Journal of Medical Case Reports and Reviews

Received 18 Dec 2019 | Revised 24 Dec 2019 | Accepted 20 Feb 2020 | Published Online 24 Feb 2020

JMCRR 03 (02), 534-603 (2020) ISSN (O) 2589-8655 | (P) 2589-8647

JMCRR

THE TRUTH ABOUT BIO-ENERGY, CELLS DIVISIONS AND SOME IMPORTANT CONCEPTS OF DIFFERENT CREATURES.

Assist. Prof.: Alaa H. Al-Darraji

College of Science – Chemistry Dept. Iraq

Article Info

***Corresponding Author:**

Alaa H. Al-Darraji

Email: alaa_h_k@yahoo.com

Abstract

All creatures in the earth move all the time due they have certain energy which continually produced in them bodies. References [11 and 15] show that ATP and other like nucleotides are responsible for producing this energy but how this specific molecule produce energy while thousands chemical molecules do not do that!

In another hand, cell's division is so important process in the earth, it represents life's basic phenomenon, it responsible for; Reproduction, Repair and Growth of all creatures in the world. Then without understanding scientific basics of this phenomenon, it is impossible to understand how humans and other creatures form, how they grow up, and how they repair those bodies!

It highly obvious that there is no clear scientific vision about above most important phenomena in the earth, for this, in this research a full survey depending on chemistry principles was done on known procedures of DNA extraction processes. In addition, it contains chemical explanation for DNA's identification techniques; U.V.-Visible, Electrophoresis and N.M.R spectroscopy. Finally, the truth moment of this research represents all above surveys which included DNA's samples that extracted in biology department. All these indicated one scientific fact that DNA extraction processes that widely used for long time ago by many researchers produce unsaturated fatty acids do not produce DNA or nucleotides molecules. Therefore, all theories that depended on these extractions processes are incorrect.

Understanding of different Cells functions depending on facts and good evidences lead this research to explain another important concept such as; Fertilization process, identities of different viruses and their right treatment, the reason of obesity and its right treatment...etc.

Depending on; Chemistry science, facts and excellent evidences, this research gives full explanations about above so important phenomena and concepts. It believes that chemistry can solve more than these and it able to explain most important phenomena in the earth. In fact, Chemistry touch is so necessary for explaining most important phenomena in the earth.

Key words: Human's energy, Cell division, Sperm and Oocyte.

Introduction:

Our bodies are made up from many tiny units called cells, which are arranged into tissues and organs. Tissue and organ growth (in children) and repair (in adults) are generally the result of cells growing in size and dividing into two cells in a controlled manner. Chemical signals tell the cells to divide or stop dividing. Normally, the orders for cell growth are clear and our cells obey. When cells divide, they reproduce themselves exactly. One cell divide into two identical cells, then two cells divide into four, and so on. In adults, cells normally grow and divide to produce more cells only when the body needs them to replace aging or damaged cells. Many cells live for a given amount of time and then are programmed to die by a process called apoptosis. This turnover of cells helps keep the body healthy. Cells of different tissues and organs divide at different rates [(1)].

Experimental part:

This part was divided to three categories as follow:

- First one is; Cells of different species; animals including humans or different plants are continually reproduction, repair and growth. Cell division is responsible for these natural processes which are naturally happen in these different species and they experimentally happens such as in tissue culture techniques.
- Second part of experimental part include:

1. Add 250 ml of saturated solution of sodium chloride (NaCl) to two conical flasks (A and B).
2. Add hydrochloric acid (HCl) to these flasks until them pH become = 2-2.5.
3. Then add 1 g of dry yeast to these flasks each one have 1 g.
4. Leave flasks for three days at room temperature about 25-30 °C.
5. In the last day the two flasks were stirred for two hours.
6. Then flask (A) was sent to professional biologist [(2)] for insuring that all cells of dry yeast were destroyed while the second flask (B) was used in spectrophotometer method of U.V.-Visible apparatus by using phosphorus clinical kit which is the best method for calculating concentration of phosphate groups or phosphorus atom in each yeast's cell.
7. A third flask (C) have as same as above flasks, 1 g of yeast in 250 ml of distilled water. This flask was sent to specific laboratory at biology department [(2)] for calculating number of cells in 1 g of dry yeast.
8. Collecting results of this part for discussing them in discussion section.

- Third part of experimental section is quantitative determination method for finding the concentration of phosphorus from Spinreact in laboratory of medicinal chemistry:

1. Assay conditions: wavelength =710 nm (620-750), temperature 37 °C.
2. Adjust the U.V.-Visible instrument to zero with distilled water.
3. Pipette in a cuvette:

	ank	andard	mple
R (mL)	5	5	5
andard (µL)		)	
mple (µL)			)

4. Mix and incubate for 10 min. at 37°C or 30 min. at room temperature (15-30°C).
5. Read the absorbance (A) of the sample and calibrator against the blank. The color is stable for at least two hours.

Results and Discussion:

Results of this research including three parts; Firstly different cells are divided to give more cells for producing new cells instead of dying one, repairing different injuries that happen in different tissues of different species (animals or plants) and for growing. New born baby step by step for years become bigger until it becomes young then old person. All these are due to cell division so this process is the most important natural process that happen in the earth.

Results of second part are;

1. Professional biologist showed that all cells of 1 g dry yeast in conical flask (A) were totally destroyed or finished and this was done through microscope apparatus in biology's laboratory. It is obvious that yeast's cells are totally destroyed by this good procedure because there is no yeast cells left in both flasks after more than six months.
2. Also professional biologist find that the number of yeast's cells in conical flask (C) of (1 g) of dry yeast= 3720000 cells.
3. After insuring that all cells of dry yeast in flask (A) were died or destroyed and the other 1 g of same dry yeast contain 3720000 cells. Now weight of phosphate moieties that are in all cells of yeast should be calculated in flask (B) to find exactly how many phosphate in 1 gram of dry yeast. This for knowing how many nucleotides or other bio-phosphate molecules in each cell. Beer-Lambert equation was used for this purpose and the best method in this field is clinical method. Chemical fact indicates that phosphorus or phosphate group are stable do not change with this research's chemicals for this clinical method is the best method can be used for calculating concentration of this group. This method depends on affinity of phosphorus to molybdenum or molybdic acid (H_2MoO_4) and this phenomenon is good well known in chemistry for exactly measuring concentration of phosphate in flask (B). Clinical method is best quantitative method because; It is a result of so many studies, it is accurate, and for most important human's life depend on it and also hospitals over the world widely use it. This method must gives right result because it treats with human health. A conclusion of all these Phosphorus Kit is good quantitative method based on Beer-Lambert equation.

It is most important to notice that phosphorus or phosphate Kit made for calculating inorganic phosphorus (phosphate moiety) in serum for clinical uses and this research use it for calculating phosphorus or phosphate groups in destroying cells solution (flask B)! The fact of flask (B) is that it contains; proteins, sugars, lipids, nucleic acids...etc. It contains what cells contain. Therefore, both of these solutions; the serum and destroying cell solution (flask B) contain extremely same molecules, for this this research used this Kit for calculating phosphate (phosphorus) concentration in destroying cells solution in flask (B).

In clinical biochemistry laboratory concentration of phosphorus (Inorganic phosphorus) in flask (B) was measuring according to;

(A)Sample/(A)Calibrator * 5 (Calibrator conc.)= 0.072/0.187*5=1.925 mg/dL. This for 100 mL so for flask (B) (250 mL) = 4.813 mg of all phosphorus (phosphate) in flask (B).

This result is good and reasonable that 1 g of dry yeast consist from 3720000 cells and these cells contain about 4.813 mg of phosphate. This means that each cell contain about 0.000001294 mg = 0.001294 µg of phosphate moieties.

In another hand, according to number of moles of phosphate =Wt./M.Wt.= 0.004813g /96 g/mole= 5.0135*10^-5 mole, so if one mole contain $6.022e^{+23}$ molecules of phosphate groups (Avogadro's number) then 5.0135*10^-5 mole should contain = 2942107.002 molecules of phosphate (phosphorus) in 1 g of yeast.

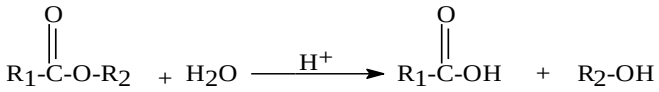
This number for molecules in 0.004813 g so weight of each molecule should be (PO_4^{-3})=1.636*10^-9 g =0.0000000016 g= 0.00164µg for one phosphate only.

Quantitative method showed that total weight of phosphate in each cell = 0.001294µg while weight of each one phosphate= 0.00164µg. This means that each cell contains less than one phosphate or one nucleotide or one Bio-phosphate molecules of other bio-molecules.

In fact, this is unsuitable and incorrect because weight of one phosphate molecule is not real for this it is difficult to know how many phosphates in each cell? This because of theoretical number of Avogadro's number it is not experimental number. However 0.001294µg for all phosphates in each cell is so small may be is suitable for few phosphates not as bio-sciences showed.

Total phosphate in each cell =0.001294µg and it is including DNA, RNA with three types; tRNA, rRNA and mRNA. Phosphates of phospholipids of cells and nucleuses membranes about six membranes of phospholipids and phosphate groups in another molecules such as; ATP or other nucleotides or glucose-6-phosphate..etc. This means all phosphate of one cell of yeast is not enough for what biologists indicated [(2)] or Bio-books showed. Thus it is clear now that above chemical quantitative method does not find a lot of phosphate in each cell of yeast.

Procedures of this research make pH of flasks A and B = 2-2.5 for two important reasons; Firstly, membranes of different cells or nucleuses are made up from phospholipids that chemically consist from glycerol (3(–OH) alcohol) with two fatty acids connected by ester bonds while the third hydroxyl (-OH) of glycerol connected to phosphate which bond to another different molecules. This chemically means pH=2-2.5 able to hydrolyze phospholipids membranes of cells and them nucleuses because acid (H^+) with water molecules able to hydrolyze ester bonds of phospholipids by well known ester's hydrolysis as following equation:



Where: R_2= glycerol. and R_1= different fatty acids.

Secondly, pKa_1 of phosphoric acid is 2.16 and pH of the two flasks =2-2.5. This is perfect for making all Bio-phosphate molecules in each cell be free as inorganic phosphate as (H_3PO_4) because acidic pH of the two flasks make all Bio-phosphate prefer to be as phosphoric acids (H_3PO_4) rather than other forms ($H_2PO_4^-$ and HPO_4^{-2}). These two chemical facts give procedure of this research good supporting factors for hydrolyzing all cells and nucleuses membranes for make all phosphates in each cell be free as H_3PO_4 rather than other forms for making calculations be more accurate.

In addition, first step of second part of this research procedures was that putting saturated solution of sodium chloride (NaCl) in two conical flasks A and B before adding 1 g of yeast. This for making this salt concentration outside yeast cells is more than inside them leading to destroyed these cells membranes. This is a well known fact of effecting of differences in salts concentrations on organisms.

However, It so difficult to find the real weight of one phosphate group without using theoretical values but 0.001294µg for all phosphates in each cell definitely does not reach 1% of what biologists said [(2)] depending on them books that; each cell contain; 46 human chromosomes, 2 meters of DNA, 3 billions DNA subunit (bases; A,T, C and G) and approximately 30000 genes.

It is unlikely two meters of big molecules like DNA that consisting from big molecules (different nucleotides) be in one cell or in one nucleus! DNA contain so many nucleotides so if one DNA contain as example 50 nucleotides then two meters of DNA means unlimited number of nucleotides how they be in small area like nucleuses!? It is difficult and actually impossible to understand how these two meters of unlimited nucleotides be in one small area!

There is another unlikely impossible point of biologists indications that each cell contain three billions of DNA mean if applying same above example that each DNA contain only 50 nucleotides 25 for each chain then it should have 50 phosphate moieties because each nucleotide have at least one phosphate.

This means that each cell should contain about 150000000000 molecules of phosphate (PO_4^{-3}), if weight of each molecule = 0.0016µg then them total weight = 240000000µg =240 g in case that DNA have only 50 nucleotides. 240 grams of phosphate in each cell, this for phosphate only not for all other big molecules that have relatively big weight too. This is impossible and unbelievable because cell is too small cannot be recognized by normal eyes unless by microscope so how it have 240 grams of phosphate with other molecules!?

This is impossible and illogically because quantitative clinical method show that all phosphates in each cell of yeast is 0.001294µg while biologists [(2)] showed that each cell should contain 150000000000 molecules of phosphates meaning grams of phosphates in the cell! Quantitative method is the best method as clinical method and this research methods are also goods as simple chemical procedures depending on simple chemistry rules.

Both of them are good, trusted and give perfect results. For this they give experimental results that each cell contains few nucleotides may be ten or less. While biologists [(2)] show billions of nucleotides billions of phosphates in each cell. Genetic or chromosomes sciences is most wide in the last years so many scientists study them so there is a conflict between this research results and genetic or chromosomes results.

It is important to mention that this research calculate weight of phosphates (phosphorus) molecules rather than other molecules because each nucleotide have at least one of them then by calculating how many phosphate in all the cell it is easy to know how many nucleotides in each cell or how many Bio-phosphates molecules in the cell.

It is obvious from above fact that each yeast's cell does not have a lot of phosphates, it has 0.001294µg of phosphates which means this is too small value for nucleotides or for other bio-phosphates molecules in each cell, each cell may contain ten nucleotides or less!

Above facts were based on experimental results that finding weight of phosphate molecules because each atom or molecule have a specific weight even, they are so small, they must have a weight that gravity of the earth must attract. Of course, each atoms or molecules have a specific weight and also they have a specific volume, and above methods find the weight of phosphate groups may them volume show another facts or another additional conflict points!

Before discussing above fact one of the most important organ should be discussed first. It is known that nuclei is the most important part inside different cells of different species that living in the earth. Biology indicate that nuclei is responsible for cells division and it has DNA molecules so what this organ contain?

There is another indication for biologists [(2)] that "human genome" genetic code in each human cell, contains 23 DNA molecules each containing from 500 thousand to 2.5 million nucleotide pairs. DNA molecules of this size are 1.7 to 8.5 cm long when uncoiled, or about 5 cm on average, distance of all uncoiled DNA of all human cells is from the Sun to Pluto and back or from the earth to the moon and back...etc. Finally, Genes are responsible for cell division and each Gene is more than 1000 bp (i.e.1000 nucleotide). In fact, scientists of this field thought about everything since Mendel or Watson-Crick to so many scientists nowadays but unfortunately, they forget Chemistry and its rules! Reference indicate that these scientists did not bury chemistry science they did not know it [(2)].

According to chemistry rules each atom have a specific atomic weight and each one have a specific radius. As example for lowest molecular weight comparing with other nucleotides dCMP (Deoxy-Cytidine-monophosphate) that have following structure:

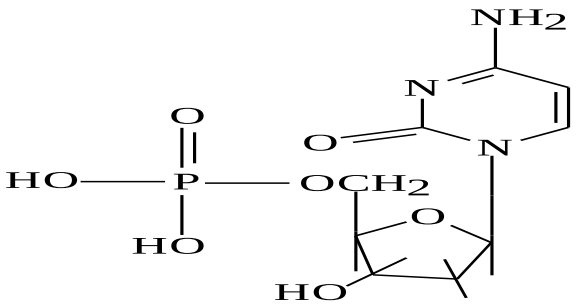


Figure (1): Chemical structure of dCMP molecule.

This molecule consist mainly from; Carbon, Oxygen, Hydrogen, Nitrogen and phosphorus atoms. Radius of each atoms; C=0.91°A, O= 0.65°A, H=0.79°A, N=0.75°A and P=1.23°A.

A chemical atom means electrons spin around a nucleus in spherical movement so atom's volume have a spherical shape.

Spherical volume = $4/3 * \pi * r^3$

Where $\pi = 3.14$ and r = atomic radius.

Then volume of each atom in dCMP is:

Carbon = $3.0563e^{-30}$

Oxygen = $1.436e^{-30}$

Hydrogen = $2.144e^{-30}$

Nitrogen = $2.144e^{-30}$

Phosphorus = $4.187e^{-30}$

Atoms of Citidylic acid (dCMP) are bonding each other by Covalent bonds which means them volumes stay as they are without decreasing. Number of each atom in dCMP molecule = (C= 9, O=7, H=14, N=3 and P=1 atoms), then by multiply volume of each atom with its number in dCMP resulting total volume of each atom in dCMP= ($C=1.6815e^{-117}$, $O=9.022e^{-92}$, $H=8.4634e^{-183}$, $N=1.757e^{-39}$ and $P=3.918e^{-13}$).

Then, total volume of dCMP molecule is sum of all volumes= 0.000008856 m^3 or 8.856 μm^3.

Noticing that the true chemical structure of any chemical molecules such as dCMP is like many spheres connect each other by chemical known bonds (Covalent bond, ionic bond, Hydrogen bonds, Van der walls interactions, hydrophobic interactions, hydrophilic interactions) as in the following figure:

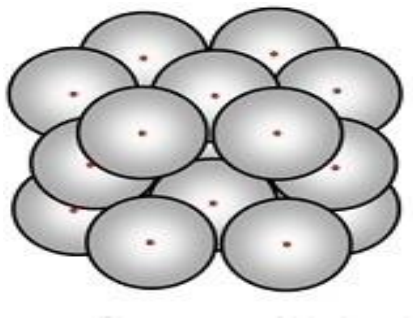


Figure (2): The true structure of chemical atoms in different molecules.

Therefore, dCMP molecule have a known volume = 8.856 μm^3 and it have known molecular weight = 307.086 g/mole, then it must have a known space inside nuclei. Because of three-dimensional structure of each chemical molecule it is difficult to know exactly volume of each molecule inside

different cells specially inside nuclei but it is important to mention that dCMP volume is definitely not zero and also it may be less than 8.856 μm^3 in few micrometer but it is not a zero.

According to chemistry rules each molecule consist from different atoms that have electrons spin around nucleus so there is no force in the earth can reduce atomic volume or reducing molecular volume. Electrons spin around them nuclei in very fast velocity so if there are any force affected these electrons it is difficult to know what should happen!

Any particle move very fast like electrons when it hit by a any force even it is so weak, it should have highly effect leading to change this particle's movement may collide the nucleus or collide another electrons of same atom or with other electrons of another atoms resulting many collides leading to release beam of electrons with high energy effect the molecule resulting at least many damages in nucleus or in all the cell and other cells. The fact of any atom is that it have accurate system electrons spin in opposite directions in many orbits so any force hitting one electron this should lead to many possibilities difficult to predict them. The fact of each cell in the all world there is no force effect the cell or effect its nucleus both of them are so normal since they were. Therefore electrons of dCMP molecules are in them positions inside nucleus, them volume is the same and the true volume of dCMP in nucleus =8.856 μm^3.

As it was mentioned before because of unknown stereo-chemical structure of dCMP inside the nucleus its volume can be suggested to be at least 5 μm^3. It is important to repeat that dCMP is the lowest atoms than other nucleotides so other nucleotides should be more than 8.856 μm^3.

DNA molecule consist from four different nucleotides; dAMP, dGMP, dCMP and dTMP so if volume of lowest atoms dCMP assuming be 5 μm^3 then others dAMP, dGMP, and dTMP are more than 5 μm^3. In fact, differences between above four nucleotides is so close so suggestion for calculations that the volume of each nucleotide is 5 μm^3. Then total volume of all four nucleotides of DNA molecule is 20 μm^3.

Ron Milo and Rob Phillips indicate that Nuclear size variation with typical diameter ranging between 2-10 micrometers [(3)]. Then nucleus relatively have spherical shape so its volume can be calculated from same above relation (Spherical volume = $4/3 * \pi * r^3$), then depending on this, typical volume of nuclei are between (4.1867 – 523.3375μm^3).

According to this facts, typical size of different nuclei must contain between (0.83734 – 104.6675 nucleotides). Colleagues biologists [(2)] indicate that each nucleus does not have only nucleotides it contain nucleolus and Chromatin Network that contains nucleotides. They said that Chromatin Network contain Chromosomes (46 Chromosomes for human) and chromosomes contain nucleosom which contains nucleotides and protein called histon. Each circle in nucleosom contain 146 base pair (about 292 nucleotides), finally they said that Gene contain more than 1000 bp (1000 base pair = 2000 nucleotide), then in chemistry one Gene contain more than 2000 nucleotides!

Another reference [(4)] indicate in a typical animal cell the nucleus has a diameter of about 5 micrometer then nucleus's volume = 65 micrometers or according to the law (Spherical volume = $4/3 * \pi * r^3$) then nucleus volume = 65.4167. The true of cell's nuclei is not enough for just 13 nucleotides so what about thousands or millions of them as biologists indicated [(2)]? The important question now is where is the Gene? All the nucleus does not have 13 nucleotides and the Gene must have more than 2000! where is the Gene?! This for one Gene and the cell contain large number of Genes as biologists indicate while the true of nucleus it have small part of the Gene 0.0065 Gene it is not have even one complete Gene.

Both references [(3-4)] indicated that radius of nucleus of human's cell = 1- 5 µm so its volume = (14.13-65.42µm) therefore it must contain about (2.826 – 13.084 nucleotides volume for each one = 5 µm). At maximum volume of nucleus of human's cell = (65.42µm) and it contains about 13 nucleotides but nucleus does not contain just nucleotides! It contains nucleolus, Chromatin Network and proteins

molecules, it was mentioned before nucleolus is about 10% of all nucleus contents [(2)] that means Chromatin Network contain just 12 nucleotides or less.

This research show another calculations for finding the truth of DNA or chromosomes that DNA density = 1.7 g/cm^3 [(13)], and volume of each nucleotide is about 8 µm^3, density= mass/volume, then 1.7g/cm^3 = mass/0.0008cm^3, so mass of each nucleotide = 0.00136 g. It is obvious that this mass of each nucleotides is extremely high and ten nucleotides have mass =0.0136 g, it is so difficult for these ten nucleotides to be in one nucleus. This fact is for just ten nucleotides not for billions or millions as biologists [(2)] said. For one million or one billion weight of nucleus must be 1360 gm (1.36 kg!!) or 1360000 gm (1360 kg!!) respectively. This for one nucleus then for one cell should be more than this but for calculations this number should be for one cell neglected other materials of the cell. Human body contain about 3.72 × 10^13 cells [(10)] and weight of each cell= 0.00136 g then human weight should be = 50592000000 gm or = 50592000 kg or =50592 tons!! Is this appropriate for human's weight!!?

It obvious that even nucleus' volume of human's cell is much more than real volume, it's not contain more than 12 nucleotides. As it is mentioned before, it is highly obvious that biology's scientists do not know chemistry rules because each atom have a weight and a volume. It is a fact that nucleotides are just a collect of atoms that have a total volume for each one equal to about at minimum 5 µm which means nucleus cannot stand with 15 nucleotides so what about thousands or millions as biologists said or what about the Gene!

Human being have 46 Chromosome and each one have thousands of Genes and also as mentioned before Gene must have more than 2000 nucleotides. This means thousands or millions of nuclides in each nucleus while the actually number according to chemistry rules each one does not have 15 nucleotides, what about these millions! This unusual issue and it is so important because it's the secret of life and it is much more than this. In fact, Genes or Genetic theory indicate that each Gene is responsible for one target in human's body so if there is no Gene who did this! There are so many questions about this because as its mentioned before it represents the basic of life.

This incredible facts about the differences between the actual number of nucleotides inside the nucleus and what biologists indicated leading this research to search for appropriate and justice way, for showing which one is correct! Is the chemical number (Nucleus contain less than 15 nucleotide) or biologists number (Nucleus contain thousands or millions of nucleotides). Results of this research are so clear, so there is a mistake in somewhere who is the right one then this research looking and finding that the incorrect results were in extraction's procedures of Chromosomes or DNA from different cells of different tissues. Therefore, this research examine these procedures depending on known chemical rules and found following notices.

Then for solving this a chemical view on Chromosomes or DNA extractions procedures was discussed in below points depending on chemistry's basics. Biologists[(2)] indicated that there are two types for Chromosomes or DNA extraction processes; Either manual or by known kits they do this processes. However, there are so many procedures for extracting Chromosomes or DNA from nucleus or from different cells for study them but all of them have same main principles that will be discussed as follow:

1. Before discussing the first step there is so important point should be discussed first; since very long time thousands years Iraqi and Egyptians people found that there are specific compounds react with each other to form new products. Nowadays in Chemistry books there are so many known reactions that resulting known products. It is so unfamiliar from biologists to mix two active different reactants in same container! This is difficult to explain and for what purpose they mix these compounds! Truly it is unbelievable are they do not know that Alcohols react with carboxylic acids in very famous reaction "Esterification Reaction" or are they do not know that sulfate moiety is more active than carboxylate moiety. Are they do not know that these specific chemical react each others to form different esters. They must react each other to form known products? Biologists prepare mixture from methanol and glacial acetic acid 3:1 in first step called

"standardization step" these two compounds are highly active should react each other to form ester compounds so the question is; are biologists want methanol and acetic acid or they need additional compounds (Dimethyl ester)? add above mixture in "standardization step" is incorrect step! Biologists [(2)] mentioned that they do not know that Dimethyl ester produce from methanol- acetic acid mixture means in simple word biologists do not know this. There are another mixtures such as Lysis buffer or RIPA buffer which are mixing of different compounds it's so difficult to know their resulting products. These different mixtures will be discussed to know them reactants and possible products according to known reactions of Chemistry science.

2. Biologists [(2)] indicate that first step in Chromosomes or DNA extractions is "Standardization step" they use mixture of glacial acetic acid with methanol 1:3 for stopping cell division and extract Chromosomes or DNA at maximum volume before completing division process or for stopping the cell at any time they want. This step is well known and scientists called it "standardization step". According to chemistry rules this step is just a something so difficult to recognize what the purpose of it! Above mixture glacial acetic acid and methanol after putting them together in appropriate container they must react each other to form known compounds called "esters" in very famous reaction called "esterification reaction" so the true product of 1:3 acetic acid with methanol mixture can be written as following reversible chemical equation:

$$CH_3COOH + CH_3OH \xleftrightarrow{H^+} CH_3COOCH_3 + H_2O \quad \text{.....[1]}$$

Dimethyl ester is the true product for acetic acid-methanol mixture. Chemical facts of this reaction that; One mole of acetic acid must react with one mole of methanol to form dimethyl ester then final products for above equation [1] must be; Dimethyl ester with two moles of methanol. This because of the three moles of methanol must force one mole of glacial acetic acid to produce dimethyl ester and also this must force reversible reaction equation (1) to move to forward reaction only. In reversible reactions to make the reaction go to one direction only it must increase reactants concentration or decreasing products concentration. Another chemical fact is that dimethyl ester is highly active electrophile while methanol is good nucleophile means the first step in Chromosomes or DNA extractions is just providing different cells with highly active electrophile and good nucleophile.

The fact of different cells animals or plants are mainly contain different nucleophiles and electrophiles so who can stop these reactants from react each other! This is incredible and unbelievable situation from biology science because Bio-systems of human body are just nucleophiles and electrophiles, and nucleophiles are more than electrophiles so if give these moieties what they want who can stop them from react each other? Following scheme illustrate some possibilities of these different interactions:

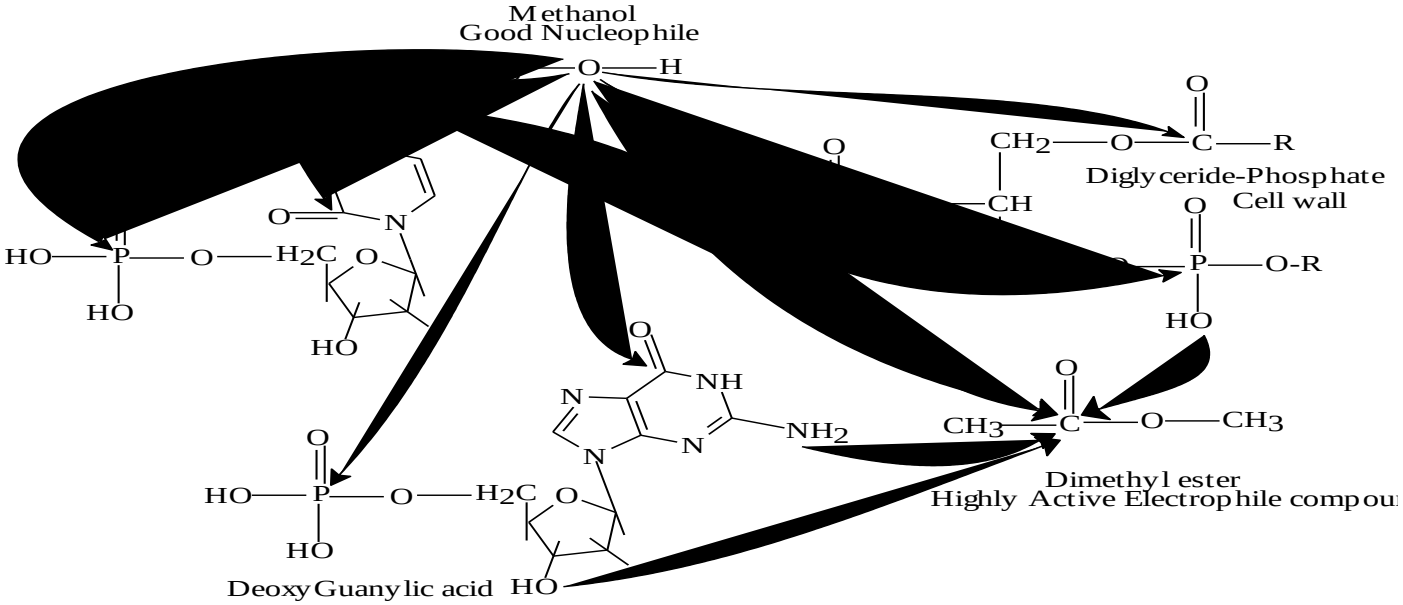


Figure (3): Possible Nucleophile - Electrophile interactions of step (1) of DNA Extraction.

Noticing that above interactions for one molecule for each reactants is not for all reactants which are thousands or millions. In fact no one able to predict products of these interactions, the true mixture is look like a chemical war no one know its results.

Another notice, methanol and dimethyl ester are react with all cell's compounds so there must be another resulting molecules should react with methanol and dimethyl ester forming additional products. Finally, methanol and dimethyl ester react with different nucleotides of nucleus's compounds and they should react with diglyceride of cell's wall too. In fact, in this step, membranes of all cells should be destroyed by differences in concentrations of above chemicals which lead to diversity in pressure. There are high concentrations from methanol, acetic acid and dimethyl ester outside the cells while concentrations of these molecules are so less inside them. These differences inside and outside cells should destroy cells membranes, cells membranes either it destroyed by this differences or by reacting with methanol and dimethyl ester as it is shown in figure (3).

Nucleus's membrane made up from two lipid bilayers with four rows of phospholipids [(2)]. Therefore, cell's membrane should be destroyed by this step while nuclear membrane could be effected but it is difficult to be destroyed.

