



## Research Article

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# The effects of quantum spectrum of $4 + n$ -dimensional water around a DNA on pure water in four dimensional universe

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**Abstract:** Recently, a method for calculating the quantum spectrum of black holes has been proposed. We show that this method can be applied for radiations of  $4 + n$ -dimensional water around a DNA. In this model, DNA acts like a black hole and produces a curved space-time in a water around it. In these conditions, molecules of water in four dimensional universe are entangled with some DNA-like structures in extra dimension. Consequently, the effects of structures of water in extra dimensions can be observed in four dimensions. The entangled structures emit some quantum spectrum which can be transmitted to pure waters. These waves produce a curved space-time in pure water and make an entanglement between structure of water on four and DNA-like structures in extra dimensions. As a result, some signatures of DNAs can be observed in pure water. This model helps us to understand the reason for the emergence of life on the earth. To explain the model better, we unify Darwin's theory with string theory in a new Darwinian's string theory. In this theory, a zero dimensional manifold decays into two types of closed strings. One type decays into open strings and then these strings join to each other and form cosmos. Another type decays into open strings which form biological matters like DNAs and molecules of water in universe and anti-DNAs and anti-water in anti-universe. Thus, DNAs and molecules water are connected to each other and anti-DNAs and molecules of anti-water in anti-universe through some closed strings. These strings helps to molecules of water to store their informations in extra dimension and have long time mem-

ory. Because, information that are transformed into extra dimensions through closed strings, could be returned into universe. Also, these closed strings could have the main role in DNA transduction. Because, they connect two tubes one including water and DNA and another pure water in universe to two tubes including anti-DNA and water in anti-universe and transform properties of DNA into pure water. As a result, Darwinian string theory can confirm both water memory and DNA transduction. Finally, this theory response to this question that why memory of water couldnt remain for a long time. In this model, open strings which connects atoms in universe with anti-atoms in anti-universe interact with open strings which connects molecules of water and anti-water and decrease their entanglement. This causes that exchanging information between water and anti-water decreases and memory is disappeared.

**Keywords:** Black hole, spectrum, DNA, water

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## 1 Introduction

Recently, some scientists have obtained the spectrum of quantum black holes and the suggested a more exact black hole effective temperature [1, 2]. This effective temperature has included both the non-strictly thermal character of Hawking radiation and the countable behaviour of emissions of subsequent Hawking quanta [3]. In their mechanism, the formula of the horizon's area quantization and the number of quanta of area were resulted to be functions of the quantum quasi-normal modes i.e. of the black hole quantum level [4]. These results are a quantum version of classical radiation which is proposed by Hawking [3] and include some extra terms like number of states in quantum mechanics. Since these calculations are based on the quantum field theory in curved space-time, we can generalize them to any system which creates a curved space-time. Now, the question arises that this mechanism could

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be applied for obtaining the spectrum of DNAs in waters?. It seems that similar to black holes, DNAs and waters can have spectrum. This has been shown by some scientists who considered the capacity of some DNA sequences to radiate very low frequency spectrums in high aqueous dilutions. They have shown that the genomic DNA of most pathogenic bacteria contains sequences which are able to produce such spectrums [5, 6]. On the other hand, some other group of scientists have discussed that water itself is very complicated system and has an special spectrum. Also, water has the memory and is able to store information [7–9]. Motivated by these research, we will calculate the quantum spectrum of waters around DNAs. We will show that DNA acts like the black hole and creates a curved space-time. This system produce some waves that move, achieve to second pure water and creates a curved space time in it. In this curved space-time, the structures of waters in four dimensions become entangled with some DNA-like structures. Consequently, the signature of DNAs can be observed in second water.

The outline of the paper is as follows: In section 2, we will consider the quantum spectrum in curved space-time of water around a DNA . In section 3, we will analyse the effects of radiated waves by this system on second pure water. In section 4, we consider the origin of DNA transduction and water memory in a unified Darwin’s string theory. In section 5, we consider effects of medium on water memory in string theory. The last section is devoted to summary and conclusion.

