Brigitte Fau

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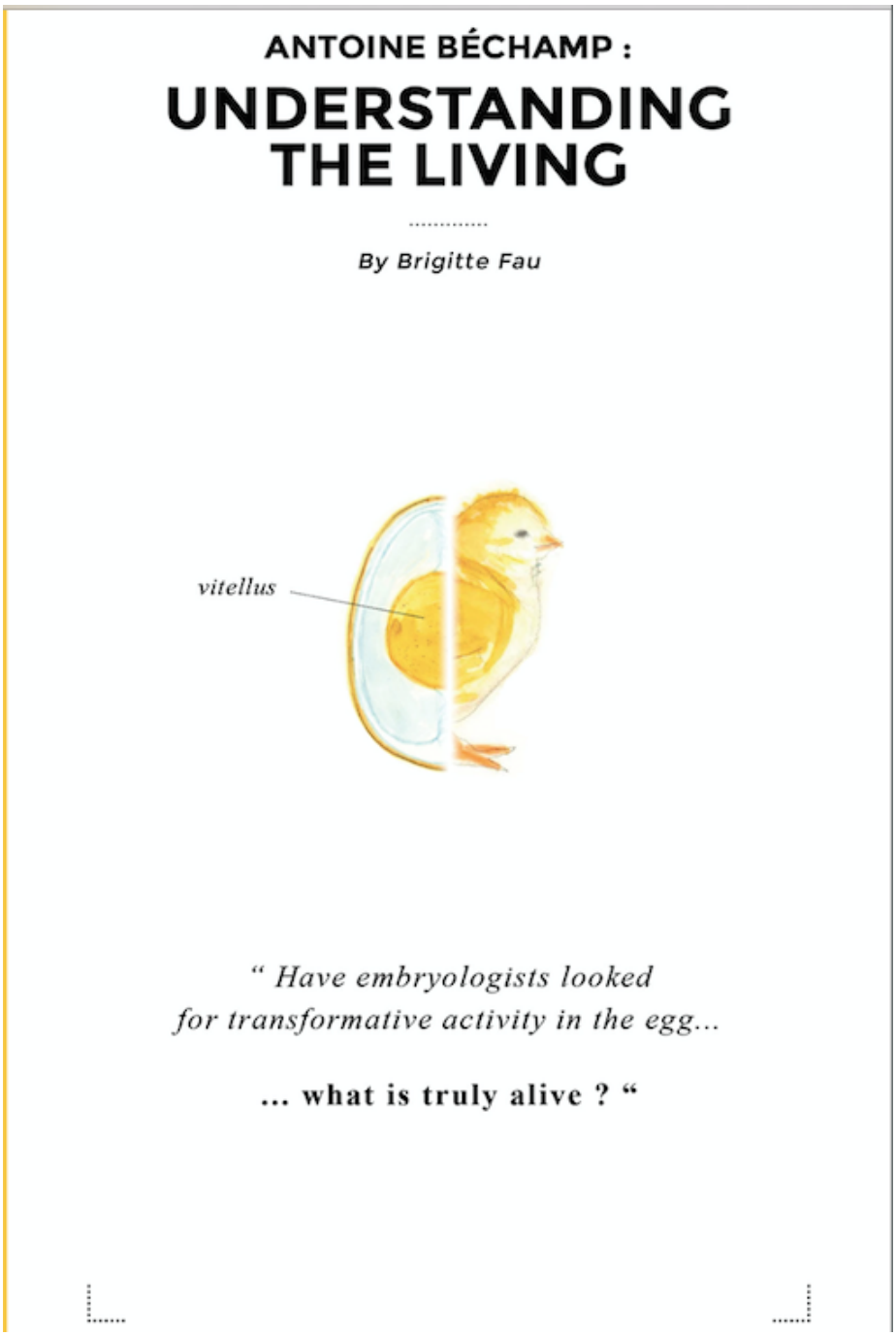
“Antoine Béchamp: Understanding the living”



Summary

Preface

"*To be silent when you know is to lie*"

Zoroastre

Brigitte Fau is to be congratulated on the courageous publication of her opuscule on Antoine Béchamp (1816 - 1908).

Antoine Béchamp's work is considerable, and provides a striking illustration of the explosion of major discoveries in the second half of the 19th century, not forgetting Antoine Laurent de Lavoisier (1743-1794), for whom Antoine Béchamp had boundless admiration.

This period saw the emergence of the first concepts of chemistry, biology, the structure of atoms and matter. Woehler's 1828 experiment, in which he synthesized urea, a substance known to be excreted exclusively by living organisms, brought chemistry into the understanding of living organisms and into the construction of the nascent chemical and pharmaceutical industries.

Louis Pasteur's interventions undoubtedly provided arguments for the pharmaceutical industry. The latter was delighted to supply molecules designed to exterminate the nasty microbes staged by Pasteur... and still staged today by Big Pharma, which pretends not to understand their resistance mechanisms...

It takes courage, today, to recall the basis of Béchamp's observations and reflections, based on rigorous and tireless experimentation, reproducible and sufficiently reliable to be published in the Comptes Rendus de l'Académie des Sciences, where Béchamp and Pasteur frequently clashed, and where their reasoning and positions are authoritative (spontaneous generation, silkworm disease...).

Béchamp's microzymic theory, by demonstrating the importance of each individual's "terrain", enables better control of his or her health:

- through preventive measures to prepare the body, by identifying and rectifying flagrant deficiencies, detecting intolerances, and harmoniously integrating the body into all the expressions of life that surround (and inhabit) it,
- by taking corrective measures to put the body in the conditions that will enable it to rectify its balances.

And it's true that L.C. Vincent's bioelectronic method, to which I've devoted part of my research, brings the objectivity of original physico-chemical measurements to the description of the terrain, to the reference values of good health, and to the observation of their characteristic drifts.

Brigitte Fau's judicious choice of quotations from Béchamp's masterpieces firmly establishes this work as rigorous, serious and worthy of interest, and as a source of sound practical solutions for public health.

André FOUGEROUSSE

Doctor of Science 1973, postdoctoral fellow at the University of Montreal
Professor Emeritus of Chemistry at the University of Strasbourg
Former Director of the Faculty of Chemistry
Former Mayor of Ostwald (1979-1991). Inaugurator of a street Antoine Béchamp in 1982, in the presence of Madame Marie Nonclercq, who defended a remarkable Doctor of Pharmacy thesis on Béchamp's work on December 21, 1981 in Strasbourg, with the support of four eminent professors from the Faculty of Pharmacy.

https://www.andrefougerousse-recherche.fr

Foreword

The name Antoine Béchamp was unknown to me or very vague until I became interested in health from the point of view of the biological terrain.
Louis Claude Vincent, with the Vincent bioelectronics, opened the way for me by showing that the biological terrain could be degenerated and above all restored by re-establishing the balance of the following media: venous blood, saliva and urine. He analysed three physico-chemical parameters of these media and noted similar values in the healthy state. He observed the drift of these parameters in relation to various diseases (see Appendix).
Among the people interested in the notion of terrain, I gradually heard about Antoine Béchamp without understanding the interest of his work which seemed obscure.
In 2017, when there was talk of making 11 vaccines compulsory for children from an early age, I came across open letters that Professor André Fougerousse had sent to our president, the prime minister and our health minister at the time.*

In these letters, André Fougerousse spoke of the "erroneous dogmas of PASTEUR" and asked that the work of Béchamp and Tissot be taken up again with modern means by independent academics.
This was a wake-up call.
What is so interesting about the work of Antoine Béchamp (1816 - 1908) and Jules Tissot (1870 - 1950)?
How are Pasteur's dogmas wrong?

I immediately bought the book "Les Microzymas" by Antoine Béchamp published in 1883 and the book "Pour en finir avec Pasteur" by Eric Ancelet, books cited as references in the open letters.
These readings were shocking, the word is not too strong, as the shock was so strong in understanding to what extent we were all fooled, deceived, particularly as scientists.

Eric Ancelet's book allowed me to go back to the time of Louis Pasteur and to understand that the character so idealised by our society was a tortured, sick, ambitious man and that "his" discoveries were mostly those of his contemporaries.
I will not dwell on this subject, I will leave you to discover the book by Eric Ancelet who has done a research work that deserves our full attention.**

I had the impression of discovering what Science really was when I read the book "Les Microzymas". Antoine Béchamp gives a lesson in Life Science as I had never seen it before.
How could I have "trusted" what I learned without questioning the foundations of the science taught?
Passing on became obvious. But I became aware that this enormous work had not had any impact because, in addition to having been deliberately ignored, there was no pragmatic and sufficiently clear synthesis to understand its importance.
To say "read Béchamp's 1883 book" was doomed to failure given its thickness and especially the "systemic" rejection of scientists who did not want to hear about it.
Moreover, given that this discovery was too recent for me and the need to take a step back, I started by extracting from the text the essential parts, the conclusions of the numerous experiments, by linking them to the pages of the book published on the website of the Bibliothèque Nationale de France (BnF), so that the reader could complete and deepen his

knowledge. This summary can be downloaded from my website and may be useful as a complement to this synthesis. (***)

Time has passed since then and it is time for me to make this synthesis, which is essential for a good understanding and transmission of Antoine Béchamp's theory, in order to bring a coherence and a global vision of the living world, which is missing more than ever to science and scientists.

Antoine Béchamp has developed a theory which totally changes our vision of life. The discovery of microzymas is the key.
Antoine Béchamp's discoveries are not limited to microzymas, far from it, but this booklet focuses on the theory that follows from their discovery.

(*) https://www.andrefougerousse-recherche.fr/
(**) https://www.youtube.com/watch?v=nSpbQwRnx6k
(***) 2ème § https://www.bonnes-habitudes.fr/comprendre/la-théorie-d-antoine-béchamp/
even in English here : https://www.bonnes-habitudes.fr/comprendre/la-théorie-d-antoine-béchamp/book/

Part 1: Béchamp's theory

But who is Antoine Béchamp?

Born into a modest family, Antoine Béchamp, pharmacist, chemist, doctor and biologist, was an exceptional scientist.
Trained as a pharmacist in Romania, where he lived from the age of six, with a diplomat uncle, he had to resume his studies, which were not recognised in France, on his return.

In 1851 he passed the competitive examination for the agrégation at the Strasbourg School of Pharmacy. His thesis was entitled: "Atmospheric air considered from the point of view of physics, chemistry and toxicology".
In 1853, Béchamp's theses for the doctorate in science were chemical: Research on pyroxyline (cotton-powder), and "On the chemical action of light";
In 1856, he obtained his doctorate in medicine, with a thesis entitled " Essay on albuminoid substances and their conversion into urea" in Strasbourg.

For 20 years, he was professor of medical and pharmaceutical chemistry at the Faculty of Montpellier.
Then in 1876, while he was working on "The Origin and Essence of Matter", he was asked by the bishopric to become the first dean of the Catholic faculty of Lille. A choice he regretted in the words of a letter he sent to Hector Grasset in 1900 (4) p.66:

> *"It is that I still had the illusions that the clergy of the Catholic University of Lille took it upon themselves to make me lose forever, when the rector of this university wanted to put the book on Microzymas on the index, as a materialist. So please consider the statement in my letter to the journal L'Univers as foolishness on my part. I have remained a Christian as fully as possible, but no longer convinced that theologians like science for science's sake.*
> *It is thus proven that, holding the Gospel to be true, I hold, like Galileo and Lavoisier, to be certain that the disinterested and thorough study of nature is the only path capable of leading to the knowledge of the things we are given to know.*

When he retired, he went to Paris and continued his important biological research at the Sorbonne, in the laboratory put at his disposal by the famous naturalist Ch. Friedel, until his death at the age of 91, on 15 April 1908.

Antoine Béchamp was selfless, tenacious, an energetic worker, rigorous, precise, uncompromising with himself in particular, and did not tolerate injustice; without doubt, he loved science and understood the importance of an exemplary approach to progress in science (see the section on the scientific approach)

What strikes me most when reading his books is his insight, his lucidity, his exceptional hindsight. Each element finds its place in the course of the many experiments that he dissects with unfailing determination to understand and find the origin of each phenomenon, even the most trivial which may in fact prove to be the most essential.

« *Nothing happens without a provocative cause! »*

This work is recounted in his regular reports to the Academy of Sciences, so numerous that I would not be surprised if, in addition to this essential discovery of microzymas, nuggets still unknown to science were to be discovered.
His work is considerable. Dr Hector Grasset presents it to you in a non-exhaustive way, so great is it, placed in the historical scientific context.
In 1913, Hector Grasset began his book, "L'œuvre de Béchamp" (4), which he had had the opportunity to meet following the sketch in question:

> *"Eleven years ago, I made a sketch of the work of this unknown man, thinking to draw attention to an old man whose colossal work was worthy of a better fate. It was in vain, the scientific ostracism had been such that my voice had hardly been heard; this revenant could be dangerous for glories that were too well known. So when Béchamp died in isolation on 15 April 1908, it was a foreigner who reported the case to the French press. A. Béchamp, born on October 15, 1816, in Bassing, near Dieuze (Meurthe), died at the age of 91 in Paris, of the pulmonary congestion of old people, in general indifference; I myself did not learn of the fact until a long time later.*
>
> *I was not his pupil, I knew his work only indirectly, and I was led to appreciate it by researching the genesis of contemporary science; if I was seduced by the immense scope of his research, I was more profoundly astonished by the almost general misunderstanding of his ideas among present-day scientists, when there was not obvious bad faith, or absolute ignorance. If, therefore, I take his side, I cannot be accused of bias;"*

And to complete the numerous information he provides, Hector Grasset recommends in particular the following books by Antoine Béchamp :

1. Les Microzymas dans leur rapport avec l'hétérogénie, l'histogénie, la physiologie et la pathologie (Paris, in-8°, 1883, chez J. Baillière) ; 1066 pages
2. Microzymas et microbes (Paris, 1893, in-8°, chez E.Dentu) ; 412 pages
3. Le sang et son troisième élément anatomique (Paris, 1899, chez Chamalet) ; 297 pages

He adds:

> *"It is especially the first that is widespread, and that is unfortunate, for the others seem to me to be far superior. I must confess that, if I had not known Béchamp's ideas through the scientific reports that I studied progressively, the 1883 book would have seemed indigestible to me and would not have given me an easy conception of the theory; but when one has grasped the big idea, at every step one finds treasures in these three volumes. It will therefore be the historical and chronological method which will enable me to make you understand and appreciate the work of this great man, and will perhaps encourage you to become acquainted with it."*

I also found "treasures" in a 4th book of 1888 (5), in which Antoine Béchamp collected letters, rather articles he wrote to Dr Edouard Fournier, to be published in the "Revue médicale française et étrangère".

