

旋风中的四活物与双螺旋中的四核苷酸 (图解)

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在 1953 年 4 月 25 日和 5 月 30 日, James Watson 和 Francis Crick 联名发表的两篇共三页文字和六幅插图的论文, 描述了 DNA 分子的结构. 使现在的人们能够这样认识 DNA: DNA 是由四种核苷酸构成的双螺旋分子, 编码了人体的全部生物学结构 (DNA is the right-handed double helical molecule in which there are four kinds of nucleotides. In humans DNA encodes the human biological body). 从此掀起了“DNA 双螺旋和随后的基因革命”.

人的 DNA 分子是由 30 亿个“核苷酸”组成的, 而“核苷酸”中的每一个结构对于 DNA 分子来说都是必不可少的. 对于现代生物学者来说, 了解“核苷酸”的结构是最基本的要求, 但这类结构对于公众来说却没有太多实际意义. 实际上, 众多完全不知 DNA 分子的人士对核苷酸的结构更是“一无所知”. 在这样的背景下, 要让读者读懂关于“圣经文字和 DNA 分子巧合”的文章, 就会遇到很大的困难. 其实, 以“看图识字”方式了解核苷酸的基本结构是一件非常简单容易的事. 笔者尝试用“图解”方式介绍“圣经文字和 DNA 分子巧合”的一部分内容: 核苷酸与四活物的结构.

图一 (a), 是从 1953 年 James Watson 和 Francis Crick 发表的论文插图中摘取的. 可以看出, 图中每一个核苷酸其实只有三个“硬件”: 碱基, 戊糖和磷酸; 还有四个附属的化学键, 其中两个是与外界连接的, 另外两个是维持内部结构的.

图一 (b), 是 2600 年前圣经以西结书第一章中文字描述的“四活物”. 从中可以看出, 每一个“活物”也是由三个“硬件”组成: 脸, 人的手和脚; 还有四个附属的“翅膀”, 其中两个是与外界连接的, 另外两个是维持内部结构的.

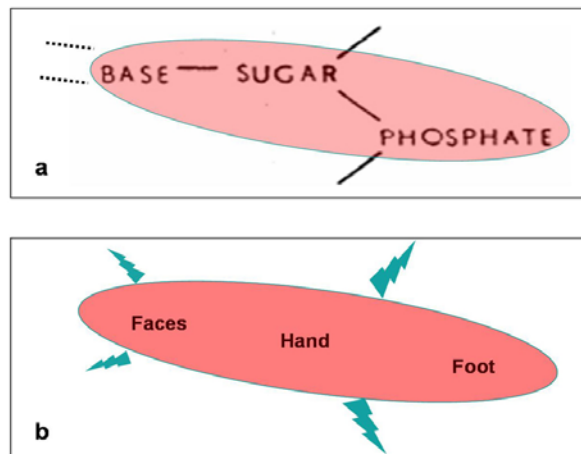
从来源完全不同年代的这两种描述中不难看出, “核苷酸”的基本部件与“活物”的基本部件在数目上是完全吻合的.

在这个基础上, 进一步分析“核苷酸”的三个“硬件”与“四活物”的三个“硬件”在内容上是不是也能一一对应吻合.

核苷酸的“碱基” --- 四活物的“脸”, 能对应吻合吗?

核苷酸的“戊糖” --- 四活物中“人的手”, 也能对应吻合吗?

核苷酸的“磷酸” --- 四活物的“脚”, 还能对应吻合吗?



图一: Watson and Crick's nucleotide and Ezekiel's "living creature"
(a) In 1953 Watson and Crick sketched the figure to show that there are three parts and four chemical bounds in a nucleotide.
(b) 2600 years ago Ezekiel described that there were three parts and four wings in a "living creature".

试用图二和图三加以解析.

如图二 (a) 所示, DNA 分子中核苷酸的“碱基”有四种形式, 也就是 A, T, C, G (另见图四 b, 摘自 1953 年 Watson 和 Crick 的插图).

如图三 (a) 所示, 四活物的“脸”也有四种形式, 就是鹰, 牛, 人和狮子.

由此可见, 核苷酸的“碱基”与四活物的“脸”在数目上是完全对应吻合的.

如图二 (b) 所示, DNA 分子中核苷酸的“糖”是含有五个碳原子的“戊糖”(脱氧核糖).

如图三 (b) 所示, 四活物都拥有“人的手”, 众所周知人手是“五指”结构.

