Biophysical Informatics

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Abstract   Biophysical informatics are concerned to anti-gravitational influx into the system that lead to synthesis of amino acids under supervision of lunar gravity and time following codon-anticodon complementarity. The positional charecteristics of anti-gravitatioal strands have been discussed, especially for hemoglobin molecule.

Keywords   Bisection, Anti-gravity, Hemoglobin

1. Introduction

This paper is a sequel of 'Biology of Time' [1]. Biophysical informatics relating to chemistry of gravity and antigravity that controlling the biological proceedings explained in this paper to some extent. The building block of proteins i.e. amino acids are interactive due to its variable codon composition and execute noncovalent weaker forces that would be gravitational forces [2].

2. Discussions

Earth or Moon's diameter is a measurement of time:

The diameters of earth(12756 km) and our moon(3476 km) are measurement of time and that relevant to biology. The formulation, g = relative mass*curvature of diameter^2

Where g = gravity of the celestial bodies considering earth's mass & gravity (= 1) as a body of reference and this is applicable to all solar planets.

In earth-moon context, Earth's diameter / Moon's diameter = 12756 km/ 3476 km = 3.67 and moon's relative mass = 0.012 with respect to earth's mass = 1.

Applying this in above formula, we get, moon's gravity = $0.012*3.67^2 = 0.16$.

In earth-mars context, Earth's diameter / Martian diameter = 12756 km/ 6786 km = 1.88.

Martian relative mass = 0.107.

Applying this in formula, we get, Martian gravity = $0.107*1.88^2 = 0.38$.

This is applicable to all solar planets and the results are in approximation and would asserts diameter of moon, earth etc. in kilometre are measurement of time.

Repetitive 14.0267:

Here is a mathematical model of amino acids follows repetitive 14.0267.

The amino acids start with $75.0669^{gly} + 14.0267 = 89.0935^{ala}$ and $89.0935 + 2*14.0267 = 117.1469^{val}$ and $117.1469 + 14.0267 = 131.1736^{leu}$ and $132.1184^{asn} + 14.0267 = 146.1451^{gln}$.

It is significant that $131.1736^{leu} - 121.159^{cys} = 10.0146$ and $117.1469^{val} - 121.159^{cys} = 4.0121$ where $10.0146 + 4.0121 = 14.0267$. Here 10.0146 and 4.0121 are bisection of 14.0267 with respect to core values (C_v).

$10*0.0019 - 0.0146 = 0.0044$ whereas $4*0.0019 - 0.0121 = (-)0.0045$ with 0.0001 time difference and neutralizes each other.

It is significant that 121 or 146 values both found in horizontal as well as vertical time.

The addition of core values of cys and gln = $0.0709 + 0.1323 = 0.2033 = 19*0.0107 = 107*0.0019$ whereas the substraction follows $0.1323 - 0.0709 = 0.0614 = 1/16 - 0.0010$ where 1/16 = reciprocal of lunar gravity (vt) and 0.0010 is vertical bisection of 14.0267 since $0.0267/14 = 0.0019$ with 0.0001 time difference.

In met-tyr context, $149.2124^{met} - 117.1469^{val} = 32.0655 = 28*0534 + 4.0121$ and $149.2124 + 32.0655 = 181.278$ that differ with $0.278 - 0.1894^{tyr\ ht} = 0.0886 = 0.0741 + 0.0146$ where $16(\text{lunar gravity}^{vt})*0.0019 = 0.0304 = 0.016 + 0.0146 - 0.0002(\text{time difference})$.

Again $89.0935^{ala} + 32.0655 = 121.159^{cys}$.

The starting amino acid $75.0669^{gly} + 3*14.0267 = 117.1469^{val}$.

Reptetive 14.0267 is significant for anti-gravitational influx since 0.3477(lunar time) − 30*0.0107 (anti-gravitational unit) = 0.0267 shows lunar time limitation and go for a new amino acid in a definite structure. The system allows bisection of lunar antigravity or gravity i.e. $0.428 - 0.3477 = 0.0803$ that related to $0.0803 + 0.0267 = 0.107$(i.e.10*0.0107) or 0.0367(earth-moon curvature) − 0.0359(UUA) = 0.0008 and $0.0367 - 0.0382(\text{AAU}) = 0.0016 - 0.0001(\text{time difference})$ that constitutes $0.0359 + 0.0382 = 0.0741$ a fundamental codon package that extrude specific

anti-gravitational values in the positive side thus making amino acids.

3. Biophysical Informations

The gravitational or antigravitational threshold of the earth-moon time structure would be $30*0.0107 = 0.321$ and that of corresponding values $30*0.0019 = 0.057$. The amino acid synthesis reaction can not be initiated until anti-gravitational influx reaches to this position. The each position represents a multiple of 0.0019 or 0.0107.

From the standpoint of codon difference i.e. 263(UG) – 246(AC) = 17 = 16 + 1.

