



## **Preceding Diseases through a Computational Algorithm, an Analysis through the Possibilities of Blood Sampling.**

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### **Summary:**

This article explains how to perform a blood analysis using formulas and algorithms of the appropriate references, for ratios and Euler formulas, as well as exponential, the references cited help a lot in the calculations mentioned through probabilities, variables and graph analysis. And an approach from the history of biology in philosophy and natural philosophy to Heidegger in the atomic age and consciousness and the phenomenon. As well as Leonardo Da Vinci's area ratio, Fibonacci and the ancient culture in India.

Keyword: Blood, Exam, Algorithm

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### **Introduction:**

Starting from the blood count and other tests, for example the ERYTHROGRAM test (Erythrocytes, Hemoglobin, Hematocrit, MCV, HCM, MCHC, RDW) LEUKOGRAM (Leukocytes, Rods, Neutrophils, Eosinophils, Basophils, Lymphocytes, Monocytes, Platelet Count and MPV) . The ABO System is determined by multiple alleles as it presents three allelic versions ( $I^A$ ,  $I^B$  and  $i$ ) for the same gene locus, which results in four blood types: A, B, AB and O. Each blood type is differentiated by the presence or absence of antigens (agglutinogens) on the membrane of your red blood cells. In case of absence of agglutinogens, the individual is type O. And when only agglutinin A is present, the individual is type A; when only agglutinin B is present, the individual is type B; and when red blood cells have both agglutinogens A and B, the blood is type AB (PIERCE, 2016). In addition to these, the plasma contains antibodies (agglutinins) responsible for recognizing foreign antigens and inactivating the cells that contain them. Thus, an individual with blood type A has Anti-B agglutinin; blood type B has Anti-A agglutinin; blood type AB does not have these agglutinins; and blood type O has Anti-A and Anti-B agglutinin (PIERCE, 2016). Regarding the Rh System, it is determined by the presence of a D-antigen on red blood cells. People who have it are Rh+ (positive) and those who don't have it are Rh- (negative). There are no anti-Rh antibodies in blood plasma. They are formed only by Rh- individuals, when receiving blood from an Rh+ person they stimulate the production of Anti-D (Anti-Rh+). This can cause incompatibility between the mother's blood and the fetus - Hemolytic Disease of the Newborn (HDRN) (MANOLO et al., 2018). [5]

In this article, only the hypothesis and assumption of mathematical statistics is highlighted, it is very relevant to consider blood genetics comprehensively for the analysis of all data, for example, how and the methods for determining vitamins and PSA in blood which already predicts diseases and cancer, but cancer is confirmed with a biopsy of the cellular tissue. Only the mathematical and physical training of the author of the article was considered, as he does not have extensive training in molecular genetics. The article is based on a brief summary of blood sampling analysis, considering a sample for example analyzing anemia and all types of cancer, explaining the idea of how the analysis is carried out using references and mathematical statistics, the sampling study would take a few months for an assumption and a hypothesis of an inference and prediction of diseases.

The analysis requirements can be considered, for example, references [6], [7] and [8] which are respectively Basic Statistics Wilton De O. Bussab and Pedro A. Morettin, Numerical Analysis Richard L. Burden and J. Douglas Faires, through these two books, provides statistical error methods, probabilities and graph analysis, for example, [8] Waves and Wavelets Pedro A. Morettin, which requires, for example, stotastic methods, Fourier analysis and statistical predictions, these three approaches take a broad approach to the analysis of computer program graphs. It is considered that statistical prediction induces and requires complex molecular genetic analysis, which is not included in the article.

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### **Theoretical Reference:**

An important fact is the theory of Leonardo da Vinci and Fibonacci, as an example, the golden ratio in the work of Leonardo Da Vinci shown, the author emphasizes which are the maximum elevation points of the limbs for maintaining bodily harmony, thus corroborating the mathematical, artistic and scientific aspects that make up a simple component act of nursing care. [9] Da Vinci's mathematical methods are relevant to body proportions in relation

to blood, for example, the golden ratio and the center of mass that differs from different people and different ethnicities, and race does not exist in the human species and also the characterization of ethnicities and blood types. The Fibonacci theory is also considered in the mathematical approach of ancient Indian culture. The Fibonacci Series is a numerical series that offered the first mathematical model of population growth. This series is also found in the logarithmic spirals present in most flowers, in the bark of the conical pine and the pineapple, as well as in the leaves of countless trees. Each of the famous Fibonacci numbers is the sum of the previous two. Over the centuries, this sequence has intrigued artists, scientists and philosophers, both due to the beauty of the forms it creates in the arts and the regularity with which it occurs in nature. Fibonacci, following his father's commercial trips, visited several Mediterranean countries, including Algeria, Greece, Egypt and Syria. On these trips he had the opportunity to study and compare different numerical systems and methods for arithmetic operations. Concluding that the Indo-Arabic number system was superior to all others, he devoted the first seven chapters of his book to the notation of this system and its practical applications.