Different cells contain more than DNA nucleotides and lipid molecules of cell membrane or of nuclear membrane, there are many other molecules such as; Proteins of other part of cell's membrane which is not just phospholipids, RNA molecules, energy molecules such as Glucose-6-phosphate..etc, all these molecules are inside the cells so they must react with methanol and dimethyl ester in very known reactions to form known compounds like glucosides compounds (methyl-α-D-Glucoside-6-Phosphate) as in the following equation:

Glucose-6-Phosphate + CH_3OH ⟶ Methyl-α-D-Glucoside-6-Phosphate....[2]

As it is mentioned before methanol and acetic acid must react each other to form ester and two moles of methanol. The product dimethyl ester must react with what cells contain, these high active nucleophiles and electrophiles should react with Bio-system to form so many products but who can even imagining what these products should be! There are so many possibilities for interactions of above different compounds to form different molecules but there is specific interactions should be clarified as in the following figure:

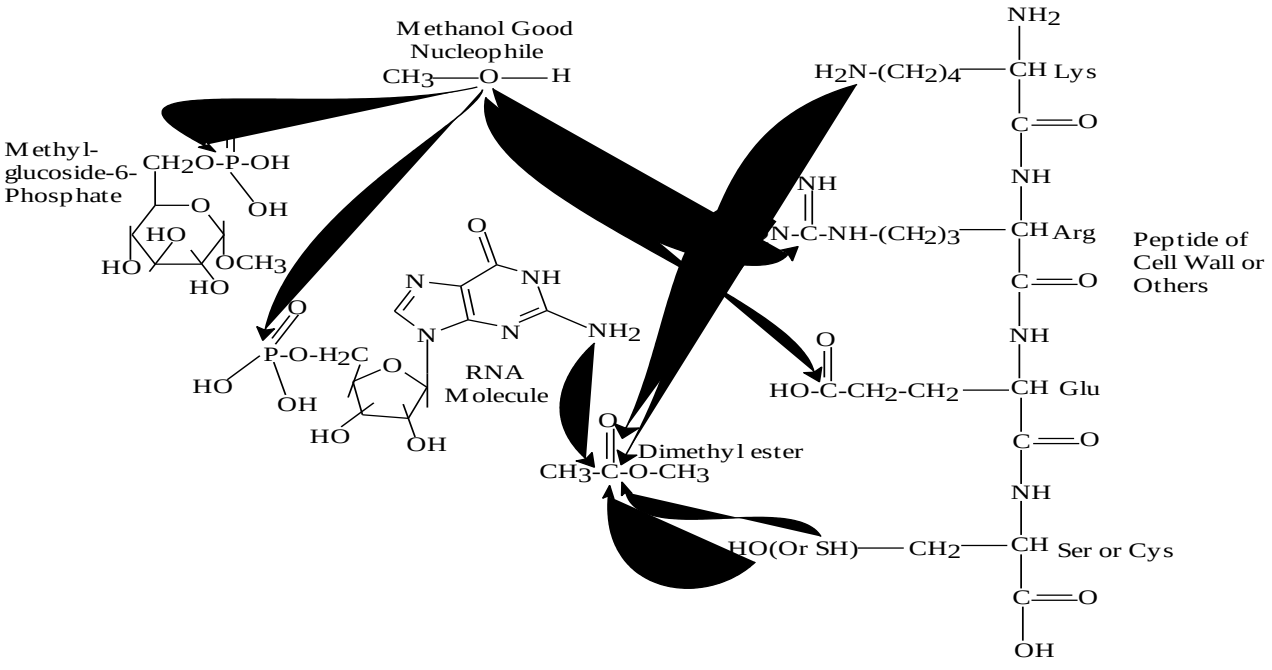


Figure (4): another Possible Nucleophile - Electrophile interactions of step (1) of DNA Extraction.

Methanol and dimethyl ester can react with phospholipids of cell's membrane as well as with proteins of same membrane resulting new products differ than original molecules and as a result of this the membrane lose its shape.

A conclusion of step (1) standardization step; preparation of fixative solution of methanol-acetic acid 3:1, this mixture with its products must destroyed cell's membrane and must react with other cell contents in fact nothing can stop these reactions. Methanol and dimethyl ester react with diglyceride and proteins of cell's membrane resulting new products able to react with another molecules or with each other resulting destroying of cell's membrane.

Therefore, cells lose them membranes and them contents should react each other or with fixative solution to from new products. Furthermore, after this step nucleus either still have its membrane or lose some of its rows.

3. Biologists [(2)] showed that they used very known solution for fixating different cells for Genetic studies; Chromosomes or DNA extractions. Carnoy's solution is a good solution for fixating the cells and fixation time is 1-4 hours [(2)]. This solution is; 60 ml ethanol, 30 ml chloroform and 10 ml glacial acetic acid. This means Chloroform was added to contents of previous steps and methanol was replaced by ethanol which means so many interactions adding to figures (3 and 4) impossible to draw them in one or even in more figures. However, according to chemistry rules this solution is not fixating solution and it is more active than previous or other steps because; Ethanol is more active as nucleophile (more nucleophilicity) than methanol due to add additional carbon atom. Oxygen is more electronegativity than carbon so electron density should be around or near oxygen atom more than its time around carbon atoms. In addition carbon is electrons automotive atom so two electrons automotive carbon atoms (ethanol) more than one carbon atom (methanol). For these reasons oxygen of ethanol molecule is more active as nucleophile than oxygen of methanol. Beside, Chloroform ($CHCl_3$) is so active electrophile because chloride atom is more electronegativity than carbon so electron density should be on the three chlorides atoms rather than on carbon of chloroform resulting partial positive charge on carbon and partial negative charges on chlorides means highly active carbon atom as electrophile and highly active chlorides atoms as nucleophile. Biologists [(2)] do not know weights of each content of Carnoy's solution so it's difficult to calculate moles of each one to measuring number of moles for them and for them products. However, for just Carnoy's solution; 10 ml of glacial acetic acid must react with ethanol to from ethyl methyl ester, another part of ethanol will stay in the solution whereas Chloroform must react with ethanol and with ethyl methyl ester as following simple figure which show most possibilities of interactions of Carnoy's solution components with each other and with Bio-systems of different cells:

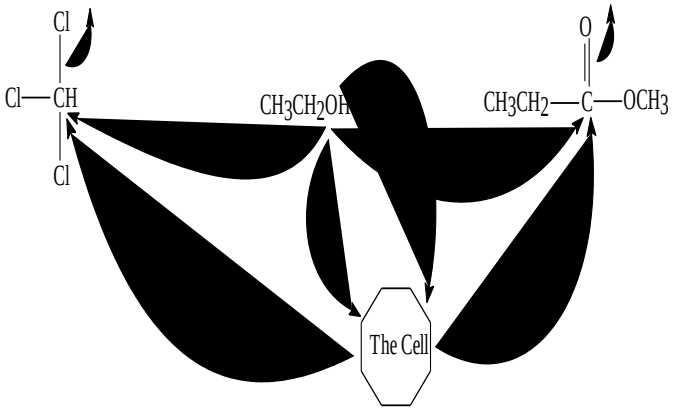


Figure (5): Simple figure of chemical interactions of Carnoy's solution.

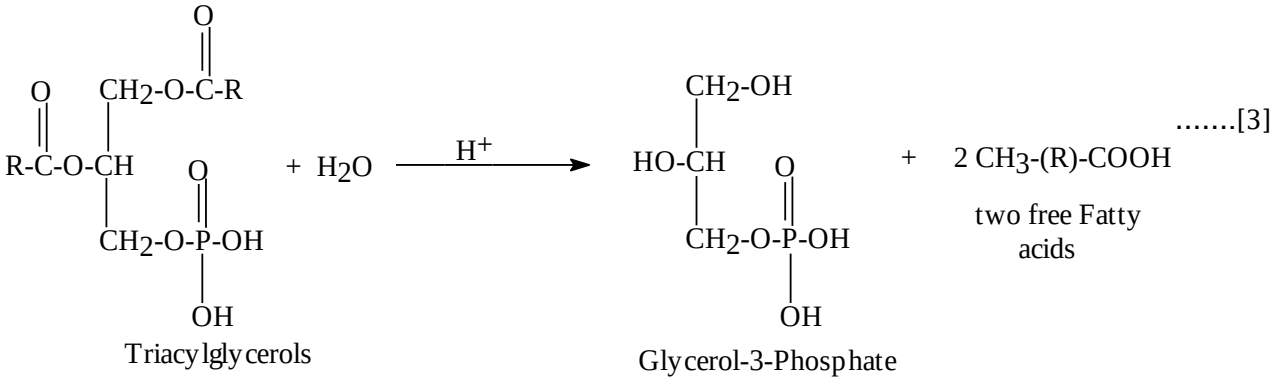
Noticing that above figure is for one molecule for each component of Carnoy's solution that reacting with one cell "The cell" which refers to different molecule that each cell contains specially

nucleophiles molecules. The true of above reactions is something no chemist can imagine, thousands or millions components of Carnoy's solution reacting with each other and reacting with cells components.

4. Cell's membrane and nuclear membrane made up from phospholipids which are like natural lipids but with two fatty acids instead of three and with phosphate group bonding with different molecules. Natural lipids hydrolyze by basic hydrolysis resulting "Soaps" while their acidic hydrolysis producing free fatty acids with glycerol. This should happen too for phospholipids of cell's membrane and for nuclear's membrane. Adding of different molecules such as methanol, ethanol or chloroform with glacial acetic acid in Chromosomes or DNA extractions processes do not affect the acidity of the solution because above molecules do not affect high acidity of glacial acetic acid in addition glacial acetic acid is relatively strong acid compare with other acids. Therefore, solution of Chromosomes or DNA extractions inside the tube is acidic because of glacial acetic acid. Moreover, different cells of animals tissues contain additional acids such as Carbonic acid of CO_2, nucleic acids of different RNA or DNA, lactic acid of glycolysis, β-hydroxyputirc acid of lipids metabolism, ...etc. These different acids inside the cells while glacial acetic acid outside the cells make the medium of the tube acidic. This true for water molecules too, they are outside the cells and inside the cells because biologists use distilled water for preparation different solutions for Chromosomes or DNA extracting studies. This means solutions of different cells that using for Chromosomes or DNA extracting are acidic aqua's solution. Therefore, these acidic solutions must hydrolyze cell's membrane and nuclear membrane noticing that nuclear membrane is more protected with four rows of phospholipids than cell's membrane of two rows may not complete hydrolyzed. Then step (1) standardization or fixation with glacial acetic acid and different acids that cells contain must hydrolyze cell's membrane and effected nuclear membrane or hydrolyzed it. In fact, above different acids are just catalyst, reaction's reactants is water molecules so existing of these molecules in the solution should push the reaction equation (1) to backward reaction whereas methanol or ethanol push the reaction to forward reaction. This means amounts of water molecules, methanol and ethanol are controlling reactions products. For this it is true that both products are in the test tube solution put in different percentages, reversible reaction of equation (1) as follow:

$$CH_3COOH + CH_3OH \overset{H^+}{\longleftrightarrow} CH_3COOCH_3 + H_2O \quad \text{.....[1]}$$

There are two factors push the reaction equation to opposite directions means both products should be in the solution in different percentages either dimethyl ester (ethyl methyl ester) with water molecules or glacial acetic acid with methanol (ethanol) so this indicate that part of acetic acid should be with other components in addition to acidic molecules of cells components. Solution of Chromosomes or DNA extraction should contain water molecules with hydrogen ions (H^+) must hydrolyze cell membrane and nuclear membrane by very known hydrolyzing process in Biochemistry to form free fatty acids with glycerol-3-phosphate or glycerol may loss this phosphate as following equation [3]:



Triacylglycerols Glycerol-3-Phosphate .....[3]

This hydrolyzing process definitely must destroy cells membranes but it is difficult to know what its effect on nuclear membrane, it may hydrolyze first or second rows of nuclear membrane. After standardization step nuclear membranes should stay with three or less rows and with its all nuclei components (such as nucleolus and nucleotides of DNA).

5. Biologists [(2)] used so many solutions for extracting Chromosomes or DNA from different cells but they do not know why they used them! They called them kits and these kits contain different molecules it is impossible to understand them purposes in studies of Chromosomes or DNA extractions. However, after standardization step or fixation step biologists put the product of this step in solutions called "buffers"! Chemists called some known solutions by "buffer solutions" for one reason either they have a weak acid with its salt or they have a weak base with its salt. Biologists mix many compounds in one solution called it "Lysis buffer" that its fact there is no weak acids or weak base with their salts! Most known buffers in Chromosomes or DNA extractions are Lysis or RIPA buffers. These buffers have relatively same molecules so this research take one of them (RIPA buffer) as example for discussing it, Firstly this buffer contain following molecules with them amounts [(2)]:

No.	Component's conc.	Component's name	Component's volume	Notices
1-	50 mM	Tris-HCl	25 ml of 1M	
2-	1%	NP-40	5 ml	
3-	0.5%	Na^+-deoxyCholate	2.5 g	
4-	1%	SDS	0.5 g	
5-	150 mM	NaCl	15 ml of 5M	
6-	2mM	EDTA	2ml of 0.5 M	
7-	50 mM	NaF	1.05 g	

Secondly, these components have different Chemical structures can be illustrated as flowing figure:

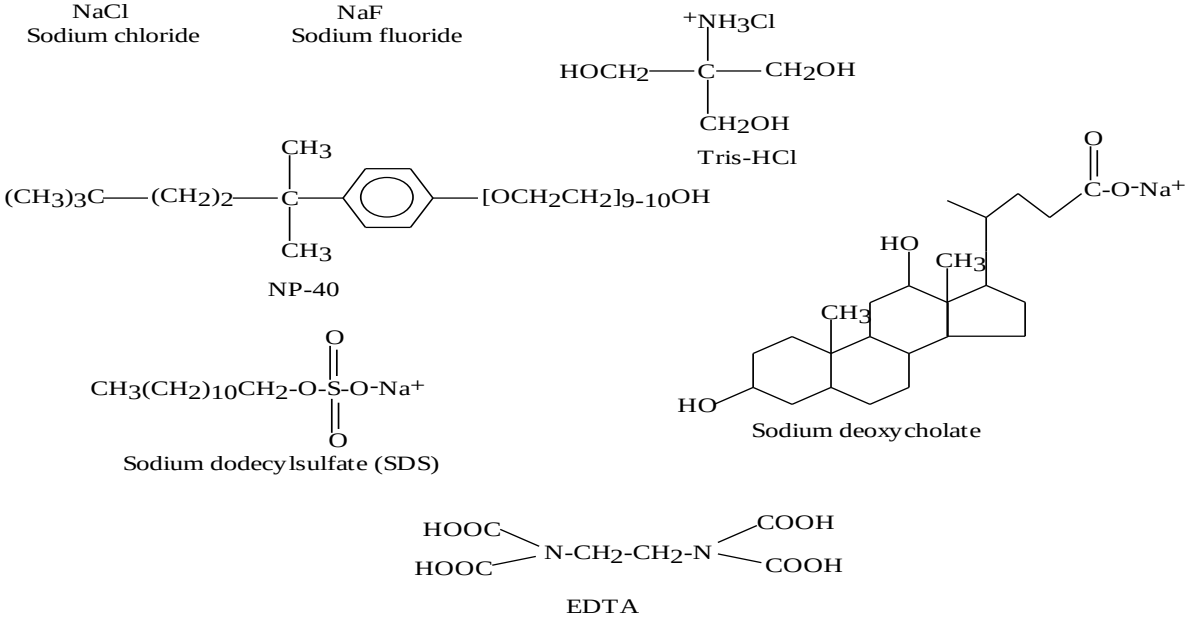


Figure (6): Chemical structure of RIPA buffer's different compounds.

This situation needs books for just discussing the possible chemical interactions of these compounds with each other and with different compounds of different cells resulting different products but these books are nothing without certain results from known chemical apparatuses such as; CHNSO, Mass spectroscopy, Infra-red spectroscopy, U.V.-Visible spectroscopy...etc. The fact of this, it is impossible for any chemist or others to know results of above interactions because there are

more than thousands or millions different molecules react in same time with each other and with another molecules so how it's possible to separate one product from other thousands or millions products.

The fact of Lysis step and previous steps is; this mixing of so different active compounds with cells compounds is look like cooking with one difference that products of cooking are known in contrast of Chromosomes or DNA extractions products. However, there are some chemical notices of above molecules interactions with each other and with cell's contents; Firstly, pH of this buffer is basic above than 7 means all compounds are in active status because basify of each compound make it more active than before such as; ($-^{+}NH_3$ to = more active amine $-NH_2$, -COOH to = $-COO^{-}$ more active carboxylate group, -SH= -S more active thio moiety ...etc), Tris-HCl have four good nucleophiles three hydroxyls 3(-OH) and one amine ($-NH_2$). In fact this molecule is a mazy molecule as nucleophile with four nucleophiles react in four directions with highly four possibilities to react with different electrophiles in buffer solution or reacting with different molecules of cells contents. The fact of each cell of different sources animals or plants it contains many nucleophiles rather than electrophile so Tirs-HCl molecules should react with them electrophiles or with buffer's compounds to form different products. In addition, NP-40 compound has terminal hydroxyl moiety bonding with chain of hydrocarbons means this hydroxyl is highly active as nucleophile may react with other compounds of RIPA's buffer or reacting with cells contents. The other compounds of RIPA's buffer compounds are highly active electrophiles such as; EDTA molecules that have four carboxyl groups 4(-COOH) bonding with two nitrogen atoms, the two oxygen of carboxyl and nitrogen atoms are more electronegativity than carbon so carbons of four carbonyl of four carboxyl groups should have partial positive charges means highly active electrophiles, then this compound should react with other compounds and react with cell's contents. The other molecule of RIPA's buffer is Sodium dodecyl sulfate (SDS) four oxygen atoms surrounding to one sulfur, electronegativity differences definitely make sulfur have partial positive charge highly active as electrophile means SDS is highly electrophile as same as EDTA. Finally, Sodium deoxyCholate contains carboxylate group two oxygen highly electronegativity bonding with one carbon atom mean this carbon has partial positive charges highly active as electrophile in same time it is a good nucleophile attached by oxygen atoms of carboxylate.

Then the chemical truth of RIPA's buffer or any other buffer is contain salts as NaCl and NaF must destroy the rest of cells membranes and destroyed nuclear's membrane by pressure of salts concentrations differences. Then, after destroy cell's membrane and nuclear's membrane by salts specially sodium ions with water molecules, RIPA's buffer or any other buffers provide the cell contents with so many different compounds with five highly active compounds three of them are highly active as electrophiles while the other two are active as nucleophile. In another words, salts of RIPA's buffer destroy protection membranes let cell's different contents react with highly active compounds. According to chemistry, buffer's different compounds and cell's contents are in same tube so nothing can stop reacting of high active nucleophiles with active electrophiles. No one can even imagine results of these attaches even best chemist cannot even imagine or predict results of above interactions of buffer's contents each other and with cells contents. Cell's membrane like a outer enceinte of the cell and nuclear membrane is like inner enceinte, therefore when these enceintes are destroyed by salts of RIPA's buffer, cells contents should be without protection to be attached by different compounds that buffers contain or by different resulting molecules that result from previous steps or by other molecules produce from other steps that mentioned before. This like a big chemical party with so many different compounds attached each other, then the important question should be; after destroy cell's membrane and nuclear's membrane letting different molecules reacting each other who can recognize between RNA and DNA nucleotides!?

Chemical fact of these two nucleotides; they have exactly same atoms except two difference; Firstly, Thymine base in DNA while RNA have Uracil. Secondly, RNA have additional oxygen in ribose while deoxyribose in DNA. In chemistry, one hydroxyl moiety (-OH) in big molecule like series of nucleotides cannot effect reactions of DNA and RNA with buffer molecules or with other cell's contents! These

different nucleotides should react in same way so it is chemically impossible to recognized between RNA and DNA in them results in DNA extraction process.

There are some possible products of interactions of RIPA's buffer molecules each other and with cell's contents can be clarify as following figure:

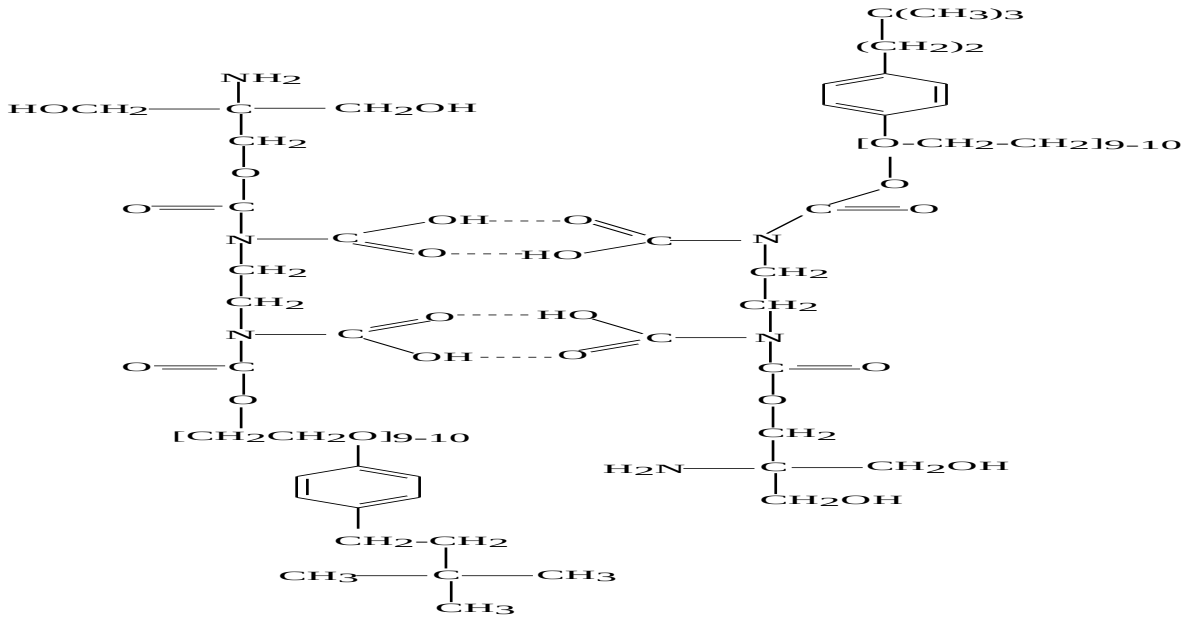


Figure (7): One possible product of RIPA's buffer interactions with the cell.

Carboxylate groups exist as dimeric in them solutions as above figure and these interactions called "hydrophilic bonds". In addition, there are another known bonds such as; hydrogen bonds, hydrophobic interactions, Van der walls forces...etc. these interactions give different compounds them stabilities and them shapes. However, figure (7) show one possible product in Lysis or buffers step and there are thousands or much more of possible products that producing from different interactions of RIPA's buffer molecules reacting with each other or with cell contents. Another product can be clarify as following figure showing above different bonds:

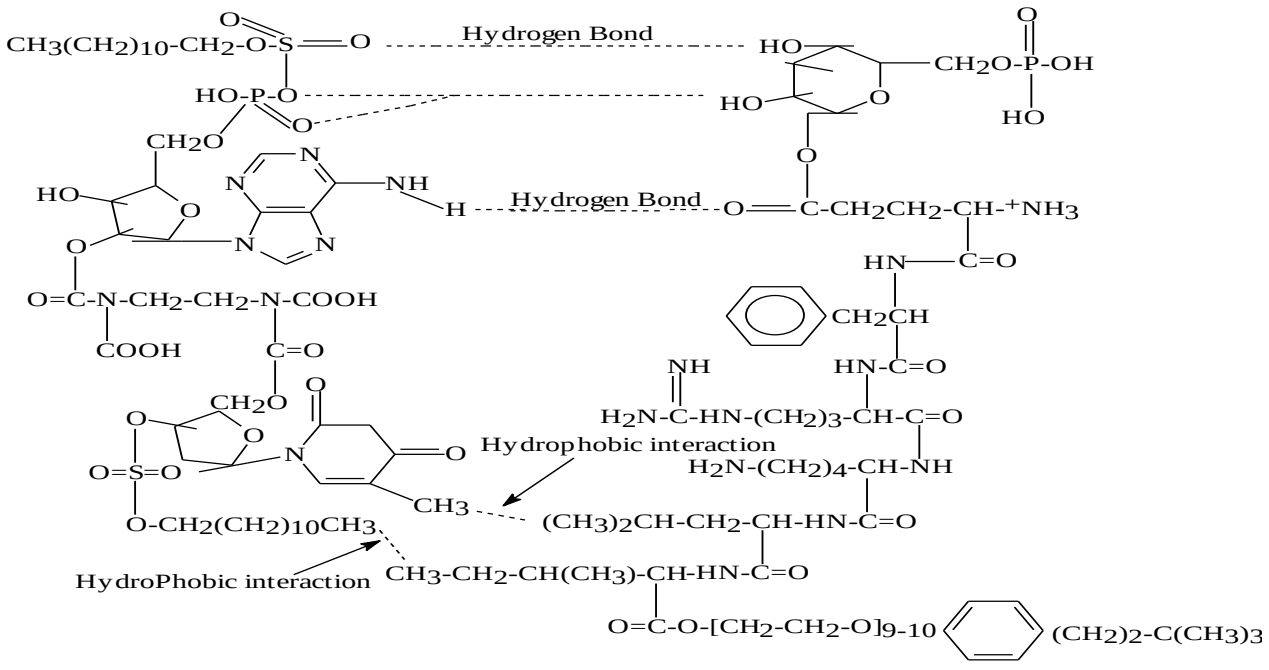


Figure (8): Show another product with different bonds.

Above figure look like crowded different molecules for one or two possible products so what about the true situation! As it is mentioned before chemical atoms are spheres connecting each other by known bonds therefore the true products of above step (buffers step) are millions or much more from spheres linked together by known bonds.

A conclusion of buffers step is that biologists added additional much more different active compounds to active different compounds that produce from "standardization step" either they know or they do not know they mix highly active compounds together with cells contents which have additional highly active compounds producing something impossible to know its products. This research believe that even best chemists with best apparatuses cannot imagine or predict results of standardization and buffers steps. Besides, these steps (standardization and buffers) must destroy cell membrane and nuclear membrane let cell contents without protection freely to react with different highly active compounds of above two steps resulting different products impossible to know them.

6. After standardization and buffers (Lysis) steps incubation steps should apply after standardization step then it was applied again after buffers (Lysis) step. According to chemistry this step is very important for previous different reactions because in chemical laboratories after adding the reactants together in same tube it must let the solution for specific time for completing the reaction. Then incubation step after standardization step is important for completing reactions of this step then another incubation after buffers (Lysis) is important for completing them reactions but if reactions were completed by two incubation processes so what about different products who can recognize between them! A conclusion of this step, it is known now that different reactions that happened in standardization step and in buffers (Lysis) step are completed by incubation two steps but it is impossible to know them products.
7. Centrifugation step; This step was done by centrifuge apparatus that have very high speed in limiting time for many times in chromosomes or DNA extractions studies. According to chemistry science this step represents the biggest chemical fault in Chromosomes or DNA extractions processes! This because until buffers (Lysis) step the solution of Chromosomes or DNA contain different molecules polar and non-polar like; ethanol, acetic acid, chloroform, water molecules, different lipids, different proteins, different organs of cells, different compounds that added in standardization (fixative) and buffers (Lysis) steps which was shown before...etc. These different molecules cannot mix each other and they must form two or three layers in the test tube of Chromosomes or DNA so even centrifuge run in very high speed more than ever these molecules must return to them positions in them layers in the tube as they were before. This must happen because no force in the earth can mix water with chloroform or mix ethanol or methanol with different lipids molecules, ...etc.

In chemistry laboratories if any chemist seek for specific molecules and they are in a solution consisting from two layers. Scientifically it should study wanted molecules and study the two layer to know which layer must have wanted molecules then by using separating funnel it becomes easy to get wanted molecules from them layer and leaving unwanted layer. After this as example by evaporating the layer or using another technique just for collecting wanted molecules. This in chemistry and for getting nucleotides or chromosomes from different cells contain many different molecules, biologists must do this. Centrifuging steps are so bad choice because it should produce same molecules in same layers as they were before with no changes. However, for the tube that contain different cells with them contents with different molecules that added in previous steps, it inappropriate to use above chemistry's laboratory procedure because the solution inside the tube after buffers (Lysis) step contain so many different molecules impossible to separate one of them from the others.

Biologists do not use chemistry procedures and centrifuging the tube resulting precipitate and supernatant so the question is; which molecules biologists took after centrifuge process?! According to biologists [(2)] they took supernatant solution after finishing the centrifuge and it's important to know what it contains! Of course any liquid must dissolve it's like molecules because "like dissolve like"

polar molecules should dissolve in water-ethanol (or methanol) layer while non-polar molecules should dissolve in chloroform or lipids layers. In another hands, different cells contain different molecules either polar or non-polar, water-ethanol (or methanol) layer dissolve polar molecules while chloroform should dissolve different lipids molecules such as different lipids in the cells or phospholipids of cell's membranes and nucleus's membranes. Thus, until buffers (Lysis) step the tube should contain water, lipids and chloroform with them compounds. This means complicated situation chemistry should explain it.

According to this science there are two possibilities; using of chloroform and do not use it, this for this research only there are another choices if using another solvents as it was mentioned before. Biologists are using so many procedures with different compounds each one have different chemical and physical properties which may need much more explanations taking this study beyond its targets so for explaining specific situations of using most known solution "Carnoy's solution" that use chloroform and do not use it. Moreover, biologists have two choices in their different procedures either they use polar solvent resulting two layers; water-ethanol or water-methanol and lipids layer, or they use non-polar solvent such as chloroform resulting two or three layer; down layer chloroform with its non-polar molecules, middle layer water and its polar molecules and lipids layer either they form upper layer or they dissolve in one of above two layers. It is so difficult to know solubility of each chemical solvent in each situation unless doing many tests in good laboratory with good apparatus for getting appropriate results. However, there are chemical basics can be used for knowing what biologists took as chromosomes or as DNA, then the two possibilities can be written as;

Firstly, in case of using chloroform or using Carnoy's solution then the tube should contain two layers water-ethanol (or methanol) layer and chloroform layer. Chloroform is non-polar solvent more density than water, it must be down layer in the tube and water is less density must be upper layer. Then there are two layers in the tube and each layer should dissolve its molecules. Biologists [(2)] do not know what the tube contain after buffers step is there two layers or more? All they want from centrifuge is making the supernatant more clear without knowing what it contains. This is inappropriate because if there two different layers in the tube there is no need for centrifuging process as it is mentioned before each molecule must stay in its layer. In fact, biologists depend on them eyes in characterization of many molecules one of these are nucleotides or chromosomes and this is unacceptable in chemistry science. Thus after buffers (Lysis) step the tube contain two layers chloroform down and water up with its molecules such as nucleic acids, different lipids and other molecules.

As it is mentioned before Lipids have two choices depending on them amount either they dissolve in chloroform or they be in water layer as micelles. In fact, there are many sources for lipids or non-polar molecules such as; cells and nuclei have different lipids in them membranes (Phospholipids), fatty acids, prostaglandins and others in addition to add molecules in previous steps from lipids or non-polar molecules such as; Sodium deoxycholate, NP-40. All these are lipids or non-polar molecules can form a layer in the tube for example; Unsaturated fatty acids of phospholipids that made up cells membranes and nuclear membranes, six rows around the cell and around the nucleus so six rows multiply by number of cells inside the tube resulting enough amount of these lipids to make a layer. In addition, acids less density than water because of carboxylate groups ($-COO^- Na^+$) that produced from previous step they cannot dissolve in chloroform so they should form a layer or thin layer up water layer. This means three layers, biologists [(2)] showed that the tube should form three layers and they took upper layer because they think that its water layer while the fact of different densities indicate upper layer is lipids as described in above explanation.

This is a basic fact that when three solvents have different densities in same tube they must form three layers. Chloroform density is higher than both water and lipids so it is down layer, water is higher density than lipids (unsaturated fatty acids and others) therefore its middle layer, finally lipids is less density than both chloroform and water so its upper layer. This fact comes from basic law "density" biologists took the upper layer because it is so clear look like water while it is not!

Until centrifuge step, amount of ethanol or methanol is much more than water so them layer water-ethanol (or methanol) cannot accept phospholipids so these molecules should form thin third layer up

than water-ethanol (or methanol) and chloroform should be down. Then according to chemical properties and experimental results about solvents densities of each solvent. Water molecules should be middle layer between down layer chloroform and up layer of phospholipids. These layers should dissolve them like molecules or each molecules should be in its layer according to them solubilities so the question is where nucleotides or chromosomes should be in which layer?!

