



Carnicom Institute Research

2018

Acknowledgements

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The Discovery of Thiocyanates within the Cross-Domain Bacteria

 carnicominstitute.org/the-discovery-of-thiocyanates-within-the-cross-domain-bacteria/

The Discovery of Thiocyanates within the Cross-Domain Bacteria

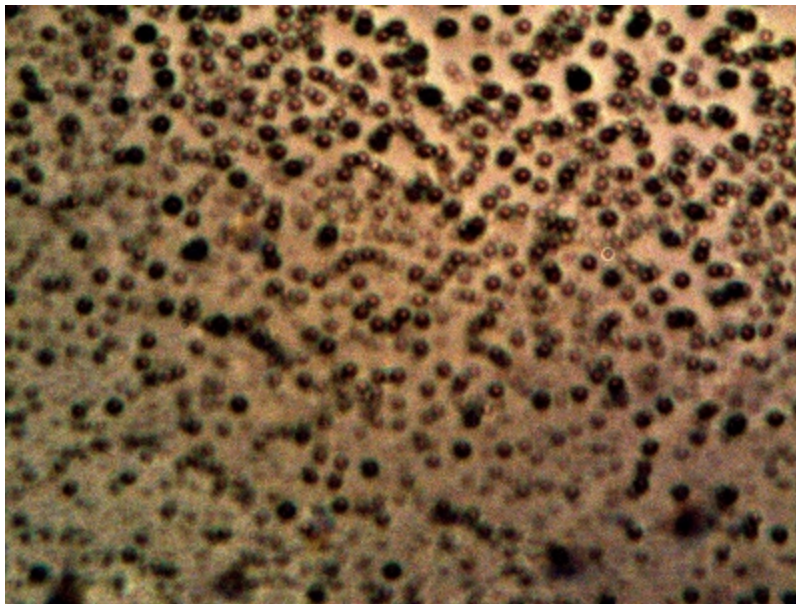
by

Clifford E Carnicom

Jun 25 2018

Edit Aug 06 2018

The chemical signature of a significant and potentially toxic compound has been repeatedly identified and confirmed within the *cross-domain bacteria* (CDB – CI, May 2014) that are causative within the Morgellons condition. This chemical structure does and will exist as another unique biochemical marker of this particular microorganism.

