



ATTENTION STUDENTS



BIOLOGY 111

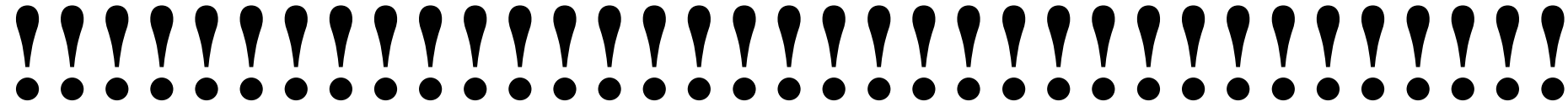
PRINCIPLES OF BIOLOGY

DR. MENAPACE

!!!MAJORS BIOLOGY!!!

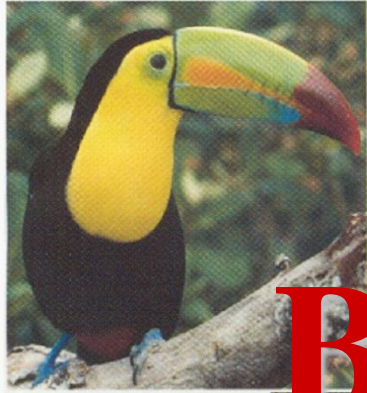


ATTENTION STUDENTS 



SCREEN #2

LECTURE SLIDES

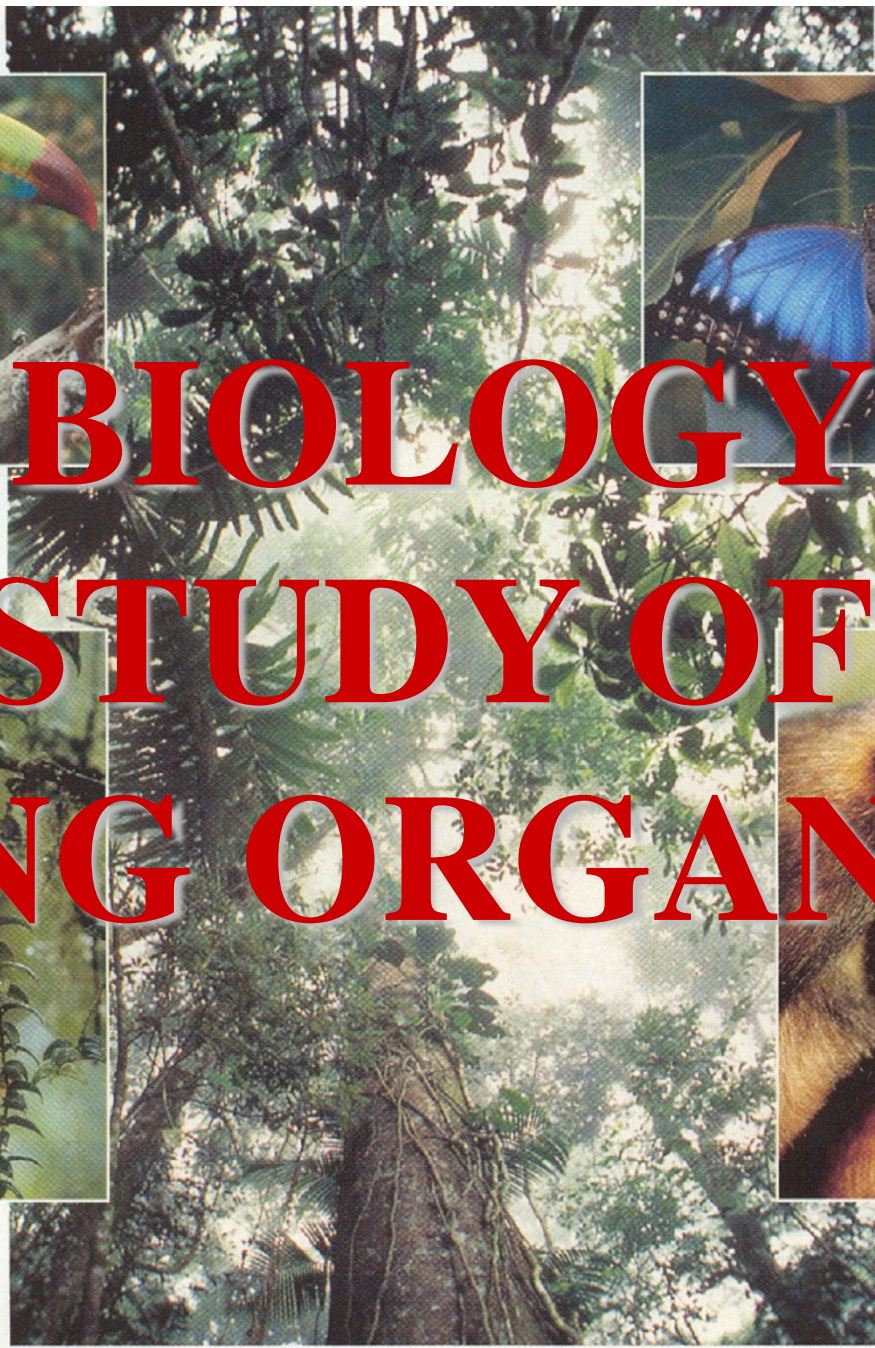


BIOLOGY

STUDY OF



LIVING ORGANISMS





CHAPTER 01
INTRODUCTION
SCIENCE
&
INTRODUCTION
BIOLOGY

INTRODUCTION SCIENCE

SCIENCE

SCIENCE



**PURSUIT
OF
KNOWLEDGE**

SCIENCE

SCIENCE

PURSUIT

OF

KNOWLEDGE

SCIENTIST

SCIENTIST



**PURSUES
KNOWLEDGE**

SCIENTIST



SCIENTIST
PURSUES
KNOWLEDGE

SCIENTISTS

SCIENTISTS

SOCIAL SCIENTIST

SCIENTISTS

SCIENTISTS

SOCIAL SCIENTIST

NATURAL SCIENTIST

SCIENTISTS

**SOCIAL
SCIENTIST**

SOCIAL SCIENTIST



**PURSUES
KNOWLEDGE
HUMAN SOCIETY**

SOCIAL SCIENTIST

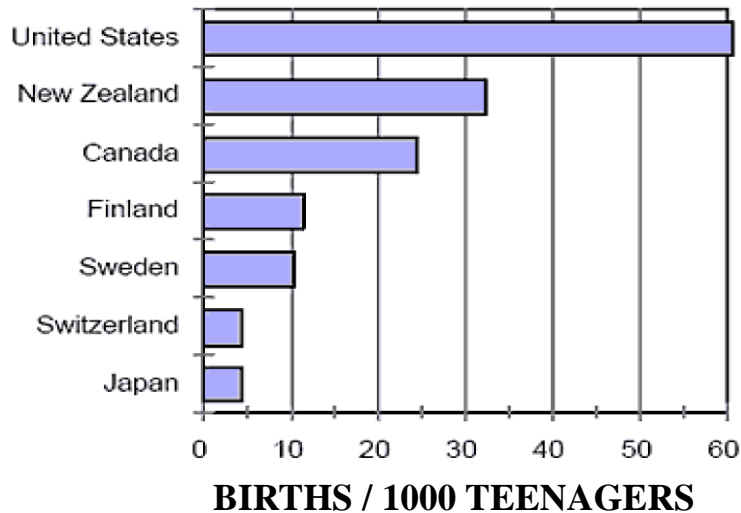


HUMAN SOCIETY



TEEN PREGNANCY

N



NATURAL SCIENTIST

NATURAL SCIENTIST



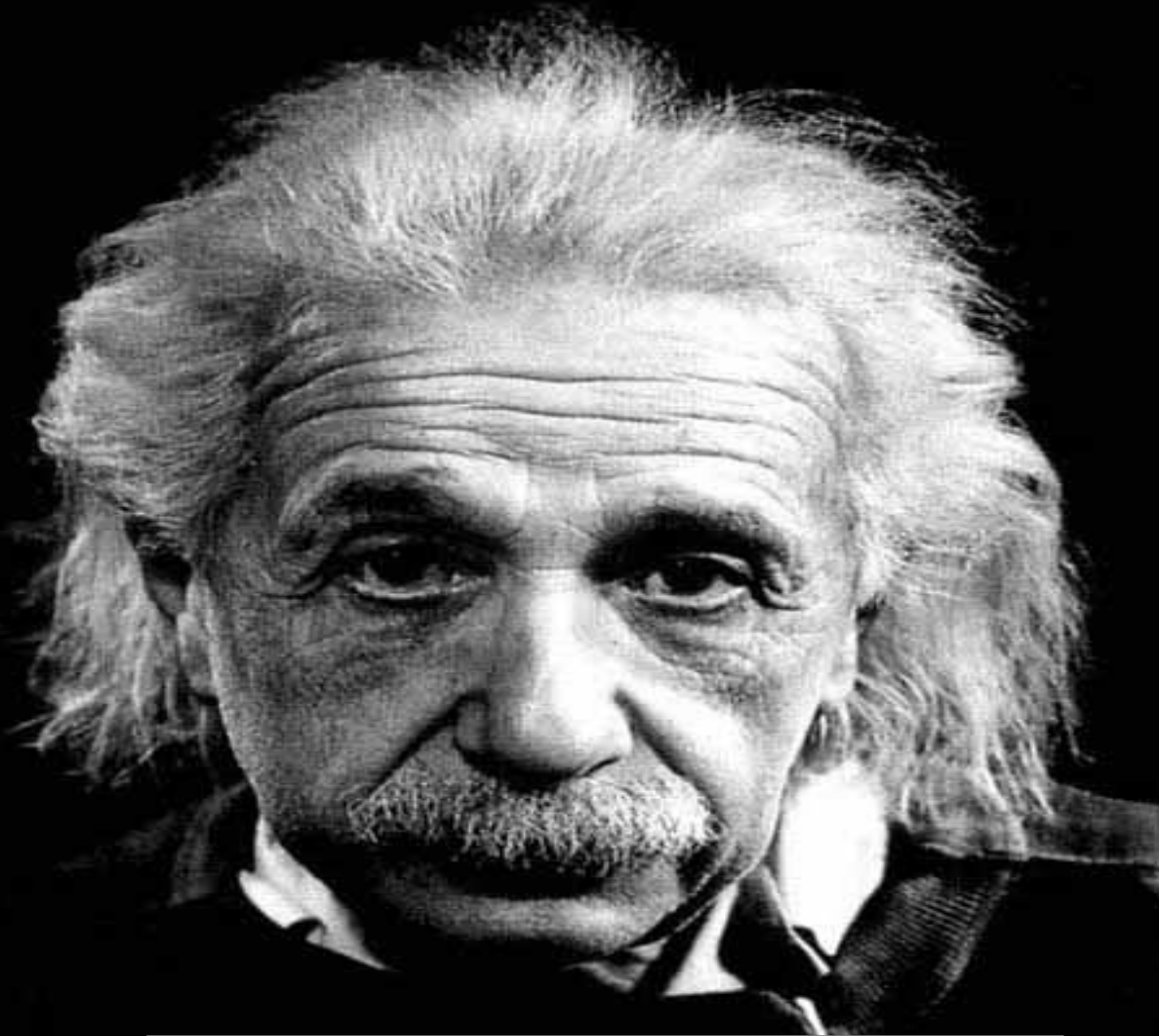
**PURSUES
KNOWLEDGE
NATURAL
ENVIRONMENT**