It's difficult question because nucleotides and chromosomes should dissolve in water and they do not dissolve in ethanol [(2)]. While middle layer is not just water its about 3/4 ethanol or methanol with 1/4 water molecules. Nucleotides or chromosomes definitely do not dissolve in chloroform or lipids layers so where they must be? This research understand that nucleotides and chromosomes must be in the middle layer, but without experimental results depending on chemical instruments it's so difficult to know this where chromosomes or nucleotides should be!

It is highly important to mentioned that different procedures of chromosomes or DNA extractions do not contain anything about adding amount of water molecules. Actually biologists [(2)] showed special tubes that used in Chromosomes or DNA extractions, these tubes are so small for being extend for another molecules such as water molecules. This unbelievable situation because Chromosomes and DNA dissolve in water and according to chemistry it should use water molecules for extracting chromosomes or DNA. Therefore, it is difficult to know where nucleotides or chromosomes should be until this step.

However, the truth of centrifuge steps after buffers (Lysis) step, cells membranes and nuclear membrane are destroyed by acidic or basic hydrolysis or by osmotic pressure as mentioned before releasing many different organs and different molecules such as; Cytoplasm, Mitochondria, Microbody peroxisome, Endoplasmic reticulum, Ribosomes, Golgi bodies, Lysosomes, Vacuoles, DNA molecules, RNA molecules, different proteins, different Enzymes, Chloroplasts in the plants,...etc. These organs and different molecules exist in every cell, so for all cells inside the tube they should form good amount as precipitate in the tube. However, after buffers step they must be in the tube's liquids but in which layer there are three layers! Cell's organs and different molecules are relatively non-polar and they like non-polar solvent like chloroform in same time they able to be in water layer as they were inside the cell so this means they can be in the three layers; chloroform, water and lipids layers. Therefore circulation of centrifuge must force these organs and big molecules that have high molecular weights to be in down layer in chloroform layer forming a precipitate. This means huge amount of big organs with big molecules in down layer in chloroform as precipitate while supernatant be more clear even it is not one layer it is two layers water-ethanol or methanol with lipids (unsaturated fatty acids). Moreover, eppendourf tube or even normal tube that they used in DNA or chromosomes studies is so small and it is not clear enough with appropriate amount of cell's organs and big molecules as precipitate leaving clear liquid from water-ethanol and lipids as supernatant. In fact, all different organs with big molecules of all cells should take an enough space in the bottom of the tube leaving the rest space from the tube for the three layers so the supernatant should be from three layers but this is not clear in eppendourf tube or even in normal tube as it is showed from experimental results.

Therefore, organs and big molecules form a precipitate while chloroform, water-ethanol or methanol and lipids form supernatant. This what biologists saw after centrifuge process precipitate and supernatant. A conclusion of this the tube contain three layers chloroform down, water in the middle and lipids upper layer. Each layer contain it's like molecules but high speed of centrifuge must force different organs of cells contents with different big molecules to be in chloroform layer to form crowded precipitate while some of chloroform, water and lipids layers must contain small molecules because big molecules are relatively non-polar and high speed of centrifuge should force them to be down. There are additional big molecules that added in previous steps should be down in chloroform layer leaving small molecules. This means huge amount of possibilities because there are many small molecules dissolve in water from adding molecules that described before. In addition, different molecules of standardization and buffers steps and them products in addition to what cell contain from small molecules dissolve in water. Then down chloroform layer with huge amount of big organs and big molecules make this layer as precipitate while the clear supernatant is a water-ethanol (or

methanol) and lipids (unsaturated fatty acids) layers with its relatively small molecules could be any molecules.

Secondly, in case of not using chloroform, do not using Carnoy's solution this will be same first point except without chloroform. Biologists [(2)] indicated that in case of using human cells or other like species they do not use Carnoy's solution, they do not use chloroform in chromosomes studies. In addition, the earth contain so many different cells for different animals and different plants with so many details means different procedures resulting unlimited explanations more than this research's papers many times. All these events are without any advantage because what is appropriate for human definitely is appropriate for other species, cell is a small unit for all living systems so what is for human is for other creatures too. Then the second case of do not using of chloroform. This must be easier because there are two layers only water-ethanol or methanol with lipids in the tube, as it seen before water is more density than lipids (specially unsaturated fatty acids) so down layer is water while upper layer is different lipids that described before. Hydrolysis of phospholipids of both cell's membrane and nucleus's membrane produce for each molecule two unsaturated fatty acids in addition these phospholipids are six rows two around the cell and four around the nucleus so for all cells inside the tube resulting enough amount of lipids as upper layer. In addition, non-polar molecules of buffers (Lysis) step then this must be a layer of lipids with water-ethanol (or methanol) layer inside the tube. Water or ethanol molecules definitely do not mix with lipids molecules this the simplest chemical fact so both of them in same tube mean two layers in relatively small volume "normal tube or eppendourf tube". Chemical facts depending on results of many experimental tests indicate that phospholipids (or unsaturated fatty acids) are less density than water so it must be upper layer and water down. Even that fatty acids do not form a layer they are small molecules should be upper micelles because they are less density than water.

Then centrifuging process should force cells contents that are different organs and different big molecules to form a precipitate then they taking a space in the tube pushing some of water-ethanol or methanol to be with lipids (fatty acids and others) layer as supernatant. It is so clear that biologists taking lipids layer with some of water-ethanol or methanol layer and it is so clear that they may not take nucleotides because many facts; Different chemical conditions of above steps from fixative to centrifuge may not affect nucleotides, different chemicals of above steps may not effected 3'-5' phosphodiester linkages of nucleic acids specially chemical structure of these molecules may be well protected, these molecules may form hydrogen bonds with other molecules resulting big molecules precipitated with other big molecules specially there are incubate steps that doing for long time such as for 24 hours. In fact this step is just a good opportunity for giving chemicals enough time to react each other or for giving enough time for molecules to bond each other by different bonds or interactions such as hydrogen bonds. Nucleotides are RNA and DNA this means more molecules can bond each other forming big molecules precipitated with other big molecules. They dissolve in water so they may not dissolve in water-ethanol or methanol layer so they cannot be with lipids they may be with other molecules as precipitate. As it is mentioned before they dissolve in water and as it is shown before there is not enough water molecules so if molecules put in a little solvent they should not dissolve in it, this is simple chemical fact so nucleotides RNA and DNA do not dissolve in water-ethanol layer they precipitate with other molecules in centrifuge step. Until now no step recognized between DNA and RNA molecules so amount of these nucleotides (DNA and RNA) together in all cells lead to enough amount to precipitate with other molecules.

There are another possibilities for where nucleotides should be and all of them are nothing without chemical tests and chemical apparatuses at least doing of melting point technique, this test is like finger print each atom or molecule have a specific melting point chemists can know target molecule from this test. However, it must remember that supernatant after centrifuge step is lipids with some water-ethanol layer because the rest water-ethanol layer is with precipitate so down layer divide into two parts one of them with precipitate's molecules and the other with lipids layer. Biologists took supernatant and neglected the precipitate and they may neglected nucleotides with the precipitate! Move from one to another step just for finding what biologists found and they thought they found human's chromosomes!

8. After proving depending on principle basics of chemistry and laboratory experimental tests that lipids (unsaturated fatty acids) are less density than water for this different biologists took lipids and some of water-ethanol layers with what they have as supernatant in DNA or chromosomes studies because they thought that this supernatant is water containing chromosomes or DNA whereas they may neglect these molecules because they were with other precipitates. Biologists [(2)] said they do not know this and they do not know that unsaturated acids are less density than water and also they indicated that they follow them scientists by applying certain procedures in extraction of DNA or Chromosomes. It is difficult to mentioned anything after these information.
9. It is so important to mention this point before mentioned the next step; depending of chemical facts until centrifuge step there is no chemicals were added and no procedures were seen contain anything about how can recognized between DNA and RNA molecules in chromosomes or DNA extractions processes. The only differences between these molecules are just one oxygen and methyl group ($-CH_3$) which means according to chemistry science it is so difficult to characterize between DNA and RNA nucleotides in chromosomes or DNA extraction procedures even if using so good appropriate technique such as HPLC apparatus. This apparatus is used for separating different molecules in high accuracy and efficacy but in case of DNA and RNA it could not be. Biologists [(2)] mentioned that they used either phenol or mixture of phenol with chloroform 1:1 for removing RNA and protein molecules from DNA molecules for making molecules of DNA alone and more pure! Once again biologists mix two highly active compounds together in same tube, phenol is highly active nucleophile while chloroform is highly active electrophile how these highly active molecules be added alone or together to the tube contains so many different active molecules?! How it is possible add highly active molecules into solution contain so many different active molecules of cells contents! However, there are two possibilities either using of phenol alone or using it together with chloroform in fact biologists [(2)] said that they use additional compounds adding to phenol and chloroform however this research discuss only two cases of using of phenol alone or with chloroform. For first case of using phenol alone; This molecule is high electrons density benzene connected to hydroxyl moiety (-OH) means highly active oxygen as nucleophile attached any other electrophiles even molecules with weak electrophilecity such as: Different cells contents, SDS molecules, carbonyls moieties of EDTA, carbonyls moieties of sodium deoxycholate, carbonyls moieties of the product ethyl methyl ester or dimethyl ester...etc. These attaches should give so many possibilities resulting huge number of products impossible to be characterized. Phenol may attach phosphate groups of DNA and RNA forming big molecules precipitate with other precipitates.

It is right that phenol is an active molecules but it is impossible for it to react with RNA molecules and do not with DNA because both molecules have same phosphates with same chemical properties and phenol do not have anything make it able to react with RNA and do not with DNA. And also it is important to understand that phenol is highly active as nucleophile and DNA with RNA molecules have same chemical properties, same electrophiles groups; phosphate and carbonyls moieties of nitrogen bases (Guanine, Cytosine, Uracil and Thymine) these electrophiles have same properties. Therefore, according to chemical science and according to phenol chemical properties, phenol does not have anything make it react with RNA and do not with DNA. This fact is so obvious and for proving it in Biochemistry laboratory a DNA extraction test for students of second stage was done by using phenol for destroying cell's and nuclei's membranes of yeast cells to get DNA, this true because phenol is highly nucleophile and phospholipids of cell and nucleus membranes have many positions of esters bonds highly active electrophiles. In addition, water molecules able to react with them in esterfication reaction as mentioned before. Therefore, Phenol react with carbonyls of phospholipids resulting many products lead to change cell and nucleus membranes means destroyed them as following figure:

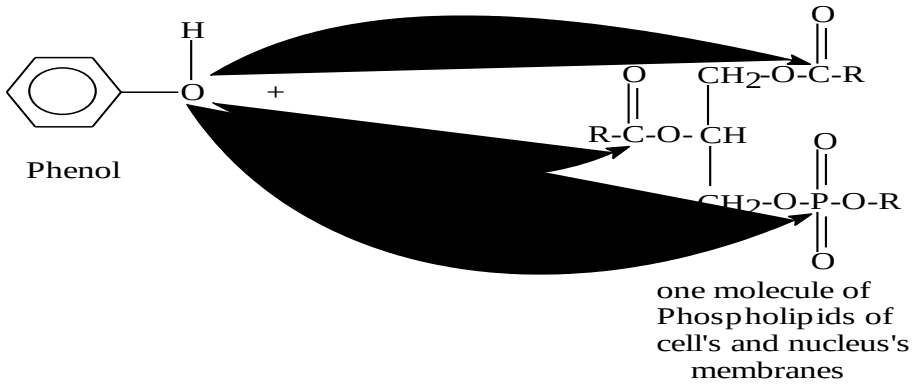


Figure (9): Reaction of phenol with cell's and nucleus's membranes.

Above reaction with one phospholipids molecules while the true picture there are so many molecules reacting with others resulting so many possibilities products. A result of these reactions, cell and nucleus membranes must destroyed leaving cell's contents free in the tube. This is correct for phenol but what biologists thought about its react with RNA and do not with DNA is not appropriate. Finally, hydrogen bonds are so important bonds in all creature's bodies they occur between hydrogen atom bind to highly electronegativity atom such as (N, O, S..etc.) with atom have high electronegativity. Phenol is a good solvent have both hydrogen and oxygen able to bind by both ways with hydrogen and with high electronegativity atom of other molecules. This is a chemical fact that phenol is very known solvents as solvent making hydrogen bonds with different molecules. Moreover, nucleotides contain many good atoms to do hydrogen bonds, either they contain hydrogen atoms bind to high electronegativity atoms or they contain high electronegativity atoms (N, O..etc.). Therefore, whose can stop hydrogen bonds from occurring between phenol with nucleotides! Phenol must bind all molecules DNA, RNA, nucleotides and chromosomes specially they are relatively have same molecules and also they have many hydrogen atoms bonded to high electronegativity atoms. These bonds should produce big molecules with high molecular weight precipitate by centrifuge with other precipitates. For this, both molecules (DNA and RNA) are removed by phenol from the tube leaving so many possibilities importance one; which molecules stay in supernatant!

In second case, biologists [(2)] use phenol with chloroform for removing RNA and proteins for making DNA molecules alone and pure. This what biologists thought but what this research find and what scientific facts indicated is something else! Until this step biologists in all previous steps that explained before for DNA or Chromosomes known procedures, they use two or many different reactants putting them in same container then they adding to another container contain so many molecules of cell's molecules and so on.

Biologists prepare these solutions of many different reactants putting them in same container and give them appropriate time for completing them reactions then they add into another container contain more different molecules. This does not make any sense because these reactants as they are and as it is shown before must react each other to give different products so what biologists want from this; reactants or them products!?

This incredible and unbelievable action needs answers from who did this "The biologists". Therefore, when asked biologists about are they know that these reactants must react each other to give different products and what they exactly want reactants or them products? They have been answered that they do not know, biologists do not know that phenol must do hydrogen bonds with nucleotides or they do not know that it reacts with other molecules or they do not know it reacts with chloroform to give another different products. According to laboratory experimental tests phenol may react with chloroform.

In the second case, using of phenol with chloroform and these molecules may react each other and react with other active molecules of cells contents because they are highly active molecules. It is

important to notice that this research does not characterize following product by known apparatus but the product is known and this is a scientific fact because the solution's mixture is 1:1 or 70:30 chloroform to phenol respectively means there is one possible product as following reaction equation:

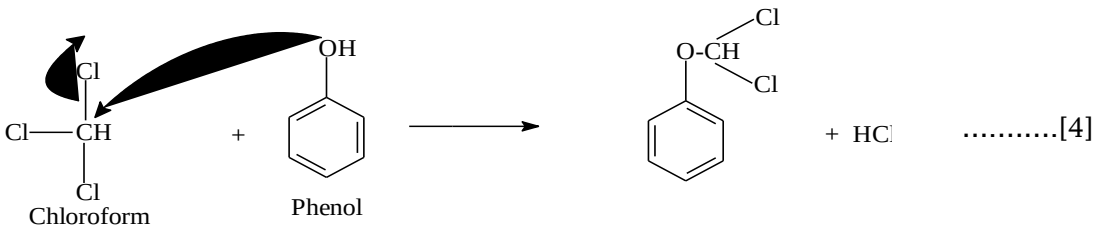


Figure (10): Reaction equation of chloroform with phenol.

Moles of chloroform is more than phenol as biologists indicated so above reaction must complete to give above product. Phenol is a polar molecule and chloroform is non-polar solvent, this what experimental tests shown phenol does not dissolve in chloroform so it may convert to the product (dichlorophenoxy-methane) which it look like a non-polar like chloroform for this it dissolved. After finishing above reaction the solution should contain three molecules; phenol, chloroform and above products (dichlorophenoxy-methane). These molecules are very dangerous for different cell contents and for all living systems because they are highly active electrophiles and nucleophiles. All living systems contain mainly active nucleophiles such as moieties; ($R\text{-}NH_2$, R-OH, R-SH...etc.) and also active electrophile such as what it is existed in proteins, lipids, carbohydrates..etc. Chemical fact of adding chloroform with phenol to solution contain different nucleophiles is look like adding oil to a fire because in chloroform ($CHCl_3$) chloride moieties (-Cl) are more electronegativity than carbon so they should withdraw electron density getting partial positive charge on carbon and chlorides get partial negative charges as; $((Cl^{\delta-})_3\text{-}C^{\delta+}H)$, this molecules is highly active as electrophile can attach by any nucleophile even less nucleophilicity one. This status is same for the product (dichlorophenoxy-methane) two chlorides and oxygen withdraw from carbon atom make it partial positive highly active electrophile as same as chloroform. Phenol is oxygen connecting to high electrons density benzene and this oxygen is more electronegativity means oxygen should have more electrons density as nucleophile for attaching any electrophiles even weakness one. Different proteins, different lipids, RNA and DNA molecules of different cells and different molecules that added in previous steps are contain many nucleophiles and electrophiles, it is so wrong adding phenol with chloroform to the solution contain so many molecules like cell's contents.

It is so important to mentioned this in biochemistry laboratory when putting chloroform with other solvents; water and lipids (unsaturated neutral lipids) in plastic tube over night, chloroform dissolve or hydrolyze plastic tube dropping its solution, chloroform strong organic solvent dissolve organic material even plastics. This test showed that chloroform strong solvent and this strongest come from it contains active carbon with partial positive charge $((Cl^{\delta-})_3\text{-}C^{\delta+}H)$ it may affect cells and changing them contents such as nucleotides (DNA and RNA) instead of doing what biologists thought. It so wrong use chloroform or phenol in chromosomes and DNA extraction studies.

Biologists [(2)] showed that they use phenol alone one or many times in DNA or chromosomes extractions. This is right because this compounds catch most molecules by hydrogen bonds leaving clear solution, biologists [(2)] found clear solution after adding of phenol so they thought that phenol remove RNA and proteins molecules from the sample while the fact is that it is impossible for phenol to catch RNA with proteins and leave DNA. This is not a right thinking phenol must catch all molecules that have an appropriate hydrogen or high electronegativity atoms that can do hydrogen bonds. Unfortunately biologists based only on them eyes so phenol look like a cleaner compounds after adding it and doing centrifuge certainty resulting clear solution as supernatant while the fact is that most important molecules were gone.

Finally using of phenol alone or with chloroform in chromosomes and DNA extraction processes is unacceptable step that produced so many possibilities as products and once again it is so difficult to know these products even in best chemical laboratory in the world.

10. After adding phenol alone or with chloroform another centrifugation was done again[2] of course heavy molecules go down in the tube as precipitate while light molecules stay in the solution as supernatant. Biologists [2] mentioned that they took supernatant and neglected the precipitate also they were shown that they put this supernatant in special tube contain a filter paper for washing it. This washing step was done by ethanol [2] and this is not appropriate at this step, because nucleotides are polar molecules due to phosphate groups so after previous steps from first step until this step these groups may capture from nucleotides. For this polarity may be less than before so ethanol may dissolve them as polar solvent less polarity than water. In another hand, nucleotides are polar molecules and ethanol is polar solvent so even they do not dissolve in it they may go with it through filter paper. This may happen by binding nucleotides with ethanol by hydrogen bonding, hydrophilic interaction, van der walls interaction..etc. This in case that nucleotides still there after all hard steps and this is truly so difficult to happen.
11. They may be another steps and may be another details this research was neglected because; This research took the main steps and as mentioned before explaining of other steps may need more explanations more than what this research need, so this should make this research go far from its target of actual property of bio-energy and cells divisions.
12. Last step is coloring step, it was done by so many chemicals that adding colors to what was stay on filter paper for making biologists able to recognize it through microscope. This because they think that they get chromosomes or DNA molecules. Of course these coloring compounds have a chemical structures, volume and weight, then they should react in different ways with what stay on filter paper to form additional compounds additional to what produced until now from previous steps. Until now this research show so many different compounds were added or they were in the cell so adding new compounds is not appropriate. Staying molecules on filter paper saw many molecules they look like pass through chemical war then adding new molecules for make them appear is bad choice. Adding of new chemicals for appearing what molecules stay on filter paper is not acceptable because in chemistry's laboratories when molecules does not have a color (colorless) chemists use U.V.-Visible spectroscopy apparatus because each atom or molecule have a special λ_{max} easy to study them through this technique and easy to calculate them concentration by this special wave length. Colorless molecules should stay as they are and for study them biologists should use appropriate apparatus such as above apparatus.

Molecules that survived from chemical war at the final they stay on the filter paper and biologists colored them and saw them into microscope. By special camera that putting in the microscope biologists took a picture for survived molecules and they thought these molecules are human's chromosomes. In fact, survived molecules become very famous because they represent many scientific terms, one of them important knowledge of human's chromosomes that controlling human's body and controlling cell divisions. Pictures of these molecules or pictures of human's chromosomes as biologists thought and were indicated as follow [6]:

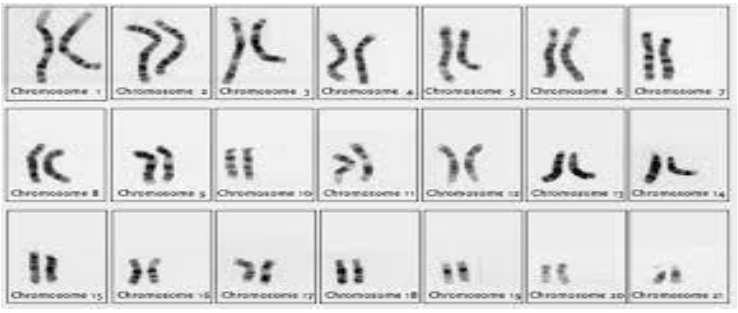


Figure (11): Human's chromosomes as biologists [2] indicated.

After all above chemical facts, no one can know what above molecules are! These things in above pictures could be any molecules. There are so many different molecules in human's cells and there are so many different molecules were added in above steps. In addition, there are huge number of products that producing form reacting of above different molecules. These pictures could be any molecules of them but scientifically they mean nothing without real evidences at least knowing their melting point. In fact, according to real sciences these pictures are not enough for characterizing survived molecules.

However, according to these pictures specially they are look like liner molecules means they do not contain rings and according to chemical properties of fatty acids and non-polar molecules that added or produced. All these may survived from above steps because; Firstly they do not interact with ethanol therefore they will stay on filter paper. Secondly they are lighter than other molecules. Thirdly, they do not interact with phenol or chloroform. Fourthly, fatty acids of cell and nucleus membranes are long chain of hydrocarbon terminally with carboxyl group. Actually it is difficult to react with them. Fifthly, even of fatty acids react with other molecules to form any product, they will hydrolyze to return to them original structure. Sixthly, according to stereochemistry science carboxylic acids exist as dimeric by hydrogen bonds so this will protect these acids then fatty acids is protected by these bonds to be a survive molecules. Seventhly, they are just lipids have a lipid properties so they do not interact with most molecules make them able to be survived from above steps. Eighthly, chemical structure of fatty acids is relatively same as shapes of above pictures. There are another chemical properties for fatty acids make them the right molecules or survived molecules.

Thus this research can predict which molecules may be survived and appear in above pictures. They are could be; Some unsaturated fatty acids that produced from cells and nucleus membranes, NP-40 (nonylphenoxypolyethoxyl-ethanol) molecules that being added in buffers step and Sodium dodecyl sulfate molecules.

Without real experimental evidences it is hard to know the survived molecules 100% however according to the lengths of each one of above pictures figure (11) there are three kinds; long, middle and short molecules (chromosomes as biologists thought). Therefore, for middle molecules unsaturated fatty acids have same shape they could be these molecules as following figure [6]:

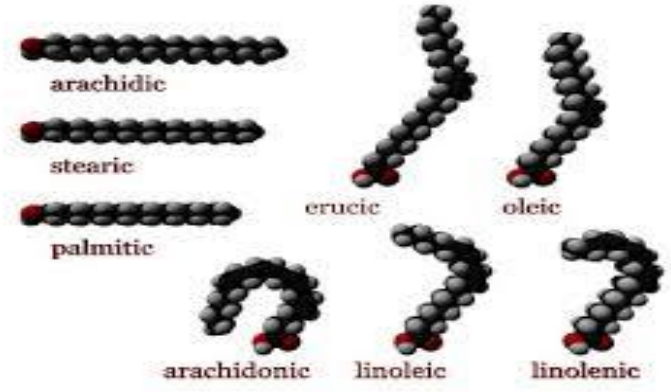


Figure (12): Pictures of saturated and unsaturated fatty acids.

NP-40 (nonylphenoxypolyethoxyl-ethanol) and SDS molecules could be long molecules figure (7) show closer status for these molecules. Short one included many possibilities such as; dimethyl ester and ethylmethyl ester...etc. of other products, Tris (hydroxymethyl) aminomethane..etc. of other short molecules.

In fact, chromosomes picture could be any molecules that added or they were in the cell in addition to so many different products that produced from different interactions which happened between different molecules that shown by this research.

It is so wrong and unacceptable adding active chemicals to human's cells or cells of other species because each cell or each tissue of different sources contain huge amount of active chemicals do not need another active molecules. Biologists added active molecules to active molecules who can know what these active molecules can produce. Final project for chemical student of fourth stage is about water that come with oil, is just a water even this extract useful compounds from it the student does not add any other active molecules just water with ethers solvents in separating funnel then heating by hot plate apparatus. Adding active molecules to oil's water is so wrong even is just a water so what about human's cells!?

13. For identifying and checking purity of resulting molecules either for DNA or chromosomes in extraction processes, biologists [(2)] indicated that they do not see them through Microscope. They do two main methods for this purpose which are; 1- Using of U.V.-Visible apparatus in the range about 220-330 nm at λ_{max} at 260 nm or 280nm. 2- Using of electrophoresis in specific Gel. This research took long time before completing this point because it needs more time just to be quiet. Also it is so sure that no chemists see this or if there a chemists saw this then it did not know what they are or what U.V.-Visible technique is!

It is true that this technique is good technique for chemistry but biologists must understand that they used so bad lambda max in so bad range because this range is so crowded 200-320, there are so many molecules interact each other and with this lambda such as; Water, ethanol, methanol, carboxylic acids, phosphates, proteins, unsaturated fatty acids...etc. moreover is 260 nm or 280 nm for one nucleotide or for a polynucleotide or is it for just nitrogen bases, or for deoxy ribose only...etc. It a chemical fact that U.V.-Visible technique is good technique but interferences of other molecules each other and with target wavelength should lead to wrong results specially some amino acids show λ_{max} at 280 nm while this research find that λ_{max} of phosphate group is 254 nm, there are another lambda max should interfere with 260 nm so depending on λ_{max} =260 nm or on 280 is so bad choice. U.V.-Visible technique is not like NMR spectroscopy it is bands are wide then it is so bad choice for characterizing DNA or chromosomes molecules.

For last twenty years this research prepared and saw so many molecules that prepared in specific methods from chemistry procedures then for identifying resulting molecules many techniques must be done such as melting point, U.V.-Visible and I.R spectroscopy. These techniques are sometimes not enough for identifying chemical structure of resulting molecules therefore additional techniques must be done such as; NMR spectroscopy, mass spectroscopy, CHNSO...etc. This means in chemistry laboratories when any chemist prepare target molecules it do this through adding known molecules each other as example adding A to B molecules so for identifying resulting molecules many chemical tests must be done in addition using of many apparatuses, this the fact of chemical reactions and methods. Chemists adding many known molecules for preparing another molecules so when they want to identify them resulting molecules they do above techniques and sometimes they are not enough.

In chemistry adding of known molecules so sure from them chemical structures each other they produce products so for identifying them products it must use above techniques and sometimes they are not enough. It is so important to notice that chemists do above techniques for known compounds so for natural products the situation is something else. As example, last year a student in chemistry department fourth stage did its project about water molecules that oil company used in washing process. This student for about seven months extract a natural product from this water and she did; Many chemical tests for this product in Bio-Chemistry laboratory, Measuring melting point of this product by three different apparatuses, recording its λ_{max} by U.V.-Visible apparatus, recording its functional groups by I.R. apparatus more than five times in three different apparatuses. In addition to another chemical tests she did not estimate the right chemical structure for this natural product!

This indicates that in real science for knowing chemical structure of natural product three techniques (melting point, U.V.-visible and I.R spectroscopies) are not enough the student thought its product is aliphatic while her supervisor thought it is aromatic. In chemistry for natural product above three techniques and another chemical techniques in chemistry laboratories are not enough. If this for

unimportant natural products then what about DNA and which molecules in nucleus should be the most important molecules in the world!??

Definitely this is not acceptable for this research and even for student in first stage in chemistry department it understands that it is impossible to characterize any natural product by only U.V. spectroscopy. This technique is useful for certain medicinal tests but it is totally inappropriate for identifying any natural product specially bio-molecules. Biologists and relating sciences must understand that they have to prepare a nucleotide experimentally in a laboratory then they must find its λ_{max} not near U.V. range 200-380 nm, therefore, after insuring from this lambda then they should test it for unknown samples. λ_{max} for different molecules is not constant it differs according to position of target moiety in its molecule so what biologists did until now is totally not acceptable. However, there are a lot of pictures indicated what biologists thought about U.V. Spectroscopy they are as following [6]:

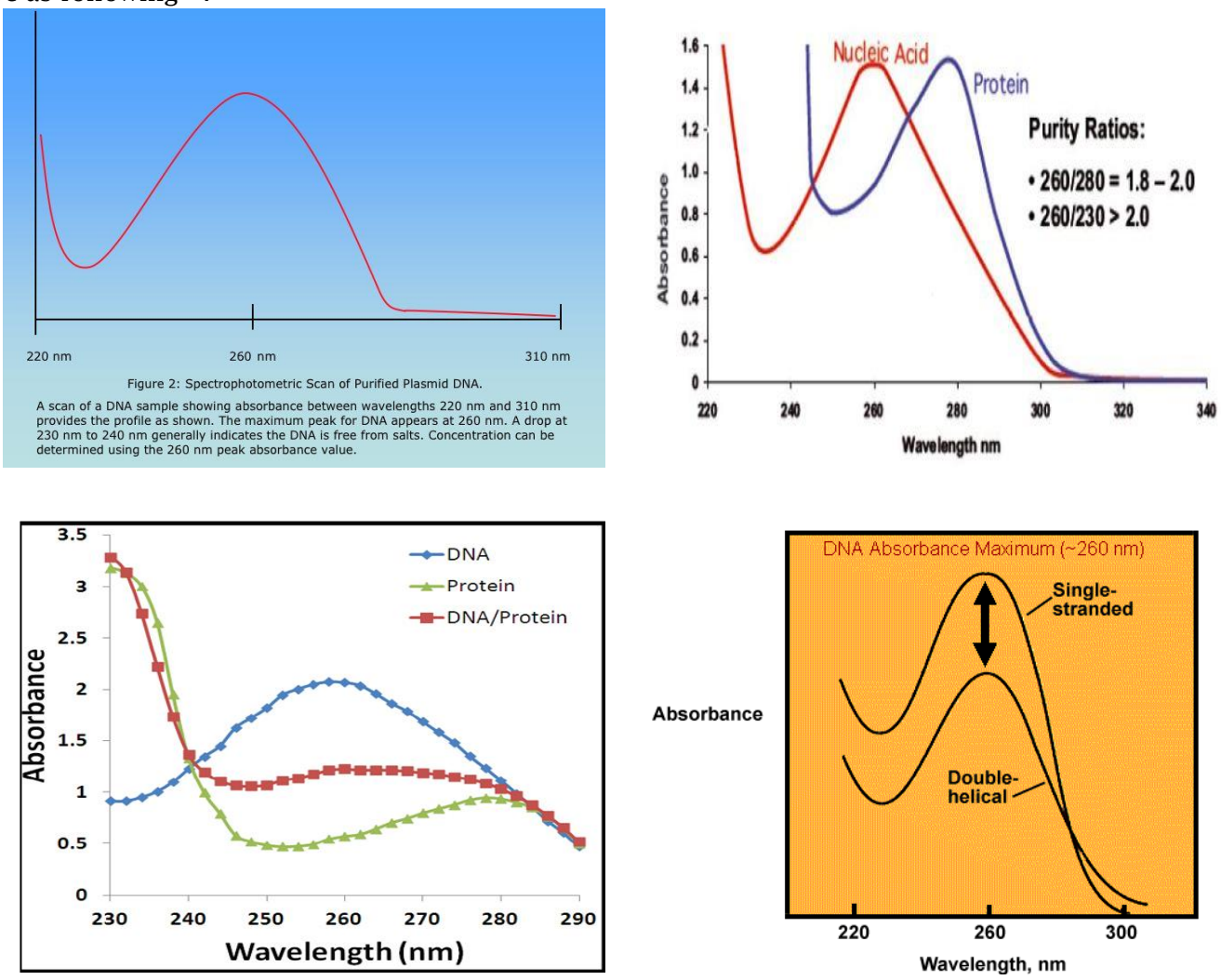


Figure (12.5): Some pictures showing what biologists thought about U.V. spectroscopy.

