

ECOTOXICOLOGIA

AULA PRÁTICA 6

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The presence of a DNA double helix structure is a characteristic feature of all living organisms. It is the primary structure of DNA, which is a long, thin molecule that can be several meters long. The DNA molecule is composed of two strands of sugar-phosphate backbone, which are connected to each other by nitrogenous bases. The bases are arranged in a regular, repeating pattern, and they are the key to the genetic code. The DNA molecule is also highly organized, with the two strands twisted around each other to form a double helix. This structure allows the DNA molecule to store and transmit genetic information. The DNA molecule is also highly stable, and it can survive for long periods of time. This is why DNA is used as a molecular clock to study the evolution of species. The DNA molecule is also the target of many drugs and toxins, which can damage the DNA and cause mutations. These mutations can lead to cancer and other diseases. The study of DNA is a rapidly growing field, and it is expected to continue to grow in the future.

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Within cells, DNA is organized into very condensed, labeled chromosomes. These chromosomes are replicated before each cell division. In prokaryotes, the DNA is organized into a single, circular chromosome. In eukaryotes, the DNA is organized into multiple, linear chromosomes. The DNA molecule is also highly organized, with the two strands twisted around each other to form a double helix. This structure allows the DNA molecule to store and transmit genetic information. The DNA molecule is also highly stable, and it can survive for long periods of time. This is why DNA is used as a molecular clock to study the evolution of species. The DNA molecule is also the target of many drugs and toxins, which can damage the DNA and cause mutations. These mutations can lead to cancer and other diseases. The study of DNA is a rapidly growing field, and it is expected to continue to grow in the future.

The most published reports of A-Chk1 gene deletion in cancer cells are from the lung, colon, and breast. Although the A-Chk1 gene is found in all tissues, it is most abundant in the lung, colon, and breast. The A-Chk1 gene is a tumor suppressor gene, and its deletion can lead to cancer. The A-Chk1 gene is also involved in the DNA damage response, and its deletion can lead to genomic instability. The A-Chk1 gene is a key component of the DNA damage response, and its deletion can lead to cancer. The A-Chk1 gene is also involved in the DNA damage response, and its deletion can lead to genomic instability. The A-Chk1 gene is a key component of the DNA damage response, and its deletion can lead to cancer. The A-Chk1 gene is also involved in the DNA damage response, and its deletion can lead to genomic instability.

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PLANEAMENTO DAS AULAS

AULA 1 (02.03) – INÍCIO DOS TESTES DE ECOTOXICOLOGIA

AULA 2 (09.03) – EFEITOS DO BEZAFIBRATO NA GERMINAÇÃO DOS ORGANISMOS TESTE (TAXAS DE INIBIÇÃO E CONSTANTES DE INIBIÇÃO IC50)

AULA 3 (16.03) – MARCADORES BIOFÍSICOS DE TOXICIDADE I

AULA 4 (23.03) – MARCADORES BIOFÍSICOS DE TOXICIDADE II

AULA 5 (06.04) – ANÁLISE ESTATÍSTICA MULTIVARIADA E ÍNDICES FOTOQUÍMICOS (TEÓRICO-PRÁTICA)

AULA 5 (13.04) - MARCADORES BIOQUÍMICOS DE TOXICIDADE I – PIGMENTOS

VEGETAIS

AULA 6 (20.04) – MARCADORES BIOQUÍMICOS DE TOXICIDADE II – PIGMENTOS VEGETAIS II

AULA 7 (27.04) - MARCADORES BIOQUÍMICOS DE TOXICIDADE III – DANO MEMBRANAR

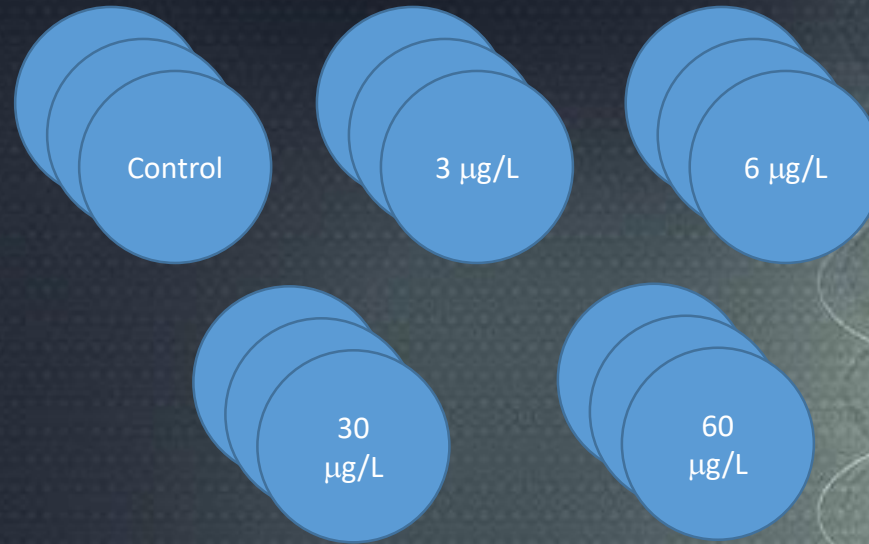
AULA 8 (04.05) – MARCADORES BIOQUÍMICOS DE TOXICIDADE IV

AULA 9 (11.05) - TÉCNICAS DE EXTRAÇÃO E ANÁLISE DE METAIS PESADOS

AULA 10 (18.05) - NANOTOXICOLOGIA

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DELINEAMENTO EXPERIMENTAL



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Chemically, DNA consists of two complementary strands of deoxyribose sugar-phosphate backbones, with nitrogenous bases of adenine, thymine, guanine, and cytosine attached to the inner side. The two strands are antiparallel to each other and are therefore held together by hydrogen bonds between their nitrogenous bases. Adenine, which is a purine, is always paired with thymine, which is a pyrimidine. The sequence of these base pairs is the genetic code that encodes information. This information is read using the genetic code to synthesize proteins. The process of copying the genetic code into a messenger RNA molecule is called transcription. The messenger RNA then moves to the cytoplasm where it is translated into a protein called translation.

Within cells, DNA is organized into long structures called chromosomes. These chromosomes are duplicated before cell division. In a process called replication, eukaryotic organisms separate their DNA into long, and produce three main types of DNA: linear, circular, and plasmid. Some of these DNA molecules are found in the nucleus and some are found in the cytoplasm. The DNA molecules are organized into a structure called a nucleosome, which is a complex of DNA and histone proteins.