Fibonacci begins the *Liber abaci* as follows: "The nine Indian figures are: 9 8 7 6 5 4 3 2 1. With these nine figures, and with the sign 0... any number can be written (apud Livio, 2002, p. 94). Among the various problems proposed by Leonardo Pisano, some are so stimulating that they were used by several later authors (Boyer, 1974, p. 186). We find among these, one that may have been suggested to Fibonacci by a problem similar to that of the Ahmes papyrus of ancient Egypt. Fibonacci proposes: "Seven old women went to Rome; each had seven mules; each mule carried seven sacks, each sack contained seven loaves of bread; and with each loaf there were seven knives; each knife was within seven sheaths." (Boyer, 1974, p. 186) The problem in *Liber abaci* that most inspired future thinkers was, without a doubt, the following: "How many pairs of rabbits will be produced in a year, starting with a single pair, if in each month each pair generates a new pair that becomes productive from the second month onwards?" (Boyer, 1974, p. 186). Consider Bhagavad Gita, for example, Robert Julius Oppenheimer's bedside book to cover all Indian mathematical cultural contexts.

A relevant fact to consider is the evolution, for example, of Patagonian mice. Inbred strains have greatly contributed to the study of humoral responses and oncology, as well as helping to elucidate the genetic component of several diseases such as obesity, diabetes etc. These animals saw an increase in their breeding after the Second World War, when the study of the effects of radiation began to be more studied. Many inbred mice were subjected to irradiation and then mated. The mutants resulting from these matings were selected and re-mated with representatives of the parental lineage or other lineages, constituting congenital lines, which, by definition, differ from the original lineage only by the pair of introduced genes. In reality, what is introduced into the new background is a small portion of the chromosome, where the 'imported' gene is found. When the mutation occurs through processes of natural selection, we say that the lineage is coisogenic. With this, a huge step was taken, as alleles existing in a lineage or created by mutagenesis (irradiation or chemical substances) could be transferred to all existing backgrounds, which made it possible to study the effect of that allele in different genetic environments. The study of histocompatibility complex genes, which regulate the immune response, has greatly benefited and developed from this. Currently, the majority of existing congenital lineages have their origin in lineages whose 'imported' gene belonged to this complex. [11] The important thing is to consider the natural selection of the environment as an example of rats in natural selection.

An important fact is the approach to nanotechnology through the book *Quantum Mechanics Paperback – Portuguese Edition* by [David J. Griffiths](#) through Schoedinger wave functions probabilities, expected values and deviations, for example a deeper quantum mechanics approach, or even statistics through reference [6], [7] and [8] and expected values and statistical deviations. Schoedinger who was in India on several occasions. The objective is a computational statistical algorithm and not to delve deeply into Quantum Mechanics.

Now a brief summary of the history of mathematics with references [1] and [2] Tatiane Roque, Ian Stewart and Karl Boyer the principle of the beginning of mathematics probably occurs in Iraq, but it exists in several places with sheep herders in Mesopotamia and in the Ancient, Iraq is Lower Mesopotamia, through sheep herders algebra begins. And also the clay mathematical tablets with greater preservation than papyrus with the hieroglyphics in reference [1] is the comprehensive history of mathematics such as the Arabic Singularity, The Greek Diophantus of Alexandria and Euclid of Alexandria. Since there is no race in the human species, in the French Enlightenment we have Rousseau's *Persia*, Montesquieu's *Soul* and Voltaire's pre-Darwinian and Voltaire's *Soul* and Descartes' *Passions of the Soul*.