Above pictures show that biologists found another several aspects differ than what chemists know for long time ago about U.V-Visible spectroscopy. It is an experimental facts in chemistry that the shape of U.V. bands are depend on concentration of the sample do not refer to any molecules or how this molecules be in the sample. In addition, U.V. bands does not show how molecule pure as above ratio, it is a experimental fact that concentration of the sample is the judgment factor in the shape of U.V.-Visible bands. Biologists calculate concentration of DNA depend on above band at 260 nm from a mathematical relation; DNA conc. (µg/ml)= Abs_{260} * 50, also they understand that DNA free from salts from lambdas at 230-240 nm. It is so difficult for this research to comment on what above pictures mean but they are definitely incorrect results.

In fact, this research more grateful for biologists about above pictures because they focusing them work on proteins and how they affecting U.V. results of DNA molecules neglecting other molecules that may produce from extracting methods of DNA or chromosomes, this is a big mistake from them! However, above figures show few important bands = 260-280 nm and 310-330 nm, the facts of these bands were determined by this research more than five experimental tests were done for checking these bands belong to which molecules. This research measured bands of unsaturated fatty acids by U.V. – visible apparatus and these molecules show bands exactly as same as above pictures. Really fact of U.V.-Visible charts of DNA and chromosomes they are for unsaturated fatty acids they are not for another molecules and this fact resulting from more than five tests for different sources of natural unsaturated fatty acids. This research checking its results and insuring from them by measuring U.V. bands for acetic acid as simple acid contain one carboxylate group in basic medium.

This fact is excellent evidence for this research which it depends on real experimental tests. U.V. bands of natural unsaturated fatty acids and acetic acid are; First band at 190-240 nm is for H_2O or for CH_3CH_2OH ($n \rightarrow \pi^*$) of pair electrons of oxygen atom. Second bands 260-280 nm are for carboxylate group (-COOH) ($n \rightarrow \pi^*$) of pair electrons of oxygen atom and ($\pi \rightarrow \pi^*$) of double bond of carbonyl group (-C=O). Last band 210-230 nm is for ($\pi \rightarrow \pi^*$) of double bond or bonds of unsaturated fatty acids, it is a weak band because of long chain of hydrocarbon ($-CH_2-$). Above pictures show good U.V. bands and them really scientific explanation is what this research found.

U.V.-Visible Spectrum of DNA or for chromosomes are for unsaturated fatty acids and they are good evidences for this research but what about second technique electrophoresis!

This technique have two paths either support this research results or not. The fact of this technique is alkaline technique more than PH=7 biologists called it alkaline Lysis therefore most molecule should be negative and more active.

In fact, biologists add more additional molecules in this techniques difficult to understand why they do this. These molecules are in two systems [2] either Tris-Borate-EDTA (TBE) or Tris-acetate-EDTA (TAE). If these molecules in basic medium then what they should do to DNA or Chromosomes samples!? In basic medium these molecules should be negatively charged as in the following figure:

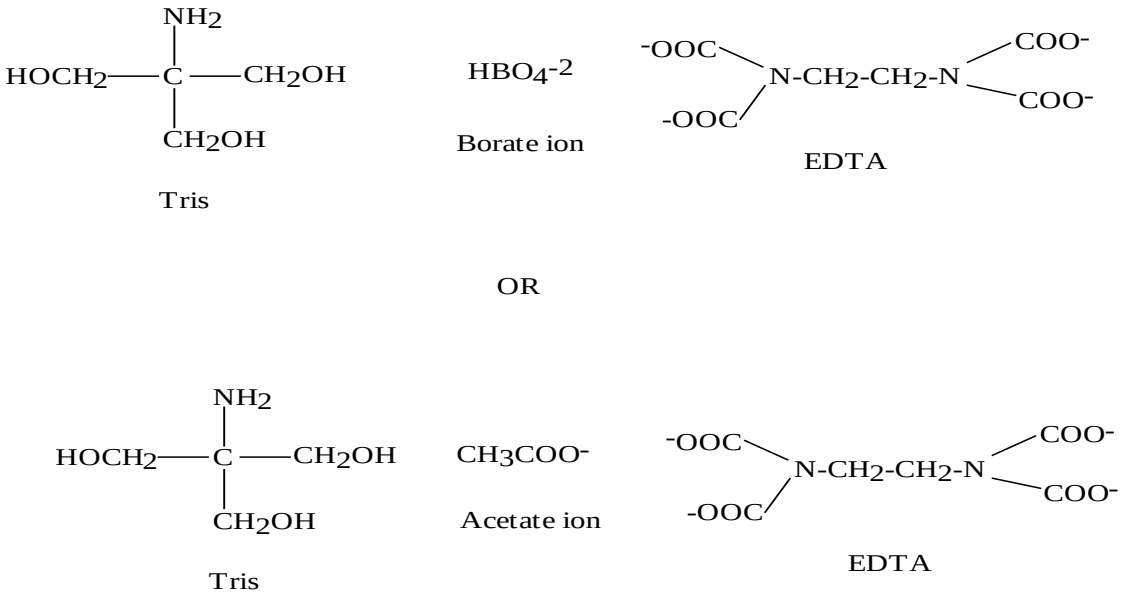
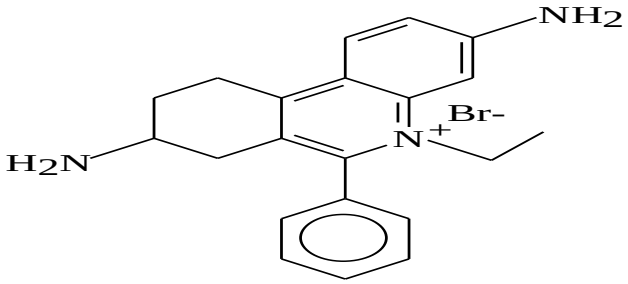


Figure (12.75): Chemical structures of DNA or chromosomes electrophoresis compounds.

Biologists [2] cannot see their resulting molecules or above two system molecules in electrophoresis apparatus so they added different molecules called them dyes for make DNA or chromosomes as they thought appear over special GEL (Agrose gel). As examples of these dyes are; Ethedium Bromide, Syber

green, Syber gold. These dyes are big molecules with three or four rings following figure show one of them (Ethedium Bromide):



Ethedium Bromide

Figure (12.8): Chemical structure of Ethedium Bromide.

After knowing chemical structures of above two systems and different dyes that added to resulting molecules in electrophoresis techniques, the question is what the point of adding these different molecules to resulting molecules!?

It is most obvious that above molecules have negative charges and the other one do not have but actually they have moieties with high electrons density (-NH or -OH) should act as negatively charged molecules. Therefore, when knowing that biologists [(2)] in electrophoresis put them resulting molecules (DNA or chromosomes as they thought) near cathode pole because they thought these molecules have negative charges due to phosphate groups.

Therefore, the fact of electrophoresis of DNA or chromes is that all these negatively charged molecules must move toward same direction anode pole. Then the only advantage of adding above different molecules in DNA or chromosomes electrophoresis is to increase the amount of resulting molecules or it is more than this! In DNA or chromosomes electrophoresis biologists get so little amount from them target molecules less than 50 µL [(2)] in extracting process, then they adding above molecules to increase the final amount. Biologists[(2)] showed that they use only 5 µL from them resulting DNA in electrophoresis so this amount is so little does not show anything compare with above adding molecules the two systems and the dyes. 5 µL is so small amount and it does not just a molecules (DNA or others) it is a solvent (mostly phenol) contain a molecules so it is experimentally impossible for big molecules such as DNA or others be in 5 µL. There is a fact about solvents called solvent's capacity each solvent has a specific capacity for dissolving different molecules specially big molecules in very low amounts like 5 µL therefore as a fact from chemistry, definitely there is no molecules like DNA in 5 µL as a sample of DNA's electrophoresis.

It is most important noticing that biologists adding negatively charged molecules addition to them results molecules in electrophoresis and they do not recognize between these different molecules. They adding one of above two systems of negatively charged molecules with dyes molecules to them sample and then they collect them as results of all these molecules together saying that they are DNA. This is unacceptable because scientifically they adding known molecules have negatively charged and another have high electron density then they collect them together as results of electrophoresis. This is the fact of biology's DNA electrophoresis they collect and measure what they add. They do not collect or measuring resulting molecules as they thought only because its amount is so little.

Biologists confessed [(2)] about how electrophoresis they did that they prepare a solution from one of above two systems; either TBE or TAE then they dissolve Agros gel in it. This preparing solution put on the surface of electrophoresis apparatus as the gel of this technique. This step should be done by biologists for making electrophoresis ready for DNA measurements. This incredible a chemical fact of this is that above specific gel fully with three negatively charged molecules spread in it and additional negatively molecules or atoms were added to fully gel such as bromide ion (Br^-) in Ethedium bromide dye. The medium of electrophoresis is so fully with negatively charged molecules much more than

negatively charged phosphate groups in DNA so when electric power is opened all these negatively charged molecules must move toward anode pole with DNA if its amount is enough truly it is impossible for DNA to be there or eve to reach anode pole because its amount is so little less than 50µL. For these facts another chemical facts DNA electrophoresis must be named electro-madness techniques because this is the scientific truth of it.

In addition, unsaturated fatty acids have negatively charged due to carboxylate group (COO^-) in basic medium so electrophoresis cannot help either biologists or this research about what DNA extraction processes produce? However, it is known now from this technique that biologists measure what they add in DNA's electrophoresis, they do not measure resulting molecules.

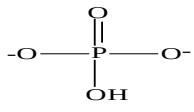
There is another technique biologists use for characterizing DNA molecules, NMR was used for this purpose and it is a good apparatus for knowing status of hydrogen atoms of unknown molecules. This techniques depend on status of different hydrogen atoms either they bind to withdrawing atoms such as; N, O, S..etc. or they bind to high electron density pushing atoms like carbon atoms, benzene..etc.

In fact, there are known chemical programs can predict or estimate the chart of any unknown molecules just draw them in these programs and get them NMR charts at once. This research use these programs for get estimation charts for known four nucleotides and for known four unsaturated fatty acids. Unbelievable and Confusion points of estimation charts of NMR of DNA molecules and for unsaturated fatty acids are arising for both molecules because they do not have bands over 9 ^1H (p.p.m) in the scale of NMR while biologists [2] show bands over 9 to 14 ^1H (p.p.m) for DNA! DNA molecules do not have hydrogen of aldehyde moiety or hydrogen for carboxylic acids as well as unsaturated fatty acids so above bands over 9 to 14 for which molecules?!

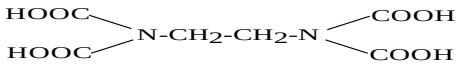
This is so confusing situation NMR apparatus is excellent technique in chemistry also NMR estimation programs are good chemical programs for knowing the right NMR charts for preparing or unknown molecules. Therefore, there is must be something wrong in NMR of DNA molecules!? After studying this very carefully this research find that biologists do not act as chemists in NMR technique! Chemists treat their target molecules very carefully and purified it as one molecule while biologists prepare an solution contain more than two molecules for NMR measurement !? a chemists when he know about biologists solution for NMR he said this is a crime and added no this is a disaster.

It is truly a disaster because in chemistry when extracted an natural product and after insuring that this product is one pure molecule by many procedures, after this many measurements should be done for it just for knowing its chemical structure. Therefore, what biologists do in NMR studies is scientifically unacceptable its beyond the science by many steps and they prepare DNA solution for NMR studies by adding many molecules for specific purpose as they thought such as adding EDTA molecules which is common molecules in all techniques but it is so difficult to understand why biologists adding them for DNA samples?! Also they added phosphate molecules in specific pH as phosphate buffer, and also they add cannbinoids CB_1 or CB_2 for prevent cyclization of nucleotides molecule to form cAMP as example.

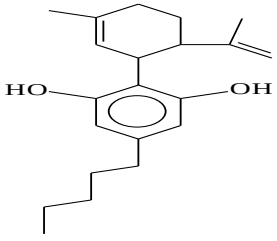
In fact, There are a lot of different molecules biologists added to them resulting molecules (DNA as they thought) to prepare a solution contain more than two different molecules for NMR studies. Following figure show chemical structure of these addition molecules:



Phosphate



EDTA



Cannabinoid CB_1

Figure (12.9): Chemical structure of some molecules that added to the results molecules.

It is more obvious that DNA charts of DNA as biologists thought are for above molecules because phosphate group has active hydrogen in NMR that binding to oxygen atom, EDTA molecules have four so active hydrogen atom of carboxyl acids and this moieties have a NMR bands over 9 ^{1}H p.p.m. in addition, CB_1 molecules have two hydroxyl good for making hydrogen bonds with other molecules showing bands over 9 ^{1}H p.p.m. In general, hydrogen bonds of above molecules and others must show band over 9 ^{1}H p.p.m.

In addition to U.V. and electrophoresis, NMR results indicated that resulting molecules from DNA extraction process are just unsaturated fatty acids because these acids in acidic media have active hydrogen atoms of carboxyl group give bands over 9 ^{1}H p.p.m. in NMR apparatus.

Therefore, scientifically and experimentally all studies and results for resulting molecules from DNA or GENE extraction processes are indicated these resulting molecules are just unsaturated fatty acids. These techniques indicated obviously without any doubt that all results of above techniques (U.V., Electrophoresis and NMR) are just for unsaturated fatty acids.

There is a unbelievable behavior or so strange was noticed in above techniques that biologists cut a specific scale so difficult to understand why this do this! They cut about 230-330 nm from U.V. region (200-370 nm) and they cut 9-14 ^{1}H p.p.m from NMR region (-3-15 ^{1}H p.p.m.). In chemistry all scale is required for understanding unknown molecules very well because different molecules have many bands in above techniques not just limiting region as biologists took. This is highly unacceptable.

The Truth's Moment:

After long discussions with biologists since 2014, they accept what this research want! They give this research samples of extracting DNA that extracted in them laboratory. They give samples with volumes 40, and 50 µL, in fact these volumes surprised this research while biologists [(2)] indicated that maximum volume of extracted DNA in both procedures manually or by special kits is 50 µL. This fact is unbelievable and unacceptable because scientifically there is a fact about each solvent that each one has a specific capacity.

In addition, in cold medium solvents capacities must decrease due to increase their densities. It is true that this increasing happen for both solvents and solutes leading to precipitate the solute or separate them. These two facts are well known in chemistry in addition this research tested and checked them by put sucrose solutions in cold place (the freezer) for more than 24 hours, sucrose molecules firstly dissolve in water but after relatively long time in freezer (more than 24 hours), they precipitated or in fact they separated water and sucrose leave each other easy to see them by only normal eye in wonderful picture. This due to increase densities of both water molecules and sucrose molecules as it is mentioned before. Another indication show that sucrose return to its original status dissolving in water molecules forming clear solution and this happen due to increase temperature degree over than 8-10 °C but they appear again clearly in the solution by decreasing temperature degree 0-2°C, this fact is well known and it is well known now form above tests.

DNA samples do not follow this at low temperatures for so long time more than a week! According to above rules phenol must expels what it have, in fact it does not do this so is it really have a big nucleotides? Actually phenol has a unsaturated fatty acids because both of them stay as they are do not freezing in low temperature, both phenol and unsaturated fatty acids have a low melting points must stay as they are as one liquid in low degrees. This an additional evidences for this research addition to everything was discussed until now.

The DNA's samples were be in cold medium for long time and they still as they are without any precipitate this is unbelievable because molecules like different nucleotides are big molecules if there are few from them 5 nucleotides only then no solvent (just 50 µL) can keep them in normal status or in cold medium. This is the fact of all solvents nucleotides are big molecules impossible for all solvents to keep them in normal status and in cold medium they must precipitate and this does not

happen! DNA samples are so little about 50 µL and they stay in very cold medium about 0-4°C and they do not showing any precipitate, this beyond the science.

Moreover, solubility of different solutes decrease with decreasing volumes of their solvents, solvents volumes are controlling solubility of different solute specially big molecules. Biologists showed that last product of DNA extraction process is Oligomers, or even only four nucleotides, different solvents cannot stand with these big molecules under any condition. There is no solvent has high capacity to keep nucleotides in so limiting volume 50 µL. Therefore, without adding any molecules it is true and depend on facts that last product from DNA extraction process does not contain any nucleotide it just a solvent mostly phenol contain smaller molecules above explanation and techniques indicated that they are unsaturated fatty acids.

DNA's samples are more than enough for knowing what these solvents contain, unfortunately volumes of these samples do not give this research enough space for doing many chemical tests also these samples are not pure molecules. They are limiting molecules in 50 µL impossible to do boiling point test for checking. However, the best test can be done is by adding aqua's solution of pH= 8.5 by Potassium hydroxide KOH. This solution can not affect nucleotides or DNA molecules because KOH can not affect nitrogen base or ribose sugar in addition phosphate groups are the only moieties can be affected due to they are active. In fact, these molecules must be as they are without changing HPO_4^{-2} because pKa_3 of phosphoric acid=12.7 so at this pH they can be affected.

Actually acidic medium must effect these groups not basic and it can cleavage them bonds with deoxy ribose because acidic medium under pH 7 must convert HPO_4^{-2} to $H_2PO_4^{-1}$ and in lowering pH under pH 2 this must convert it to phosphoric acid H_3PO_4. Then basic medium pH =8.5 does not affect DNA or nucleotides in any way. In another hand, KOH can affect fatty acids and convert them to soap, basic hydrolysis of fatty acids. This procedure is well known for long time in preparation of special soaps that do not contain any fatty acids. For long time ago in preparation of these soap the workers add KOH for removing different fatty acids either saturated or unsaturated because these acids produce unwanted smell in these special soaps.

This test is the best test for precipitating soap if the last product in DNA extraction is unsaturated fatty acids or the solution stay as it was without changing then the product is DNA or nucleotides.

It is impossible that after testing by chemistry all procedures and techniques that biologists used in DNA studies the DNA's samples contain nucleotides molecules!? This cannot be because the real science know what it should do. In fact, adding aqua's solution its pH=8.5 by KOH, after about few minutes soap molecules were formed and by leaving the tube for standing for few hours soaps formed micelles and precipitate in the bottom of the tube as it is appear in the following figure:

Figure (12.95): Soap molecules precipitate as micelles.

Above precipitate is the truth moment that extraction's procedures and products of DNA extraction processes either manually or using different kits are produce only unsaturated acids. There is not any nucleotides or other like molecules in above tube.

In addition, after be more insuring from what DNA or GENE extraction processes produce depending on quantitative test for lipids "Saponification reaction", another additional test should be done on DNA's samples to be 100% sure from what DNA procedures produce!?

According to samples volumes which is so little only 50 µL, the best test can be done is an qualitative test for lipids which is copper acetate test. This test is used for recognizing between; neutral fat, saturated fatty acids and unsaturated fatty acids. This test show; colorless upper layer and blue lower layer for neutral fat, while saturated fatty acids show blue precipitate in the lower layer, in addition, unsaturated fatty acids show bluish-green upper layer. This research did this test and repeat it for be more sure from final product that yield from DNA's extraction processes either manually or by specific kits. Following figure show results of doing copper acetate test on DNA's samples:

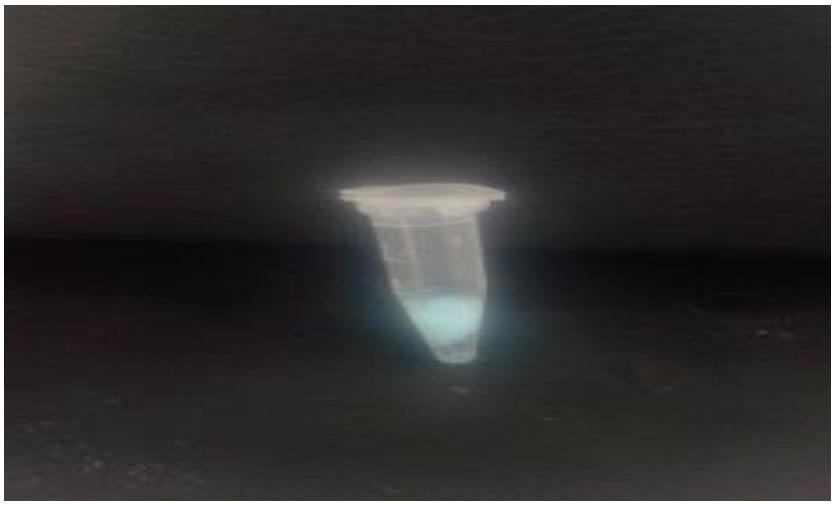


Figure (12.97): Show result of copper acetate test for DNA or GENE extraction process.

Above figure and copper acetate test show so obvious bluish-green upper layer after adding 3% copper acetate to DNA's samples. This means, the final product that produced from DNA extractions processes either manually or by special kits is just phenol contain unsaturated fatty acids. These extractions processes are the basics of many studies for long time ago such GENE's theories, nucleotides theories...etc. Therefore when these processes are just rubbish give unsaturated fatty acids do not produce what they thought then all others relating sciences and relating theories are just rubbish too.

To be honest this research show in last points that scientists and workers of DNA and GENE studies do not have appropriate knowledge for extracting so important molecules like nucleotides, DNA or RNA from different cells of different creatures. Truly they look like searching for something so small in very big and so dark room. As it is seen, DNA extraction process until checking process by different techniques; U.V., electrophoresis and NMR spectroscopy is highly differ than what chemistry science have. In chemistry for extracting important molecules like what nuclei contain it must not add any big molecules or other hard stuffs that shown before. A good procedures and a good calculations for DNA studies should be done according to real science as in the following chemical procedures:

Chemical methods:

Procedures of this research are suitable, excellent and enough for this research target but this not means that there are no others. The other additional chemical methods for extracting nucleotides from human cells or from other cells (other creatures), it should follow the right scientific steps like what this research did without adding any active molecules. As this research did, after studying the

target cell and its contents, it is important to divide the procedure into two parts; in-vitrow and in-vivo (these terms for this research only).

For in-vitrow part; It is so important to prepare known nucleotides in laboratory, which means synthesis in-vitrow; AMP, GMP, CMP, UMP, dAMP, dGMP, dCMP and dTMP nucleotides.

This preparing methods must done by certain chemical procedures and these preparing nucleotides must characterize by; melting point, CHNSO, Mass spectroscopy, I.R. and U.V-visible spectroscopes...etc. after these and after being so sure from preparing nucleotides it is important to find important chemical and physical properties for them specially measuring the lambda max (λ_{max}) for each nucleotide.

Unfortunately Biologists [(2)] indicated that there is special lambda max (λ_{max}) for each nucleotide and this for all nucleotides (λ_{max}) be either 250 or 260 nm and this is unacceptable because this research calculate depending on chemical method and Beer-Lambert equation that (λ_{max}) of sodium phosphate (Na_2HPO_4) is about 254nm. Then 250-260 range is for phosphate molecule only not for all nucleotide, this (λ_{max}) is for phosphates that exist free does not binding to other molecules in different cells so biologists range 250-260 is not a correct. In addition, lambda max (λ_{max}) interactions of different molecules is the most problems of U.V.-Visible technique, lambda max (λ_{max}) of proteins is near 250-260nm so proteins should interact with these lambda max resulting wrong results.

It is important to notice that Lambda max (λ_{max}) is so important for each atom or molecule for knowing them concentration in unknown solutions so if this wave length more or less than the correct one results should be wrong.

For in-vivo part, in the cell there are main eight important things; Cell's membrane, nucleus's membranes, cell's organs, different lipids, sugars, different proteins, different positive and negative ions such as; Cl^-, Mg^{+2}, K^+..etc. and different nucleotides RNA and DNA. For extracting nucleotides from these molecules and ions it must not add any active chemicals even not active one because they may interact with these molecules and ions leading to unwanted results. Before starting with this procedures it must use sample contain known number of cells mean calculated the number of cells as this research did in its procedure. For starting with these procedures it is so important to do this. However, possible procedures with necessary explanations as follow:

1. First procedure is quantitative method; Preparing a sample as example = 5 g cells of human's tissue, more cells is needed in this procedure for getting good results. Cell membrane is about 65% phospholipids and about 35% protein so for all counted cells; 65% multiply by the number of cells resulting the true amount of phospholipids in the sample. Phospholipids are phospho-esters molecules hydrolyze by water and acids (acidic hydrolysis) resulting glycerol, free fatty acids, phosphate with other molecules that binding to phosphate group. This is a simple chemical rule; Calculating exactly number of moles that need for hydrolyzing phospholipids resulting how many water molecules need in hydrolysis reaction with H^+ ions as catalyst. It is important to notice that nucleus is well protected by four rows even if used a little increase in concentration of acidic water it should not affecting nucleus's membrane. Therefore according to following reaction:

Phospholipids (esters of cell's membrane) + $H_2O \xrightarrow{H+}$ Free fatty acids + protein + glycerol ... [5]

This means equal number of moles for phospholipids and water molecules should hydrolyze cell membrane and keep nucleus membrane save, then the sample now contain only nuclei with free cell's contents and it is in acidic media so different proteins should have positive charges because acidic solution (H^+) then by using two electrodes (+ and -) putting them in the sample; proteins, positive ions like Na^+, K^+, Ca^{+2}, Mg^{+2}...etc. and other positive charged molecules should go to negative electrode (-). While negative ions such as Cl^-, phosphates...etc. and others negative charges should go to positive electrode (+). Noticing that electric current must be too low 6 volts or less because nucleotides contain negatively charged phosphate groups ($H_2PO_4^{-1}$, HPO_4^{-2} and PO_2^{-3}) may lose them by moving towards positive electrode then appropriate amount of volts should be measured depending on experimental

tests first then completing the procedure. The sample now contain nucleuses with other organs and molecules but they are less than before because of electrodes.

Human's nucleus is bigger organ than others and molecules, it is volume about 65 μm^3 so there are good techniques can get nucleus alone by a special filter such as Gel-filtration chromatography technique able to stop organs or others with 60-65 μm^3 and let organs and others less than 50 μm^3. This filter such as Gel filtration or Molecular sieve chromatography can stop nucleus and letting other organs and molecules to pass through. This special filter must be changed with the nucleus size that used for human or for other creatures that are differ so this should be noticed.

Human's nucleuses should be on the filter paper alone and microscope can recognize them and counted them if this possible. It important to notice that nucleuses are well protected so in this step it can be colored for noticing them through microscope in one condition this coloring molecules must not be active or interact with nucleus or with its contents, a red iodine (I^-) negatively charged ion that can be removed from nucleuses after see them is a good example and also this let us counting them through microscope. It is easy now to calculate how many moles of acidic water can hydrolyze nucleus membrane and noticing that there are four rows for each counting nucleus.

After hydrolyzing nucleuses membranes the sample now contain nucleotides DNA, RNA, histon protein or other proteins as biologists said [(2)], glycerol, free fatty acids and phosphates of nucleuses' membranes. Nucleus's proteins in acidic media should be positively charged easy to withdrew them by negative electrode while positive electrode can remove free negative phosphates molecules because they have negative charges more negativity than nucleotides or without this step they will not do any affect. However, glycerol and free fatty acids do not dissolve in water easy to remove by separation technique. This should leave nucleotides alone to be characterized by chemical apparatuses; CHNSO, Mass, I.R. ..etc. Noticing that in this method it should use hydrochloric acid (HCl) to prepare acidic water because it is easy to remove chloride ions by positive charged electrode in the last step means nuclei's proteins go to negative electrode and chloride ions go to positive electrode.

This method is accurate and easy without any active chemicals or non-active, getting nucleotide as they are inside the nucleus. In fact, nucleotides inside nucleuses are mainly DNA with RNA even this method is so good but it cannot recognize between them. This research does not do this easy quantitative method because previously in the beginning it calculated; weight of phosphates in each cell and the volume of each nucleotide (DNA and RNA nucleotides) depending on facts of chemical rules and facts of chemical atoms resulting volume of each nucleotide's that is about 8 μm^3 and assuming that it about 5 μm^3 then each human's nucleus (65 μm^3) has about 10 nucleotides and the rest about 15 μm^3 is for protein and other molecules so after this facts this research does not need above quantitative method to find what it already found.

2. Second procedure is qualitative method, the sample should prepare as same as above quantitative method (5 g cells of human's tissue in about 10 ml of distilled water) volume of water must depend on the method also more sample is good for this procedure too. Number of cells should be counted as same as above method. Phospholipids of cell and nucleus membrane are esters, fatty acids connecting to glycerol by two ester bonds, the third hydroxyl connecting to protein molecules or nitrogen molecules by ester phosphate bond instead of carbonyl. Cells of the sample was calculated so depending on this number, moles of acidic water should be calculated as above procedure for totally hydrolyzing cell and nucleus membranes. Acidic water should produce from adding hydrochloric acid (HCl), H^+ ions are used while (Cl^-) ions are removed by positive electrode as it is shown in above method. After hydrolyzing cell and nucleus membranes by acidic water, cell's contents should be free now with nucleotides with others which are; cell's different organs, different lipids, sugars, different proteins, different positive and negative ions such as; Cl^-, Na^+, Mg^{+2}, K^+..etc. and nucleotides RNA and DNA. Different lipids molecules with lipids of cell and nucleus membranes can be removed by putting the sample (15-20 ml) into extraction funnel then add 20 ml of ether or benzene. Shake gently once or twice and leave the funnel for one hour then

take water sample which is down layer and neglect the ether or benzene layer. Water sample contain other cell's contents; cell's different organs, sugars molecules, different proteins, different positive and negative ions such as; Cl^-, Na^+, Mg^{+2}, K^+..etc. and nucleotides RNA and DNA. It is easy to remove proteins with different ions by using positive and negative electrodes as it is shown before but it is important to notice that it must use low amount of electric 6 volts or less because negative phosphate group of nucleotides (DNA and RNA) may runaway as it is shown before.

After this the sample should contain cell's different organs, sugars and nucleotides RNA and DNA molecules. Cell's organs are relatively heavier than other molecules (sugar and nucleotides) so by using centrifuge it possible to remove this organs but this centrifuge must its circulation be so gently, it should be less than 100 cycle per minute. Cell's organs should precipitate due to them weight and earth's gravity and supernatant should contain sugars and nucleotides RNA and DNA. Sugars are glucose, glucose-6-phosphate and may be fructose-1,6-phosphate and these molecules have lambda max differ than nucleotides so by using U.V. apparatus depending on nucleotides lambda max or depending of phosphorus Kit as this research did, it possible to calculate how many nucleotide in each nucleus because number of cells and nucleuses were known so as example; After finding amount of AMP in the sample by using its lambda max (λ_{max}) with using U.V. apparatus or by phosphorus Kit and dividing this amount on the number of all nucleuses (or number of all cells) = number of each AMP in one nucleus. Doing this for other nucleotides resulting as example about ten nucleotides in each nucleus of human's cells as this research found by certain scientific methods.