## 2 The quantum spectrum of 4 + n-dimensional water around a DNA

Recently, some scientists have shown that for black hole, the entropy can be given by [4]:

$$S_{BH} = 4\pi \left( M^2 - \frac{n}{2} \right) \tag{1}$$

where,  $n$  is the number of quantum states and  $M$  is the mass of black hole. We are working with national unit and put all constants equal to one ( $G_E = c = k_B = \hbar = 1$ ). Here,  $G_E$  is the gravitational constant,  $c$  is the velocity of light,  $k_B$  is the Boltzman constant and  $\hbar$  is the plank constant. For this reason, we choose the same unit for  $M$  and  $n$ . In this section, we will apply this method for DNAs [4]. This is because that bases in a DNA are coiled more or four times around an axis and a curved space-time is emerged around it. In this curved space-time, the structures of water in

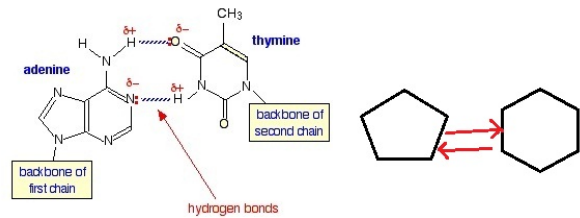


Figure 1: The hexagonal and pentagonal structures in a base of DNA.

four and extra dimensions are entangled. Consequently, we can detect the structure of water in extra dimension around a DNA. Near a DNA, the gravitational constant is the same of gravitational constant in normal physics. This is because that this constant depends on the strength of gravitons. With respect to this point that all gravitons behave the same on four dimensional manifold, this gravitational constant is the same for DNAs and gravitational objects.

Each base of DNA has been constructed from hexagonal and pentagonal structures (See Figure 1). To calculate the energy of each base, first, we should calculate the energy of hexagonal and pentagonal shapes.

Each hexagonal structure has been constructed from trigonal manifolds. Thus, it is needed to calculate the energy of trigonal manifolds. To this aim, we use of the mechanisms in string theory. This is because that this theory gives us more degrees of freedom. To begin, we introduce the action of triangular manifold [10–13]:

$$S_3 = -T_{tri} \int d^3\sigma \sqrt{\eta^{ab} g_{MN} \partial_a X^M \partial_b X^N + 2\pi l_s^2 G(F)} \tag{2}$$

$$G = \left( \sum_{n=1}^3 \frac{1}{n!} \left( -\frac{F_1 \dots F_n}{\beta^2} \right) \right)$$

$$F = F_{\mu\nu} F^{\mu\nu} \quad F_{\mu\nu} = \partial_\mu A_\nu - \partial_\nu A_\mu$$

where  $g_{MN}$  is the background metric,  $X^M(\sigma^a)$ 's are scalar fields,  $\sigma^a$ 's are the manifold coordinates,  $a, b = 0, 1, \dots, 3$  are world-volume indices of the manifold and  $M, N = 0, 1, \dots, 10$  are eleven dimensional spacetime indices. Also,  $G$  is the nonlinear field [6] and  $A$  is the photon which exchanges between manifolds. Using the method in ref [7], we can obtain the Humiltonian for triangular manifolds:

$$H_3 = 4\pi T_{tri} \int d\sigma_3 d\sigma_2 d\sigma_1 \sqrt{1 + \eta^{ab} g_{MN} \partial_a X^M \partial_b X^N} O_{tot} \tag{3}$$

$$O_{tot} = \sqrt{1 + \frac{k_3^2}{O_2 \sigma_3^4}} \sqrt{1 + \frac{k_2^2}{O_1 \sigma_2^4}} \sqrt{1 + \frac{k_1^2}{\sigma_1^4}}$$

$$O_2 = O_1 \sqrt{1 + \frac{k_2^2}{O_1 \sigma_2^4}}$$

For constructing a hexagonal manifold, we should put two trigonal manifolds near each other so that direction of the motion of particles on two trigonal manifolds are reverse to each other (See Figure 2). In a symmetrical hexagonal manifold, two photons cancel the effect of each other and total energy of system becomes zero. Using equations (3), we can write:

$$\begin{aligned} \sigma_1 &\rightarrow -\bar{\sigma}_1 & \sigma_2 &\rightarrow -\bar{\sigma}_2 & \sigma_3 &\rightarrow -\bar{\sigma}_3 \\ \int d\sigma_3 d\sigma_2 d\sigma_1 &\rightarrow -\int d\bar{\sigma}_3 d\bar{\sigma}_2 d\bar{\sigma}_1 \\ A_0 &\rightarrow \bar{A}_0 & A_1 &\rightarrow \bar{A}_1 \\ \Rightarrow H_3 &\rightarrow -\bar{H}_3 \end{aligned} \quad (4)$$

