

# Gravitational Induced Chirality of Biology by Nuclear Magnetic Moments of $^{13}\text{C}$ and $^{17}\text{O}$ with $^1\text{H}$ , $^{14}\text{N}$ , and $^{25}\text{Mg}$

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## Abstract

Gravity is the one asymmetry on earth. Magnetism on earth is symmetry with N and S on earth. Electric field is also symmetrical with + and - on earth. Such symmetrical forces of electric and magnetic fields cannot as well explain the chiral nature of life's molecules. But RBL theory of gravity better explains homochirality of biomolecules as gravity on earth is asymmetrical with mostly Br gravity on earth. In this work, RBL theory is developed more that Br gravity on earth is what broke the symmetry of chirality for one chirality for life on earth. Prior theories of homochirality do observe magnetic effects on physical processes, but magnetic fields on earth are not asymmetric, macroscopically. So different magnetic fields can alter chirality and the two polarities can manifest both chiralities. But why is there only one chirality in healthy organisms? RBL's theory explains homochirality better by his gravity theory. Gravity on earth is asymmetrical. RBL theory determines earth's gravity and its Br nature and irrational, fractional nature acts on stable isotopes of nonzero nuclear magnetic moments  $^{13}\text{C}$  and  $^{17}\text{O}$  in aqueous solvents on earth to organize organic compounds with preferred chirality for origin of life on earth. Such basis for life's chiral origins is consistent with other aspects of RBL's theory as isotopic enrichment in living organism can alter the primordial isotopic blueprint of chirality for altering metabolism for aging and disease.

## Introduction

The purpose of this manuscript is to present theory for gravity of Bright (Br) favoring one type of enantiomer during the formation of biomolecules for structuring organelles, cells and tissues in biology. If gravity favors one type enantiomers, then why would the other not form? Why wouldn't racemic mixture form? Gravity (G) is overpowered by electric field (E) and/or magnetic fields (B). Biology may have developed with chiral molecules of one type due to combination of G and B by this theory [1-3]. There are two types of enantiomers l and d for levorotatory (l) and dextro-rotatory (d) for causing optical activity of rotation polarized light counterclockwise and clockwise, respectively. Chirality is unbalanced distribution of the enantiomers in a system. Balanced equality of enantiomers is equal relative amounts of the two enantiomers and such balance causes racemic mixture. In this theory, the racemic mixture of l and d enantiomers is proposed to form from system having stable isotopes of zero nuclear magnetic moments (NMMs) for involving nucleophiles having null NMMs and attacking from left or right side of the electrophilic centers for forming both l and d enantiomers. But in this theory, it is proposed that nucleophiles like  $^{17}\text{O}^-$  and  $^{15}\text{N}^-$  in environment of electric and magnetic fields on atomic scale and gravitational field of bright (Br) nature on earth cause fractional, reversible fissioning and fusing of the nuclei of  $^{15}\text{N}^-$  and  $^{17}\text{O}^-$  nucleophiles for relativistically releasing Dk fields into electronic shells and magnetic moments as nuclear mass is converted to rotational energy of nucleons and nuclei with production of enhanced gravitational and magnetic fields about the activated nuclei to alter biochemistry, chemistry,

enzymatics and catalysis by Little Effect. In this theory, these  $^{15}\text{N}^-$  and  $^{17}\text{O}^-$  nucleophiles attack  $^{13}\text{C}$  electrophilic centers for substitution reactions that produce chiral centers about  $^{13}\text{C}$ . These  $^{13}\text{C}$  chiral centers organize similar chiralities about  $^{12}\text{C}$  by steric effects in macromolecules of proteins, nucleic acids and carbohydrates.

But somehow life involved organization by + NMMs of  $^1\text{H}$ ,  $^{14}\text{N}$ , and  $^{31}\text{P}$ . These NMMs by RB Little's Rules are subject to gravity [1,2]. The chirality is subject to magnetism by RBL Rules; magnetism is stronger than G (gravity) and chirality of electrons is weaker than NMMs by RB Little's Rules. Thereby Little Rules the NMMs can couple to gravity and chirality can couple to magnetism. Earth's magnetism is too weak to couple to chirality. Then maybe iron, nickel, cobalt may have been nearby to increase magnetic field to couple to electrons' chirality to favor one chirality as previously suggested by the author here [-3] and also Naaman and coworkers [4]. But the problem is magnetic field is symmetrical on earth as both polarizations of N and S are possible and thereby both enantiomers could be formed for causing different forms of life with different chiralities. But the reality is life on earth has one type chirality [5]. So this is a weakness of the magnetic field causing chirality in life on earth and biology. The Ni--Ni involved in early formation of biomolecule is magnetic and may have caused the chirality [6].