It is important to notice that above chemical methods can be modified as much as it is necessary for getting perfect results not just good results as this research did through medical tests of phosphorus Kit. These chemical methods are easy and accurate giving good results without adding active molecules or using hard techniques because these techniques must affect more sensitive human's cells. Chemical methods depend on scientific facts which counted everything may affect cell's contents not like other procedures which look like cooking rather than anything else.

These chemical procedures able to find what this research found that each cell contain about 10 nucleotides. It is impossible for nucleus to have thousands, millions or billions of nucleotides because each nucleotide has a weight and volume and each nucleus has a capacity for limiting number of molecules depending on its volume.

Above procedures are just possible techniques that should follow to extract nucleotides from different cells samples rather than biology's procedures that using active and hard techniques as it is shown before. However, this research procedures are more accurate and excellent than above procedures because it use medical Kit with other good reasons as mentioning before. Procedures of this research give perfect results as it was shown and discussed.

This lead this explanation for so important notice in this research which is there are so many types for different cells as biologists indicated [(2)], there is small cells and big cells, there are chicken's egg, dinosaur's egg..etc. This research indicated that number of nucleotides in each cell depends on nucleus's volume, may be millions or billions nucleotides in dinosaur egg while they are thousands or more in chicken's egg. Nucleotides in nucleuses of nervous cells are more than nucleotides of blood's cells.

Number of nucleotides differ from cell to another depend on nucleuses' volumes, while volume of each nucleotide is a constant does not affect, decreasing or increasing under any condition.

Nucleotides' volumes is a constant but their numbers inside different nucleuses is differ depending on them nucleuses' volumes. This is a good evidence for this research that number of nucleotides inside different nucleuses depends on volumes of these nucleuses. In fact, this research took typical volume of animal cell which have nucleus volume about 65 μm^3 mean it takes one type only in its explanation while the truth as it is mentioned there are so many different cells have so many different volumes.

For this research's example, nucleus volume = 65μm^3 able to stand with about ten nucleotides and also the truth of different cells of human's body are small cannot recognize by human's eyes they ranged between 30 μm^3 of sperm cell to 4000000 μm^3 of oocyte cell, number of nucleotides are depend on volume of each cell of human's cells. Human body is something incredible smallest cell (sperm's cell)

with biggest one (oocyte's cell) forming the beginning of human's kind on the earth. Nucleuses of these cells are about 0.125 from all cell's volume [(2)] so nucleases' volume are ranging = 3.75-500000 μm^3. These nucleuses should have about 0.75-100000 nucleotides. Sperm cell have about one nucleotide while oocyte have hundred thousand. This research proved that human nucleuses have limiting number of nucleotides not thousands or millions as biologists thought so it have to explain the role of these limiting number inside these different nucleuses.

This research find that wondering about differences between sperm and oocyte should lead to understand nucleotides roles inside human cells.

Scientific facts indicated that nucleotides have a constant volume in human's cells about 5-8 μm^3 and these facts showed that these cells have different volumes then number of nucleotides inside each nucleus must limiting with its nucleus's volume. Nucleotide with $5\mu m^3$ cannot be inside a nucleus with volume = 3 μm^3, this does not make any sense. Number of nucleotides inside different nucleuses should lead to understand nucleotides role.

Sperm cell have one nucleotide while oocyte have 100000, differences between these two cells should lead to explain above question which are; Sperm live outside men's body for 1-3 days while oocyte live inside woman's womb for about month without fertile. Sperm cells do not connect to human's tissue while oocyte connect to womb's tissue...etc. This means oocyte should get assistance from woman's tissue while sperm cells does not. Smaller cell is sperm then it should get assistant rather than bigger one. This means sperm does not need to connect to human's tissue because it have one nucleotide while oocyte need to connect because it have 100000 nucleotides.

Sperm cell does not have nucleotide because it not needs to produce energy from reacting of glucose with nucleotide. In fact sperm have its own energy which is enough for it at maximum for three days and it does not need additional energy. While oocyte live for long time at least one month so it needs continues source for energy unless it die and this continues energy come from reacting of glucose with nucleotides. For this oocyte have 100000 nucleotides while sperm have one nucleotide only. This difference between these two cells is so obvious for understanding the role of nucleotides in human's body.

Connection between womb's tissue with oocyte means this cell become a part of womb's tissue like other cells get what other cells get to produce energy. Human's cells have two main roles produce energy from glucose and forming proteins as biology science show. Blood supply human's cells including oocyte by glucose for producing energy and give them protein or peptides for building proteins. In fact, after what this research proved about nucleotides, protein synthesis inside human's cells is something beyond this research explanation because as biologists think there are DNA's code and RNA three molecules that subscribed in build of proteins in ribosomes while this research does not find thousands of nucleotides for being a DNA's code or for being RNA three different types!

It is clear now from sperm and oocyte cells that nucleotides have a main role in producing of human's energy and preparing of nucleotides should be continued by human's cells but where this production should occur!

If there is no DNA's code and there is no tRNA, rRNA and mRNA in the cell then there should be a suitable explanation for this. Nucleotides have a known weight in the cell and they have a constant volume = 5-8 μm^3 and this research showed that a few number of them can be in the nucleus. Ribosomes which they have relatively small volume in typical human's cell cannot stand with 50 then what about thousands or more, where these nucleotides should be or it have to be!

In addition to explain differences between oocyte and sperm cells, this research should do another chemical review. The first chemical review was done on biology's procedures of DNA and chromosomes extractions for knowing what biologists found in nuclei and they thought that are chromosomes or DNA molecules. Now for finding the role of nucleotides inside nucleuses, a chemical review was done on; Introduction to metabolism (Krebs cycle, respiratory chain...etc.), Carbohydrates metabolism (glycolysis...etc.), Amino acids and proteins metabolism and nucleotides with nucleic acids metabolism. Oocyte have 100000 nucleotide and sperm have one nucleotide, this difference should lead to find the nucleotide role inside nucleus. This for finding nucleotides role in the cell and

for all human's body. However, after doing above chemical review, this research find that nucleotides have main role in producing energy for human's body!

Depending on perfect evidences, nucleotides role is producing energy for human body. Biologists were asked about source of energy of human's body and they said; ATP is the main energy molecules comes from glucose metabolism but they do not explain how these happen. There are so many evidences indicated what is the role of nucleotides inside human's cells in addition to oocyte and sperm facts but this research take the following evidences only:

1. Although sperm cells do not connect to human's tissue, them volume cannot stand with one nucleotide and they are so small rather than oocyte cell which is connected to womb tissue. These facts leading to one fact about nucleotides which have the main role in cell's energy, sperm cells do not need nucleotides because they do not connect to human's tissue for getting glucose from the blood. In addition, oocyte have 100000 nucleotides because they connect to womb tissue for producing energy by these nucleotides. In fact, sperm cells do not want energy they die in few days so they have one nucleotide or not for producing energy.
2. Electrical workers showed that when any one of them catch positive anode (+) of electric current without standing on the earth just them bodies with electric power, it should incur a electrical shock may be it dies. This because human's body have negative cathode (-).
3. Same electrical workers showed that when any one of them catch negative cathode (-) of electric current also without standing on the earth it should feel nothing, nothing should happen. Again this because human's body have negative cathode (-).
4. There are two kinds of electrical screwdrivers; First one is for checking positive anode (+) of electrical power and the other checking the negative cathode (-). In case of first one of positive anode it does not work, the small light does not shine unless human put its finger on the end of it to be as negative pole connecting to positive pole of electrical power, and this completing the circle for shining the light. This means human have negative power. This test was done for thousands times and the light does not shine without human finger as negative power.
5. The second screwdriver is checking negative cathode (-), it checking for negative power when put this screwdriver on human's skin its small light should shine because human's body have negative power and this screwdriver checking for negative power therefore the light shine from human body as negative power. This test was done for thousands times and results of these times proving that human's body have a negative power and this power differ from person to another in shining of small screwdriver because it depends on energy production by human's body.
6. When any person does not eat for one or two days it should lose its power and feel its weak. This is very well known without glucose there is no power for human's body, glucose is the power molecules for human's body.
7. Diabetes patients always they feel that are weak people because glucose stay in them blood and does not enter them cells.

There are many other evidences about energy of human's body and importance of glucose as fuel for it. Evidences showed sperm does not need nucleotides while oocyte need, also human's body have negative energy because glucose give it this energy. Chemical review indicated that there is no full explanation about energy of human's body and how glucose produce this energy?

When glucose entering the cell it reacts with ATP to produce glucose-6-phosphate then another ATP make it fructose-1,6-diphosphate, then in mitochondria in the last step glucose convert to CO_2 and H_2O. Therefore where the source of energy and why it is negative? In addition, what is the role of nucleotides in producing of human's energy?

Energy of human's body is more important to make human do its different activities so there must be a clear picture about how human get its energy and what molecules involved in this process, following steps should illustrate this depending on good facts:

1. Human's body provide energy production process by important molecules and human get other molecules (glucose) from its food therefore this process is participated process between molecules produced in human's body and molecules that human get from its food. In the first step of energy

production of human's body; The body produce insulin in pancreas in β-cells for reacting with glucose, it is more important molecule for first step and for make glucose more active to react with ATP inside the cell. This means production of insulin should be continued until human die. Human's body collect many amino acids together forming insulin, while this body take glucose from its food from outside source. For this, proteins (amino acids sources) is so important for human body more than glucose which is outside molecules. Human's body need proteins more than glucose because it produce insulin from them and it does not need to produce glucose. According to this, equation of first step can be written as [7]:

Insulin + $(Glucose)_n$ ⟶ n (Sodium gluconate) + other products ....[6]

Where n= 1-11 depend on reaction condition and on the two reactants.

For each about eleven glucose molecules human's body must prepare insulin molecule until the body die, body must continually prepare 51 amino acids arranged together in specific sequence and it doing this for long time. Huge amount of insulin that human's body prepared and must prepare for each day so what about one month, one year, human body need huge amount of proteins just for preparing insulin molecules for first step in energy production of human's body.

2. This step is main step in energy production process, after preparing insulin by human's body it reacts with glucose in the blood to produce sodium gluconate. This product penetrate human's cells for reacting with ATP and other nucleotides. In fact, insulin able to react with 11 glucose molecules while ATP can react with three at maximum of gluconate molecules. Of course volumes of human's normal cells unable to prepare molecules like insulin (51amino acids with high molecular weights) for first step in energy production so instead of this they must prepare more ATP molecules for increasing possibilities of reactions with gluconate. Human's body always need energy and it always get its meals (carbohydrates, proteins, lipids..etc.) three times in the day in addition to in between meals. Glucose concentration still high in the blood after about two or three hours or more which means its concentration remain high most of the day. In another hand, there must be same amount of ATP or other nucleotides that human's cells should prepare. This must force all human's cells to produce more nucleotides and keep the excess for any cases. Preparation of ATP by human's cells should be more than entering glucose, should be twice or three times than glucose concentration each day for being ready for additional glucose if anything happen.

Human's keep working for this it keeps eating all the time. This means it always needs energy then it always eating for getting this energy. Of course human's body must keep working to produce ATP and other like molecules in its different cells for reacting with sodium gluconate. Each day human eat millions or billions molecules of carbohydrates, proteins, lipids...etc. leading its body to prepare more than this amount by at least two times of ATP and other nucleotides.

Huge amount of glucose entering human's body make it prepare two or three times of nucleotides including ATP, then the question is; Where the body prepare this huge amount of nucleotides in different cells or even in the outer of the cell?! Continues energy need continues preparing of nucleotides so where this continues preparing occur in the cell or in outer of it?!

ATP and other like molecules consist from; nitrogen base, ribose sugar and phosphate groups with known weight and a volume about 5-8 μm^3 of each one. Energy of human's body represents everything for him/here, without it human should die or shutdown therefore there must be a specific path and specific organs inside the cell for preparing energy's molecules (ATP and other nucleotides). ATP and it's like molecules do not come from nowhere and cells cannot keep them inside it against concentration of blood's contents with other factors.

Different concentrations means if concentration of nucleotides outside cells less than inside they should run away means losing them therefore cells have to prepare more nucleotides continually for redressing. This is another case for preparing more nucleotides, these molecules are so important for human body there should be a known paths or from where they come?! In fact, proteins and nucleic acids metabolisms have showed how different nucleotides prepare and where they prepare!

For human's energy cell prepare different nucleotides in nucleuses. These organs prepare and storage nucleotides or they keep preparing nucleotides and some of them stay inside. It is two lines for

energy productions human keep eating this line for glucose production and the second line human's cell keep preparing of nucleotides in nucleuses. for this it is normally find some nucleotides in nucleuses (ten nucleotides or less). Nucleotides forming mainly from amino acids and proteins (Histon and other like proteins) of nucleuses are just a starting materials for nucleotides preparation. Nucleuses prepare different nucleotides for one purpose producing energy for human's body.

Nucleotides are just a chemical compounds preparing for producing energy, They do not have super properties for genetic theories they are just for producing energy for human different activities. According to nucleotides weights and volumes this research found that normal nucleuses have ten of them ready for reacting with gluconate, there are no genes or chromosomes, these molecules responsible for energy production only.

This reason why sperm have one nucleotides and oocyte have 100000, sperm do not contact to human tissue therefore they do not get glucose from the blood leading its life is so short without energy while oocyte contact to womb tissue get glucose from the blood live for about one month or it development to divide to so many times producing more cells finally they become a new baby. Oocyte need energy while sperm do not need.

In fact, biology science have more surprising good evidences, Biologists [2] said that different cells do not have one nucleus only there are many cells have two nucleuses "Binucleuate" or others have more than two nucleuses may be three, four, hundreds or thousands "Polynucleuate". They said there is a certain relationship between number of nucleuses with functions of them cells, more nucleuses needed for tissue that needed and as a result of this produce more energy. This means number of nucleuses depends on how much releasing energy from these cells (tissue) or depends on what the cell need from energy. Biologists [2] indicated that cells of heart, liver and muscles tissues..etc. have two nuclei because these organs do hard work for this they need more energy rather than other tissues in different bodies including human's body.

References [15] show that continuous degradation and synthesis of cellular proteins occur in all forms of life. Each day, human turn over 1-2% of their total body protein, principally muscle protein. As it was shown before muscles have two nuclei therefore they consume more protein each tissue do hard work have more nuclei and need more proteins of course this amount of protein not for structural rearrangement as this reference indicate. It is true that muscle's tissues consist from known cells surrounding by membranes and also nuclei has a another membrane, all these membranes contain proteins so where structural rearrangement should occur in each cell!? Each cell has specific life time but not each day they consume 1-2% of all proteins. This means one fact muscles have two nuclei need more protein for producing more energy and keep specific organs work continually (heart, liver...etc). This fact is additional evidence for this research.

Actually according to human's body, different cells of heart, liver and muscles have harder function than other tissues, they move all the time for this they need energy all the time so two nucleuses are just enough for releasing more nucleotides to be ready for reacting with gluconate to produce continues energy enough for them hard work.

This research noticed that biologists [2] were uncomfortable and unlikely to talk about binucleuate or Polynucleuate cells they said they do not have enough information about them also scientific references were not enough in them knowledge's sources. In another hand, Biologists [2] said that they learned above facts about number of nucleuses for students in pharmacy school. Therefore, for understanding this strange behavior this research asked a scientific biologist about binucleuate cells and what they think about them? She said [2] binucleuate cells have two nucleuses each one have same number of chromosomes 46 chromosomes. Moreover, she answered the question about how two nucleuses controlling one cell? By saying if assuming that these two nucleuses were A and B then when chromosome 1 in A work chromosome 1 in B must be shutdown and this true for other chromosomes too. Unfortunately the biologist does not answer this research about whose responsible for make chromosome 1 in A work and shadowing 1 in B! In fact, this research have a lot of questions such as biologists believed that all chromosomes work together or half of them so whose can recognized between which chromosome must work and the other not!? There is no logic in biologists

thought because binucleuate cells mean they have two controlling centers (two nucleuses) one should work in opposite to the other so one of them must neglect the other or one must destroyed the other.
It is not just obvious it is more than this that there is a clear relation between number of nuclei with producing energy from them cells. When cell's function need more energy this means more nuclei to form more nucleotides for reacting with more gluconates to produce more energy.
There is another good evidence about this fact, different cancer cells are stronger than normal cells they dividing much more faster than normal cells in different tissues of different creatures. Dividing processes of cancer need more energy rather than normal cells, therefore, these abnormal cells have two nucleuses not just one like other cells because they need more energy. Therefore, explanation of this research is so clear it is a fact it depends on good evidences and this evidence about cancer cells is more than enough that are strong cells have to produce more energy for continues in dividing processes for more growing than normal cells, cancer cells are abnormal cells because they have two nucleuses two chambers for producing more nucleotides to react with more gluconates releasing more energy than normal cells.
Then the fact of nucleuses are just a special chambers for producing different nucleotides from protein that exist in them or getting them from others sources. Nucleuses are not alone all the cell is involve in energy production process such as Endoplasmic reticulum and ribosomes are just organs for supplying proteins and different amino acids to nucleuses for preparing important molecules "nucleotides". All human's cells are organs for producing energy for human different activities and they have another activities such as; Termination step that occur in mitochondria.
Glucose and nucleotides are the source of energy for human's body and other like creatures so explaining how this happens following figure show three possible interactions of gluconate with ATP or with other like nucleotides:

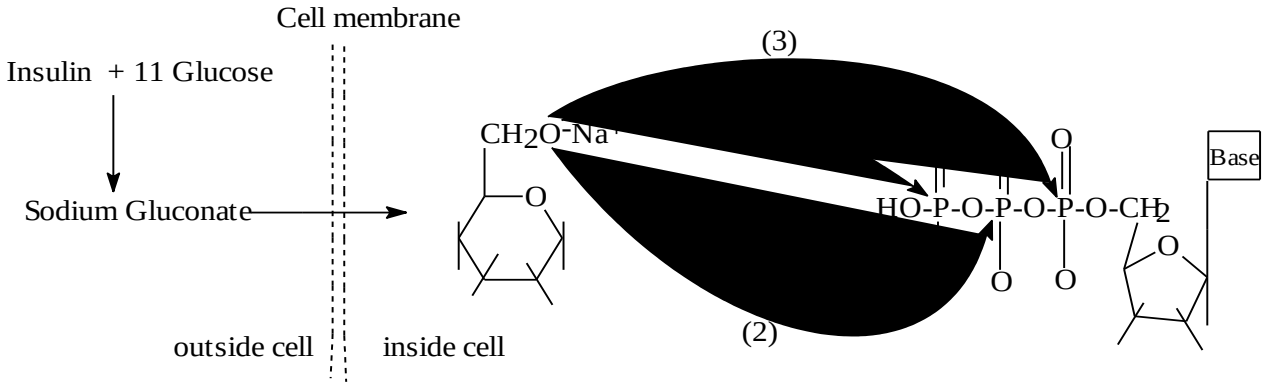


Figure (13): showed the three possible interactions between gluconate with ATP molecules.

Noticing that phosphate groups of ATP are highly active as electrophile moieties because oxygen is more electronegativity than phosphor then it should withdrew electron density to be partial negative moieties making phosphor partial positive more active moiety. This for one oxygen atom, above phosphor surrounding by four oxygen atoms then this should make phosphor be highly active electrophile rather than all other molecules of cell's contents. In addition, sodium gluconate is highly active nucleophile because oxygen more electronegativity than carbon lead oxygen to be more active as nucleophile than other atoms of cell's contents or blood's contents. This reaction of gluconate with ATP and other nucleotides is the source of energy of human body and other like creatures.

ATP (Adenosine triphospates) and other like molecules are responsible for; keep heat of human's body be continually constant "isothermal body", Bio-constructions in human body, human's movements, active transports of bio-molecules, electrical potentials of nervous systems...etc. In short words, ATP and other nucleotides are responsible for all human's activities as human being. This was very known in biochemistry books for ATP and other like molecules in human's body but it is unclear how this molecule do all these.

ATP and other like molecules are the source of energy for human's body and for other creatures. This true as product from human body, there is a outer products glucose is the other source, by both sources human's body get its energy for doing its different activities.

Figure (13) show three paths for reacting of gluconate with ATP and other nucleotides and there are three hydrolysis reactions give known specific free energy (DG) as follow:

$ATP + H_2O \longleftrightarrow ADP + Pi$ DG = -7.3 Kcal/mole ..... [7]

$ADP + H_2O \longleftrightarrow AMP + Pi$ DG = -7.3 Kcal/mole..... [8]

$AMP + H2O \longleftrightarrow$ Adenosine + Pi DG = -4.4 Kcal/mole ... [9]

It is important to notice that above hydrolysis reactions are same nucleophilic reaction of gluconate with ATP and other nucleotides. Absolutely hydrolysis differ than nucleophilic reaction, attached by water molecules should give less than true values of attached by gluconate. Free energy (DG) that produce from nucleophilic attach by H_2O is less than free energy of nucleophilic attach by gluconate molecules. This because H_2O molecules attached ATP producing intermediate with rearrangement resulting ADP + Pi as following figure:

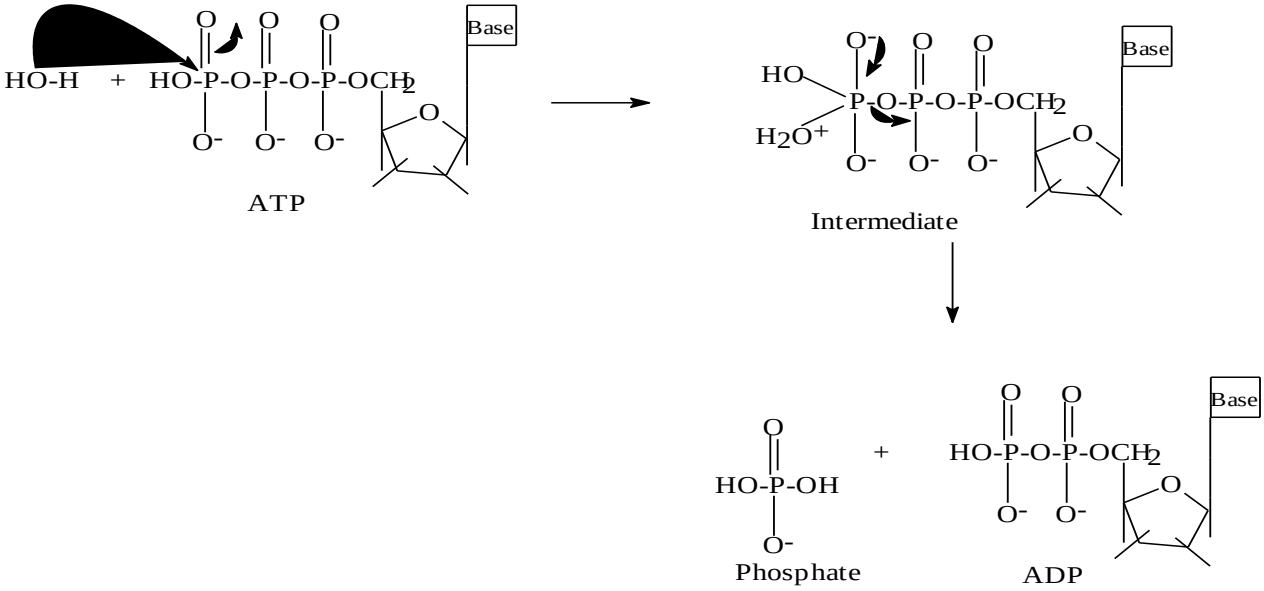


Figure (14): Showed mechanism of hydrolysis reaction.

Attached of Gluconate as nucleophilic is differ than above attach by water, because the size of gluconate is bigger than water molecules leading to more repulsion with gluconate's moieties resulting split one phosphate group from ATP there is not intermediate or rearrangement gluconate forcing ATP and take a phosphate from it, this happens stronger than water molecules. In fact, gluconate splits phosphate from ATP stronger than H_2O so the true of free energy (DG) of this reacting should be higher than -7.3 Kcal/mole. This releasing energy of reacting of ATP with gluconate is the main energy of human's body to do its different activities. Flowing figure Number (15) after next point should show all steps of gluconate inside the cell until it convert to H_2O and CO_2.

3. This step is the last step in energy production of human's body, this research called it "termination step". All unwanted excess bio-molecules such as; carbohydrate, proteins, lipids convert to two products CO_2 and H_2O by this step which consisted from very known stages with many details; Metabolism of carbohydrate, metabolism of lipids, metabolism of proteins, metabolism of nucleic acids, Krebs cycle (Tricarboxylic acid (TCA cycle)), stages of respiratory chain...etc. All these are just termination steps, they explained how human's body remove unwanted excess bio-molecules from its cells. Actually, human always took more than what it is exactly need so these termination

steps are so important for human's body to remove unwanted bio-molecules through changing them to be a water and carbon dioxide.

In fact, there are another products such as; Urea, uric acids...etc. but H_2O and CO_2 are the most products resulting from continues reactions that happens in human's different cells. Unfortunately the truth of this human's life about this step its cannot stand with amounts of human's eating.

As it is mentioned before all organs of human's cells participated in energy production steps, nucleuses and other organs containing nucleotides such as; Endoplasmic reticulum, Ribosomes, Mitochondria, they are producing of, or they participating in producing of different active nucleotides. This for preparing active molecules to react with gluconate for producing free energy. Whereas mitochondria organs mainly responsible for termination steps, all unwanted excess bio-molecules; carbohydrates, lipids, proteins..etc. are removed by Krebs cycle in Mitochondria.

Most of unwanted excess bio-molecules are removed by cell's membrane to the blood which removed them by two known ways; with urine or with stool. Human always removed its unwanted bio-molecules to its surrounding environments either as CO_2 and H_2O from mitochondria or as urine and stool from other organs. Therefore, it is well known nowadays that human affect its surrounding environments [8].

After knowing how human get its power and the sources of this power it should know this from following figure that showing the three steps of energy producing for human's body:

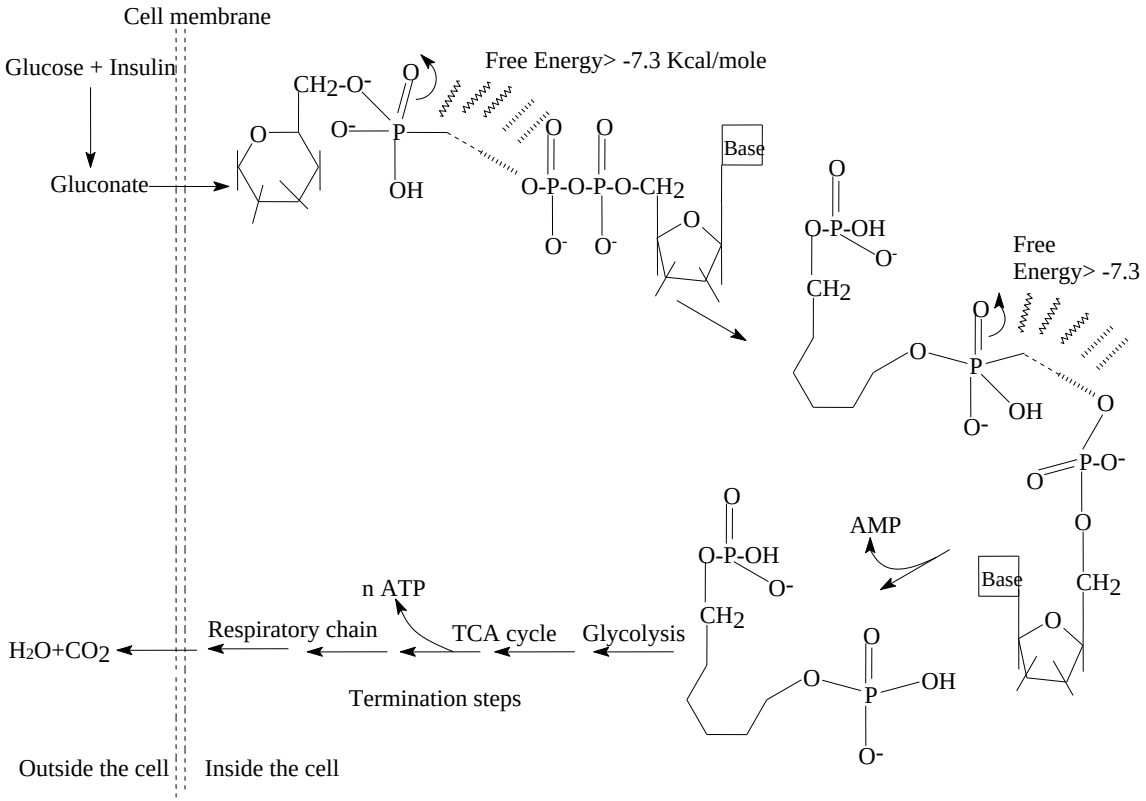


Figure (15): showed all steps of gluconate inside the cell until it becomes CO_2.

This paths of glucose inside human's cell show how it is so accurate system a molecule originally it bonding with other like molecules thousands or millions of them connecting each other by glycosidic bonds, human eat them and hydrolyze them step by step until get final product (glucose) in its blood. These polysaccharides (glucose polymer) convert to its components glucose units in intestinal then these units should move through the blood to reach all human's cells. A molecule that made in human's body (insulin) convert these glucose units to be more active gluconate

for reacting with another molecule that made in human's body active electrophiles ATP and other like nucleotides. Gluconate react with ATP and other like molecules twice inside each cell releasing at least -14.6 Kcal/mole for each cell and for one glucose molecule.

After releasing this free energy about (-14.6 Kcal/mole), all molecules of human's cells return to its original status as they are before and glucose convert in the final step to CO_2 and H_2O. These an amazing paths as energy production of human's body give clean energy without any side products or unwanted molecules just energy with CO_2 and H_2O.

Above figure (15) showed that gluconate after reacting with ATP or with other nucleotides it capture phosphate group for releasing (-7.3 Kcal/mole). Four oxygen atoms of this capturing group repulsion with oxygen atom of carbon number (1) in gluconate resulting a position that this oxygen be far from these atoms of phosphate group make it free as active electrophile. This active oxygen atom react with another ATP or with any other nucleotides capturing another phosphate group. Glycolysis steps indicated that the product of this, is fructose-1,6-diphosphate while this research showed in above figure it is glucose molecule does not convert to fructose because this changing needs two additional steps reduction carbon (1) and oxidation of carbon (2). According to chemistry science this should happen as this research show without changing carbon (1) or any other hydroxyl groups of gluconate. It is impossible reduction and oxidation in same molecule because if any molecule is reduced should be back by oxidation also the opposite right too, or where these reduction agents or oxidation agents should be in the cell, this paths represent energy's paths for relatively big animal mean it needs continues agents huge amount from oxidation and reduction agents so where are they made! Finally, when any chemical molecule oxidized it is difficult to return to its original form unless there is reduction agent be there and this means another additional reactions. There are another chemical reasons but above reasons are enough. Attaching of second nucleophile give gluconate-1,6-diphosphate and releasing another amount of energy (-7.3).

Above figure (15) shows so nice path for gluconate when it enters the cell and find ATP alone without other millions different molecules to react with for producing energy, this does not happen. Cell contains so many different molecules so many active molecules, gluconate and different nucleotides must react with them forming so many different molecules addition to what the cell already have. This situation is impossible for anyone to predict what gluconate or ATP and other nucleotides do if they do not react each other? what these molecules should react with? For this it must be enough nucleotides producing from nucleuses for be ready for gluconate and this what exactly happen in the cell. Furthermore, different nucleotides exist in most organs as it mentioned before for assisting nucleus in forming of different nucleotides for human's energy.

It is important to notice that the cell have different molecules and they are near each other without any separating aspects so they should react each other to form different molecules. Depending on specific paths for human's body activities, one of these molecules are nucleotides that they produced in nucleus from three different molecules, nitrogen base, ribose and phosphate. These different molecules exist in same so small limiting space (nucleuses) near each other so they must react each other to form many molecules such as; AMP, GMP, CMP, UMP, TMP, dAMP, dGMP, dCMP, dUMP, dTMP, cyclic nucleotides, Xanthine, Hypoxanthine...etc. so this indicate that many molecules produce from interactions of different molecules in nucleuses.