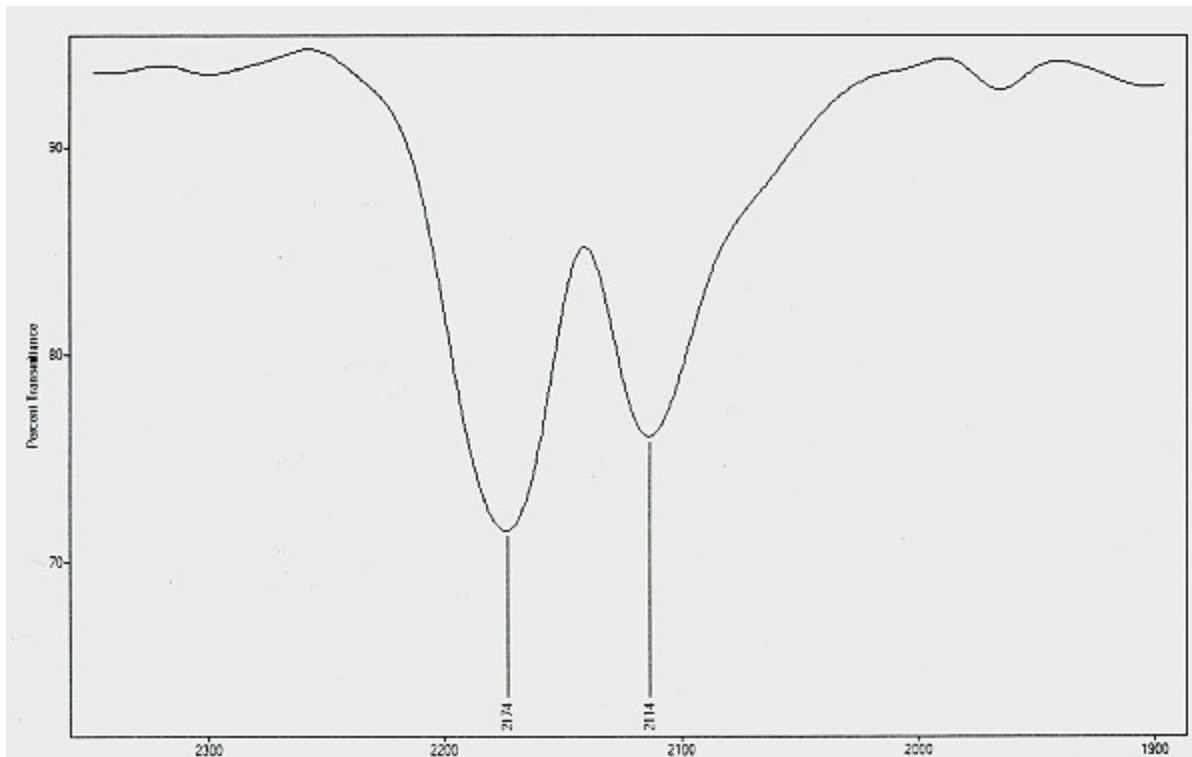


Microphotograph of the Cross-Domain Bacteria

Isolated May 2014

Magnification Approx. 5000x

The chemical functional group identified is that of an isothiocyanate. This chemical, when in excess within the body, does pose significant health and toxicity risks. Areas of special concern include those of thyroid inhibition, liver toxicity and tinnitus; there are numerous other health issues that arise or relate to these as well.



Infrared spectrum of the isothiocyanate chemical structure existing within the CDB

The method of detection involves the use of pyrolysis and infrared spectrometry. The relevant portion of the spectrum is shown in the plot above, with absorption peaks of 2174 cm⁻¹ and 2114 cm⁻¹. The double absorption peak in this region offers further uniqueness in the identification process.

The general description of the thiocyanate and isothiocyanate functional groups can be located within most organic chemistry reference sources. A typical partial entry is of the following form:

Thiocyanate is the anion [SCN]⁻. Common derivatives include the colourless salts potassium thiocyanate and sodium thiocyanate. Organic compounds containing the functional group SCN are also called thiocyanates. Mercury(II) thiocyanate was formerly used in pyrotechnics.

Thiocyanate is produced by the reaction of elemental sulfur or thiosulfate with cyanide.

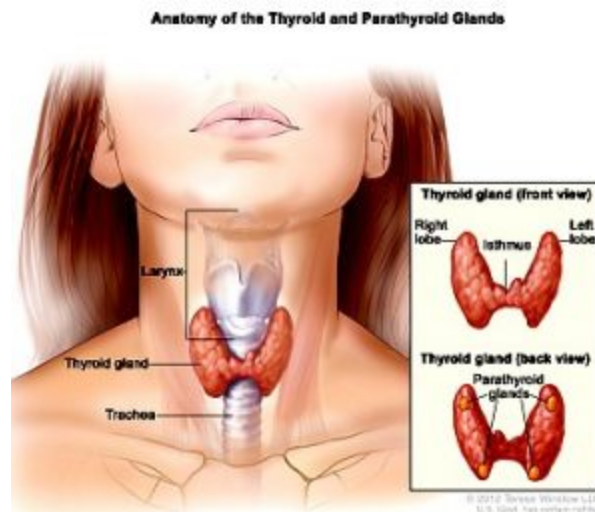
Organic and transition metal derivatives of the thiocyanate ion can exist as “linkage isomers”. In thiocyanates, the organic group (or metal ion) is attached to sulfur: $R-S-C\equiv N$ has a $S-C$ single bond and a $C\equiv N$ triple bond. In isothiocyanates, the substituent is attached to nitrogen: $R-N=C=S$ has a $S=C$ double bond and a $C=N$ double bond.

(<https://en.wikipedia.org/wiki/Thiocyanate>)

The more lay interpretation of one of the more immediate concerns is as follows:

“The overall effect of thiocyanate is to hamper utilization of iodide, the main effect of thiocyanate is to worsen iodine deficiency. By this mechanism thiocyanate is one of the most important environmental compounds influencing the occurrence of thyroid disease.”

(<https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/thiocyanate>)



The Thyroid Gland

“The thyroid gland is a small, butterfly-shaped gland located in **the** base of **the** neck just below **the** Adam’s apple.

Although relatively small, **the thyroid** gland plays a huge role in our body, influencing **the** function of many of **the** body’s **most important** organs, including **the** heart, brain, liver, kidneys and

skin.”