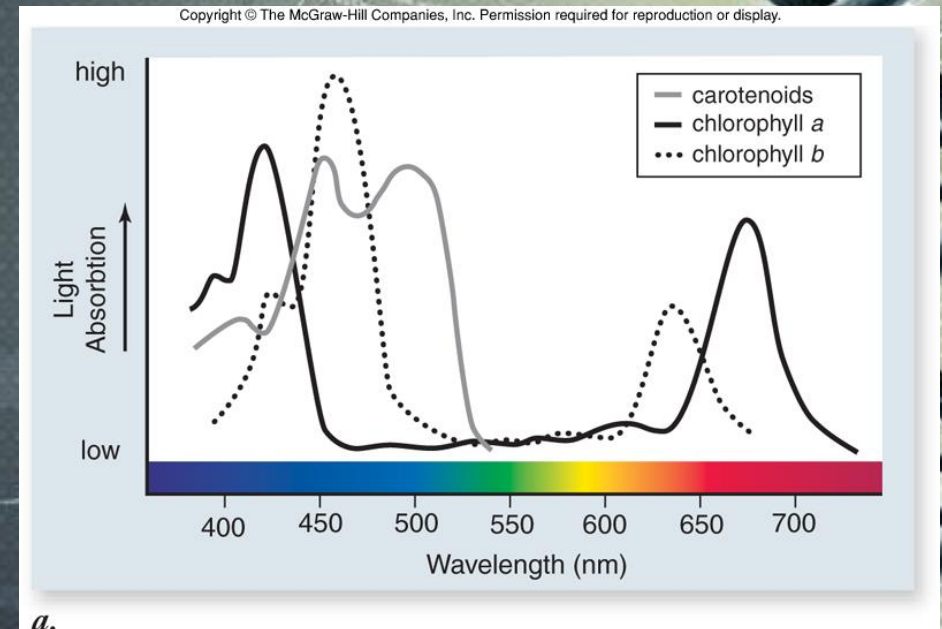
PLANT PIGMENTS

PIGMENTS ARE LIGHT-ABSORBING COLORED MOLECULES.

DIFFERENT PIGMENTS ABSORB DIFFERENT WAVELENGTHS OF LIGHT.

CHLOROPHYLLS ARE THE MAJOR LIGHT-ABSORBING PIGMENTS IN PLANTS.

THEY ABSORB ENERGY FROM VIOLET-BLUE LIGHT AND REFLECT GREEN LIGHT, GIVING PLANTS THEIR GREEN COLOR.



ACCESSORY PLANT PIGMENTS

ROLE OF ACCESSORY PIGMENTS:

ACCESSORY PIGMENTS HELP PLANTS ABSORB ADDITIONAL LIGHT. PLANTS NEED TO MAKE THESE ACCESSORY PIGMENTS TO MAXIMIZE THE AMOUNT OF PHOTOSYNTHESIS THEY CAN DO.

MORE PIGMENTS = MORE GLUCOSE OR FOOD FOR THE PLANT!

ACCESSORY PLANT PIGMENTS

CAROTENOIDS: REFLECT YELLOW, ORANGE, AND RED LIGHT.

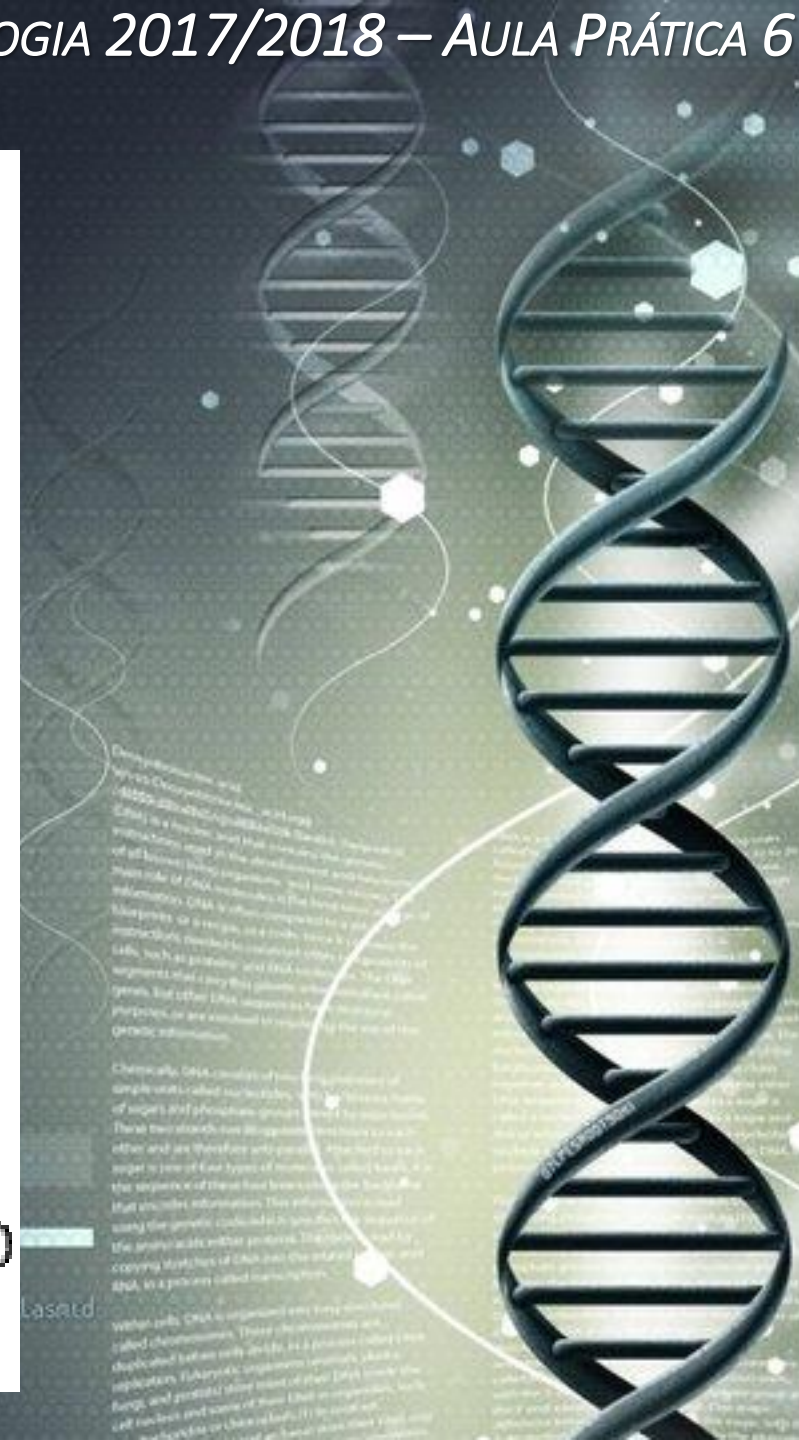
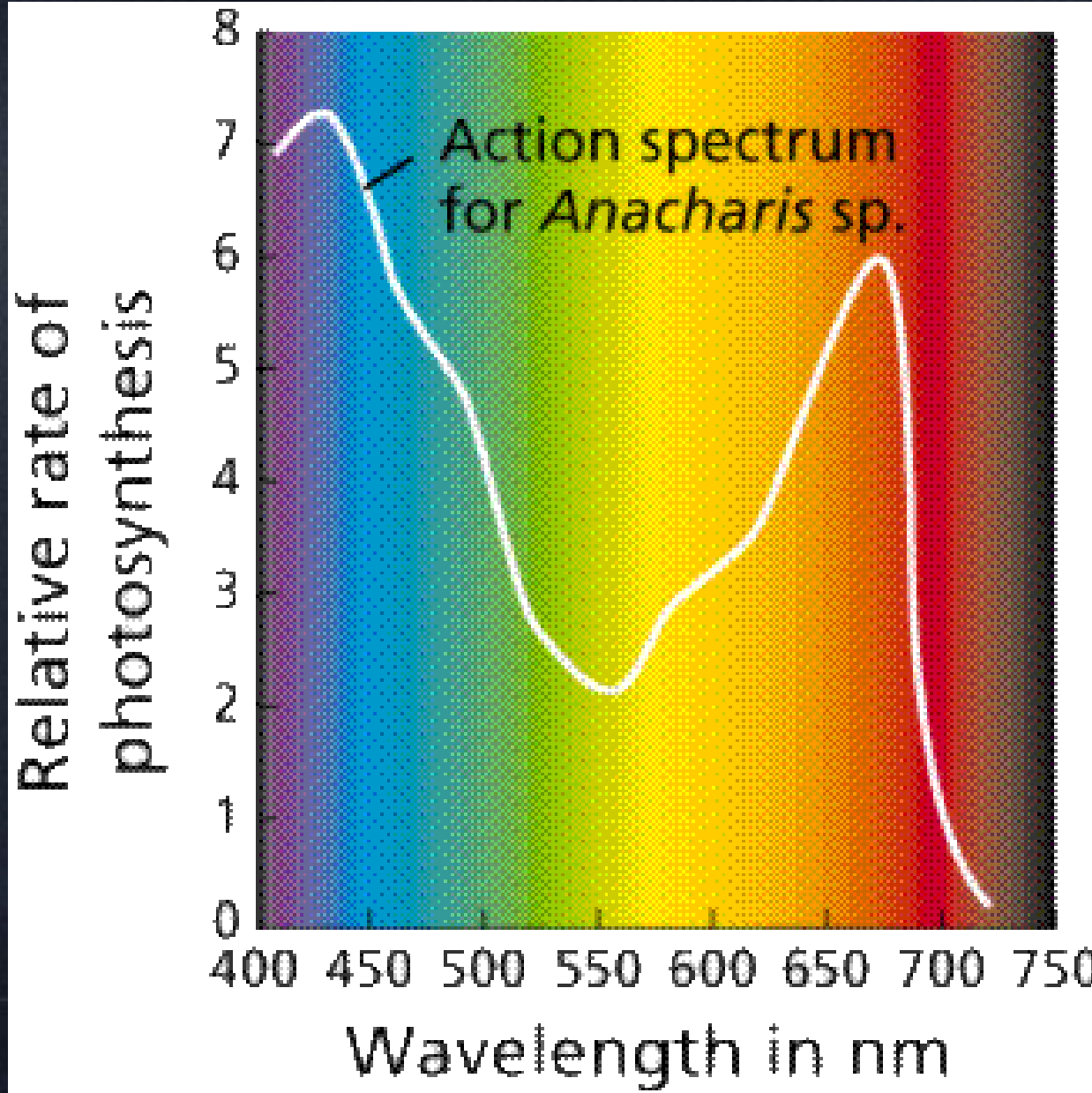
CAROTENOIDS GIVE CARROTS AND SWEET POTATOES THEIR ORANGE COLOR.