For a symmetrical hexagonal manifold, the Hamiltonians of two trigonal manifolds cancel the effect of each other and total Hamiltonian of system becomes zero. This system is completely stable and can't interact with other systems. For a non-symmetrical hexagonal manifold, fields are completely different and two Hamiltonians can't cancel the effect of each other. Using equations (2 and 3), we have:

$$\begin{aligned} H_3 &= 4\pi T_{tri} \int d\sigma_3 d\sigma_2 d\sigma_1 \sqrt{1 + \eta^{ab} g_{MN} \partial_a X^M \partial_b X^N} O_{tot} \\ \neq \bar{H}_3 &= 4\pi T_{tri} \int d\bar{\sigma}_3 d\bar{\sigma}_2 d\bar{\sigma}_1 \sqrt{1 + \eta^{ab} g_{MN} \partial_a \bar{X}^M \partial_b \bar{X}^N} \bar{O}_{tot} \end{aligned} \quad (5)$$

Thus, total Hamiltonian and the action of two trigonal manifolds can be obtained as:

$$H_6^{tot} = H_3 - \bar{H}_3 \quad (6)$$

This equation shows that if two trigonal manifolds join to each other and form the hexagonal manifold, the Hamiltonian and also the action of hexagonal manifold is equal to the difference between the actions and Hamiltonians of two trigonal manifolds. A non-symmetrical hexagonal manifold has an active potential and can interact with other manifolds.

Using the Hamiltonians in equation (6), putting  $X^M \simeq \sigma^M$  and assuming all coordinates are the same ( $\sigma_1 = \sigma_2 = \sigma_3$ ), we obtain:

$$\begin{aligned} E_{tot}^6 &= H_3 - \bar{H}_3 \approx 4k\pi T_{tri} \left[ \frac{1}{\sigma^3} - \frac{1}{\bar{\sigma}^3} \right] \\ S_{BH} &= 4\pi \left( (E_{tot}^3)^2 - \frac{n}{2} \right) \\ T_6 &= \frac{1}{4\pi E_{tot}^3} \end{aligned} \quad (7)$$

where we have used of  $E = Mc^2$  and put  $c = 1$  in national unit. This equation shows that the entropy and the temperature of hexagonal manifolds depend not only on the number of quantum states but also shape of manifolds which

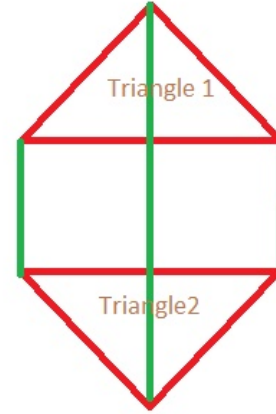


Figure 2: A hexagonal manifold is consisted of two triangles.

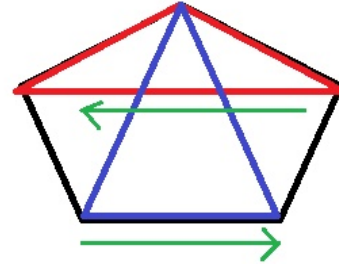


Figure 3: A pentagonal manifold is formed by joining two triangles with a common vertex.

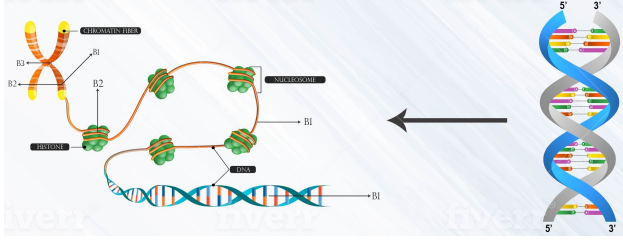
construct this molecule. For a symmetric hexagonal manifold which constructs of two similar trigonal manifolds, total energy of system is zero. However, if a hexagonal manifold is constructed from two non-similar trigonal manifolds, the energy isn't zero and depends on the difference between two triangles. Thus, entropy and temperature of a hexagonal manifold depends on the differences between two triangles which construct it.

A pentagonal manifold can be built of two triangles with a common vertex (See Figure 3). Consequently, both of triangles have a common photonic field. To avoid of calculating this photon for two times, we remove it from one of triangles. We have:

$$H_5^{tot} = H_3 - \bar{H}_2 \quad (8)$$

Following the mechanism for hexagonal manifold, we obtain following actions

$$\begin{aligned} S_3 &= -T_{tri} \int d^3\sigma \sqrt{\eta^{ab} g_{MN} \partial_a X^M \partial_b X^N + 2\pi l_s^2 \left( \sum_{n=1}^3 \frac{1}{n!} \left( -\frac{F_{1..F_n}}{\beta^2} \right) \right)} \\ \bar{S}_2 &= -T_{tri} \int d^3\sigma \sqrt{\eta^{ab} g_{MN} \partial_a \bar{X}^M \partial_b \bar{X}^N + 2\pi l_s^2 \left( \sum_{n=1}^2 \frac{1}{n!} \left( -\frac{\bar{F}_{1..F_n}}{\beta^2} \right) \right)} \end{aligned} \quad (9)$$