Biochemistry books contain so many different nucleotides, this research believe that there may be another molecules do not mentioned in these books and they exist in human's cells because as mentioned before different active molecules together in limiting space means many products impossible for anyone to characterize them.

In fact, the difference between deoxy-ribose and ribose is just one oxygen atom impossible for any chemical technique to characterize between them depending on this difference, and also the differences between the five bases (A, G, C, U and T) is oxygen instead of amine or adding additional amine or methyl moiety, these differences are difficult to most chemical techniques to characterize

between them. Therefore, assuming chemical structure for nucleotides may not be the right method for study important phenomenon such as human's energy and cells division.

However, this research also believed that human's body was created and work in very accurate method so preparing of nucleotides in nucleuses must produce molecules contain five different nitrogen bases and two ribose types and number of phosphate groups; one, two or three. For this, nucleuses does not produce just ATP that it should react with gluconate, other nucleotides were prepared too as above figure (15) that shows in the "box" there is one word "base" means any base of the five bases or there are another bases chemical experimental characterization should know them.

It is so difficult to imagine what should happen inside the cell different molecules near each other, for this they should react each other in same time and in continuous reactions. Perfect system work continually for all the time its reactions happen in same time, it is so difficult to follow these reactions and knowing them products but there are basic points can be illustrated in the following figure:

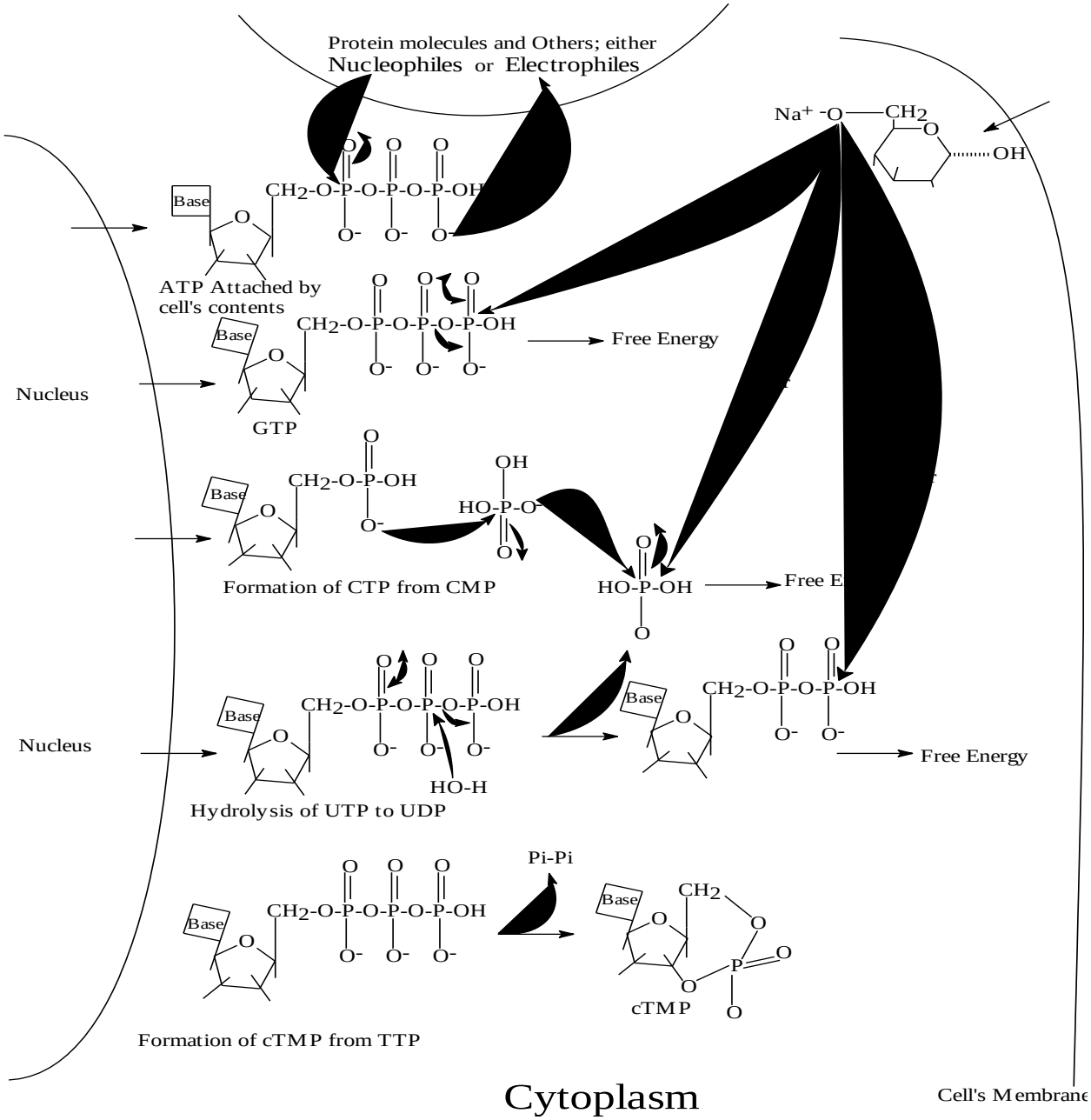


Figure (16): Showed main reactions that happening in cytoplasm.

This figure show main points which it contains a lot of details this research should explain; Biologists [(2)] indicated that cytoplasm consist mainly from; 80% water, 15% proteins and 5% other molecules such as nucleotides, different minerals..etc. this means one scientific fact water is the solvent and other molecules are solutes. For this cytoplasm should contain water soluble with nucleotides and different minerals; Na^{+}, K^{+}, Mg^{+2},...etc. while for proteins the situation is differ because proteins contain polar and non-polar moieties, in aqua's solution (cytoplasm) they should show polar moieties and hide non-polar one. Amino acids like; Ser, Lys, Arg, Asp, Glu, Asn, Gln, Cys...etc are active nucleophiles while amino acids like; Arg, Asp, Glu, Asn, Gln...etc are active electrophiles.

Therefore, protein molecules in cytoplasm are contain both active nucleophiles and active electrophiles easy to react with nucleotides that producing in nucleuses, this interaction between protein molecules with nucleotides inhibit energy production that producing from interaction of nucleotides with gluconate.

Another facts of high activity Phosphor atom that is known in previous reactions and mentions as active electrophile. This activity is well known in the cell by forming as example cAMP, cyclic nucleotides. These molecules forming from interacting of internal oxygen of carbon 2 of ribose with active phosphate group. High activity of phosphate forced nearby oxygen of same molecule to attach it, and this an evidence of high activity of nucleotides as active electrophiles. However, this internal interaction should inhibit energy production as same as proteins inhibition.

It is important to notice that these interactions of protein or internal oxygen with nucleotides may not change nucleotide for long time the cell should repair them after specific time. In fact, most important factor effected nucleotides its concentration in the cell and out the cell which force them to runaway outside the cell.

If concentration of cyclic nucleotides inside the cell is more than outside it, cyclic nucleotides should run away from the cell. The fact is differ than this because nucleotides are in equilibrium status with the cell and without of it means them production in nucleuses is in equilibrium with both; their changing (as cyclic) in cytoplasm and their runaway outside the cell. This indicate that nucleuses produce nucleotides and a specific amount of them become cyclic nucleotides and others are runaway from the cell, these must inhibit important reaction with gluconate to produce energy for human body.

In fact, chemical rules indicate there are another possibilities for nucleotides reactions to form another molecules because these different molecules are in same limiting space nothing can stop them from reacting each other forming another molecules not just cyclic nucleotides or others.

Following figure show how cyclic nucleotides form and how they were repaired by water molecules in addition to formation of nucleotide-protein complex and how to repair by water molecules too:

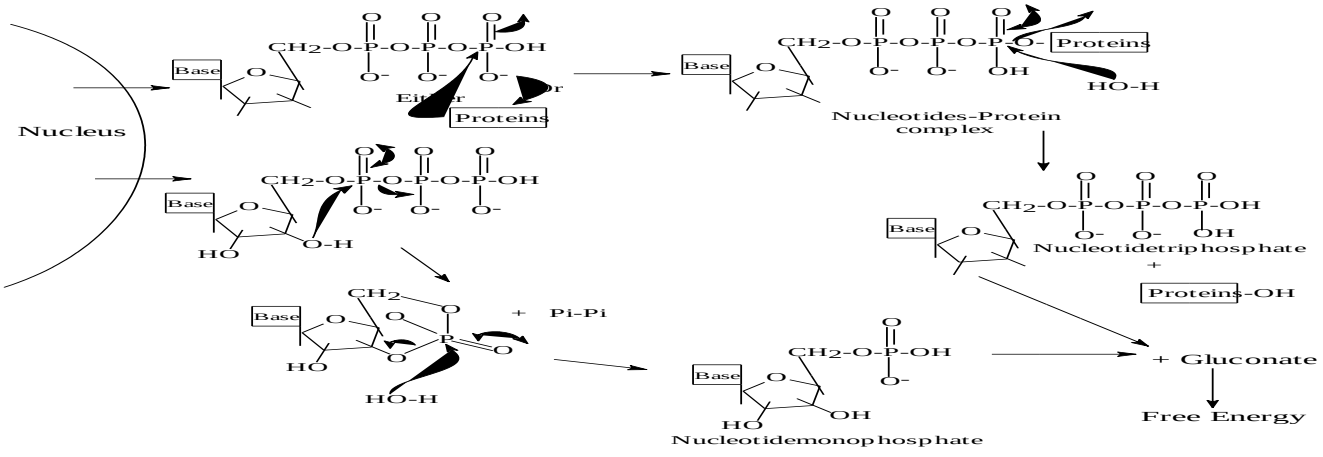


Figure (17): Show inhibition reactions and how water repair them.

Water molecules are so important molecules in cytoplasm because they can repair inhibition reactions of cyclic nucleotides or protein-nucleotide complex as it is shown in above figure (17). However, constant concentration of cyclic nucleotides 1µM means formation reactions of these nucleotides are continually happen. Nucleus keep producing different nucleotides and some of them become cyclic easy to repair by water molecules. Energy production for human's body should decrease by formation of cyclic nucleotides because repair reactions figure (17) produce mono-phosphate nucleotide instead of Tri or Di-nucleotides and this nucleotide give just = - 4.4 Kcal/mole instead of -7.3 Kcal/mole as for Tri or Di-Nucleotide.

Moreover, reaction of gluconate with mono-phosphate nucleotide is stronger than other nucleotides because phosphate group is closer to ribose rather than other nucleotides it is difficult for gluconate to attach it through this molecules. Then cyclic nucleotides reduce energy production need more proteins to prepare more nucleotides for restoring cyclic one in nucleus.

In fact, formation of cyclic nucleotides in cytoplasm indicated that producing nucleotides were stay long time in cytoplasm pushing internal oxygen to react with its phosphate group. For this more taking proteins is not good option because water molecules should repair this situation by opening cyclic nucleotides to produce mono-phosphate nucleotide then this mono-molecules must react with other phosphate group to form Di- or Tri- nucleotides as it is mentioned before in figure 16. This means for reducing production of cyclic nucleotides more taking phosphate is better than taking more protein. Phosphates can be found in coca cola drinking.

Drinking of coca cola better than eating more eggs in case of repairing cyclic nucleotides getting more energy because cyclic nucleotides are just about 15-20% of all nucleotides that produce energy. Figure (16) show five different lines; Two of them are cyclic nucleotides and proteins-nucleotide complex, they about 40% from all nucleotides that producing from nucleus and they inhibit reaction of nucleotides with gluconate. While three lines they about 60% from all nucleotides can react with gluconate to produce free energy.

In addition, repairing of inhibition reaction can return about 20-25% to all energy production process to result as final products give about 80-85% free energy of all interactions of 5 gluconate in five lines. The fact is totally differ than this because this for calculations only, number of gluconates that enter each cell is unknown also repairing time is unknown therefore above percentages are just proximately numbers but it is more important to notice that there are constant amount from cyclic nucleotides and for repairing them there must be more phosphate should be taken.

Biochemistry references [11 and 15] showed that known processes such as; Kreps cycle, glycolysis..etc. produce continually certain amounts from ATP while the truth of this that these amounts come from ADP or AMP that got additional phosphates to become ATP molecules again. Therefore, it is unlikely to mentioned that these processes produce good amounts from energy molecules "ATP" while the fact is that they do not prepare ATP they convert ADP or AMP.

This indicates that each cell of any creature like human have always ATP molecules in their cytoplasm, these molecules are repaired continually to be always ready for attaching by gluconate molecules to produce energy. This happens even these ATPs lose phosphates moieties when they attach by gluconate molecules to be ADP or AMP as it is shown in figure (16). This fact come from that phosphor atom in phosphates moiety binding to four oxygen atoms which are more electronegativity atoms leading to phosphor should have partial positive charge while oxygen atoms should have partial negative charge, this means that phosphor atom is a good electrophile while oxygen atoms are good nucleophile. In fact, Phosphate molecule is amazing molecule into each cell because it has both and it acts in opposite way make it more active than other molecules therefore it attaches by many molecules forming different molecules inside bodies of different creatures [11 and 15].

Without any catalyst such as enzymes or others, ADP is an active molecule in limiting space contain three active nucleophiles should get any free phosphate to be ATP again or may attach other electrophiles. In addition, AMP should catch additional phosphate to be ADP then catching another phosphate to be ATP. Different molecules inside each creature react each other according to them right properties them chemical properties.

However, for increasing human's energy there are three important factors; Firstly, taking more proteins to produce more insulin in β-cells and more nucleotides in nucleuses. Secondly, more glucose means more gluconate inside the cell to react with nucleotides for producing more free energy. Thirdly, phosphate groups for increasing energy production more phosphate is needed. These three factors can increase energy or decrease it depending on them, and for proving these results the life contain many examples should show these as follow:

Ordinary people eat each day at least three times getting many molecules including; proteins, sugars, lipids, nucleic acids, phosphate...etc. for their life to be continued because without eating people die in about seven or more days after losing its storage energy or storage energy's molecules. Nowadays in Syria and in Iraq people died because there is no foods, then food is so important for continuing human's life.

Biochemistry indicated that carbohydrates (sugars) and lipids are used by human's body for producing its energy while proteins are for building processes only. Then this science indicates that proteins molecules are not used for energy production, while this research proved that proteins with carbohydrates are responsible for human's energy, human's energy produce from reacting of glucose with different nucleotides. There must be a good example for proving which one is the right one!

Normal people eat different molecules including these energy molecules (protein, carbohydrates, lipids..etc.) for them life to be continue. Whereas there specific people need more energy more than normal people for them different activities. These people are sportsmen, they need more energy for them different sports more than normal people.

It is so known for long time ago that sportsmen using raw eggs with milk as energy food, they eat eggs with milk for being strong people to do them different sports. In fact, sport's people are good evidence for this research indication they do not need just energy they need more energy rather than ordinary people so they tested many different foods for many generations just for getting more energy and they found as generations result that mixing of raw eggs with milk should give more energy as they need.

They tested this and it works but they do not know its scientific basics that egg and milk contain high ratio of proteins. In fact, raw eggs and milk contain huge amount of proteins while so less amounts of carbohydrate. After raw eggs with milk sports people found another energy molecules! they used different energy molecules at last they found another good energy molecules "free amino acids".

The question is; What raw eggs, milk and free amino acids should contain for increasing sport's people energy?

As mentioned before they contain huge amount of connected amino acids as proteins or the other example are free amino acids with other contents; low concentration of lactose in milk while raw eggs are normal cell consist from cytoplasm and big nucleus. Cytoplasm contain; protein, cholesterol and other lipids, different nucleotides and different minerals while big nucleus contain a lot of nucleotides. Then above mixtures of eggs, milk and free amino acids contain; huge amount of proteins as connected or as free amino acids, nucleotides, cholesterol and other lipids, lactose, different minerals...etc. respectively.

Experimentally tests show that these mixtures increase body's energy of sport's people so what they can do inside human's body?! As mentioned before Biochemistry books indicated human's body use carbohydrates or lipids for producing energy and proteins do not do this. Human's body use proteins for Bio-construction then is egg and milk contain lipids or carbohydrate? Of course they are not, they

contain huge amount of proteins and nucleotides then what the role of proteins in the body of sport's people for increasing them energy? Different cells of sports bodies use proteins for preparing different nucleotides to react with gluconate for producing energy so more proteins lead to more energy.

Sport's people found that free amino acids are better than other energy's molecules for increasing them energy, free amino acids means easy for sportsman's body to form more nucleotides in nucleuses faster than when taking protein molecules because proteins is big molecule poly-amino acids need long time inside the body to degrade to free amino acids and may finally not reach all cells causing less energy than using of free amino acids easy to absorb by human's body to reach all cells in less time.

There is another good evidence in addition to different sport's people, astronauts need little useful foods in same time this food should produce high energy so they took foods with high proteins ratio not with high carbohydrates or lipids ratios! This is in opposite to scientific books about these molecules. Astronauts do not need build them bodies, they needs enough energy for their bodies to be continued in them activities so it should take high ratios from lipids and carbohydrates respectively. Students of Chemistry department were learned that lipids give about 9 Kcal when they oxidize one gram from them inside human's body while proteins and carbohydrates give about 5.5 Kcal and 4 Kcal respectively. These student should wonder if they know that astronauts took high ratio from protein instead of taking high ratio from lipids!

Logically 3 kilograms from lipids should give about 27000 Kcal better for astronauts than just 16500 Kcal that produce from 3 kilogram of proteins. In fact, astronauts bodies need energy molecules not bio-construction molecules therefore they should take high ratio from lipids because they give high energy higher than carbohydrates or proteins.

This research think that astronaut start them jobs as spacemen may be after 35 years of them ages means them body increase bio-degradation rather than bio-construction so according to biochemistry books they do not need proteins they should take lipids in them journeys. Of course astronauts bodies become meager than before, after doing them journeys so they do not need proteins for them bodies that have enough proteins even for bio-construction processes.

There is no reasonable reason for astronaut to take more proteins rather than other molecules unless proteins did what they did for sport's people. This research explain facts and what it really happens that nucleuses prepare many different nucleotides from different proteins for one target producing energy for all creatures to do different activities. Nucleuses prepare enough nucleotides send them to cytoplasm for reacting with gluconate resulting high energy for sport's people or for astronauts. These two evidences of sport's people and astronauts are good evidence for this research.

A scientific discussion were happened in biology department in presence of some biologists with specialist sport's lecturer. When this specialist knew that students of third and second stages study in biochemistry classes that proteins have nine important functions last one they act as energy molecules in special circumstances. The lecturer does not believe this! In fact, biochemistry books mentioned that proteins have important eight functions and last one is that under special circumstances protein may become source for energy. Sport lecturer does not agree with biochemistry books because he said that he study that order of energy molecules are; Carbohydrates, proteins and lipids respectively. Biochemistry books show different order; carbohydrates, lipids and proteins in case of special circumstances. The fact of this, sport's lecturer order is same of this research results that carbohydrates with proteins together are produce energy for human body.

All sciences were existed due to find the right explanation for everything around human beings so scientists must explain everything according to right explanations depending on facts do not according to what they found or what they saw! They must not defend on myths that not have enough evidences. This research hope that all scientists do this and agree with it to help who want assistant.

However, sport's lecturer and biochemistry books agree that carbohydrates (glucose) are important molecules in energy production process for most creatures but both of them are disagree with which molecules come next lipids or proteins?

For years now students are learning in Biochemistry books that proteins are used for bio-construction processes only and for special circumstances such as fasting or diabetes, they become energy producing molecules. Metabolism steps of amino acids and protein do not contain anything about producing energy from protein or from amino acids. These information were very clear in biochemistry books and students know them very well but what about sport's people, space's people and sport's lecturer! They tested them results for long time ago that proteins are energy's molecules!

This is not for argument or it is not for proving this research points it is for finding the truth, the truth that different people taking different proteins for getting more energy while biochemistry books indicated that proteins do not have this ability. Human's body consist from different cells and these cells were well studied since long time, each one consist from known organs in liquid solution called cytoplasm. According to biochemistry science all organs of human's cells have known functions and all these functions do not include producing energy from proteins. Biochemistry's books indicated that human's cells do not have a function for producing energy from proteins while they have known paths for preparing proteins in the cell (ribosomes) by DNA cods with three types of RNA. In fact, biochemistry science showed that human's cells able to produce just proteins rather than all other molecules.

As it is mentioned before, this is not for showing who is right and who is wrong, or this is not for proving something differ than what it is already exist. Everyone should understand that cell division is so important process important than other phenomena just for understanding our life and other phenomena.

Human's cells prepare different proteins in ribosomes and protein molecules to be a protein should contain at least 40 amino acids so if each cell prepare protein molecule with just 40 amino acids in them ribosomes each day then total amino acids that produce from human's cells = 1045004618.34 different amino acids/day (This in case that total number of human's cells = 3.72* 10^13 cells [10]).

If human's body needs proteins of 1000 amino acids then producing protein from cells ribosomes should be 1045004.62 proteins molecules each day. More than millions protein molecules that body can produce each day. In fact, human's body does not have ability to prepare all amino acids it cannot prepare essential amino acids so it must get them from its foods. The truth of this is the cell can stand with amino acids volumes! Cells have limiting spaces as same as nucleuses so above indication need good calculations as this research did for insuring form above numbers.

It is a fact that human's body recycling proteins molecules mean they transfer from cell to another to form new proteins. Biochemistry books indicated that in metabolic fate of amino acids "metabolism of amino acids and protein"; That proteins usually do not degrade for producing energy in presence of carbohydrates and lipids in human body. They use for preparing different peptides or proteins or they use as a source for Nitrogen atoms (transferring of amine groups) for preparing another amino acids and also for preparing another nitrogen and not nitrogen compounds. The excess of amino acids that increased from above three main activities of proteins, degrading by elimination of amine groups resulting carbon compounds enter different bio-paths for completing degradation process and the excess amine groups become ammonia elimination out of the body [11].

Proteins or free amino acids transfer from cell to another to form another amino acids or forming of new peptides or new proteins without elimination outside human's body this means proteins, peptides or free amino acids stay inside the body and there are another proteins were come systematically from three or more meals each day. There is more than enough proteins in the body and there is another additional proteins that adding many times each day to body's proteins each day, most human's food contain high ratio of proteins. This why above book [11] indicated that there is

different paths for elimination of excess amino acids (proteins) whereas there is no paths for decreasing of amino acids in the body because there always proteins in the body.

If there always proteins in human body then why sport's people, astronaut, sport lecturer, need additional proteins!? The body have enough proteins from three meals each day so why above people adding addition proteins? why they do this? Free amino acids are widely used by sportsmen and they do this and their bodies have more than enough proteins. Human's body have enough proteins rather than other molecules so what the purpose for adding additional proteins?

Human's body have more than enough proteins because its foods three times each day contain at least 1:2 carbohydrates to proteins. Human's foods mainly consist from other different cells either plants' cells or animals' cells. Therefore, sport's people, astronauts and sport's lecturer do not need additional proteins for them activities they should take more carbohydrates or glucose for them different activities! In fact, they took proteins more than glucose at least two times as exactly what them bodies need, since very long time human's body took more proteins than glucose and this still continues until now.

In fact, human's meals contain more proteins than carbohydrates at least two times for one reason. Human's foods are a results of many generations that these food's types are suitable for human and for its different hard activities. Before very long time human's work was so harder than now so they tested many kinds just for knowing which food's types gave enough energy for this work. human's foods nowadays is come from tested results just for making human live as better as it can. Tested foods contain more proteins rather than glucose (carbohydrates) at least two times and this is exactly what the body needs. It is a fact that what human eat contains more proteins rather than other molecules, what the nature give human is exactly what its body need.

There is another evidence form people's history around the world before long time there are stories about very strong men such as Arthur king of England...etc. and these men have high energy because they eat complete cheep in breakfast each day. This means one cheep in breakfast each day is enough for making men be so strong and the fact of this that the cheep consist from; about 50% proteins and about 10% carbohydrate (glucose)..etc. It is clear that 10% of carbohydrate is not the reason of these men strength and high concentration of proteins is the right reason.

There is no right explanation for above facts unless proteins able to produce energy in human body. Energy paths of human's body are well known glucose react with different nucleotides to produce continues energy, glucose need continues nucleotides so nucleuses continually prepare different nucleotides from different proteins for this purpose.

In addition, β-Cells prepare insulin from proteins too. Then protein molecules are more important than other molecules such as carbohydrates or lipids because human's body need them to prepare insulin and different nucleotides for getting its energy. Continues energy all the time for all organs of human's body specially important one; Brain, heart, lungs, kidneys..etc. need continues stable energy therefore there must be a suitable protected space in the cell such as nucleus can do this, it has all necessary components and around it everything to be able to prepare nucleotides and preparing more of them all the time. Then more free amino acids mean more nucleotides leading to more energy and this what sport people tested and used.

It is clear now that nucleotides react with gluconate to give about (-7.3 Kcal/mole) and another reaction happen between glucose-6-phosphate (the product) with other or same nucleotide for giving another (-7.3 Kcal/mole) or there is another possibility which is above product (glucose-6-phosphate) should react with AMP resulting bout (-4.4 Kcal/mole) as it is shown in figure (15). Then for one glucose entering one cell two energies values should produce depending on reaction type either (-14.6 Kcal/mole) which is the major energy or (11.7 Kcal/mole) which is the minimum energy of AMP with glucose-6-phosphte.

Energy values are at minimum than the real values so it should be another studies for finding the real values for reaction of glucose with any nucleotide in human's cell. Reaction results of (-14.6 Kcal/mole) is much more than (11.7 Kcal/mole) in human cells and also the real free energy is more than 7.3 Kcal/mole as it is shown before so (-14.6 Kcal/mole) is the value of producing energy from reaction of glucose with two nucleotides.

Human's body have about 10^12 – 10^16 cells whereas Bianconi E. et al [10] indicated that total number of cells of human's body about 3.72×10^{13}. Therefore, free energy (G) that come from reacting of glucose (gluconate) with 2 nucleotides in each cell = 3.72×10^{13} cells * -14.6 Kcal/mole = -54.312 *10^10 Kcal for one glucose entering one cell of human's cells. Free energy (G) is refer to maximum useful work can get from a system with a constant of; pressure, temperature and volume. Human's body is a system with constant of; pressure, temperature and volume so -54.312 *10^10 Kcal is a minimum value for free energy (G) that producing from one glucose reacting with two nucleotides in all human's cells. Human's body use this energy (-54.312 *10^10 Kcal) for its different activities so either low proteins resulting low nucleotides or low glucose, decreasing of both molecules should decrease human's energy.

Biochemistry's Books and biologists [2] showed that energy's molecule of human's body and of most creatures is ATP (adenosine triphospates) and as it was shown before that biochemistry books indicate that ATP molecule responsible for; Bio-construction, human's body and other creatures movement, active transporter, electrical potential of nervous systems and keep temperature of human's body be a constant at 37 °C. In fact, they indicated that ATP molecule is responsible for most important activities of human's body but how this molecule produce energy?!

Figure (15) showed that cleavage of phosphate bond (-O—$P(O_3)$-) produce free energy about 7.3 Kcal/mole but is this what really happen!? Why cleavage of this bond give this energy while there are thousands or millions of different bonds of thousands or millions different compounds do not give like this energy!?

What this bond have and other millions different chemical bonds do not have, it must be have something differ than other different bonds and there must be a suitable explanation about this chemical phenomenon. Energy of Human's body is so important for understand how it work but unfortunately no one explain how ATP produce energy and how this truly happens.

The science have the answer of this and there are facts indicated that are a lot of bonds like phosphate bond produce high energy higher than phosphate bond. These bonds are explosion bonds produce so high energy higher than phosphate bond so many times and they consist mainly from;-C—NO_2, -C-O—NO_2 and -N—NO_2. Following compounds are arranged depend on decreasing in releasing energy to low one:

1. Ethyleneglycoldinitrate.
2. Nitroglycerin.
3. Nitrocellulose.
4. Trinitrotoluene.
5. Cyclotrimethylenetrinitramine.
6. Cyclotetramethylenetetranitramine.
7. Pentaerthrytoltetranitrate.

Following figure shows chemical structures of above seven explosions compounds:

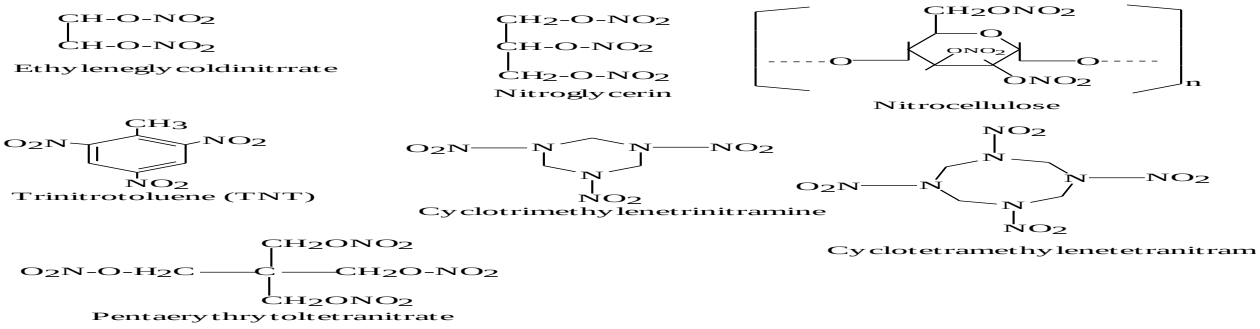


Figure (18): Show chemical structure of explosion compounds.

The truth of these compounds they are explosive molecules, they release so high energy when they decomposed. A chemical fact of these compounds, they are stable, normal and non-active compounds do not have explosive ability if they do not contain nitro-dioxide moiety such as; Glycerol, cellulose, toluene ...etc., in fact some of them are bio-molecules such glycerol and cellulose. Nitro-dioxide moiety is the reason of explosive ability and removing of this moiety (cleavage of X—NO_2 bond) release explosion energy such as Trinitrotoluene (TNT). This what Revital Cohen and its colleagues found [12], They found that cleavage of -C—NO_2 bond give explosion energy for TNT because each bond like this bond in TNT give high energy and each TNT molecule have three bonds then by summing energies of all these bonds in same molecule with other molecules of all TNT molecules, this must release so high energy "explosion energy". This is exactly as same as nucleotides in each cell, as it is shown in figure (15) cleavage of phosphor-dioxide (-$(O)_2$-P—O-) releasing high energy but it is less than explosion energy of TNT.

Nucleotide bond is (-O_2P—O-) and explosion bonds are;-C—NO_2, -C-O—NO_2 and -N—NO_2, a chemical fact of this that nitrogen have relatively same phosphor chemical and physical properties. They have same outer five electrons and they are in same group in periodic table so they relatively have same chemical properties except some differences. Then cleavage of (-O_2P—O-) should produce explosion energy like cleavage of O_2N—X where X= C, O or N.

This comparison should be with one molecule from explosion molecules and one from nucleotides, as trinitrotoluene (TNT) which have three (NO_2) groups with adenosine triphosphate (ATP) that have three (PO_2). Phosphor (P) have relatively same properties as Nitrogen (N) then ATP should release so high energy higher than -7.3 Kcal/mole for each cleavage bond.

If nitrogen and phosphor have relatively same properties then cleavage of nucleotides active (–PO_2) bond by gluconate should produce so high energy near or less than explosion molecules (–NO_2)!