ANTHOCYANS: REFLECT RED, BLUE, VIOLET LIGHT.

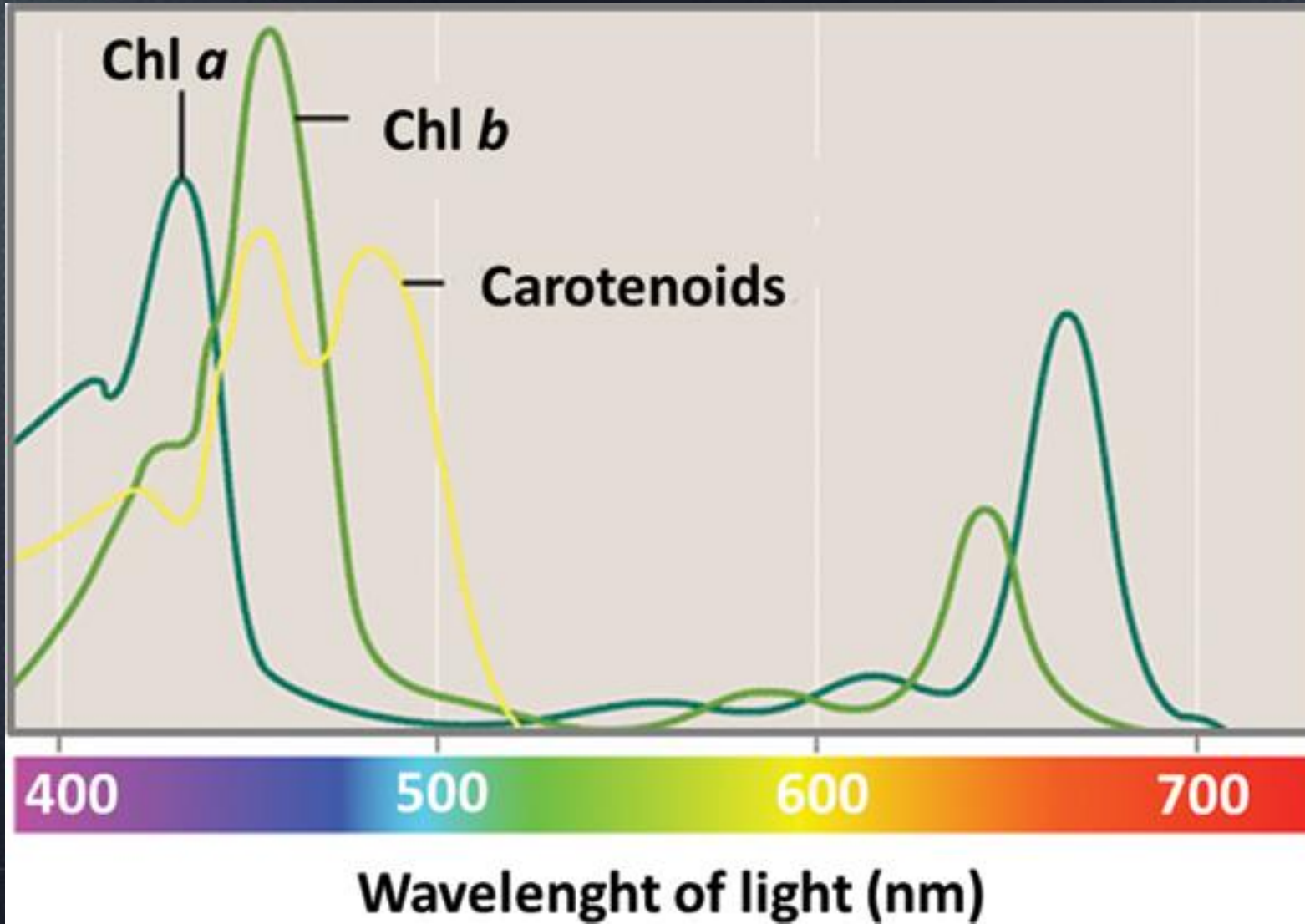
XANTHOPHYLLS: REFLECT YELLOW LIGHT.

