

#### Carnicom Institute Research

2023

#### Acknowledgements

#### **Mission Statement**

Carnicom Institute is a non-profit organization working solely for the benefit of humanity. Our goal is to provide the public with beneficial and responsible information through scientific, educational, environmental, and health research for the public welfare. The Institute has devoted significant effort to the important issues of geoengineering and bioengineering.

#### Disclaimer

The Carnicom Institute is a non-profit health and environmental educational and research organization serving the public welfare. CI is not a clinic and does not perform any medical diagnosis, medical treatment, or prescription of therapy. We do not advocate any proprietary products, protocols, or therapies. All studies conducted by the Institute are for research purposes only. Our purpose is to provide information and education to the public.

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## Altered Blood Research – Interview of Clifford Carnicom by Harry Blazer

carnicominstitute.org/altered-blood-research-interview-of-clifford-carnicom-by-harry-blazer-jan-2023/

Altered Blood Research – Interview of Clifford Carnicom by Harry Blazer



<u>Altered Blood Research - Interview of Clifford Carnicom by Harry Blazer</u>

Interview conducted Nov 2022. Interview posted on Jan 11 2023.

#### Interview with Dr. Ana Mihalcea, MD, PhD.

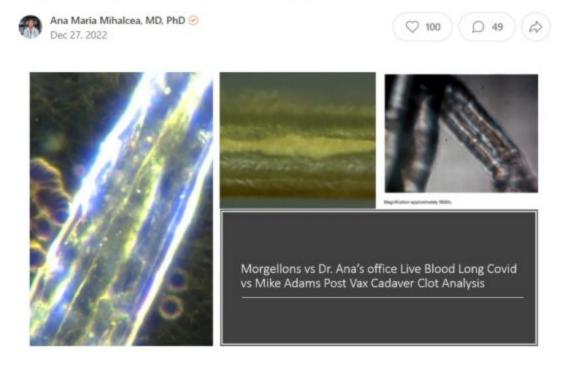
carnicominstitute.org/interview-with-dr-ana-mihalcea-mdphd-dec-2022/

Dr. Ana Mihalcea, MD, PhD. interviewed Clifford Carnicom of the Carnicom Institute. The record of the interview is available below:



Dr. Ana Mihalcia Interviews Clifford E Carnicom, Carnicom Institute, Dec 2022 – Video

# Synthetic Biological Life Forms – Cross Domain Bacteria, Morgellons, and Correlation to Current Live Blood Findings in Post C19 Injection Era - My Conversation with Clifford Carnicom



Dr. Ana Mihalcia Interviews Clifford E Carnicom, Carnicom Institute, Dec 2022 – Article

This interview was conducted on Dec 26 2022.

Clifford E Carnicom Jan 04 2023

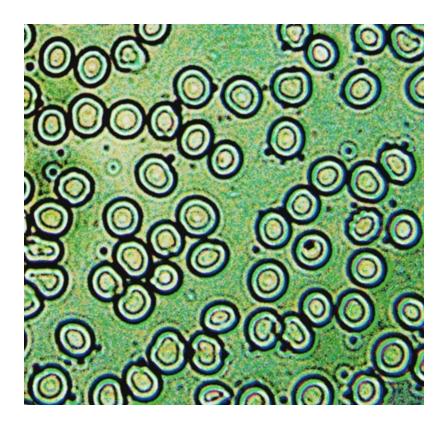
Born Clifford Bruce Stewart, Jan 19 1953

#### Blood Research: Dr Ana Mihalcea MD, PhD with **Carnicom Institute**

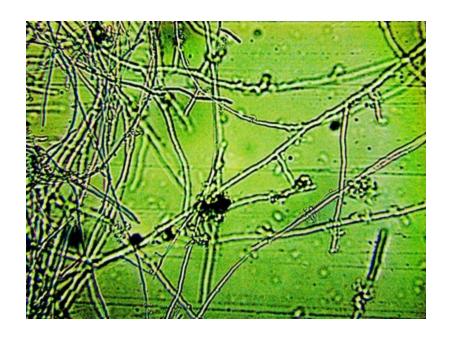
**arnicominstitute.org**/blood-research-dr-ana-mihalcea-md-with-carnicom-institute/

Unvaccinated Blood:

Recurrent New Proof of (CDB) Filaments Growing Under Exposure of Extremely Low Electrical Currents: Ana Maria Mihalcea, MD, PhD in conjunction with Clifford Carnicom



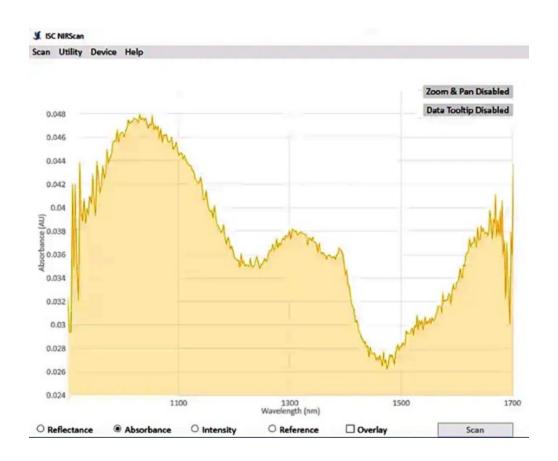
Link to article here



## Blood Comparisons : Dr. Ana Mihalcea MD, PhD with Carnicom Institute

carnicominstitute.org/blood-comparisons-ana-mihalcea-md-phd-w-carnicom-institute/

Unvaccinated vs Vaccinated Blood Comparison
Infrared Spectroscopy and Electrical Conductivity Studies
Ana Mihalcea, MD, PhD In Conjunction with Clifford Carnicom



#### Infrared Spectroscopy Unvaccinated

History of mild to moderate Covid, no long Covid, N=5

Nanometer Peaks Associated Chemical Groups
934nm CH, ROH
1386nm CH3, ArOH
1524nm RNH2

I out of 5 samples had a very weak peak of 1648 nm which is why we describe it as a secondary resul

History of severe Covid with respiratory failure and long Covid, N=1

Nanometer Peaks	Associated Chemical Groups
1315nm	SH bond
1100nm	ArCH
1648nm	ArCH
1386nm	CH3, ArOH
1035nm	RNH2

CH = carbon hydrogen bond. ROH= hydroxyl group. CH3= methyl group, ArOH= aromatic alcohol, RNH2=monoamine. SH=disulfide bond. ArCH=aromatic ring with carbon hydrogen

#### **Carnicom Institute: Mirror Sites Available**

carnicominstitute.org/carnicom-institute-mirror-sites-available/

Carnicom Institute: Mirror Sites Available

Two mirror sites for Carnicom Institute research are now available. The first is located at:



<u>Carnicom Institute Mirror Site – First Mirror Site</u>

https://carnicominstitute2.org/

The second one is located at:



<u>Carnicom Institute Mirror Site – Second Mirror Site</u>

https://mirror.carnicom.com/

Additional Note:

The longevity of the Carnicom Institute website remains uncertain. It is recommended, as a minimum, that global users download and archive the primary research information of Carnicom Institute. This exists in PDF format and is located at:

# CARNICOM INSTITUTE LIBRARY DOWNLOAD PORTAL

https://library.carnicominstitute.org/

There should be no assumption made as to the future existence of the Carnicom Institute website. My opinion and assessment is that foresight and preparation should be extended to the next century. I have no confidence, for a variety of reasons, that the majority of the current population is aware of or comprehends the breadth of change that is in place. The future existence of life as we know it is not guaranteed. I would also be aware of the following statement that has been made within recent research papers:

"There is now a record of more than 400 research papers along with an estimated 5000 pages of laboratory notes that paints a completely consistent portrait of environmental and biological transformation of this planet. The record has been available for all to examine, repeat, refute or confirm. No formal process of those steps has taken place and we are left, together as a species, to frame our understanding of what has taken place and what shall take place in our future.

I am increasingly of a mindset that it will be left to future generations to determine if this retrospective will ever take place. It may or may not happen."

Altered Blood VI: Implications and Consequences (Oct 2022)

Appreciation is extended to those parties that have, over history, created Carnicom Institute mirror web sites. Currency of information is now in need on any CI mirror site. The development of additional CI mirror websites is eagerly encouraged and invited. A goal exists to have approximately a half dozen mirror sites operational in perpetuity across the

globe. Any reports of archiving the CI Library information from the download portal linked above, along with the location of your country, are also very helpful. Correspondence to that effect can be directed to [info@carnicominstitute.org].