NATURAL SCIENTIST

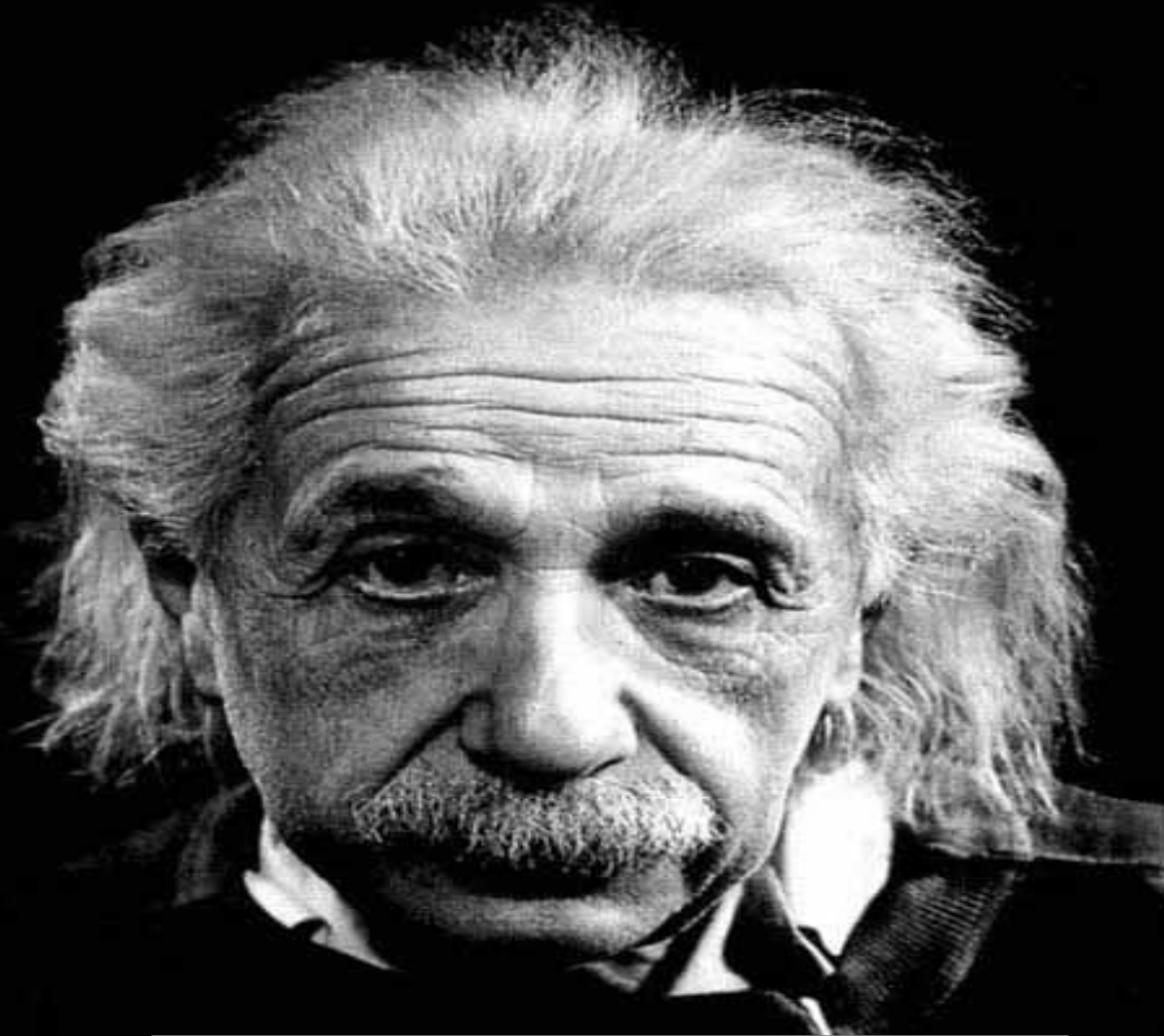


NATURAL ENVIRONMENT





NATURAL SCIENTIST



ALBERT EINSTEIN

NATURAL SCIENCES

NATURAL SCIENCES

CHEMISTRY

NATURAL SCIENCES

NATURAL SCIENCES

CHEMISTRY

GEOLOGY

NATURAL SCIENCES

NATURAL SCIENCES

CHEMISTRY

GEOLOGY

PHYSICS

NATURAL SCIENCES



NATURAL SCIENCES

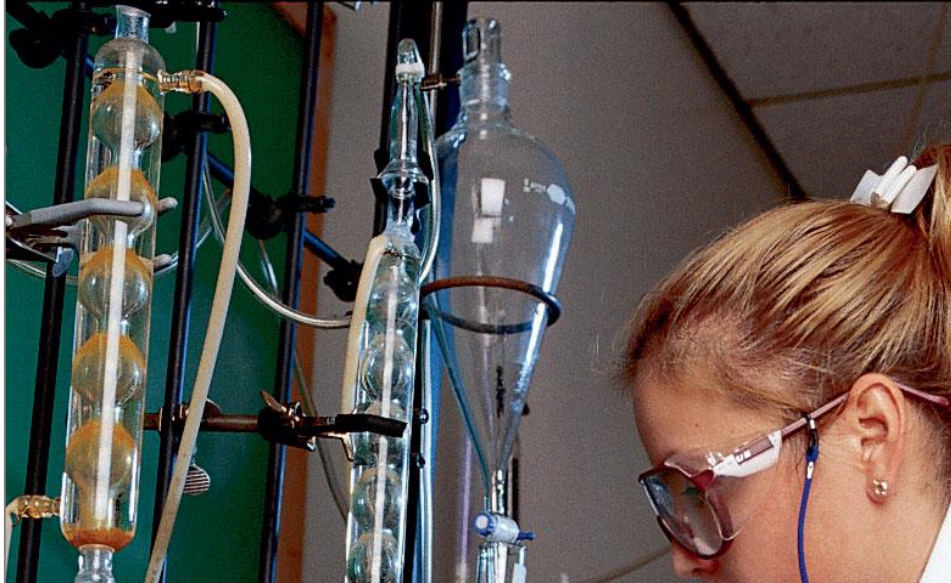
CHEMISTRY

GEOLOGY

PHYSICS

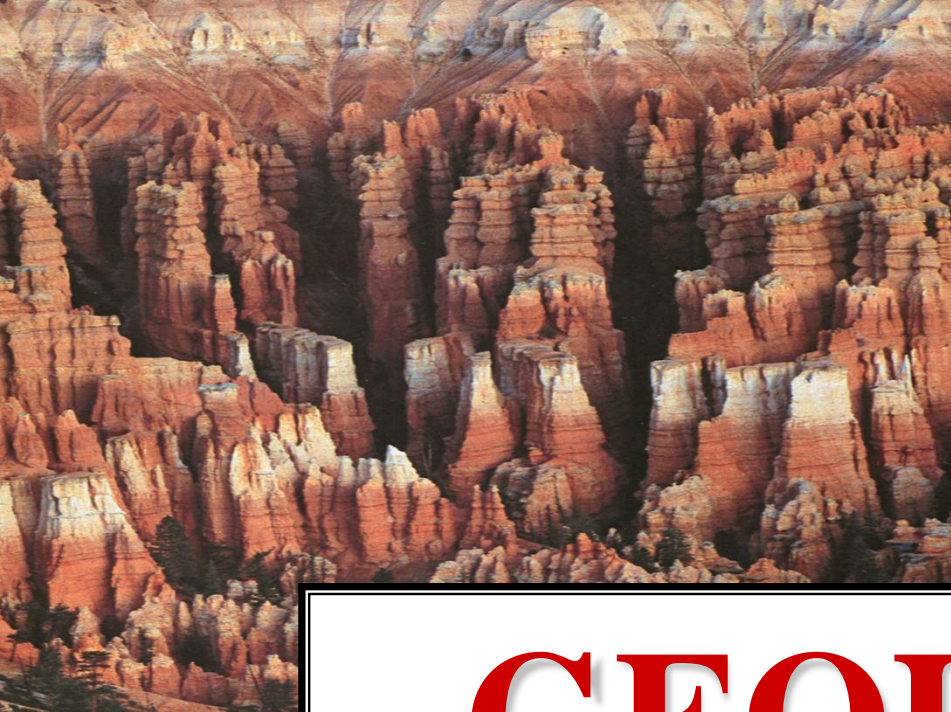
BIOLOGY

NATURAL SCIENCES

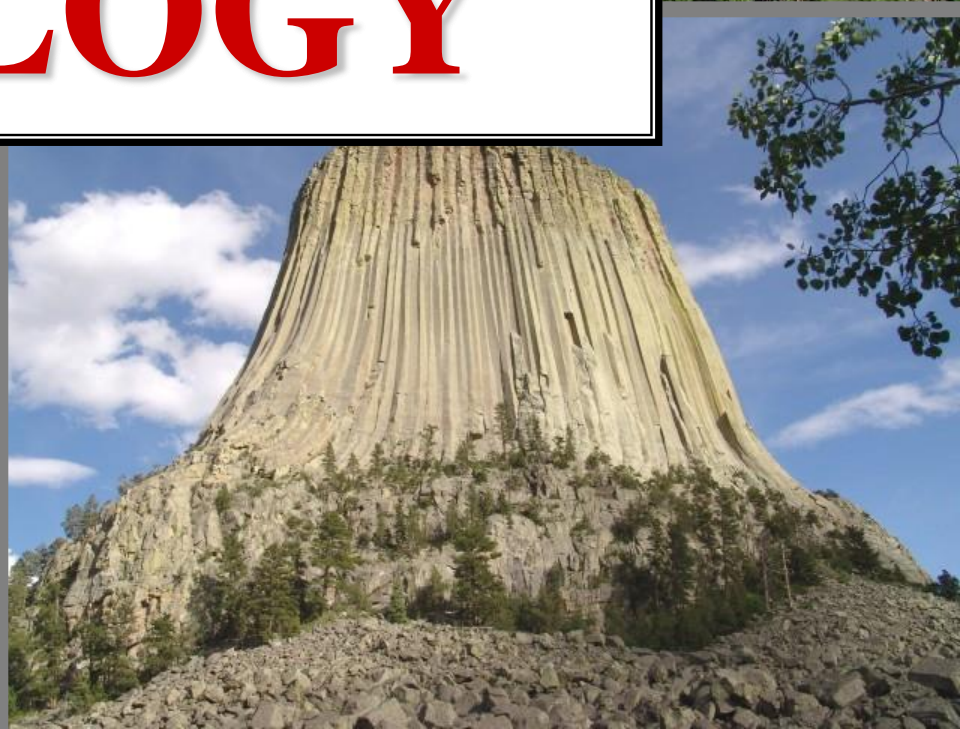


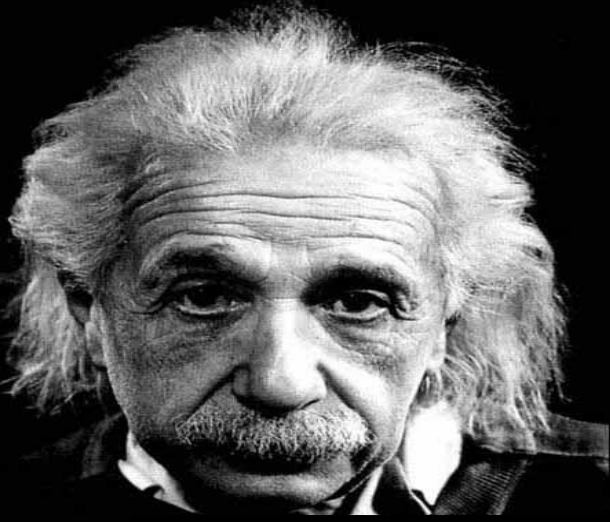
CHEMISTRY



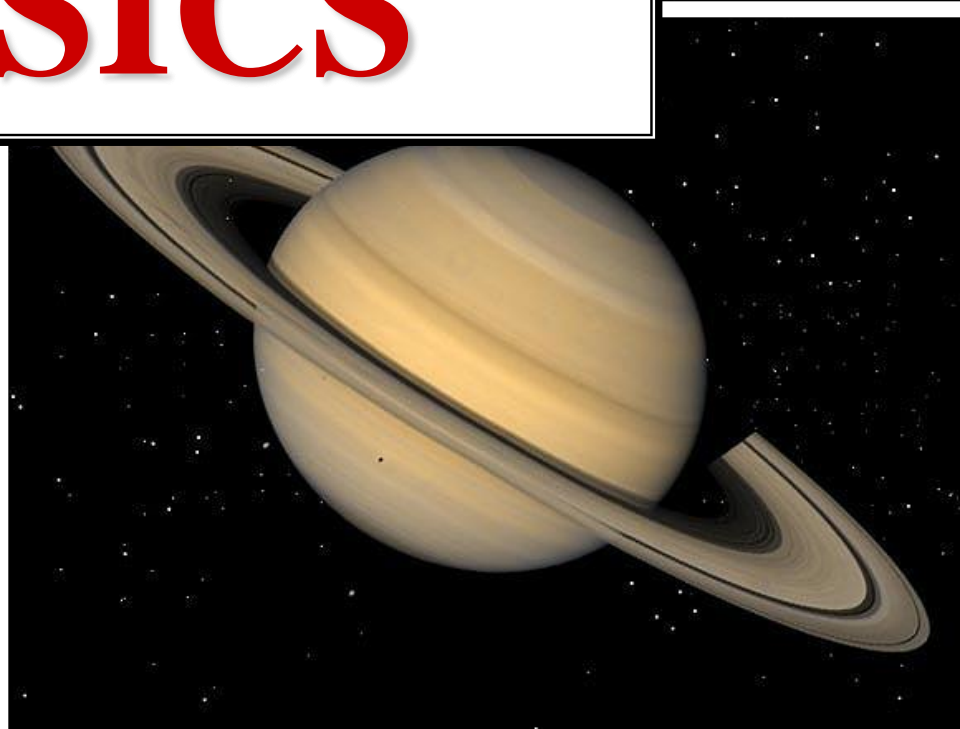
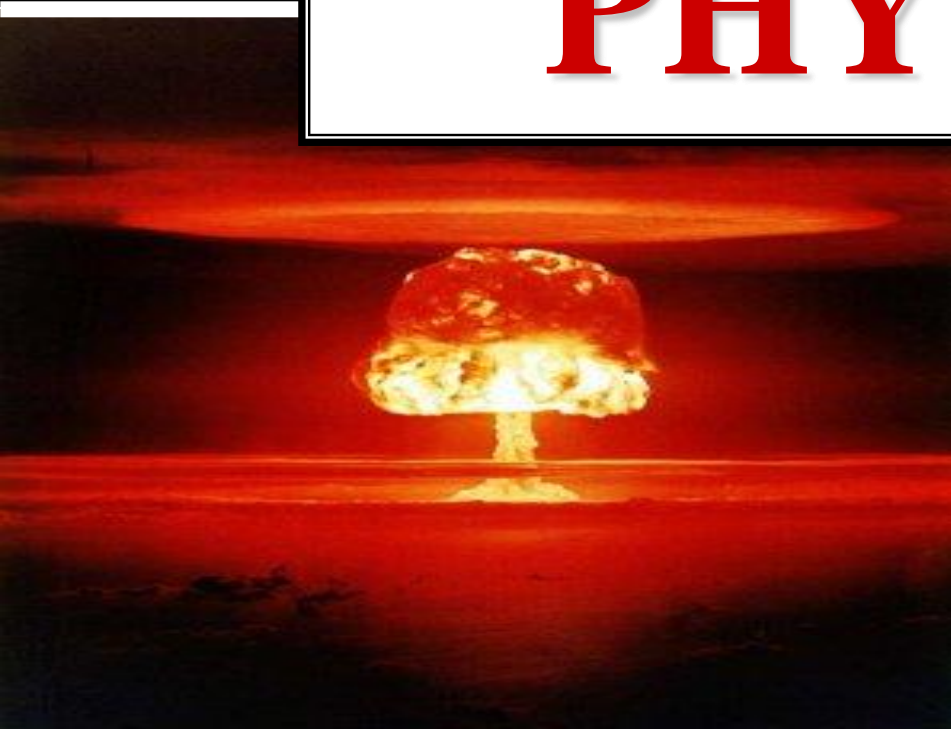


GEOLOGY





PHYSICS





BIOLOGY



INTRODUCTION BIOLOGY

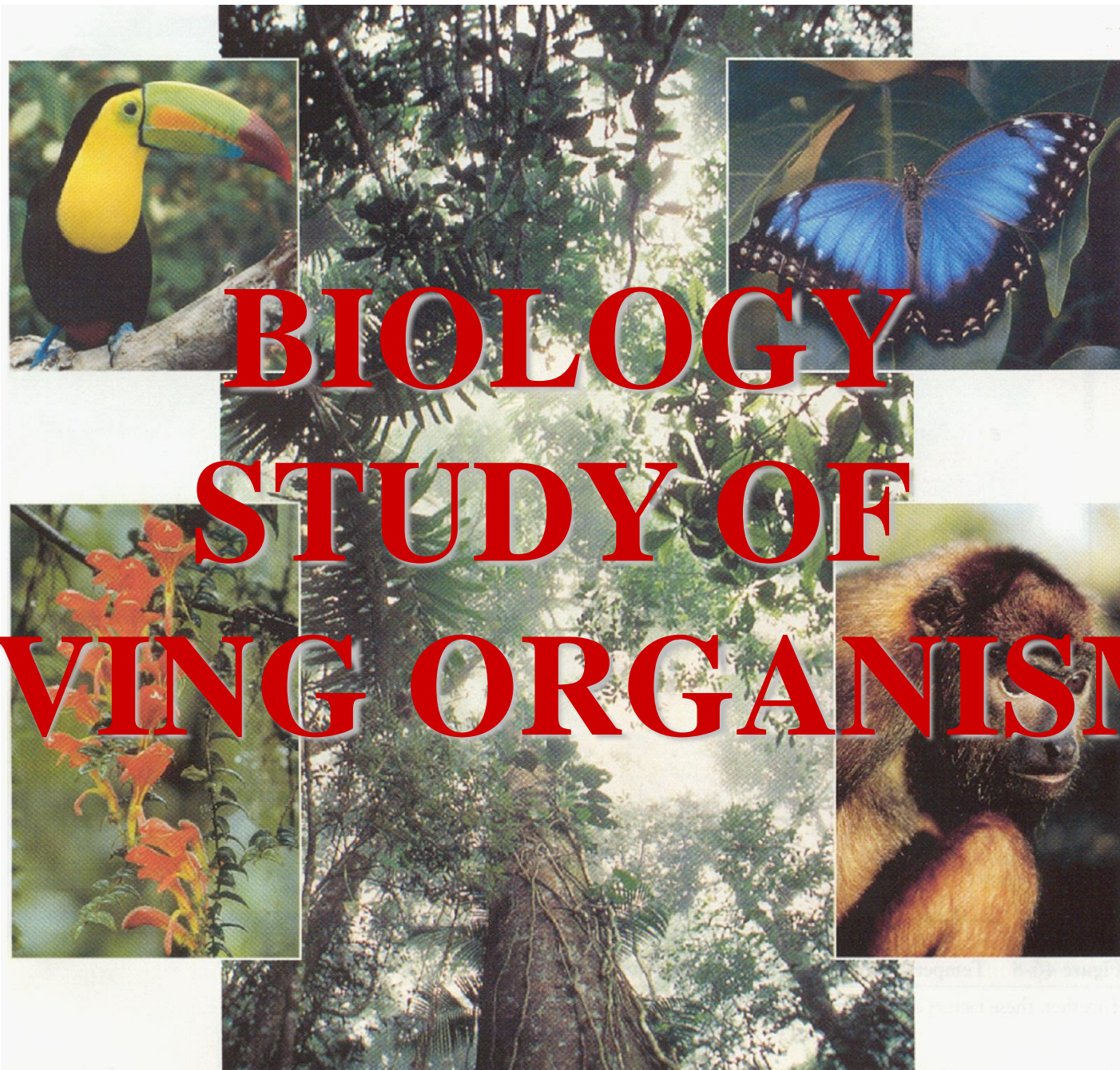
BIOLOGY



BIOLOGY

**STUDY OF LIVING
ORGANISMS**

BIOLOGY



BIOLOGY

STUDY OF

LIVING ORGANISMS

BIOLOGIST

BIOLOGIST

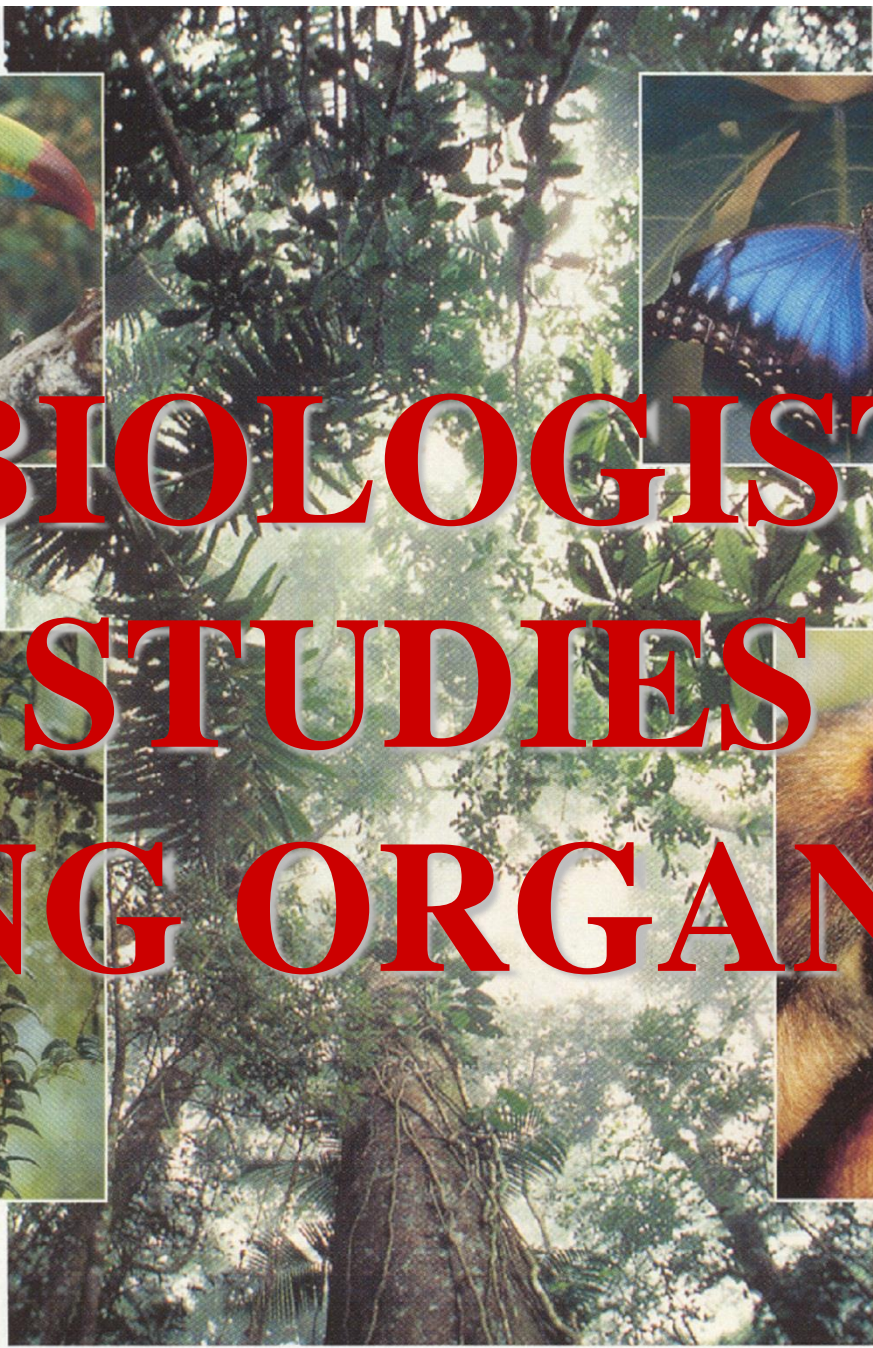
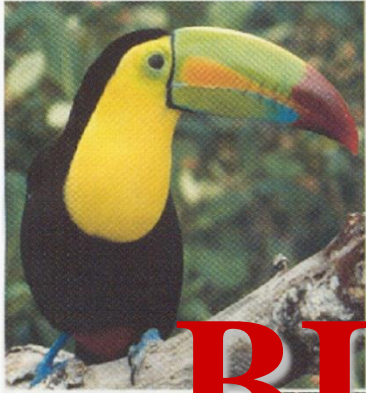


NATURAL SCIENTIST

STUDIES

LIVING ORGANISMS

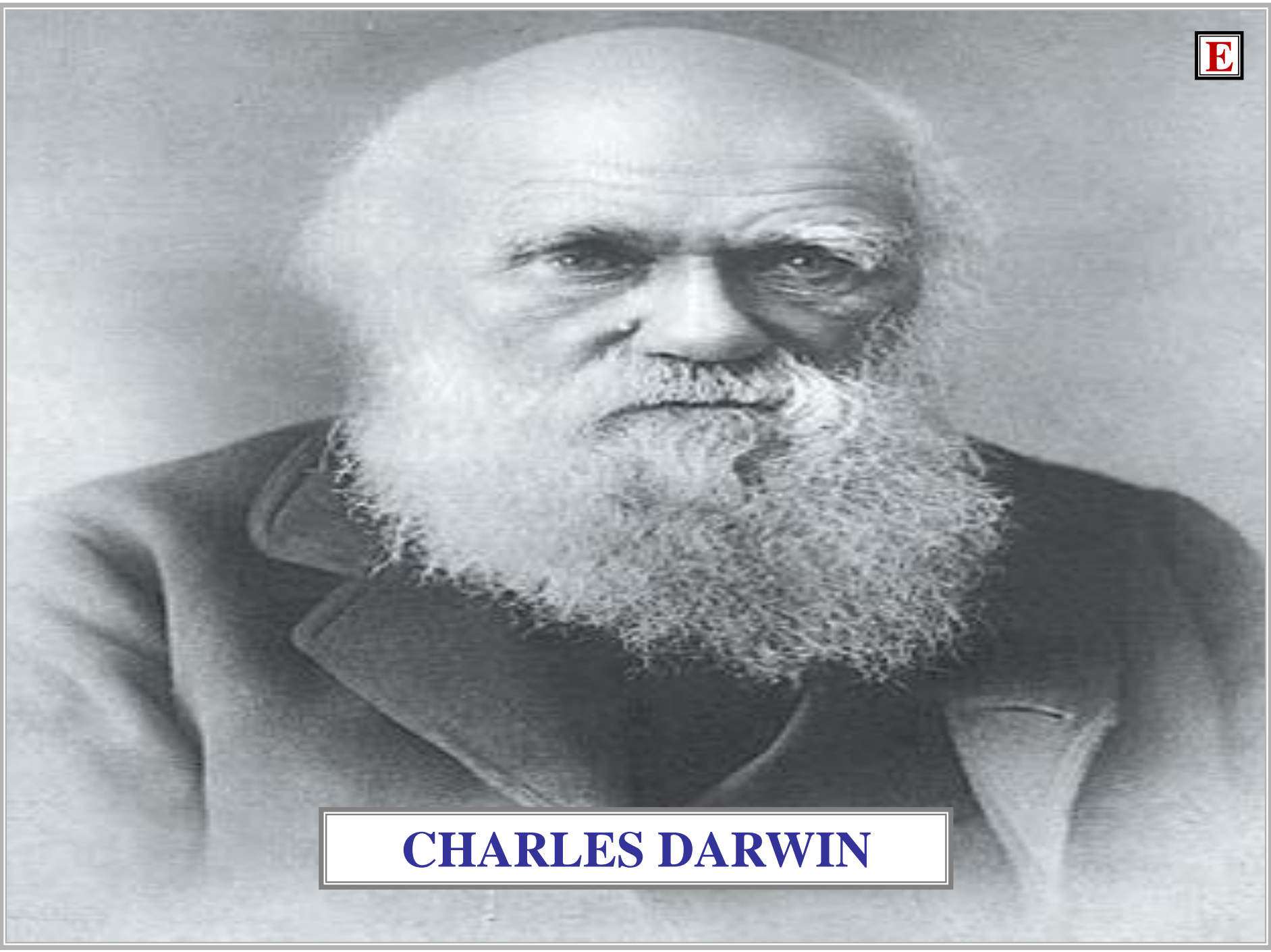
BIOLOGIST



BIOLOGIST STUDIES LIVING ORGANISMS

D

BIOLOGIST



CHARLES DARWIN



EVOLUTION

CHARLES DARWIN



LIVING ORGANISM

QUESTION

WHAT IS A

LIVING ORGANISM?