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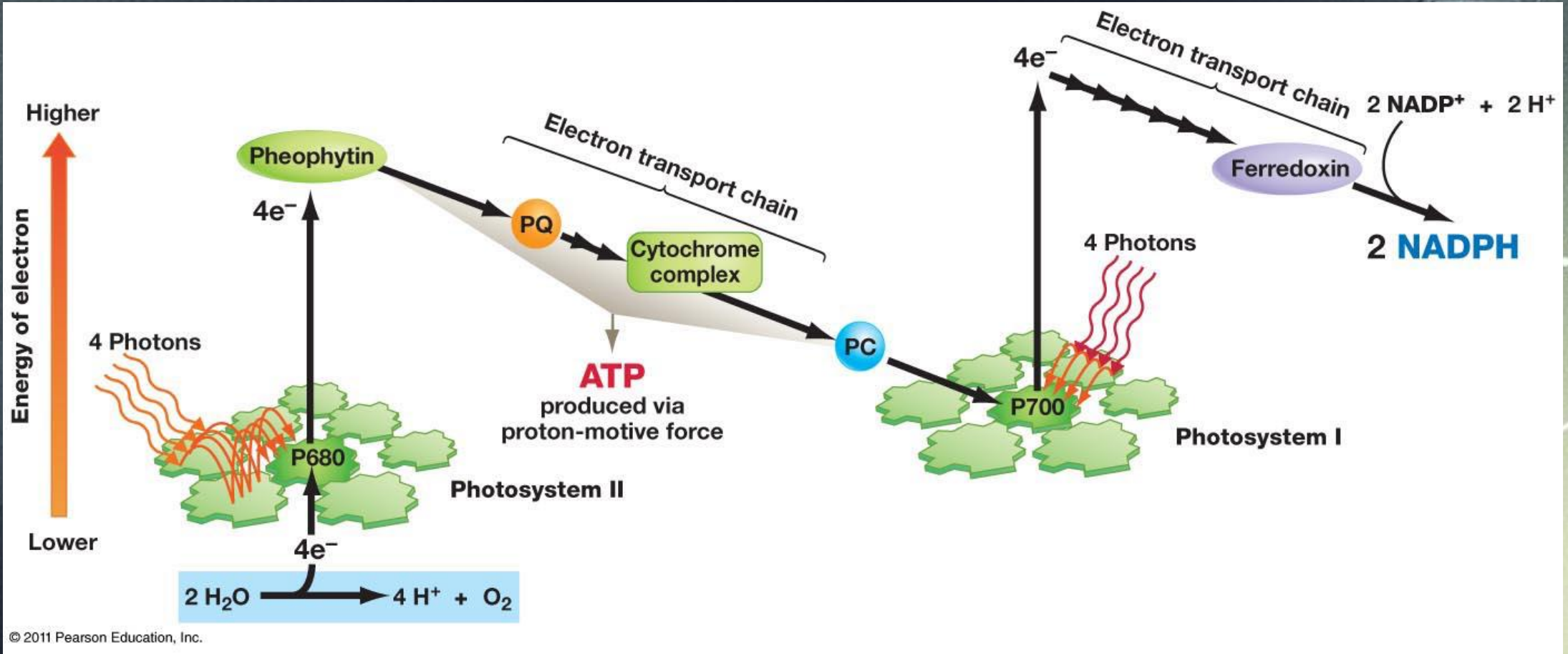
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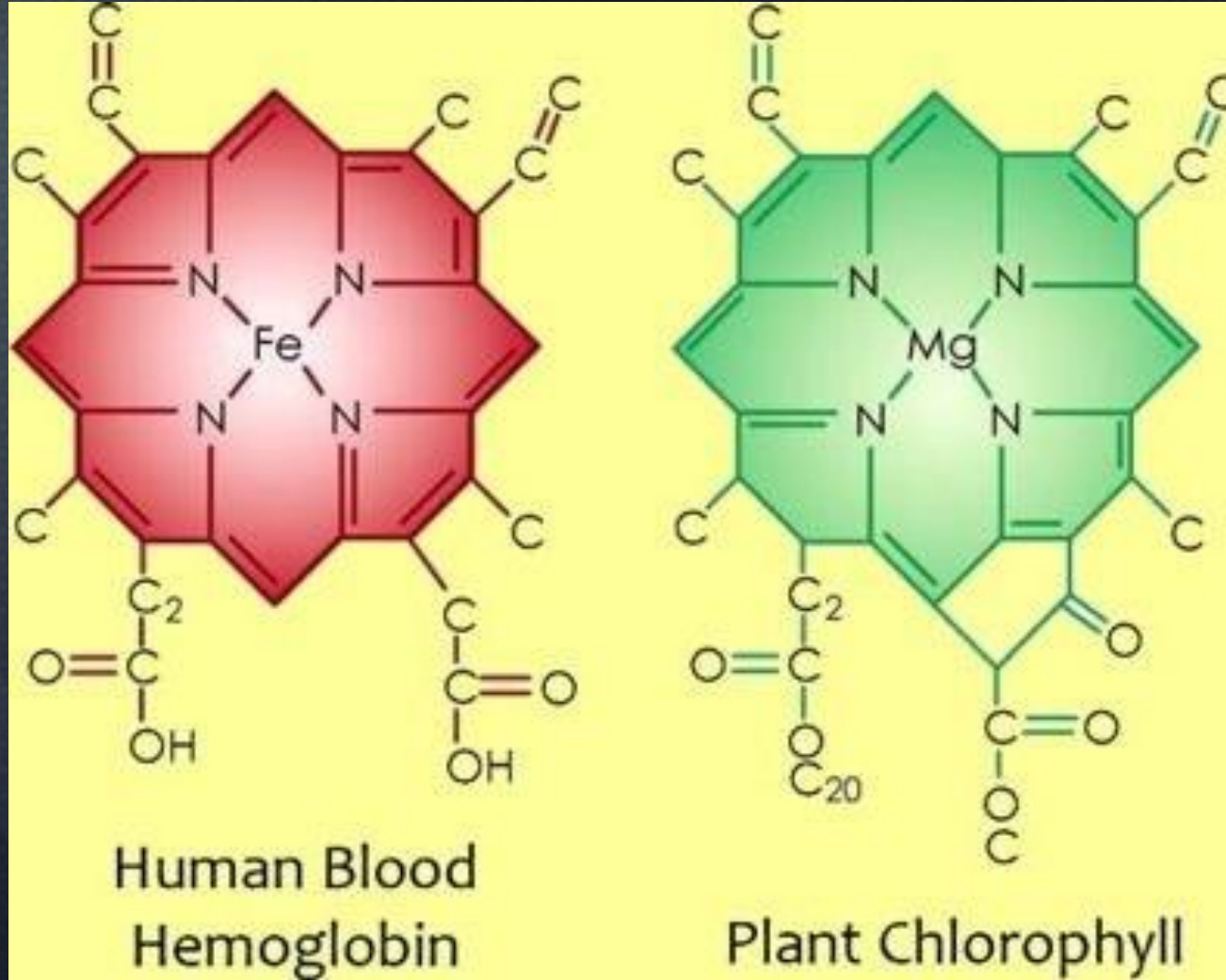


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the sequence of these base pairs is the genetic code that encodes information. This information is used to synthesize proteins. The process of copying the genetic code into messenger RNA is called transcription. In eukaryotic cells, this process occurs in the nucleus and involves the enzyme RNA polymerase. In prokaryotic cells, transcription and translation occur simultaneously in the cytoplasm. The genetic code is universal, meaning that all living organisms use the same code to synthesize proteins. This is evidence of a common ancestor for all life on Earth.