**Figure 4:** Each DNA has been constructed from many hexagonal and pentagonal molecules.

and following Hamiltonians:

$$H_3 = 4\pi T_{tri} \int d\sigma_3 d\sigma_2 d\sigma_1 \sqrt{1 + \eta^{ab} g_{MN} \partial_a X^M \partial_b X^N} O_{tot}^3 \quad (10)$$

$$\neq \bar{H}_2 = 4\pi T_{tri} \int d\bar{\sigma}_3 d\bar{\sigma}_2 d\bar{\sigma}_1 \sqrt{1 + \eta^{ab} g_{MN} \partial_a \bar{X}^M \partial_b \bar{X}^N} \bar{O}_{tot}^2$$

$$O_{tot}^3 = \sqrt{1 + \frac{k_3^2}{O_2 \sigma_3^4}} \sqrt{1 + \frac{k_2^2}{O_1 \sigma_2^4}} \sqrt{1 + \frac{k_1^2}{\sigma_1^4}}$$

$$\bar{O}_{tot}^2 = \bar{O}_1 \sqrt{1 + \frac{k_2^2}{\bar{O}_1 \bar{\sigma}_2^4}}$$

Using the Hamiltonians in equation (10), putting ( $X \sim \sigma$ ) and assuming all coordinates are the same ( $\sigma_1 = \sigma_2 = \sigma_3$ ), we obtain:

$$E_{tot}^5 = H_3 - \bar{H}_2 \approx 4k\pi T_{tri} \left[ \frac{1}{\sigma^5} - \frac{1}{\sigma^3} \right] \quad (11)$$

$$S_{BH} = 4\pi \left( (E_{tot}^5)^2 - \frac{n}{2} \right)$$

$$T_5 = \frac{1}{4\pi E_{tot}^5}$$

This equation shows that the entropy and the temperature of pentagonal structures depend not only on the number of quantum states but also shape of manifolds which construct this structure. The entropy of this structure is more respect to hexagonal structures.

Each DNA has been constructed from many hexagonal and pentagonal molecules. Thus, total energy and spectrum of a DNA can be obtained by summing over energy and spectrums of all structures. We can write:

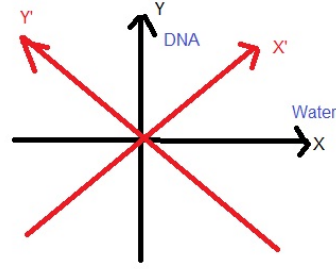
$$E_{tot}^{DNA} = \sum_{i=1}^N E_{tot,i}^5 + \sum_{j=1}^M E_{tot,j}^6 \quad (12)$$

$$S_{BH} = 4\pi \left( (E_{tot}^{DNA})^2 - \frac{n}{2} \right)$$

$$T_{DNA} = \frac{1}{4\pi E_{tot}^{DNA}}$$

where  $N$  and  $M$  are the number of hexagonal and pentagonal molecules in a DNA. Above equation shows that DNA acts like a black hole and emit a spectrum. This spectrum depends on the shape of molecules that construct DNA.

This black hole-like DNA creates a curved space-time in a water around it (See Figure 5). In this curved space-time, coordinates will be changed and some space-time of



**Figure 5:** Curved space-time in waters around DNAs.

four dimensions will be mixed with some coordinates of extra dimensions (See Figure 5). We can write:

$$|X, Water\rangle \rightarrow |X', Water, DNA\rangle \quad (13)$$

$$|Y, DNA\rangle \rightarrow |Y', DNA, Water\rangle$$

where  $X$  is the axis along four dimensions and  $Y$  is the axis along extra dimensions. Also,  $X'$  and  $Y'$  are coordinates in curved space-time. With respect to this point that water has memory and can store information like DNA, we guess that it has a DNA-like structure in extra dimensions. We can rewrite equation (13) by using temperature of equation (12) and the relation between fields:

$$\alpha = e^{-\frac{2\pi}{T_{Water}}}, \alpha' = e^{-\frac{2\pi}{T_{DNA}}} \quad (14)$$

$$a_{water,flat}^\dagger |X, Water\rangle \rightarrow [\alpha a_{water,curved,n}^\dagger |X', Water, DNA, 0\rangle + \sqrt{1 - \alpha^2} a_{DNA,curved,n}^\dagger |Y', DNA, Water, 0\rangle]$$