QUESTION



ANSWER

LIVING ORGANISM

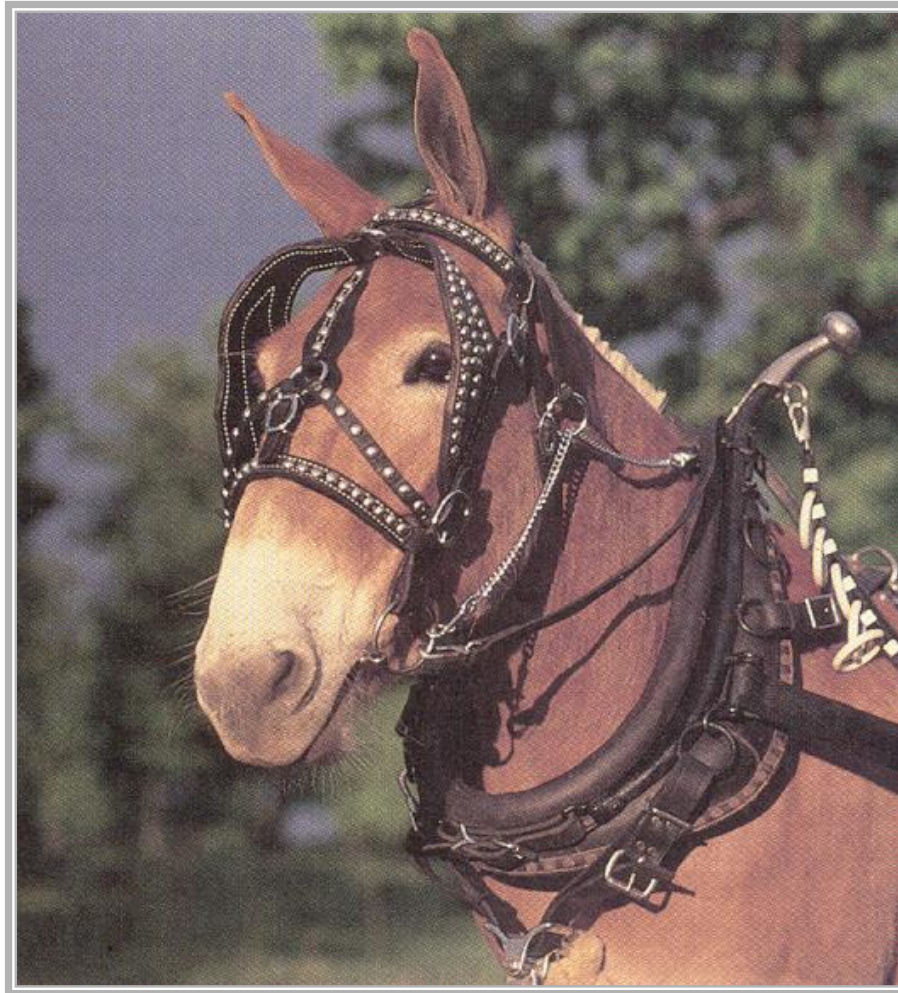
UNDERGOES

REPRODUCTION

ANSWER



MULE

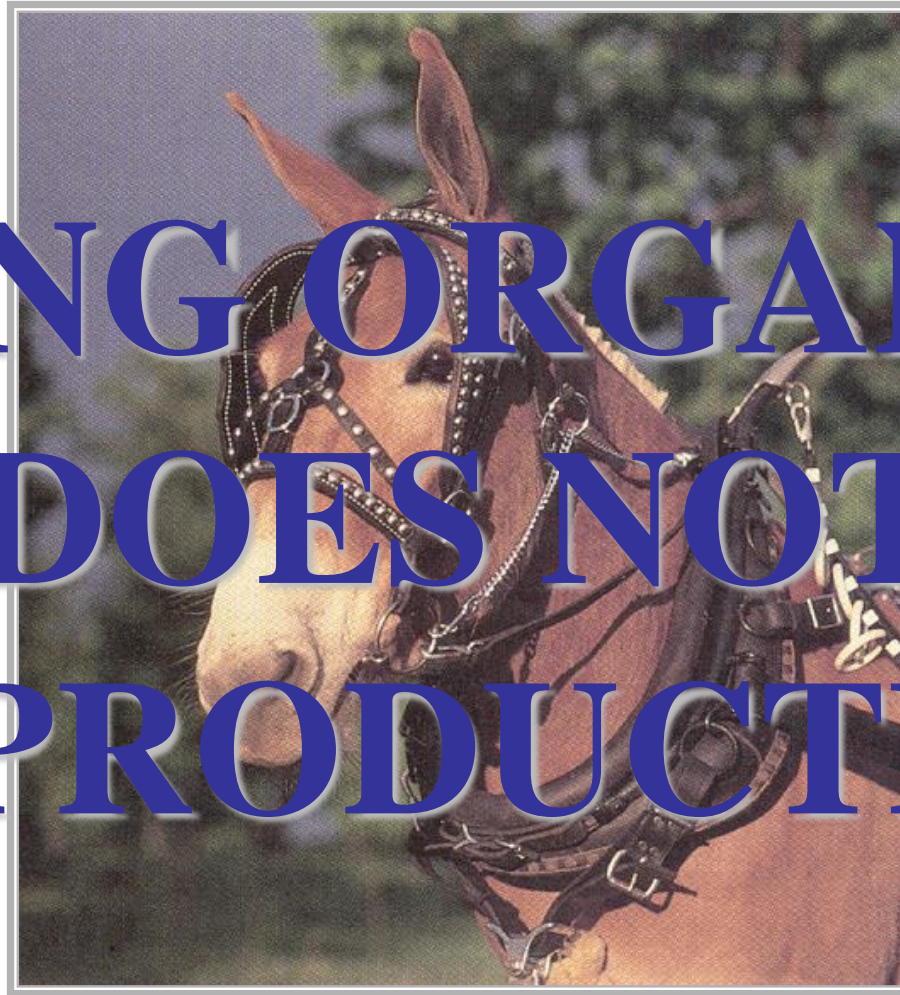


FEMALE HORSE X MALE DONKEY

MULE



**LIVING ORGANISM
DOES NOT
REPRODUCTION**



FEMALE HORSE X MALE DONKEY

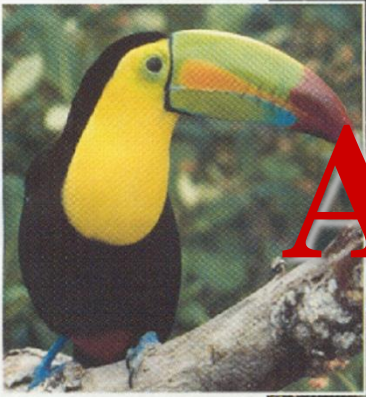
STERILE

QUESTION

WHAT IS A

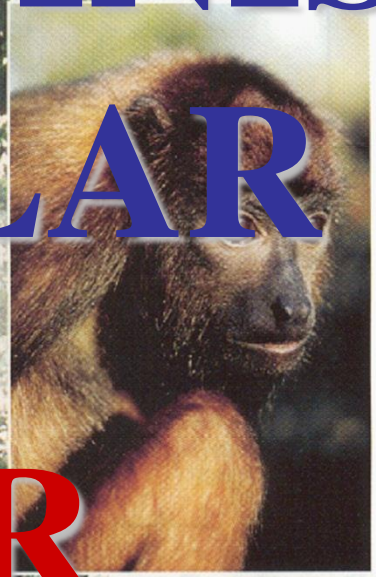
LIVING ORGANISM?