Clifford E Carnicom Feb 22, 2023

Born Clifford Bruce Stewart Jan 19 1953

#### **Carnicom Institute: The Covid Connection**

carnicominstitute.org/carnicom-institute-the-covid-connection/

Carnicom Institute: The Covid Connection



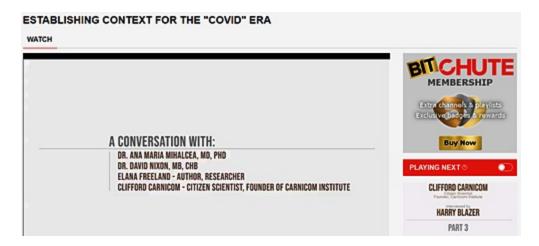
Link to Interview

<u>Carnicom Institute</u>: The Covid Connection

## Carnicom Institute : Panel Discussion – Establishing Context for the "Covid" Era

carnicominstitute.org/carnicom-institute-panel-discussion-establishing-context-for-the-covid-era/

Carnicom Institute: Panel Discussion – Establishing Context for the "Covid" Era



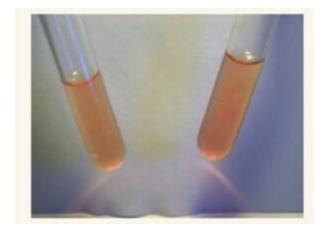
Link to Panel Discussion

<u>Carnicom Institute: Panel Discussion – Establishing Context for the "Covid" Era</u>

## **Evidence Of Impaired Electrical Blood Conductivity : Dr. Ana Mihalcea, MD, PhD with Carnicom Institute**

**carnicominstitute.org**/evidence-of-impaired-electrical-blood-conductivity-dr-ana-mihalcea-md-phd-with-carnicominstitute/

Evidence Of Impaired Electrical Blood Conductivity, Iron Oxidation and Reduced Oxygen Transport Capacity In The Post C19 Injection Era: Ana Mihalcea, MD, PhD In Conjunction With Clifford Carnicom



Link to Article Here

## Replication of Electrical Transformation of Blood – Ana Mihalcea, MD, PhD in Conjunction with Clifford Carnicom

carnicominstitute.org/replication-of-electrical-transformation-of-blood/

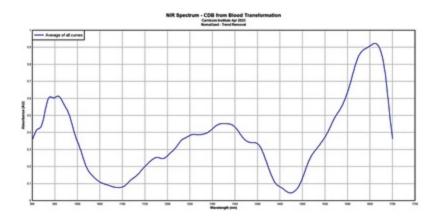
Replication of Electrical Transformation of Unvaccinated Blood Filament Growth Documented – CDB Extraction and Isolation Ana Mihalcea, MD, PhD in Conjunction with Clifford Carnicom



#### Anal sis Of Cross Domain Bacteria (CDB) Ana Mihalcea, MD, PhD In Conjunction With Clifford Carnicom

carnicominstitute.org/anal sis-of-cross-domain-bacteria-cdb-ana-mihalcea-md-phd-in-conjunction-with-clifford-carnicom/

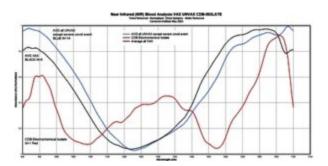
Chemical Composition Anal sis Of S nthetic Biolog Cross Domain Bacteria (CDB) Ana Mihalcea, MD, PhD In Conjunction With Clifford Carnicom



#### Cross Domain Bacteria (CDB) NIR Fingerprint Match Found In Human Blood – Ana Mihalcea, MD, PhD In Conjunction with Clifford Carnicom

carnicominstitute.org/cross-domain-bacteria-cdb-nir-fingerprint-match-found-in-human-blood-ana-mihalcea-md-phd-in-conjunction-with-clifford-carnicom/

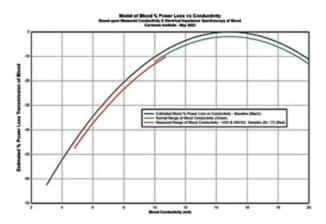
Cross Domain Bacteria (CDB) NIR Fingerprint Match Found In Human Blood – Ana Mihalcea, MD, PhD In Conjunction with Clifford Carnicom



## Blood Conductivity & Human Power Loss- Ana Mihalcea, MD, PhD and Clifford Carnicom

**arnicominstitute.org**/blood-conductivity-human-power-loss-ana-mihalcea-md-phd-and-clifford-carnicom/

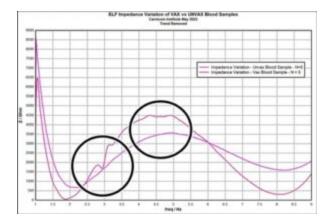
Blood Conductivity & Human Power Loss- Ana Mihalcea, MD, PhD and Clifford Carnicom



# Prospective Difference Bet een C19 Vaccinated and Unvaccinated Blood Ana Mihalcea, MD, PhD and Clifford Carnicom

carnicominstitute.org/prospective-difference-between-c19-vaccinated-and-unvaccinated-blood-ana-mihalcea-md-phd-and-clifford-carnicom/

Prospective Difference Between C19 Vaccinated and Unvaccinated Blood Ana Mihalcea, MD, PhD and Clifford Carnicom



#### Blood Clot Anal sis: Pol meri ed Protein Part 1 of 3 Ana Mihalcea, MD, PhD and Clifford Carnicom

**carnicominstitute.org**/blood-clot-anal sis-from-living-deceased-individuals-a-rubber-like-pol meri ed-protein-ana-mihalcea-md-phd-and-clifford-carnicom/

Blood Clot Anal sis: Pol meri ed Protein Part 1 of 3 Ana Mihalcea, MD, PhD and Cliffc Carnicom



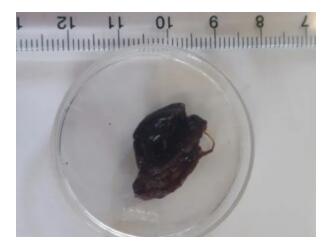




# Blood Clot Analysis From Living And Deceased Individuals w/ NIR – Part 2 of 3 – Ana Mihalcea, MD, PhD and Clifford Carnicom

**carnicominstitute.org**/blood-clot-analysis-from-living-and-deceased-individuals-w-nir-part-2-of-3-ana-mihalcea-md-phd-and-clifford-carnicom/

Blood Clot Analysis From Living And Deceased Individuals w/ NIR – Part 2 of 3 – Ana Mihalcea, MD, PhD and Clifford Carnicom



## Blood Clot Anal sis Solubilit Testing Part 3 of 3 Ana Mihalcea With Clifford Carnicom

carnicominstitute.org/blood-clot-anal sis-solubilit -testing-part-3-of-3-dr-ana-mihalcea-with-clifford-carnicom/

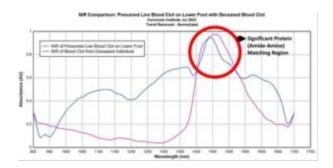
Blood Clot Anal sis Solubilit Testing Part 3 of 3 Dr. Ana Mihalcea With Clifford Carnicom



## NIR Analysis Of Health Findings: Blood Clot Signatures Matched – Dr Ana Mihalcea and Clifford Carnicom

**carnicominstitute.org**/nir-analysis-of-health-findings-matching-chemical-blood-clot-signatures-dr-ana-mihalcea-and-clifford-carnicom/

NIR Analysis Of Health Findings: Blood Clot Signatures Matched – Dr Ana Mihalcea and Clifford Carnicom



#### The Source of Blood Coagulation: Cross Domain Bacteria (CDB)

carnicominstitute.org/the-source-of-blood-coagulation-cross-domain-bacteria-cdb/

The Source of Blood Coagulation: The Cross Domain Bacteria (CDB) Aug 26 2023 Clifford E Carnicom

The case can now be made that the primary mechanism causing the widespread increased coagulation of blood in the "Covid Era" is the Cross Domain Bacteria (CDB). This biological entity, synthetic or otherwise, is the subject of extensive inquiry at Carnicom Institute(CI) for many years.

This conclusion can be reached with the suitable use of microscopy alone. This paper will depend primarily on imagery to make the case, but it will also include some of the historical framework that helps to interpret the coagulation problem within the context of the *Covid* Era. The change and increase in coagulation/clotting appears to result from an apparent attractive force (i.e., electromagnetic, chemical, etc.) induced, aggravated or enhanced within blood that does show itself to correlate with the advent of the Covid Era.

There are two methods of microscopy that will be of complement to one another. The first is that of a traditional dried blood smear(assuming the method remains viable), and the second is with the use of live blood microscopy. In one case, the blood is static and dry. In the other case, the blood is fluid (at least initially). The historical impact, of the CDB upon blood, observed and documented now over decades, is an important aspect of the understanding before us. Undoubtedly, the Covid Era added another dimension to the earlier problems recorded, and this will also be discussed within this paper.

I will provide an image early in this paper so that the reader may have an intuitive perception as to where this discussion is leading. It will take some time to establish an understanding of what follows below. I leave it to the reader whether they wish to engage at the level required, but all of us may immediately have a sense of how remarkable but problematic the image below is.



Blood Cell Coagulation Mechanism with CDB Original Magnification ~8000x

I hope that you will bear with me, however, as our future as a species most likely does depend upon our "engaging".

We must start with what motivated this examination to begin with, and *when* it arose and *why*.