Hector Grasset makes us feel "this great idea" by using the historical and chronological method. He highlights the difficulties and misgivings encountered by Antoine Béchamp, whose integrity and genius he understood, in the face of influential people whose egos came before science, ready to twist science to their own ends.
Antoine Béchamp is said to have lacked flexibility and political sense, refusing to compromise and finding himself the victim of a conspiracy of silence (4) p.72.

But was this silence imposed to prevent his work from being known not proof of the inability of his opponents to stand up openly to his solid explanations and his determination to defend the "truth" of scientific facts? His sharp thinking was able to detect the slightest flaw in his opponents' arguments.
It is this "big idea" that I wish to pass on, in my own modest way, by writing this book, 110 years after Hector Grasset's. Hector Grasset was not satisfied with the knowledge that was disseminated, he went to the source of the scientific reports. And he understood what a treasure Science had there! I did not go back that far. I learned about Béchamp's work mainly through his book written in 1883.
Whatever the route taken to go deeper into the subject, it is "indigestible" at first, before perseverance and hindsight make us feel this "big idea": this new vision of the living being in its entirety which escapes science.

I have chosen a synthetic method to transmit in a different way.
Could we finally break the "conspiracy of silence" of which Antoine Béchamp was and still is a victim? Do contemporary scientists only realise that they maintain this censorship without being aware of it, due to a lack of curiosity (and above all of time) about the origins of their science, the foundations of which are essential and should be their first concern.

Unlocking the mystery of microzymas

Béchamp's "big idea", as described by Hector Grasset (4), is the "Theory of Organisation and Life", the key to which is "Microzyma".
It is therefore high time to lift the veil that hides the microzymas discovered by Antoine Béchamp as their role is essential and vital.

These little ferments of life are the basis of all living matter, of all living organisms.
The microzyma is the element without which no matter can be alive.
The knowledge of microzymas allows us **to understand living matter in its entirety**, in all its coherence.

This global vision eludes scientists and science to the point that scientists cannot clearly determine whether a new organism they discover is alive or not. It is quite striking to realise that even today scientists do not agree on this.

The work I am summarising here could be a new approach to science for all scientists who are attentive and curious.
We will make the link with recent discoveries. Scientists are indeed rediscovering microzymas without knowing it. This knowledge can only be a timely help and could save them precious time.

The interrelated scientific facts highlight the resulting theory, which is a real paradigm shift.
This presentation is dense and requires to accept to take the necessary distance to understand it.

We go back to the 19th century.
Try to forget what you have learned in order to dive into this reading without preconceived opinions.
Thank you for accepting this experience which constitutes a discovery for you and will probably change your vision of life that Antoine Béchamp had understood, like no one before him or after him. Indeed, other scientists have discovered these small entities to which they gave other names, but they studied them in particular contexts, never from a general point of view.

Discovery of microzymas

In 1854, Antoine Béchamp tried to reproduce a study showing that sugar could be inverted when cold. In what was called the sugar inversion, *

> *"Cane sugar, by fixing water, by a deep chemical reaction, has been transformed into 2 glucoses, of unequal rotatory powers and opposite directions, which compose the inverted sugar. »*

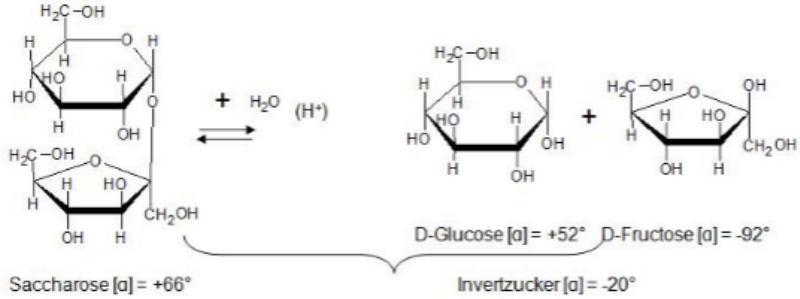
Applying his credo ***"There is no chemical transformation without a provocative cause"***, Antoine Béchamp sought the cause of this cold reversal, which normally occurs only in the presence of acid, facilitated by an increase in temperature.
At the start of the experiment, the sugar and water were pure. There is then no "albuminoid material" as he calls it, in other words no protein.
This is no longer the case when the inversion occurs.
He then discovers moulds or, in the absence of moulds, a fine dust in which he can observe what he then calls "small bodies", not knowing how to classify them.
Interversion only occurs in the presence of moulds or small bodies.

Taking the analysis further, he found a soluble substance produced by moulds or small bodies, which, when isolated, is capable of producing this reversal.
He named the active substance zymase, which later became enzyme. But enzymologists do not know Antoine Béchamp.

Let's go back to our little bodies that he discovered. He realised **that they had been deposited by the ambient air and that they were the origin of moulds**. Moulds do not appear spontaneously but develop from the small bodies in the air (in this case).
It is these small bodies that he later called microzymas.

This reversal of the sugar is the first step in alcoholic fermentation.
It is important to look at fermentation to understand the whole thing, as microzymas are special "ferments". And you will understand that the deep chemical reactions of our metabolism are nothing other than fermentations... which therefore require a ferment!

(*) The hydrolysis of sucrose, which is made up of two linked simple sugars, releases these two sugars which are a glucose and a fructose.



The theory of fermentation (1857)

Moulds and small bodies are ferments, like yeast, that can ferment sugar and produce alcohol.
The root "zim" comes from the Greek for "leaven". It is used in the sense of ferment.
Microzyma means "very small ferment".
Antoine Béchamp did not choose to use this same root in the word "zymase" by chance, as **zymase is linked to the ferment that produces it**, as is the enzyme.

> *"All this proves that the cause of the interversion of the sugar is pre-formed in the mould and in the yeast; and, as the isolated active matter acts without the presence of an acid, ...It is after having established these facts that I gave a name to this active matter: I call it zymase. We shall see later how this word zymase, initially intended to designate the active matter of yeast and moulds, became a generic term. Today, I refer to the zymase of yeast and moulds as zythozymase. It goes without saying that zythozymase, like diastase (*), loses all its activity by boiling. You can now understand why moulds and yeast lose their interfering power by heat.*
> *And I must point this out: these things were so little known; so little was known of the relationship which links soluble ferments, or zymases, to the organisms which produce them, zythozymase to yeast, for example, that M. Pasteur, three years after the publication of my dissertation of 1857, did not believe in the interverting action of yeast...*
> *...it should be noted that in 1856, despite the demonstrations of Cagniard-Latour and the insistence of Turpin, it was not believed that yeast was organised and that fermentation was a physiological act...". (1) p.73*

Fermentation, according to Antoine Béchamp, **is a physiological act of nutrition** and occurs in 2 phases:
1.The ferment produces the zymase so that it modifies the medium to make it assimilable (e.g. sugar inversion)
2.The ferment feeds on it, it assimilates, digests ...then de-assimilates, thus eliminates.

Alcohol and other fermentation products are therefore the waste products of this act of nutrition!
Antoine Béchamp distinguished the soluble ferment (zymase) from the insoluble ferment that produces it, organised and alive.

> *"There are no exception**: everything that lives is organised, and everything that is organised is insoluble**. »*

It was this difference in properties that enabled him to separate and analyse the two.
And, importantly, he found that **zymase alone** (with pure sugar and pure water) **could not produce fermentation without the presence of an organised, living ferment.**
It is therefore surprising that Eduard Büchner was awarded the Nobel Prize in 1907 for being able to carry out alcoholic fermentation with zymase without the presence of the yeast that produced it. Indeed, **Antoine Béchamp did not claim anything that he had not experimented with at length**.
Well, it turns out that Eduard Büchner was unable to carry out this fermentation with zymase "alone" without adding a sedimentary rock (**). It did not occur to him that the rock could contain the ferment essential for this profound chemical transformation. Which is undoubtedly the case since microzymas, as you will discover, are present everywhere in the environment.
I remarked to myself that Antoine Béchamp died the following year in 1908 and that he had therefore witnessed, powerless, so much bad science.

This remark on the role of enzymes is important. Indeed, deep chemical transformations such as those carried out in metabolism are fermentations specific to the medium of origin. **These fermentations cannot be carried out without the presence of a ferment, a small living organism**.
Antoine Béchamp found microzymas, small ferments, everywhere in the environment and in all living organisms, plants, animals and humans.

(*) Diastase, which later became amylase, was the first enzyme discovered in 1833 by Anselme Payen

(**) extract from Wikipedia (oct. 2022): https://fr.wikipedia.org/wiki/Antoine_B%C3%A9champ
“It should be noted, however, that what Buchner was obtaining from the yeast "zymase", and in the absence of the yeast itself, was alcoholic fermentation. However, Béchamp explicitly stated that the "zymase" he extracted from yeast produced the inversion of cane sugar, but not alcoholic fermentation. After distinguishing between the two functions: "As a ferment, then, yeast has two functions: that of inverting cane sugar and that of producing alcohol. Are these two phenomena of the same order?" and pointing out that the "zymase" of yeast alone can invert cane sugar, he added: "Now, the zymase can be left in contact with the sugar for as long as you like, without any trace of alcohol forming or any sign of fermentation appearing". Buchner succeeded, notably by adding kieselguhr (tripoli) and using a hydraulic press, where Béchamp had failed.”

The spontaneous generation

In the second half of the 19th century, many scientists wondered about the origin of moulds, animalcules, vibrios and other bacteria that arose without understanding where or how.
Do we now know more about the origin of micro-organisms, where they come from and how they arise? Not really.
Adherents of 'spontaneous generation' thought that they appeared as if by magic. Louis Pasteur and Antoine Béchamp agreed that such a concept could not be accepted.

> *"We started, Mr. Pasteur, and I before him, from the point of view that the germs of all ferments exist in the air; that all the phenomena of fermentation and putrefaction recognised these same germs. »* (1) p.276

This action generalized to airborne germs is called "atmospheric panspermia". (2) p.25.

However, Antoine Béchamp had already discovered these "little bodies" that cause moulds when he studied the cold inversion of cane sugar in solutions exposed to the air in 1855.
As he continued his experiments on fermentation, a doubt arose in his mind: were the germs in the air not too general in their action?

> *"In 1863, ...*
> *.... I asked myself whether it was true, as I had hitherto taught, that so constant a phenomenon as wine fermentation was left to the chance germs of the air. The difference in the fermented products obtained ...* ***led me to wonder whether the grape might not carry the germs of the ferments that make wine****».* (1) p.277

To show the impact of airborne germs, experiments had to be carried out to exclude their possible action and to ensure that no generation of micro-organisms occurred in their absence.

Experiments free from airborne germs

Numerous experiments were carried out on all sides to confirm or disprove spontaneous generation.
Various very complex devices were constructed to carry out these experiments.
In many of these experiments, no micro-organism was found in the substance tested, which was an **inert substance**, confirming panspermia.

Pasteur, but other researchers as well, added "carbonate of lime" in the form of chalk to some of their experiments. He did not understand why, despite a seemingly impeccable implementation, in order to eliminate the influence of airborne germs, bacteria were born from even supposedly inert materials.
But was it the complex implementation that was to blame? We will come back to this subject later, in connection with the microzymas of chalk.

With the exception of cases where the meat was boiled for so long that all its juices coagulated (Schoeder and Dusch's experiment), or other cases where the sample was subjected to heat for too long, the same complex devices that had proved effective for inert materials were used to test "living" materials and systematically led to the same result; milk, blood, meat, etc. systematically became corrupted and **bacteria appeared despite the absence of airborne germs**.

However, can we speak of spontaneous generation of these micro-organisms in living matter? Their origin cannot in fact be attributed to airborne germs. However, are they born "spontaneously" without their origin being identifiable?
Pasteur and Béchamp diverged from this point on. Pasteur stuck to his original idea and denied the facts that contradicted it. Béchamp, now wondering about this internal origin, would not stop pursuing the subject until it was resolved.

Louis Pasteur refused to recognise that meat putrefies, saying that it is "pheasant or reduced to a state of gangrene".
Antoine Béchamp will say:

> *« ... He could crush his opponents, but he could not convince them, because he could not demonstrate why in ancient experiments, as in his own, milk, blood, and meat become corrupted, in spite of the absence of germs from the air. »* (1) p.27

Thus, despite the results of experiments contradicting this fact, Louis Pasteur generalised panspermia, and confirmed that germs acting on any matter, inert or living, could only come from the air. **He thus declared the absence of internal "germs" in living matter**, **whereas his experiments, like those of other researchers, showed not the presence of micro-organisms but their birth and development within living matter.**

Since then, science and medicine have advanced along the path traced by Pasteur with the idea that we are sterile in the intimacy of our tissues and that any micro-organism found in these sterile medium is foreign to the organism by deduction.
The Pasteurian dogma of animal asepsis, which came from a preconceived idea, could not be demonstrated, it is simply false.

Inevitably, the question must be asked: What is the origin of micro-organisms in living matter, if not airborne germs?
Béchamp showed that the analysis of the products of meat spoilage showed fermentation and therefore the presence of **internal** ferments on the one hand, and that in the case of prolonged boiling, the ferments were destroyed entirely, so that the meat did not spoil.

Antoine Béchamp solved the question through numerous experiments confirming that plant and animal microzymas are at the origin of bacteria that are born within their tissues or humours.
There is no spontaneous generation nor atmospheric panspermia!

Description of the microzymas

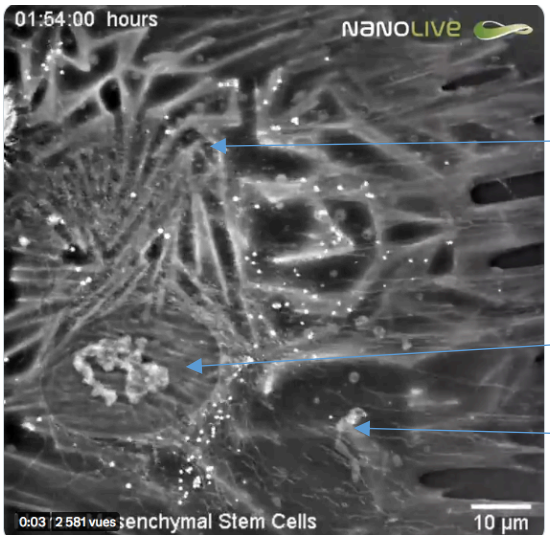
What do microzymas look like?