QUESTION



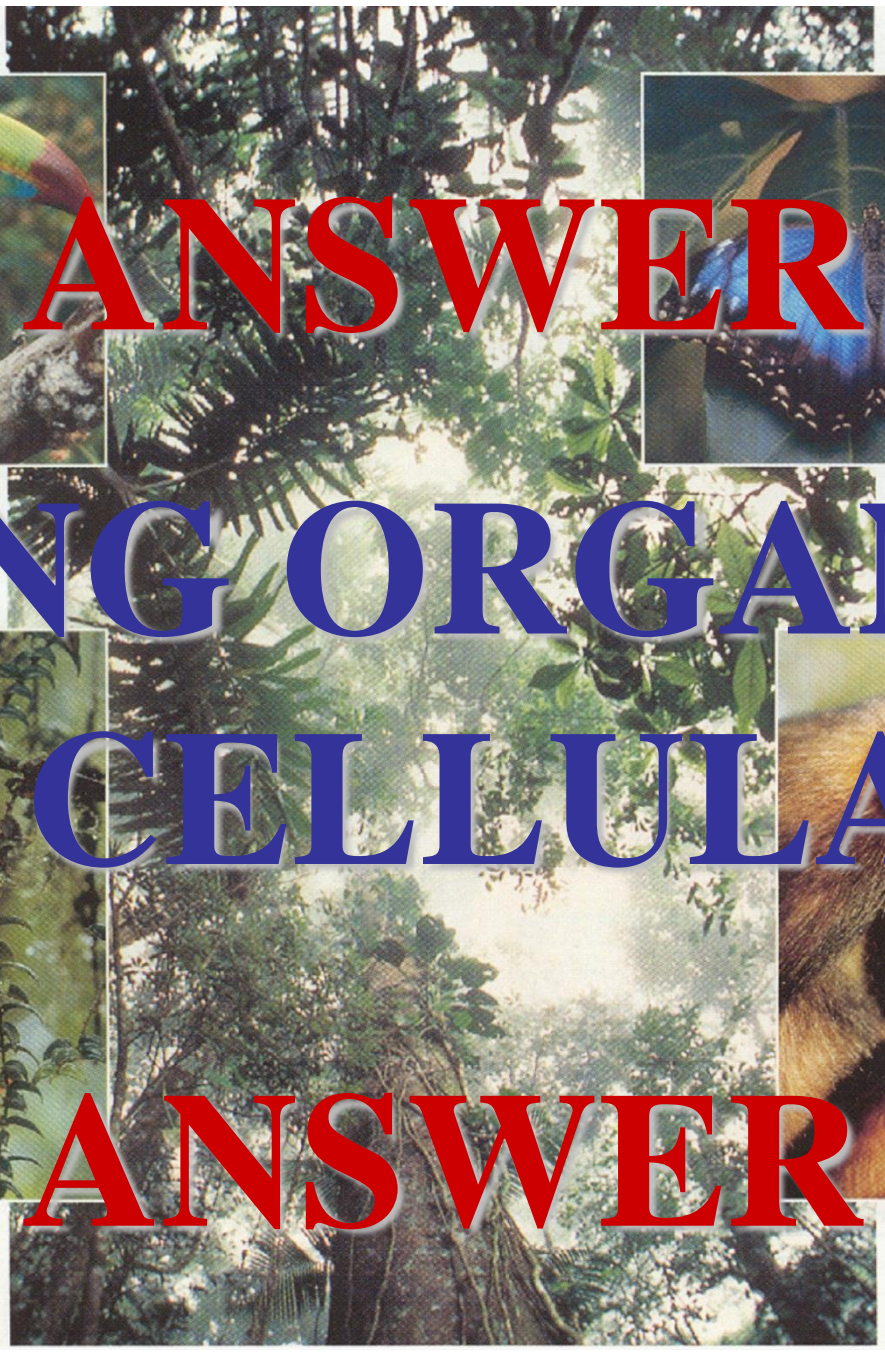
ANSWER

LIVING ORGANISM



IS CELLULAR

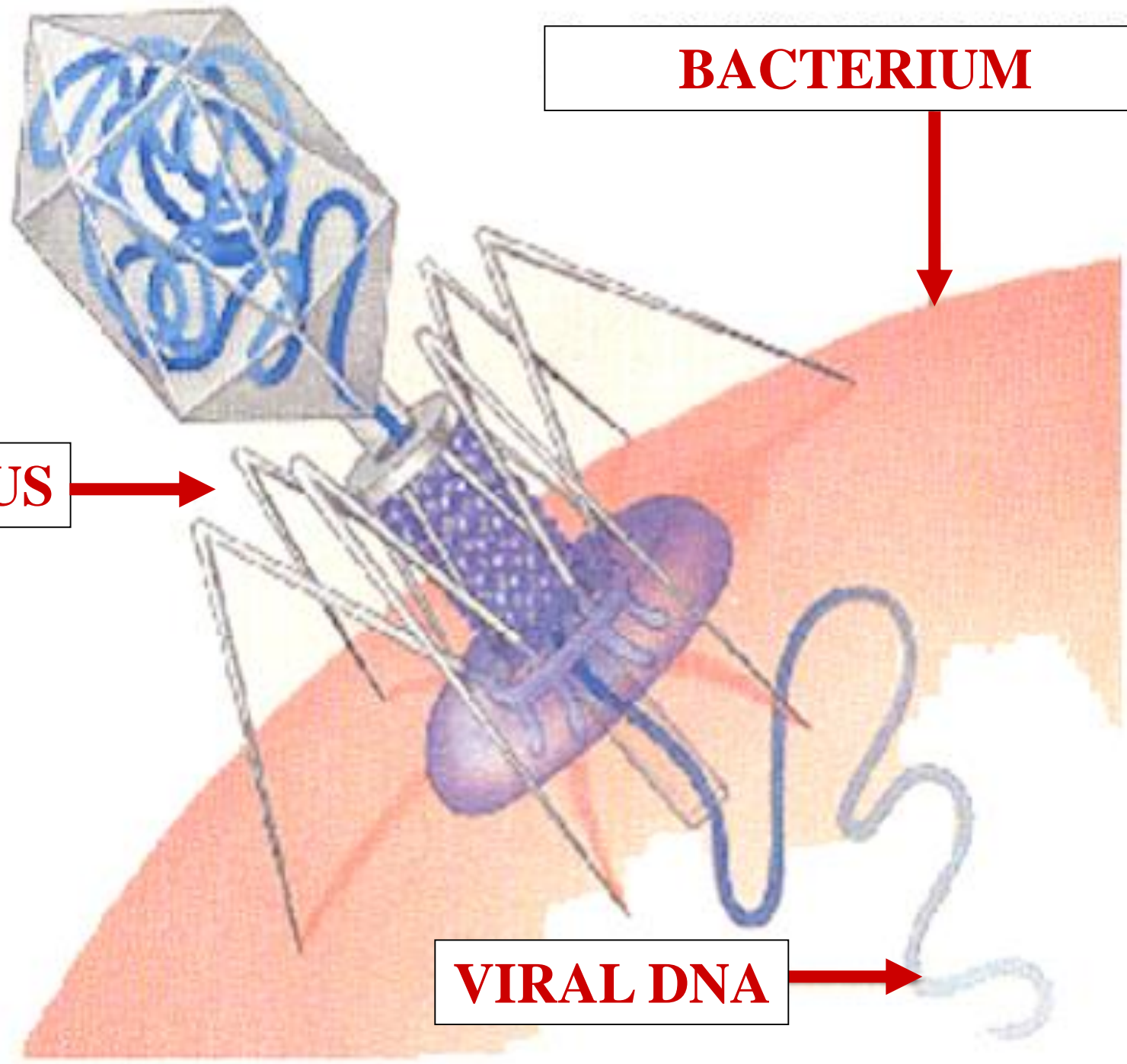
ANSWER



BACTERIUM

VIRUS

VIRAL DNA



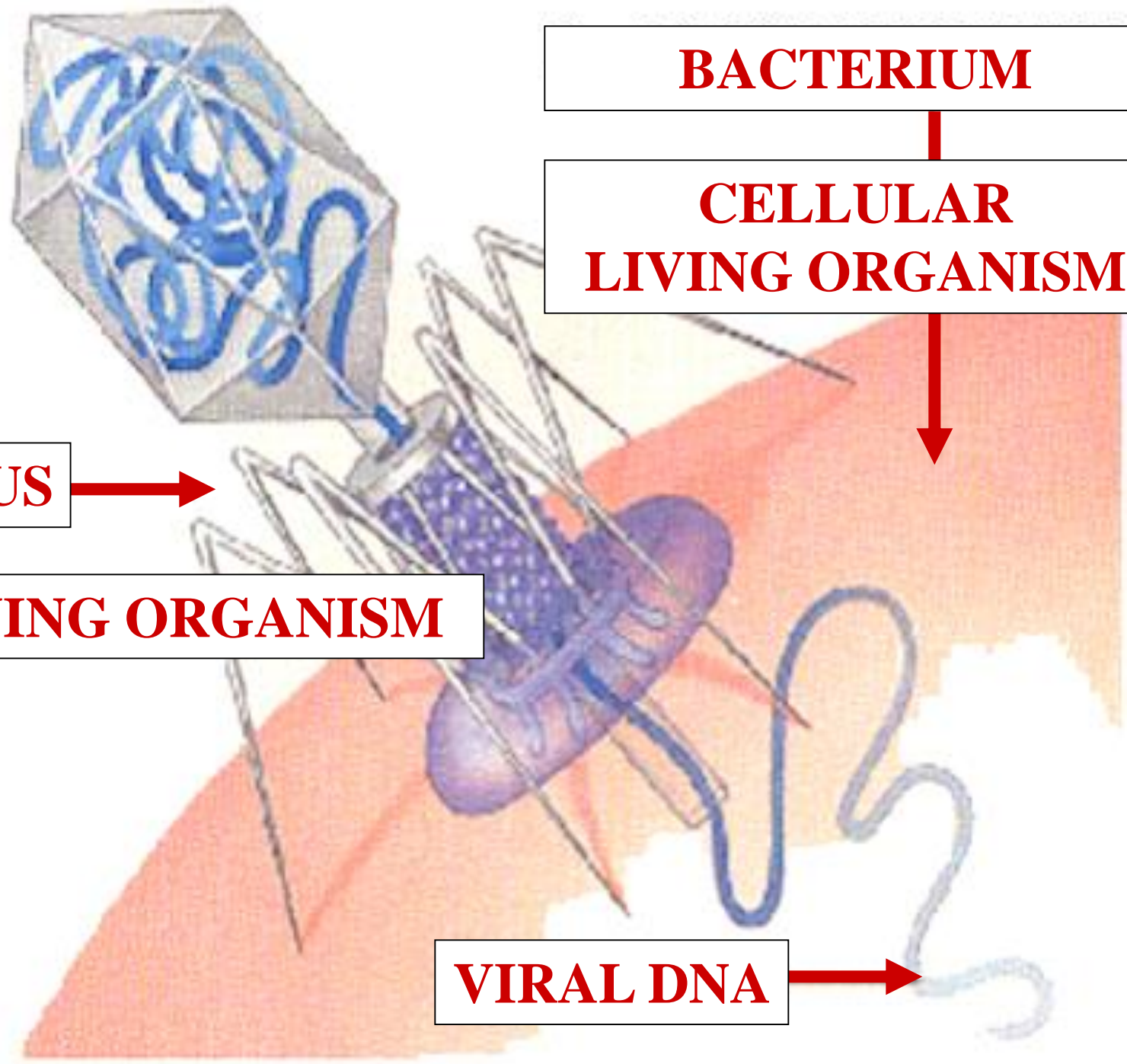
BACTERIUM

**CELLULAR
LIVING ORGANISM**

VIRUS

LIVING ORGANISM

VIRAL DNA



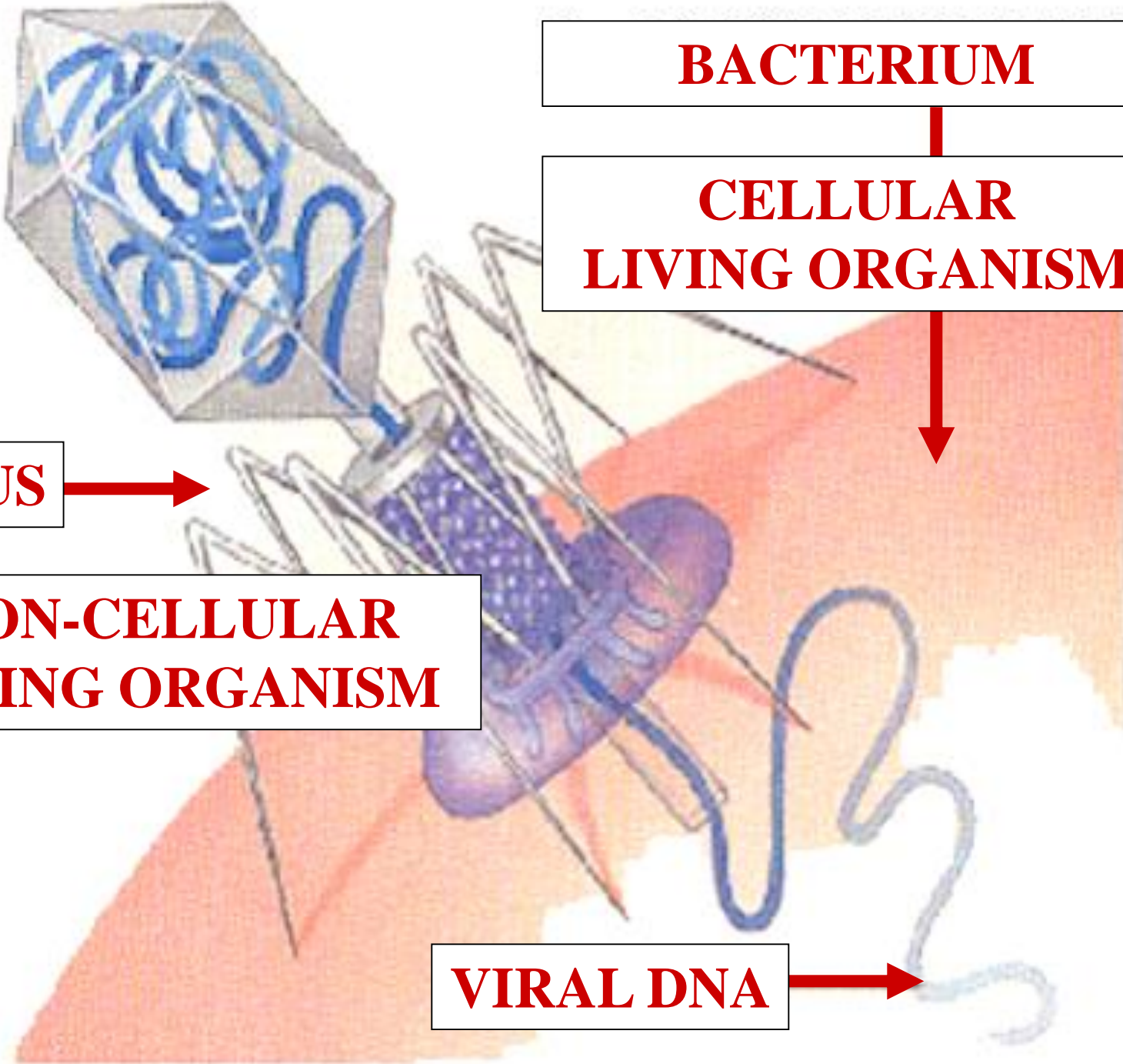
BACTERIUM

**CELLULAR
LIVING ORGANISM**

VIRUS

**NON-CELLULAR
LIVING ORGANISM**

VIRAL DNA



QUESTION

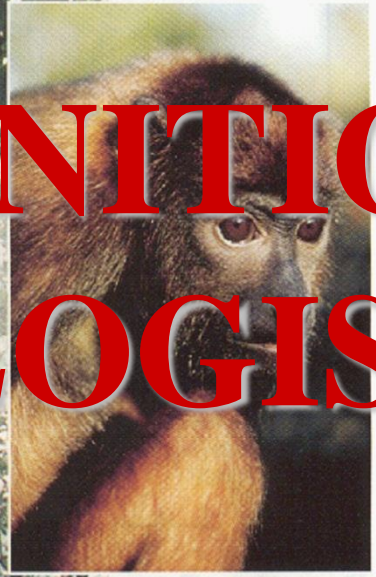
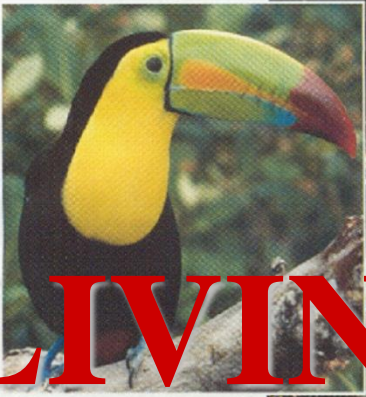
WHAT IS A

LIVING ORGANISM?

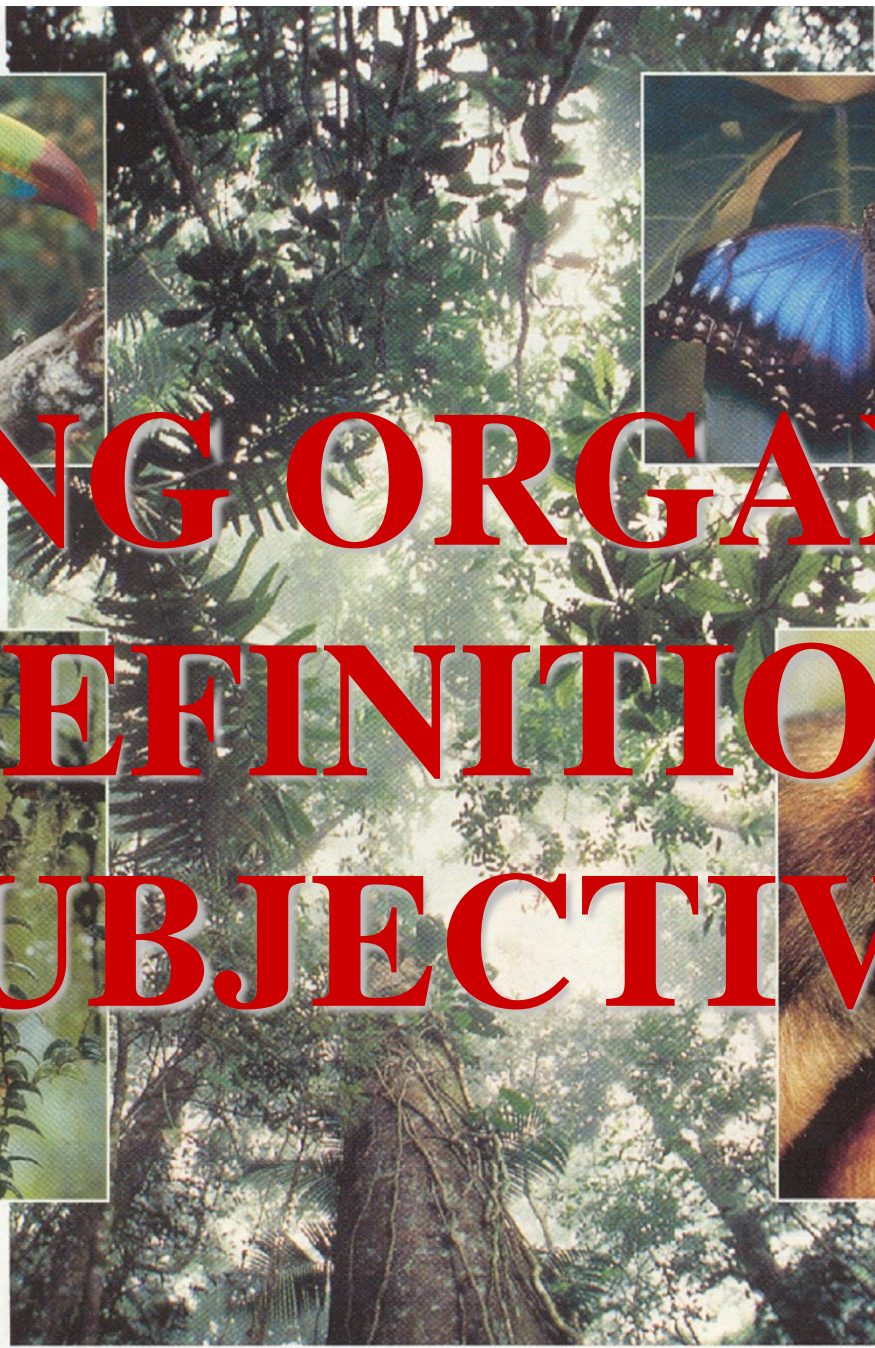
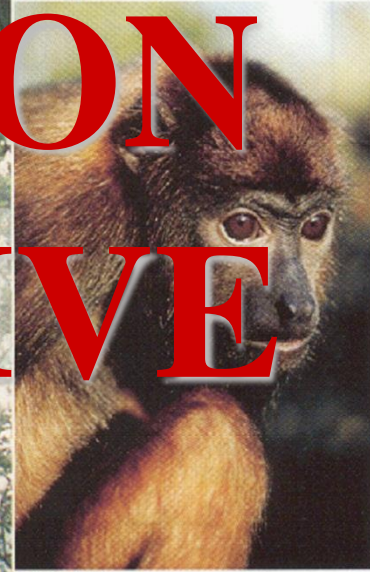
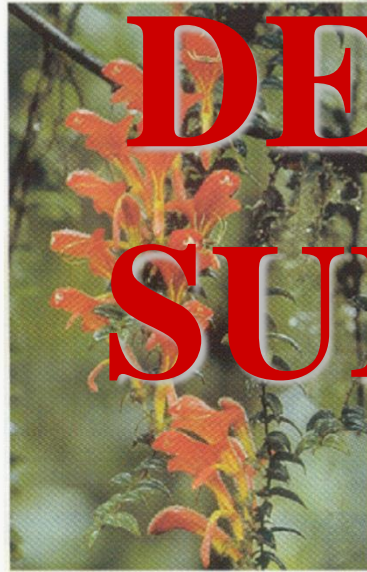
QUESTION

A close-up photograph of a woman's face, looking slightly to the right with a thoughtful expression. Her hand is resting on her forehead. In the background, a petri dish containing a yellow substance is visible, slightly out of focus. The text is overlaid on the image.

ANSWER
DEPENDS
ON
BIOLOGIST
ANSWER



**LIVING ORGANISM
NO
COMMON DEFINITION
AMONGST BIOLOGISTS**



LIVING ORGANISM

DEFINITION

SUBJECTIVE

CLASS DEFINITION

LIVING ORGANISM

LIVING ORGANISM

LIVING ORGANISM



**ENTITY WITH
FUNCTIONAL
NUCLEIC ACIDS**

LIVING ORGANISM



**LIVING ORGANISM
ENTITY WITH
FUNCTIONAL
NUCLEIC ACIDS**

FUNCTIONAL NUCLEIC ACIDS

NUCLEIC ACIDS

NUCLEIC ACIDS



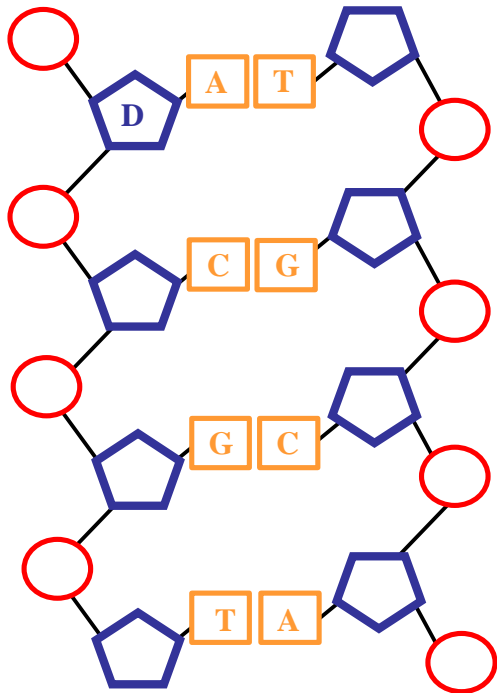
CARRIERS GENETIC
INFORMATION

NUCLEIC ACIDS

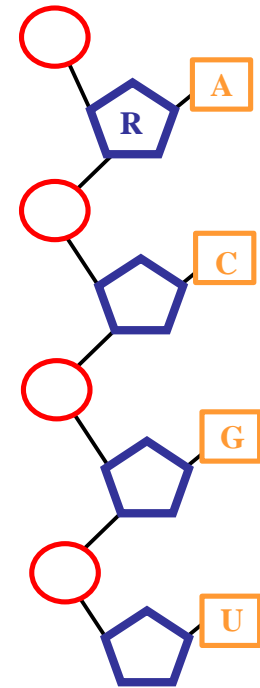
NUCLEIC ACIDS



CARRIERS GENETIC INFORMATION



NUCLEIC ACID



NUCLEIC ACID



NUCLEIC ACID TYPES

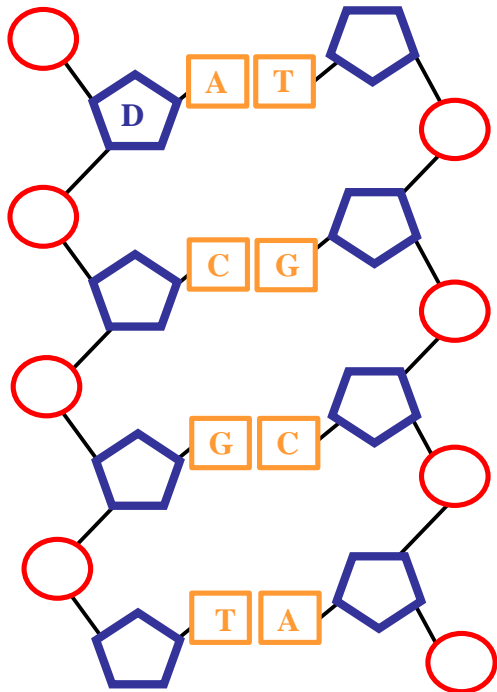
NUCLEIC ACIDS

L D

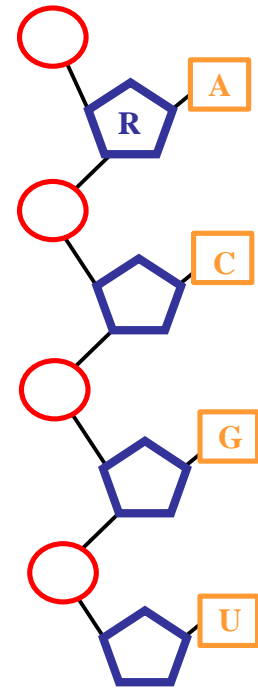
?

CARRIERS GENETIC INFORMATION

?



NUCLEIC ACID



NUCLEIC ACID

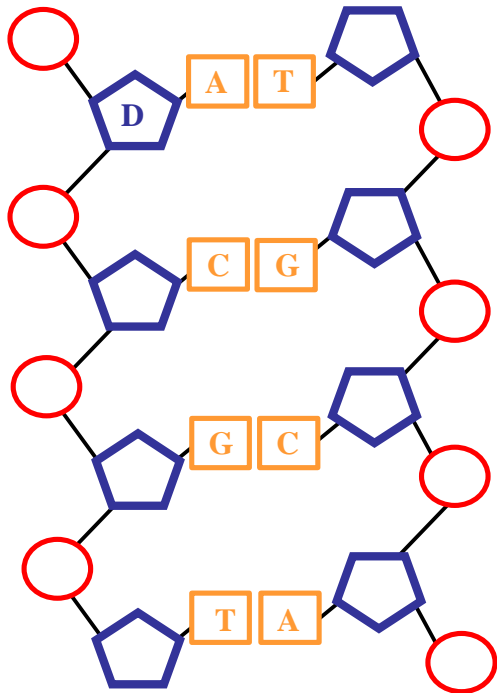
NUCLEIC ACIDS

R

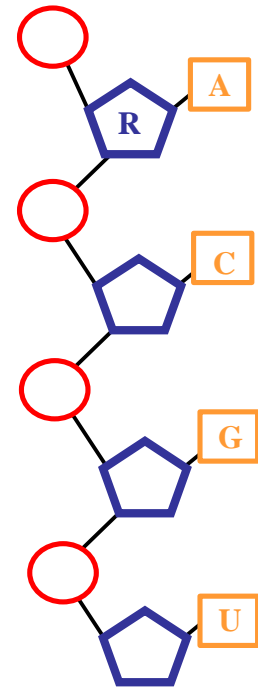
DNA

CARRIERS GENETIC INFORMATION

?