In August through October of 2022 a six-part research paper series was written that spans roughly a year and a half of work. The paper set deals primarily with extraordinary findings that involve the application of electrical energy to blood (unfortunately, the end result is lethal). Beyond the broader perspective afforded by those papers, the opening paper of the series is especially relevant here as it reports on unusual coagulation behavior of blood. So much so that making proper slides for the viewing of blood was difficult if not impossible. The paper series is available <a href="https://example.com/here/beaches/beach

The following statement was made in the summary at the opening of this first paper, entitled "Blood Aterations I: Coagulation":

"The coagulation factors appear to associate with the presence and effects of the "cross-domain" bacteria (CDB); a unique microbial life form identified and studied by Carnicom Institute over the last 25 years."

One might question how that perception was reached at that stage of research, but suffice it to say that it came from the changes in blood slide preparation and blood observations at the time this paper was written. Proper dried blood slides could no longer be made. The primary change over the preceding three years was the entry of the *Covid Era*. *The essential problems with blood remained squarely resulting from the CDB*, as they had for twenty years prior. but something new was now on the horizon. This change was, is, and remains centered on unknown influences from the Covid Era upon the human population.

And thus the question has remained:

What agent, force, or mechanism is responsible for causing widespread, and now devastating, changes, especially coagulation and blood clotting, in human blood on a global scale?

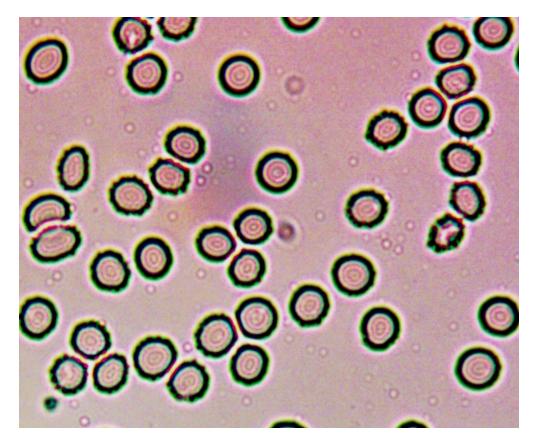
Generalized answers, presumptions, conjectures, misinformation, discord, speculation, sensationalism, and plenty of maybe's are all woefully insufficient. There are plenty of all of these to surpass our all needs. When combined with the censorship and restrictions in place to access truthful information, we have generally been left to wallow in a state of confusion for the last 3 years or more (actually, more than 30). It is an absolute abhorrence at this stage that the SPECIFIC and DETAILED contents of mass worldwide injections to the population remain unknown and are perpetual fodder for the chaos just mentioned. This is not by accident, but by design.

Unfortunately, the resources of CI have been relatively minimal, for a number of reasons, over this same time period. And as Stevie Nicks sings, "I'm getting older too..."

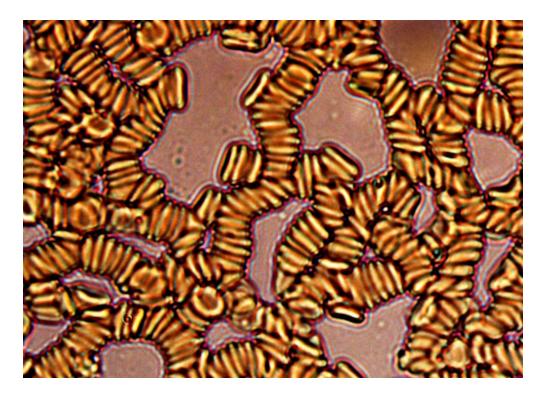
Nevertheless, a chink in that armor has been opened with recently regained access to sufficient microscopy.

And so now we need to start looking at some images.

As mentioned, both a dried blood smear and a live blood capture can be used to complement one another in this inquiry. All photographs on this page come from the same individual (no Covid "vaccination") at the same point in time. Let's begin with one photo from each method:



Static Dried Blood Smear – Selection 1 – Original Magnification 3200x



Live Blood – Selection 2 – Original Magnification 3200x

These photos clearly demonstrate the need for a comprehensive examination of blood under different circumstances. It may be difficult to accept that both photos come from the same individual at the same time, but this will be the case for all photos shown. What differs here are the conditions and method of view. As will be seen, there is much that can be learned from a more thorough study of the blood under various conditions and even location within the sample area.

Let us speak about the differences in this first photo set in more detail. Given the state of serious and drastic degradation of blood by the CDB that has been chronicled by CI over the years, the first photograph might be regarded as somewhat "normal". The cell membranes have decent integrity, the cells have fairly even geometry, and the cells are distributed evenly across the sample region. But as will unfold, this blood is anything but "normal", and the clue to that awareness is the widespread presence of the CDB within the blood, and those same CDB on surrounding the perimeter of the majority of cell membranes. There is a bit of a war taking place here. But in a superficial sense, we can start this paper by saying it has a mildly conventional appearance of blood, at least relative to what can be seen if we were to open this discussion further.

The second photograph shows the same blood from the same individual in the same time period, however it shows the state reached by the blood literally within seconds of being placed upon the slide in a *live view* mode. Suffice it say as it has been witnessed in times far past, a live blood view should be akin to throwing a bushel of ping bong balls in a lake. It is actually a marvelous thing to see the under microscope, and it is a dynamic and vibrant view of the marvel of healthy human blood. Unfortunately this is no longer as easy or as common to see. What we see is total and complete congregation (rouleaux) of blood on the slide immediately upon being placed upon the slide with a cover slip; this is far, far and everything away from "normal". It is most certainly a dangerous situation, and serves as a harbinger to the widespread clotting of blood that is now reported in open scientific and health communities. It relates directly to the increased mortality that is now before us.

Now it is sensible to ask, how can this be? Why would two blood samples from the same individual at the same time look and behave so differently from one another, even within a matter of seconds?

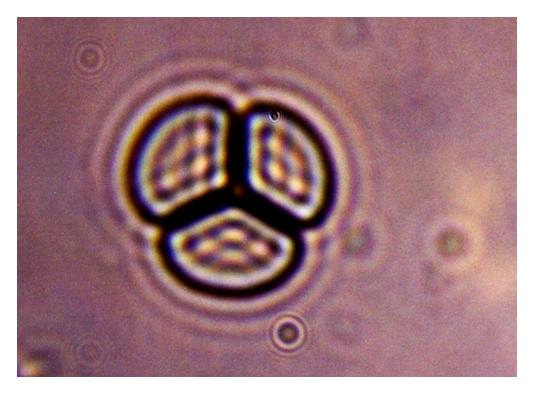
The answer is to be found from a broader as well as a closer study of variation of cells upon the slides. Let's begin the progression.



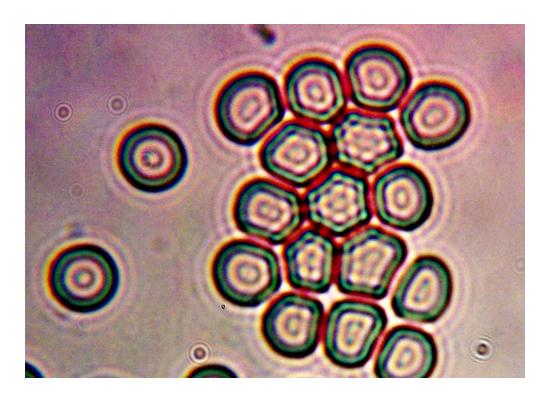
Blood Cell Microphotograph – Static Slide – Selection 3 Central CDB visible in cells (not "bulls eye" blood condition) Original Magnification 8000x



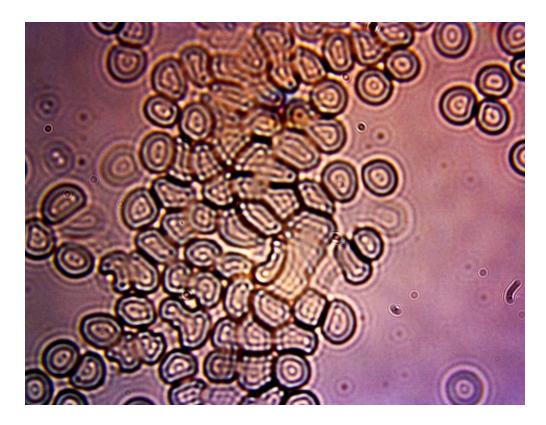
Blood Cell Microphotograph – Live Blood Slide – Selection 4 Double CDB Visible in Cells Original Magnification 8000x



Blood Cell Microphotograph – Live Blood Slide – Selection 5 CDB Multiple Grouping Visible in Each Cell Original Magnification 8000x

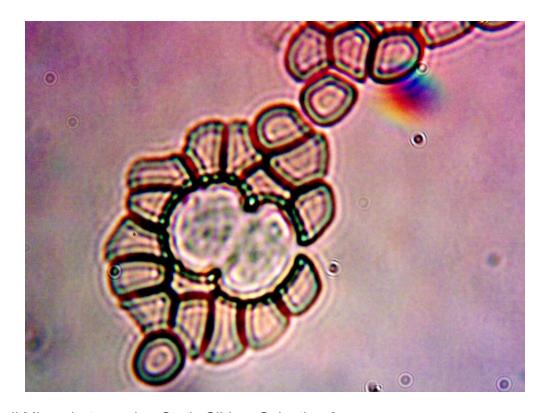


Blood Cell Microphotograph – Static Slide – Selection 6
Early Stages of Blood Coagulation
Increases Directly and Proportional to Abundance of CDB Intrusion
Notice Isolated Cells to Left with Singular Internal CDB
Original Magnification 8000x