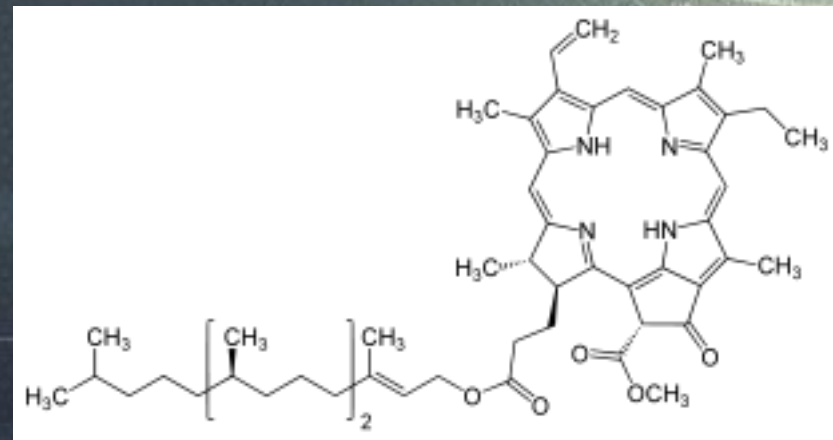
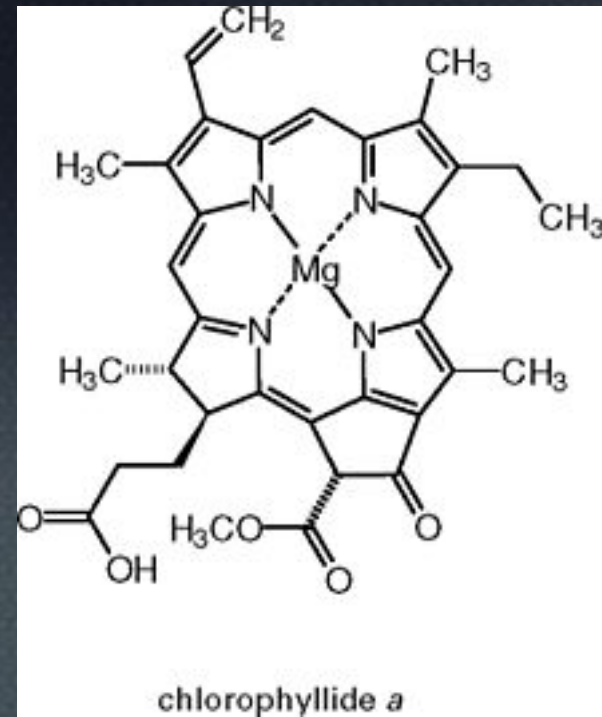
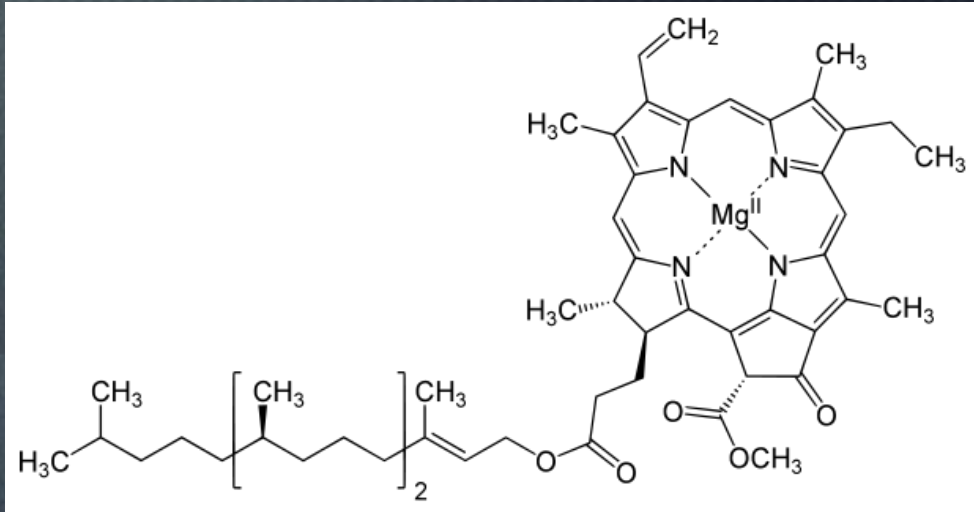
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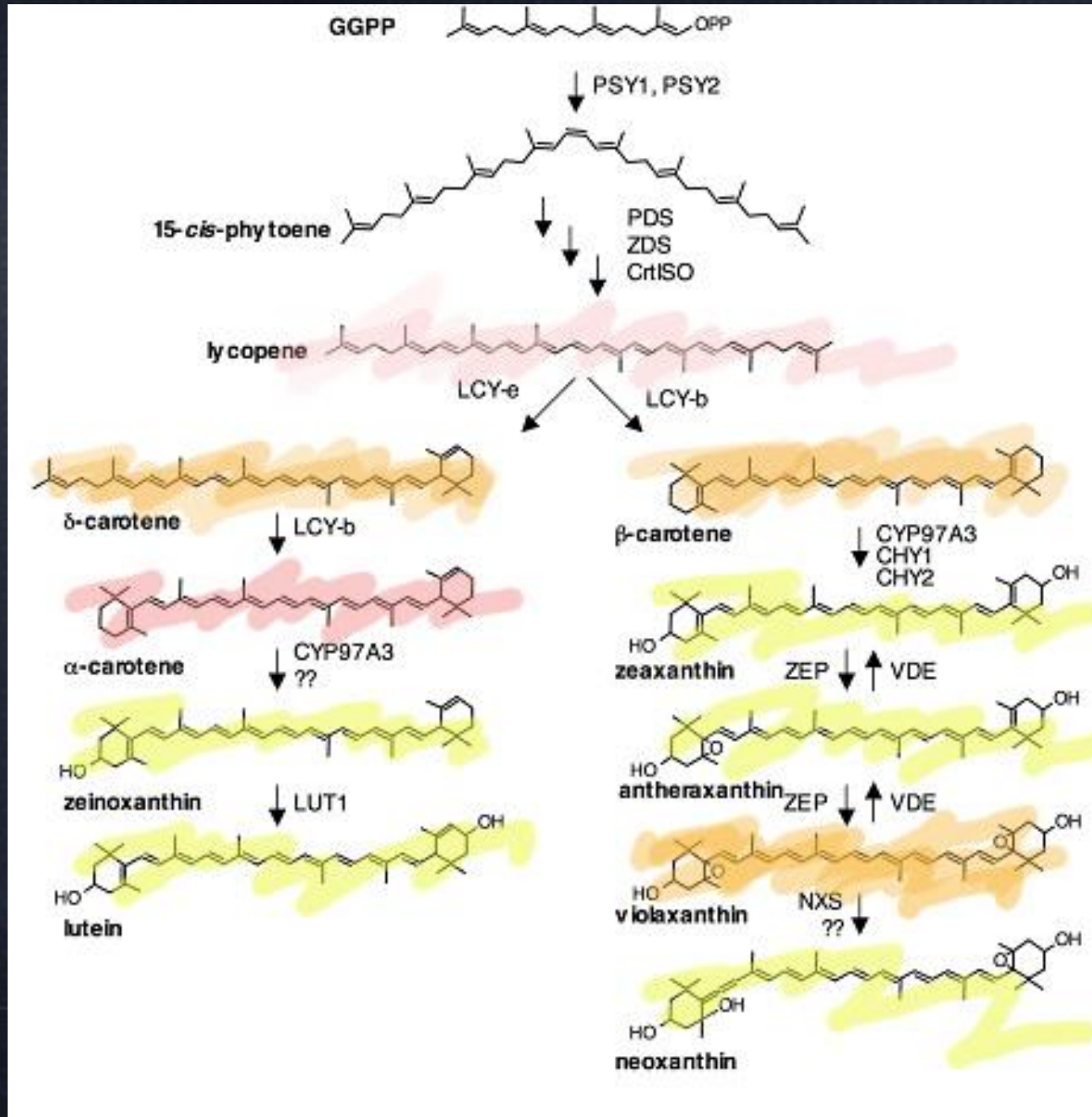
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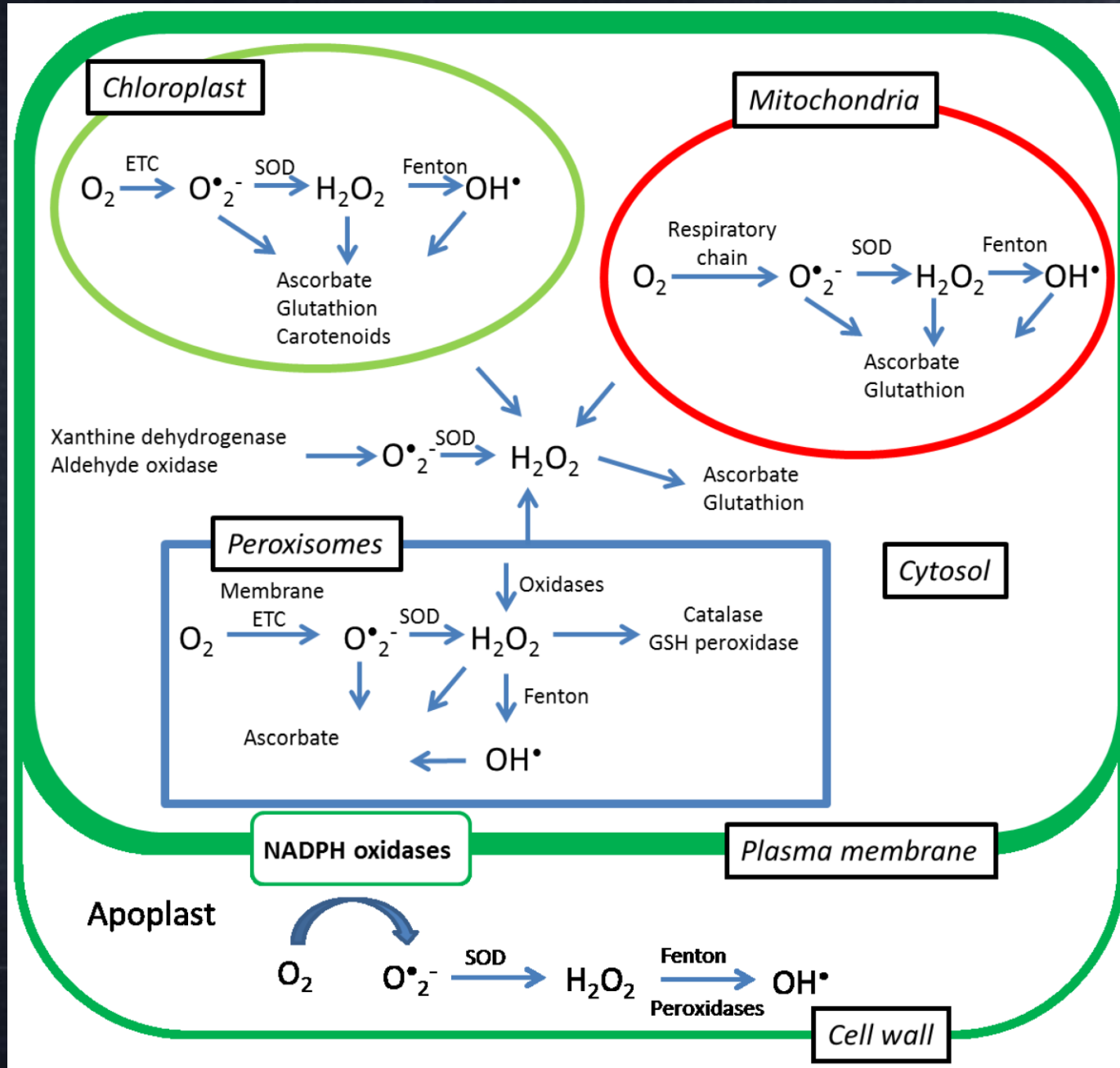