$$a_{DNA,flat}^\dagger |Y, DNA\rangle \rightarrow [\alpha' a_{DNA,curved,n}^\dagger |Y', DNA, Water, 0\rangle + \sqrt{1 - \alpha'^2} a_{water,curved,n}^\dagger |X', Water, DNA, 0\rangle]$$

where ( $a_{water,flat}^\dagger, a_{DNA,flat}^\dagger$ ) are creation operators of  $n$  molecules of water and DNA in flat space-time and ( $a_{water,curved,n}^\dagger, a_{DNA,curved,n}^\dagger$ ) are creation operators of  $n$  molecules of water and DNA in curved space-time. Also,  $\alpha$  is the probability for producing water and  $\alpha'$  is the probability for producing DNA. Assuming that temperatures of water and DNA are the same, we can solve equation (14) and obtain:

$$T_{Water} = T_{DNA} \rightarrow \alpha = e^{-\frac{2\pi}{T_{Water}}} = \alpha' = e^{-\frac{2\pi}{T_{DNA}}} \quad (15)$$

$$|X, Water\rangle = \left[ \frac{1}{\alpha^2} \sum_{n=1}^{\infty} \left( \frac{\sqrt{1 - \alpha^2}}{\alpha} \right)^{2n} \right] |X', Water, DNA, n, n\rangle \otimes |Y', DNA, Water, n, n\rangle$$

$$|Y, DNA\rangle = \left[ \frac{1}{\alpha'^2} \sum_{n=1}^{\infty} \left( \frac{\sqrt{1 - \alpha'^2}}{\alpha'} \right)^{2n} \right] |X', Water, DNA, n, n\rangle \otimes |Y', DNA, Water, n, n\rangle$$

Above equation shows that a DNA could produce a curved space-time in a water around it. In these conditions,

molecules of water in four dimensions are entangled with molecules of DNA in extra dimensions. Thus, spectrum of water around a DNA is different from the spectrum of pure water. In this spectrum, the effects of DNA could be observed completely.

### 3 The signature of DNA-like structures in pure water

In this section, we will assume that there are two containers of waters. In one container, we put some DNAs and another container includes only pure water (See Figure 6). We will calculate the probability for detecting DNAs in pure water of second container. To this aim, using equations (14 and 15), we obtain:

$$T_{Water} \neq T_{DNA} \rightarrow \alpha = e^{-\frac{2\pi}{T_{Water}}} \neq \alpha' = e^{-\frac{2\pi}{T_{DNA}}} \quad (16)$$

$$N_{DNA/pure\ water} = \sum_{m,m'=1}^{\infty} \langle X, Water | a_{DNA,curved,m} a_{DNA,curved,m}^{\dagger} | X, Water \rangle = \left[ \frac{1}{\alpha^2} \sum_{n=1}^{\infty} \left( \frac{\sqrt{1-\alpha^2}}{\alpha} \right)^{2n} \right]^2 \left[ \frac{1}{\alpha'^2} \sum_{m=1}^{\infty} \left( \frac{\sqrt{1-\alpha'^2}}{\alpha'} \right)^{2m} \right]^2$$

where  $a_{DNA,curved,m} a_{DNA,curved,m}^{\dagger}$  are annihilation and creation operator that act on pure water. To obtain the real operators, we should regard the separation distance between containers and write:

$$\bar{a}_{DNA,curved,m} = \rho \left( \frac{1}{2\pi L^2}, T_{DNA}, T_{water} \right) a_{DNA,curved,m} \quad (17)$$

where  $\rho \left( \frac{1}{2\pi L^2}, T_{DNA}, T_{water} \right)$  is a function of separation distance between two container ( $L$ ) and temperatures of two containers. This function measures the impact factor of operators in first container on the water in second container. Using equations (16 and 17), we can obtain the probability for detecting DNAs in pure water:

$$P_{DNA/pure\ water} = \sum_{m,m'=1}^{\infty} \langle X, Water | \bar{a}_{DNA,curved,m} \bar{a}_{DNA,curved,m}^{\dagger} | X, Water \rangle = \left[ \rho \left( \frac{1}{2\pi L^2}, T_{DNA}, T_{water} \right) \right]^2 \left[ \frac{1}{\alpha^2} \sum_{n=1}^{\infty} \left( \frac{\sqrt{1-\alpha^2}}{\alpha} \right)^{2n} \right]^2 \left[ \frac{1}{\alpha'^2} \sum_{m=1}^{\infty} \left( \frac{\sqrt{1-\alpha'^2}}{\alpha'} \right)^{2m} \right]^2 \quad (18)$$