> *« To see them, all you have to do is take a fragment of an organ, an almond embryo, the parenchyma of a leaf, a bit of liver, pancreas, thymus or kidney, a bit of egg yolk; With a scalpel you scrape the fragment lightly in a little water on the microscope's object holder, or you dilute a parcel of egg yolk in a little water, you cover the preparation with a thin slide and you look attentively, under a magnification of 500 to 600 diameters (objective 3, eyepiece 2, of Nachet), at what is smallest in the suitably lit field. In all preparations they are very small spheres similar to those described in air dust and in chalk. If the magnification is more considerable, you will discover in them, as in those of the air, a brilliant centre and an envelope. »* (1) p.141

They are some of the molecular granulations that scientists know about without attributing a role to them:

> ***" Not all molecular granulations are microzymas, but all microzymas are molecular granulations.***
> ***"****If we pay attention to them < the granulations >, we invariably find that they present themselves with a shining centre, endowed with a certain mobility, a sort of trepidation, back and forth movement. This bright spot, in a certain position, appears as a black spot, but when it is in focus, one gets the idea of a sphere whose centre is bright with a dark outline. Most of these granulations are less than one thousandth of a millimetre in diameter, but there are some that are hardly more than half a thousandth of a millimetre ..."* (1) p.137

Mobile granulations can be observed in a mesenchymal stem cell using this modern technology.
https://twitter.com/NanoLiveLtd/status/1172497086459338752
Find the video on twitter by searching: « Human Mesenchymal Stem Cells Nanolive »



So-called stress fibres

Nucleus with DNA

Deforming granulations

Note that the video is in fast motion. We can see bright granulations with a hectic movement, others slightly larger, more discreet with a dark centre, some of which are deformed like barbapapas.
Does their appearance depend on their position in relation to the light, more or less on the surface?

Do they appear in different forms, native or with the beginnings of evolution, depending on their role?
This type of recent technology should make it possible to confirm the observations described in the experiments of Antoine Béchamp.

The Molecular granulations

This is how microzymas were seen and perceived by scientists in the days of Antoine Béchamp and Louis Pasteur, and this has not changed.

Essentially: **they are seen as amorphous granules**.

> *« Molecular granulations had thus been noticed, some had even attributed to them a **certain function in the genesis of cells**, but a completely mechanical function... M. Charles Robin ... in an article of the dictionary of medicine and surgery < of Littré and Robin>, ... gives the following description:*
>
> > *"Molecular granulations, ..., **which are found either in suspension in all the humours of the body, or interposed in the fibres of the tissues, or included in the substance of the cells, fibres or other anatomical elements, or above all in many amorphous materials**. They may be very abundant especially in the tubercular substance, in the morbid white patches of the serous membranes, in the normal medullary tissue.*
> >
> > *I add that in all the treatises and plates of histology and pathological anatomy, these granulations are mentioned and drawn as a fine dust or in the main form of the drawing... **It is even mentioned in the genesis of cells** ..."*
>
> *Finally, Mr. Robin reminds us in the same dictionary that **leucocytes and infusoria, while decomposing, let out molecular granulations** which offer a Brownian movement with the most intense hopping, and which have sometimes, wrongly, he says, been considered as particular infusorial animals.*
>
> *" ... Not only are they given no role in histology, but nothing is known of their physiological or chemical functions.*
>
> *... The discovery that I claim as mine is to have brought them out of their obscurity, to have demonstrated:*
>
> - *That some of them are **ferments of rare power**, and consequently, that they are organised in the sense of structure;*
> - *That they can, under certain conditions, **evolve physiologically to give rise to other organisms**, and*
> - *To have established that, under other conditions, **they can reconstitute cells**.*
>
> *In short, it is not because they are animated by Brownian motion that I have concluded that they are living and organised beings, but from the set of facts that I am going to list. »* (1) p.131-133

He describes his research on granulations in his book.

The scientific approach

You need to understand what a scientist Antoine Béchamp was. His claims cannot be taken lightly.

> *« ...I am, in scientific matters, of the sentiment of Boileau in matters of poetry*
> *Make haste slowly; without losing courage,*
> *Twenty times on the job put your work back,*
> *and I do not publish an experiment until I have remembered Lavoisier's precept twenty times...»*

Lavoisier's advice and method

> *« Lavoisier admirably described this state of mind which leads so many scientists, today as in the past, to reason about hypotheses as if they were proven truths.*
>
> > *"...it is not surprising, therefore, that in the physical sciences in general, assumptions have often been made instead of conclusions; that the assumptions, handed down from age to age, have become more and more imposing by the weight of authority they have acquired, and that they have finally been adopted and regarded as fundamental truths, even by very good minds..."*
>
> ***The method which follows from these precepts consists in not paying lip service to the idea; in not making gratuitous hypotheses; in never proceeding except from the known to the unknown; in constantly taking experience as a guide, in constantly using it to control the views of the mind; in considering the same objects for a long time in order to see them from all their sides; in considering the same fact from all sides, from all points of view, before concluding.*** *»* (1) p.41

Antoine Béchamp applied this method to the letter. His numerous experiments were accompanied by control experiments, varying the media, the salts added, the conditions...
Each result had to be explained, each hypothesis had to be verified. He never ceased to go deeper, to go to the end of the questioning.

Step by step, fact by fact, he tenaciously advanced his knowledge of these small bodies:

> *« After having noticed their presence in my cane sugar solutions as early as before 1857, it took me 7 years to convince myself of their independent existence, their functions and their organised nature. I then discovered them in the air, where nobody, ... had looked for them, ... Yet they were known, they were even described as molecular granulations,* ***as amorphous matter****; but they were regarded as unimportant and insignificant in the order of organisation and function in the organism.* ***They were nothing, and I dare to assure you that they are the whole of the organisation****! ... »* (1) p.113

29 years devoted to microzymas

Speaking of his first discovery of small bodies and its consequences, Antoine Béchamp said:

> *« Thus, a research of pure chemistry, in itself very simple, became the starting point of physiological studies which occupied me almost without interruption for almost thirty years.*
> *The beginning was therefore modest. Nothing is more ordinary than to see moulds develop in the most diverse solutions, organic or even mineral. If I had stuck to the theories that were accepted among scientists, I would have neglected mould after having, as a faithful historian, noted its presence. It was because I did not consider the fact as a chance encounter that the physiological theory of fermentation was discovered and, later,* ***a new doctrine concerning the organisation and life*** *of which this book contains the history… »* (1) p.V

New anti-heterogenic method

Previous experiments on spontaneous generation (heterogeny), in order to exclude the influence of airborne germs, were particularly complex to implement. A simplified method had to be found.
For the continuation of these experiments on microzymas, Antoine Béchamp developed a method which made it possible to exclude the influence of airborne germs and whose experimental **results reproduced in every respect** those obtained by previous researchers.

Based on the results of the experiments on sugar reversal (see § Discovery of microzymas), he found that in the presence of creosote, no mould appeared and reversal did not take place (1) p.52.
Creosote', **in fact phenic acid**, which was sold as 'creosote' at that time, had to be used as a solution in small doses (one or two drops per 100 cm^3).

Using this method, a clear distinction can be made between:

- inert materials and
- living materials or those containing living organisms (e.g. chalk)

Some cannot ferment in the absence of the action of air ferments.
Others containing internal living ferments, remain capable of continuing to ferment despite the presence of phenic acid in non-coagulant doses.
Phenic acid used in coagulating doses can prevent all fermentations.

Antoine Béchamp explains all the precautions taken, in detail, in his book "Microzymas and microbes" (2) p.12-13.
A theory of antisepticity (1857) was derived from this.

For example, you will recall that sometimes, instead of using pure carbonate of lime, chalk was used as carbonate of lime, without suspecting that their action could be different. Here is the comparative experiment between chalk and pure carbonate of lime, with and without creosote, supposed to prevent the action of ferments coming from the air (called "air germs"): (1) p.139

> « *Chalk, when placed in starch starch, without any addition of albumen, can first liquefy it and then ferment it to produce alcohol, acetic acid, butyric acid and lactic acid,* ***even in a creosote medium***.
> *Pure carbonate of lime, prepared in boiling and creosote-treated liquors, put into creosote-treated starch, does not in any way fluidise it.* ***After several years*** *of contact,*

by leaving air in the apparatus (unheated air), the starch, instead of becoming fluid, has contracted, producing, under these conditions, a modification of the starch which is no longer liquefiable by diastase or by saliva and sialozymase.
But if pure carbonate of lime is exposed to air, the starch gradually becomes fluid; it may even enter into fermentation, releasing carbonic acid and hydrogen and producing, in addition to butyric acid, alcohol...» (1) P.139

I should point out that fluidization is the preliminary, enzymatic step in the fermentation of the starch.
Whereas creosote prevents the action of airborne germs from acting on the starch in the presence of carbonate of lime, the ferments that act in the presence of creosote with chalk do not come from airborne germs and are therefore internal to the chalk.
Chalk shows molecular granulations under the microscope, which Antoine Béchamp named microzymas after having discovered them in the chalk, extracted them and fermented them.

When Antoine Béchamp used creosote (phenic acid) to prevent airborne germs from acting on living matter, there is no reason why his action should not be as effective! And so the fermentations observed are indeed internal to the materials in question.
This does not presume their origin, you may ask? They could have been introduced previously or during their sampling. This doubt will be removed by their functional analysis revealing specificities specific to this origin.

Where are microzymas found?

Antoine Béchamp has found microzymas everywhere in the environment, in the air, in the soil, in limestone... and in all living organisms, plants, animals and humans.

In the air,

« They are not counted by the thousands in 1.5 litres of air, but by the hundred thousand and more in some cases...» (1) p.123

In the chalk,

« Now, when I examined under the microscope the chalk I used, which was the commercial chalk (called Spanish white, Meudon white), I invariably discovered the same small bodies that I had noted in my other experiments. (1) p.136

*"The microzymas of the chalk, which are fed at the same time with alcohol and syntonine, **multiply without growing**, and they produce with this alcohol, in the absolute shelter of the air as well as in contact with it, acetic acid, and, note it, caproic acid...*
These stones now contain beings still living: whatever their age and origin, they can be called geological organised ferments, and they testify perhaps that in those remote times things happened as they do today; that their creation is contemporary with creations that have disappeared, just as the organised ferments that we see swarming around us are contemporaries of species that are disappearing before our eyes.
Microzymas are the smallest organisms I have ever studied. Yes, for me, these so-called molecular granulations are organised, living, and their role is no less than that of the cells a thousand times larger that we call brewer's yeast or alcoholic ferment. Descriptive naturalists cannot classify them, but the chemist who studies their functions can characterise them. » (4) p.27

In milk, urine, wine,

« … As early as 1865, I reported them in milk, bringing them closer to those in chalk. … It follows from these investigations that microzymas compose the major part, the very major part of the organised corpuscles of the atmosphere, and that, according to the media in which they are forced to live, they produce the organisms that we call ferments. But before the date of this last work, I had already pointed out in the urine that putrefies, without naming them, the microzymas, under the name of small mobile beings. The same is true of wine: … as the cause of its ageing and alteration. … »

In plants,

In higher organisms,

« This is how I came to deal with the ***granulations of animal tissues and cells*** *…»*

He was able to extract these granulations and observe them directly, despite their extreme smallness, thanks to a powerful microscope (x700) for the time, enhanced by an immersion cell.

An excellent chemist, he was able to analyse their composition, verify their function as ferments and their ability to multiply.

Evolution of animal and plant microzymas into bacteria

This time, Antoine Béchamp found that plant **microzymas were capable of evolving into bacteria**, which he had first seen forming in stages in the pulp of a plant that had been frozen. It was a fat plant whose particularly thick wall had remained intact.

« *An incision being made in the frozen part, the material, taken from the depth of the wound, or immediately under the epidermal layer, contained bacteria in great numbers, in which the species called Bacterium termo and putridinis, which are extremely mobile, were predominant...".*

"In the healthy parts, the microzymas are normal; but as one approaches the frozen parts, ***one sees the microzymas change in shape and size****… »* (1) p.141

He observed this phenomenon with different plants that had been partially frozen and systematically observed the appearance of bacteria a few days after thawing in the frozen parts. After reproducing the experiments on plant microzymas, he was interested in the capacity of various animal microzymas to produce bacteria.

He found that there were differences depending on the vital centre of origin and age:

- The microzymas, which are very numerous in the yolk (egg yolk), hardly evolve into bacteria, any more than the microzymas in the brain.
- The microzymas of the liver, on the other hand, evolve into bacteria with great ease.

This transformation is systematically carried out in successive stages.

Chemical functions of microzymas

He also analysed the chemical functions, in terms of fermentation, of microzymas according to their origin.

«No doubt I am far from having studied with as much care and detail the microzymas of all tissues; but it follows from the facts concerning those of the liver, the pancreas, the stomach, the blood, the almonds, etc., that the microzymas of ***the different organs and organic systems possess, each according to its nature, one or more determined functions and that, morphologically identical, they are functionally different****. »* (5) p.294

He noted differences in their chemical functions of fermentation according to the vital centre of origin, and thus realised that they are **specific to the vital centre of origin** (liver, pancreas, muscles, salivary glands, etc.).

Hector Grasset (4) explains that Antoine Béchamp published a work in 1867 entitled " On the circulation of carbon in nature", in which he analysed, as an accomplished chemist, the transformations, similar to fermentations, carried out by the cells according to their origin:

> First of all, he proves that there are **no specific ferments**, that the organised ferments make their own medium; a fact that was only admitted long afterwards by the Pastorian school.
> « ***With the same being, other foods, other products; you see moreover that the organisms (microzymas) we are dealing with are much more active than brewer's yeast;*** *apart from the plastic food, the latter can only digest cane sugar and feeds only on glucose; they, on the contrary, feed equally well on sugar and starch... I will only tell you that the organisms which make lactic acid with glucose, butyric acid with starch and with lime lactate, make above all acetic acid with lime citrate and with tartrate, propionic acid with succinate and malate. Doesn't this strike you? I am surprised that we still talk about butyric, lactic, alcoholic ferments, etc. Is it not obvious that this nomenclature should be abandoned ... The same ferment would therefore be lactic, butyric, acetic at the same time; and as* ***alcohol is a constant term*** *in all these fermentations, it would also be alcoholic.*
> *In this work, in which Béchamp highlights the organisation of matter by plants, its consumption by animals and the return to the mineral state by the minute and multiple fermentations, he also highlights the role of animal and plant cells. "****And not only do cells have these various roles, but we have seen that while there are some that can only feed on one kind of matter, there are also some that are capable of consuming several kinds. A given cell can therefore live in several media and will produce, with the materials of these media, compounds of the same or different nature****. »*

The microzymas also show differences in their chemical functions with age from embryo to adult, acquiring specificities during embryo development in particular and during childhood.