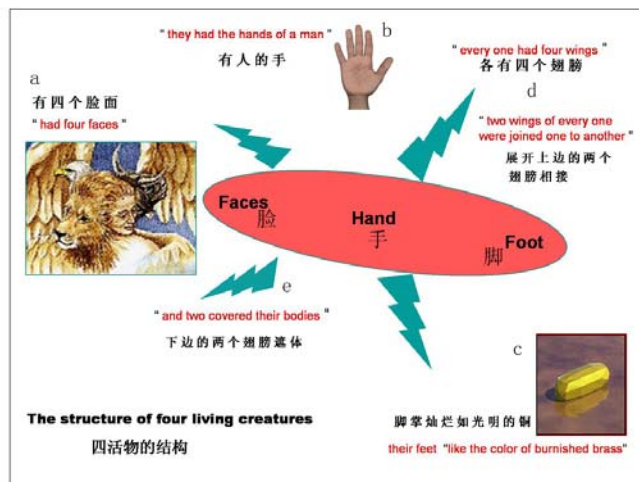
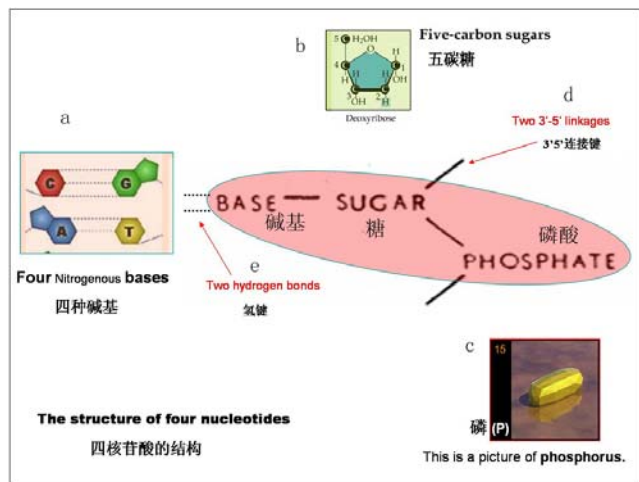
因此, 含有五个碳原子的“戊糖”与五指结构“人的手”在结构特征上是完全对应吻合的.

如图二 (c) 所示, 核苷酸的“磷酸”中含有一个“磷”原子, 结晶纯磷的外观与“黄铜”极其相似.

如图三 (c) 所示, 四活物都拥有“脚”, 而且外观如光明的“铜”.

核苷酸的“磷”元素的照片与四活物光明如“铜”的脚的外观颜色上的联系, 也是完全对应吻合的.

从图二和图三可以清楚地看出, 核苷酸和四活物的主体部件在细节上是高度对应吻合的 (见表 1).



图二：The structure of the four nucleotides

In 1953 Watson and Crick sketched the figure to show that there are three parts in a nucleotide: nitrogenous base, sugar and phosphate (pink area), (d) there are two chemical bonds (3'5' linkage) between the phosphates and the sugars in each one, and (e) there are two hydrogen bounds between the base A and T; two between C and G (in 1953, three between C and G now). (a) In DNA only there are four nitrogenous bases (A, T, C and G). (b) The sugar is five-carbon sugar (pentose). (c) There is phophruos in the phosphate that the pure phophruos likes the "color of burnished brass".

图三：The structure of the four living creatures

2600 years ago Ezekiel described a detail about the "four living creatures": (a) They "had four faces"; and (b) "they had the hands of a man"; (c) their feet "like the color of burnished brass"; (d) "every one had four wings", "two wings of every one were joined one to another" (e) "and two covered their bodies".

表 1. 核苷酸与四活物的基本结构的对应吻合

核苷酸	四活物
如图二 (a) 所示: DNA 分子中核苷酸的“碱基”有四种形式: A, T, C, G.	如图三 (a) 所示: 四活物的“脸”也有四种形式: 鹰, 牛, 人, 狮.
如图二 (b) 所示: 核苷酸的“糖”只含有五个碳原子	如图三 (b) 所示: “人的手”都是“五指”结构
如图二 (c) 所示: 结晶纯磷的外观与极象“黄铜”	如图三 (c) 所示: 四活物的“脚”如光明的“铜”.

除了他们主体部件在细节上的高度吻合外, 核苷酸附属的四个化学键与“四活物”附属的四个“翅膀”在功能方面是否也能对应吻合呢?

