

E Coli & Electrolyte Depletion: The Cause of Parkinson's; Schizophrenia. ALS; Alzheimer's; & Cancer

Paul TE Cusack*

BScE, DULE, 23 Park Ave. Saint John, NB E2J 1R2, Canada

*Corresponding Author: Paul TE Cusack, BScE, DULE, 23 Park Ave. Saint John, NB E2J 1R2, Canada.

Received: October 27, 2020; Published: November 20, 2020

Abstract

This paper synthesizes previous papers with the added twist of explaining the connection between bacteria and nervous system diseases. We make use of familiar AT Math solution as applied to contagions. We will see that E Coli and Cholera which cause watery diarrhea deplete the electrolytes in the body leading to detrimental affects on DNA Adenine. This paper is the key toward understanding the root cause of some major neurological diseases.

Key words: AT Math; Golden Mean Parabola; Sugar Intake; E Coli; Cholera; Parkinson's; Schizophrenia; ALS; Alzheimer's; Cancer.

Introduction

Continuing in the vein of what causes major neurological disorders, we have a paper that shows how electrolyte depletion through diarrhea caused by E Coli and Cholera may be the cause of various diseases. Once again AT Math plays a role in the mathematics underlying the phenomena. We begin with the familiar golden mean parabola and the logarithmic and exponential functions. We then move into the chemistry of excess sugar and the impact it has on bacterial growth, such a E coli. Next, we proved some calculations from the chemistry of E Coli which has been well studied. Finally, we consider pH and how acid environments contribute to bacteria growth. We begin with the familiar ln function.

Golden Mean Parabola

$$\ln t = e^{-t}$$

Derivative:

$$1/t = (-e^{-t-1}) / (-1)$$

$$1/t = e^{-t-1}$$

Integrate both sides:

$$\ln (1/t) = \ln e^{-t}$$

$$\ln (1/t) = -1-t$$

Aside:

$$\ln t = e^{-t}$$

Derivative:

$$1/t = -e^{-t-1} = e^{-t}$$

$$t = 1/e^{-t}$$

$$t = e^t$$

$$1/e^t = e^{\exp(-1-t)}$$

$$\ln (e^{-t}) = e^{(-1-t)}$$

$$\ln (-t) = \ln e^{(-1-t)}$$

$$\ln -t = -1-t$$

$$t = -1$$

$$\int dt/dt = \int 1 + C = t + C$$

$$t + C = 1$$

$$t = C - 1$$

Let $C=0$

$t=-1$

$-t=e^{\exp(1-t)}$

Take ln of both sides twice:

$-\ln \ln t=(-1+t)$

$\ln \ln t-t=-1$

$1/\ln t+1=t$

Integrate both sides:

$\int 1/\ln t = \int t-1$

$\ln t=t^2-t$

From above:

$e-t=t^2+t$

Take ln of both sides:

$-t=\ln t^2+\ln t$

Take derivative:

$C=1/t^2+1/t$

$C=(1+t)/t^2$

Let $C=1$

Golden Mean Parabola

$t^2-t-1=0$

$t=1.618; -0.618$

Since one cycle is 2π ; then:

$2\pi/3=212$

$M=\ln t$

$=\ln 212$

$=1.550$

$TE=M [0.15915]$

$= (0.1550)(0.15915)$

$=246.68$

$E=1/t=405.38$

$E=Mc^2$

$405.4=Mc^2$

$M=451$

$M=\ln t$

$t=166.99 \sim 1.57 = \pi/2$

$PE=KE=t$

$Mc^2=1/2Mv^2$

$1/2=c/v$

$1/2=9/v$

$v=18$

$t=KE=1/2Mv^2$

$=1/2(\ln \pi/2) (18)^2$

$=73.156$

$E=1/t=0.01367$

$E^2+E-2=t$

$(0.01367)^2+0.01367-2$

$=-1.986 \sim -2$

$t^2-t-1=E$

$t^2-t-1=-1.986$

$t^2-t+1=0$

$t=1.314; 3.1429=\pi$

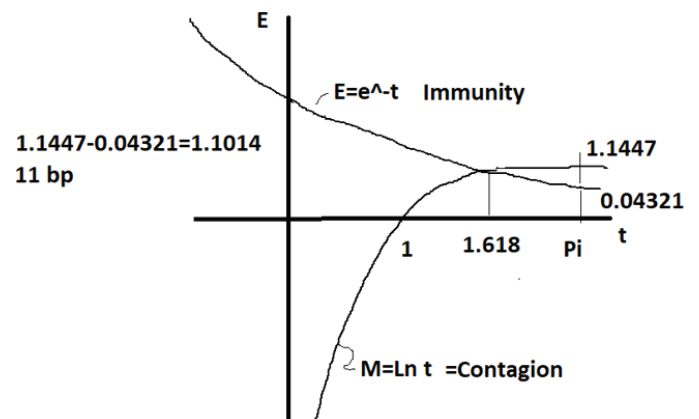
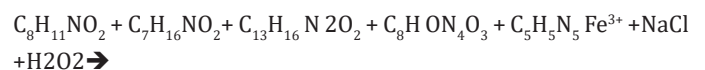
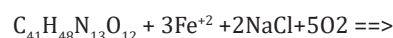


Figure 1: Immunity and Contagion.

Proton Motive Force

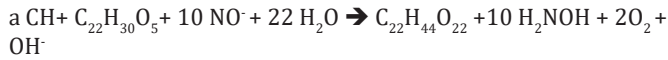


Dopa. + Ach. + Melatonin + Caffeine and Adenine+ Iron and Chlorine + Hydrogen Peroxide \rightarrow





Methylene (Carbene) Hydroxylamine



Carbene +Cortisol (Stress) Sugar Hydroxylamine

The excess sugar makes the bodily system acidic. Bacteria need iron Fe +3 to grow.

$$\text{amu} = (14.016 + 362.46 + 30.006 + 396.33) = 1072.866$$

$$1072.866 \times 6.026 = 6461.87 \text{ g}$$

$$6461.87 \text{ g} \times 0.994 \text{ g/mole of blood} = 65.008 \text{ moles}$$

Normal pH=7.35-7.45 Say 7.4

$$\text{pH} = \text{Ln} [\text{H}^+]$$

$$e^{-7.4} = 6.1125$$

$$[\text{H}^+] = \text{moles of H}^+ / \text{moles of solute}$$

$$6.1125 = \text{Mol of H}^+ / 6500$$

$$\text{Mol of H}^+ = 3973$$

$$\text{H}^+ = 1.008 \text{ g/mol} \times 4 \text{ moles} = 4.00 = |\text{D}|$$

$$4.00 \times 6.023 = 24120.8$$

$$e^{0.241208} = 127.3 = 4 / \pi = \rho$$

Moles of Sugar:

$$\text{C}_{22}\text{H}_{44}\text{O}_{22} = 660.33 \text{ g/mol} \times 6.023 = 397.716 \text{ g} \sim 4 \text{g of Sugar}$$

=Moles of H⁺

$$\text{H}^+ = 1.008 \text{ g/mol} \times 397.716 = 4.008977 \sim 4.00 \text{g of H}^+$$

So we consider that E Coli is the proximate cause of various disorders including Parkinson's; Schizophrenia; ALS; Alzheimer's disease; and Cancer.

We examine E Coli in more detail.

E Coli double in growth every 20 minutes (1/3 hour)

Since it follows exponential growth, we have:

$$2 = a_0 e^t$$

$$2 = a_0 e^{(1/3)}$$

$$a_0 = 1.4335 = 1/698 = 1/7 \text{ Economic Multiplier.}$$

A full cycle is 2π rads

$$2\pi/7 = 0.8976 = c^2$$

$$\text{GMP: } t = 1/3$$

$$(1/3)^2 - (1/3) - 1 = 1.22222$$

E Coli has 20% of its protein in its envelope

$$M = \text{Ln } t$$

$$= \text{Ln} (1/3)$$

$$= 1.096$$

$$(20\%/100\%) M = 21972/\chi$$

$$\chi = 1.0986$$

$$M_t = 21972$$

$$\text{TE} = M[0.15915]$$

$$= 1.0986[0.15915]$$

$$= 174.842 \sim 1 \text{ rad}$$

$$t = E^2 - E - 2$$

$$t = 30.743$$

$$E = 1/t = 3.2527$$

$$100\% M = 1.0986/30 \text{ genes} = 0.03663 \text{ gm/gene}$$

$$3.2527/0.03662 = 0.88823$$

$$\text{GMP: } = E = 1.099 \sim 11 \text{ base pairs}$$

$$4 \text{ mol of sugar} = \text{amu} \times \text{mol} \times \text{Avg.}$$

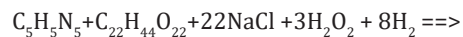
$$= 660.33 \times 4 \times 6.023 = 1590.86 \sim 1591$$

E Coli and Cholera cause watery diarrhea which depletes the body of electrolytes. Electrolytes such as Salt and Potassium are essential for the functioning of the nervous system as they are the ions that cause a nerve to surge with a signal.