Where '16' is lunar gravity in vertical time or molecular weight form that coincides to Oxygen and would be concerned mathematically $31*0.0019 = 1 / 17$ and $31*0.0107 = 0.3317 = 0.3477$(lunar time) – 0.016.

Here, $17*0.0019 = 0.0323$ and $1/17 = 0.0589$ are structural matters are related to $0.321/10 = 0.0321 + 0.0002$ and $0.0589 – 0.057 = 0.0019$ shows 0.0570 is eqivalent or complementary to 16(lunar gravity). Reciprocality arises as moon exists in opposite direction to earth.

Now, $0.321 – 0.0321 = 0.2889 = 27*0.0107 = 152*0.0019$ and $0.057 – 0.0057 = 0.0513 = 27*0.0019$ are related to $0.0152*2 = 0.0304 = 16*0.0019$.

Now, $152 + 3 = 155^{his \ vt}$ and $152 – 3 = 149^{met \ vt}$ and correspondingly $0.2124^{met \ ht} – 0.1552^{his \ ht} = 0.0572$ and $(0.2124 + 0.1552) – 0.321 = 0.0466 = 0.0321 + 0.0145$ where $152*2 = 304 = 160 + 144$ a structural matter in course of bisectional progress of biomolecules.

Correspondingly, $0.1894^{tyr \ ht} – 0.1469^{val \ ht} = 0.0425 = 0.0570 – 0.0145$ and $(0.1894 + 0.1469) – 0.321 = 0.0153$.

It is significant that 0.1736(bisection of lunar time or leu ht) – 0.1552 = 0.0184(bisection of 0.0367 earth-moon time curvature) comply to 304 /2 = 152 where 152*2 = 304 = 155 + 149.

Here are some interesting relations like $0.2889 + 0.0513 = 0.3402 = 0.378$(TTT) $– 0.0378$(TTT) $= 0.321 + 0.0192$ and also $0.0321 + 0.0192 = 0.0513 = 0.057 – 0.0057 = 0.0155 + 0.0358$(CAU).

Again, $131.1736^{leu \ MW} + 14.0267 + 10.0146 = 155.2149$ differed by $0.2149 – 0.1552 = 0.0597 = 0.0741 + 0.0144$ with 0.0002 time difference and $0.2889 – 0.2149 = 0.0741$.

So 0.0144 or 144 structural values appears from 304 – 160 = 144.

A changeover of '10' originated from $0.367 – 0.3477 = 0.0193 = 10*0.0019 + 0.0003$.

The codon package '39' shows $39*0.0019 = 0.0741$ a fundamental anti-gravitational codon in biophysics shows $0.0741 = 0.0359$(UUA) $+ 0.0382$(AAU).

A general form of codon-anticodon disposition is $19*0.0019 = 0.0361 = 0.0359$(UUA) $+ 0.0002$ and $19*10 = 190$ so that $190*2 – 361 = 19$ a core values exists for regeneration and the seed of replications are innate to $0.0267 / 14 = 0.0019$ formulation. This $0.019 = 10*0.0019$ acts as a changeover as a complementation in the structure to initiate

bisectional progress and $0.0190 = 0.0133 + 0.0057$ are the structural matters.

The synthesis of amino acids can also be found from summation of codon-anticodon assignment.

The maximum difference of codon-anticodon triplet pair would be 453(GGG) – 333(CCC) = 120 = 3*40(triplet repetitive of 40) and on summation perspective 453 + 333 = 786 is concerned to lunar gravity with one molecule difference like $786 – 741 = 45 = 3*16 – 3$ that is why $3*0.0019 = 0.0057$ is an intrinsic factor of time structure.

741 or 0.0741 and 0.3477(lunar time) are differentiated by change of one decimal place.

$39*0.0019 = 0.0741 = 0.0304$(lunar antigravity) $+ 0.0437$(core values or difference of UUA-AAU).

Lunar time $= 0.3477 = 0.304 + 0.0437$.

Lunar time 0.3477 or 0.0741 is a limit point of anti-gravitational influx and that can be overfluxed by codon complementarity or any way otherwise it drives out the anti-gravitational values to gravitational arena.

Now, $183*0.0019 = 0.3477$ and $183 = 160 + 23 = 144 + 39$ shows under one step replication 144 drives out to positive or gravitational arena and related by $144 + 8 = 152$ and $152*2 = 304$.

Because of gravitational-antigravitational chemistry, $23*0.0019 = 0.0437$ is fundamental values in the system. '23' appears a core values of UUA^{leu} and AAU^{asn} codon-anticodon combination (0.0741) and it is seen the combination torn out by 39 = 10 + 29 where $10*0.0019 = 0.0190$ would acts as a complementary of one step(10) replication or one molecule adjustment as the case may be.