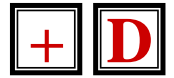


NUCLEIC ACID



NUCLEIC ACID

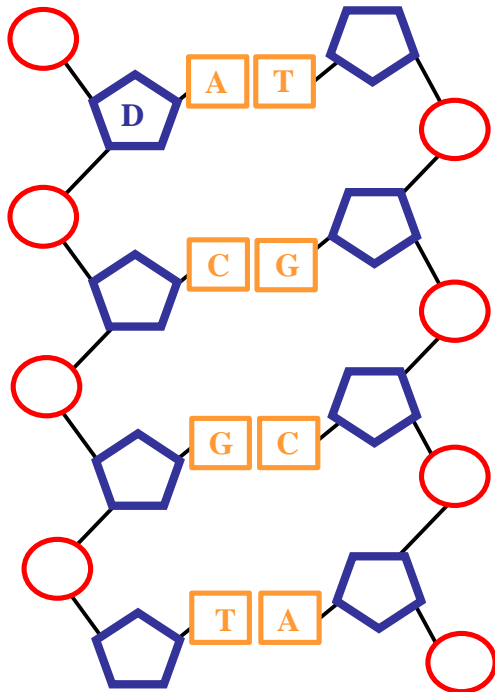
NUCLEIC ACIDS



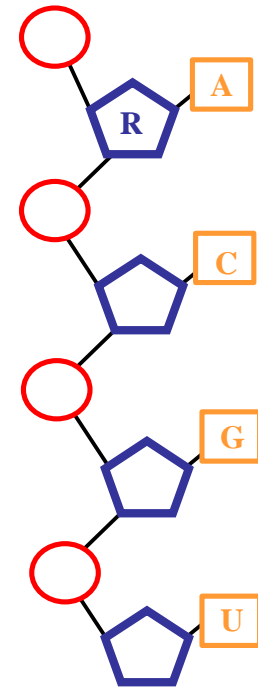
DNA

CARRIERS GENETIC INFORMATION

RNA

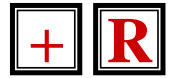


NUCLEIC ACID

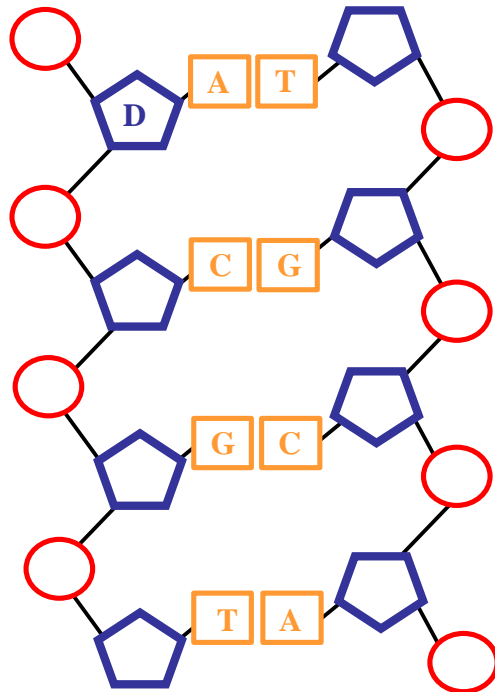


NUCLEIC ACID

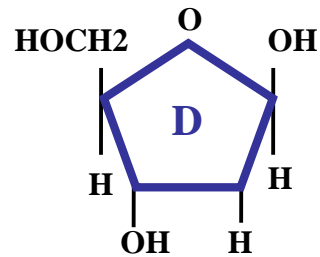
NUCLEIC ACIDS



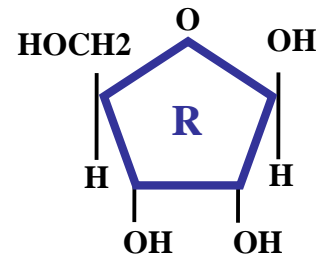
DEOXYRIBONUCLEIC ACID



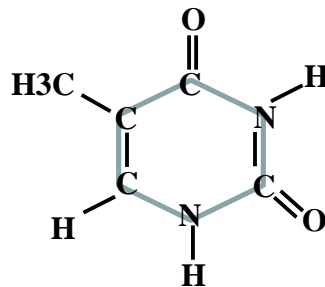
NUCLEIC ACID



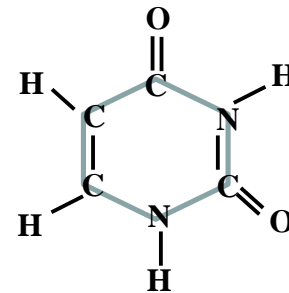
DEOXYRIBOSE



RIBOSE

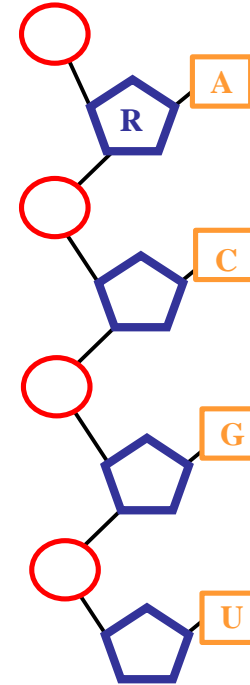


THYMINE



URACIL

RNA

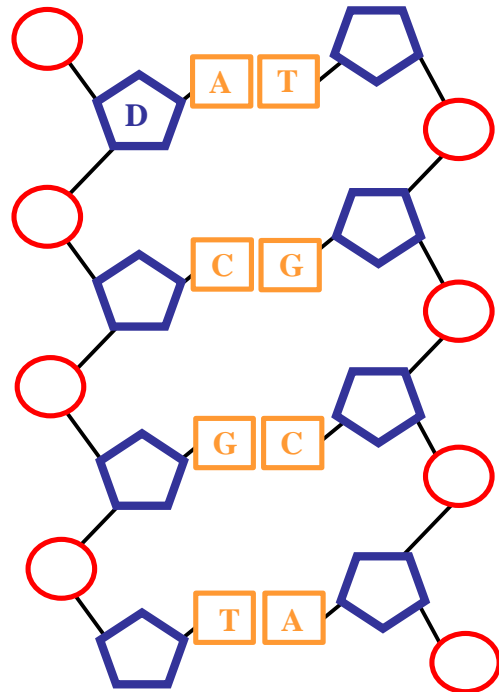


NUCLEIC ACID

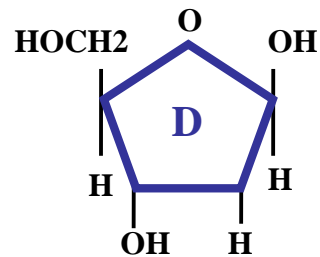
NUCLEIC ACIDS

+ S

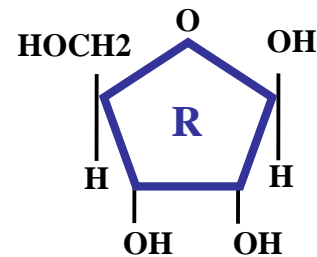
DNA



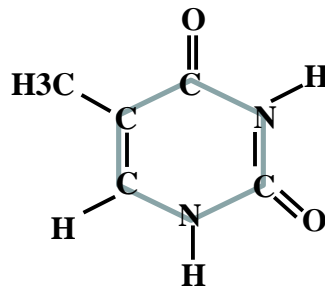
NUCLEIC ACID



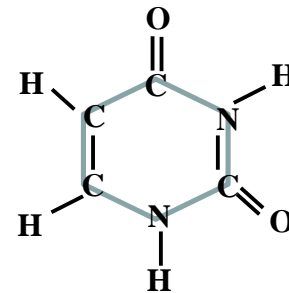
DEOXYRIBOSE



RIBOSE

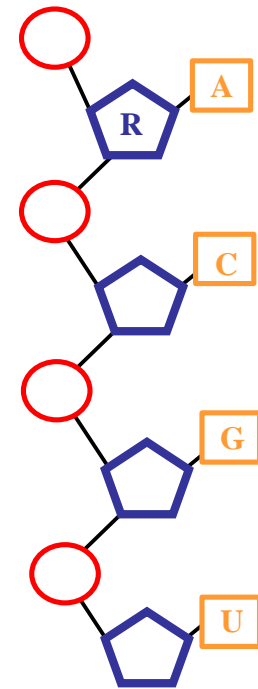