I would like to point out that these experiments were carried out as a precautionary measure, protected from airborne germs, and always using the same proportions and the same conditions.

It results from these functional analyses that:
The specificity of microzymas is not linked to their form but to their origin in a living organism and more precisely in the vital centre of this organism.

> *« There are as many species of primordial microzymas (those of the yolk) as there are species of organised bodies, but in each species of complicated living body there may be several species of microzymas differentiated by their function (microzymas of the liver, pancreas, stomach, lung, etc.). There is something more: each species of primigeneous particle of a simple body remains identical to itself in all the transformations that this simple body may undergo, either physically or chemically. On the contrary, the microzymas, while remaining morphologically identical, vary in function from the egg to the adult state of the being that comes from it: this results from the comparative study of the microzymas of the yolk and those of the liver, pancreas, stomach, lung, blood, nervous matter, etc.; as well as from the studies of M. J. Béchamp (*) on the microzymas at the various ages of the same being from the foetal state. And*

this notion of change of function, the result of precise experiments, will make it possible to understand how microzymas can become morbid in certain circumstances, when they are no longer in the physiological conditions of their life. » (5) p.319

(*) Joseph Béchamp is one of his sons who followed him in his research.

The specificity of microzymas is also the specificity of the bacteria developed from these microzymas:

« Not only are microzymas personally ferments, but they are capable of becoming bacteria; and this aptitude, the same for all, does not manifest itself equally for all under the same conditions; which amounts to saying that, in each natural group of beings and for the same organism in each centre of activity, the microzymas have something specific... ***And what is remarkable is that the bacterium derived from the microzyma is a ferment of the same order as it is****.* » (4) p.48

Composition of the microzymas

> *« The microzyma is organized, structured; it is morphologically defined, to speak as Cl. Bernard; it is endowed with multiple activities: chemical, physiological and histological. ... the elementary composition of the microzyma in the egg, in the liver, in the pancreas is more or less close to that of brewer's yeast and of the albuminoid substances. Immediate analysis reveals fats and minerals. And a more detailed analysis of the microzymas of the hen's egg yolk has revealed several albuminoid substances, one of which is a zymase ...*
> *... **The composition of microzymas in their physiological state admits 80% water** in their tissue.*
> ***They therefore satisfy all the conditions of life by their composition**. »* (1) p.576

Comparison of the content of the components of different microzymas with yeast:
Carbon - Hydrogen - Oxygen - Nitrogen, minerals (ashes) (1) p.372

	Carbone.	Hydrogène.	Azote.	Cendres.
Levûre de bière	49,6 à 50,6	68, à 7,3	9,17 à 15,0	7,5 à 9,7
Microzymas du pancréas	52,4	7,9	14,01	4,48
— du foie	53,8	7,6	16,2	3 à 4
— du jaune d'œuf	52,4	7,17	15,7	2,9 à 4,3
— de l'ovule de l'œuf de poule, pris dans l'ovaire	50,5	7,50	15,67	—
— des amandes douces	41,8	6,56	13,2	38,1
Bactéries de pancréas élevés dans gélatine	53,82	7,76	13,92	5,03 (1)

Dans ce tableau, l'oxygène n'est pas inscrit : sa quantité s'obtient en retranchant de 100, la somme du carbone, de l'hydrogène et de l'azote.

This table alone represents a significant amount of experience and analysis.
It can be seen that it goes back to the origin of the formation of the egg in the hen's ovary.
The mineral content (ash) of the almond microzymas is exceptional.
The ash of the pancreas microzymas contains a lot of iron, says Antoine Béchamp, and the great abundance of ash in the tonsil microzymas struck him...

The microzyma and the cell

> *« Microzymas in themselves summarise what is essential in the chemical functioning of a given cell or mood. »* (1) p.246

What Antoine Béchamp means by this is the result of experiments on the chemical functions performed by the microzymas. **These functions, in terms of fermentations, were those expected by the cells of the original vital centre.**
This means that they alone are capable of performing the function of the vital centre from which they were extracted.

> *« But after having explained how each function has its own special apparatus, either for the preservation of the species or for the preservation of the individual and the exercise of these faculties, we must investigate how the function can be preserved and* ***how the cell is necessary for this preservation****.*
>
> *The cell is the first and most important of the cogs that the microzymas form in order to constitute the organs and apparatuses. »* (5) p. 356

Microzymas carry out the functions of our various vital centres, sheltered in cells that they have built in order to preserve the ideal medium for carrying out their functions. They manage the incoming and outgoing flows in order to maintain homeostasis.

Microzymas are permanent, cells are only transient.

Scientists believe that beyond the cell, there is nothing organised, let alone living. Antoine Béchamp says of the cell theory:

> *« Let me just say that there is something profoundly philosophical in his conception that must be retained; it is the notion that* ***what is alive comes from what is already alive****. But the cell is not what is alive per se; it is, on the contrary, something essentially provisional. »* (1) p.130

Moreover, not all cells originate from another cell, especially embryonic cells, i.e. the first cells of the new individual, which are formed by the microzymas**:**

> *« There is another cause for the common illusion. We know how a yeast cell originates from another similar cell. But we do not always know the origin of a cell, so that we may want to demonstrate that a leucocyte, for example, is the product of spontaneous generation.* ***Such a cell, like the vitelline cells, the red blood cells, the pus globules, the embryonic cells, do not proceed from another pre-existing cell; they are formed from scratch by the microzymas****, as we have seen that they are formed by those of the mother of vinegar (*) and as the brewer's yeast is formed with the help of the microzymas that are isolated from it by grinding. The difference is that I have been able to artificially compose the medium in which these microzymas can be formed and in which, once formed, they can live and function; whereas animal microzymas, each according to their species, produce them only in the medium and in the place where they must play their role, as long as this role is necessary.* ***No, a cell does not necessarily proceed from another cell****. I said that I had vainly sought for ossein in the vitellus of the hen's egg; one would search in vain for such or such an albuminoid material as is found to exist in the chicken. In the same way, it would be useless to pretend to discover*

in it the cell from which the cell of this or that part of the same chicken would proceed. The vitellus undoubtedly contains what have been called vitelline globules or spherules; but these enormous cells are essentially ephemeral; they are unceasingly formed by the vitelline microzymas, and are unceasingly destroyed, setting their microzymas at liberty; so that at the moment of incubation none of them are discovered. ***In such a way that all the cells, all the tissues of the chicken are the result of the histogenic activity of the yolk microzymas, just as the chemical compounds that did not exist are the result of their chemical activity.*** *»* (5) p341

(*) See next §

The destruction of a cell reveals its original microzymas.

« The purpose of these lectures is to demonstrate that the vital, irreducible, physiologically indestructible unit ***of which the cell itself is formed****, is none other than the microzyma.* ***It is the living form, reduced to its simplest expression, having life in itself, without which life does not manifest itself anywhere*** *.... In short, the microzyma is the living unit per se; and this is what cannot be said of the cell. »* (1) p. XVII

The importance of the medium

Let's take the example of the action of airborne germs on starch in the presence of lime carbonate (without creosote) and compare it to their action on starch without lime carbonate.
In these two different media, which micro-organisms are born from these air "germs" during the fermentation of the starch?

> *« If one examines carefully the organised productions that develop in the lime carbonate-added starch and in the unadded starch, one may, at a given moment, discover only rare microzymas. However, when the phenomenon becomes more pronounced, bacteria may be found in both preparations; there will never be only microzymas and bacteria in the lime mixture, but also mycelial moulds in the lime-free starch. »* (1) P.139

In the case of sugar inversion, it was found that the microzymas deposited by the air systematically developed into moulds.

And so, depending on the medium on which the airborne microzymas are deposited, they form:

- sometimes bacteria (carbonate of lime poisoning)
- sometimes moulds (sugar)
- sometimes bacteria and moulds (starch alone), the medium probably being less homogeneous (oxidised on the surface?).

According to Antoine Béchamp,

« It's all about the medium »

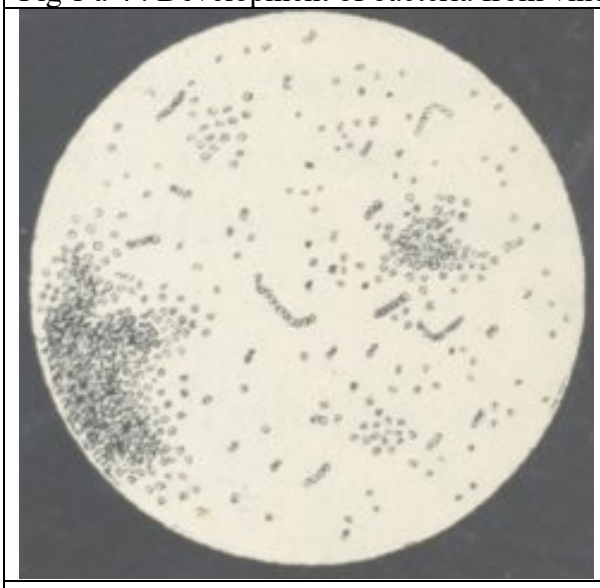
There are as many media as functions in a living organism.
Depending on the medium, microzymas will form different cells.
And depending on the state of the medium specific to a function, the same microzymas will form cells OR different bacteria and other micro-organisms.

Antoine Béchamp also notes:

> *« The appearance of bacteria excludes the formation of cells proper, and vice versa »* (1) p.472

Here are drawings by Antoine Béchamp when he observed microzymas from the vinegar mother gradually forming bacteria in successive stages (fig.1 to 4).
By putting these same microzymas in a suitable medium, he obtained not bacteria, but cells (fig.5) that form gradually.
He never obtained both at the same time. The medium favours the evolution into cells to the exclusion of bacteria, or vice versa.

Fig 1 à 4 : Development of bacteria from vinegar mother microzymas



Obtained at 650 magnification
Fig 1: free, coupled (torula) 2- and multi-grain microzymas and clusters of microzymas

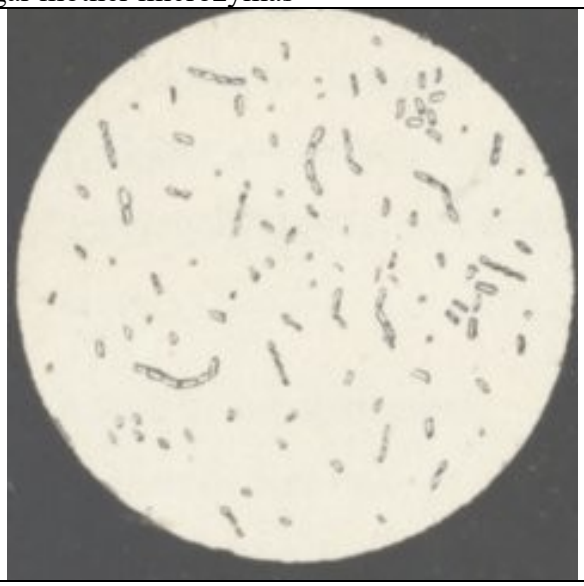


Fig 2: termo bacterium and different states of evolution of microzymas

Fig 3: a, bacteria
b, articulated bacteria
c, bacteria with a head or a shiny spot

Fig 4: Bacteriidia and leptothrix

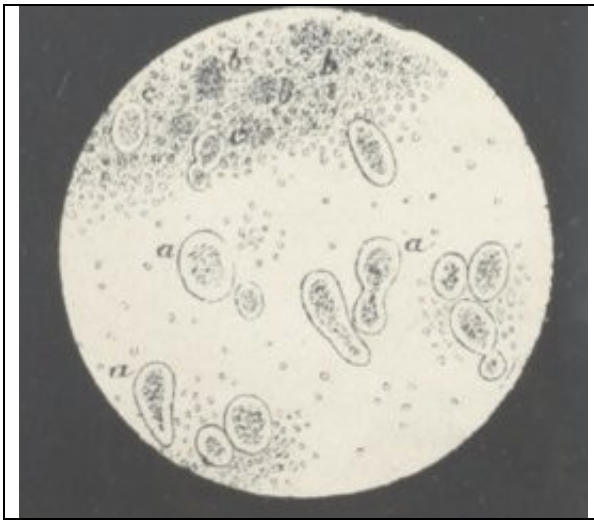


Fig 5: Vinegar mother in sweet yeast broth.
a: developed and free cell
b: cell in the process of forming in the membrane
c: developed cell still committed to the membrane

Microzymas and micro-organisms

As we have seen, depending on the medium, microzymas will form micro-organisms...
For example, if we stick to Vincent's bioelectronics (Appendix / bioelectronic media), a reduced (as opposed to oxidised) medium favours bacteria, an acid-oxidised medium favours moulds and fungi.

We know how difficult it is for microbiologists to maintain a culture. Didier Raoult explains in a seminar (*) the need to have real "cooking recipes" to carry out a precise culture. And he adds that it is very difficult to maintain the culture.
This is all the more understandable given that the medium is constantly evolving due to the assimilation and de-assimilation of micro-organisms, which are ferments.

« *They are mistaken for parasites that are turned into genera and species* » complains Antoine Béchamp.
Monomorphism amounts to attributing a species to a stable state of evolution.
The 'species' of the various micro-organisms are in fact stages in the evolution of microzymas according to the medium.
This is what we call: **microbial polymorphism**

(*) https://www.youtube.com/watch?v=KKntxhM6jug

The microbial polymorphism

Microorganisms evolve according to the medium.
Here are a few examples from the many experiments of Béchamp and his team:
The example of the frozen plant mentioned above is characteristic. Antoine Béchamp of course reproduced it in several experiments before confirming the evolution of microzymas into bacteria inside plants, typical of bacterial polymorphism.
Liver microzymas are particularly apt to evolve into bacteria. In this example, he observes a mouse liver 48 hours after it has been placed in a bottle of phenol water. Phenic water prevents airborne germs from becoming involved:

> « … *We find isolated microzymas, others associated in a string; we see microzymas with a large and a small diameter, which progress in the manner of bacteria; finally, we also see true bacteria. Many are associated in linear groups of 2 or 3.* ***Is it not obvious that these are the various forms of the various phases of the evolution of microzymas****? »*

He also notes, confirming that the bacteria do not come from the air*:*

> *« In a large number of trials,* ***these bacteria appeared in the centre of the livers*** *before being visible in the surrounding fluid. »* (1) p.151

Microbial polymorphism has been confirmed by other researchers, also unknown for the same reasons that disturb the established system.