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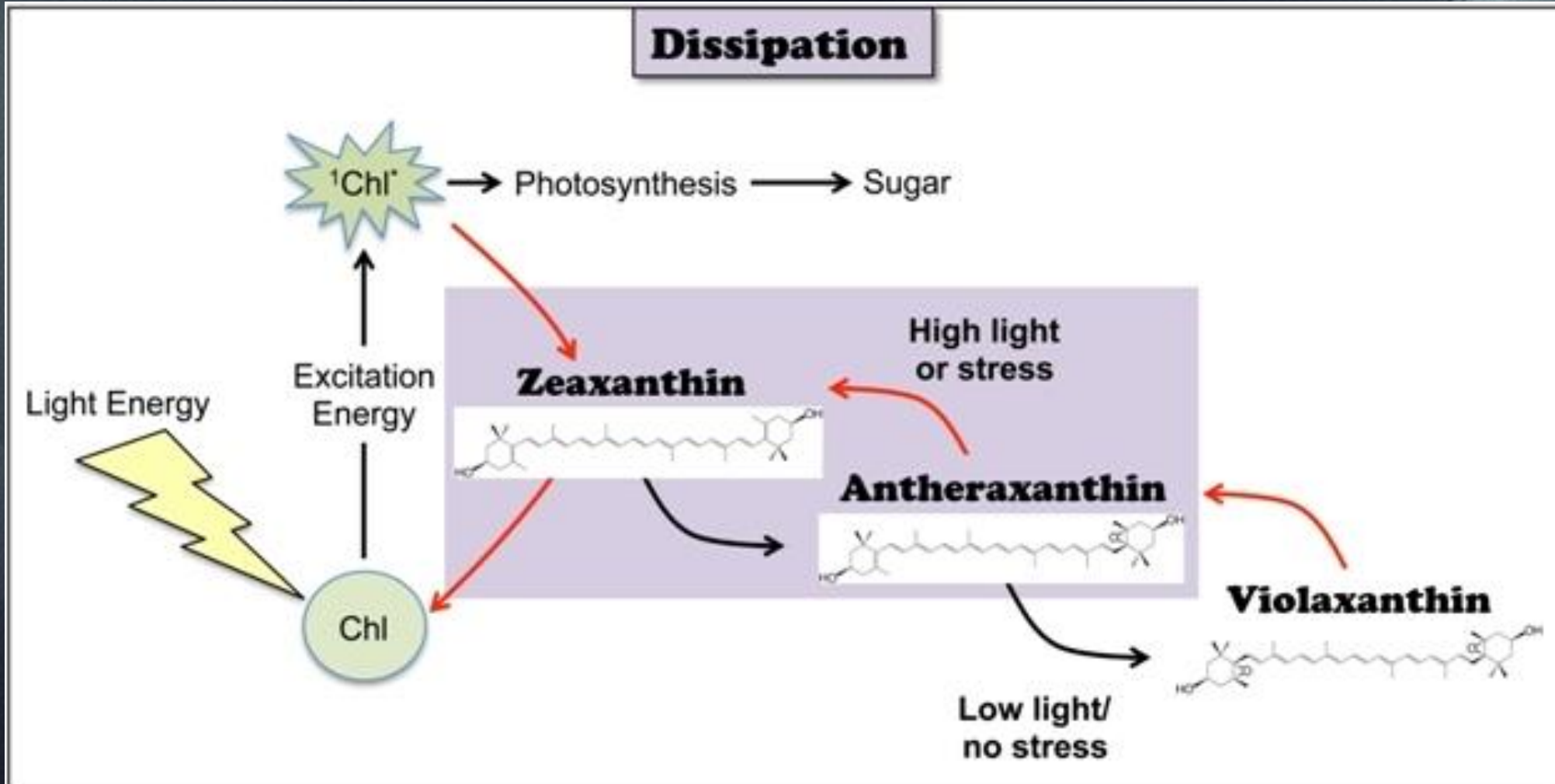