THYMINE



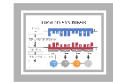
URACIL

RIBONUCLEIC ACID



NUCLEIC ACID

NUCLEIC ACIDS

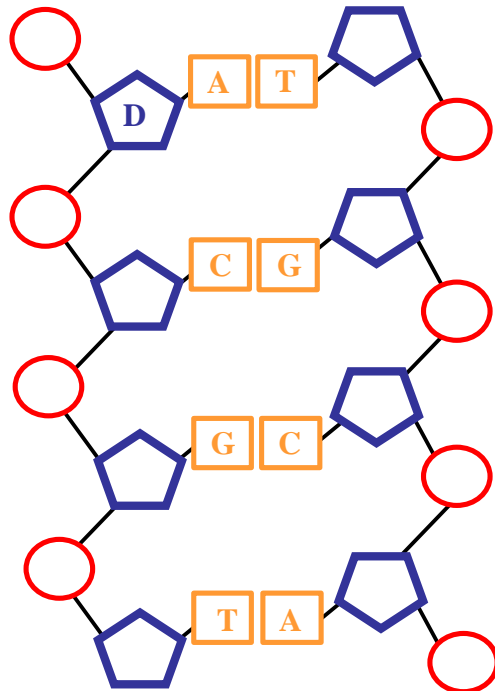


D

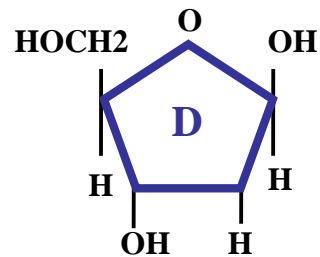
DNA

CARRIERS GENETIC INFORMATION

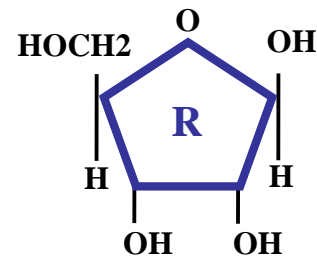
RNA



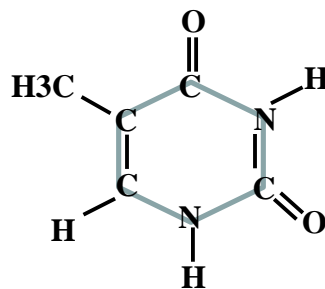
NUCLEIC ACID



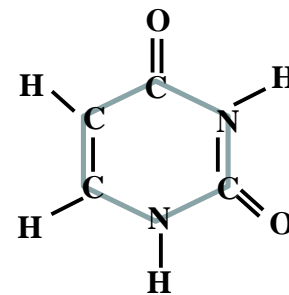
DEOXYRIBOSE



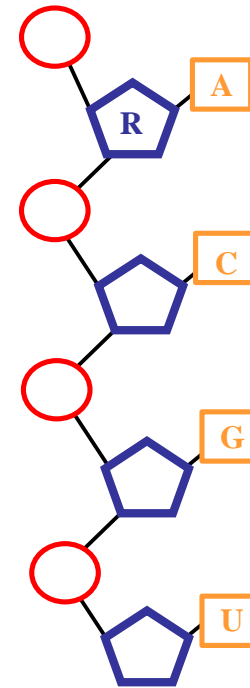
RIBOSE



THYMINE

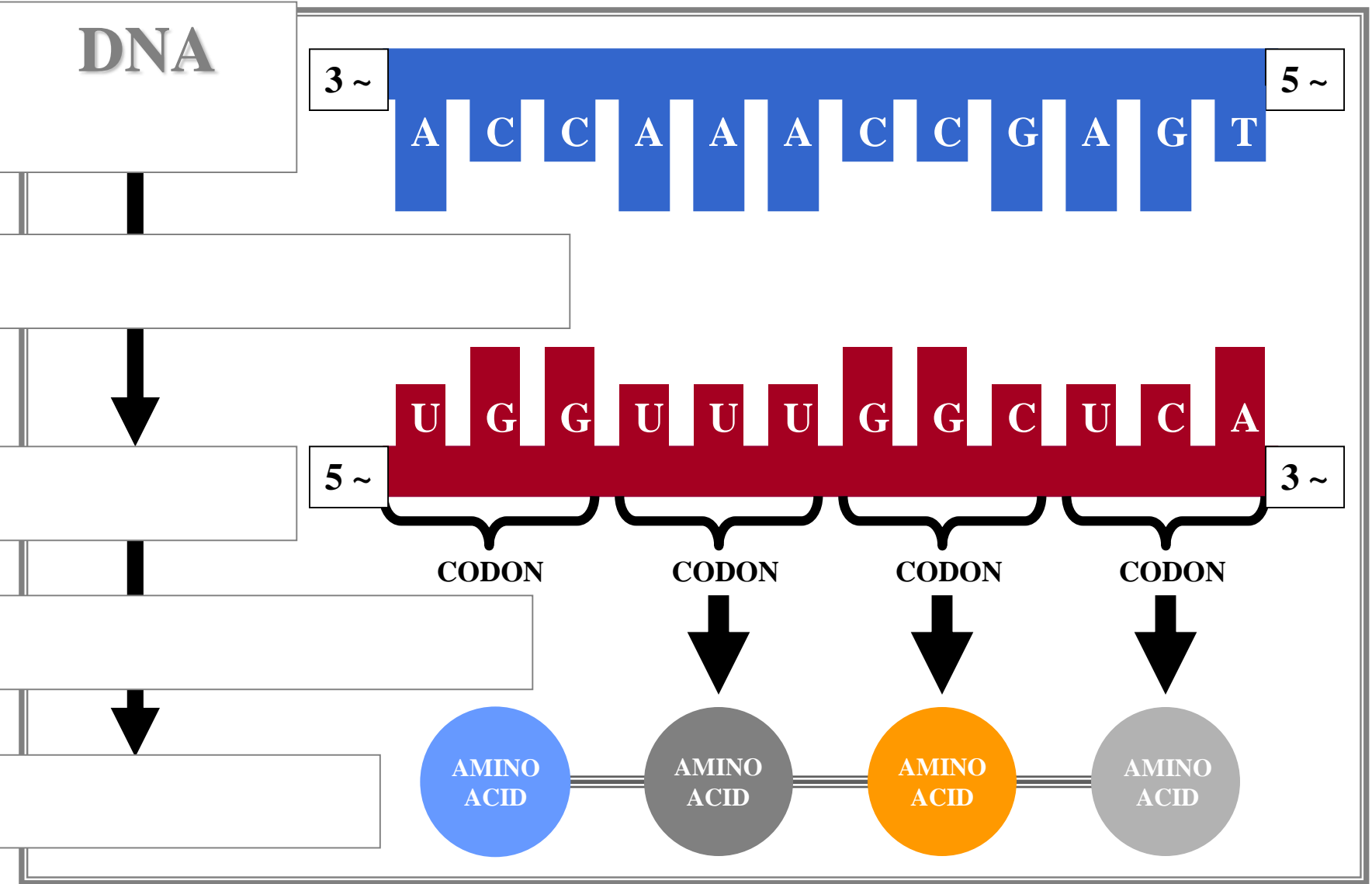


URACIL

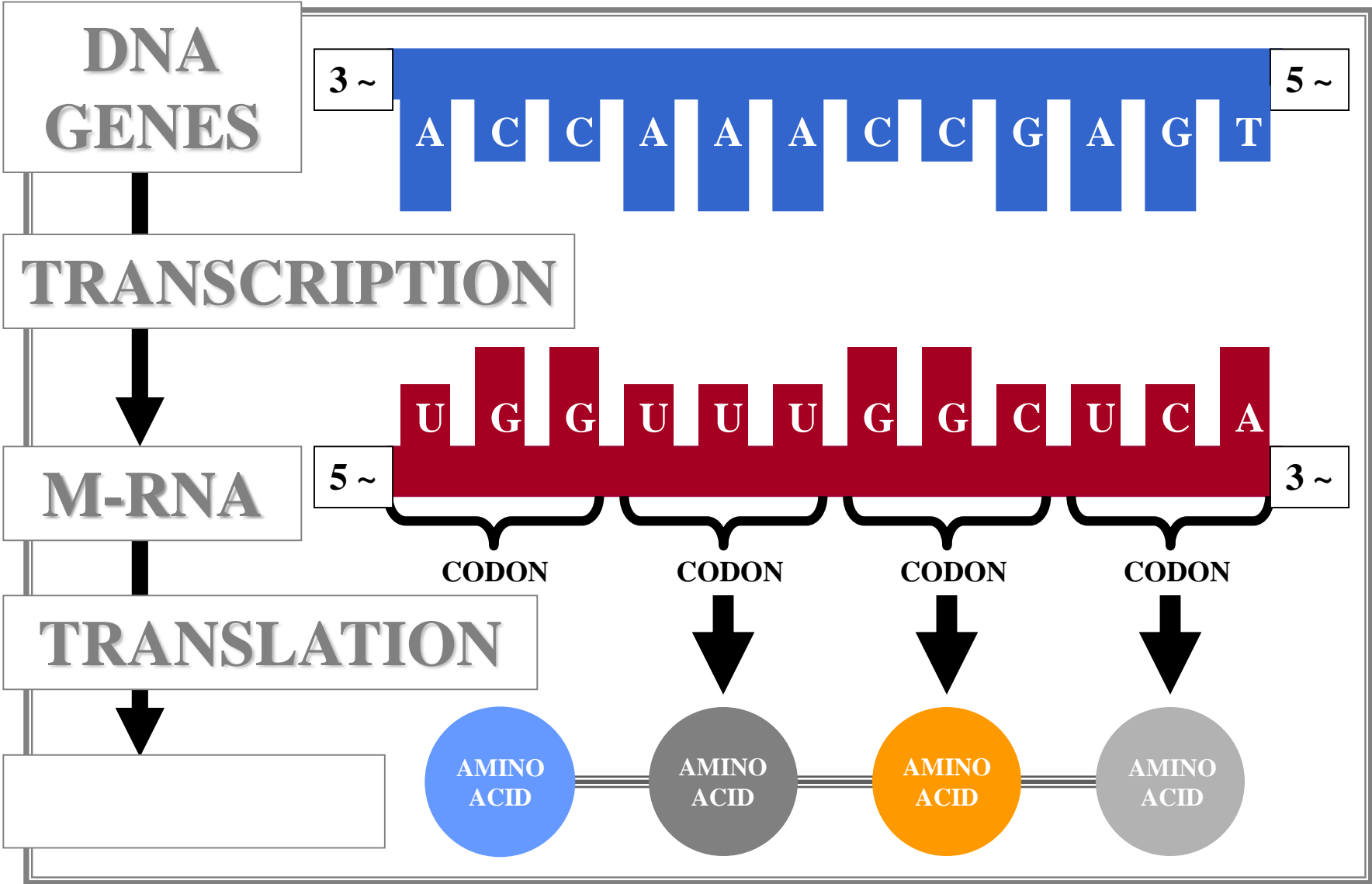


NUCLEIC ACID

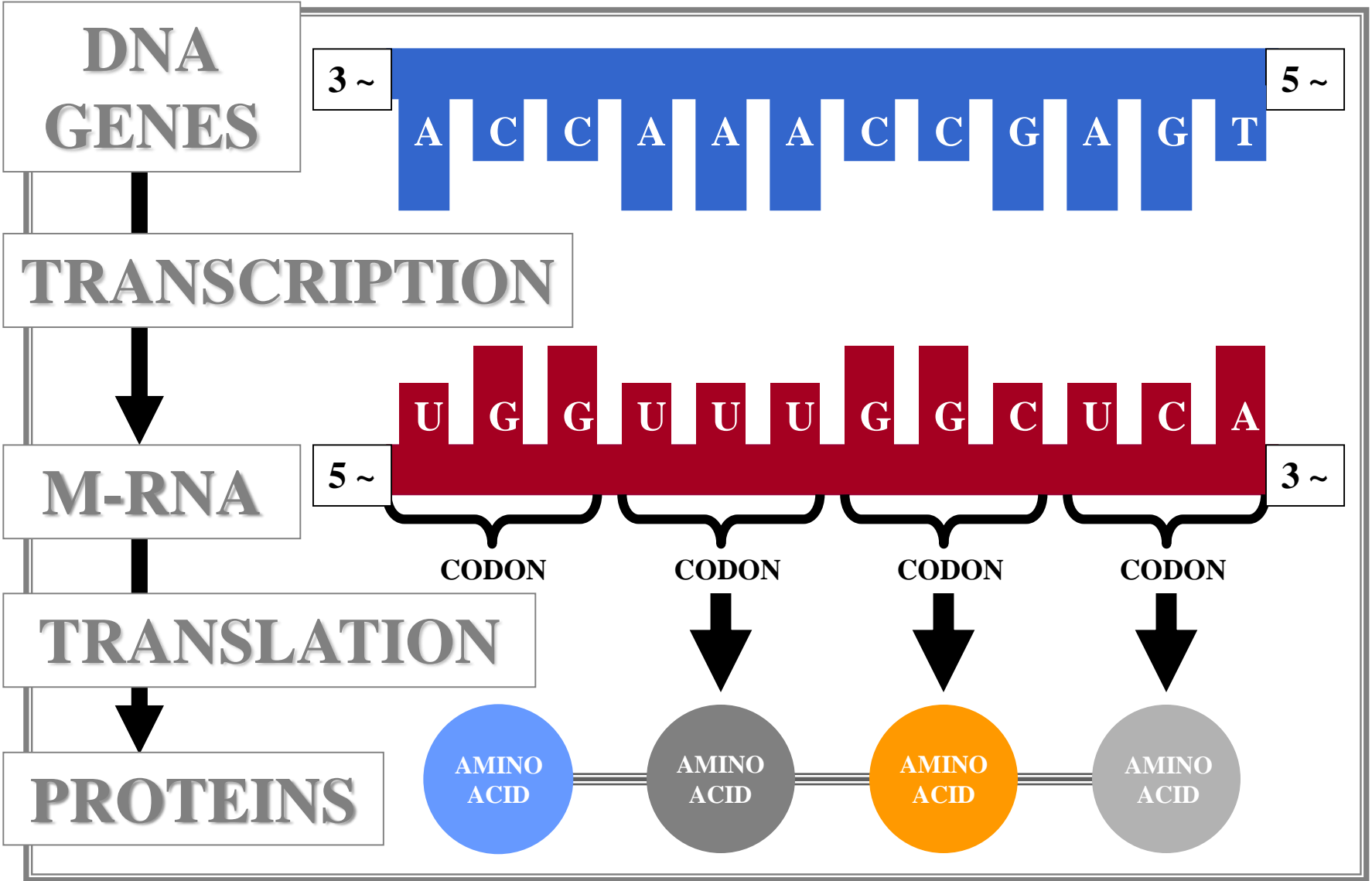
PROTEIN SYNTHESIS



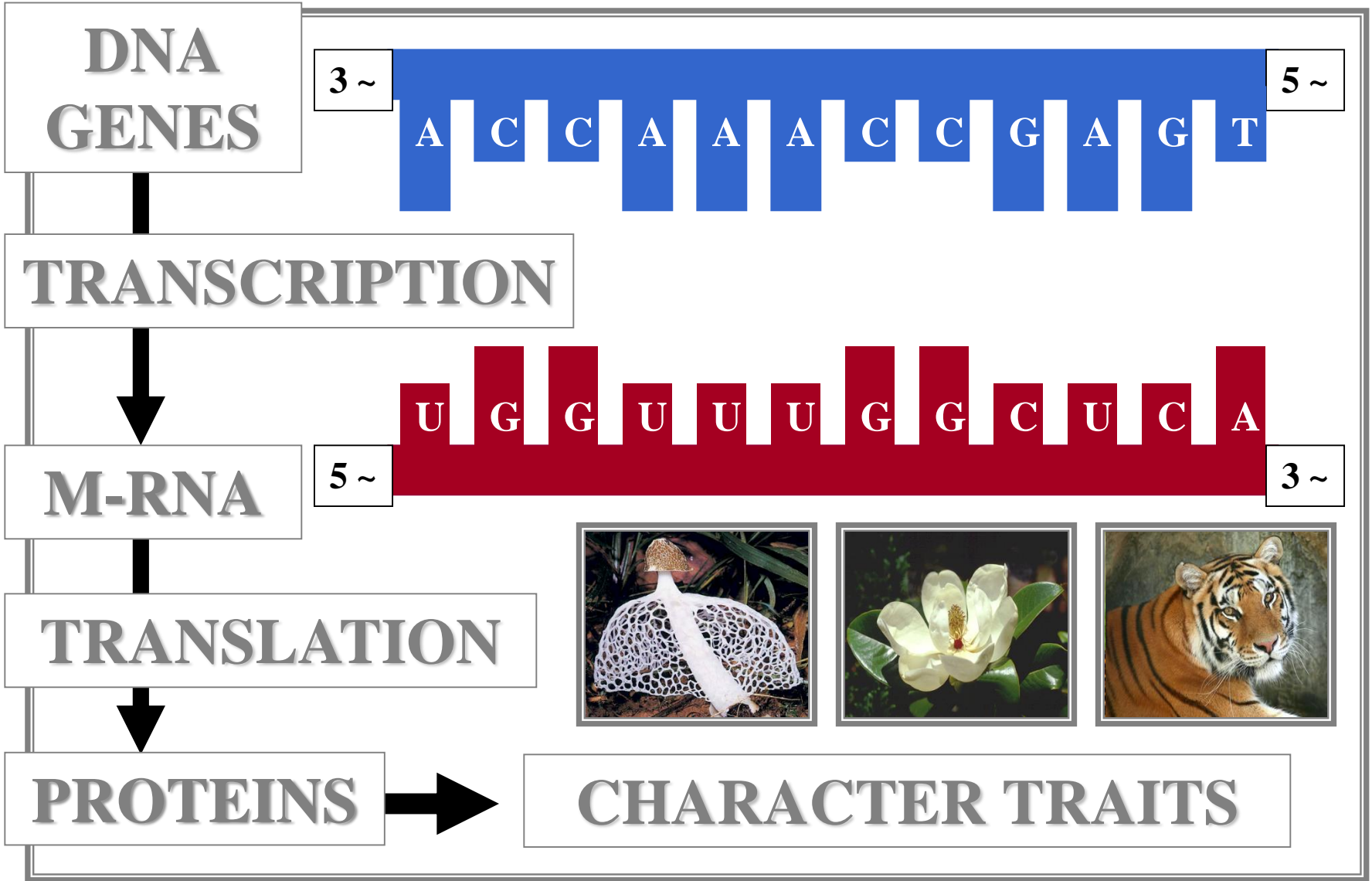
PROTEIN SYNTHESIS



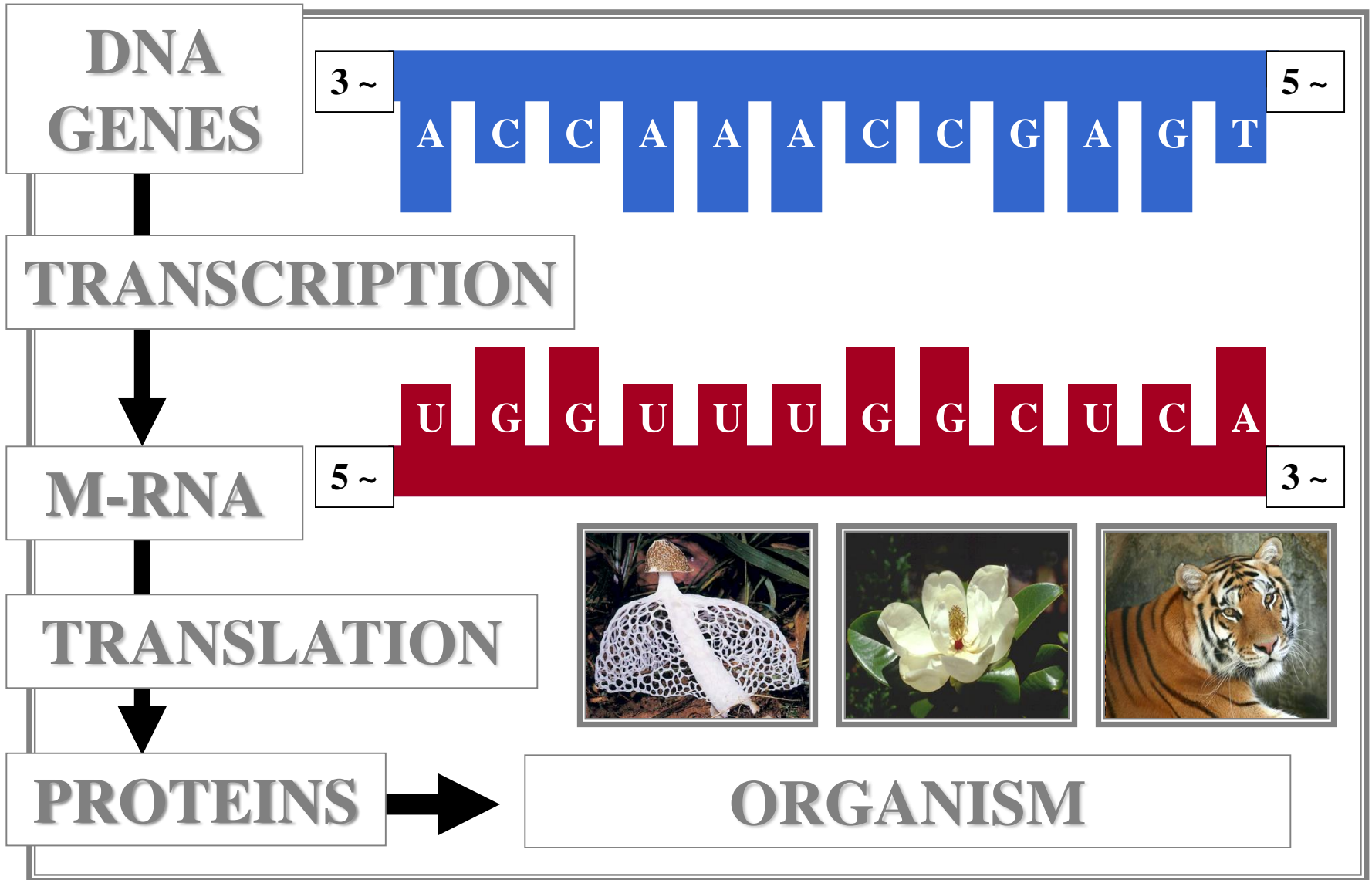
PROTEIN SYNTHESIS



PROTEIN SYNTHESIS



PROTEIN SYNTHESIS





FUNGI DIVERSITY





PLANT DIVERSITY





ANIMAL DIVERSITY



HUMAN DIVERSITY

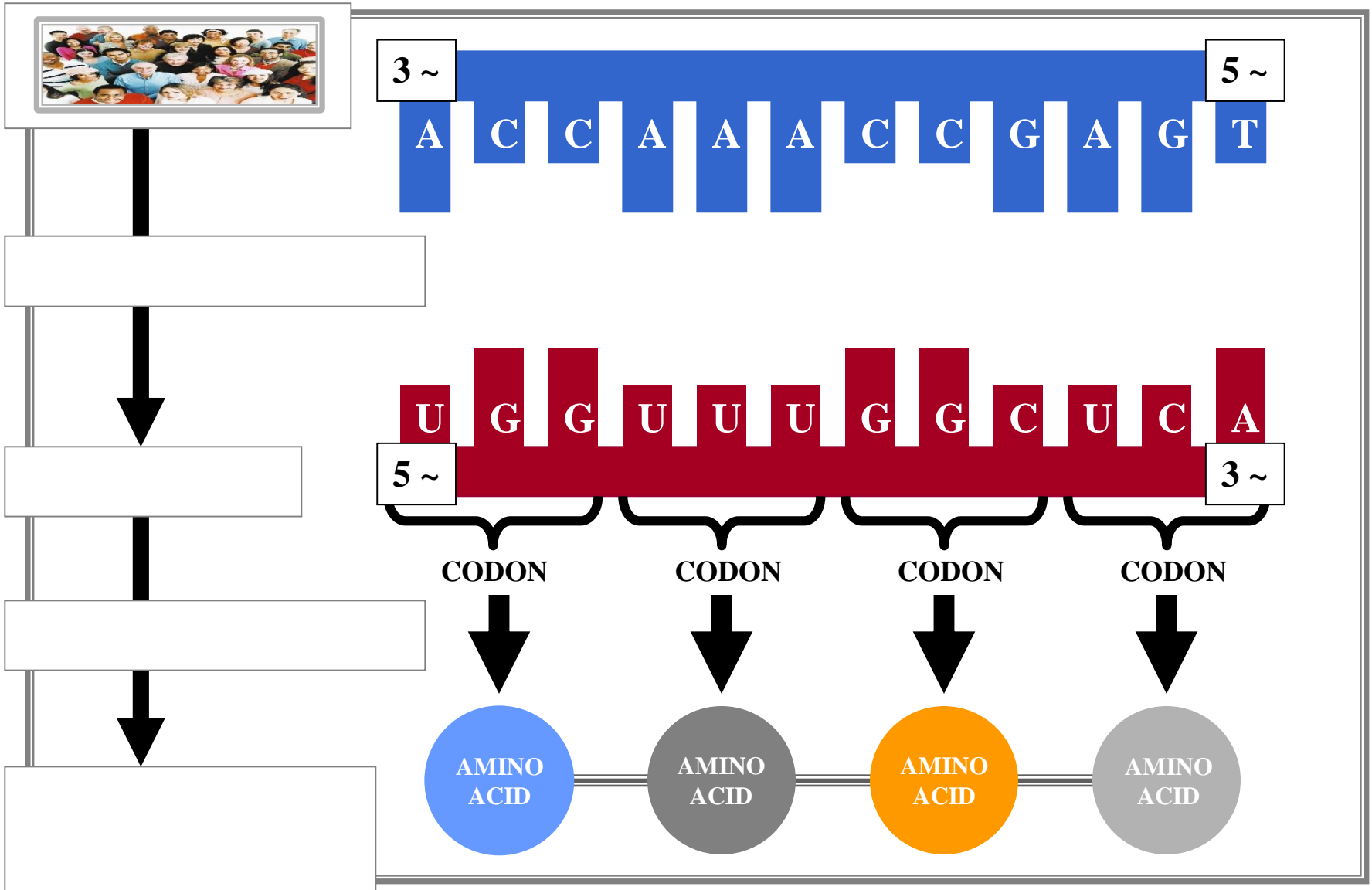


HUMAN

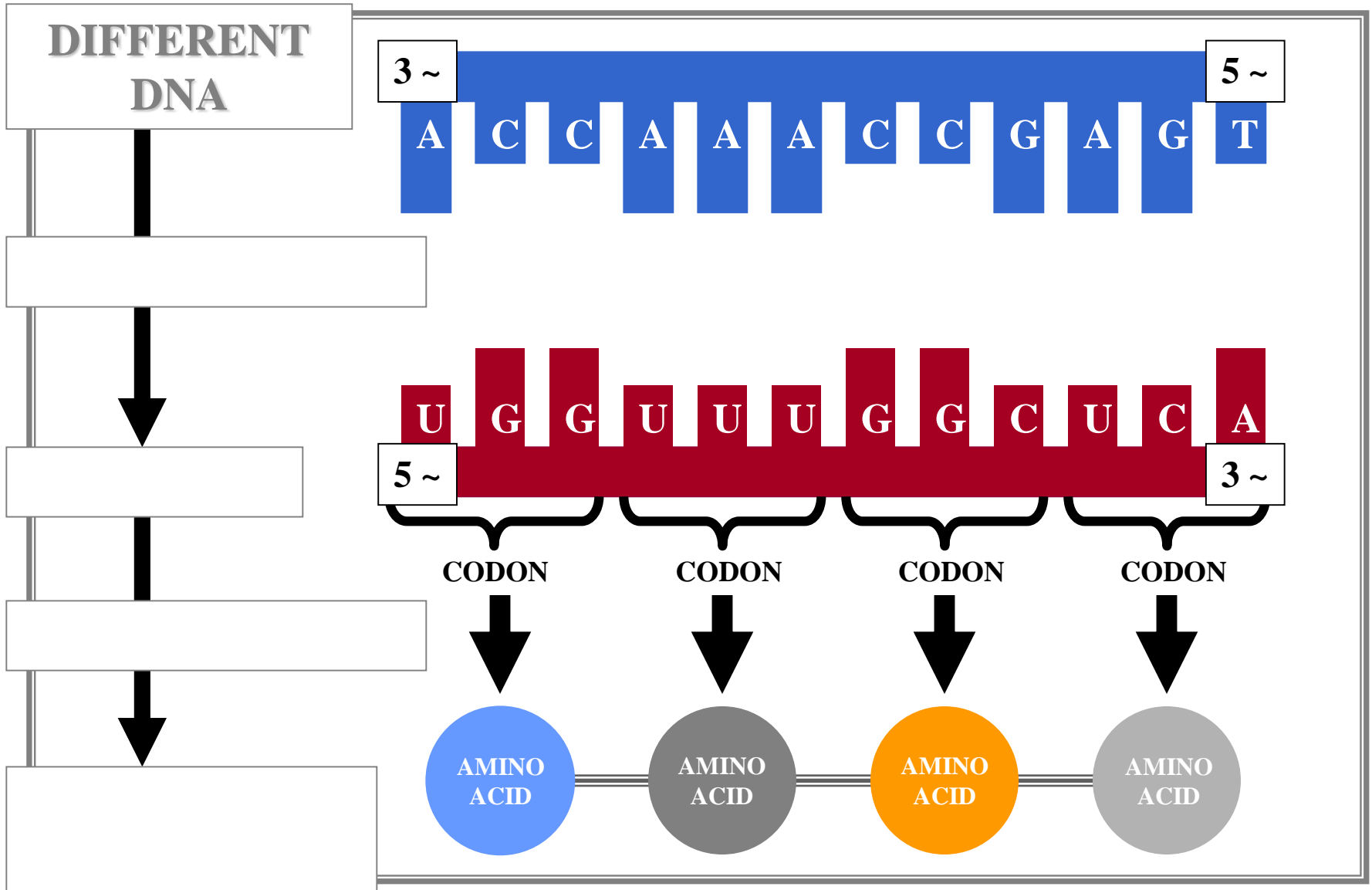