Water has many organic and biochemical reactions and water is thought essential for life [3,7]. With this importance of water, the  $^{17}\text{O}$ : in water as  $^{17}\text{OH}_2$  can imbue with distinct products in biochemistry and biology as  $^{17}\text{OH}^-$  from  $\text{H}_2\text{O}$  attacks  $\text{CR}_3^+$  centers by the theory given by the author here to favor one enantiomer as driven by the gravity field (Br) of the earth. This forms alcohol  $\text{R}_3\text{-OH}$  (with possible different chiralities in sugars). The gravity of the earth is asymmetric as it is mostly bright (Br) gravity with essentially no Dk gravity. The theory presented here is the Br gravity of sole type on earth give asymmetry for organizing asymmetry of enantiomers in biology. But the magnetic field of the earth and its symmetric N and S would provide equal production of both enantiomers for racemic mix rather than homochirality in biology. So on basis of this theory life requires gravity and life manifest due to gravity of the earth.

In the past scientists have not reasoned gravity affecting chemical reactions. But the author of this theory for gravitational induced chirality, previously discovered and disclosed gravity can couple to chemistry via nuclei in particular nuclei of nonzero nuclear magnetic moments as the gravity is irrational dense thermal space and interacting with nuclei induced fractional fission and fusion of nuclei with release of excessive nuclear magnetism from stable isotopes having nonzero nuclear magnetic moments (NMMs) for altered magnetic and gravity fields about these nuclei for affecting chemistry, catalysis and enzymatics (1,3).  $^{13}\text{C}$  and  $^{17}\text{O}$  may form biomolecules of one enantiomer in gravity as the positive and negative NMMs fractionally fission and fuse from the  $^{13}\text{C}$  and  $^{17}\text{O}$  to produce local strong magnetic and gravitational fields about these nuclei to favor one sided nucleophilic attack of  $^{17}\text{O}$  about favored side of  $^{13}\text{C}$  without external B. Previously, RB Little predicted such during physical processes [1-3] and Naaman [4] observed such external magnetic field induced chirality during physical processes but not during chemical processes. The theory here explains Naaman [4] prior result. By RBL theory, the magnetic field is able to couple to the physical process by RBL's Rules 1-3 [8] as the magnetic field is strong enough to couple to the physical processes involving the atoms and molecules. But by RBL Rules [8] the magnetic field couples more strongly to chemical process

and the breaking of chemical bonds form stronger internal magnetic fields that overwhelm external magnetic fields for overwhelming chirality induced by external magnetic field for more racemics by internal magnetic field. But for physical process by RBL theory [1-3] the chemical bonds are not broken and internal magnetic fields are not produced so the external magnetic field can couple to favor one chirality during the physical process of melting, freezing, evaporation, ect... But unlike Naaman and coworkers [4], here RBL uses his theory and rules to determine that gravity can couple to chemical processes due to the greater energy of chemical process relative to physical processes and RBL notes heighten effects for systems having nonzero NMMs and relativistic effects of fractional reversible fission and fusion of these isotopes for release of huge transient gravity and magnetic fields about the nuclei of nonzero NMMs. By RBL's theory, the gravity polarizes all the NMMs in a system as earth's gravity is mostly Br. But if nanoregion of - NMMs then the gravity locally may be Dk to polarize NMMs in different way. This is basis of RBL proposing disease and aging in organisms. But there is more  $^{17}\text{O}$  in organism than scientists currently understand or know. RBL reasoned this.

The Earth's magnetic field could affect Naaman's magnet near lake and polarize magnet to polarize enantiomers [4] of favoring one type enantiomer during nucleophiles attacking and reversible thermodynamics of OH<sup>-</sup> in water. But flip earth's magnetic field over the geological age of earth and life on earth would cause life to possible form with different chiralities of biomolecules during different times on earth. And different lifes should have developed with different chiralities along side current life form as is known on earth. Is this the different between Neanderthals and Humans? Did change in flip of earth's magnetic field kill Neanderthals due to their biomolecules having different chiralities relative to human biomolecules? RBL may have new theory for extinction of Neanderthals due to change in chiralities of life? But in general this is big problem for Naaman's Theory of earth and local magnetic field causing chirality during physical processes [4] for effects in biology as earth's magnetic field has been dynamical over time and local magnetism can flip flop for changing chiral formations of biomolecules in ways that differ from homochirality of biology as we know it [5]. Naaman's chirality by physical processes by magnetic field (B) of earth and local B [4] can be flipped with consequent flipping in chirality of enantiomers in biology. But we see life with one chirality.