(thyroidawareness.com)

(image source: Oregon Health & Science University)

It is appropriate to mention that the existence of thiocyanates and isothiocyanates, in and of itself, does not necessarily indicate that a toxicity situation exists. It appears to be a matter of degree and concentration within the body. There are many natural sources of thiocyanates, especially the sulfur-containing foods such as cabbage, turnips, broccoli, Brussels sprouts, kale and cauliflower (Brassica vegetables). One may even find thiocyanates sold in supplement form for the diet. There are also some studies that indicate anti-cancerous properties of thiocyanates.

On the other hand, there is a preponderance of evidence in the literature that an excess of thiocyanates most certainly presents significant health risks and serious toxicity issues.

For example, a toxicity review of the issue will quickly reveal statements such as the following:

1. From the International Cyanide Management Code:

“Although thiocyanate is approximately seven times less toxic than cyanide, increased thiocyanate concentrations ...can adversely affect the thyroid.”

(<https://www.cyanidecode.org/cyanide-facts/environmental-health-effects>)

2. From the National Institutes of Health:

“Thiocyanate [SCN-] is a complex anion which is a potent inhibitor of iodide transport. It is the detoxification product of cyanide and can easily be measured in body fluids. Consumption of naturally occurring goitrogens, certain environmental toxins and cigarette smoke can significantly increase SCN- concentrations to levels potentially capable of affecting the thyroid gland.”

(<https://www.ncbi.nlm.nih.gov/pubmed/14757960>)

3. From Biochemistry & Pharmacology: Open Access:

“Many agents in the environment interfere with thyroid gland morphology and function acting directly on the gland or indirectly by altering the regulatory mechanism of thyroid gland. The uptake and utilization of iodine, by the thyroid gland is impaired by the pseudo halide thiocyanate (SCN-). Thiocyanate is formed from cyanogenic substances. It is metabolized in

thyroid gland. The role of thiocyanate ion in the homeostasis of thyroid is a provocative issue where IDD [Iodine Deficiency Disorder] persists in spite of adequate iodine intake and consumption of cyanogenic plant food is relatively high.”

(<https://www.omicsonline.org/open-access/iodine-thiocyanate-and-the-thyroid-2167-0501-1000171.php?aid=54337>)

4. From the T3DB Toxin Database:

“Thiocyanates are known to affect the thyroid glands, reducing the ability of the gland to produce hormones that are necessary for the normal function of the body.”

<http://www.t3db.ca/toxins/T3D0089#>

and the list continues. Additional relationships with liver function are also simple to establish:

1. From McKendree University:

“The ingestion of this [tobacco] smoke leads to the formation of the thiocyanate ion (SCN-) in the liver.”

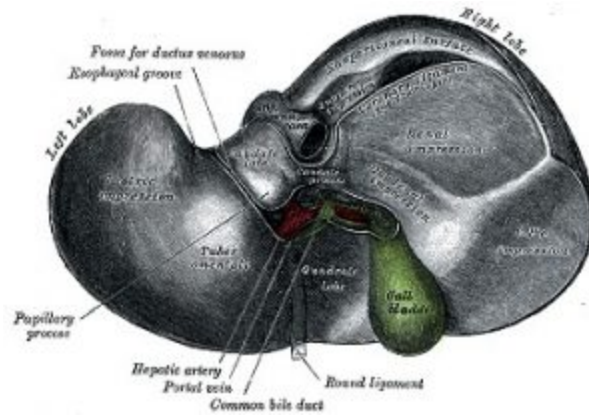
<https://www.mckendree.edu/academics/scholars/issue1/krebs.htm>

2. From the Anatomy Journal of Africa:

“The use of thiocyanate as an anti-sickling drug is currently on the increase among sickle cell disease (SCD) patients. The continuous use of this substance without sufficient toxicity data does not guaranty continuously functional and healthy internal organs among the SCD patients that are susceptible to multi-organ failure such as hepatic failure.

...Therefore, this study can be used to infer that SCN use in sickle cell disease management regimen can cause hepatocellular damage in wistar rats.”

(<https://www.ajol.info/index.php/aja/article/view/135925>)



The Liver

“The liver plays a central role in all metabolic processes in the body.”

(<https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0072577/>)

(image source: commons.wikimedia.org)

This investigative line of research can continue as well.