HUMAN DIVERSITY

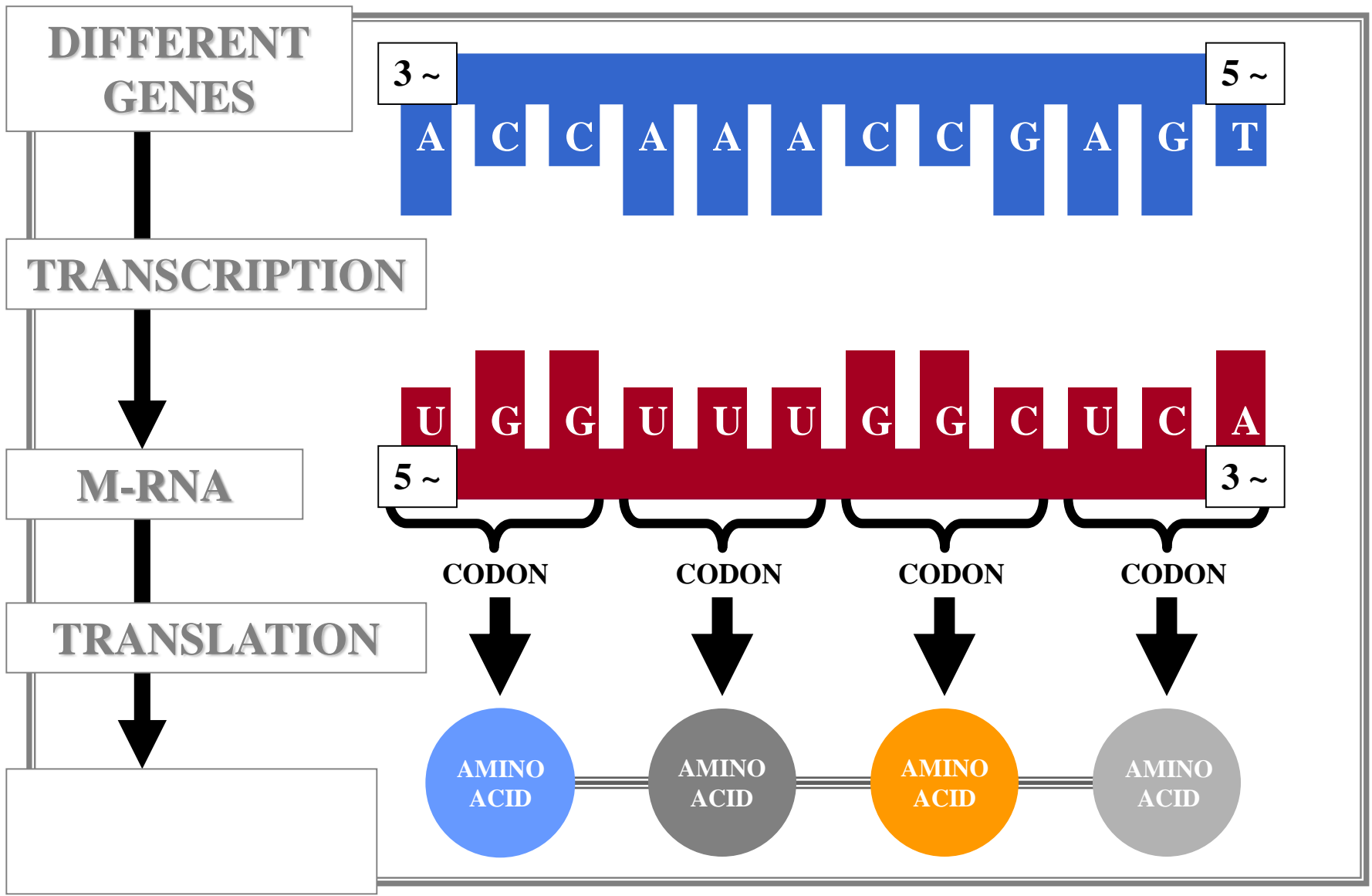
HUMAN DIVERSITY



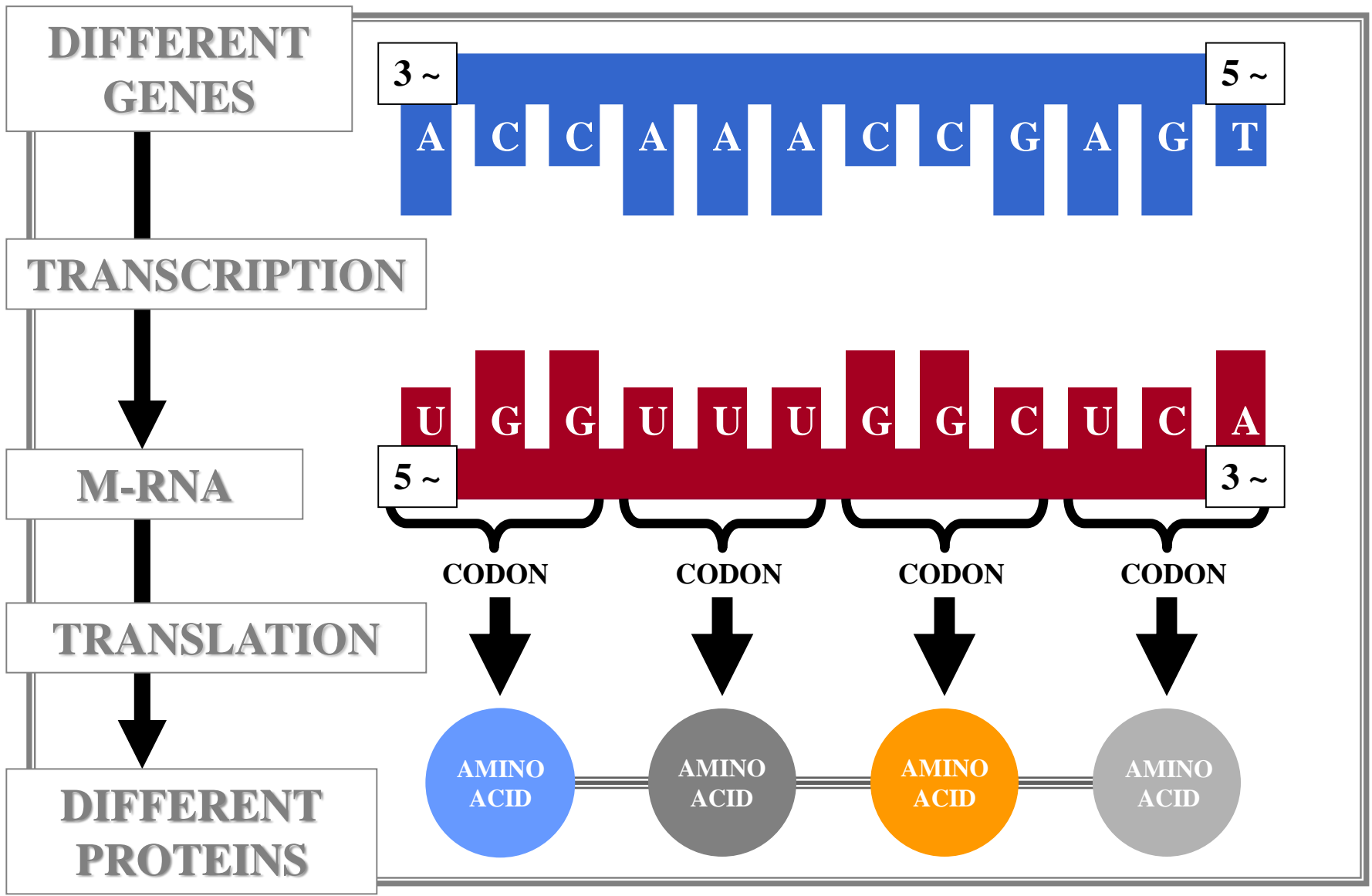
HUMAN DIVERSITY



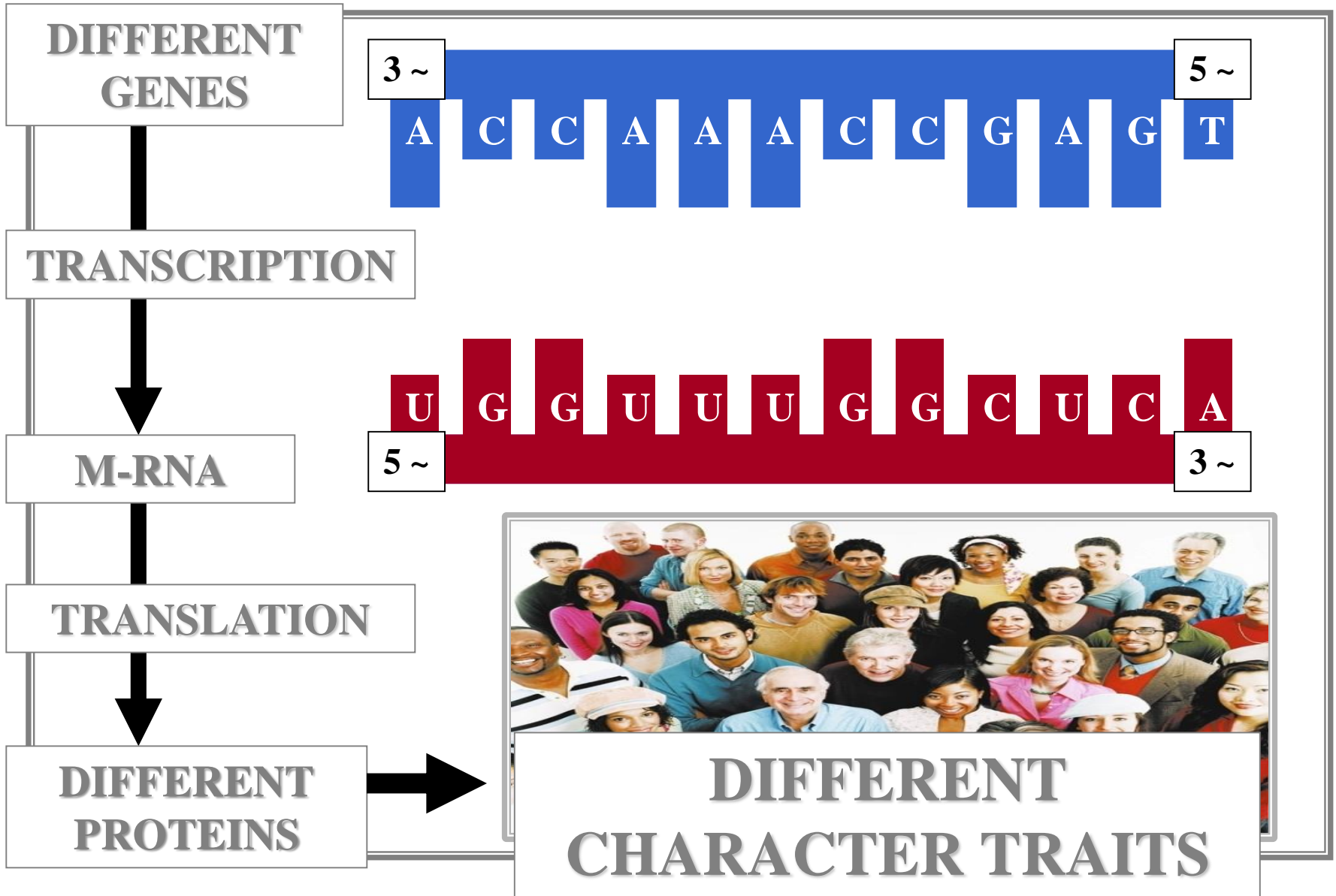
HUMAN DIVERSITY



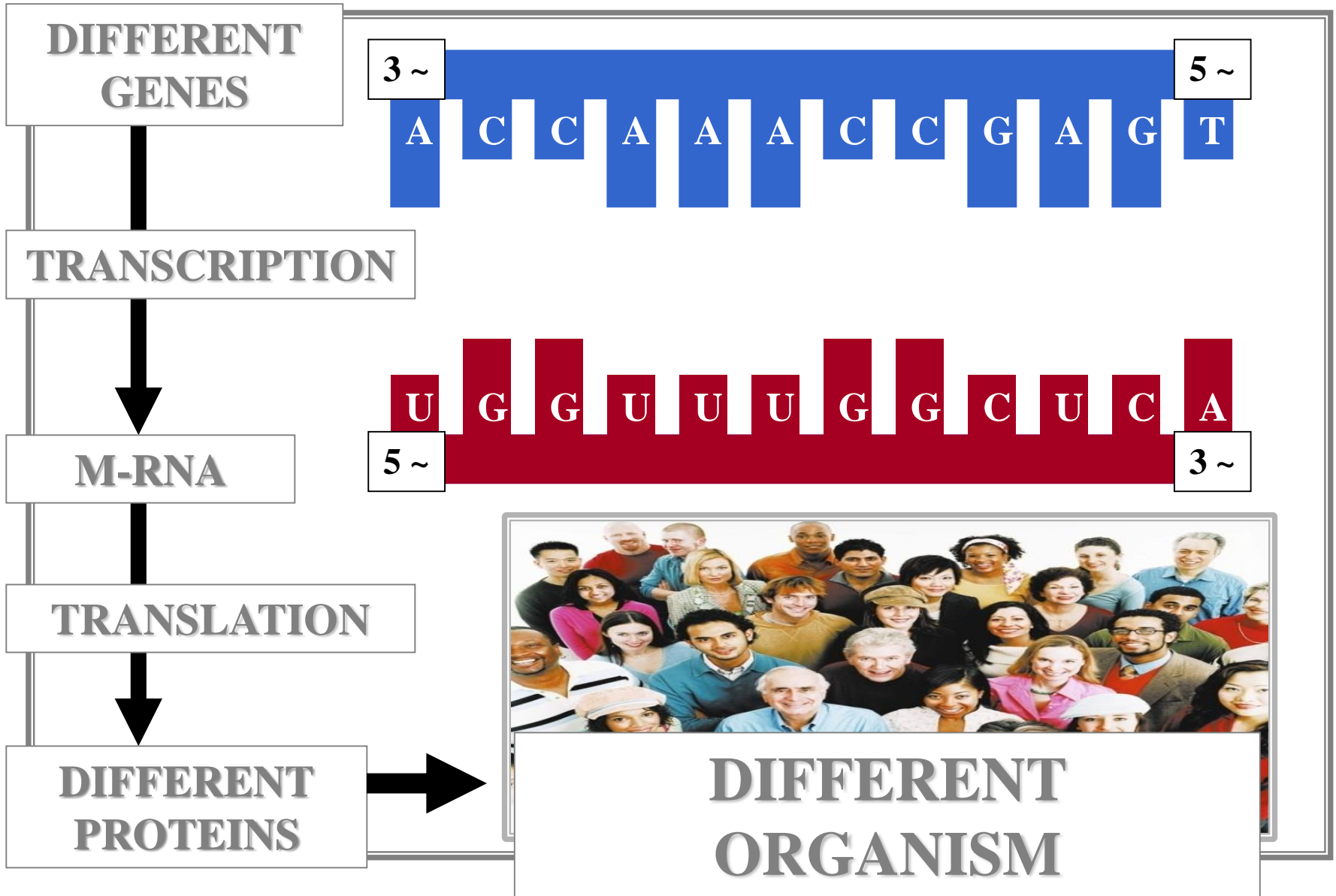
HUMAN DIVERSITY



HUMAN DIVERSITY



HUMAN DIVERSITY



DIFFERENT GENES



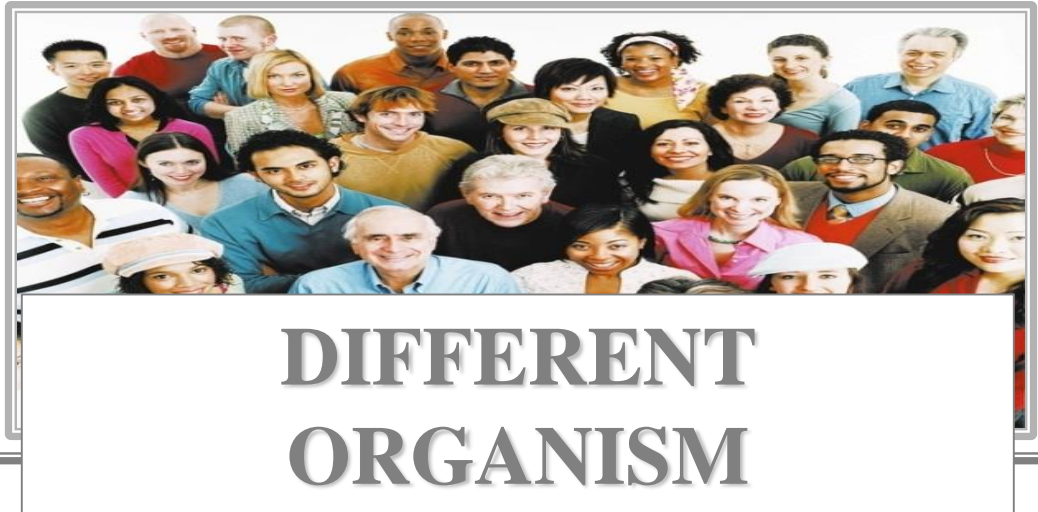
TRANSCRIPTION

M-RNA

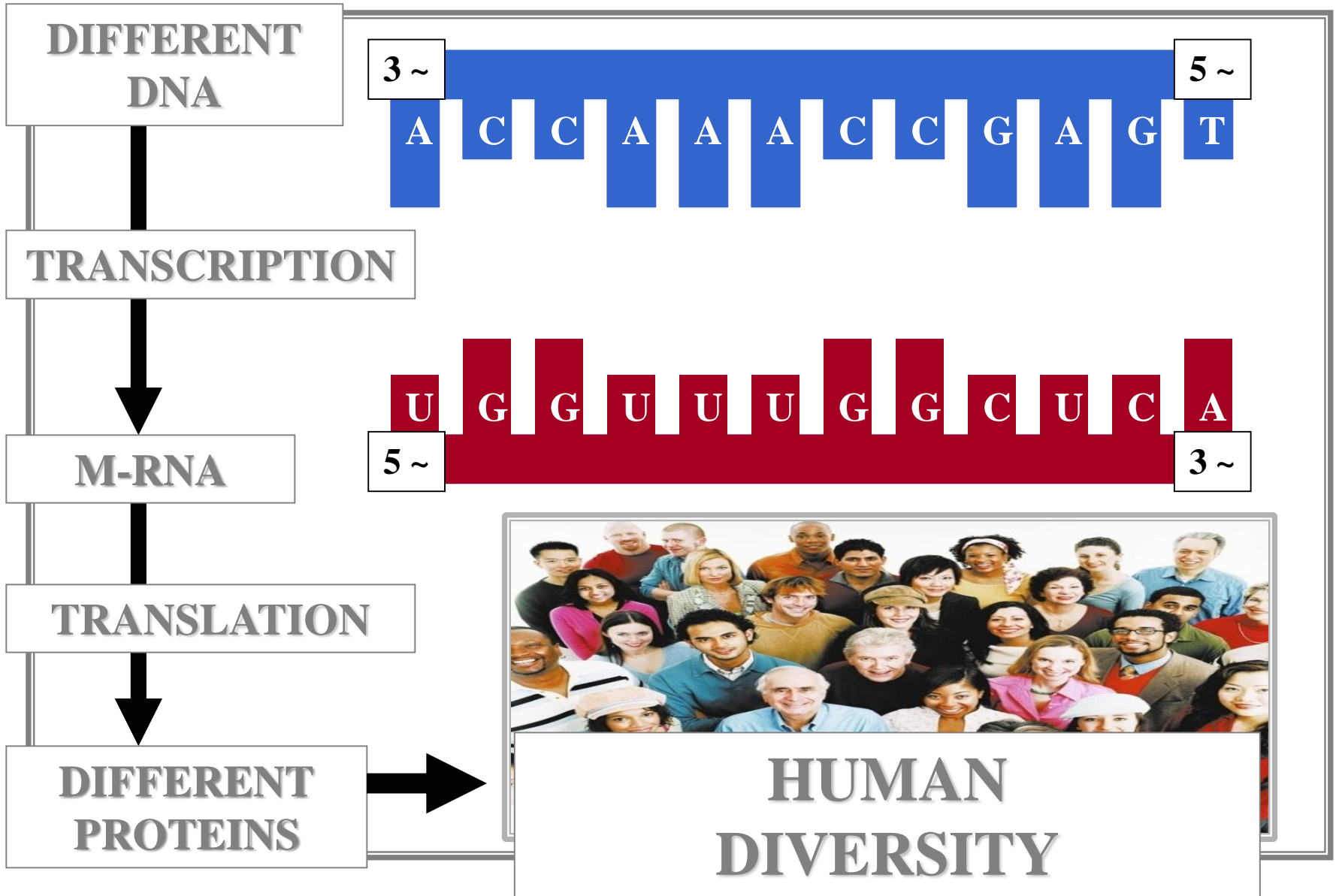


TRANSLATION

DIFFERENT PROTEINS



HUMAN DIVERSITY



INTRODUCTION
SCIENCE
&
INTRODUCTION
BIOLOGY
SUMMARY



B

SUMMARY

S



BIOLOGY 111



SUMMARY

N

SCIENTIST



SUMMARY

B



SCIENTIST

NATURAL SCIENTIST

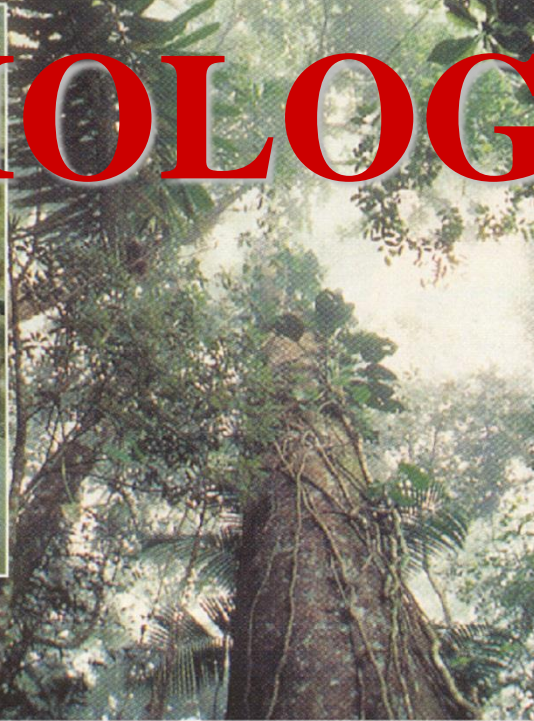


SUMMARY

L



SCIENTIST
NATURAL SCIENTIST
BIOLOGIST



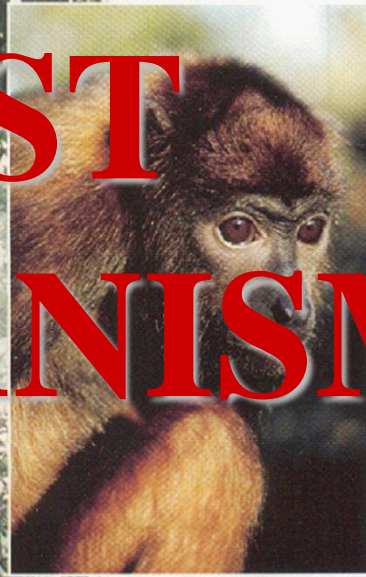
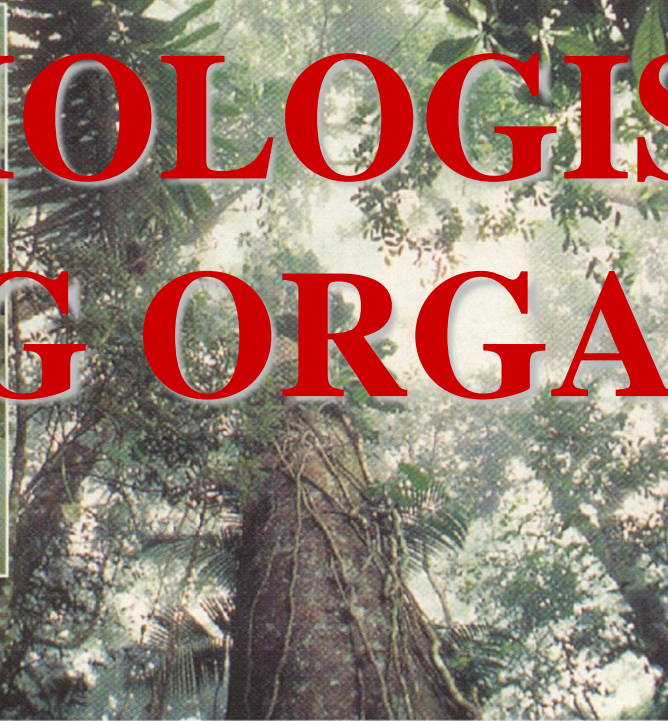
SUMMARY



SCIENTIST

NATURAL SCIENTIST

BIOLOGIST



LIVING ORGANISMS

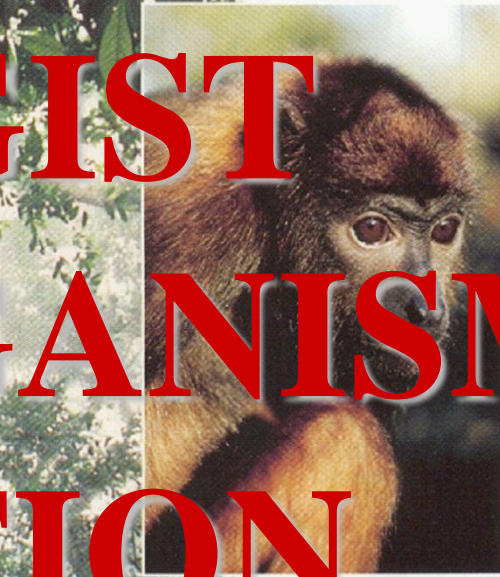