Blood Cell Microphotograph – Static Slide – Selection 7 Progressed Stage of Blood Coagulation Directly Proportional to Severe CDB Intrusion Original Magnification 8000x

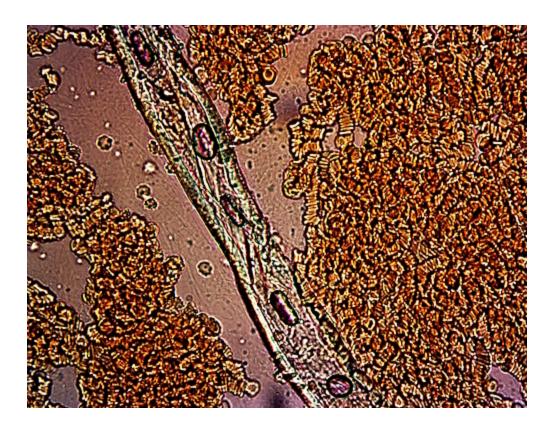
To broaden the perspective even further, here are a few images that depict additional severe consequences of CDB impact:



Blood Cell Microphotograph – Static Slide – Selection 8
White Blood Cell Infused with CDB Attempting to Serve Immune Functions
Overwhelmed by CDB
Original Magnification 8000x



Blood Cell Microphotograph – Live Blood Slide – Selection 9
Complete Rouleaux Taking Place Essentially Instantaneously
During Preparation of Live Blood Slide Preparation
Original Magnification 8000x



Blood Cell Microphotograph – Live Blood Slide – Selection 10 Classic Example of CDB Filament within Extensive Rouleaux Formation Original Magnification 8000x

One would think that these photographs would spawn a great deal of discussion. Even further, one might expect the top minds in the world to immediately, collectively and aggressively put themselves to work. Based on our performance as a species as a whole, this can not be assured or expected. We are behind the curve seeking three decades now, and our future as a species must be admitted to be under threat or siege. The photographs shown are not an aberration, they are representative of the state of affairs.

I do think the focus and priority of required effort before us is quite clear, as it has been. The appeals are embodied throughout the entire history of research at CI over these same decades. Carnicom Institute will proceed to the best of its capability but that history is inevitably finite. Godspeed, as it is said.

Clifford E Carnicom Aug 26 2023

Born Clifford Bruce Stewart, Jan 19 1953.

#### A Source of Global Harm: The Cross Domain Bacteria (CDB) Proteins

carnicominstitute.org/a-source-of-global-harm-the-cross-domain-bacteria-cdb-proteins/

A Source of Global Harm: The Cross Domain Bacteria (CDB) Proteins Sep 02 2023 Clifford E Carnicom

The assessment by Carnicom Institute (CI) is that the proteins created by the Cross Domain Bacteria (CDB), a subject of extended study here, are responsible for a vast majority of the health ills imposed upon the global population, including the more recent tragedies involving blood coagulation and clotting of the "Covid Era".

The starter for the cultures is human blood. Culturing of this biological entity has a long history within CI. One major advantage of the culturing process is that it allows for the study of biological growth (synthetic or otherwise, as the case may be) in a controlled environment. This provides for many studies and discoveries that would simply be impossible otherwise. Recent advances and refinements in CDB culture practices have been used to isolate four separate proteins from this organism; this has major ramifications for human health now and in the future.



One of Four Protein Forms Isolated From CDB Cultures

This paper will simply establish the existence of the various protein forms, along with a brief discussion of their character. These proteins serve as a window to great understanding of what has transpired, what is currently happening, and what will continue to degrade human health and threaten existence unless "engagement" (as mentioned in the previous paper, The Source of Blood Coagulation: Cross Domain Bacteria (CDB)) commences at the highest level possible. The broader demands and requirements here far exceed the capabilities of CI.

A logical step in biological discovery begins with DNA analysis. Even the nomenclature given to this microorganism by necessity, and not desire, depends upon this initial information. The biological and genetic origin of this entity remains unknown, but the properties of its existence force upon us the issue of synthetic biology. Until that DNA information is acquired at a minimum to the "domain" level, we will remain in ambiguity. CI has successfully isolated DNA from this organism on three occasions over the decades.

Let it be disclosed at this time, however, that good faith efforts were made by CI to seek out this preliminary DNA analysis several years ago. Professional services were consulted and appropriate requests were made to seek domain level DNA identification. Those requests were denied with no rational or just cause from a scientific standpoint. It is fair to say that certain "filters" seemed to be operative within the discussions that took place, and that those

filters established a wall that has kept the populace in ignorance ever since. The atmosphere and tone of that meeting had similarities to those written years ago in the paper, Environmental Filament: False Lab Report (Jan 2013); this may also be of interest.

After DNA comes protein, which is where we are today. Proteins are the most abundant constituent of living organisms after water. They offer the most meaningful insight into the nature of biological existence. The same high level of laboratory expertise and resources are required for protein analysis as they are for DNA.

Nevertheless, despite obstruction or limitations, let us put our foot forward and begin to show what is available as a path of understanding in the future. The photos shown here are the evolution of decades of research. With this background, it still requires a couple of weeks of steady work to produce these results. The identification and separation of proteins of a living organism is not a trivial matter. This was also the case for DNA isolation along that same path.

Each of these proteins will be present in the human body if the CDB are present in the body. Thus far, there is no known exception in any observed case, although there is variability in the impact to human health. The focus of the CDB studies within CI research has been human blood, although all body systems show serious detriment. The <u>Morgellons Research Project</u> (Nov 2016) of CI will enumerate the problems in more detail.

A very few generalized comments will be made about each isolated protein.



CDB Isolated Protein No. 1

Protein No. 1 is a water soluble protein. Water solubility of a protein has major implications of distribution within a biological system. Given that more than 3/4 of the human body is water, it is not difficult to envision the prospects for harm from a foreign protein. The CI toxicology studies (numerous research papers 2017-2019) are directly associated with this particular protein form. All indications are that this protein is primarily of polymeric form, and it has a film or "liquid plastic" texture to it upon increased evaporation or drying.



CDB Isolated Protein No. 2

CDB Protein No. 2 varies in solubility depending upon the pH. The solid form of the protein is shown after precipitation is induced from an increase in alkalinity. The consistency of this protein is that of an adhesive paste upon evaporation or drying. Indications are that this protein is also of a polymeric nature.



CDB Isolated Proteins No. 1 & 2 Combined

Protein Nos. 1 & 2 originally coexist in the culture solution. This photo shows both both forms after precipitation is induced for Protein No. 2 causing it to settle at the bottom of the solution.



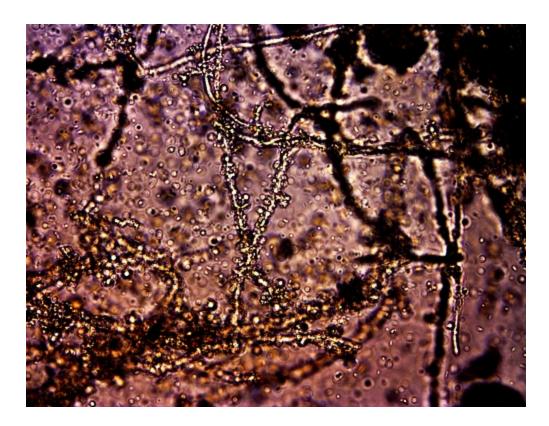
CDB Isolated Protein No. 3

Protein No. 3 is a solid protein that settles out of culture. The protein has a paste like consistency upon evaporation and concentration. Polymeric aspects of this protein remain uninvestigated at this time.



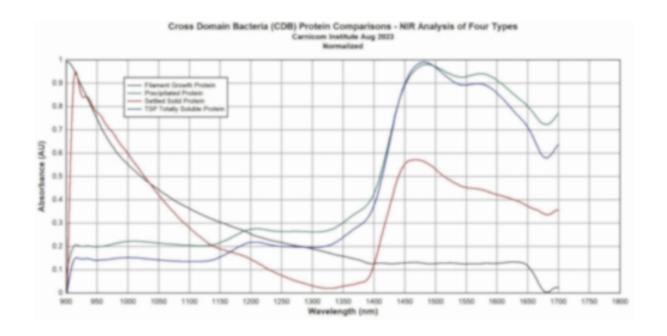
#### CDB Isolated Protein No. 4

Protein form No. 4 has been extensively examined over the years at CI. The earliest culture work generated this form and extensive research on that work is available on the CI site. The long history of equivalency between the "Environmental Filament", human biological study (under the colloquial identity of "Morgellons"), and culture results is documented in excruciating detail on the CI site. The filament structure, especially as this protein form is known to share equivalency with the "Environmental Filament" of CI research, also strongly implicates polymeric formation.