在 1953 年, Watson 和 Crick 描写到, 每一个核苷酸都有两个 3' -5' 连接键 (见图二 d), 与上下两个相邻的核苷酸相互连接 (见图四 a, 摘自 1953 年 Watson 和 Crick 的插图). 2600 年前, 以西结描写到, 每一个活物都有两个“翅膀”, 是用来与另外的活物相互连接的, 如图三 (d) 所示. 很显然, 核苷酸的两个 3' -5' 连接键与活物的两个“翅膀”在功用上是对应吻合的 (见表 2).

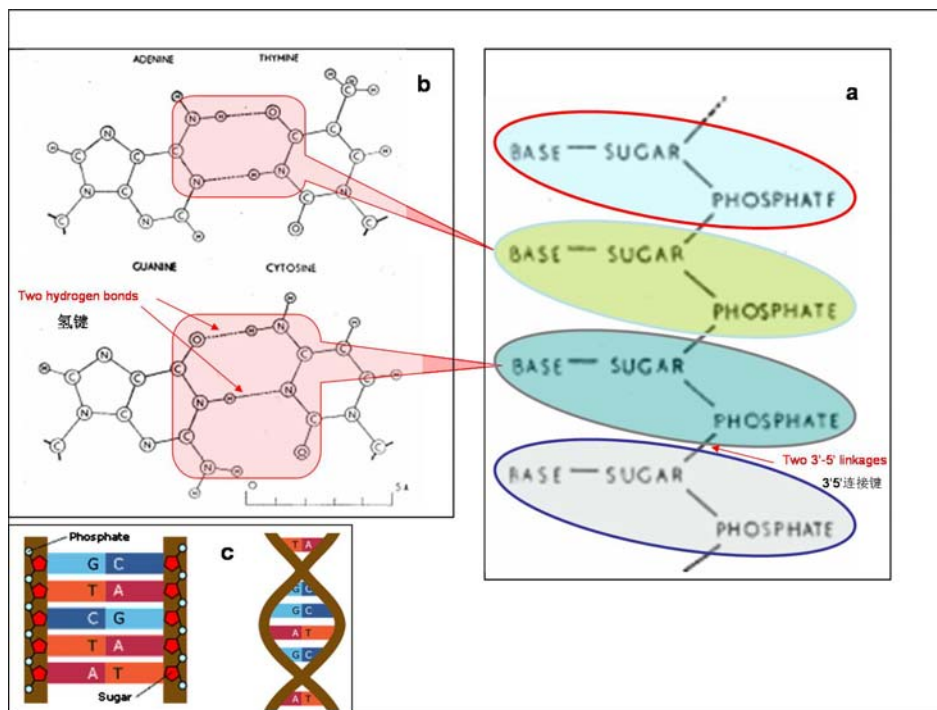
Watson 和 Crick 还描写到, 每一个核苷酸都有两个氢键 (图二 e 所示), 与互补碱基并联 (见图四 b, 摘自 1953 年 Watson 和 Crick 的插图), 其功能是用来将碱基保持在 DNA 分子的内部, 避开外部的水分子 (见图四 c). 以西结也描写到, 每一个活物还有另外两个“翅膀” (图三 e), 其功能是用来“遮体”的. 由此可见, 核苷酸间的两个

“氢键”与四活物的另外两个“翅膀”在维持“结构”方面的功用又是完全对应吻合的 (见表 2).

表 2. 核苷酸附属四个化学键与四活物附属四个“翅膀”的对应吻合

核苷酸附属的四个化学键	“四活物”的四个“翅膀”
有两个 3' -5' 连接键与上下两个相邻的核苷酸相互连接	各展开上边的两个翅膀相接 翅膀彼此相接
有两个氢键与互补碱基并联	各以下边的两个翅膀遮体

笔者以图解的方式展示了 Watson 和 Crick 在 1953 年表述的事实和 2600 年前圣经的文字记载 (表 3), 这不仅有助于读者初步了解一些关于核苷酸基本结构的知识, 还能进一步让人们更加直观地认识“圣经文字和 DNA 分子巧合”的神奇事实 (见表 4). 如果说人们相信世界上有“神迹”存在的话, 那么“圣经文字和 DNA 分子巧合”应该是最为不可思议的最出人意料的了, 也是最令人无法“推诿”的.



图四：The four nucleotides linked together in DNA molecular

(a) In 1953 Watson and Crick sketched the figure to show how the four nucleotides link each other to form a chain by 3'5' linkages. (b) In 1953 Watson and Crick sketched the figure to show how the two hydrogen bonds between nitrogenous bases result in the bases are largely buried in the interior of the DNA and are kept away from water. (c) The bases are buried in the interior of the DNA by hydrogen bonds between A and T (two), C and G (three).