Above equation shows that DNAs produce curved space-time in water of first container. This system emit some waves that moves and achieve to pure water in second container. These waves produce a curved space-time in second container and mix molecules of water in four

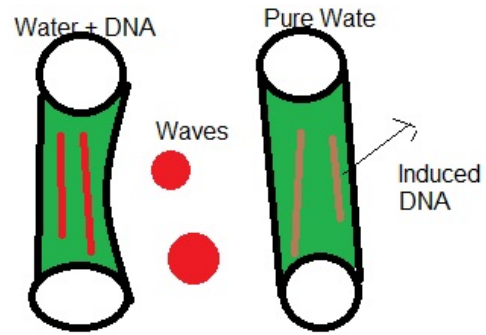


Figure 6: Two containers, one includes DNA and water and another includes only pure water.

dimensions and DNA-like structures in extra dimensions. Thus, we can detect the signature of DNA-like structures in pure water so. This is very interesting result that help us to discover the origin of life in our earth. It seems that there are some mixtures of waters and DNAs in other planets and sky. Those systems radiate some waves that interact with waters in earth and create DNA.

### 4 The origin of water memory and DNA transduction in a generalized Darwinian string theory

Around 150 years ago, Darwin proposed theory of evolution and suggest that the origin of all alive creatures is some mono celled bacteria [14]. In parallel, in cosmology, string theory predicts that the origin of all matters is strings. We unified these theories in one and propose a unified Darwinian string theory. In our model, a zero dimensional manifold decays into two types of closed strings (See Figure 7). A closed string decays into open strings. Each open string has two ends, one with positive charge and another with negative charge. These strings join to each other and form a universe and an anti-universe (See Figure 8). Another closed string decays into open strings and these strings join to each other and form DNAs, wa-



Figure 7: A zero dimensional manifold decays into bio-closed strings and cosmic closed strings.

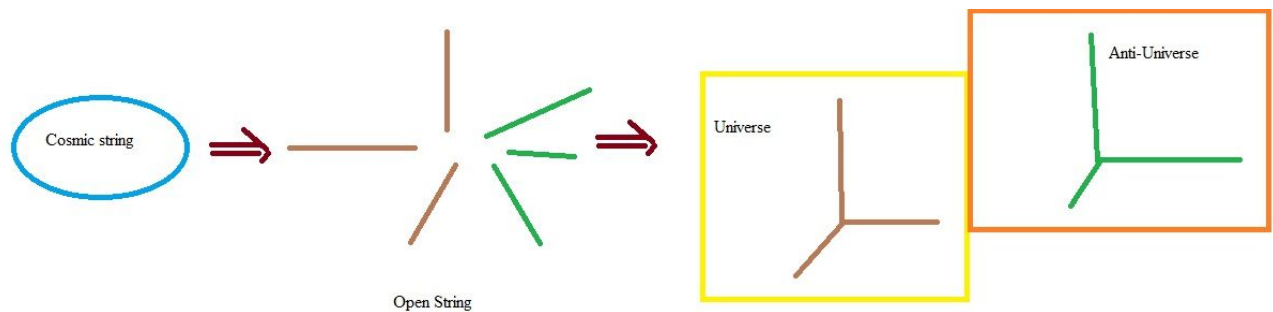


Figure 8: Formation of a pair of universe and anti-universe from strings.