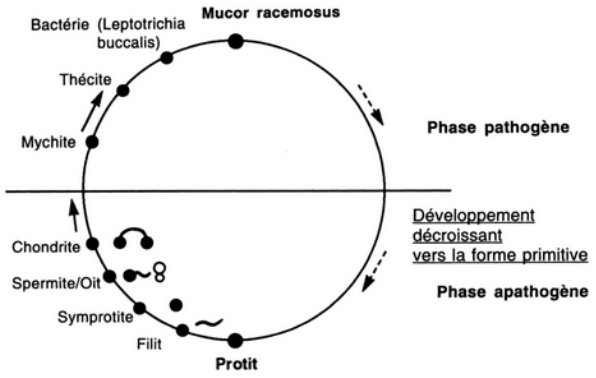
Jules Tissot (1870 - 1950) noted the evolution of cultures according to the medium, confirming the microbial polymorphism:

> " *I have demonstrated, in the most formal way, ..., that bacterial cultures are transformed into hyphomycetes, that is to say, into mould cultures, when they are placed in conditions favourable to this transformation. ... The reverse phenomenon also occurs..."* (9) vol 2

Günther Enderlein (1872 - 1968) established a "bacterial cyclogeny". For him, the primitive stage of micro-organisms is the "Protit", equivalent to Microzyma. He used a darkfield microscope to observe them.

> *« **All microbes show changing forms of manifestation.** Enderlein observed three types of organisms in blood and tumours: bacterial rods, mycelia and Chondrits or Symprotits. He considered the latter to be the most primitive stage of development of micro-organisms. In his seminal work, "Bakterien-Cyclogenie" [Bacterial Cyclogeny], Berlin & Leipzig1925,* ***he describes his discovery that viruses, bacteria and fungi are nothing more than alternating forms of manifestation of a particular microbe. » (*)***

(*) https://www.alexapharma.dk/upload/100604/doc/20086-Professor-Günther-Enderlein--Doctor-of.pdf

Between the two poles described by Enderlein (protit and mucor), there are countless forms of development, some of which are present in the normal phase and others in the pathogenic phase. Figure taken from « Les clés du vivant » - Franz Arnoul	

Gaston Naessens (1924 - 2018) designed a special microscope, the somatoscope, which allowed him to illuminate the sample with a particular light frequency, highlighting the "somatids" in the blood. Somatide is the name he gave to the living granulations, Béchamp's microzymas, which are difficult to observe in the blood because of their "transparency", as Béchamp said (*). Gaston Naessens was able to observe different stages of evolution depending on the medium and defined an evolutionary cycle. The first stages correspond to a healthy state, the others to different pathological states**. (*)**

Enderlein and Naessens observed especially the granulations of the blood, **both of them observing different states in a healthy organism**.
It can be assumed that depending on the cell medium, which is specific to the function, the granulations may be at a different stage of development in the healthy organism. This could explain the difficulty in making the connection with microzymas on the one hand, but also the fact that Jules Tissot did not find these granulations in cells. He more commonly observed 'dumbbells' (9) vol. 3, which are the equivalent of Enderlein's 'chondrites', and what he called the bacterial organelle close to the colibacillus.

> *« I was finally able to arrive at a knowledge of the morphological constitution and organisation of living matter, both animal and vegetable, and of the two elementary organelles of a bacterial nature which constitute it; these are :*
>
> *On the one hand, **the dumbbell organelle** which, from the top to the bottom of the scale of living beings, forms the fixed framework which is the very substance of the organised living matter of their organism.*
>
> *On the other hand, **the mobile bacterial organelle**, colibacillary organelle for mammals, which vegetates in the liquid albuminous medium circulating in the meshes of the fixed framework of the living matter and which carries out the chemical actions necessary for the conservation and manifestation of the properties of the latter. »*

(*) (cf. « Les somatides – Gaston Naessens on BioticTV de YouTube : https://www.youtube.com/watch?v=laSBUn1xTgw

(**) Antoine Béchamp talking about the microzymas of the blood: "In the middle of the globules, we always see a crowd of microzymas. **They are quite similar to those of the liver, but smaller and more transparent**. It is their tenuousness and transparency that has prevented histologists from seeing them. Moreover, because of their smallness, it is useful to use the Nachet immersion lens, n°7. » (1) p.243

Origin of living organisms

Let's go a little further into Antoine Béchamp's discoveries.
We saw earlier in the table studying the composition of microzymas that Antoine Béchamp went back to the formation of the egg in the hen's ovary.
He followed the stages of egg formation, then in the egg itself, the development of the embryo.
The yolk, vitellus, corresponds to the oocyte of mammals.

> *« ... When the ovum has not yet reached 2 cm in diameter, it is possible to discover states of the ovum where* ***there are only molecular granulations****; these are the extremes. When the microzymas decrease, the yolk globules increase and vice versa: this is the middle state»* (1) p.494

He also demonstrates the presence of microzymas in all anatomical elements during the early embryonic life of the chicken.

And of course, he was interested in the development of spermatozoa:

> *« The cells in which the spermatozoa are born, like the egg, do not come from a pre-existing cell.»* (1) p.557

And he quotes M. Grasset in Liégois' « Traité de physiologie » :

> « *Our observations have led us to admit, like Godard, that the spermatozoa, in the whole animal series,* ***are formed by the aggregation of a certain number of granulations. »*** (1) p.558

The microzymas of the new organism are inherited from its parents.
The vital, permanent unit at the origin of every living organism is the microzyma, which is the only one present at the beginning of the formation of the egg and the spermatozoa.

> *« Not one atom of the organisable matter (*) which forms the organs of the chicken exists in the egg before incubation; and the hen, before she lays her eggs, does not contain a trace of the materials of the egg from which the chicken will emerge, except the microzymas of the egg! I have searched in vain for ossein or gelatinous material in the egg white and yolk.* ***It is during development that the microzymas first and then the other living parts manufacture the organisable materials of the tissues to be born, each according to its species and its destination****. »* (5) p.330

From his experiments and observations, Antoine Béchamp deduced:

> ***« Microzymas are at the very root of organisation: without them there is no organisation and no living matter. »***

(*) « Matter, in a microzyma, without being of a special essence by destination, like the organic matter of the pre-Lavoisier scientists, is therefore particular. Strictly speaking, it does not constitute a chemical compound, and it is not physicochemically constituted; but it deserves a name that comes from the nature of things: it is organisable matter. And this denomination expresses two things; the first, that it is formed of certain complex combinations of carbon associated with certain necessary mineral combinations; the second, that it is worthy of or capable of receiving organisation, which supposes that it is not capable of doing so itself. ***Organisable matter, it is a fact, exists only in organised bodie****s; no trace of it exists elsewhere than in these beings. Organic matter can be made by the hand of a chemist, with the help of the simple Lavoisierian bodies, and this is the magnificent demonstration that science owes to M. Berthelot. Organisable matter is only formed by and in the living organism with the help of the materials it finds in the surrounding medium. »* (5) p.329

Notion of organisation

> *« There are not only two distinct principles (matter and life), in a living being as in a microzyma, there are three: matter, organisation and life»* (5) p.329

We are living "organisms", but we are not familiar with the notion of organisation. Antoine Béchamp explains the relationship between life and organisation:

> *« All living things are organised»*
>
> *Organisation is the ability acquired by organisable matter to be morphologically constituted to manifest vital phenomena. And for the immediate organic and mineral principles next to the organisable matter to become this morphologically constituted matter, it is necessary the presence of that which is morphologically constituted and already or still alive. I say still living; for organisable matter constituted in organisation and living, which has lost life by some process, cannot make organisable matter out of the materials that could serve it before. In short, organisation is the arrangement of organisable substance into a definite form for a definite purpose»* (5) p.331

An original experiment was proposed by M. Donné in 1865 when he brought Antoine Béchamp a **shaken** ostrich egg (9th lecture): The shell being sufficiently solid to resist strong vibrations, the aim is to cause the egg to become disorganised and to observe what results, while being assured that no germ of the air can intervene.
Well, the shaken egg undergoes putrefaction by its microzymas without evolution into the bacteria originally contained in the yolk. Remember that the microzymas in the yolk do not evolve into bacteria, but the microzymas as ferments are able to achieve putrefaction. Patience! It took 6 months. And interestingly enough, at the end of the putrefaction process, they were found still alive, the sugar had disappeared.

> *« Ah, certainly the egg is organised, skilfully organised. And what precautions are taken to ensure that nothing naturally disturbs the admirable order that reigns there. How many precautions are taken to isolate it from external accidents. The shell, the membrane which lines it and which by its folds forms towards the end the air chamber. The yolk or vitellus is suspended there by the chalazes in the white, which is itself formed of two concentric layers of unequal fluidity. In the yolk there is a reserved part, the cumulus proligere, the cicatricula, that white spot where the embryo will develop. The yolk itself, during its stay in the Graaf's vesicle, as it is protected before arriving in the oviduct, where it is immediately enveloped by the albumen which is secreted by special glands.*
> *...*
> *The embryologists have admirably described all these parts ....*
> *...But after having noted these marvellous arrangements,* ***have they looked for what is endowed with transforming activity in the egg, what is really alive, what weaves the cells, the tissues of the being that will come from it****? And if they have looked for it, have they recognised it? While waiting for me to answer these questions, let's ask ourselves what happens when we scramble everything in the egg with strong shocks?*
> *It happens that what in the divine plan was a premeditated arrangement, something structured, something built for a certain purpose, has been destroyed; so that the things in the edifice which were intended to remain separate have been confused; ...; subsequently the desired result is no longer achieved, although the necessary matter is*

still present! ***So what has changed? The conditions: apparently little, but in reality the essential, without which the material will remain sterile****!*
Yet, is what was capable of producing a chicken earlier, with its future, absolutely destroyed by the fact of having shaken the egg? No doubt it is a corpse of an egg, to speak like Mr. Donné; but in the chemical sense is it a corpse? ***No, because an activity is manifested****. »* (1) p.380-381

« Was what was alive in him killed? No, but it acted under other conditions*: instead of forming tissues and determining the chemical reactions necessary for the formation of the substances which must intervene during the subsequent development of the animal,* ***it acted on its own account, selfishly****: it fed itself, multiplied, and other combinations were generated. In short, the microzymas of the egg yolk acted as ferments do, and as we have seen, the alcohol, acetic acid, carbonic acid, and hydrogen released or formed were at the expense of the glucogenic material and the glucose of the egg; the albuminoid material is found substantially intact****. »***

The circular movement of matter

Mr Estor was Antoine Béchamp's close collaborator to the point that Antoine Béchamp no longer knows who did what during those years. Antoine Béchamp or his colleague M. Estor, therefore, explained in a congress in Montpellier in 1869.

> *« After death - and here we leave the field of pathology and enter that of the physiology of the species -* ***matter must return to its primitive state****, for it has only been lent for a time to the living organised being. In recent times, an excessive role has been given to the germs brought in by the air; the air may indeed bring them in, but they are not necessary. The microzymas in the state of bacteria are sufficient to ensure, by putrefaction, the circular movement of matter...* ***The living being, filled with microzymas, thus carries within itself the essential elements of life, disease, death and destruction****. Gentlemen, let this diversity of results not surprise us too much, the processes are the same; our cells, it is a fact of constant observation, are constantly destroying themselves, as a result of fermentations very similar to those which follow death; by entering into the intimacy of the phenomena, one could really say, were it not for the shocking character of the expression, that* ***we are constantly putrefying ourselves.****»* (1) p.401

With regard to the excessive role attributed to airborne germs, it should be noted that putrefaction begins in the internal parts of the body:

> *« The blood in the vessels, the spleen, the stomach, the liver and sometimes even the lung and heart putrefy before the intestine itself, both in the case of death by disease and by submersion...»* (1) p.634

What do we find at the end of complete putrefaction? **The microzymas, alone and still alive, having regained the nature of an autonomous ferment** that they already exercised in putrefaction. They are therefore also active during our lifetime to better renew us.

A mechanical destruction experiment of yeast reveals its original microzymas.
The physiological death of a cell gives rise to the microzymas that constituted it.
As we have already seen, microzymas are present at the very beginning of a living organism; they are permanent during the life of this organism; and they are found at the end of the putrefaction of this same organism, which they survive:

> ***« Every living organism is reducible to the microzyma »***

This is true of all living organisms, as well as of ferments and all the micro-organisms from which they originate.
The experiment with the little cat described in the following section demonstrates this.

Microzymas in the environment

But what are the microzymas found in the environment?

The little cat experiment:

This original experiment, mentioned by Hector Grasset (4) p.61, shows many things that confirm the theory:

> *In 1875, A. Béchamp developed his theory at the congress of the French Association for the Advancement of Science (Nantes). It was there that he developed the magnificent experiment with the little cat,* ***which demonstrated the hypothesis of the origin of geological microzymas in chalk****. He buried a newborn cat in chemically pure, precipitated, creosote-treated carbonate of lime: the whole thing was placed in a glass jar protected from dust, but where aeration could take place.*
> ***After seven years****, the result is examined; the upper layers of carbonate of lime are intact, but where the corpse was, things change. "Of the little cat, only a few fragments of its bones remained; everything else, even the hair, had disappeared. The carbonate of lime, examined under the microscope, had the appearance of chalk, except for the small crystals of aragonite which are usually seen in it. The microzymas were easily recognisable by their shape and shiny appearance. It's a kind of artificial chalk.*
> ***Thus, of the whole organism, only the presence of the microzymas remained as a witness****, just as the geological microzymas of sedimentary terrains are only the remains of the organisms buried in them.*

The microzymas found in the air, soil, limestone, etc. are the remains of living animal and plant organisms that have regained their autonomy.

Under natural conditions, are microzymas immortal? They are in fact rot-proof, but could be destroyed by the force of other elements.

This is what Hector Grasset thinks (4) p. 112:

> *« Their immortality is only theoretical; if, in the geological layers, they have not perished (as in the little cat experiment), it is because the carbonate of lime has formed a protective envelope preserving their latent life; there is nothing phenomenal about this.*
> ***A microzyma, a vital unit, is immortal compared to a cellular unit which is no longer a vital unit****. As for rotting, it is of the same order. What is putrefaction? It is the dissociation of an organism by an autogenous or foreign fermentative act****; now the microzyma, being the active, essential principle of fermentation, cannot destroy itself by fermentation****, which is understandable; it is therefore imputrescible, but it is not indestructible. »*

They can be killed by heat in a variable way depending on their origin, from 60°C, some resist up to 400°C, more often around 100°C.
To extract and isolate them, Antoine Béchamp subjected them to aggressive treatments, such as removing the fatty gangue surrounding the pancreas microzymas, without them losing their properties, specific to the pancreas, and their vivacity.