In phe-lys context, the codon-anticodon disposition is UUU-AAA, so it is expected the presence of TTT(378) in the system.

Here, antigravitational influx (horizontal time) $= 0.1881^{lys \ ht} + 0.19^{phe \ ht} = 0.3781$(TTT) $= 0.321 + 0.057$ where 0.321 or 0.057 acts as parameters.

Here, codon-anticodon summation is 336(UUU) + 405(AAA) = 741 but codon difference is 405 – 336 = 69 = 3*23. Comparing with above discussions, $0.3781 – 0.3477 = 0.0304$ and surplus of $2*23 = 46 = 0.0874 = 0.0311 + 0.0553 + 0.0010$ and $0.0874 = 0.0304 + 0.0570$.

The total molecular weight of phe-lys = 146.1881 + 165.19 = 311.3781 and phe-lys shows one molecule adjustment in positive and negative side.

In met-tyr context, anti-gravitational influx(ht) $= 0.2124^{met \ ht} + 0.1894^{tyr \ ht} = 0.4018$.

Now, $0.4018 – 0.3781 = 0.0237$ coincides to $0.0237 + 0.0330^{met-tyr \ ht} + 0.0003 = 0.0570$ with 0.0003 time difference and codon-anticodon summation = 398 + 358 = 741 + 16 – 1 and 16 is equivalent to 0.057 previously explained.

In val-gln context, anti-gravitational influx $= 0.1469^{val \ ht} + 0.1451^{gln \ ht} = 0.292$.

Now, $0.3781 – 0.292 = 0.0861 = 0.0571 + 0.0290$ where $0.292 + 0.029 = 0.321$.

In trp-thr context, antigravitational influx (ht) $= 0.2261^{trp \ ht} + 0.1197^{thr \ ht} = 0.3458$.

Now, $0.3781 - 0.3458 = 0.0323 = 323^{trp\text{-}thr\ vt}$.

On codon-anticodon perspective, $414(UGG) + 357(ACC) = 741 + 32 - 2$.

Here, $30*0.0019 = 0.057$ plus $0.0019 = 0.0589 = (16 + 1)$ since $0.3477 - 0.3458 = 0.0019$.

Biophysical informations in terms of Hemoglobin molecule:

The sequence of hemoglobin polypeptide starts (position no. 1) with valine [3]. Although it is called amino acid position-1 but is actually position-30 because valine can not be synthesized until anti-gravitational influx reaches to lunar gravity (position-30).

So the position-6(glutamic acid) is actually position-35 for Hemoglobin A.

Position-35 is the locus of hemoglobin molecule clarified as follows.

Now, $35*0.0107 = 0.3745 = 0.3477 + 0.0268$.

$0.0268(extruded) = 268 = 121^{cys\ vt} + 147^{glu\ vt}$ and the corresponding values(ht) $= 0.159 + 0.1299 = 0.2889 = 27*0.0107 = 152*0.0019$ and $0.159 - 0.1299 = 0.0291$.

The values $0.0291 = 0.0107 + 0.0184$ are correlated with 0.0304 and 0.0267 are structural matters.

It is striking that cys's are found at '93' & '112' positions of hemoglobin beta-chain what are actually '122' & '141' positions. Beta-chain is 146(i.e.175) amino acids long related with loci-35 in a way that $175 - 35 = 140$ and 122 is cys vt with one molecule difference.

Loci-35 is controlling the whole beta-chain hemoglobin and mutation like val or lys in this position-6 or position-35 changes the charecter of the molecule and leads to molecular abnormalities.

The net ht of glutamic acid$(147.1299) = 0.1299 - 0.0147 = 0.1152 = 0.1605(lunar gravity) - 0.0453$. As 0.0453 overlaps 0.0367(earth-moon curvature) by $0.0453 - 0.0367 = 0.0086$ the codon of glu appears as $0.0333 + 0.0086 = 0.0421(GAA) - 0.0002$.

In case of valine(117.1469) substitution in position-35 causes gravitational detrimental of the molecule.

The net ht of valine $= 0.1469 - 0.0117 = 0.1352 = 0.1605 - 0.0253$ where $0.0421(GAA)^{glu\ cd} - 0.0253 = 0.0168 = 0.016 + 0.0008$ is said to be gravitational non-consistency.

Secondly, $268 - 117 = 152 = 0.0152 = 8*0.0019$ is a bisection of lunar gravity with one molecule difference.

Again, $0.1469^{val\ ht} - 0.0803(\text{bisection of } 0.1605) = 0.0665 = 35*0.0019$.

Again, $35*0.0107 - 121*0.0019 = 0.1446 = 0.0147 + 0.1299$ that would supports loci-35.

Conclusions: The biophysical informatics are concerned to deep meaning of gravitational and anti-gravitational motivation towards biological processes derived from earth-moon time structure towards far-reaching implications and simply saving earth-moon is saving ourselves.

REFERENCES

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