表 3. Watson 和 Crick 在 1953 年表述的事实和 2600 年前圣经的文字记载

	In 1953 Watson and Crick described the “four nucleotides”		2600 years ago Ezekiel described the “four living creatures”
1	four nitrogenous base	A, T, C, G	had four faces
2	sugar	Five-carbon sugar	they had the hands of a man (five fingers)
3	Phosphate	pure phosphorus like the “color of burnished brass”	their feet “like the color of burnished brass”
4	Four linkages: • Two 3'5' linkages • two hydrogen bonds between the bases		every one had four wings: • two wings were joined one to another • and two covered their bodies

表 4. 以西结异象与 DNA 分子

	Chapter: Verse	Ezekiel Code (KJV, in metaphor words)	Annotate (in common words)	DNA molecule (in biological terminological words)
1	1:4	a whirlwind came out of the north, ... Also out of the midst thereof came the likeness of four living creatures ... they had the likeness of a man.	Overview of the thing included four characters	DNA, the right-handed double helical molecule that composed by four kinds of nucleotides encoding the human biological body.
2	1:4	whirlwind	Helix thing	Double helical long-chain
3	1:4	came out of the north	Tornado spin direction is right-handed helical on north hemisphere	DNA spin direction is right-handed helical
4	1:4	a fire infolding itself	Energy releasing	Energy releasing are necessary when enzymes working on DNA
5	1:4	colour of amber, out of the midst of the fire.	Thing emits strong white light	Magnesium in enzymes. Strong white light as burning reaction of magnesium.
6	1:5	four living creatures	only four things there	There are only four kinds of nucleotides in DNA
7		the likeness of a man.	Constituting the form of mankind	DNA information encoding the human biological body
8	1:6	four faces	Four structure as identity card	Four nitrogenous base are nucleotides' identity



				in DNA
9	1:6	wings	Expanding things from body to outside	Chemical bonds between nucleotides
10	1:7	calf's foot: and they sparkled like the colour of burnished brass.	Yellow material	A phosphate in phosphate acid in each nucleotide. Crystal phosphate is yellow.
11	1:8	they had the hands	There are five-structure thing in	A deoxyribose (five-carbon structure) in each nucleotide
12	1:9	Their wings were joined one to another;	Linker between things	The chemical bonds between the phosphates and the sugars to form sugar-phosphate backbone for linking one nucleotide to the next in the DNA strand
13	1:10	four faces: man, lion, ox ,eagle	Four individual's identities	Four nitrogenous base as nucleotides' identity in DNA: adenine (A), thymine (T), Cytosine (C) and guanine (G)
14	1:10	Face of ox	Close related on calf	Cytosine was first discovered in 1894 from calf thymus tissues.
15	1:10	Face of eagle	Close related on birds	The first isolation of guanine was in 1844 from birds
16	1:11	two wings covered their bodies.	Expanding things for cover, protection, maintain its main structures	Hydrogen bonds between complementary nucleotides (A-T, C-G), responsible for establishing and preserving DNA's special structure and functions, such as, 1. The bases are largely buried in the interior of the DNA and are kept away from water. 2. Two chains are held together to form double helix. 3. Hydrogen bonds of complementary nucleotides, A-T (two bonds), C-G (three bonds), assure the proper sequence of each daughter DNA strand during DNA replication (semiconservative model of replication). It was very appropriate that the three special functions of the hydrogen bonds were summarized as "covering its body".
17	1:12	And they went every one straight forward: whither the spirit was to go, they went; and they turned not when they went.	fixation of the direction following the guide	nucleotides link in 5'—3' or 3'—5' direction in DNA
18	1:13	living creatures, their appearance was like burning coals of fire, and like the appearance of lamps:	Four things carry high energy than common status	Deoxynucleoside triphosphate (dNTP), with more energy than Deoxynucleoside monophosphate (dNMP)
19	1:13	it went up and down among the living creatures	Energy transferring among them	Energy of dNTP are transferred from ATP
20	1:13	out of the fire went forth lightning.	Soon extinguish after movement	When dNTP are assembled into DNA the energy released
21	1:14	the living creatures ran and returned as the appearance of a flash of lightning	Movement very much fast and there are a lot	3 billions nucleotides needed during a DNA molecule formed, 50 nucleotides per second
22	1:15	living creatures, behold one wheel	Together with ring-shape thing	Ring-shape proteins working on nucleotides
	1:16	the colour of a beryl:		?
23	1:16	a wheel in the middle of a wheel.	Multiple wheel shape things combine together	ring-shape protein with multiple subunits together
	1:17	When they went, they went upon their four sides: and they turned not when they went.	Same with 17	Same with 17
24	1:18	their rings, they were so high that they were dreadful;	Very bigger than living things	Multiple subunits ring-shape proteins is larger than nucleotides
25	1:18	their rings were full of eyes round about them four	With very complex structure on it	Multiple subunits ring-shape proteins are very complex structure with binding sites
26	1:19	when the living creatures went, the wheels went by them: living creatures were lifted up from the earth, the wheels were lifted up	Activation must be together, depended each other	Structural of helicases has been identified to assemble into multisubunit ring-shaped hexamers. In most, hexamer formation requires nucleotide binding.
27	1:20	for the spirit of the living creature was in the wheels.	The living things are controlled completely by wheel shape thing	The hexamer-ring cannot be formed and not move on DNA (either 5' to 3' or 3' to 5' direction) without binding NTP because the helicases are NTP-driven motor proteins.
	1:21	Same with 1:20	Same with 27	Same with 27