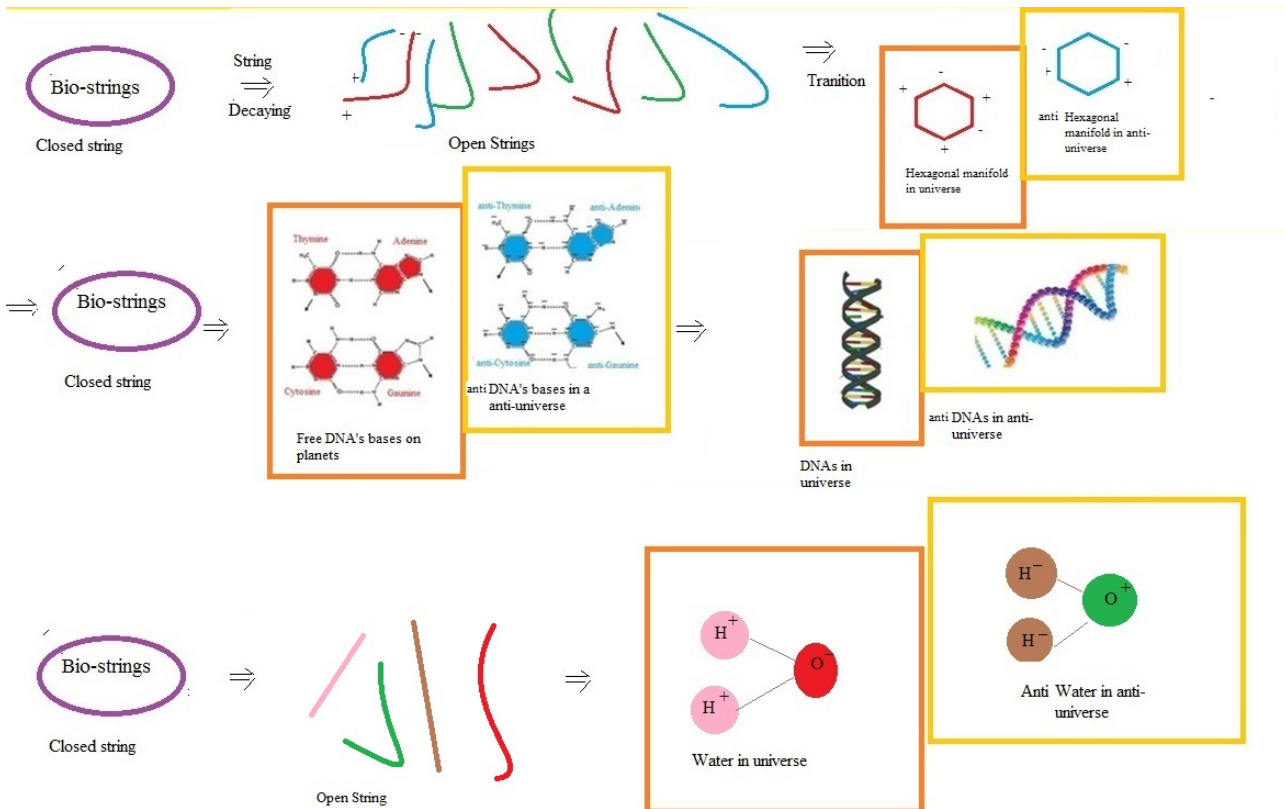


Figure 9: Formation of biological matters from strings.

ter molecules and other biological matters in universe and anti-DNAs, anti-waters and anti-biological matters in anti-universe (See Figure 9). Thus, each DNA is in relation with one anti-DNA in extra dimension. Also, each molecule of water is in relation with one molecule of anti-water in extra dimension. In fact, DNAs and molecules of water in universe can join to anti-DNAs and molecules of water in extra dimension or anti-universe and form a closed string (See Figure 9). Thus, this string can be a bridge between biological matters in universe and anti-biological matters in anti-universe and help them to exchange information and be connected. This closed string causes that some informa-

tion are transformed from molecules of water into extra dimensions and save in anti-molecules. These informations can be returned from anti-universe through closed string and for this reason, molecules of water can have long time memory (See Figures 9 and 10). On the other hand, if we put two tubes one includes water and DNA and another includes pure water without DNA and connect them by a closed string like graviton, this system will be related to a system of two tubes of water and DNA in anti-universe. Consequently, properties of DNA can be induced into pure water in second tube (See Figure 10).

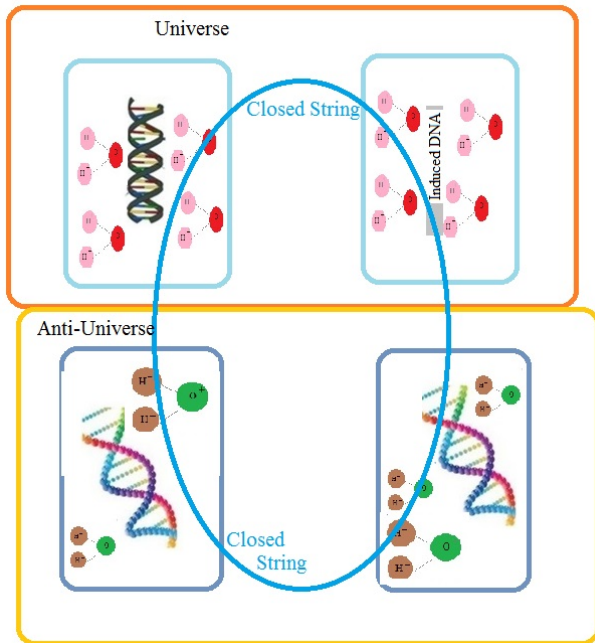


Figure 10: A closed string connects DNAs and water in universe with anti-DNAs and anti-water in anti-universe.