Chemically, DNA consists of two complementary strands of deoxyribose sugar-phosphate backbone, with nitrogenous bases attached to the sugar. The two strands are held together by hydrogen bonds between the bases. The sequence of the bases in the DNA molecule is the genetic code, which is used to synthesize proteins. The process of copying the DNA molecule is called DNA replication, and it occurs in a cell during cell division. In a prokaryotic cell, DNA is organized into a single circular chromosome. In a eukaryotic cell, DNA is organized into multiple linear chromosomes. The DNA molecule is a double helix, and the two strands are antiparallel to each other. The nitrogenous bases are adenine, thymine, guanine, and cytosine. Adenine pairs with thymine, and guanine pairs with cytosine. The hydrogen bonds between the bases hold the two strands together. The DNA molecule is a very long molecule, and it is packaged into a compact structure called a chromosome. The DNA molecule is the blueprint for the synthesis of proteins, and it is passed on from parent to offspring. The study of DNA is called molecular biology, and it is a branch of biology that deals with the structure and function of DNA and the processes of DNA replication, transcription, and translation. The DNA molecule is a double helix, and the two strands are antiparallel to each other. The nitrogenous bases are adenine, thymine, guanine, and cytosine. Adenine pairs with thymine, and guanine pairs with cytosine. The hydrogen bonds between the bases hold the two strands together. The DNA molecule is a very long molecule, and it is packaged into a compact structure called a chromosome. The DNA molecule is the blueprint for the synthesis of proteins, and it is passed on from parent to offspring. The study of DNA is called molecular biology, and it is a branch of biology that deals with the structure and function of DNA and the processes of DNA replication, transcription, and translation.

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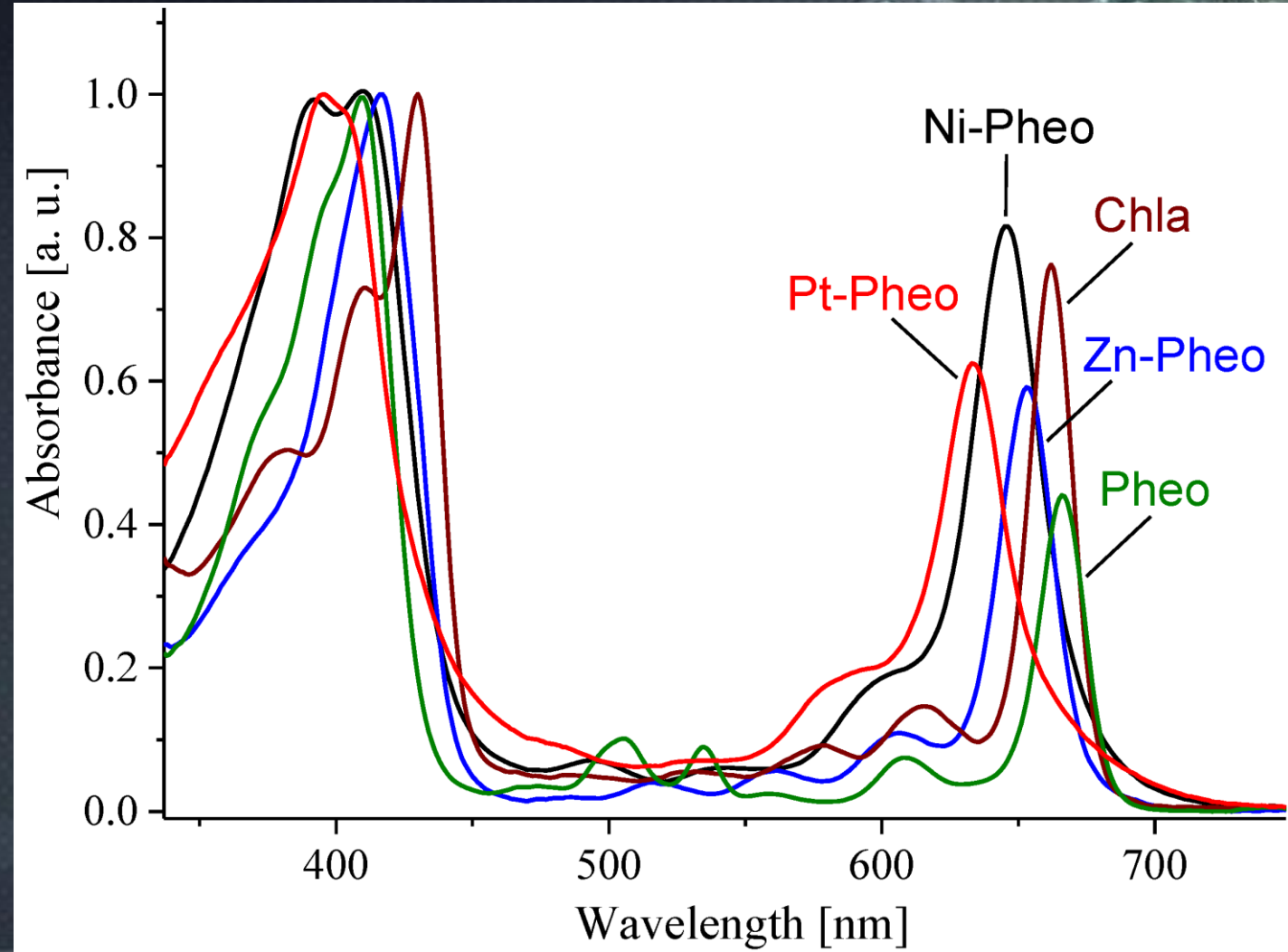
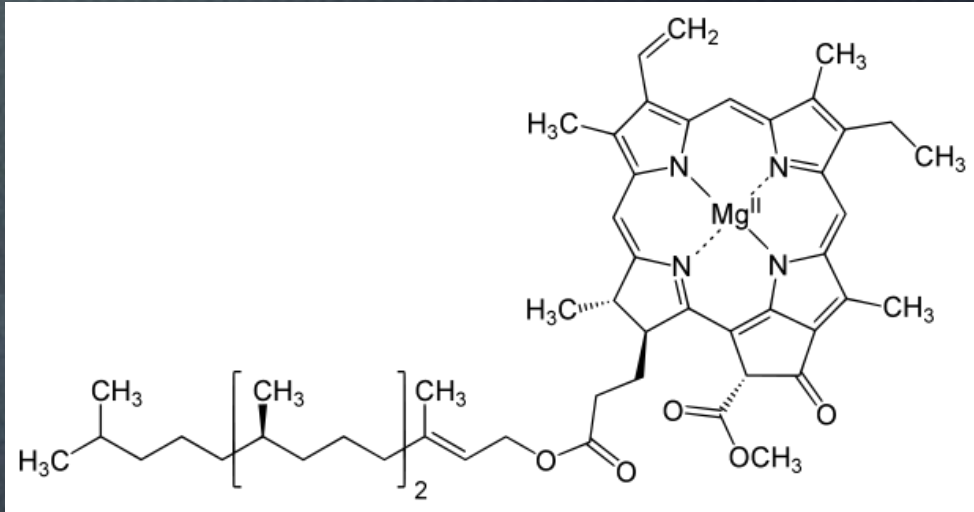


