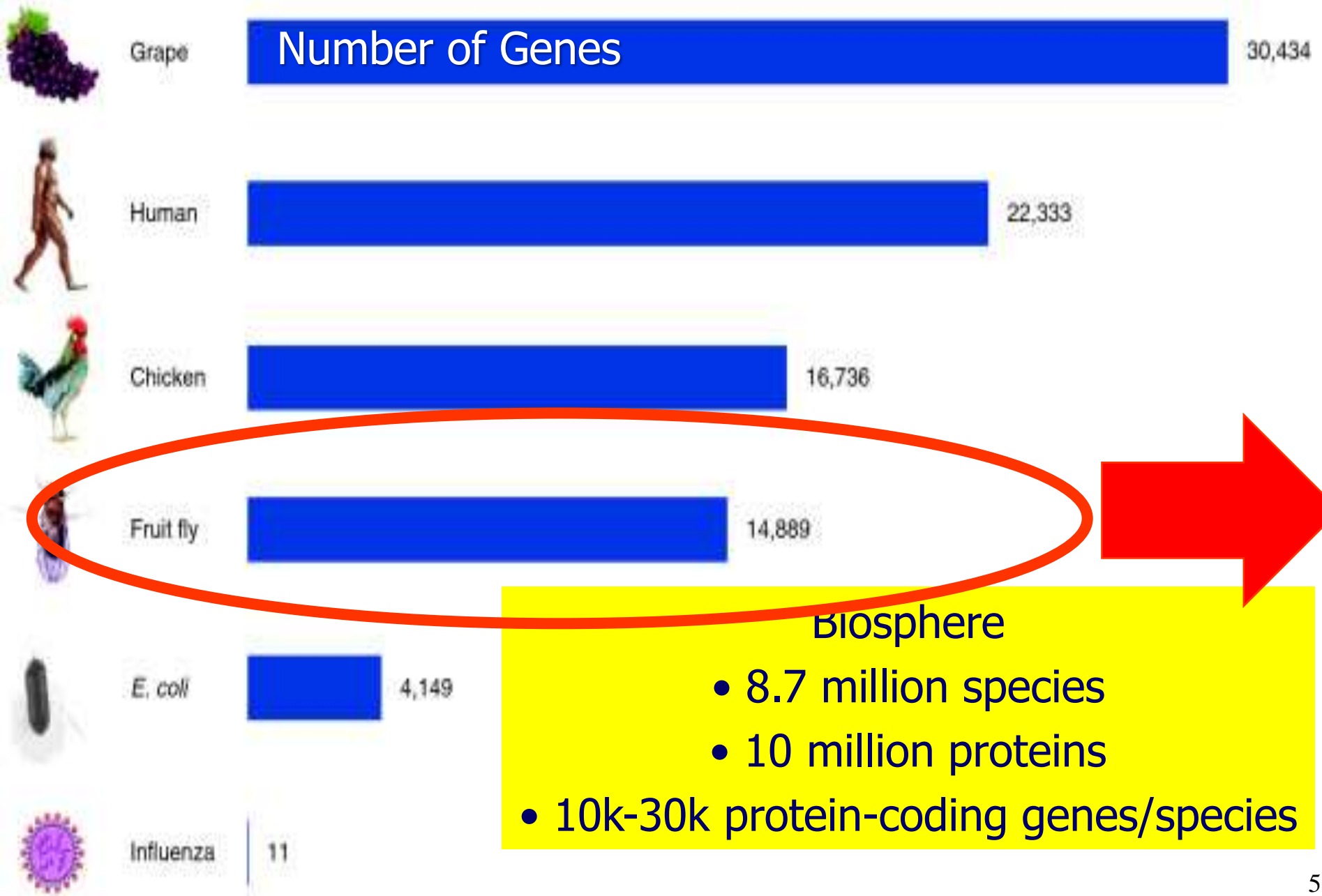
Comparison:
 $\sim 10^{80}$ particles
in entire universe

- Cover NorthAm with dimes to the moon, 239k mi
- Cover $10^{399,972}$ such continents with dimes.
- Hide 1 red dime in the middle of all of these.
- Get blind-folded friend to pick one at random.