They can remain in a dormant state for a long time and are reactivated when conditions are favourable.

They have a great capacity for adaptation and undoubtedly an important role as cleaners, fermenting (putrefying) organic waste, bringing it back to its mineral state.

Hector Grasset, admiringly, says:

> « Béchamp saw at first hand (*) what bacteriology was to proclaim only 35 to 40 years later, that morphology must give way to physiological properties.
> Béchamp discovered these microzymas in mineral waters, in organic detritus, in marsh mud, in the air, in soil, with the bacteria where « *they are responsible for transforming the organic matter in fertilisers into carbonic acid, ammonia carbonate, and absorbable materials that the plant roots will use for the benefit of the vegetation; it is thanks to their influence that oxygen helps to burn the last portions of the organic matter in the soil.* » » (4) p.29

He adds:

> « Well, let's not be afraid to say it loud and clear, these pages are brilliant, and it was only ten years later that the chemists of the Pasteur school would prelude the work that would confirm this way of seeing things. No one would then speak of the precursor whose geological microzymas had been joked about, when studying the bacteria of carboniferous soils (Van Tieghem), or the nitrifying, oxidising microbes, etc.».

Microzymas thus act on a larger scale, constantly restoring a balance between the different kingdoms on a planetary scale. (see "The Bacterial Universe" - Lynn Margulis did not know about microzymas but understood the important role of bacteria in the global balance)

(*) precision on the dates: 1866-1867.
The passages quoted are introduced in Hector Grasset's book (4) p.26 "But it is especially in 1866, that he puts the question to the point: Du rôle de la craie dans les fermentations butyrique et lactique et des organismes actuellement vivants qu'elle contient (C.R. t. LXIII p.451). Analysis of the waters of Vergèze. Microzymas and other organisms of this water studied from the point of view of their function (C.R. t. LXIII p.559). To give us an exact idea, I transcribe a few paragraphs from a nearby publication: (De la circulation du carbone dans la nature. Paris et Montpellier, 1867, in-8, 103 p.*)* »

Health and disease conditions

Inevitably, questions are raised about the role of microzymas in health and disease states. They obviously have a vital role in health by organising us, building our tissues and cells and carrying out our vital functions. But what about disease?

"***The microbes encountered in our diseases are produced by the unbalanced terrain of the patient***," summarises Professor André Fougerousse.

Take the previous example of the frozen plant: the plant was sick, but the cause of the disease was not the bacteria, but the cold that changed the conditions of the medium; the bacteria are only an internal consequence.
The disease is primarily due to an imbalance that prevents the microzymas from performing their function properly.

> *« Microzymas are not foreigners in the organism and in the diseases themselves;* ***the bacteria that can be observed there, are not the products of germs that have penetrated the body from outside.*** *»* (1) p.IV

Example of gangrene:

> *« A patient had just had his arm amputated following a serious traumatic injury; the removed part was immediately brought to the laboratory; the forearm presented a dry, black surface, the insensitivity of which had been noted before the operation; all the symptoms of gangrene existed; microscopic examination shows us, not bacteria, but associated microzymas, strings. The accident had taken place so quickly that the bacteria had not had time to form, they were only in the process of forming****;* ***they are therefore not the cause of the gangrene »*** (1) p.181

« ***Disease is in us and comes from us*** » says Antoine Béchamp, taking up Pidoux's precept. But the origin of the imbalance may be external or psychological, influencing the internal medium.

Moreover, according to Antoine Béchamp, foreign microzymas would not develop in an organism, even by forcing its natural barriers through an injection. On the other hand, they could cause a 'dyscrasia', i.e. an imbalance, to which the internal microzymas would react or not. The induced disease is not necessarily the same when there is an induced disease.

Antoine Béchamp explains this point of view in this new extract from Hector Grasset's book (4) p.47:

> *« In 1870, Béchamp addressed the Académie de Médecine (Les microzymas, la pathologie et la thérapeutique, 3 May).*
> *"It is not the organisms that are inoculated into animals that multiply; but their presence and the liquid that impregnates them determine an alteration of the surrounding environment that allows normal microzymas to evolve morbidly, by reaching or not reaching the state of bacteria; the disease is only the consequence of the new way of being of the normal microzymas; the fever that follows is nothing else but the result of this new way of functioning, and of the effort of the organism to get rid of the products of an abnormal fermentation and de-assimilation, by provoking the return of the morbid microzymas to the physiological state. " »*

Microbes are actually ferments, they are not parasites, they are not pathogenic, but they can be morbid (sick).
However, Antoine Béchamp noted that, unless they are inoculated immediately after being taken from a patient, they cannot transmit the disease when released into the air because **they lose their morbidity very quickly**.

> *"What is taken for parasites, in the diseases studied as parasitic, are only the evolutionary forms of the normal microzymas of the various given centres of organisation, which can transmit the disease born of the organism under the influences that nosologists know how to specify.* ***In fact, it has never been possible to communicate a characterized disease****: typhoid fever, smallpox, syphilis****, by taking a microbe from the atmosphere****, which is the negation of the system of parasitists. In short, the morbid microzyma is the fruit of the disease, which is spontaneous in origin and not produced by a given microbe, originally created morbid* » (1) p.IV

Sterility or Impenetrability?

In our internal parts (excluding the digestive tract...), we are not sterile, but populated by small entities that work in harmony to operate and maintain our vital centres. However, can we be invaded by foreign micro-organisms or are our natural barriers really effective, as long as they are not damaged of course?
Example of an egg white infected by mould: The thin film that protects the yolk prevents invasion.
Here is another example of an egg, (5) p. 213:

> *« An egg yolk is a huge cell with the yolk membrane as its envelope. This means an isolated egg yolk immersed in ordinary water, in unlimited contact with the air. Soon the ambient liquid, which has become cloudy, swarms with vibrionians and ends up being fetid. The yolk swells, because the ambient liquid penetrates it by endosmosis; but the distended vitelline membrane, and consequently thinned, does not break. Things being in this state, the yolk is washed by a stream of pure water until all the vibrionians are removed. If the membrane is then broken to examine the contents, it is easy to see that there is no trace of bacteria or vibrios and that the yolk's own microzymas have remained unaltered in their form and properties. However, here everything came together for the entry of the external vibrionians; the thinness of the protective envelope and the current of endosmosis which had introduced external fluid into the cavity of the cell. This is my really direct experience. »*

Why shouldn't our lungs be as well protected?
We can see that the intestines themselves are colonised without the bacteria of the intestinal microbiota (*) invading us.
The same applies to other openings. Antoine Béchamp devoted a large part of the 12th lecture, which was very instructive, to the urinary system. We thus discover that the bacteria which develop in a urinary infection are an early development of the microzymas of the urine due to an internal imbalance. In no case is it an external invasion.

As long as our natural barriers are healthy, there is an impenetrability of micro-organisms.

(*) Where do the bacteria in the intestinal microbiota come from?
Antoine Béchamp notes that when we leave the stomach, there are only microzymas, even if we inevitably ingest bacteria. These microzymas then evolve in the intestine, where the environment is favourable to bacterial evolution.
And what are these microzymas? Those of our tissues encountered during digestion, of our salivary glands, and those of the food which will have resisted the transformations undergone (cooking in particular).

The theory of organisation and life

From all these stages that I have presented to you in a very synthetic way, the theory of "organisation and life" emerges, as Antoine Béchamp calls it, which really constitutes a real change of paradigm that I try to summarise for you in a few points:

- The microbes that we mistakenly take for parasites are in fact ferments.
- These ferments and the cells have the same origin, a ferment of life, the Microzyma, **transmitted by descent**, present at the beginning and at the end of any living animal or vegetable organism, without which there can be no living matter.
- Microzymas are specific to a living organism and even to the original vital centre, having acquired their specificity during their maturation.
- It is an imbalance in the medium that causes a reaction of the microzymas, which can associate and evolve into bacteria by going through different stages. This is microbial polymorphism.
- What is observed as a species (monomorphism) is only a stage in the evolution of microzymas according to the medium.
- These same ferments are found at the end of the putrefaction that they carry out, **still alive**.
- The microbes found in the environment... are **the remains of living organisms that return to life as autonomous ferments**.

Whatever our philosophy ...

Whatever our religion, whatever our philosophy, we cannot deny that we are something other than a simple body, magnificently organised by our life ferments, the microzymas, to whom we do not make things easy, if you have understood correctly.

Microzymas are the source of living matter.
Living matter has been lent to us for a lifetime.
It continues its earthly life after us.

« ***Nothing is the prey of death. Everything is the prey of life***»
Antoine Béchamp

Why 'Organisation and Life' theory?

Antoine Béchamp answers us:

> *« **We can consider organisation as the place of application and action of the force that produces the movement we call life.** The effect of organisation is to impart to organisable matter the property of preserving this movement, which would be transformed in parallel with the composition of this matter during histological, physiological and functional evolution.*
>
> *Let us enter into this idea.*
>
> *Let us consider the microzymas in the egg: **life is the vibratory movement of the primordial particles of the organisation in these microzymas** (1). As, under the physical and chemical influences necessary for each species (for the hen's egg, heat and air), development takes place, the initial vibratory movement is transformed; the transformation is evidenced by the*

correlative changes that occur: multiplication of the microzymas, formation of new anatomical elements (embryonic cells, etc.), formation of new immediate principles, etc.), formation of new immediate principles, absorption of oxygen, release of carbonic acid, various chemical actions; the new vibrations are the cause of the activity manifested by the new microzymas which contribute to the formation of new anatomical elements, which form new organic centres of activity or energy, from which new chemical and physiological formations and changes proceed, so that soon there is nothing left of what was originally in the egg, everything having been transformed, the organisable matter, the organisation, the life And in the end, when the organism is developed, there comes a time when the microzymas that have become adults have acquired all the properties that they will henceforth possess in every centre of activity and organisation. And, something very worthy of attention, these microzymas are producers of zymases, which, not organised, but immediate principles are endowed with certain chemical or physiological activities of the microzymas from which they come. ***These zymases are therefore also capable of retaining some of the vibratory movement they have borrowed from the microzymas and which they can manifest and expend in the form of transformative chemical energy.*** *»* (5) p.332

Part 2: Looking back on science today

Microzymas and contemporary science

How does contemporary science miss out on this essential element, without which there would be no living matter on earth?

Science since Pasteur has been based on 'atmospheric panspermia', as defined by Chamberland (2) p. 25:

> *« In Pasteur's theory, microscopic organisms all derive from parents **similar to themselves; they come from outside**, where they exist in a form that often differs from the one we know when they develop in organic substances, a form in which they are called "germs". As these germs are very small, they must be found in the dust that the air holds in suspension in exactly the same way as mould spores: hence the name 'atmospheric panspermia' sometimes given to this theory".*
> *and in Note: "It is worth noting that this expression was never used by Pasteur.»*
> *(Chamberland – « Recherches » p.5)*

This panspermia, which is contradicted by Pasteur's own experiments and yet is accepted, has serious consequences for science, which has followed preconceived ideas that are not borne out by the facts.

Living organisms, in the intimacy of their tissues, are not sterile and the "microbes" that are said to be foreign to these organisms, far from being parasites, are in fact vital ferments.
There are no species of micro-organisms determined by their shape.
What determines their specificity is their origin: an animal or plant organism, or even a vital centre of this organism when it has had time to acquire this specificity.
For the same specificity, the original microzyma can evolve into different forms of micro-organisms, which are not species but stages in the evolution of the original microzyma.

How long does the autonomous microzyma, excluded from the life of the original organism, retain this specificity? This will depend on its experience in the media it encounters. Antoine Béchamp observed an adaptation, a change in the function of pancreatic microzymas, which lost their toxicity towards blood after having been made to digest fibrin. (1) p.684

Could contemporary discoveries be reinterpreted in terms of Antoine Béchamp's theory?

Researchers are specialised. How, under these conditions, can they have an overview, a perspective? However, they are probably rediscovering microzymas without knowing it.
They've never heard of them, and if they ever thought of taking an interest, everything has been done to discourage them.
So what are these most likely rediscoveries?

Nanobes or nanobacteria

Nanobacteria were discovered by various researchers in the 1990s, sometimes under extreme conditions.

Find out more in this article:

https://serc.carleton.edu/microbelife/topics/nanobes/index.html

> ***« Nanobes are thought to exist everywhere! Nanobe structures have been found in organisms as well as in rocks.*** *… »*
> *« Studies on nanobots are challenging our perception of life. Microbes have already broadened our understanding of the harsh conditions that can support life (see the Extremophilic Microbial Life collection).* ***So if nanobots exist as living biota, they will broaden our perspective on the scale of life****. »*
> **« *Nanobacteria have reportedly been found in human blood* ***and could be linked to health problems such as the formation of kidney stones due to their biomineralisation processes. This hypothesis has met with some resistance, as some claim that this biomineralisation is caused by the nucleation of non-living biological molecules.*** **»**

Scientists are questioning the presence of these nano-organisms in our bodies, regarding them as foreign, and tend to link their presence to some health problem.
In the 5th lecture, Antoine Béchamp explains:

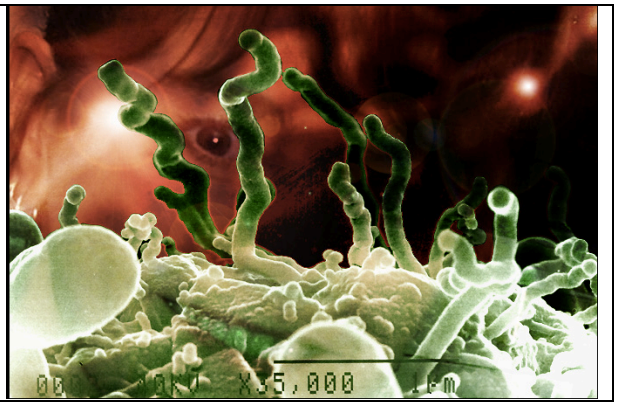
> *Contrary to popular belief, blood contains more than just two histological forms: microzymas are the third organised component of blood… »*

This brings to mind a question posed by Professor Walter Longo, who studies the particularities of fasting: (*) *«* What we started noticing in both our human work and animal work is that the white blood cell count goes down with prolonged fasting. Then when you re-feed, the blood cells come back. So, we started thinking, well, where does it come from? *»*.