28	1:22	And the likeness of the firmament upon the heads of the living creature was as the color of the terrible crystal, stretched forth over their heads above.	A special structure over the above that with crystal structure	The membrane architecture is a lipid bilayer and proteins embedded in the bilayer. The structure of membrane looked like "ice" or "crystal" from cytoplasm toward outside.
	1:23	Same with 1:9 and 1:11	Same with 16	Same with 16
29	1:24	And when they went, I heard the noise of their wings, like the noise of great waters	All activation are occurring in water	The "space" inside of cell under the membrane called "cytoplasm". The entire cell including nucleus is full of water and also the enzyme-catalyzed reactions take place in aqueous solutions.
30	1:25	And there was a voice from the firmament that was over their heads, when they stood, and had let down their wings.	All activation are controlled by a signal system	The reactions of replication, transcription and translation are controlled by the molecular signals.
	1:26			?
	1:27			?
31	1:28	appearance of the bow	Light with water existing in the same space and same time	During these reactions the water-generated and energy-released in the same time
32	1:28	the day of rain	water formation	During these reactions the water-generated
33	2:9	a scroll	A roll- ship thing that contained series of information.	Human DNA molecule twines into "rolls" of chromosomes, the information of genomic DNA is a huge "book" formed many years ago not by humankind. The genome includes about 35 thousands genes (sentences).
34	2:10	he unrolled before me	Humankind cannot "open" and read it directly.	Humankind cannot "open" and read DNA directly.
35	2:10	on both sides	Two sides.	Two strands of DNA, one is up side another is down side.
36	2:10	were written words	Express information by unites.	Nucleotides, A, T, C, and G, or genes.
37	2:10	lament and mourning and woe	basic behaviors and emotions	Genomic DNA determine human basic behaviors and emotions.
38	3:1-3	eat this roll. take the roll as food. I eat it; as honey for sweetness	The roll- ship thing contained series of information can be eaten as food and contains sugar.	The DNA, a unique biological material, certainly can be eaten and contains sugar (pentose sugar), "sweet" indeed.
39	3:5	a strange speech and of an hard language	A special information system different from human languages.	A genomic DNA is a "book", the genes are the "words or sentences" to be a chemical language, a special strange language.
40	3:6	Not to many people of a strange speech and of a hard language, whose words thou canst not understand.	Languages that cannot be understand by ancient people.	Modern scientists use the scientific terminology, parameters and language to understand biological information on genomic DNA.
41	3:6	Surely, had I sent thee to them, they would have hearkened unto thee.	Some one would surely understand the mystery thing Ezekiel saw.	Modern scientists can understand DNA molecule structure and function as Ezekiel saw.

圣经中的一句话似乎早已断定了这类巧合的发生是必然的是不可推诿的: "For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his

eternal power and Godhead; so that they are without excuse." (Bible, KJV, Romans 1:19-20).

(如果读者还想知道细胞 "染色体", "DNA 分子", "线粒体能量代谢系统" 和 "细胞凋亡" 等生命中最要紧的环节与圣经文字的 "巧合" 关系, 请参阅 "星空细雨" 的系列文章, <http://xkxy.org>).

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