CDB Isolated Protein No. 4 Under the Microscope CDB in Large Numbers Enmeshed within Filament Network Magnification 3200x

Above is a microscopic view of the filament protein form from the culture. This form is the most heavily observed and documented over the years. The additional proteins now identified from this most recent work provide a pathway to much greater understanding of how human health is impacted by the CDB.



Near Infrared (NIR) Plot of the Set of Four CDB Isolated Proteins

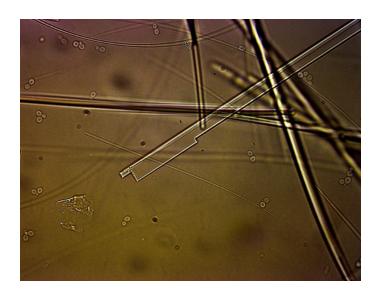
Initial NIR data for the four protein types has been acquired.

Future work will seek more detailed information on the chemical nature of the various proteins so that coarse and early stage biochemical interpretation can be made. This CI work, to the degree possible, will establish further connections between the environmental sciences, human biology, and the impact of the *Covid Era*. Potential further mitigation strategies, beyond those already discussed, will be explored or proposed. Without the greater "engagement" referred to earlier, this work will be a long term venture with limited accomplishment relative to what is required. Time is not in our favor (and never was) and the humans species does exist under an increased threat of extinction. Transformation of the species, which may ultimately be equivalent to extinction, exists as an additional alternative.

## **Cross Domain Bacteria (CDB) Protein : Exotic Crystal Biology**

carnicominstitute.org/cross-domain-bacteria-cdb-protein-exotic-crystal-biology/

Cross Domain Bacteria (CDB) Protein : Exotic Crystal Biology Clifford E Carnicom Sep 18 2023



CDB Developed "Protein Crystal" Magnification 3200x

This paper bears within important ramifications for the human race. Straight lines in nature are relatively rare. Right angles are even less common. There are a very few minerals that possess such characteristics, but even those express relatively simple geometry. Straight lines and right angles combined are a difficult challenge to find in the natural organic or biological world. The addition of interior parallel, grid and grid subdivisions combined with irregular geometry and unusual projections should sharpen our senses even further.

The act of a protein in nature producing a crystal structure alone is similarly a rare find, and it is at the forefront of the most advanced levels in biological research. It is not an easy situation to produce even within that branch of research. History and literature on the subject is generally scant, and pursuit of knowledge about it quickly involves higher level physics, particularly X-Ray Diffraction. X-Ray Diffraction is the method by which the structure of DNA was discovered.

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"Developing protein crystals is a difficult process influenced by many factors, including pH, temperature, ionic strength in the crystallization solution, and even gravity. Once formed, these crystals can be used in structural biology to study the molecular structure of the protein, particularly for various industrial or medical purposes" (Wikipedia).

[Wikipedia is heavily biased, manipulated and censored, however, it remains suitable for some basic technical needs-CEC]

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Here are a couple of general readership articles that will introduce the subject of protein crystals:

<u>Biological crystals: at the interface between physics, chemistry and biology,</u> Dominique Cornuéjols

Growing crystals from protein, Beat Blattmann, Patrick Sticher

They are worthy of review, and a call to the European Synchrotron Radiation Facility in France may be appropriate under the circumstances.

Let us first discuss where these crystals come from. They arise as an outgrowth from the isolation of the water soluble protein of the Cross Domain Bacteria (CDB) as described in a previous paper, A Source of Global Harm: The Cross Domain Bacteria (CDB) Proteins, Sep 2023. There are several stages in the isolation process that takes place, and the crystals will begin to form and settle within 24 hours of final purification, and will subsequently mature. The process has now been repeated three times with identical results. It has already been established that this particular protein form is toxic.

Let us take a look at a few representative images under the scope, along with a few parting comments.



CDB "Protein Crystal"
Structured but irregular geometry, numerous right angles combined with variable internal dimensions
Magnification 3200x



CDB "Protein Crystal"
Structured but irregular geometry, numerous right angles combined with internal variable subdivision
Magnification 3200x



CDB "Protein Crystal"

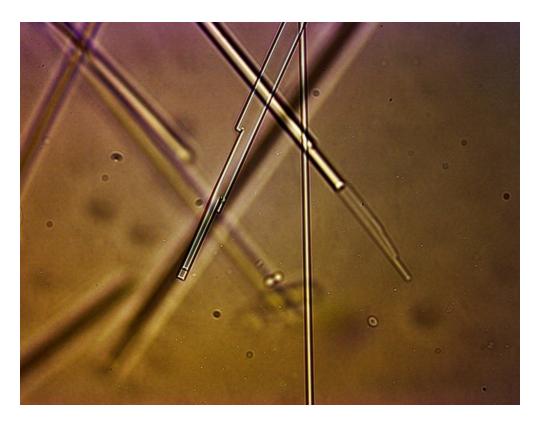
Active CDB manufacturing site

Extraordinary combination of biological and "crystallization" processes

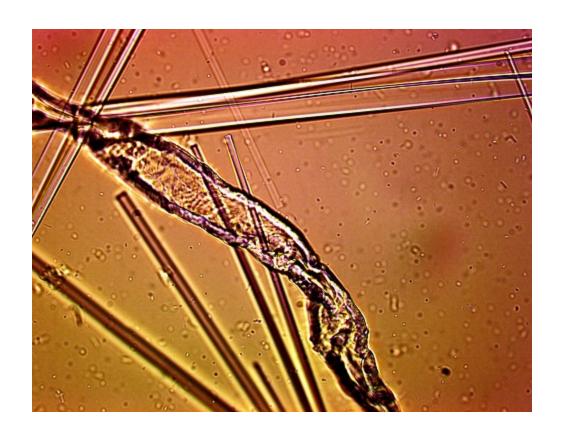
Unusual projection and discontinuity of material

The likelihood of "biological circuitry" must be acknowledged here.

Magnification 8000x



CDB "Protein Crystal"
Structured but irregular geometry, numerous right angles combined with variable internal dimensions. Slot construction. Magnification 3200x



CDB classic biological filament combined with "Protein Crystals" Magnification 3200x

Fourscore and many times past one might think the questions that arise above would be of hot pursuit. From the general history, I have no expectations of such from those of position or influence. The obligation and duty remains, nevertheless.

It is not difficult to assess that Carnicom Institute has remained most conservative in its assessment over the years regarding synthetic biology "proof", as it were. The implication of synthetic biology has been pronounced, but restraint has also been continually exercised because of the many surprises always before us in the world of science.

It is now time, however, to choose reason over caution, as we now encounter a barrage of overwhelming evidence to indicate that synthetic biology is in full force in front of, and within us.

Is it now reasonable to conclude that we, as a species, are an unwilling subject of "synthetic biology"? I think so. It would be to our mutual benefit to be proven wrong.

You have the freedom to think and make your own decision. My role has been to patiently and consistently seek and provide information to assist in that process, and to call those of influence to "engage", as has been mentioned in recent papers.

Bacterial forms are now commonly used as a vehicle for genetic manipulation and protein generation(i.e., expression). The truth is that it is more of a staple operation than I have recognized. The classic case of this is insulin production, which is well accepted by millions across the globe. Insulin originally came from cows and pigs, but for reasons that many consider justifiable, genetic engineering was born. Here are a few lay descriptions of what has come to pass that involves the combination of bacteria, genetic engineering, and manufactured proteins (*insulin is a protein*, *the CDB produce proteins*, *and every living creature produces proteins*):

"You can learn more about the history of genetic engineering in episode 23 of series 1 – GMO, OMG! – but it's quite simple: take the human insulin gene, stitch it into a circle of bacterial DNA known as a plasmid and put it into bacteria. Then grow up the modified bugs in large vats of broth and wait as they pump out pure human insulin, which you can then purify and give to patients."

https://geneticsunzipped.com/transcripts/2021/6/3/from-insulin-to-humulin-the-story-of-the-first-genetically-engineered-drug

Recombinant DNA is a technology scientists developed that made it possible to insert a human gene into the genetic material of a common bacterium. This "recombinant" microorganism could now produce the protein encoded by the human gene.

https://www.nlm.nih.gov/exhibition/fromdnatobeer/exhibition-interactive/recombinant-DNA/recombinant-dna-technology-alternative.html

"A great deal of research went into producing human insulin by means of genetic engineering. The genetic material of a bacterium [or] a yeast is reprogrammed to make insulin instead of the proteins it would normally produce. This insulin is purified so that it contains no trace of the original bacterium."

https://www.iddt.org/diabetic-commonsense/the-great-debate-natural-animal-or-artificial-human-insulin/

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And so now we get to ask: What if the introduced gene into the bacteria was not human? Can that be done too? And the answer is yes.

And then we get to ask, what if the introduced gene(s) into the bacteria was from an unknown species or life form (at least to most of us)? Could that be done also? I see no reason why not.