Probability

*(of formation of proteins
for a fruit fly)*

Genes (instructions in DNA) → Code for Proteins



Proteins for fruit fly → $10^{279,972}$ continents

1:10^{280,000}



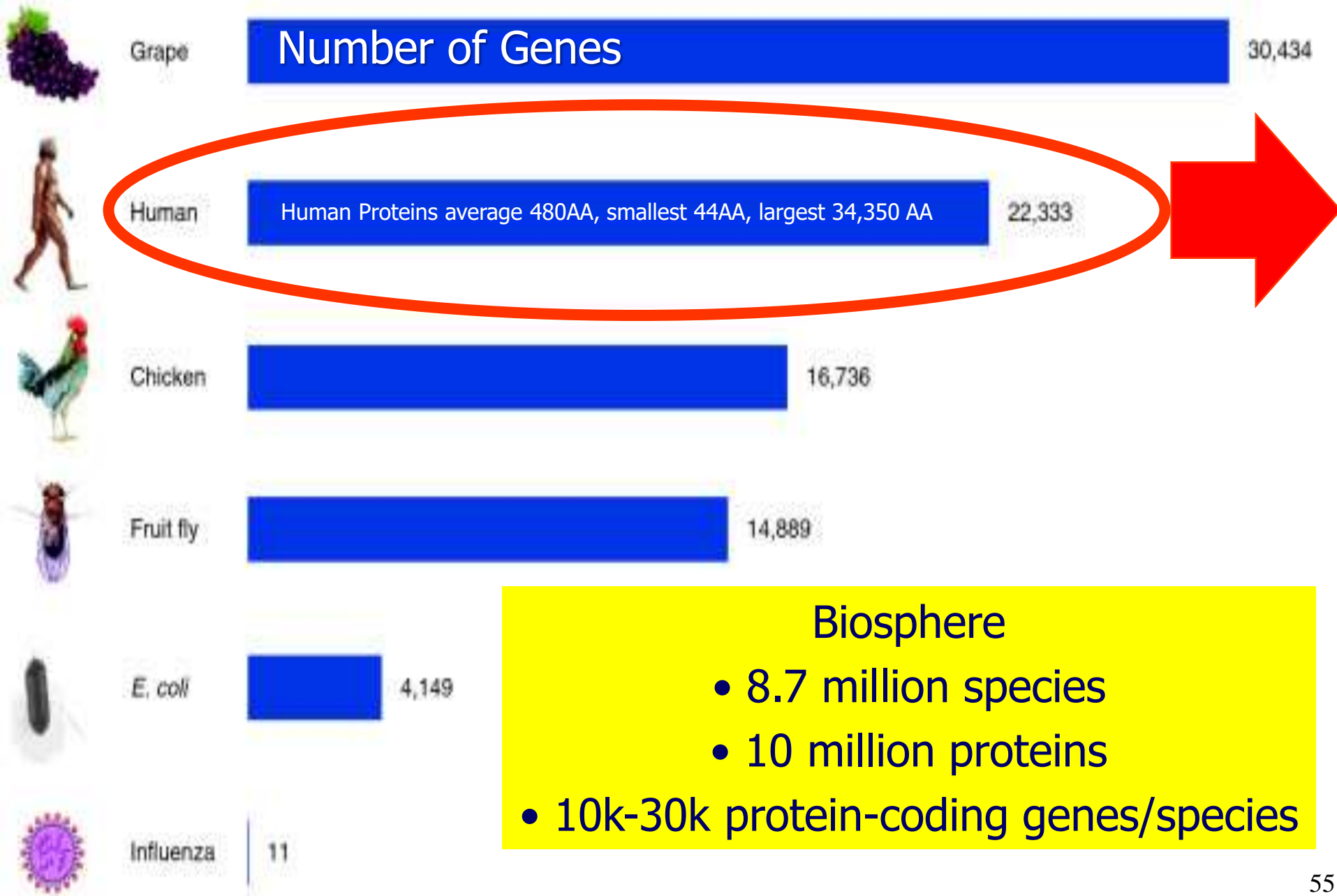
Comparison:
~ 10^{80} particles
in entire universe

- Cover NorthAm with dimes to the moon, 239k mi
- Cover $10^{399,972}$ such continents with dimes.
- Hide 1 red dime in the middle of all of these.
- Get blind-folded friend to pick one at random.