In the 9th lecture, Antoine Béchamp explains the formation of leukocytes from molecular granulations. Leukocytes therefore reappear when the fast is broken, and knowing their role in defending against the body's toxicity, we realise that our diet could be to blame. In fact, the more toxic our food, the greater the dietary leucocytosis during digestion.

(*) http://awarenessact.com/study-finds-that-fasting-for-72-hours-can-regenerate-the-entire-immune-system/

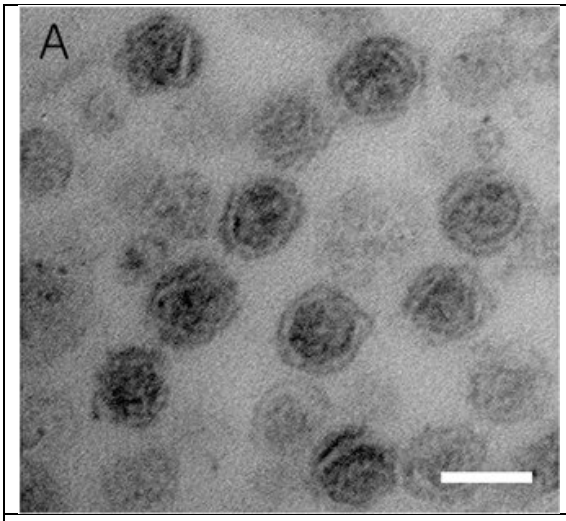
Geologist Philippa Uwins and her team discovered these nano-organisms, which she has named nanobes. Despite the extreme conditions in which they were found, they are alive, according to her, after examining them at length.:
http://www.microscopy-uk.org.uk/index.html?http://www.microscopy-uk.org.uk/nanobes/nanointro.html

« Examination revealed that the structures were tiny, irregularly shaped filaments less than 1/100,000 mm (millimetres) wide. Further experiments and laboratory observations showed that the structures were able to grow and increase in number spontaneously on freshly fractured rock - becoming visible to the naked eye within 2 to 3 weeks.» *Scanning microscopy x 35000*	

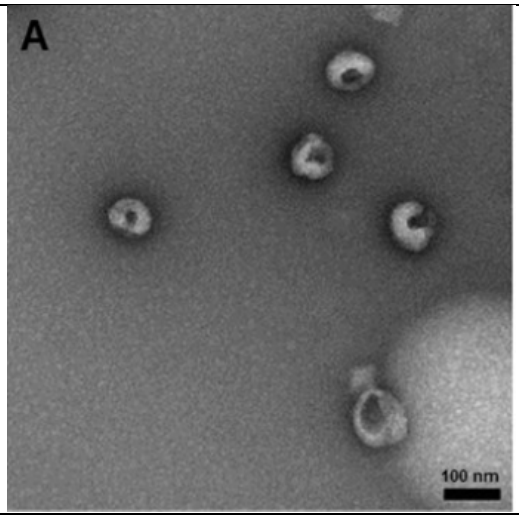
Exosomes

Exosomes or extracellular vesicles (EVs) are found inside living organisms, and their properties are being discovered more and more.

> *Exosomes are nanometre-sized extracellular vesicles secreted by body fluids and **are known to represent the characteristics of the cells that secrete them**. The content and morphology of secreted vesicles reflect cellular behaviour or physiological state, for example cell growth, migration, cleavage and death. The role of exosomes can be highly dependent on their size, and exosomes vary in size from 30 to 300 nm.»*



Electron micrograph of sectioned exosomes. (A) Round morphology of exosomes
Scale : 100 nm



Negative staining and immunostaining in whole mount. (A) The morphology of exosomes is observed by negative staining.

https://www.researchgate.net/publication/322269064_Sample_Preparation_and_Imaging_of_Exosomes_by_Transmission_Electron_Microscopy

And this publication from September 2022 explains new functions discovered recently:

> *«Various cell types and physiological fluids release EVs, and they play an important role in cell-to-cell communication. Moreover, EVs have been implicated in important processes, such as immune responses, homeostasis maintenance, coagulation, inflammation, cancer progression, angiogenesis, and antigen presentation. Thus, **EVs participate in both physiological and pathological progression**. »*

https://www.researchgate.net/publication/363625357_Characteristics_of_culture-condition_stimulated_exosomes_or_their_loaded_hydrogels_in_comparison_with_other_extracellular_vesicles_or_MSC_lysates

We inevitably think of the microzymas that escape from the cells. Microzymas whose functions are those expected of cells in a given vital centre.
As we saw in the paragraph devoted to microzymas and cells, Antoine Béchamp spoke of their role in maintaining homeostasis in order to preserve the medium in which they perform their function.
Remember also that when a cell is destroyed, its original microzymas are revealed.

How come we don't ask why exosomes might be alive?
No doubt this notion of life is not logically envisaged, quite simply because the presence of living elements in an environment considered 'sterile' is not coherent.

Viruses

Viruses are in fact very similar to exosomes. What distinguishes them is the fact that the virus is considered to be an intruder, whereas the exosome is considered to be a constituent of the cells, and therefore specific to the individual. But isn't this distinction arbitrary? There doesn't seem to be any distinguishing criterion.

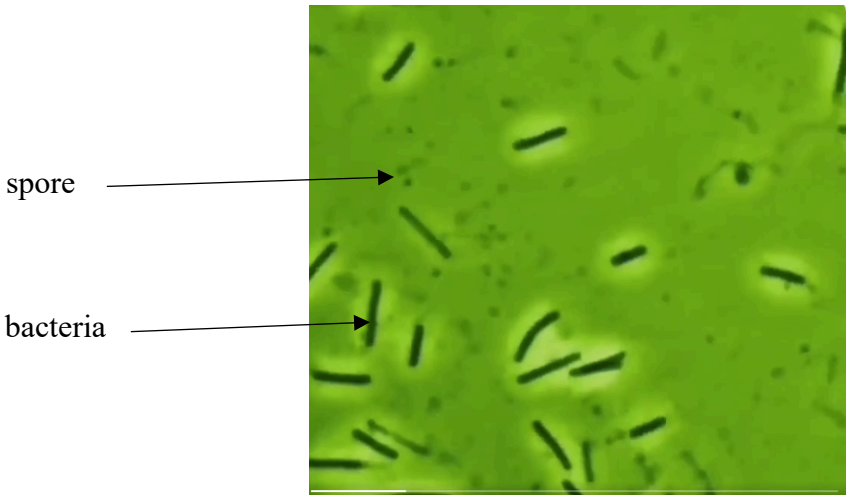
> « *In recent decades, the similarity between EVs and viral particles has become increasingly evident. Viruses and EVs share different aspects such as size, structural and biochemical composition, and the transport of bioactive molecules within cells…* »
> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7291340/

Bacterial spores

More recently, scientists have taken an interest in bacterial spores as their "dormant" form, according to this publication from February 2022:

> *« Bacterial spores are the most dormant form of bacteria since they exhibit minimal metabolism and respiration, as well as reduced enzyme production. »*
> https://pubmed.ncbi.nlm.nih.gov/32310531/

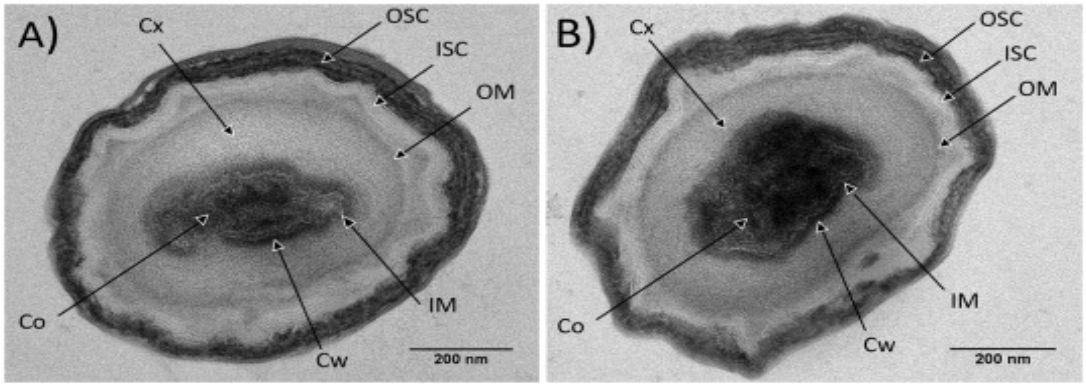
Clearly, this is where we recognise our microzymas. And this so-called "dormant" state of bacteria present in nano-bacterial form inevitably brings us closer to a polymorphic vision.
A video shows these spores, the remains of the action of a phage enzyme on bacteria.:
https://twitter.com/mICROBIOsh/status/1180480416580558849
(search « Enzimas líticas de fagos destruyendo bacterias » on twitter to find the video)



The bacteria explode completely, leaving these spores as remains.
It's a good thing scientists are interested in them. They are clearly the microzymas behind the bacteria in question.
So it's not a question of destruction, but of deconstruction. The medium modified by the phage enzyme no longer allows the bacteria to maintain this stage of evolution, and the microzymas return to their primitive form.
We'll have to wait and see what happens to the spores in this new environment? If the medium oxidises, would we see moulds develop from these spores? But don't scientists risk interpreting the formation of mould as contamination?

Instead, they try to reconstitute these bacteria by placing them in a specific medium where they can be restored, using the famous cooking recipes mentioned by Didier Raoult (see Microzymas and micro-organisms). Hence their interpretation of the dormant form of a specific species of bacteria.

I was looking for electron microscope observations of these spores. I found some in this other publication in which a technique is sought for eliminating bacterial spores from food in order to 'decontaminate' it.



https://www.sciencedirect.com/science/article/pii/S0168160521000477?via%3Dihub#f0025

This publication does raise a few questions.
Do you realise that the aim is to 'decontaminate' food from bacterial spores? If you have understood correctly, these spores are microzymas and are therefore a constituent of plant and animal cells. Researchers will be able to kill them by heating - pasteurisation is already used for this purpose - but they will not be able to make them disappear.
What are the consequences for our organisms?
We will only be able to eat food without living microzymas. This is undoubtedly already the case for people who only eat processed foods and who are not doing very well. Why is this? Remember that the living microzymas in our food, whether in the form of bacteria or not, feed our intestinal flora. I'm using this old-fashioned term because it's particularly apt. This flora is all the healthier if we feed on 'living' plants, in other words plants that have undergone the minimum amount of processing.
This balanced flora will live naturally. Its ferments, whatever their form, will assimilate, de-assimilate and transform according to the consequent changes in the intestinal medium, and the balance will naturally be struck between the absorption of nutrients by the blood, the evacuation of our waste and the intake of new foods by our diet, which must be rich in microzymas.

Researchers are concentrating on the intestinal microbiota (tens of thousands of publications). Some scientists are looking to kill the 'living' in our food, while others are looking for techniques to repair failing intestinal microbiota. By supplementing these with excreta, microbiota that would be healthy.
Do you realise that we're walking on thin ice?

Can these various elements be linked?

Can nanobes, nanobacteria, exosomes, viruses and spores be linked to each other and to microzymas?

All have sizes that already link them under the name of nano-organisms. These sizes are variable and compatible with what Antoine Béchamp observed, less than 1µm and even 0.5µm for some.
There are real similarities in appearance, with a characteristic dark centre under the electron microscope.
All contain nucleic acids. But the analysis of these acids was based on specific criteria, such as bacterial criteria for nanobacteria and spores. Could we find something different if we analysed them in a different way, looking at them from the angle of microbial polymorphism? I'll look at the subject of multiple characteristics a little further on ("Starting afresh").
Philippa Uwins has shown that nanobes have evolutionary forms and that they are capable of multiplying.
The spores of bacteria in a dormant state can also evolve, since they are supposed to reform the original bacteria, according to scientists.
The comparisons have yet to be made, but we need the will and the knowledge of microzymas and Béchamp's theory to move forward on this subject.

A sterile route

As far as the purely internal parts of our bodies are concerned, i.e. excluding the digestive tract and other openings, scientists continue to reason in terms of sterility, whereas even in Béchamp's day experiments all led to the same results (see the section on spontaneous generation):
In the absence of the influence of germs in the air, bacteria develop within materials taken from living organisms, **showing that we are alive and not sterile**.
Subsequent interpretations of observed facts have always tried to stick to this sterility dogma out of habit.

At no time is a micro-organism ever considered to be SELF.
Over time, inconsistencies become normality. There are many examples of this:

1. Any microbe encountered in an organism is considered foreign (NOT ITSELF).
2. So-called mitochondrial genes that contain living elements useful to our cells are considered symbiotic and their presence is explained by an "archaeobacterial fusion"! But that's just one explanation!
3. The recent discovery of an internal microbiome (*) should have been a wake-up call. But no, we continue to reason from the same angle, asking ourselves: How did this microbiome get in? In other words, it can't be from the SELF, according to established reasoning.
4. The causality of a microbe in a disease is accepted and is even the first, if not the only, cause sought, whereas:
    - some people with the disease do not carry the gene,
    - others with no symptoms do.
    - The genes are different from one patient to another, whereas in a stable culture the genes are identical.

All these inconsistencies in the course of discoveries should arouse the attention of researchers. On the contrary, they get used to them, and consensus becomes normality.

(*) https://www.researchgate.net/publication/330453639_Multi-Method_Characterization_of_the_Human_Circulating_Microbiome

Starting afresh

The best thing would be to start again from the work of Béchamp (and his team) with modern means and make the link with studies on various nano-organisms.
But beware of habitual thinking: we have to accept that we are not just a sum of chemical functions and that the living in us is undoubtedly there to organise us, animate us and much more.
The very notion of living organisms and their relationship to genetics in particular need to be clarified.

Could microzymas produce our genes?