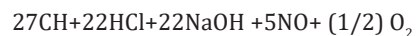
So how does electrolyte depletion cause the genetic mutation that leads to a genetic disposition of r these nervous system diseases? The answer lies in a "special membrane protein that binds to an 11 base-pair sequence (5'-AAGTGC GG TCA-3') that occurs frequently in Haemophilus DNA...." [17]

Let us consider the A o=Adenine molecule: C₅H₅N₅

The chemical mol balance equation is:



(Adenine + Sugar + Salt + Hydrogen Peroxide + Proton \implies)



Carbene + Hydrochloric Acid + Sodium Hydroxide + Nitrate + Oxygen

Pathways of fermentation of sugars by various microorganisms need protons (Hydrogen atoms). Pyruvic acid C₃H₄O₃ produces Formic acid; Acetyl CoA; Acetic Acid; Ethanol; Acetoacetic acid; Butyric acid; Butanol; Acetone Isopropanol; Butanediol; Propionic acid; Lactic acid; Acetaldehyde; Ethanol requires 16 Hydrogen atoms which is what we have above. [17]

Now, excess sugar causes the body to become acidic. Thus, pH varies from the normal pH=7.4

$$\text{pH} = \text{Moles of } [\text{H}^+] / \text{Mol of solute.}$$

$$\text{pH} = 7.4$$

Ln 7.4=2

$2 = (8 \times 2) / \text{Moles of Solute}$

Moles of solute=8

$8 \times 6.023 = 481.8$

GMP: $E = -1.249 \sim -1.25 = E_{\min}$

Conclusion

So, we see that these diseases of the nervous system follow AT MATH. E Coli causes depletion of the electrolytes that are necessary for normal A- adenine in the DNA molecules.

References

1. Cusack PTE. (2020). Gonorrhea: Alzheimer's disease & Eye Problems. SM J Psychiatry Ment Health 5: 1.
2. Cusack, PTE. Oral Microbiology, Iron, and Alzheimer's Disease. (Submitted).
3. Cusack PTE. Herpes Simplex Virus: Possible Root Causes of Dementia. Madridge J Intern Emerg Med. 2019; 3(1): 99- 00. doi: 10.18689/mjiem-1000122
4. Paul TE Cusack. (2020). One Cause of Alzheimer's disease: Gonorrhea and HSV-1. Current Trends Med Clin Case Rep, 1(1); 1-3
5. Cusack, PTE. The Cause of Alzheimer's Disease: Hydrogen Peroxide. (Submitted).
6. Cusack, PTE Melatonin and Schizophrenia (Submitted).
7. Cusack, PTE Hydrogen Peroxide: Possible Cause of Amyotrophic Lateral Sclerosis (ALS) (Submitted).
8. Cusack, PTE. (2019). How Schizophrenia Could be Caused by Cholera & Ferric Chloride Disease. Crimson Publishers.
9. Paul Cusack TE. (2019). Review of Cusack's Cause for Schizophrenia. Med J Clin Trials Case Stud, 3(5): 000241.
10. Paul T E Cusack. (2020). "The Chemistry of Parkinson's disease". Current Opinions in Neurological Science 5.1 37-38.
11. Paul TE C. (2018). Hydrogen Peroxide and Cancer. Open Acc J Oncol Med 2(2)-. OAJOM.MS.ID.000134. DOI: 10.32474/OAJOM.2018.02.000134 1
12. Cusack, PTE., Anxiety Disorders (Submitted)
13. Goldberg, S., (2019). Clinical Neuroanatomy Made Ridiculously Simple. MedMaster.
14. Diamond., MD., (1985). The Human Brain Coloring Book. Collins.
15. Mahy. BWJ et al. (2010). Desk Encyclopedia of Human and Medical Virology. Elsevier, AP, USA.
16. Cusack, PTE., Evolution of Viruses and AT Math (submitted)
17. Ryan. K.J., C G Ray., (2004). Sherris Medical Microbiology 4th Ed., McGraw Hill.
18. Cusack., PTE., Sugar and E Coli; Diseases of the Nervous System.(Submitted)

Benefits of Publishing with EScientific Publishers:

- ❖ Swift Peer Review
- ❖ Freely accessible online immediately upon publication
- ❖ Global archiving of articles
- ❖ Authors Retain Copyrights
- ❖ Visibility through different online platforms

Submit your Paper at:

<https://escientificpublishers.com/submission>