If we accept that there are indeed toxicity issues that result from an excess of thiocyanates-isothiocyanates in the body, our attention naturally will turn to whether methods exist to reduce this compound.

There will, of course, be an immediate interest in what can be done to assist the thyroid. Before discussing that topic further, however, it may be of benefit to pay attention to this single line of text from a paper at the National Cancer Institute:

*“In addition, several case-control studies have shown that specific forms of the gene that encodes **glutathione S-transferase, which is the enzyme that metabolizes and helps eliminate isothiocyanates from the body**, may influence the association between cruciferous vegetable intake and human lung and colorectal cancer risk”*

(<https://www.cancer.gov/about-cancer/causes-prevention/risk/diet/cruciferous-vegetables-fact-sheet>)

This is certainly a most interesting statement, as it returns us to the prospective benefits of glutathione precursors, anti-oxidants, vitamins, and the tremendous importance of glutathione itself. These topics have been extensively discussed on this site over the years, and there is no need to repeat that work here. Suffice it to say that attention should be paid to those previous discussions; please recall the difficulties of direct glutathione absorption. Based on the above references to liver health, it is also important to understand that glutathione is an essential metabolic molecule that is produced in the liver of humans and animals.

In addition, the role of selenium acting as a cofactor to assist enzymatic activity in the production of glutathione is also of benefit to understand and realize. Put simply,

“The mineral selenium accelerates the antioxidizing action of glutathione.”

(<https://saveourbones.com/glutathione-cofactors-how-they-protect-your-bones-and-how-to-get-them/>)

The previous reference also helps as a summary to the numerous cofactors that increase glutathione production. Notice again the numerous references to the suite of vitamins (e.g., B, C, E) within the above article, as well as alpha lipoic acid, each of which has been mentioned extensively on this site with respect to antioxidant benefits.

Furthermore, we note the relationship between selenium and liver health as well:

“Selenium supports the immune system and thyroid function and acts as an antioxidant. It is needed for proper enzymatic activities that protect the body against cancer. It promotes the production of killer T-cells that engulf harmful foreign substances that enter the body and act, in conjunction with vitamin E, as an antioxidant that scavenges the body for free radicals that damage healthy tissue.”

(<https://www.livestrong.com/article/441819-selenium-glutathione/>)

In closing, for the time being, reference will also be given to a rather detailed and beneficial paper on thyroid health, by Dr. Joseph Bebe, a Board Certified Nutritionist. I think that we may all find it to be a worthwhile read, and I trust that gratitude will be expressed to him for his efforts. I would also request that attention be paid to the extensive list of “Thyroid Suppressing Environmental Chemicals” within, where you will find thiocyanates listed.

The paper is entitled, *Reviving Your Thyroid*, by Dr. Joseph Bebe.

(<http://www.drdebe.com/articles/reviving-your-thyroid>)

The subject of this paper has actually been under development over a period of several years. An entire further discussion, at a later time, can take place on the extent of thiocyanate distribution beyond the CDB source. Numerous environmental and biological sample types continue to be examined, and it is fair to say that the thiocyanate issue does not end with the CDB. The joining of metallic ions (such as iron, for example) with isothiocyanate compounds is also a deserving topic of the future. Those additional discussions will have to unfold over time.

The definitive findings of this current report actually bring us full circle to many discussions that have been brought forth on this site over the years. I hope that you will explore those connections with the attention that they deserve, and that your health and the health of those you know and love will benefit from the pursuit.

I must close for now, and I thank you for your time today.


With best regards,

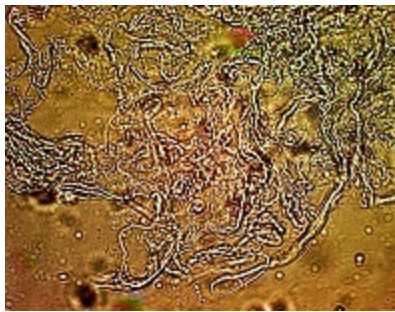
from Clifford

P.S. Here is a side story that may be of interest to readers (If the link remains active):

Rise of Synthetic Biology Means U.S. Government Unprepared for Biowarfare

Another Marker for Examination

 carnicominstitute.org/another-marker-for-examination/



Another Marker for Examination (One of Many...)