Also why do Naaman and coworkers [4] see chiral selectivity for physical processes and not chemical processes? Chemical reactions and their energies overwhelms gravity says the theory given here by the author [1-3, 8]. Physical processes are global and weaker fields of such physical processes do not overwhelm the magnetic energies and effects (as chemical energies would alter gravity and external magnetic effects), according to RBL [8], that is causing the chiral selectivity of physical processes by magnetism as observed by Naaman et al [4]. RBL notes the bond breaking and bond forming cause electron magnets from diamagnets [1-3,8]. The electron magnetism overwhelm  $B_{\text{ext}}$  during chemical reactions and gravity by RBL theory [8]. RBL explains during the physical processes the  $e^- e^-$  bosons are not broken to Reggie acids and Reggie bases [1]. So effects of gravity (G) and magnetism (B) of earth on physical is not overwhelmed by internal chemical bonds. Unlike RBL, Naaman et al [4] leave out NMMs. It is by RBL's theory [1-3,8] the NMMs couple by RBL Rules [8] to the weak  $G_{\text{earth}}$  and  $B_{\text{earth}}$  to polarize NMMs, which polarize the atoms and molecules to polarize release NMMs to favor NMMs attacking electrophiles and centers.

So physical processes started enantiomers preference as proposed by Naaman work [4]. But here the author notes subsequent chemical processes would overwhelm chiral effects caused by Naaman's physical processes [4]. But as chemical processes overpower the chiral effects of physical processes, the chemical processes would then erase the chirality from physical processes to cause racemic mixtures in biology. But here RBL introduce chemical effects with nonzero NMMs to better explain the homochirality of life as we know it. Chemical effects make chiral platform  $^{13}\text{C}$  and  $^{17}\text{O}$  and other nonzero NMMs and uses nonzero NMMs to do life. Then if nonzero NMMs form homochiral biomolecules then the resulting NMMs drive life processes. Then the altered nonzero NMMs can also have chiral preference for altering life (for RBL theory of aging and disease [1-3]). This is RBL theory of aging and diseases [1-3]. So the NMMs with gravity and chemistry cause the chirality of life. Then NMMs with magnets also explain Naaman's physical + magnetic causing chirality. The current theory of the author also explains the lack of chemical + magnetic for chirality but for nonchirality (which is consistent with Little theory of aging and disease).

So now what about space? RBL notes when life goes from earth's surface into space, the loss of earth's magnetism and gravity causes loss of  $G_{\text{earth}}$  acting on NMMs during chemistry for life losing its chirality in zero gravity for RBL's theory [1-3,8] explaining zero gravity causing disease and cancer. By RBL theory [1-3,8], Earth's gravity causes the chirality of biomolecules. Life depends on gravity of the earth. Gravity formed life. When life is lifted away from earth, then gravity is reduced. Life loses chirality due to loss of gravity on basis of RBL's theory. When life add zero NMMs life take away change in chirality.

By RBL's theory, after life formed by  $^{13}\text{C}$  and  $^{17}\text{O}$  under gravity and chemistry, then  $^{12}\text{C}$  and  $^{16}\text{O}$  follow chirality (blueprint) left by  $^{13}\text{C}$  and  $^{17}\text{O}$  of life in G and by chemistry. Steric effects in large biomolecules assist the retention of chirality as  $^{12}\text{C}$  and  $^{16}\text{O}$  manifest in the blueprint started by  $^{13}\text{C}$  and  $^{17}\text{O}$  in the biomolecules. The chemistry prevents gravity (G) from altering chirality. So the chemistry prevents weak magnetic (B) and radio frequency waves (RF) from affecting the chirality. But RBL's theory explains all this and RBL's theory further notes that if RF and B weak are added with nonzero NMMs then life and organisms will see altered blue print of life for aging and disease. So by RBL's theory as astronaut go into outer space and and they recycle their urine and waste and Oxygen and lose gravity, then they cannot eliminate their nonzero isotopes by their waste and resulting enrichments of uncommon isotopes in their biomolecules with increased nonzero NMMs and the lost gravity causes altered chirality of their biomolecules for causing aging and disease of astronauts in zero gravity. So on other hand military pilots experience greater zero gravity and engine exhaust and they were recently observed to have higher incidents of cancer [9]. But less zero gravity by airline pilots as their flights are smoother [10]. But RBL already noted this in his book with President Bush parachute and the zero gravity cure diseases in surrounding  $^{14}\text{N}$  [3]. Zero gravity can kill cancer and it can also cause cancer. So going into outer-space the zero gravity is prolonged and astronauts recycle  $^{13}\text{C}$ ,  $^{17}\text{O}$  and also  $^{15}\text{N}$ ,  $^2\text{D}$ ,  $^{33}\text{S}$ , and  $^{25}\text{Mg}$  for in combination with zero gravity and metabolic chemistry disease and aging of astronauts.