And then we must now ask, what if the introduced gene came from either a synthetic or foreign (e.g., xenobiology, exobiology) life form? Could that be done also. I would certainly expect so.

If the proteins generated by the life form and the life form are not currently known, registered or acknowledged in the public database (the CDB are not), then I think that the focus must quickly entertain the final question above. The orchestration and scale of events over the last 25 years plus surpasses all nation interests.

Once again, you decide. It would be to our mutual benefit to be proven wrong.

A truthful answer might go a long way towards explaining the refusals which have taken place to identify the nature of the CDB DNA – please recall that event documented in the paper, "A Source of Global Harm: The Cross Domain Bacteria (CDB) Proteins" (Sep 2023).

It is therefore more than feasible, and quite reasonable, that the CDB itself is either of synthetic nature or is a vehicle through which synthetic biology is expressed. The ultimate expression of the CDB is indeed the proteins that are created in the human body, and hence the need for more aggressive "engagement".

"The time is nigh..."

Clifford E Carnicom

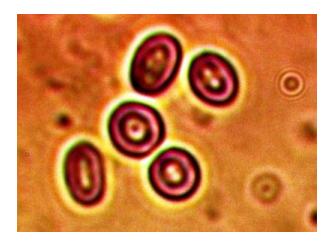
Born Clifford Bruce Stewart, Jan 19, 1953.

### Cross Domain Bacteria (CDB) Protein : The Fallout Emerges

**carnicominstitute.org**/cross-domain-bacteria-cdb-protein-the-fallout-emerges/

Cross-Domain Bacteria (CDB) Protein : The Fallout Emerges Crystal Biology, Synthetic Blood & Clotting, and Polymer Formation

Clifford E Carnicom Sep 26 2023



The water-soluble protein that has been isolated from the Cross-Domain Bacteria (CDB) is anything but a single or simple protein. It is a sophisticated complex that is now known to produce a minimum of 10 variants of growth form. There is already known to be great harm to human existence from the CDB and this particular protein. This work clearly confirms the conclusion that synthetic biology is now fully operative across the planet. The work in progress is detailed, extensive and yet preliminary – only the highlights of certain topics will be presented to maintain some modicum of the pace of work.

These multiple forms of growth or creation via culturing include, but are not necessarily limited to:

- 1. Immature protein crystals of irregular geometry
  - 2. Highly developed matured "exotic" biological crystals
  - 3. Polymer formation
  - 4. Synthetic red blood cells
  - 5. Synthetic "blood clotting"
  - 6. Budding biological growth (relatively large structures)
  - 7. Chain CDB formation
  - 8. Protein mass (iron rich complex)
  - 9. CDB
  - 10. Filament production

The focus of this paper will be on items 3, 4 and 5. Before continuing there, let us make some mention of the additional topics with the understanding that none are to be dismissed or disregarded. All are of equal importance here, as they are all part of the same package and we must choose our time and weapons wisely.

Let's lighten the load a little. Items 1 and 2 have largely been addressed, or at least previewed, with the recent paper, <u>Cross Domain Bacteria (CDB) Protein: Exotic Crystal Biology</u> (Sep 2023). Items 7-10 are ensconced deeply within the historical research of Carnicom Institute (CI), and they need not be introduced from scratch at this point. Item 6, although newly seen, can be viewed as a likely variant of those same items 7-10. What distinguishes it is its larger size.

Our interest here is to delve more deeply into the appearance and confirmation of synthetic blood within the culture work, as it is quite real and will need to be confronted quickly and directly.

The identification of "artificial blood", now more appropriately called synthetic or genetically altered blood, actually had its debut within CI decades ago. I can and will say that I tried. These two papers, written in 2009, show what was happening at the time, 14 years ago:

Artificial Blood(?) (Aug 27, 2009)

Blood Issues Intensify (Apr 2009)

Two other papers (as a minimum) have a complementary interest here, the first comes from a footnote added to the paper, <u>Morgellons: A New Classification</u> (Feb 2010), as well as the reference to artificial blood within the paper itself.

"Additional Note Feb 11 2010:

For those that consider the extent of this article to be implausible, please refer to the public disclosure on February 05, 2010 of the project by the Defense Advanced Research Projects Agency (DARPA) to develop immortal "synthetic organisms", as outlined in the unclassified version of the 2011 budget. 7 From a recent article8 on the budget that has been published, it declares that.

"As part of its budget for the next year, DARPA is investing \$6 million into a project called BioDesign, with the goal of eliminating "the randomness of natural evolutionary advancement."

It may be of interest to compare this phrase with that which has been declared within this report:

"It is very difficult to envision, at this state of knowledge, that this "organism" (for the sake of discussion) is the result of any "natural" or "evolutionary" process."

There are many that believe that the accomplishments from classified projects and budgets precede the disclosure of similar goal-oriented unclassified projects by a factor of many years to decades. My appreciation is extended to the individual that brought this disclosure to my attention.

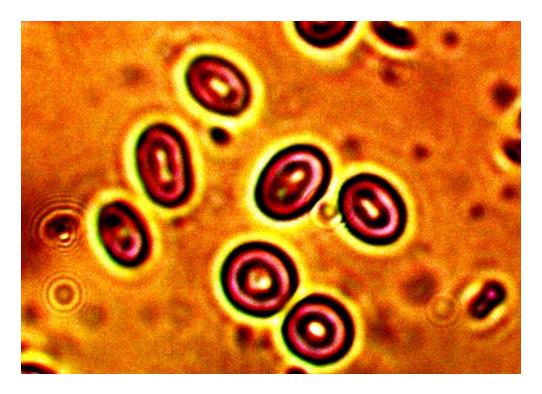
Clifford E Carnicom Feb 11, 2010."

A second paper might also be of interest, and it is titled, "The Transformation of a Species?" (Nov 2019). Under the circumstances now coming to the fore, it speaks for itself.

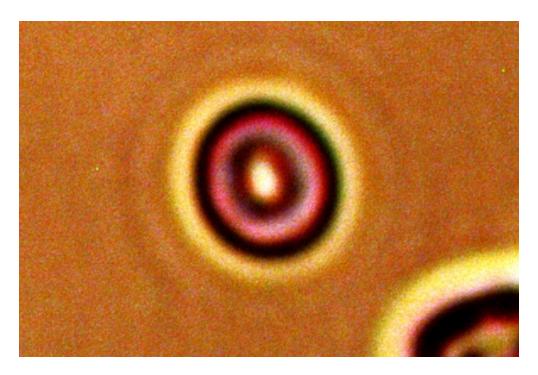
The history surrounding the <u>Artificial Blood</u> paper is of interest in its own right. It was not a paper I wished to write, as I knew that it would cause trouble. And indeed it did. The polite way of characterizing the response to the paper was abject denial regardless of the evidence presented; the more honest assessment is that of character assassination of the highest order. And in a more humorous vein, no, the blood did not arise from a non-existent fish fertilizer plant in the non-industrial remote landscape of Lamy, NM. Que sera, sera, the paper was required to be written, and so it was.

OK then, for a decade and a half (actually 25+ years) we have had synthetic blood unwillingly integrated into our human biology. And now, post Covid Era, it seems to be clotting more commonly as well as killing people more visibly. I think that it is beyond time to wise up and stop playing the proof game. That luxury no longer exists, and be assured, it has been spent.

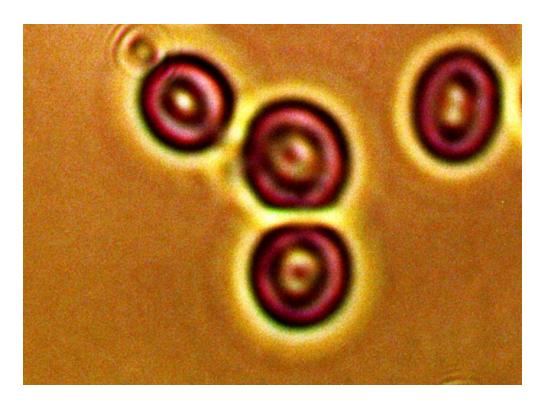
Let's look at a few photographs under the scope. Bear in mind, these images develop entirely from a culture process and not a human being. As stated in earlier work, blood cells are not supposed to grow in a test tube. That was the case 15 years ago and it is supposed to be the case now as well. But they do, and they are growing under the right conditions and knowledge of those conditions. Central to these events shown is the isolation and understanding of a protein endemic to the CDB. What is shown here is a genetically engineered, synthetic biological process that involves, interacts with, and alters human blood cells. The operation has been active over 2 1/2 decades, and it has been complicated further with the advent of the *Covid Era*. I do wish that I could be kinder about it, but there is a phrase called "tough love".