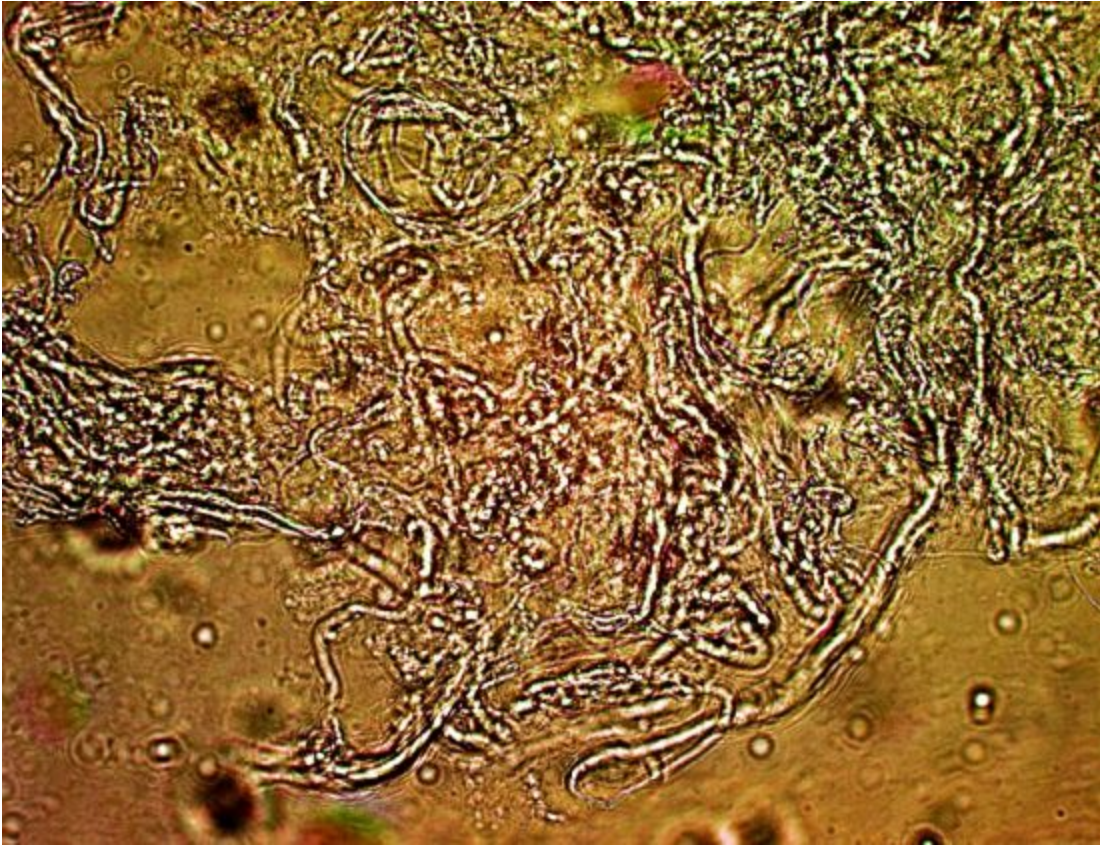
by

Clifford E Carnicom
Dec 02 2018

An individual exhibiting respiratory distress has recently made available a sputum sample for observation under the microscope. The primary symptoms stated to exist include a deep and persistent cough with difficulty of expectoration.

The photographs that follow clearly demonstrate the general internal structure of this sample. Two salient forms make their appearance within, i.e., a sub-micron coccus form and a filament network. In the case of sputum, these structures are encased within a biofilm matrix.

The reason for presenting these images is to allow comparison of them with the microbiology that is understood and known to characterize the Morgellons health condition.



Sputum sample
Filament Network – Biofilm Matrix
Magnification Approx. 3000x



Sputum sample
Filament Network – Biofilm Matrix
Magnification Approx. 3000x



Morgellons Representative Microbial Cultured Growth
Filament Network – Liquid Matrix
Magnification Approx. 3000x



Morgellons Representative Microbial Cultured Growth
Filament Network – Liquid Matrix
Magnification Approx. 3000x

The microbiology of the Morgellons condition, as determined by this researcher, is also characterized predominantly with the coccus and filament forms of growth (at least in the earlier stages). Representative growth of these forms in a controlled culture environment is shown above. Based upon the known existence and broad distribution of this type of microbial growth in the general environment, the similarity between the various samples shown is not, in any probability, coincidental.