Both of these bonds have many differences such as; Explosion molecules produce their energy from collecting all of them in specific space while nucleotides cleavage inside each cell alone do not collect with other molecules like explosion molecules, nucleotides react in water solvent (cytoplasm) while explosion molecules explode in relatively dry space, cytoplasm should spread producing energy faster than explosion molecules which they do not have spread medium, explosion molecules explode in limiting space while nucleotides do not have limiting space they have all creature body, explosion molecules explode in so short time focusing them energy in limiting space while nucleotides react with gluconate systematically step by step for long time after each meal may them reactions be for three or four hours after each meal so this energy do not have short time and it is not focusing on limiting space.

This long time of reacting of gluconates with different nucleotides keep creature body (human's body) have continues high energy all the time after each meal resulting human body have high energy all the day.

Human's body have many continually working organs so this needs continues energy, producing energy from reacting of gluconates with different nucleotides is continually producing and it continually absorbing through continues working organs. There is not an excess energy in human body in contrast to explosion molecules which are not have any absorbing organs or others. It is true that phosphor (P) and nitrogen (N) have almost same properties because they are in same group of periodic table but Nitrogen have higher electronegativity than Phosphor this should release less energy that producing from cleavage of (–PO_2) bond rather than (–NO_2) bond ...etc. there are another factors affected nucleotides make them releasing less energy than explosive molecules.

Energy that producing from reacting of different nucleotides with gluconates in each cell is more than enough for different activities of human's body or other creatures bodies. Chemistry have many unexplained phenomena one of them is releasing of high energy from cleavage of (–NO_2) or from (–PO_2)

rather than so many other chemical bonds. This may because that Nitrogen and oxygen have strong electronegativity stronger than other different atoms of periodic table so both of them bind each other want same thing, taking outer electrons to be near of its nucleus.

Moiety like (-NO_2) should have strong competition between (N) and (O) on outer electrons because they both have strong electronegativity so instead of fighting each other they focusing them strongest on neighboring groups to take outer electrons from them but when they find another strong electronegativity moiety such as another oxygen atom like Nitroglycerin and other like molecules. This means three atoms have higher electronegativity than other atoms connect each other want same thing outer electrons from neighboring atoms which mean they need same thing from each other for this all these atoms must share what they take from carbon atoms as example between them equally leading the bond be more strong.

As it is explained before the fact of atoms in any molecule they are just a small balls with known volumes stick each other without a distance like bonds that drawing in different figures so balls like three strong electronegativity atoms (Nitrogen and two oxygen) sticking each other searching for another atom for taking outer electrons. This should make connections (bonds) between them be stronger than other bonds and make them bond with normal atom like carbon be more strongest than other different bonds such as red bond in (-C—NO_2) three strong balls be a little around and focusing on normal same atom (carbon atom) sharing its electrons between them must this connection (above red bond) be strongest than other different chemical bonds so it should release so high energy when it cleavage higher than other different bonds in chemistry books when they cleavage.

It is obvious as a fact that when three or four more electronegativity atoms such as (C—NO2) or (-CH_2—O-NO_2) respectively bind to less electronegativity atom like carbon and all of them want same purpose from this carbon. Of course they do not fight each other all the time they share what carbon have between them equally or in fact nitrogen take higher than oxygen depending on electronegativity differences. Then this sharing between these atoms must make them bonds be so strong stronger than other thousands bonds in chemistry books. It is a fact that this sharing make special molecules of above figure (18) be explosion molecules.

Also when above three moieties (C—NO2) connect to another atom with strong electronegativity like another oxygen such as in (-CH_2—O-NO_2) this should make bonds (red bond) of this molecule be so strong stronger than others different bonds because four strong atoms connect each other have same strong activities connect to carbon atom. This sharing should produce high energy higher than other explosion molecules and this is truth because above bond (-CH_2—O-NO_2) produce higher explosion energy than other explosion molecules such as; Ethyleneglycoldinitrate or Nitroglycerin. These are good evidences for explanation of this research and they are stronger explosion molecules than others as it is shown before.

Chemical formula of nitroglycerin shows that four strong atoms (—O-NO_2) focusing them strongest on a weak carbon atom (-CH_2—O-NO_2), all four strong atoms (—O-NO_2) focusing on (CH_2) just for taking its electrons. This means four strong electronegativity atoms want some electrons from just one weak atom (CH_2) then they sharing what they take from carbon resulting stronger bonds between them stronger than other bonds. This happen for other two carbons in nitroglycerin resulting so strong bonds each atom want outer electrons sharing them resulting so strong bonds stronger than other bonds and unstable in same time.

Nitroglycerin is explosive molecules such as other explosive molecules and these bonds are stronger than other chemical bonds like; PO_2, SO_2, CO_2...etc. Therefore, NO_2 stronger than PO_2 and it releasing high energy higher than it.

An chemical expert [2] indicated that each compound contain NO_2 or NO_3 should be explosion compound and also biochemistry books [11] showed that important bio-energy compounds contain phosphate groups which means phosphate groups give these molecules them important as bio-energy

molecules. They arranged according to highest to lowest producing energy molecules as free energy (Kcal/mole) such as; Phosphoenolpyruvate, cyclic AMP, 1,3-diphosphoglycerate, phosphocreatine, acetylphosphate...etc.

The differences between explosion molecules with bio-energy molecules is nitrogen atom instead of phosphor atom while other factors are at minimum because both molecules produce energy according to same principles. This research prefer to end this explanation and it hopes that this explanation does not lead to prepare additional new explosion compounds.

It is obvious that releasing energy from cleaving of (—PO_2) is stronger than -7.3 kcal/mole but it is more than enough for human body.

Different carbohydrates (Glucose molecules) and different proteins are not free with no charges for human beings, humans should buy them for its meals each day. On another hand, there are important organs in human body work continually and independently which means they work all the time. These organs need continues energy and human sometimes do not have money or in another situations such as; fasting days, disasters like what happening in Syria, poor people..etc, human cannot get its food. Therefore, there must be another free continues sources for producing energy for human body.

Bio-energy molecules that mentioned in biochemistry books and some of them was mentioned in previous paragraphs are produce energy from metabolism of food so when there is no food these molecules do not form. Main path for energy in human's body is reaction of glucose with different nucleotides but if there is no glucose what should happen! All these energy sources in human body depend on carbohydrates (glucose) and proteins so without these molecules energy molecules do not produce. Human body created by so accurately and perfectibility method so there must be another continues source for producing free energy for human body which is oxygen molecules in the air.

Oxygen have highest electronegativity than most other atoms as mentioned before so when two of them bonding each other as in oxygen molecule (O_2) this should produce active molecule two strong atoms connect each other (O=O). This molecule exist freely in the air and when human get (breathing) it by its lungs, it faced human's blood which contain so many different molecules. As it is mentioned before, human body contain so many different nucleophiles and any electrophiles must effect, in fact, ferrous atom (Fe^{+2}) in hemoglobin may be the only electrophile that exist in high concentration in human's body.

Ferrous (Fe^{+2}) have high electron density and oxygen molecules searching for electrons, ferrous ion is electrophile positive ion while oxygen is nucleophile have free outer electrons to react by. These chemical properties and maybe there are additional points make ferrous have high affinity toward oxygen such as in formation of corrosion in presence of water molecules. Therefore, active nucleophile oxygen molecules (O=O) have one way in human's lungs which is attached high concentration of high electrons density electrophile ferrous atom (Fe^{+2}) forming a complex between hemoglobin and ferrous ($O=O^{+}$-Fe-Hemoglobin).

When oxygen coordinate to hemoglobin in coordination bond, connecting oxygen become positive unstable atom. Blood move relatively fast by the heart carry with it unstable complex (oxygen-hemoglobin) to all human's tissues. This complex reach most human's cells spread oxygen in all different cells which have positive ions (H^{+}), oxygen molecules prefer these ions rather than hemoglobin to form HO-OH then $2H_2O$ means this path should cleavage of oxygen molecules (O=O) and this cleavage must produce energy. Oxygen path inside human body from lungs until its bonds cleavages, is continues all the time producing energy all the time as following equation [(11)]:

$$1/2\ O_2 + 2\ H^+ + 2e^- \longrightarrow H_2O \qquad E= +0.816\ V$$

By multiplying the equation by 2 resulting:

$$O_2 + 4H^+ + 4e^- \longrightarrow 2H_2O \qquad E= +0.816\ V$$

Actually one glucose molecules become two acetyl-coenzyme A, so if each acetyl-coenzyme A produce 8 hydrogen ions (H^+) so two of them produce 16 (H^+) need 2 oxygen molecules ($2O_2$) then Electric potential should be E=+ 1.632 V. For one glucose entering one cell that produced 16 H^+ ions and +1.632 V. Number of human's cells $^{(10)} = 3.72 \times 10(13)$ then Energy of all cells that getting one glucose and 2 oxygen molecules = + 42636188.43 volts.

It is true that this electric energy is so high but it is not enough for human body. Unfortunately oxygen molecules are free molecules but they do not produce energy unless there is glucose molecule entering the cell which means free oxygen does not give human this energy unless there are glucose molecules. In fact, this energy need proteins for reacting with glucose to produce 2 oxygen molecules. This what exactly happened, human without food cannot stay alive for long time may six or seven days only.

Human have two main continues paths for getting it its continues energy for doing its different activities; Free energy produce from reacting of gluconate with different nucleotides that preparing in nucleuses DG = -54.312 *10^10 Kcal. and electric energy that produce from cleavage of oxygen bonds by H^+ ions that produce from gluconate path inside the cell (termination step) = + 42636188.43 volts.

For summing all human's energy and depending on relation of Free energy DG=-n F DE, then free energy of cleavage bonds of oxygen molecules in human body; DG =-8227505281337.1 J = -1966420956.34 Cal. = -1966420.96 Kcal, for both energies= -2020.73 *10^13 Kcal. This energy for all human activities and when human do not eat for long time its energy decreasing step by step until it finished, in addition above energy may decrease or increase depending on the food kinds that human eating.

It is important to notice that human's body have so many cells about $^{(10)} = 3.72 \times 10(13)$ so it is difficult to human's meals to have enough number of proteins or glucoses, there are so many differences between all human's cells and them food such as when human's meal does not contain enough proteins or glucoses then not all cells get same amount of these energy molecules means energy should decrease. Or if human get more than enough from proteins and glucoses (sportsmen, astronaut..etc.) then its energy should be at maximum all cells get same amounts of glucose and protein releasing high energy.

This means human's energy affect by its meals are they enough or not, depending on them with too many steps between these two points. In fact, each meal may not contain enough proteins or glucoses so the next meal should complete it or not the other should do that. Human's cells always getting additional proteins and glucoses so number of human's cells may equal or not to its meals each day for this its energy changing according to this variety.

Different creatures made up from different cells as same as humans and ATP is the energy's molecule for all cells in the world so above explanation about how ATP or other nucleotides produce energy is same as other creatures. ATP and other nucleotides are energy molecules for all creatures and this happens by cleavage of phosphate bond as shown before.

There are important facts mentioned before show that human's body have negative charge and above energy having negative charge (-2020.73 *10^13 Kcal), this should prove why human have negative charge. Human use its main both energies in its different activities and there are another sources for producing energy from bio-molecules as mentioned before but human mainly depend on above main two paths.

Explaining of human's energy is too important to understand how human's body work and this research hope above explanation is enough for understanding energy of different creatures bodies including human's body. This research tried to explain most important phenomena; cell division of human's cells and human's energy however it explained human's energy while cell division still not.

Biologists use so many procedures to extract DNA, RNA or Genes but the truth is; They do not extract any one of these molecules because they do not follow the right chemical rules. Different chemical

molecules and atoms have a specific weights and specific volumes in the space and definitely these weights or volumes do not equal to zero. In addition, there is no force can press atoms or molecules (different nucleotides) in the nucleus. There is no force in the earth can reduce weights or volumes of any atoms or any molecules to be zero or near this value.

There is no high pressure on nucleuses in human's cells or on other different cells of different creatures and they exist as they are. Preparing nucleotides in different nucleuses is for adapting them for reacting with gluconate to produce energy. Volume of each nucleotide is about = 8 μm^3 so if it is (1 μm) then human's nucleuses cannot stand with 150 nucleotides! This because that nucleuses have a specific volumes too they are not so big human can see them or they do not have infinite volume for being suitable for thousands or millions of nucleotides.

Sense and logic are important for explaining human's phenomena then how this possible that molecules with volumes about 8 μm^3 or 5 μm^3 be in thousands or millions in nucleuses! This far from sense or logic and this research surprised why scientists do not discover this before long time ago or even before few years nucleotides are big molecules how they are in thousands or millions in nucleuses!

It is impossible for 30 persons to be in small room 1*1*1 m^3 this exactly what nucleuses of human's body faced until now it cannot stand with 20 nucleotides and cell sciences mentioned that they have thousands or millions of nucleotides! This incredible because nucleus spaces cannot stand with 20 different nucleotides.

Then there are no Genes and there is no specific Gene responsible for cells divisions of human's body because originally there is no genes in nucleuses. Biologists [(2)] indicated that there are two theories for different cells division either due to unknown "Gene" or by unknown signal come to the cell from unknown source.

There are no genes in the nucleus so another signal theory may be the right explanation!

There are a lot of scientific points this theory do not explain or solve them such as which organ send this signal? If brain send this signal so is this signal is chemical compound or electrical signal? Cells organized in millions in different tissues so how this specific signal can penetrate through so many cells to reach the target one without reacting with other cells' molecules!? This impossible for specific compound and for electrical signal to penetrate through so different compounds to reach target cell. In fact, how this compound pass through many cells reaching target cell!

This impossible for any compound or molecule to pass through different cells unless different molecules of these cells stopping it, reacting with or changing it in one way or another chemical ways. Why this signal form or from what this signal form and according to what it pass to target cell! There are another important questions definitely signal theory cannot explain them.

The second case, If signal is electrical signal not chemical above questions still need scientific answers. In addition, how electrical signal be able to penetrate through so many cells to reach target cell! These cells have different molecules and ions that have positive or negative charges so how this signal able to pass through these charges it is impossible for electrical signal to pass through charges molecules or charges ions! It is so easy for cells of different tissues to absorb it step by step until finishing it but in another hand target cell is divided so how this happen! Signal was finished before reaching target cell and the cell divided into two or more cells then why cells divide and according to what?! what this signal do in the cell make it divided? Cells may start divided from cytoplasm or from nucleus [(2)] this means a lot of so different molecules changing through division process then what signal do in the cell to help it to do these changes?

Signal theory is a failure theory than gene theory and it cannot explain anything from its terms. Therefore, both theories are not correct and also it is important to notice that each phenomenon in this world if it have two different explanations then both of them are not correct. In fact, the

difference between gene and signal theories so wide due to one of them is inside the nucleus while the other come from outside, absolutely both of them are not correct.

If the cell do not divide according to specific gene or according to specific signal so according to what it divides! According to many evidences from human's body or others creatures that cell when divide it should face a suitable space and this space force the cell to divide. In addition, it is more important for any cell of different creatures including human to divide it must face suitable space and it has enough or more than that from good energy or good food. Different cells of human and all creatures are stick each other strongly according to chemical and physical conditions like following figure:

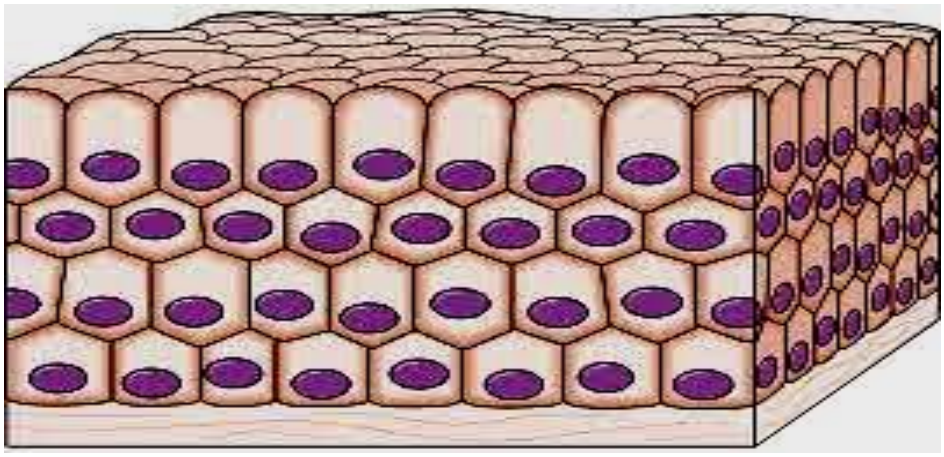


Figure (19): Show how different cells stick each other.

If these cells faced a suitable space with good food they compete each other to fill this space by dividing process. Many cells should be around this space so they compete each other to fill it either by starting dividing through cytoplasm or through nucleuses there is no rules for cell for dividing. There are many evidences prove that different cells naturally divide when they face a suitable space as follow:

1. Creatures like human start with one big cell "ovum" in suitable space "womb" in human being, if different cells divide through specific gene or specific signal then there is no need for womb. It is a fact that medicine cannot form a baby outside the womb it needs a womb mean it needs a suitable space. It is a fact that womb have a special tissue for connecting to the first cell "ovum" for providing it by what it needs but why it has a big space (womb volume)! It is a fact that womb's volume is bigger than other organs in women body and this for one reasonable reason give first cell (ovum) suitable space for making it divides as much as possible to made a new baby. Womb size is unusual and this for specific reason give first cell (ovum) what it needs to divide.
2. All the time over the world all animals including humans are wounded in different types hard or soft wounds and according to wound's type cells were divided until they fix them. Why these cells were so quiet then suddenly they dividing after each wound?! Wounds happen both inside or outside creatures bodies, sometimes both of them has occur in same creature, so whose responsible for making cells divided for rebuild damaging tissue after each wound! In fact, the only difference in this case is that wounds make enough spaces for surrounding cells to start divisions. There are so many kinds of wounds some of them do not need cell division they happen in outer skin, so how human's cells recognize between they should divide and they should not! In another hand if the gene is responsible for cell division so how this gene inside nucleus make all cells dividing after each wound? What this gene have to make all cells divide? There must be something unusual that gene do inside the cell for making it divide. All cell's components are chemical compounds so what the gene must do to make different reactions occur for resulting two new cells. This is chemically impossible for some few compounds in protected space (the nucleus) to make big changes in something bigger than them (all the cell)! Or when cell die or in case of simple wounds there are at least five cells around the die cell or around the wound cells so why one or two

of them divide while the rest not. All of them have same gene so why some divide and other not? Or why specific gene work in one cell and does not work in other cells. All the time human and all creatures have so many die cells replaced by another cells and when one cell die there are at least five or six cells around it why one divide while the other not? Why this cell divide to replace die cell while the other do not do this!? When cell die or in simple wounds a suitable space starts a competition process between neighboring cells and the ready cell should replace the die one because young cells are not ready not able to divide, this what should happen. Gene theory cannot solve why one neighboring cell replaced the die one while other neighboring not, all of them have same compounds (including same genes) so why one gene in one cell work while other genes not? In fact there are many questions about division and they can be answered by space theory of this research.

3. Most famous experimental technique and it widely used around the world, "tissues cultures" is simply refer to different cells from both animals including humans or different plants was/were cultured for specific scientific purposes. In this technique, different cells must be taken from target tissue after that they transfer to specific container for growing by division processes. The important fact of this technique is that cutting cells were in normal status within creature's cells before cutting process then they begin dividing in specific container means they divide because they find enough space. Tissue culture is just a process for giving different cells animals or plants enough space for dividing. Cutting different cells that are in quiet status or in normal sticking status without divisions then they divide after that when they find a good container (a good space) means they do not divide until they transfer to an enough space, this is the fact of tissue culture. Different cells need food and other components with enough space to divide to several young cells tissue culture give them this. Scientific fact of this that cells of different tissues have food and other components but they do not have enough space so tissue culture is just provide them what they need to divide. It is important to notice that cutting cells do not divide before and they start divide in specific container in tissue culture, the only difference between the two status before cutting and after it, is the appropriate space and this a good evidence for this research target. According to Gene theory different cells should have same genes so why they divide in specific container and they do not do that before in target tissue! Gene or signal theories cannot explain this while space theory can do that very easily. Tissue culture is just an additional provment for space theory.
4. Cancer is another good evidence for space theory. There are many types for cancer, some of them are not spread in patient body while other move to another organs and others...etc. This fact of this disease is well known such as in bladder and breast cancers, cancer cells of bladder do not move or transfer to another organs while they transfer to another organs in breast cancer. The only difference between bladder and breast is the volume which make cancer cells face appropriate space in case of breasts cancer while in case of bladder they do not. Another example, lung and skin cancers, lungs are most dangerous cancer than other cancers because they have relatively big space bigger than breasts. Lungs cancer spread very fast and transfer to another organs while skin cancer do not, the only difference between them is the appropriate space. Cancers like; lung, colon, breast, womb, blood, ovarian..etc. are most dangerous cancers because their cells have appropriate space. It is a fact that classification of dangerous cancers is depend on the appropriate space that cells of each type have. Cells need space to divide so when they find it, they divide to many cells until they stop by a specific barrier. Some cancers stay in same organs for years and others not, just few months, this is obviously due to the appropriate space. It is a fact that different cells of different creatures originally have ability to divide but just the ready or older cells can do this in one condition if they face appropriate space, this is the truth of different cells. Behavior of different Cancer types proved or they are strong evidence for space theory of this research.
5. Above points for human's body whereas this point for plants. Biologists [(2)] said that if different plants able to ascend water to higher levels then they should grow up higher as much as they can get water. This means if plants get its food they should keep dividing to be taller as much as they can get them food. Different trees have limiting height because they cannot get water higher than

they can. Plants have appropriate space so they can and able to divide for ever but they cannot do that because they do not have ability to ascend water to higher levels which means ascend food to higher levels is this problem for trees. Therefore, it is so important to mentioned that division processes need two conditions cell's necessary foods and appropriate space. Cell cannot divide without its food or without appropriate space, this is the fact of division process and above fact of plants is good evidence for space theory of this research.

6. Experimental tests showed and biologists [(2)] indicated that different creatures such as; Fungi, yeast, algae, bacteria...etc. are able to keep growing or keep dividing for long distance may be many meters in presence of specific agar. In addition, these creatures usually grow in limiting distance in betradish. These two facts show that these creatures when they find them foods and appropriate space they keep dividing for meters or more. Actually these creatures stop dividing in betradish while they keep dividing for long distance in open space. Even if put these creatures in betradish with agar and put this betradish in big container contain same agar, these creatures cannot grow outside betradish's walls and they stay there. In betradish these creatures face a barrier (betradish's walls) in contrast of without it there is no barrier. This the only difference between growing of different creatures with betradish or without it. Appropriate space make different cells of different species keep dividing in presence of them food (such as specific agar) without existing of barrier (betradish walls) means limitation and preventing divisions processes. This fact is well known for biologists and it is good evidences for this research target.
7. After finishing experimental parts of this research professional biologist [(2)] showed; If there enough food in the solutions of the three flasks, yeast's cells must keep dividing until they filling all conical flasks then they should stop. They added that pharmaceutics companies depend on this property in producing of antibiotic and other like drugs. This means that this property is well known and these factories use specific creatures that can produce antibiotics by continually producing or this process called "continuous culture". As example penicillin was produced from penicillinum fungi in case of continues culture, this fungi keep dividing to produce more amount of this drug. Biologist [(2)] indicated that this fungi stop culturing or stop dividing in limiting space like betradish or test tube. This fungi have same properties in all containers so why it stops dividing in betradish or in test tube (limiting spaces) and it continually divides in continues culture technique?! The only difference between these three techniques is the free space, there is no specific gene or specific signal. If there is a specific gene in penicillinum then why it stops dividing in betradish or in test tube and it continue in continues culture? Where this gene gone in betradish? This for specific signal too where it is gone in continues culture and appear in betradish or in test tube!? This is just one example there are a lot of species like penicillinum have a specific gene in some techniques such as stop dividing in these techniques and do not have in another techniques! This for signal theory too therefore these theories are beyond the sense. Again the sense show that the only difference between all these known creatures and known techniques is the appropriate space.
8. There is additional excellent evidence for the research target, it is well known over the world specially for females of all mammals that their bodies forming systematically one specific single cell staying alone for specific time depending of female type. Even that this cell have all requirements such as space, food and time, it does not divide to form another cells. It is singly produced and stay single without dividing even it has enough space! This fact is an opposite than this research explanation so there should be a clear picture explain why this single cell does not divide when it has enough space and enough food! The truth of this, that this famous cell does not divide because it has strong membrane. Biologists [(2)] and some scientific videos from youtube showed so clearly that oocyte's membrane is relatively strong. This obviously appeared in case of injecting operations of sperm into oocyte through specific needle. This strongly membrane prevent oocyte from dividing even it has enough space, enough food and long time in oviduct or in womb. This cell does not divide even it stays for long time with enough space while it divides when it is attached by sperm! This fact of oocyte that it divide in presence of sperm and it does not divide

alone even it has enough space, enough food and enough time leading to understand its action and its behavior.

In fact, Physiological facts of sperm and oocyte was answered this wondering. Biologists [(2)] indicated that sperm have a head contain specific vesicle located in its top, this vesicle contains specific enzymes and these enzyme are the only compounds that able to dissolve oocyte's membrane. Biologists [(2)] indicated that when one sperm attached oocyte and connected to it, its enzymes make a way through oocyte membrane according to acrosomal reactions make it able to penetrate. In addition they said fertilization process occur when both nucleuses of sperm and oocyte fused together to be one nucleus. Biologists adding that this fusion is a natural process and first cells dividing many times to produce a new baby in womb. They said that there are another unnatural processes; Either by selecting more active sperm and culturing them with oocyte in the womb or injecting one active sperm into oocyte's cell by special needle. All these techniques natural or unnatural relatively have same properties and there are many scientific chemical questions and non-chemical about them as follow; 1- Oocyte and sperm are just cells contain same organs differ only in them sizes so if sperm penetrates through outer shell of oocyte due to its special enzymes it is difficult for it to penetrate through oocyte's membrane because cell cannot penetrate through another cell both of them made up from same chemical compounds; Proteins and phospho-lipids, this means how same chemical compounds penetrate through each other?! 2- Phospho-lipids or proteins are chemical compounds of membranes of each cell while cytoplasm is a aqua's solution, it is a fact that non-polar compounds do not mix with polar compounds which means if sperm penetrate through oocyte's membrane, it is so difficult for it to move through the cytoplasm specially oocyte have so big size compare with, means long distance in aqua's solution, this is so difficult for happening! 3- Nucleus's membrane made up from four rows so how sperm's cell or its nucleus able to penetrate through these rows? 4- Cell's membrane or nucleus's membrane are made up from phospho-lipids or protein difficult for another cell or nucleus to penetrate through them without appropriate chemical reactions or special technique. 5- Phospho-di-lipids of sperm's cell or of sperm's nucleus are just esters can be hydrolyzed by cytoplasm (the aqua's solution) resulting free fatty acids with other sperm's contents. 6- Cytoplasm of oocyte contains active nucleophiles or electrophiles such as ATP, ADP, NAD, NADP, Glucose-6-Phosphate ...etc should attached sperm's cell or its nucleus. 7- As its mentioned before that sperm volume of human is about 30 µm while oocyte volume is about 4000000 µm means sperm's cell or its nucleus move long distance in active media (cytoplasm) contains active molecules for reaching oocyte's nucleus. The truth of this it is impossible for sperm or for its nucleus to reach oocyte nucleus or if fertilization depend on this process then it is efficiency should be less than 50% for this affected point only. 8- Cytoplasm of oocyte is not empty there are so many organs and different chemical compounds so how sperm's cell or its nucleus reach oocyte's nucleus without colliding or reacting with one of these organs or molecules! 9- Nucleus of oocyte is not stick at the centre of cytoplasm it swims in aqua's solution (cytoplasm) nothing catching it, it is look like a oil's drop in water so what happen if sperm or its nucleus hit it? This situation is like billiard's balls when ball hit another ball both of them move in different ways toward different directions. Biologists [(2)] said that sperm's nucleus not its cell that hit oocyte's nucleus to form one nucleus but the fact is that this hitting should push both of these nucleuses to move toward different directions because both of them are non-polar organs (their outer shell are lipids) swimming in aqua's solution (cytoplasm). 10- In fact, biologists [(2)] do not introduce any experimental evidence about how sperm's nucleus attach oocyte's nucleus also there is no experimental evidences were found about this from knowledge sources it is just a theory that equal chromosomes (23 for each) come from male and female collected together to form first cell the zygote (46 chromosomes). The truth of this theory is depend on chromosome's theory so when there is no chromosomes absolutely relating theories are not correct.

9. Actually there are a famous processes happen over the world which are good evidences for this research explanation. As same as natural process that mixing of selective active sperm cells with oocyte's cell then putting them in same womb or another one is exactly what happen in normal cases over the world but injecting of just one active sperm (small cell) inside oocyte cell (big cell). Cells of active sperm with oocyte in the womb is normal process but injecting of one sperm into

oocyte is abnormal because injecting of small cell into another big cell should loading to nothing or what should happen! Results of these experimental tests should be a small cells swimming in cytoplasm of big cell (huge difference between both volumes 30 μm^3 to 4000000 μm^3 respectively). Of course both cells have good space otherwise they will not divide so they will divide leading to two cases; Either they divide until they produce enough pressure to destroy oocyte strong membrane resulting more cells until new baby formed. Or they divide until they stop due to oocyte strong membrane resulting more sperm cells inside oocyte do not across strong membrane leading no baby. This explain why in vitro fertilization (IVF) process do not have high efficiency. The truth of above facts that these cells either sperm or oocyte do not have a specific gene or specific signal they do not find enough space then they do not divide or they find it so they divide. Noticing that sperm cells are not complete they complete themselves from oocyte [(2)] they find what they need form this cell, biologists [(2)] said cell's organs like mitochondria divide according to specific space to form additional organs as same as normal cells inside sperm cells mean these cells take one mitochondria let it divide to be thousands or more by division processes. Following figure should illustrate all these facts:

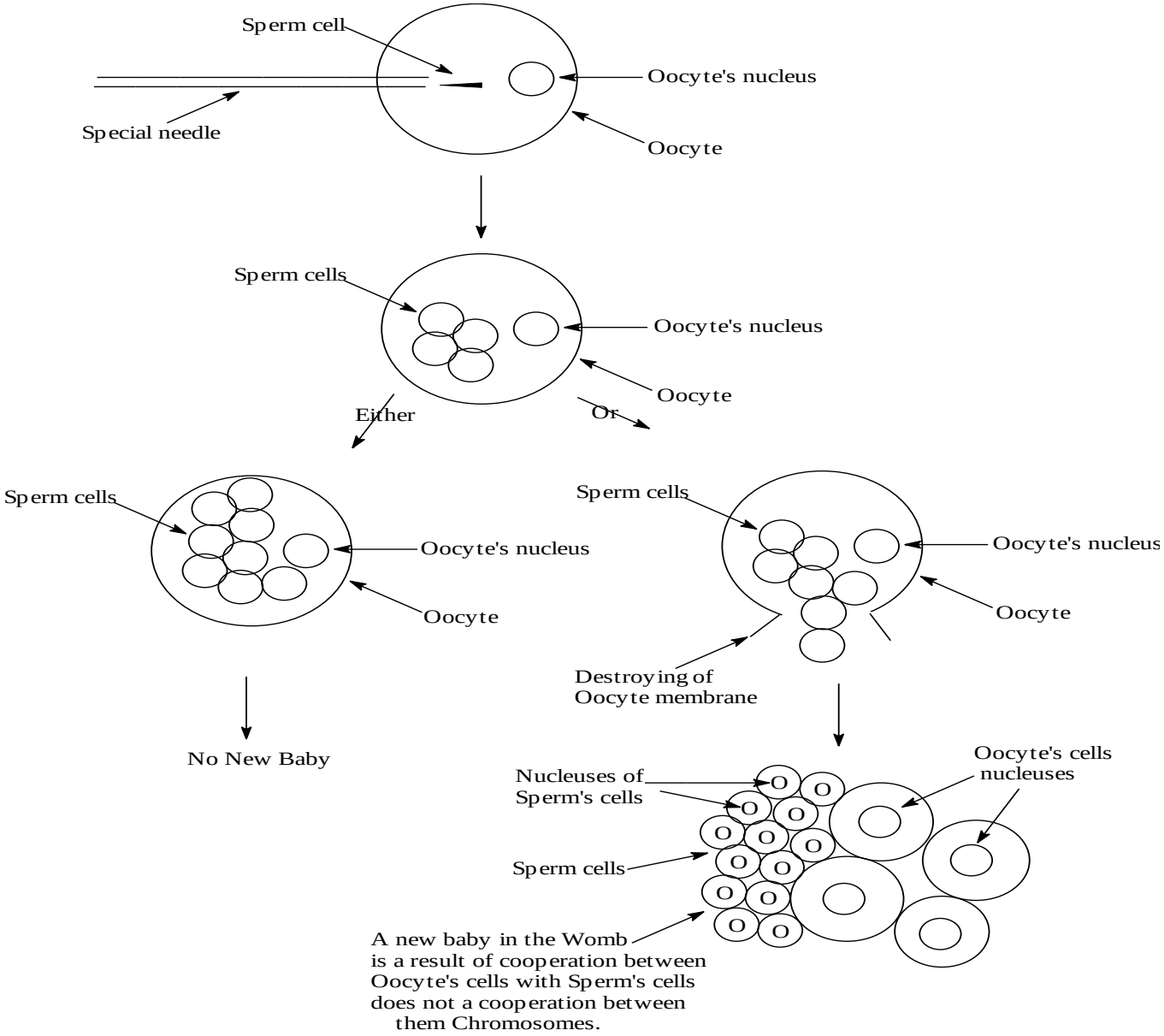


Figure (20): The two Possibilities of in vitro fertilization (IVF) processes.

