Covid-19 in Pseudo BH-algebra

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DOI: http://dx.doi.org/10.31642/JoKMC/2018/100106

Received Jul. 5, 2022. Accepted for publication Sept. 21, 2022

Abstract *– In this paper, we introduce a new of a BH-algebra and a new of pseudo BH-algebra. We call this covid-19 of pseudo BH-algebra. Also, we give the concepts of (BH-algebra, pseudo BH-algebra and covid-19). And we study some relationships between them.*

Keywords *– BH-algebra , Pseudo BH-algebra , Covid-19.*

I. Introduction

K. Iseki and S. Tanaka [1] introduced the concept of BCK-algebras in 1978. K. Iseki [2] introduced the concept of BCI-algebras in 1980. It is known that the class of BCK-algebras is a proper subclass of the class of BCI-algebras. Q. P. Hu and X. Li [3] introduced BCH-algebras in 1983. It is known that BCK-and BCI-algebras are contained in the class of BCH-algebras. Y. B. Jun, E. H. Roh and H. S. Kim [6] introduced the notion of BH-algebras in 1998. Y. B. Jun et al [7] introduced the notions of a pseudo BH-algebras in 2015.

This research is divided into three section:

The study of the first topic is summarized in how the behavior of the Corona virus was transformed. To mathematics using the definition of false BH and how to express the symbols used in the definition of the dismal BH, and the second topic is concerned with how to take advantage of the first and second conditions in weakening the connection of the virus with in two ways from the two conditions to differ in the physical composition of this virus, while in the third topic it is concerned, How to reduce the spread of this virus in the body by taking advantage of the third condition to define the false BH itself, by reducing the percentage of this virus's binding to cells inside the body of the human body, to make the connection ratio very weak.

Research problem

Corona viruses are a large family of viruses that can cause illness in animals and humans. It is known that a number of corona viruses cause respiratory diseases in humans, ranging in severity from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). Covid-19 [4]. Preventive and curative reduce or stop this spread by the least means to and follow methods that avoid the effects of this virus help shorten the time.

Limits of research

Research is limited to types of people of both sexes within Karbala governorate in particular and the world in general.

As this the epidemic started in late 2019 in China, and it is considered a pandemic because of the harms that afflicted the entire world in social, political, economic and political terms. on the one hand, and the cell on the other.

Preface

What is Covid-19 disease ?

Covid-19 disease is an infectious disease and it is the last virus that was discovered from the strain of Corona viruses. There was no knowledge of the existence of this new virus and its disease before its outbreak began in Wuhan, China in December 2019. COVID-19 has turned into a pandemic affecting many countries of the world. The virus can infect all types of humans. The virus infects the respiratory system through the mouth, nose and eyes [4]. We cannot say that it is a living being because outside the human body it does not reproduce or grow [4]. The virus is attached to the cell via ACE2 cell receptors and virus proteins [4]. Viruses multiply inside the infected cell to spread viruses and attach to other cells [4]. It destroys the infected cells [4].

The one who gets infected and then recovers may be infected with this disease again [5],Transferring the plasma of a person who was infected with this virus to another infected person from can recover at a good rate [5].

Some Definitions in Mathematics

BH-algebra [6]:-

A BH-algebra is a nonempty set X with a constant 0 and a binary operation "*" satisfying the following conditions:

1. $x*x = 0$
2. $x*0 = x$
3. If $x*y = 0$ and $y*x = 0$ then $x = y$

Pseudo BH-algebra [7]:-

Let X be non-empty set and "*" , "#" be two binary operations with 0 be any constant then X is called pseudo BH if hold for all $x,y \in X$,

1. $x*x = 0$ and $x\#x = 0$
2. $x*0 = x$ and $x\#0 = x$
3. If $x*y = 0$ and $y\#x = 0$ then $x = y$

II. The Main Results

We will devided this research into three topic:

The first topic:

We will learn how to transform the behavior of the virus into mathematics.

The second topic:

We will be concerned with the treatment of this bass by the methods used in Mathematics.