Any of the more subtle differences that exist, mostly in the manner of conglomeration within the network, is likely due to the matrix difference of the environments they exist within. In one case, biofilm as a congealing, encasing and protective medium; in the other case the liquid medium allows a more free flow growth of the network.

A variety of laboratory techniques and methods have been applied, including infrared analysis, and all methods confirm the essential equivalency of the two sample types shown.

In retrospect, there are some interesting questions and puzzles here, some likely now answered and some that remain:

The persistence and depth of a cough that has been under common report with *emerging and ill-defined* “flu-like” conditions might now often be easily explained with the existence of tenacious, biofilm-encased filament networks within the body.

For those that have a historical bent, the timely arrival of the 1-800-I-GOT-FLU public service call invitation twenty years ago that coincided with massive environmental changes, especially those involving the atmosphere, is more than a curiosity.

The redefinition of the epidemic reporting standards by the Centers for Disease Control for flu conditions shortly after these new “health conditions” developed en masse also does not pass the coincidence test with ease.

The rise of chronic respiratory disease to become a leading cause of death, as documented on this site in 2001, may now be even more poignant and relevant to this discussion than originally foreseen.

The omnipresent campaign to enlist injections into the masses for that same ill-defined “flu” must be viewed with sensible skepticism.

The particular test here is relatively easy to conduct; a decent microscope and curiosity are the only real requirements. I may be mistaken, but I seem to recall that sputum tests were done quite routinely in the past to identify the particular microbiology of various disorders. Those with a chronic cough and ‘flu-like’ symptoms do not seem to receive such attention these days. If that is a true statement, it seems fair to ask, why is this the case?

The truths of evident and emerging health conditions will make themselves known; it is primarily a case of our readiness to accept new realities of our lifetimes and to pursue them with compassion and honest curiosity. We are certain to reduce unwarranted and unnecessary suffering when we are willing to do so.

For now, there is another marker that we should all be looking at a little more closely...

Sincerely,

Clifford E Carnicom

Dec 01 2018

(Born Clifford Bruce Stewart, Jan 19 1953)

A Toxicology Study

 carnicominstitute.org/a-toxicology-study/



A Toxicology Study

by

Clifford E Carnicom

Dec 09 2018

(Note : Higher Bandwidth Required – Videos)

The effects of a specific protein produced by the microorganism (“*cross-domain bacteria*”) known, at least by this researcher, to be causal to the Morgellons health condition have been observed. The effect upon a paramecium protozoa culture appears to be, without doubt, toxic.

Six videos captured with the microscope follow. The first three videos serve as a control set, and they capture the normal behavior of live paramecium in a culture medium. The magnification of all videos is the same at approximately 800x.

The second set of three videos capture the behavior of the paramecium (grown in the same culture medium) after being subjected to a highly dilute solution of the protein. The strength of the protein solution is estimated at less than or equal to one percent. Previous trials with a 0.5% solution have produced a similar effect.

It is clear that the behavior, mobility, and functioning of the protozoa are seriously impaired after being subjected to the highly diluted protein solution. In due time, the mortality of the paramecium is extremely high if not complete.

This study is in conjunction to those previously done that demonstrate additional severe impairment or termination of growth within the plant kingdom.

This study raises the issue of the seriousness of the potential toxic effects and health impacts from the microbiology that is known to be at the root of the Morgellons condition. A radically elevated level of support for controlled research, biochemical and clinical study is long overdue at this point.

Control Video
Live Paramecium Culture
No Dilute Protein Solution Added
Magnification approx. 800x

Control Video
Live Paramecium Culture
No Dilute Protein Solution Added
Magnification approx. 800x

Control Video
Live Paramecium Culture
No Dilute Protein Solution Added
Magnification approx. 800x

Live Paramecium Culture
Subjected to Specific Dilute Protein Solution
Timed of exposure : approx. 15 minutes
Magnification approx. 800x

Live Paramecium Culture
Subjected to Specific Dilute Protein Solution
Timed of exposure : approx. 15 minutes
Magnification approx. 800x

Live Paramecium Culture
Subjected to Specific Dilute Protein Solution
Timed of exposure : approx. 15 minutes
Magnification approx. 800x

There are additional observations which indicate toxicity effects upon the human organism as well, but this work will need to be directed into facilities at the appropriate level of support.

Clifford E Carnicom

Dec 09 2018

(Born Clifford Bruce Stewart, Jan 19 1953)