Descending onto this mound of mud and having no greater notions about man, as he has no more about the inhabitants of Mars or Jupiter, I disembark on the shores of the ocean, in the country of Cafraria, and begin to look for a man. I see monkeys, elephants and black people. Everyone seems to have some glimmer of imperfect reason. Both of them have a language that I don't understand and all their actions seem equally related to a certain end. If I judged things by the first effect they have on me, I would be inclined to believe, initially, that of all these beings the elephant is the rational animal. However, in order to decide nothing lightly, I take puppies from these various beasts. I examine a six-month-old black cub, a little elephant, a little monkey, a little lion, a little dog. I see, without being able to doubt, that these young animals have incomparably more strength and dexterity, more ideas, more passions, more memory than the little black guy and that they express all their desires much more sensitively than he does. However, after a certain time, the little black guy has as many ideas as all of them. I even realize that black animals have a much more articulated and varied language among themselves than that of other animals. I had time to learn this language and, finally, after observing the small degree of superiority that they present in the long term in relation to monkeys and elephants, I risk thinking that man is indeed there. And I provide myself with this definition:

Man is a black animal that has wool on its head, walks on two legs, is almost as dexterous as an ape, is less strong than other animals of its size, has a little more ideas than them and is endowed with greater ease of expression. Furthermore, he is equally subjected to the same needs as others, being born, living and dying exactly like them. [13]

We have Saint Augustine and Tertullian, where both give the moral of existentialism and Augustine exposes the *Soul*. And Soren Kierkegaard in the symbolism of Christianity, which is the fish. Relevant in this context of history Tolstoy who exposes the soul of animals and the suffering of animals and creates the vegetarian doctrine, as well as the Pythagorean sect which was vegetarian and meat for athletes, Pythagoras who traveled from Sudan to Gaul,

from Greece to China and India .[14] And the sacred cow and sacred animals in India with Hinduism. And the existentialism of Martin Heidegger and Sartre, Heidegger in the existentialism of Being and Nothingness and the atomic age, that Heidegger, being rector of a German university, had a passion with a Jewish woman, philosophizing about existentialism and the consciousness phenomenon and the atomic age that today we have the FRENCH CERN, of bosons and fermions.

For example, considering Heidegger's philosophy of consciousness and the phenomenon of consciousness, Voltaire's Soul and Descartes' Passions of the Soul, we have the theory of vision of Isaac Newton Optics [18], Huygens Treatise on Light [19] and Bishop Berkeley An Essay towards a New Theory of Vision [20].

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### Discussion:

Examples of Fortran algorithms or other programs are [15], [16] and [17], I am in the line of research in the study of sampling and I do sampling on demand via email creating algorithms, sampling contents are carried out on demand, but the main idea is to select a sample such as anemia, prostate and types of cancer to analyze the ERYTOGRAM and WBC blood count, using the statistics in references [6], [7], [8] and [12]. Blood predicts diseases by the factors preceding the blood count as the most relevant of all types of cancer. The data must be analyzed using ratios or exponents such as Euler's formulas and references [15] and [16] what is necessary in research is to consider the possibility of diseases 3, 5 years or more through mathematical calculations, statistical analysis and graph analysis, the idea here is to approach with emphasis only on mathematical analysis to see if conditions exist without resorting to molecular genetics, noting that the determination of ERYTOGRAM and LEUKOGRAM has its determination methods, so I reaffirm the intention that the study is carried out is only in mathematical statics.

The given algorithm:

PROBABILITY PROGRAM

IMPLICIT NONE

REAL A,B,C

INTEGER D,E,F

DIMENSION A(1000), B(1000), C(1000)

!!!The construction takes place through loops and blocks between loops and blocks such as:

DOD=1.1000

DOE=1.1000

...

END OF

END OF

...

OR

DO WHILE D=1.1000

DO WHILE E=1, 1000

...

END OF

END OF

...

OR even the FUNCTION AND SUBROUTINES function...

Considering only mathematical factors and the blood count performs the mathematical calculations, remembering that it is hard work of trial and error and insistence to analyze a sample of types of cancer and other diseases.

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### Conclusion:

The possibility of working and inferring hypotheses of disease precedents in blood counts and blood tests is verified. In this article, the methods and a little history of wave theory and the atomic era from physics to philosophy were exposed. The study and study of sampling is of great importance and

relevance to generate a comprehensive report on the study and observation of patients before and after diagnoses, the article covers several possibilities of disease precedents, my line of research is in the study of sampling, results and conclusions will soon be released. The article was released so that minds in molecular biology and statics could also carry out the analysis more broadly or using other assumptions.

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