The third topic:

We will study, how to reduce the spread of this virus inside the body through cells.

The first topic

In this section we will learn how to transform the behavior of the virus into mathematics that match in their properties with those of the virus using one of the topics that force the movement of the virus and the information we obtained using definitions The previous mathematics that explains the shape of the virus and how it fuses with the cell.

III. Transform the behavior of the virus into mathematics:

We will use medical transformations into mathematics using definition Modern algebra also seek some topology terms use in Transformations that don't care about gender but care that they are a body It shares certain properties that help to understand the topic in a general way get results that will help find good solutions some I have found that pseudo algebra BH is one of the most suitable topics to explain the behavior of this virus and it contains three conditions that explain the behavior of this virus,

We assume,

1. ACE2 receptors and proteins are variables.
2. The two binary processes are * and # be two processes of bonding of receptors and proteins in their bodies
3. Let 0 is the formation of one body.

By the first condition:

Each receptors is linked to another receptors similar in chemical structure in the cell this cell

$x*x = 0$

protein is linked with another protein similar in chemical structure in the virus and each this virus , that is

$x\#x = 0$

By the second condition:

Every receptor is associated with the cell, there is a receptor similar to it in the chemical structure in the cell itself. There is a protein similar to it in the chemical structure in the virus itself, that is

$x\#0 = 0$

By the third condition:

If the receptor is linked with the protein by a catalyst in the future to be a body jointly, and if the protein binds with the receptor through a cofactor in the protein to form a common body, then the receptor fuses with the protein to form a viral cell.

That is,

let x be a receptor in the cell,

let y be the protein in the virus.

* It is a link found in the cell

It is a link found in the virus #

That is,

If $x*y = 0$ and $y\#x = 0 \rightarrow x = y$

The second topic

The study of this topic will be concerned with the treatment of this bass by the methods used in Mathematics and related information, through the hashing of this virus and killing it Some of its parts that have a direct effect with cells and also affect their interconnection.

Weakening the virus

Using two conditions from the false BH definition to weaken this virus by changing its genetic makeup through the first and second conditions because it pertains to the structure of the virome and and trying to find solutions that confront this fabromen in easy ways and study the structure of it and how to change it, because the cell cannot change its genetic composition due to the function that you perform inside the human body and the importance of the extreme and through the first and second conditions in the definition of false BH, it will be explained in the following form.

Its effect using the first condition of the definition of false BH:

In the case of each protein that does not bind with another protein Similar to it in chemical composition in virus,

$x\#x \neq 0$

Its effect using the second condition of the definition of false BH:

If every protein associated with the virus, there is no protein similar to it in the structure chemical in the virus same,

$x\#0 \neq x$

The third topic

In this section is concerned with the study of how to reduce the spread of this virus inside the body through cells, by influencing several factors that make the connection between them resemble the rare case, which is also possible in more than one way.

The spread of the virus in the body:

This subjective depends on the third condition of the false BH definition, which is considered one of the most important ~ conditions, because it shows the interconnection between receptors on the one hand and proteins on the other ~ , and by using several possibilities that would reduce the possibility of this Bonding.

Reducing spread using the third condition of the definition of pseudo-BH:

Through the third condition of the definition of pseudo-BH and its relationship to the virus, the bonding between the receptor and the protein must be via a catalyst and doctors differ on this matter. Therefore, this factor that helps in their connection must be affected, whether by the virus protein or by the cell receptor, and for this reason in the third condition section several points that would make this connection difficult to achieve in the case of:

a- If the receptor does not bind with the protein via the receptor cofactor.

b- If the pro Tin does not bind to the receptor via a protein cofactor.

c- If a and b are together.

That is,

If $x*y \neq 0$

or $y\#x \neq 0$

or $x*y \neq 0$ and $y \neq x = 0$

Conclusions

We deduce of this paper, a pseudo BH-algebra and covid-19. And we study the relationships between them, to has covid-19 of a pseudo BH- algebra with the method of treating the virus covid-19 by pseudo BH-algebra.

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