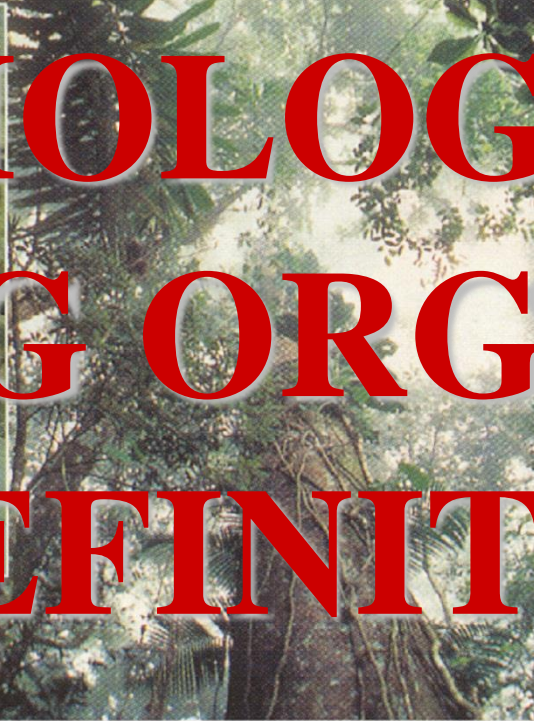
SUMMARY

N



SCIENTIST

NATURAL SCIENTIST



BIOLOGIST

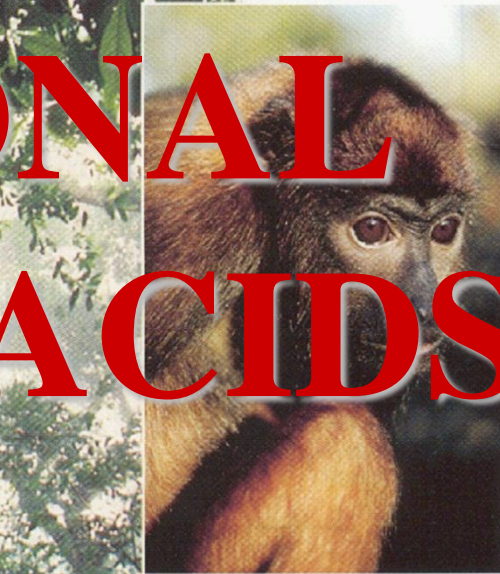
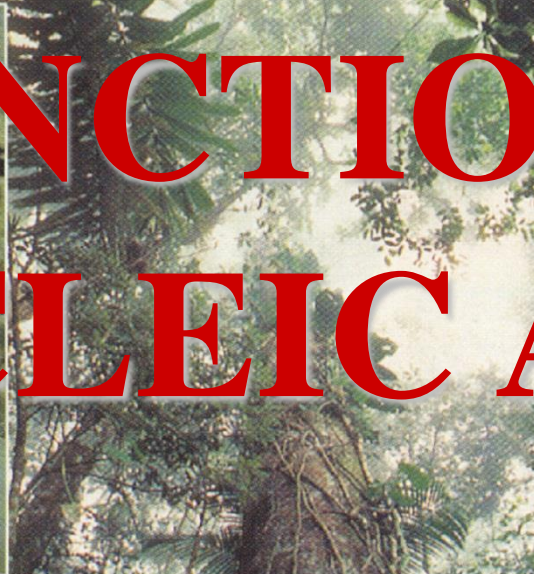
LIVING ORGANISMS

DEFINITION

SUMMARY



**LIVING ORGANISM
ENTITY WITH
FUNCTIONAL
NUCLEIC ACIDS**



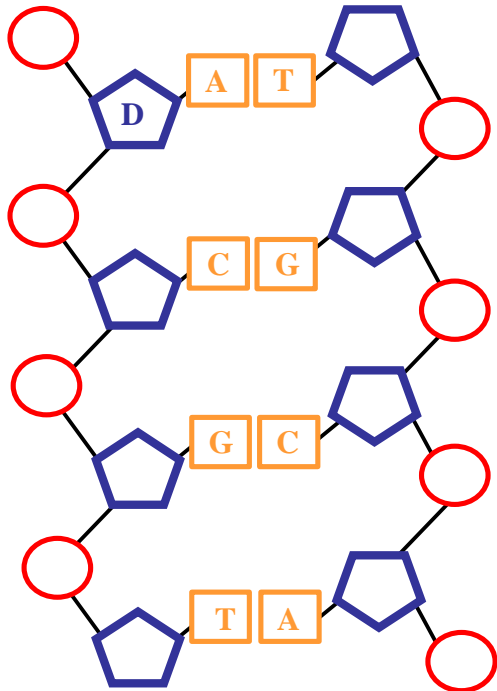
NUCLEIC ACIDS

?

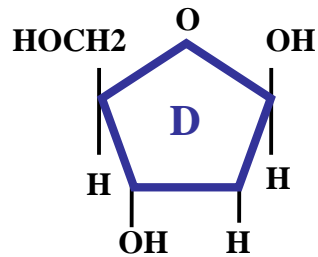
DNA

CARRIERS GENETIC INFORMATION

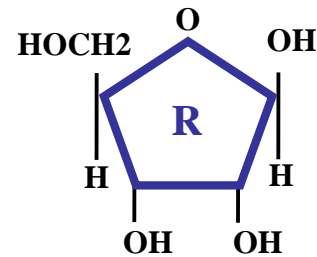
RNA



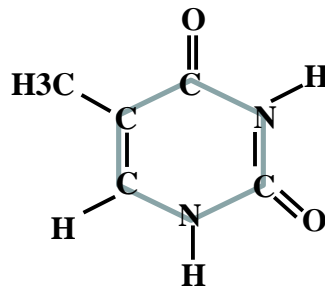
NUCLEIC ACID



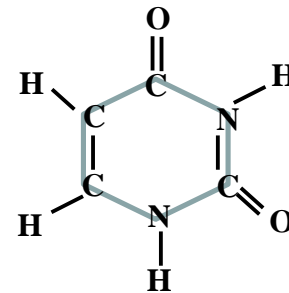
DEOXYRIBOSE



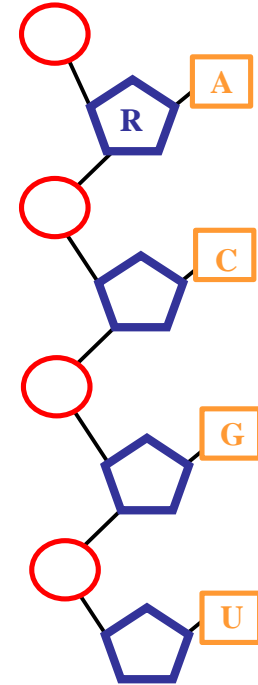
RIBOSE



THYMINE



URACIL



NUCLEIC ACID



QUESTION

IS A VIRUS A

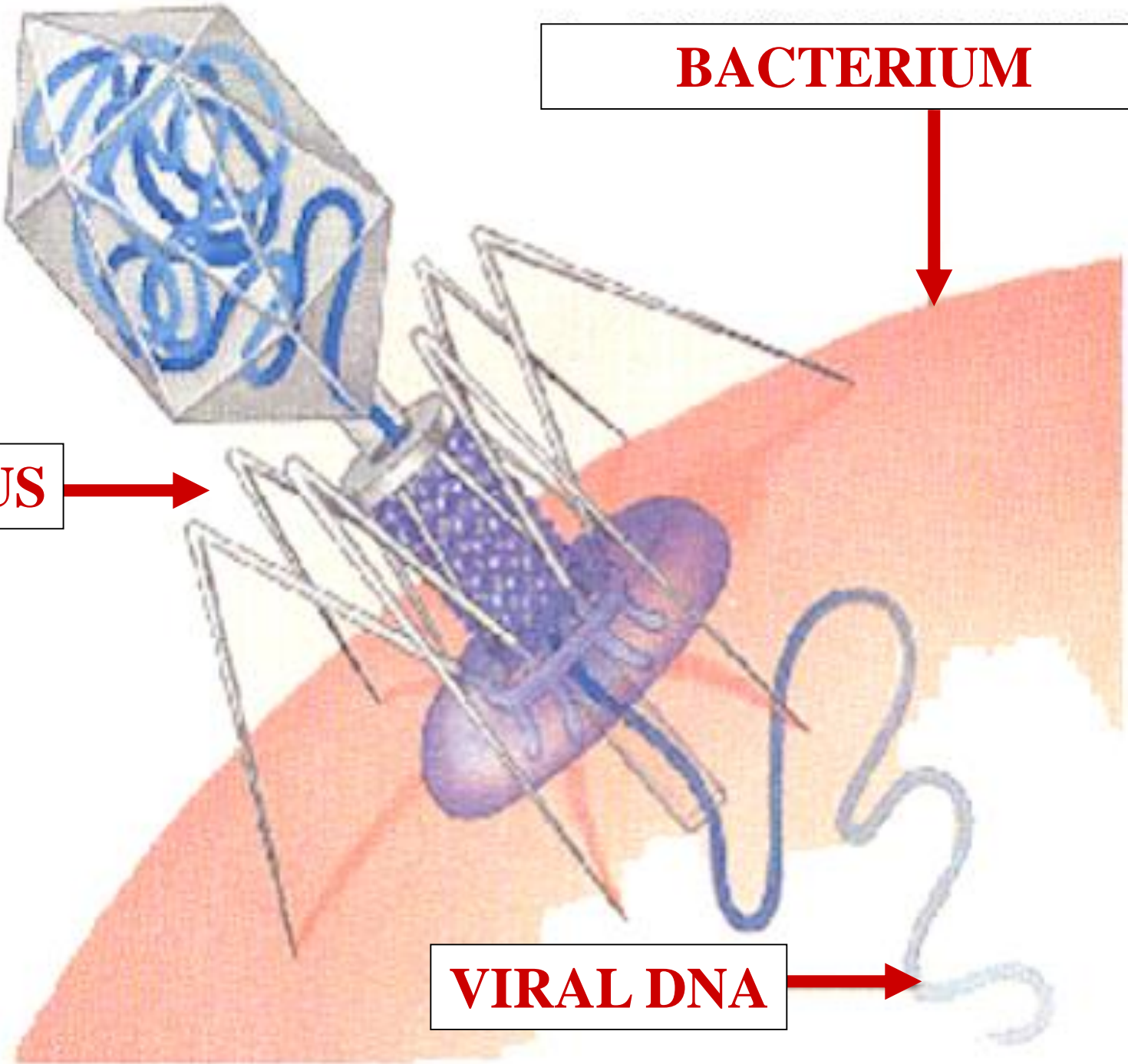
LIVING ORGANISM?

QUESTION

BACTERIUM

VIRUS

VIRAL DNA



?

BACTERIUM



VIRUS



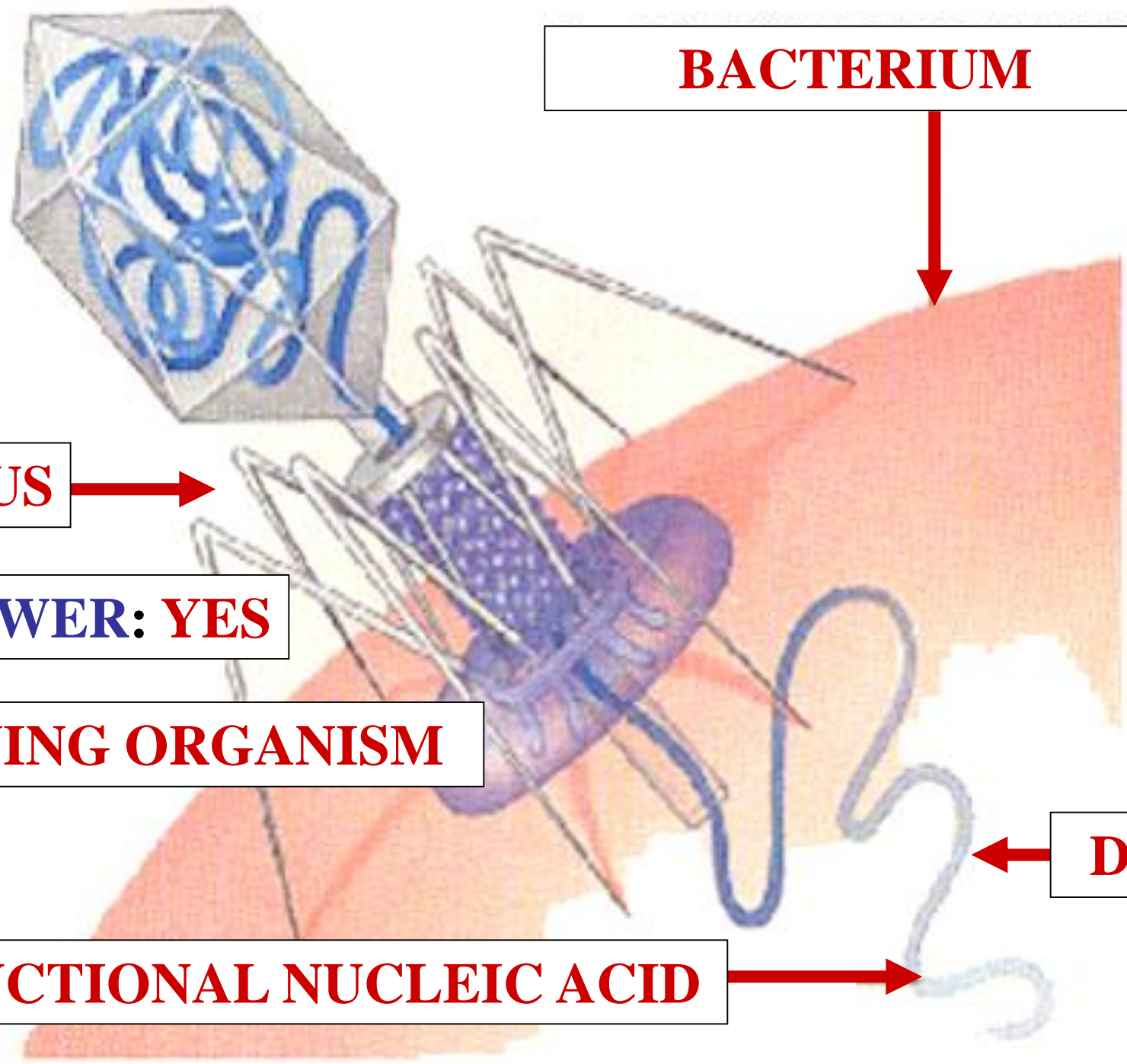
ANSWER: YES

LIVING ORGANISM

DNA



FUNCTIONAL NUCLEIC ACID





QUESTION

**IS A VIRUS A
CELLULAR ORGANISM?**

QUESTION