### 5 The effect of medium on the memory of water in Darwinian string theory

Darwinian string theory predicts the existence of a long time memory, however, we observe short time memory in experiments. The question arises that what is the reason for observing these differences. To response to this question, we should consider the effects of noise on exchanging information between molecules of water in universe and anti-molecules of water in anti-universe. Each particle like electron, proton or neutron is connected to an anti-particle in anti-universe by an open string. This string has two ends with opposite quantum charges. If there be only one molecule of water in universe and one anti-molecule of anti-water in anti-universe, they can be entangled and exchanging information occurs without any lost (See Figure 11). However, in real space-time, there are other atoms which are connected to anti-atoms in extra dimensions by some open strings. These strings interact with each other and some of informations and entanglement are lost (See Figure 12). This causes that molecules of water couldnt transform all informations to extra dimensions and recover them and thus memory is disappeared.

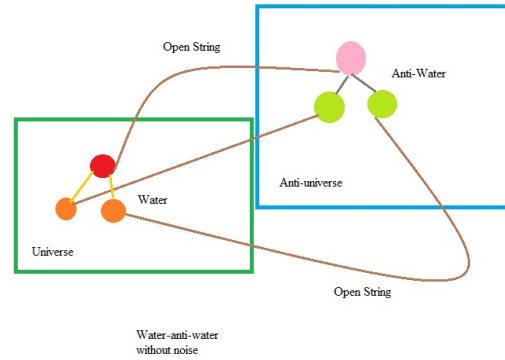


Figure 11: Entangled molecules of water and anti-molecules of anti-waters without regarding effects of medium.

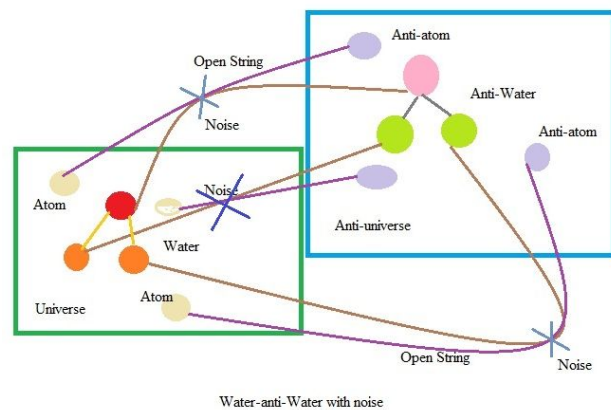


Figure 12: Decreasing the Entanglement between molecules of water and anti-molecules of anti-waters by regarding effects of medium.

### 6 Summary

Newly, some authors have suggested a mechanism for obtaining the quantum spectrum of black holes. We have generalized this mechanism and calculate the quantum spectrum of 4 + n -dimensional water around a DNA. In this model, we have shown that similar to black holes, DNA could create a curved space-time in a water around it. In this system, structures of waters in four dimensions are entangled with structures of waters in extra dimensions. The structures of water in extra dimensions aren't clear, however by considering the properties of water memory, we can guess that water has DNA-like structure in extra dimensions. In curved space-time around a DNA, the signatures of structures of water in extra dimensions can be observed. This system radiate some waves which can move and produce conditions of first water in a second water in another place. In these conditions, the structure of pure water becomes entangled with DNA-like struc-

tures in extra dimensions. Consequently, the signature of DNAs in pure water can be observed. This model gives us very helpful reasons for the emergence of life in waters of earth. It seems that life in our planet is originated from waves that come from other waters in other planets. To propose more reasons for water memory and DNA transduction, we unified string theory with Darwin's theory. In this theory, the origin of biological matters like DNAs and molecules of water are closed strings. These strings are formed from couplings of DNAs and molecules of water in universe with anti-DNAs and anti-molecules of water in anti-universe. Molecules of water can store their informations in extra dimensions through these strings and have long time memory. Also, these strings could help that two tubes, one including water and DNA and another including pure DNA be connected to two tubes including anti-biological matters in anti-universe. Thus, properties of DNA can be transformed from a tube of DNA and water into pure water through this closed string which is in agreement with DNA transduction. Maybe this question arises that what is the reason for short time water memory in experiments? To response to this question, Darwinian string theory shows that each atom is connected to one anti-atom in anti-universe through an open string. In some conditions, open strings which connect molecules of water and anti-water interact with other open strings and this causes to a decrease of exchanging information and disappearing of memory of water.

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