Above figure does not show how sperm cells take necessary organs such as mitochondria from oocyte as mentioned before because it is the first step in fertilization two cells connect each other complete each other until they reaching equilibrium point such as everything on this earth. Then they should divide millions times to form the new baby. The fact of sperm cell, it is not a complete cell, it just a nucleus surrounding by a membrane therefore when it connects to oocyte they become like it and like other connecting cells in all creatures, any cell of them contain high density of different molecules and organs as same as oocyte's cytoplasm.

Density of different molecules and organs should slip to low density (sperm cells) forming two equilibrium cells. There are another good experimental evidences relating to this point; Firstly modern study [(14)] showed that it is possible to get new baby from sperm and normal cell without oocyte. This the truth of this research when two cells connect together in enough space they will divide millions times to form same new creature, but this study does not test two different cells such as; mouse's cell with rabbit's cell. In fact, there is well known example about a kind of animal comes from horse's cell with donkey's cell, cells when find enough space they divide whatever they come from.

Secondly, there is another good evidence an experimental study showed that it is possible to change ill oocyte's nucleus by healthy one to produce a new baby produced from three people. The question is, genes are in the nucleus so when changing these genes by another different genes are they still have same properties? Unfortunately results of this study does not found but it is so sure that new baby have same properties of his/her father and mother, the third person does not adding anything to the new baby because nucleus is just a chamber for preparing different nucleotides mean all of them have relatively same properties.

Depending on scientific experimental tests, this research explain most important phenomena in the world, Bio-energy, Cell division and other concepts then it is unlikely to leave fertilization process without explaining.

This research does not know physiological facts of how oocyte form in ovarian but biologists [(2)] indicated that when it gets out from ovarian two compounds get out before it, progesterone and estrogen get out before oocyte. In fact, there are many certain compounds have known actions inside bodies of different creatures; enzymes and hormones. These known chemicals do known actions as catalysts for known reactions or do some changes inside different bodies. Progesterone or estrogen do not act as catalysts in a specific reaction in the fallopian tube because there is no any reaction there in ovarian to womb. Oocyte does not react with another compounds also these two compounds do not change anything from ovarian to womb.

Depending on chemical properties of these two compounds they are stable and soft lipids softer than other different lipids. Therefore, them function in fertilization process is very obvious is to make oocyte move faster and easier as same as oil's function in different engines. Fallopian tube and womb are not open areas they are conglutinated tissues so oocyte alone cannot slip through these tissues unless there is some assistance from two oils for make this easier and softer. This for sperm too there is another oil compound excrete with sperm cells called testosterone. These three compounds do same function in them organs is to make oocyte and sperm move easier and faster than without them.

Each period time one oocyte get out from ovarian specific compounds progesterone and estrogen in human's kind are excreted to do their function as explained before. This oocyte move through fallopian tube toward womb staying there for specific time. In human kind this oocyte have two paths; Either it waits for specific time then it will hydrolyze with other chemicals of womb to be a menstruation time, it is obvious that different chemical compounds together in specific tissue they will hydrolyze after specific time because they do not have a specific function. Or sperm cells excrete in millions while oocyte is one cell this because these cells should searching for oocyte in relatively huge area (The Womb), after sperm cells reaching oocyte cell there are two cases happen; Either sperm cells are enough for dissolving oocyte strong membrane Or they are not.

After dissolving of oocyte membrane by sperm's enzymes both cells be together. An excellent evidence from the history showed that when sperm cells are more than enough means the new baby is a boy while if they are less mean a girl but all these certainty if the GOD want.

This because a new baby is a cooperation between two kinds of cells one big and the other is so small dividing together to form one specific creature. All cells differ from each other by many points each one have specific organs and specific molecules so human's cells; oocyte with sperm should be form a human, both horse cells should be form a two horse kinds...etc. Oocyte with sperm dividing to from the creature that they come from. Following figure give a good illustration about this explanation:

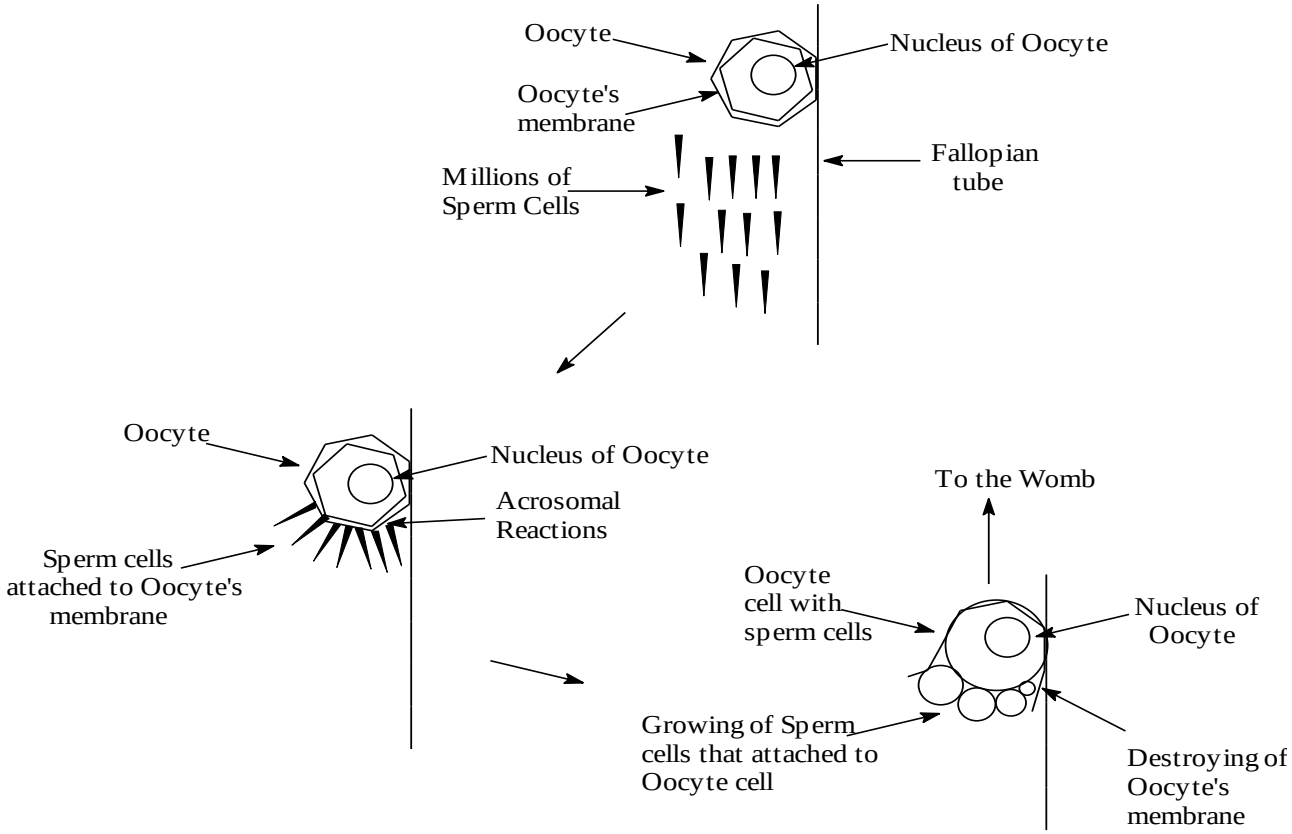


Figure (21): Showing fertilization process.

Above figure show in so clear indication the true steps of fertilization process however biologists [(2)] mentioned. There are additional information that there are another different molecules exist with sperm's solution such as; Fructose, different proteins...etc. These different molecules must have a specific purposes in fertilization but unfortunately biologists do not explain them! In fact, biologist [(2)] indicate that proteins molecules are just a special code for each mankind like finger print and they add that each man excrete special proteins as a code for him.

It is very obvious that fructose for energy production as same as glucose in different cells of human body but what about proteins!? Are they have a specific rule or they are just a code excreted with sperm cells from men body!

The right explanation for this should show both cases when oocyte be alone and when it be with sperm cells: Oocyte exist relatively long time alone in womb so even it has thousands of nucleotides it must consumed them during this period of time which is about one month. In another words, oocyte have big volume rather than other cells then it have enough amount from proteins as a cell, and these proteins consist from different amino acids that produced both energy's molecules. in fact, these molecules have two rules produce special nucleotides in nucleus and produce different molecules act as glucose for producing energy make oocyte live for one month. Glucogenic, Ketogenic are amino acids act as different molecules providing glucose paths for energy production in different cells in special cases [(11)]. This because oocyte is a special cell when it live for a month it should have living requirements so when these requirements are finished it should die within one month this in normal behavior.

Oocyte can live more than one month leading to form a new baby in the womb in one condition! when sperm's solution provide it with additional energy molecules; Fructose and proteins molecules. This explain why oocyte die within a month and keep growing in case of existing of sperm's solution. Oocyte have living requirements make it able to live for one month while when sperm come it will bring additional requirements; Fructose and protein make it live longer to form a new baby. Proteins rule are for preparing different nucleotides in nucleuses and fructose for reacting with these nucleotides to produce energy which is necessary for making these cells; oocyte and sperm cells dividing together to form different tissues resulting a new baby. A conclusion, men's proteins have a good rule in fertilization process and they are not just a code and also they are good evidence addition to this research evidences.

It should be noticed that sperm's solution does not have a large amount of proteins they have enough amount for making oocyte and sperm cells live together until they have good ability to connect with womb's tissues leading to a new baby increasing our kind and other creatures kinds.

There are another good evidences but above points are more than enough because they explain how most creatures dividing (growing) on the earth. However, each creature on this earth consist from different cells and these cells have limiting life's time according to them function in each creature's body. Cells are produce from division processes to be young cells that recently produced, they start and keep working by producing energy from forming different nucleotides in nucleuses to react with gluconate in addition to other functions. Then because of this continues work these young cells become older contain many different nucleotides in nucleuses and in cytoplasm. This because that they keep producing nucleotides more than what they exactly need, moreover other cells have same situation enough or more than enough from nucleotides so excess nucleotides should be in equilibrium with outside different cells, this means forming nucleotides must stay inside the cell.

Nucleotides are relatively big molecules when addition excess from them be in nucleus or in cytoplasm they must press other molecules leading pressing cell's membrane and nucleus's membrane by making a pressure on nucleus's membrane or on cell's membrane. This gives the cell two paths only either dividing or die, because these nucleotides are forming in nucleuses and transferring to cytoplasm so their pressures either be on nucleus's membrane or on cytoplasm's membrane. Biologists [(2)] mentioned that most divisions happen in nucleuses and start in it, this because nucleotides are originally built in nucleuses so their pressure on nucleus's membrane be more than on cytoplasm.

In addition, forming or existing of additional macromolecules such as cyclic nucleotides (cAMP or cGMP...etc) should increase the pressure on nucleus's membrane and on cell's membrane leading two paths either the cell divide if it faces appropriate space or it dies when it does not face appropriate space.

This is the fact of the cell, it has two paths after it becomes older either divide or die and both of these are due to it forms different macromolecules more than what it can stand with so when five cells around dying cell, the older one must divide to replace this dying cell while dying cell itself does not find the appropriate space to divide for this it dies (destroyed).

It is so accurate system that each cell have a specific order not all cells have same dividing time or same dying time, as example if there are six cells around dying cell then each one has specific order according to its status so there are six different orders in addition to dying cell. The oldest cell divide and replaced the dying cell then the second order cell cannot divide because there is no appropriate space which resulting from dying cell so it must die and third order cell should replace it, then cell of fourth order face no appropriate space so it must die make five order cell replace it...etc. this for all tissues of all creatures' bodies.

The order is that first cell die and second cell replace it by dividing process while third cell is die let fourth cell replace it by dividing process too, this is the system of all cells one divide and the next die,

which means; 1=die, 2=replace, 3=die, 4=replace, 5=die and 6=replace...etc. for all different creatures' tissues. This is very accurate order because it keeps the overall volume constant because 50% of all cells die while 50% of them divide by division process, die:divide ratio is equal 50:50 respectively resulting zero net of volume, the volume of each normal creature should be same.

This ratios is in normal status for normal creatures while fat creatures or sport's people increase them volume by taking more proteins as mentioned before making dying cells be less than dividing cells and this because increasing of proteins means increasing preparation of different nucleotides in each nucleus lead to increase number of older cells in same time. This makes dying time is the same for most cells and dividing time is the same for another cells there is no arranged orders for these times as explained before, as same as above example if there are six cells in tissue of fat creature may be four or more from them are ready to divide or die so when one of them die more than one divide may be three resulting new three cells not just one so die:divide ratio should deviate not 50:50 to be as example 30:70 = die:divide respectively.

More proteins make dying and dividing times of all cells be almost same so dying cell left a space and three cells compete each other to fill this space in same time resulting three or two new cells instead of one, this must increase creature's volume. Three cells are bigger than one cell in their volume so this must lead to increase creature volume.

An evidence of above explanation is from human's life which it contains two different people; fat people and body building people. These people increase them volume by increasing amount of proteins in them food. Body building sport taking free amino acids for increasing them body's volume. This fact is well known for these sportsman for long time ago they eat too much proteins for increasing them volume, they eat eggs, milk and nowadays free amino acids for just increase their volumes. This example is good because body building sportsmen take too much proteins and for this them volumes is increased that mean this is a fact there is a reason and its product. According to results of this research, too much proteins make nucleuses prepare more nucleotides for reacting with gluconate for producing human's energy so if human does not use this energy and use some of it, excess nucleotides should be in the cell (nucleus and cytoplasm). These excess must be same in all cells resulting same amount of nucleotides in each cell, nucleotides are big molecules press on cell's membrane or nucleus's membrane resulting many cells ready to die or divide so when one of them die another cells penetrate them parts in space of this dying cells producing three or more cells dividing in place of one cell. By growing of these dividing cells resulting three new cells be in place of one cell lead to increase tissue volumes. Following figure should explain this fact:

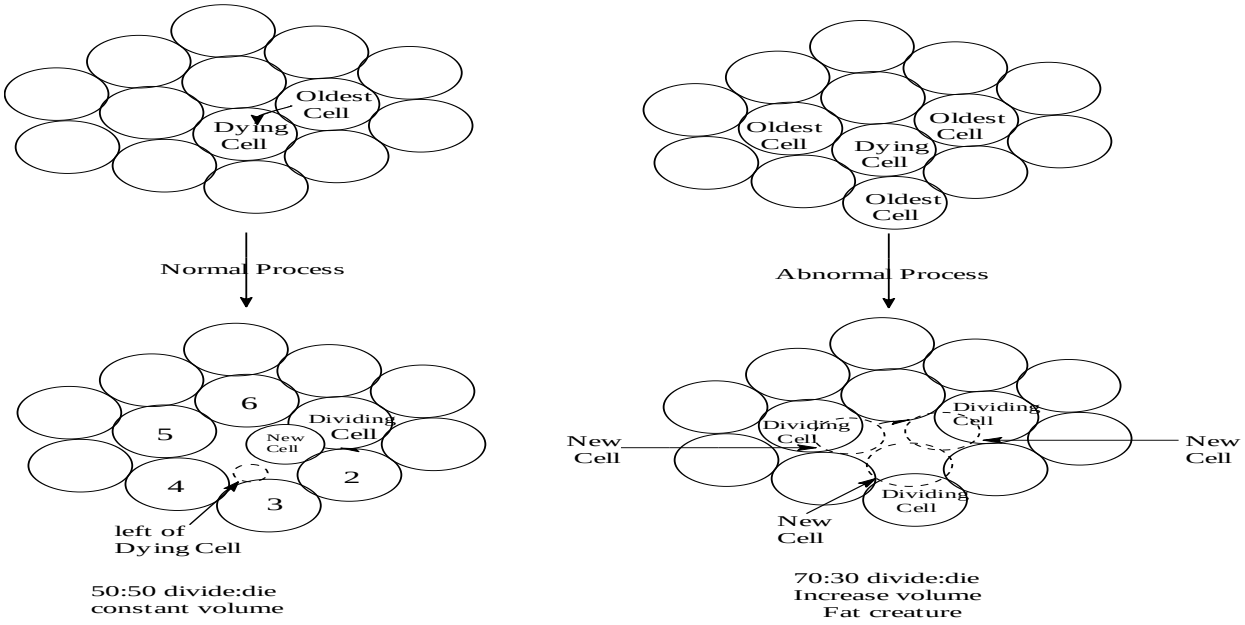


Figure (20): Normal and abnormal status of die-divide ratios.

Therefore, what happens in body building sportsmen it happens to fat people as well they took too much proteins without consuming preparing nucleotides that producing from these proteins. The best solution for fat people is by decreasing proteins as much as they can and this should happen in long time because it is difficult to change die-divide ratio and difficult to return it to be 50:50 in few days or few weeks.

There are many good experimental evidences about above explanation from the life such as; Firstly, a new chicken's business was discovered here in my country, this business depend on inject baby's chickens by specific needles contain protein's solution, this for making these chickens grow and become fat faster, this business tested its process for more than millions chickens until now giving prefect results, small baby chickens become fat in abnormal time for getting more money. Proteins make baby's chickens more fat as same as them function in human's body. Secondly, global news show that famous Hollywood actors know that proteins make them fat so they eat foods with less proteins for avoiding fatness, this research took long time more than one year and half until it was published then may be these actors know this from this research before it was published.

After these evidences the relation between proteins with fatness is so clear and once again for removing overweight it should minimize proteins content in the foods and waiting the results for long time relatively.

Different cells do not have anything they are just units for producing energy for different activities of different creatures and also they are building units for filling creature's bodies to be as they appear.

In fact, different tissues of all creatures in case of damaged, injuring or...etc. they return to them original state after specific short time except brain tissue need relatively long time. This indicates that different tissues repair themselves by themselves by division process as it is explained before to return to them original state, different tissues are just a collect of different cells.

Therefore, different cells of all creatures do not have anything they do what the brain want. This fact is well obvious in head's stroke, heart's attach or nervous poison gases..etc. billions of different cells stay without any movements exactly as they look like they die but scientifically they still work giving energy, also they still divide to replace dying cells but they cannot move. This is not happen because of these cells, it is because of controlling organs that is stop them. These conditions are good evidences and they show the work of different cells which are producing energy from gluconate (the food) and insulin with nucleotides (body's made) and divide to replace dying cells.

However, this research do its best for explaining most important phenomena depending on facts and good evidences as it is shown in previous pages so it is inappropriate to let important phenomena related to its target such as most important one that there are a lot of organisms or not organisms attack bodies of different creatures including human body and causing bad symptoms like viruses, Bactria..etc. This creatures or non-creatures effect all human or other creatures bodies so how they do this? How small creature affect big one like human's body or others?

As it is shown in this research that Bio-energy of all creatures like human comes from reacting of nucleotides with gluconates, one of these molecules are prepared in nucleuses while the other come from outside. Nucleotides are prepared in different nucleuses from; free amino acid, peptides or proteins that come from outside the body, it is a fact that creatures bodies cannot prepare these molecules. For this, the most dangerous compounds that can affect human's cells, human's body or in more specific can affect Bio-energy's path are "proteins or its derivatives" and also nucleotides can do this too because they are ready molecules as energy molecules do not prepare by nucleuses.

Bodies of different creatures are very accurate and perfect systems but bad times in bad circumstances may affect them. It is a fact that the weak point of different creatures is protein's derivatives and nucleotides. These molecules can interact with Bio-energy path to form many products differ than the original products doing changes in other original paths resulting bad symptoms.

The fact is that it is huge mistake make viruses as organisms they are not, they are just a natural chemical products produce from different animals including human and plants including all species. It is a scientific fact that these creatures produce most of the time a symptomatic products from them bodies, skins, ..etc. due to natural interactions. These products consist from different cells with their different derivatives as same as molecules of creature's bodies such as proteins derivatives and nucleotides or may be these molecules are produce from different Bio-laboratories.

Different cells of human or other like creatures either single-nucleuate, binucleuate or Polynucleuate are work most of the time in preparing of different nucleotides for releasing continues bio-energy so they need proteins, amino acids most of the time. Then interactions of molecules like viruses, bacteria, fungi...etc contain amino acids or proteins with Bio-energy path are normal interactions in Bio-energy productions processes. However, products of these interactions are the problems cause bad symptoms for all creatures.

As example Flu virus consist from nucleotides and proteins so these molecules should enter human's cells very easily specially human cells that need proteins for preparing more nucleotides for producing energy. After entering human cells they interact with nucleotide's preparations processes in nucleuses producing different molecules differ than original one actually this research does not know them and they are beyond of its target but symptoms of human's body show what this virus do:

1- Human temperature is a constant due to its Bio-energy which is producing in nucleuses so when additional proteins or them derivatives with nucleotides (viruses) are added this should increase this production releasing high energy make human body hot (fever). 2- Flu spread pain in all human body and this cannot be! How much viruses can do this for human body! Human body is so big comparing with viruses size so how they affected it! According to this research, human's muscles have two nucleuses this means they have two machines for producing more energy from amino acids, peptides or proteins. Then they are the most tissues which needs more proteins most of the time comparing with other tissues of human's body. Therefore, sometimes these tissues do not find proteins or them derivative in human's body and viruses there in the blood because they are polar compounds so muscles tissues must use these viruses for preparing more nucleotides leading different products differ than original one resulting speared pain in these tissues means spread pain in all the body. 3- Vaccines are just a viruses (proteins with nucleotides) human body or other bodies recognized them before so their interactions with Bio-Energy path is well known therefore they will not produce unknown or unwanted products. 4- It is difficult to treat viruses infections because it is difficult to know what each cell take from them and what they change in Bio-energy processes in each cell. 5- There are two facts about Flu virus should be explained; Firstly, it is a product from human body it is not from outside. Secondly, this virus with many viruses have a good relation with cold weather. There are another facts about Flu virus but these are enough and above two points are more important to discuss for all viruses not just for Flu as follow:

Sometimes human or other creatures get Flu virus without touching anything or getting out in cold weather. There are many questions about Flu and these are few of them however human body continually produce enough energy for its different activities then in cold weather this situation is differ an additional consuming energy happen in the body so it need additional energy then human's body have to produce more energy.

Any person when it feels cold in cold weather a Flu virus should be there this means there is energy reducing in human body make it have low level of Bio-energy and also Flu is product from human body. A prefect evidence about this that when human fill from its food he/she do not feel about cold weather while hungry one must feel about this weather, this differences are well known and it depend on how much energy inside human body is it enough for cold weather or not! For this, reducing energy such as in cold weather for human body have two paths; Either human body have enough protein's derivatives for absorbing by different cells to compensate reducing energy due to cold weather, or there is not enough protein's derivatives then human body have to produce additional

energy due to cold weather so it should take proteins derivatives from the body because there are not another sources. This show that cold weather and low proteins contents are the reason of Flu in human body.

There is another evidence that many people around the world for long time ago when they get Flu virus with fever they swim with cold water as a good treatment, in addition, all parents tested that when their children get fever due to Flu virus they use cold bandage for reducing these fever and this method is a good tested work method. These two methods are used in case of Flu fever for one scientific reason above sick people get Flu because of cold weather and they use additional cold treatment for consuming all proteins in the body all proteins mean the virus proteins and the body proteins. Consuming all proteins eliminated virus's proteins and return the body health. It is a fact that people of above both methods feel hungry after above cold treatments because they lose their proteins for getting required energy then they need more. These evidences show in clear scientific method that viruses are just a side product effected the energy paths of human's body.

It should be noticed that viruses are just chemical molecules (proteins derivatives) interact with formation reactions of nucleotides in nucleuses. They interact with formation reactions so they should be a part of products mean they should remain inside the cell because hydrolyzing of forming nucleotides should give starting material "viruses again" so this is a cycle for viruses inside the cell. This fact showed that different cells of human or other creatures make viruses then they stay inside them. For this, cycle of chemical molecules "viruses" inside the cell either take few days or take long time depend on many factor such as cell's type and concentration of chemical molecules "viruses"..etc. As example, Flu take few days while HIV virus take so many years because there are obvious differences between human's normal cells with immune's cells. HIV virus cycle continues in immune system because it is semi-closed system difficult to change its molecules in easy way.

It is a fact that human's body have a weak point which is; Bio-energy paths with proteins, peptides or free amino acids that interacted with above paths to produce unwanted products such as what happen in case viruses interactions. Then different viruses is not enemy to human being they are just chemicals interact with its Bio-energy paths.

According to this conclusion the best way to treat different viruses is by consuming nucleotides as much as possible of the target tissue then providing high concentration of amino acids, peptides or proteins. This can be done by making patients without eating for about 12 or 24 hours then let it eat just amino acids, peptides or proteins. Repeating this for many times should broke any virus's cycle and rearranging nucleotides productions processes in nucleuses getting good health. This method is useful for all viruses because all of them have same properties.

Unfortunately, this research does not sure 100% from above explanations because they need more chemical tests and more chemical investigations by known apparatuses without these techniques it is difficult to be so sure. Anyway it is a fact that this research explain what it explain until now depending on facts, good evidences, excellent chemical tests.

Different bodies are need protein, peptides or free amino acids continually for producing Bio-energy for them different works. Therefore, there must be continues source for these molecules in these bodies. This source is blood that contain high concentration from these molecules just for providing these bodies with energy molecules for producing Bio-energy, this additional function for blood in different bodies.

It is a fact that each small particle in this world or in the universe have only two dimensions weight and volume and this research measure by scientific facts the weight and volume of each nucleotide, about 0.00136 g and about 8 μm^3 respectively and this research show so many evidences that each nucleus (human's nucleuses) have a volume about 65 μm^3 it is impossible for it to have above than ten nucleotides so there is no millions or billions base pair (PP) or nucleotides in human's nucleuses they are just ten nucleotides or may be less.

Also this research have exam many procedures of DNA or Gene extractions and it found depending on chemistry science that these procedures absolutely gave wrong results and their results (genes pictures) are nothing without certain chemical techniques for characterizing them scientifically. This also come from tested a DNA samples by known chemical tests resulting that DNA samples are pure unsaturated fatty acids.

The fact of this research until now it talked about DNA while there are another facts about RNA such as; Transfer RNA (tRNA) exist in cytoplasm of each cell and number of it (tRNA) in animals cells = 10^{8} [(11)]! It is fact that RNA like DNA consist from same molecules so volume of each nucleotide should be at least 5 μm^3. If each molecules of tRNA consist from only 5 nucleotides then them volume should be 25 μm^3. Therefore, volume of all tRNA in cytoplasm = 2500000000 μm^3 = 2500 m^3 or 2.5 Km^3!! Cells cannot be seen by normal eye contain molecules with volume 2.5 Km^3 this is unbelievable. This just few calculations show the real fact about every science related to nucleuses, cells, DNA, RNA ...etc. These are not sciences they are imagination thoughts only.

It is a fact that above results do not come for nothing it's so known that 99.9% of scientific researchers over the world apply and follow what they have from different procedures without thinking what these procedures have from scientific basics and what they should really produce.

Conclusion:

How different cells of all creatures divide and how they produce energy these two phenomena are so important for understanding how human's and other creatures born, grow up, repair themselves, and doing different works. This research show and explain these phenomena and other important facts by real scientific science. Unfortunately there is no clear vision about these phenomena and this is absolutely not because of biologists or relating sciences like medicine..etc. It is because of us as chemists. This research confess that this happens because of chemists because they let biologist and relating sciences alone for explaining more important phenomena in the earth like above.

References:

[1.] Peters M, 2012. Family Doctor Home Adviser. 5th Edn, London, British Medical Association, ISBN:978-14093-5.

[2.] Personal communications at Biology and Chemistry Departments, Missan University, 2015-2017.

[3.] Phillips, R. and M. Ron,2016. Cell Biology by the Number. USA, Garland Sciences, Taylor and Francis Group, ISNB:987-8153-4537-4.

[4.] Metzler, D. and et al., 2001. Biochemistry The Chemical Reactions of Living Cells. 2nd, USA, Academic Press. Inc. ISNB: 0-12-492541-3.

[5.] Kotikalapudi R. and et al, 2013. Standardization of DNA Extraction from Methanol Acetic Acid Fixed Cytogenetic Cells of Cattle and Buffalo. Pak. J. of Biol. Sci., 16: 1823-1825.

[6.] Google images, 2015 and 2016.

[7.] Al-Darraji A. H., 2013. Diabetes, Blood Pressure and relating Diseases; Reasons and Solutions. Eur. J. of Sci. Res., 104 (1), pp: 53-78.

[8.] Al-Darraji A. H., 2015. Earth is Under Threat "The End", Explanation and Solution. Euro. J. of Sci. R., 133 (3), pp:285-310.

[9.] Williams M., 2005. Dietary Supplements and Sports Performance: Amino Acids. J. of the Int. Soc. Sports Nutr., 2(2), pp:63-67.DIO:10.1186/1550-2783-2-2-63.

[10.] Bianconi E. and et al, 2013. An Estimation Of The Number Of Cells In The Human Body. Ann. Hum. Biol. J., 40 (6), pp: 463-471.

[11.] Al-Flaeh, K., 2007. Introduction to Biochemistry. Iraq. Arabic 2ed Edn. Dar Ibn Al-Atheer for printing and publishing, Mosal University.

[12.] Cohen, R. and at el., 2007. Mechanism of Thermal Unimolecular Decomposition of TNT (2,4,6-Trinitrotoluene): A DFT Study. J. Phys. Chem. A, 111(43), pp:11074-11083.

[13.] Malgorzata A. and et al., 2013. Measuring The Density of DNA films using Ultraviolet-Visible inferferometry. Phys. Rev. E, 87, 060701 (R).
[14.] Suzuki, T. and et al., 2016. Mice produced by mitotic reprogramming of sperm injected into haploid parthenogenotes. Nat. Commun. 7:12676 Doi: 10.1038/ncomms12676.
[15.] Murray R. and et al., 2012. Harper's Illustrated Biochemistry. 29th, USA, The McGraw-Hill.