Synthetic – Genetically Engineered Erythrocytes Isolated from CDB Protein Culture CDB can be seen internal to cells Magnification 8000x

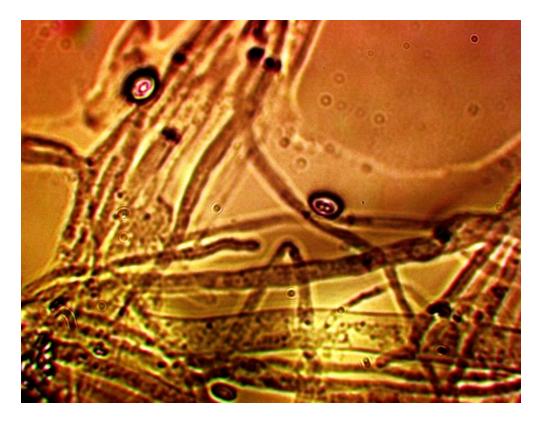


Singular Synthetic – Genetically Engineered Erythrocyte Isolated from CDB Protein Culture Magnification 8000x

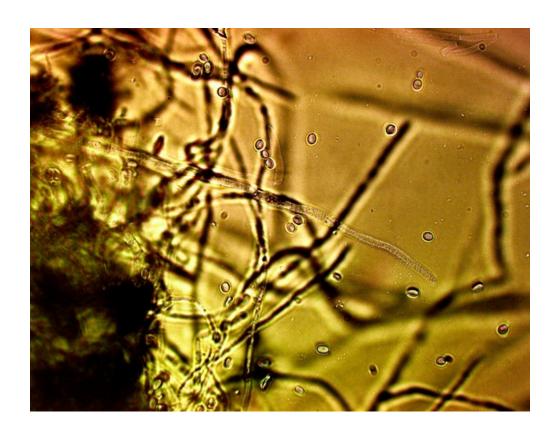


Synthetic – Genetically Engineered Erythrocytes Isolated from CDB Protein Culture Magnification 8000x

Unfortunately, the situation does not cease with the existence of the erythrocytes. The equivalent of a synthetic blood clot is also a feature of this scenario.



Combination of CDB Filaments, Synthetic Erythrocytes and Polymer Matrix (i.e., "synthetic blood clot")
Magnification 8000x



Combination of CDB Filaments, Synthetic Erythrocytes and Polymer Matrix (i.e., "synthetic blood clot")

Magnification 3200x

Furthermore, there is a polymer matrix (film or plastic like) that binds the CDB filaments and the blood cells together, creating a cohesive network that is coagulative in its very nature. In essence, it is the ideal synthetic blood clot.

Over recent months, I have collaborated with Dr. Ana Mihalcea and her colleagues in the investigation of blood clots from both living and deceased individuals. The results of that investigation are published on the <u>Carnicom Institute</u> and <u>Dr. Mihalcea's MD, PhD sites</u> (<u>Part I, Part II, Part III</u>). In summary, the final conclusion reached was that the clots consist of a combination of the CDB, filaments and red blood cells within a polymerized mass. Exactly as above.

In the first case we have the expression and creation of a clotting mechanism and structure of known origin in a laboratory setting (in vitro) and the other within human beings. They are of the same nature. The latter has led to increased mortality with absolutely no doubt and it is clearly understood as to why and how. As with many other facts now before is, there need be no mystery as to what the source of coagulation and clotting is, regardless of the impact from the *Covid Era*.

Analytic comparisons have been made or are in progress between human blood and the isolated synthetic blood. They will be discussed at a later stage. The anticipated impact upon human blood, at least in the generalized sense, will be included. In addition, a lineage of health impact that includes the above findings and the history of Carnicom Institute research (that now includes the Covid Era) will be introduced. We have a long history together now, and the picture is much broader than that receiving the majority of attention over recent months or years.

Clifford E Carnicom

Born Clifford Bruce Stewart, Jan 19 1953.

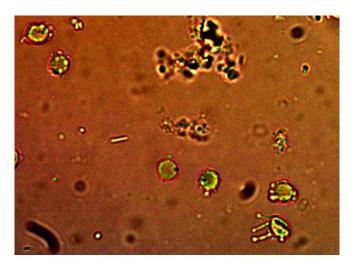
#### Cross Domain Bacteria (CDB): The Destruction of Blood

carnicominstitute.org/cross-domain-bacteria-cdb-the-destruction-of-blood/

Cross Domain Bacteria (CDB): The Destruction of Blood

Clifford E Carnicom Oct 27 2023

Another highlight of the many states of work in progress deserves presentation. The Cross Domain Bacteria (CDB) (Synthetic Biology), as claimed repeatedly by Carnicom Institute (CI), is the primary agent responsible for the change in human blood condition. This is now demonstrated in an incontrovertible way.



Destruction of Human Blood Cells by the Cross Domain Bacteria (CDB)(Synthetic Biology) Culture Based Research Original Magnification 3200x.

The claim is confirmed irrespective of the additional ravages of the "Covid Era" that are now upon us; these have exacerbated, extended, and amplified previously existing conditions that have been ignored to our long term detriment.

A few preparatory references are helpful to set the stage.

The existence of a binary or synergistic system should not be discounted. Evidence for an attractive force within the CDB in the blood post Covid Era does now exist, please see, The Source of Blood Coagulation: Cross Domain Bacteria (CDB) (Aug 2023). Please also note the prospects for this that were noted in prior electromagnetic blood studies, especially within a latter paper of the series, Blood Alterations V: Sources of Current (Oct 2022) where it was mentioned:

"Is the current agenda and regime of "vaccinations" delivered under duress to the global population altering the electromagnetic nature of the human being? There is good cause and reason to think that it is....

...I would propose that such electromagnetic and electrochemical change has likely occurred, and that the results of this change will connect directly to the disclosures within this report series.

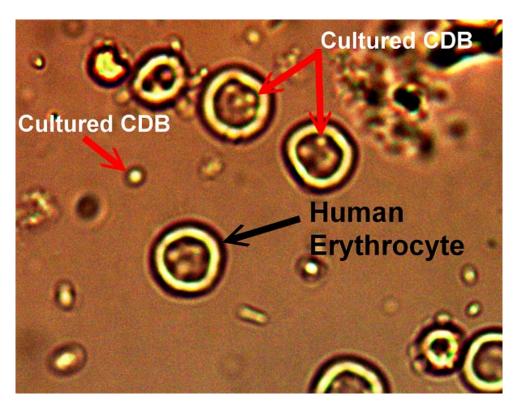
If the "vaccine" regime does alter the human electromagnetics, I expect that the injections will only compound the unfolding health tsunami. We can expect that added symptoms will further corroborate the history of Carnicom Institute research. This appears to be exactly the case."

The claim of specific blood damage by the CDB, in a fashion similar to that of synthetic blood appearance (please see <u>Cross-Domain Bacteria (CDB) Protein: The Fallout Emerges – Crystal Biology, Synthetic Blood & Clotting, and Polymer Formation</u> (Sep 2023), was also made in a substantial way many years ago. The paper titled, <u>A Mechanism of Blood Damage</u> (Dec 2009), will suffice to that end.

This background now brings us to a current state of research at CI.

What differs in this case from the research paper of 2009 is that the damage to human blood can now take place in a controlled environment. The importance of this advance over previous work is that:

- 1. The situation can now be produced at will in a controlled fashion.
- 2. There exists no legitimate excuse or diversion to avoid the focus and understanding of exactly HOW the blood is damaged or destroyed, and consequently WHAT damage is being done to the blood, biologically or otherwise.
- 3. The answers to the questions posed above may help you with the questions of "WHO" and WHY. WHERE is across the planet. WHEN is for a minimum of the past 25+ years.



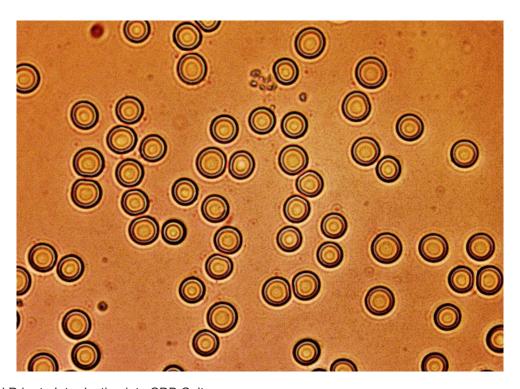
Transformation and Destruction of Human Blood Cells by the Cross Domain Bacteria(CDB) (Synthetic Biology)
Culture Based Research

Original Magnification 3200x.

The method to produce the results above is relatively simple in principle, but somewhat complex in the details required. The CDB are under culture control at this point. There are numerous manifestations that can be produced (see <u>Cross-Domain Bacteria (CDB) Protein</u>: <u>The Fallout Emerges</u>) but a representative culture is used for this particular work.

Human blood cells are then introduced into the culture with a lapse of time (~48 hrs) to observe the effects. The results speak for themselves. The human blood cells become the target of the CDB, the cell membranes are surrounded on the perimeter, the CDB invade and occupy the cell interior, and the cells are ultimately damaged or destroyed. Loss of oxygen carrying capacity (i.e., life force), nutrient distribution, and toxin removal are obvious and the immediate consequences are shown by this research. The coagulation and clotting (i.e., visibly lethal) from the CDB have been amply demonstrated (please see papers mentioned within).