Isotopes of nonzero NMMs with high temperatures, strong static and dynamic electric fields, strong static and dynamic magnetic fields, and/or gravity can alter chirality of biomolecules to alter biochemistry for disease. Prior science does not see isotope effects as RBL previously discovered as prior science did not use high temperatures, strong static and dynamic electric fields, strong static and dynamic magnetic fields, and/or gravity with altered isotopes for causing isotope effects. So prior science erroneously assume isotopes do not affect on life. Prior science did not see the magnetic effect on life as RBL discovered because prior science did not include isotopes with the applied magnetic fields with both dynamic and static fields. So prior science assumed no effects of weak magnetic field on life. But they are wrong according to RBL. Prior science tried Radio frequency (RF) waves to observe effects on life and saw no effect of RF waves on life and assume RF is not affecting life. But RBL theory proposed RF with isotope enrichment affects life. As RBL proposed in 2008 that RF with isotopes can cure cancer as isotopes couple to magnetic field of RF to kill cancer. Prior science saw no effect of RF on life because they did not include isotopes in their measurements. RBL's work involved RF and isotopes and such work of RBL followed from his collaboration with Biris [11]. Thereby Biris and RBL [11] used RF and magnets (Ni, Co, Fe ) nanoparticles to attach to cancer and use RF to heat the nanomagnets to kill the cancer. In 2007, RBL [7,12] followed his collaboration with Biris and realized that replacing stable isotopes in biomolecules could provide a platform for RF to stimulate the nonzero NMMs of the replacing isotopes to kill the cancer. RBL then noted in book chapter [7] this as  $^{14}\text{N}$  and  $^1\text{H}$  in cells can sensitize cells to RF for affecting life in 2007.

But back here other scientists have changed gravity and see no effect of altered gravity to alter life as like in Colorado and airplanes pilot in commercial jets, the altered gravity does not appear to alter life. But prior scientists do not include isotope effects with altered gravity as RBL does here. But recently the space flight and zero gravity are observed to affect astronauts [13-14] and currently scientists do not understand why the zero gravity affects life. But RBL gave theory to explain zero gravity on life as during the space flight the astronauts recycle isotopes in the body and fail to eliminate these heavy stable isotopes from their bodies to cause disease and aging [1-3]. So by serendipity, prior scientists see zero gravity affects astronauts, but they do not understand this effects of zero gravity. RBL gives explanation of zero gravity, as the space flight changed gravity and isotopes [1-3]! Astronauts are ingesting isotope enriched foods by recycling their waste and ingesting the recycle isotopes from their waste during spaceflight with compounded change in their gravity in outer space to altered their chiral biomolecules to alter life to prove RBL's theory. So with cities, the environment is different during last 100 years as technology increases intensity of radio waves and static magnetic fields and in addition in cities humans recycle waste water so they re-ingest isotopes from their waste. They see life altered by more cancer in people under 50 and do not understand [15]. But RBL explains in his theory as thereby humans in cities alter their chiral molecules to explain by RBL theory the increase in cancer and disease in humans under 50 years old. But RBL explains as in cities water is recycled and the people drink their waste as in space and the change in fields by technology cause RF and weak static magnetic fields with enriched isotopes in water for causing cancer and explaining why people under 50 are developing cancer faster in last 30 years. This is more proof of RBL's theory. RBL discovered this. Other scientists missed it.

## Conclusion

So the external magnetic field + physical cannot explain origin of chirality and life. RBL theory of nonzero NMMs and gravity and chemical explains the chirality and origin of life in better way with more details and broadly for more powerful theory of origin of chirality. RBL involves isotopes and why overtime chirality is preserved. The  $^{17}\text{O}$  and  $^{13}\text{C}$  and  $^{14}\text{N}$ ,  $^{31}\text{P}$  and  $^1\text{H}$  are blue prints and laid foundational primordial chirality, then  $^{12}\text{C}$  and  $^{16}\text{O}$  are more common and follow the primordial chiral preferred blueprint and such  $^{12}\text{C}$  and  $^{16}\text{O}$  with zero NMMs cannot change the primordial chiral blueprint as they lack NMMs. The  $^{12}\text{C}$  and  $^{16}\text{O}$  follow the blue print of chirality in the biochemistry and gravity on earth. But if change the gravity then the blue print can change or if change the earths magnetic field (strong magnetic then the blue print can change as  $^{12}\text{C}$  and  $^{16}\text{O}$  have zero NMMs very strong magnetic fields are required to change the blue print. Back in time some place on earth by chance was enriched in  $^{13}\text{C}$  and  $^{17}\text{O}$  to be Eden and life formed.  $^{17}\text{O}$  is the Dk energy and GOD that formed life and the  $^{12}\text{C}$  and  $^{16}\text{O}$  follow this primordial blue print in healthy organisms. But for current life altered isotopic distributions cause disease as by increasing  $^{17}\text{O}$  and  $^{13}\text{C}$  with altered chirality of the biomolecules causing the disease and aging and death. Under zero magnetic field and nonzero gravity of earth and  $^{12}\text{C}$  and  $^{16}\text{O}$  life follows blue print as is observed.

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