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...DNA is a protein called histone...
 called chromatin. These chromatin are...
 duplicated before cells divide. In a process called DNA...
 replication, eukaryotic organisms produce...
 large, and produce three times as much DNA...
 cell nucleus and some of these DNA molecules...
 mitochondria or chloroplasts. These organelles...
 contain their own DNA. These organelles...
 are thought to have evolved from...
 free-living prokaryotes.

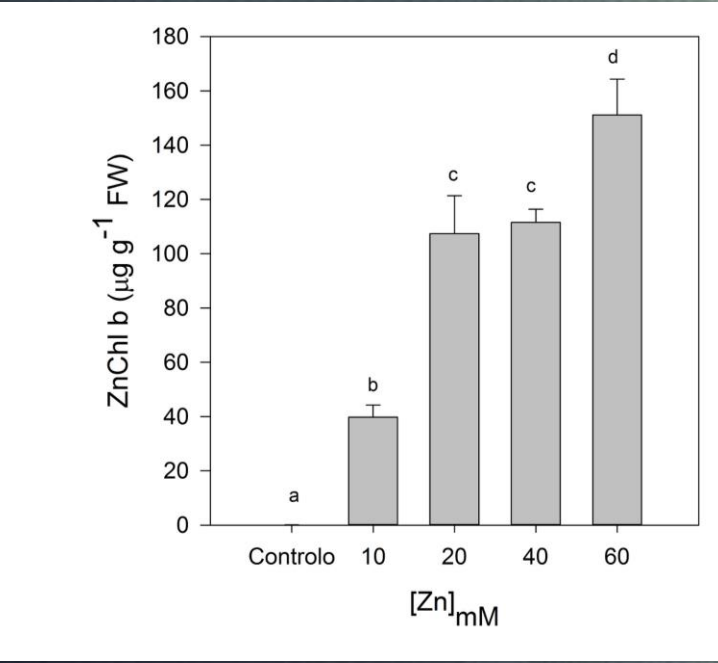
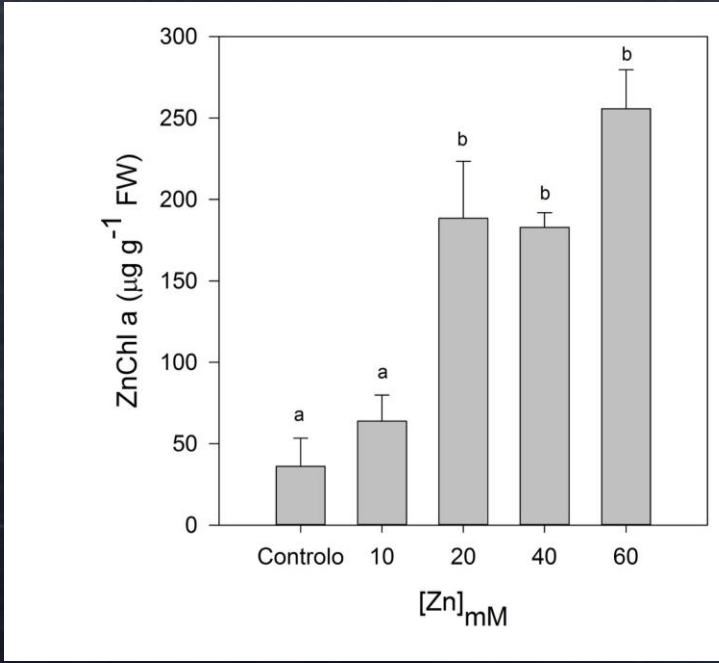
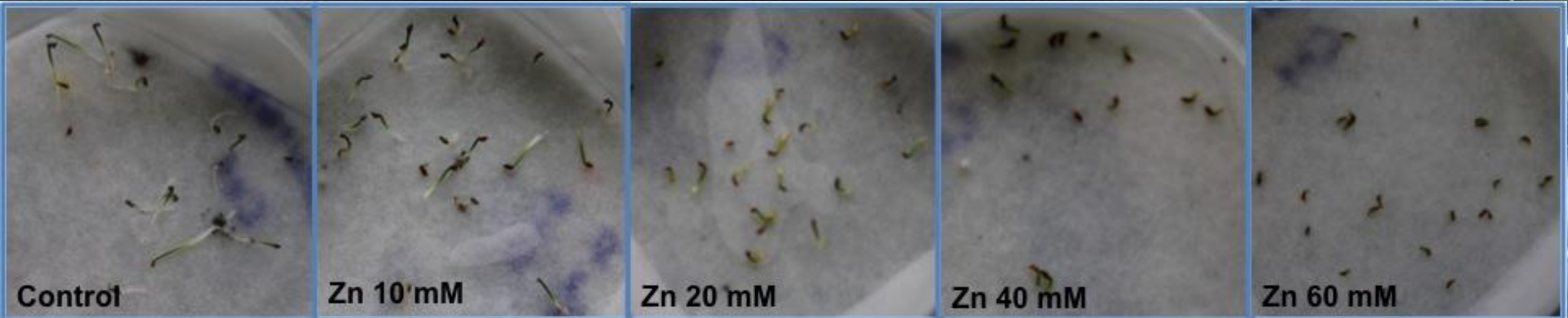


PLANT PIGMENTS



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PLANT PIGMENTS



PLANT PIGMENTS

1. *WEIGHT THE SAMPLES QUICKLY.*
2. *ALL THE EXTRACTION SHOULD OCCUR IN DIM LIGHT.*
3. *PLACE THE SAMPLES IN THE TUBE AND ADD 6 ML PURE ACETONE.*
4. *GRIND THE SAMPLES WITH THE GLASS ROD.*
5. *PLACE THE SAMPLES IN THE DARK AT -20 FOR EXTRACTION.*

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