Probability

*(of formation of orphan-proteins
needed to go from Chimp
to human being)*

Genes (instructions in DNA) → Code for Proteins



Probability calculations

10-20% of the genes (on average) of species are Orphan Genes.

Since humans have 22000 protein-coding genes

This means that up to 2000 genes could be orphan genes (in humans)

Let us be extremely conservative and say that just 100 genes are orphan genes.

We have already seen that the probability for formation of just one 92 amino-acid protein = 10^{-63} (not counting peptide-only bonds and left-handed-only molecules).

So the probability of formation of 100 orphan genes (for humans) is

$$(10^{-63} * 10^{-63} * ...) \text{ 100 times} \\ = 10^{-6300}.$$

And if we include the need for peptide-only-bonds and left-handed-only molecules, the probability of formation of just one 92-amino-acid protein is 10^{-113}

$$\text{And probability of formation of 100 orphan genes (for humans) is} \\ *10^{-113} * 10^{-113} * ...) \text{ 100 times} \\ = 10^{-11300}.$$

To form 100 proteins to go from Chimp to Human → 1000 million billion continents

1:10⁶³⁰⁰



Comparison:
~10⁸⁰ particles
in entire universe

- Cover NorthAm with dimes to the moon, 239k mi
- Cover 1000 million billion such continents with dimes.
- Hide 1 red dime in the middle of one of these continents.
- Get blind-folded friend to pick one dime at random.

To form 100 proteins to go from Chimp to Human (including peptide bonds, chirality) → $10^{11,772}$ continents

1: 10^{11800}

Comparison:
 $\sim 10^{80}$ particles
in entire universe

- Cover NorthAm with dimes to the moon, 239k mi
- Cover $10^{11,772}$ such continents with dimes.
- Hide 1 red dime in the middle of one of these continents.
- Get blind-folded friend to pick one dime at random.

These probabilities
are so incredibly low
that it is Irrational for Atheists
to insist that these
happened by random chance
(as is needed for neo-Darwinism)

Conclusion

The MacroEvolution of Life points to God

**The impossibly low probabilities
Very unexpected for Atheism**

But not very surprising
if God exists
& created Life.

Intelligent Design shows its presence
by specified events of very low probability.

Evidence such as these

**Are shaking the Atheism/
Agnosticism**

**Of increasing numbers of
Scientists, philosophers & other
intellectuals**

It is interesting – to see signs of puzzlement in
otherwise naturalistic writings/ publications

A Universe Designed for Life



For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream.

He has scaled the mountains of ignorance;

he is about to conquer the highest peak; as he pulls himself over the final rock,

he is **greeted by a band of theologians** who have been sitting there for centuries.

-- Robert Jastrow, Astronomer



Questions

(for discussion)

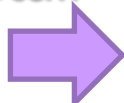
Questions for Discussion

- What did you learn (that was new to you) from this presentation?
- Did it come as a surprise to you that there is Scientific Evidence for God?
- Which of these evidences do you think is the most compelling?
- Do you feel that Science and Christian Faith are compatible?
Why, or why not?
- Was there anything in the presentation that was confusing or not clearly communicated?

•Action Steps

- Provide feedback to the presenter about what topics you would like covered in more detail.

- Read a book that goes into more detail on these topics.



There is A God

*(How an
Atheist Scientist
changed his mind)*



John M. Kinson

Does Science Point to God?

(Is there scientific evidence for God?)

God & Science – Book 2



John M. Kinson

*Recommended
Reading*

There is A God

(How an

Atheist Scientist

changed his mind)



John M. Kinson

Does Science Point to God?

(Is there scientific evidence for God?)

God & Science – Book 2



John M. Kinson

Inexpensive Kindle Books → [Amazon.com](https://www.amazon.com)

Contact

- Please email me at LogicalTheist@gmail.com if you have questions or comments, or ...
- If you wish to commit your life to Christ
 - and if you need any help with that
 - or in how to grow in your relationship with God