It is worthwhile and necessary to know and show the condition of the human blood before it was introduced into this culture. It is shown below:



Human Blood Prior to Introduction into CDB Culture Original Magnification 3200x

Research is active to seek and establish a level of normalcy in blood appearance. There is a measure of success that has been achieved and the photograph above serves as a reference to the state of affairs. Notice that the cells in the majority are free standing (i.e., coagulation and rouleaux reduced or eliminated) and of general uniform geometry. The existence of the CDB in smaller numbers is present, but damage to and penetration of the cells is reduced or absent. Work of this nature will be discussed as further definition takes place and conditions are appropriate.

The damage to the blood results from the existence of the CDB, i.e., synthetic biology, as reported extensively on this site.

Clifford E Carnicom Oct 27 2023

Born Clifford Bruce Stewart Jan 19 1953

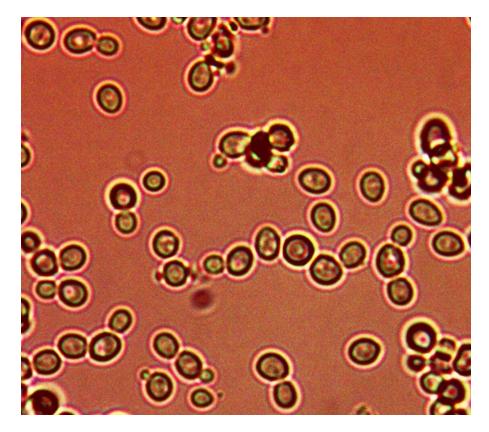
# Cross Domain Bacteria (CDB) : Synthetic Blood & Hemoglobin

carnicominstitute.org/cross-domain-bacteria-cdb-synthetic-blood-hemoglobin/

Cross Domain Bacteria (CDB): Synthetic Blood & Hemoglobin

Clifford E Carnicom Nov 06 2023

Testing information is available in the latter portion of this paper if you prefer to avoid an essay on our predicament.



Synthetic erythrocytes produced by CDB culture. Original magnification 3200x.

A culture derived from the Cross Domain Bacteria (CDB) produces synthetic erythrocytes, or in common language, blood. The CDB are a synthetic, engineered xenobiotic life form that is deeply embedded into the history of Carnicom Institute (CI) research over a period of decades. Some readers will be familiar with the term "Morgellons", a tragic "disease" that has afflicted (and caused the death of) many over these same decades; this condition evolved as a deep point of study within CI. The myopic term "Morgellons" minimized and marginalized the impact and suffering by many over these same decades, and the term has been woefully insufficient from its inception. This has been written and spoken of for many years by CI. CI has also made a continuous effort to trumpet the neglect and dismissal of those that have suffered and that continue to suffer. This pall remains fully in force, and the formal health and governmental infrastructures are fully culpable for these consequences.

We now have a new era of attention upon us, which I have coined as the "Covid Era". Many of us view it as startlingly new and distinct, the likes of which have never been seen before. This is only partly true. Our attention span is short, and we may easily forget that which remains important.

It will eventually be seen that there is a completely consistent lineage of health damage, most especially to human blood, that traces back from more than 25 years to the present day. The origin of that damage is the Cross Domain Bacteria (CDB), nomenclature assigned out of necessity due to failure of participation from the scientific and professional communities.

That importance here is one of context. "Morgellons" never left us, and the "Covid Era" has not replaced it; is has only added to the complexity of health demise now upon us. I have written a series of papers over the last few months that discuss issues such as:

- 1. A microbe (now understood to qualify as "synthetic") that causes great damage and harm to human health (CDB).
- 2. Proteins created by living organisms, and their importance in the understanding of disease.
- 3. The necessity for culturing processes to be in place.
- 4. Physical and biological damage to the blood from this same particular microbe (CDB).
- 5. Phenomenal microscopic and biological observations, especially under the microscope and with cultures (some published, most not).
- 6. Blood coagulation and clotting (*the new kid on the block*).
- 7. Synthetic blood and fundamental scientific thresholds being crossed over on a sustained basis.
- 8. The importance of the sciences of chemistry, biology and most professional disciplines to carve out a path of understanding to what remains ahead of us and unknown. Chemistry and biology to no end.

Most of these subjects have been under my pen for more than a couple of decades now. That includes the topics of even this present paper. So we may ask, what is different now? Why must yet another paper be written?

The reason is twofold. It is item six on the list above, combined with the advent of the "Covid Era".

It is the assessment of this author that item six above is the most pressing concern before us. The health of the general population and environment is compromised in serious ways over decades now, and the source of that demise, at least in part, has been the focus of Cl's history and research. Many have died or are dying, more than need be, and most of us bear the ravages of compromised health for the same reasons. Cl has done its best to tell that story.

The "Covid Era" and purported "vaccinations" have introduced another layer of complexity into the picture, and that is that even more people are dying now. In the current situation, it appears to be largely traceable to an increase in coagulation, clotting, and further demise of the blood. You will see that this same blood has been the dominant theme of the list of 8 items above for the last 25 years. Hence, the understanding of that FURTHER AND INCREASED RATE OF DEMISE of the blood seems to be a sensible priority to me. And so it shall be from the CI perspective. Teams of highest caliber professionals of ethics and conscience should have been dedicated to this and related problems decades ago.

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The prevention of many of the most fundamental diseases of human history can be traced to an understanding of the proteins created by that disease, i.e., alterations they make to the human body. Interruption of the growth of those same proteins is the key to prevention in most cases (Alzheimer's, Parkinson's Disease, HIV, and Mad Cow Disease (BSE) are good examples of such quests). This requires smarts, knowledge, resources, work, and likely some good fortune along the way.

What this requires is specific understanding, and not a generalized milieu of postulations or speculations that become self-rotating. The lay public admittedly has restricted access to resources, tools and skills but we must put our best foot forward. CI is after the what and how of blood coagulation, clotting and demise as well as a means of disruption of that same end. CI does not regard the complications of the *Covid Era* as singular in nature. I have said before that no one is in a position to fight if they are sick. The sickness goes back for many years, its origin is determinable to a large extent, and it is now exacerbated to a more visible form.

Thank you for bearing with this parley; the rest of the paper should be easier.

The short of it is that the synthetic blood now under production through culture is confirmed to produce hemoglobin. This statement deepens the consequences before us.

The tests are conducted on the polymer-synthetic blood matrix material in three stages in a progressive fashion. These test are not conducted on human blood; they are performed on a culture of the CDB. There is no cause to equate the synthetic blood as an exact match for human blood. This synthetic biology produces erythrocytes which share important similarities with human blood; they are, however, a distinctly synthetic creation that is to be discovered with its own biological and genetic nature. The synthetic biology is known to share fundamental traits and characteristics with human biology.

The first test demonstrates the characteristic reaction of hydrogen peroxide that occurs when hydrogen peroxide is combined with blood. As many are aware, a vigorous bubble or foam reaction takes place. This test is actually for the detection of catalase, an antioxidant enzyme that is found in nearly all living creatures that are exposed to oxygen. We may note that the color of the cultured polymer matrix material is white as opposed to the red of blood. It is a useful start to the process.



Catalase test on CDB cultured synthetic polymer matrix material that is observed to produce synthetic blood.

A bubbling/foaming reaction is observed.

The next test is what is known as a presumptive forensic test for the presence of hemoglobin, known as the Kastle-Meyer test. This test uses the combination of the acid-base color reagent indicator phenolphthalein with both blood and hydrogen peroxide. This test will produce a distinctly bright pinkish color in the presence of hemoglobin. This test is positive for hemoglobin at the presumptive level.



Positive presumptive Kastle-Myer forensic test for the presence of hemoglobin. Test conducted on cultured CDB polymeric matrix.

The final test was conducted with a digital meter designed specifically for the detection of hemoglobin. This test uses an electrochemical reaction in a fashion akin to that designed for electronic glucose meters. This is a test method designed specifically for the presence of hemoglobin, and it is above and beyond the presumptive level. The magnitude of hemoglobin (i.e., concentration) should not be regarded with special attention due to many other factors that can affect that result. A positive measurable test result of any kind here is highly significant and confirming for the presence of hemoglobin.



Positive test for hemoglobin.

Test conducted on cultured CDB polymeric matrix material.

This is actually another case where work has been replicated. At some point we are in a position to determine when a discovery becomes important. In addition to the synthetic blood topics brought to light in the history of CI research (please see <u>Cross-Domain Bacteria (CDB) Protein : The Fallout Emerges</u>, Sep 2023), we will find previous hemoglobin tests of record. Additional confirmation was conducted approximately 15 years ago using a similar progressive style, please see <u>BLOOD ISSUES INTENSIFY</u>, (Apr 2009).

Once again, the difference in the case from that of previous work is that this stems from an isolated culturing process under more highly defined conditions, and the situation can be created at will. This is a critical difference that affects the progress of current and future work.

This stage of discovery and confirmation further cements the importance of a comprehensive understanding of the Cross Domain Bacteria (CDB). The proper and exact knowledge of this specific, identified, and cultured synthetic biology will provide many of the answers that we all require.

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