This publication shows the self-assembly of DNA from Béchamp granules in the yolk:

> *« We found evidence that **spontaneous self-assembly of DNA molecules from yolk granules occurred** during the very early stage of egg fertilization. In order to find solid evidence for self-assembly of DNA molecules, we collected many available data in different stages of fertilized eggs, making a data table.*
> *At first by using acridine orange vital staining to demonstrate DNA, we noticed that some yolk granules emitted DNA signals **that gradually increased with increasing incubation** time from very small sizes to much larger nucleus-like structures. For convincing evidence, we also used another vital dye, Hoechst 33258 DNA-specific dye, **to trace the changes in the yolk granules**. The patterns of the DNA signals from yolk granules stained with Hoechst 33258 were the same as those from the yolk granules stained with acridine orange. A partial phase contrast microscopic image of the changes in the yolk granules showed some liquid-like material around the granules before the formation of the nucleus-like structures. Concomitant use of fluorescence and partial phase contrast microscopy suggested that these **liquid-like materials may have been released from yolk granules in which spontaneous self-assembly of DNA molecules had occurred**. Finally, in order to verify whether the DNA signals came from real DNA molecules or not, by using deoxyribonuclease I (DNAse), we confirmed that the nucleus-like structures were really assembled DNA molecules.*
> *Thus, in this article**, we report evidence for the self-assembly of DNA molecules toward cell-like structures and discuss our findings, comparing them with those in the works of other pioneers, especially Antoine Béchamp**, Olga Lepeshinskaya and Bong Han Kim, who insisted on the existence of a mitosis-free alternative pathway for generating new cells.»*
>
> https://www.sciencedirect.com/science/article/pii/S0968432813001017?via%3Dihub

suggesting in passing the possibility of cell creation by construction, as Antoine Béchamp observed, and not systematically by mitosis.
The two modes of cell creation undoubtedly coexist. This recent technology shows an accelerated video of mitosis observed live.:

https://www.youtube.com/watch?v=UrDJLj-AcFs
Searcg « Mitosis In Mesenchymal Stem Cells » on YouTube to find the video.

Multiple genetic characteristics?

Nanobacteria could contain genes according to the following work:
Philippa Uwins and her team carried out molecular analyses of nanobugs and found evidence of the presence of DNA.

https://serc.carleton.edu/microbelife/topics/nanobes/index.html

This other publication warns of the risks of detecting nano-organisms when they have multiple characteristics:

> «*Any microbiological classification of tentative nanoorganisms, such as nanobacteria proposed by Kajander and Ciftcioglu (6) and nanobes proposed by Uwins et al. (8), is difficult because they are not typical bacteria. They have also virus-, fungus-, and prion-like characteristics and* ***thus cannot fit into any existing class of microorganisms*** *(Table (Table1).1). They should be considered as their own entity*».
>
> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC165317/

Microzymas contain many genes, and these particular genes have multiple characteristics.
This observation is all the more interesting from the point of view of microbial polymorphism and the ability of microzymas to transform into different micro-organisms depending on the medium.
So we're talking about an unclassified class, and not the least if we're talking about the basic building blocks of life.

And why not the absence of a gene?

Here is a quote from the aforementioned publication on nanobes

> *«Nanobacteria are the smallest cell-walled organisms on Earth, the existence of which is the center of great controversy. A nanobacterium is by definition one billionth of a meter in diameter (1/10 the size of bacteria),* ***leaving some to question whether or not an organism of this size has enough room to house necessary cell components such as DNA, RNA, and plasmids****.* »
>
> https://serc.carleton.edu/microbelife/topics/nanobes/index.html

Living things are characterised by a necessary criterion: the presence of genes.
Science has given DNA a central role, which has been weakened by the advent of epigenetics. However, this role remains almost dogmatic.
Isn't DNA simply a molecule, a sort of memory card, set up and activated by our life ferments?
Microzymas, these living particles, these little ferments at the base of living matter, at the origin of enzymes, are probably also at the origin of genes, as suggested by the publication on the self-assembly of DNA in vitellus cited above.
But could there be microzymas without genes?
Everything remains to be discovered about these small entities from which living organisms are derived.
They undoubtedly transmit the memory of their ancestors from generation to generation, but perhaps on a different and less voluminous medium than DNA or even RNA.
Does their size vary as they build our genes - our DNA, but also the so-called 'viral' or 'bacterial' genes, those of the internal microbiome wrongly judged to be foreign on the basis of the sterility dogma on which all scientific reasoning is based?
Antoine Béchamp has noticed a change in diameter which could, why not, correspond to the development of large proteins or nucleic acids:

> *« We see microzymas with* ***large and small diameters****, which progress in the same way as bacteria. »*

So many questions

How to distinguish the SELF from the NON-SELF

If we finally accept that there is life within us and within all living organisms, we will have to be able to distinguish the SELF, which is specific to the organism, from the NON-SELF, which is foreign.
If you think about it, phylogenetic trees are built on the basis of species criteria and use data found in the world's various gene databases. These genes, analysed in their entirety, have been taken from different individuals or from the wild. What would a phylogenetic tree of genes **from the same individual yield**?
Is it feasible, and would this tree reveal the identity of the individual and the vital centre of origin of the gene?
The question is undoubtedly badly put, because this mark of identity, if it exists, must undoubtedly be known in order to establish a phylogenetic tree on this criterion.

This just goes to show the extent to which the results obtained by scientists depend on the input criteria they use, and always seem to be the same, based on the system of thought in place.
Admittedly, the many technologies available do not simplify the task of our scientists, whose goodwill I do not underestimate, even though nothing is done to enable them to stand back. One might even think that everything is done to ensure that they are driven relentlessly along this sterile path.

The role and origin of enzymes

Remember that Antoine Béchamp showed that the enzyme is directly linked to the ferment that produces it. But since living organisms are denied this, how have scientists been able to get round this established fact?

Let me remind you that Eduard Büchner (in 1897) asserted that the yeast enzyme could carry out alcoholic fermentation "on its own", in isolation, in the absence of the yeast, and yet he only carried out this fermentation by "adding" a sedimentary rock.
At no time does it occur to him that the added rock might contain the ferment that is indispensable for carrying out profound chemical transformations such as fermentation.

Could the basic experiments demonstrating metabolism have overlooked a few living granules, because they were deemed amorphous, carrying out profound chemical transformations that would have been attributed solely to enzymes or to the organelles imagined (*) in the cell? The question arises.
(*) In the following paragraph, I explain why these organelles should be called into question.

So many challenges

There is no doubt that questioning the dogmas on which scientists have based themselves for more than a century means going back to the source of the errors.
The risk would be to start again from the scientific interpretations deduced from these dogmas and to adapt these new facts or rather the knowledge of these unknown old facts.
What is established on false foundations cannot be consistent. We need to understand this so that we don't add to the consensus of truths and end up with an imbroglio of falsehoods and truths that will have no more validity.

This requires us to question all the interpretations deduced from the dogma of sterility by denying the living nature of the individual.

The notion of virus

Why do I remember so clearly the moment when a biology teacher explained the concept of a virus to us? I understand it now; because it puzzled me. And yet at no time would I have dared question what I was being taught.
But you don't come away from reading Béchamp's work without wondering about the foundations of science.
The very notion of a virus, when we understand its definition, arrived at by consensus, is in the end nothing more than a kind of mishmash of genetic material found in organisms, declared foreign to these organisms and for which we had to find the history of their invasion.
Their antiquity and anteriority in so-called pre-cellular evolution are recognised. But as long as these elements (viruses) are considered foreign to our organisms, we construct scenarios to explain their supposed role as parasites, confirmed by the fact that their genes are not systematically found in the cellular genome, thus relying on the central role of DNA:

> *« The existence of several genes that are central to virus replication and structure, are shared by a broad variety of viruses but are **missing from cellular genomes** (virus hallmark genes) suggests the model of an ancient virus world, a flow of virus-specific genes that went uninterrupted from the precellular stage of life's evolution to this day. This concept is tightly linked to two key conjectures on evolution of cells: existence of a complex, precellular, compartmentalized but extensively mixing and recombining pool of genes, and origin of the eukaryotic cell by archaeo-bacterial fusion. The virus world concept and these models of major transitions in the evolution of cells provide complementary pieces of an **emerging coherent picture of life's history**»*
>
> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1594570/

We dare to conclude that there is a "coherent picture" of the history of life, which seems very complicated compared with Béchamp's theory.
The central role of DNA must therefore be challenged, in addition to the dogmas of sterility, monomorphism and panspermia.
Viruses in the sense of poisons are not consistent with Béchamp's discoveries, but for all that, particles that have been called 'viruses' have been found in organisms. These particles are probably our famous microzymas which, far from being poisons, are vital elements and which, as we saw above, could be at the origin of cellular DNA and why not of the other genes of the internal microbiome.
The discovery of exosomes escaping from cells, which are not really distinguishable from viruses, should bring them closer to microzymas.

As for the causal role of the virome in associated diseases, this has not been proven, as indicated by this March 2020 publication, which proposes five challenges for scientists in understanding the role of the virome in health and disease.

https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1008318

Search « 5 challenges in understanding the role of the virome in health and disease »

> « *The advent of metagenomics has greatly enhanced our ability to detect known and novel viral sequences in unbiased fashion and to establish novel associations of these sequences with various disease [1–7]. However****, it is not known whether the virome plays a causative role or not****. Koch's postulates remain the gold standard for microbial disease causality, and thus the first step is to establish culture systems for viruses associated with the disease of interest.* »

This publication highlights the difficulties and the many gaps in our knowledge of the virome, in which few researchers are interested, with research concentrating on the intestinal microbiota.
The difficulty is undoubtedly all the greater in observing from the sole angle of microbiota; in wanting at all costs to find species and make the link between a species and a disease.
If they persist in this approach, the task of scientists must be a veritable morass. This virome must be in perpetual mutation because of polymorphism and its undoubtedly vital role for organisms.
Remember what Antoine Béchamp said:

> *« They're being treated like parasites and turned into genera and species! »*

Immunology

The very notion of microbes, due to a lack of understanding of these little entities that are essential to life, no longer holds water. Micro-organisms are ferments.
A large part of immunology has consisted of understanding the body's reaction to imaginary invasions. The SELF was considered to be an antigen.
It is certain that the body reacts to toxic elements introduced by different routes. Not everything has to be thrown away.
And we need to consider internal polymorphism, which is not taken into account either. According to Jules Tissot, the different leukocytes are simply stages in the evolution of the same cell, whose original microzymas are clearly distinguishable in the granulocyte stage.

Immunity

« *It's all a question of middle ».* Antoine Béchamp explains that we need to take care of our microzymas to guarantee good health. He talks about a healthy lifestyle and the risk of excess, thinking more of alcohol at the time. But he doesn't provide any direct answers (in my reading anyway).
He recommends "taking care of our microzymas", by maintaining media that are favourable to their function. In other words, we need to look after our media as a whole.
The notion of terrain allows us to consider a more or less satisfactory general state of all the many media.
Living conditions have changed considerably since then. Many elements, not just material ones, can intoxicate us and cause imbalances.
Louis Claude Vincent's work with Vincent bioelectronics is a neglected asset, even though it provides at least the beginnings of an answer to detecting drifts in the biological terrain.
Attached is an article I wrote (published by AIMSIB) on the subject of "the electromagnetic functioning of living organisms", which introduces the work of LC Vincent.

Cytology

« *Always observe what's alive* » said Antoine Béchamp.

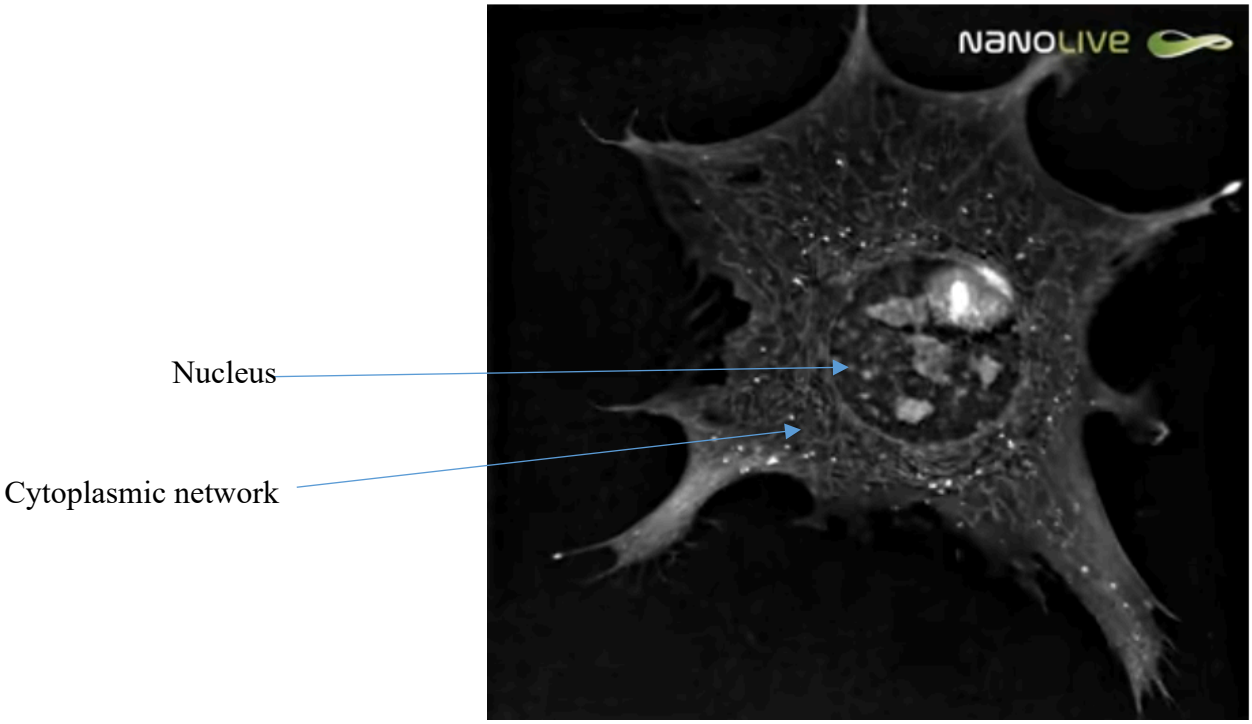
Jules Tissot's observations called into question cellular organelles and mitochondria in particular.

Jules Tissot observed cells fixed using particularly aggressive fixation techniques (still in use today) and compared them with those obtained using gentler fixation.

He found that mitochondria and other organelles were merely artefacts, remnants of a cytoplasmic network destroyed by the fixation technique:

> *« c) The so-called mitochondrial fixatives, reputed by many authors, notably Regaud and Guilliermond, to preserve the mitochondria and the cytoplasmic structure rigorously, on the contrary completely destroy the latter, the constitution of which has remained unknown for this reason. Only formalin, used with care, preserves the cytoplasm sufficiently to allow it to be studied.*
>
> ***The existence of mitochondria and their properties are therefore only the result of gross errors of observation***.
>
> *d) That the cytoplasm and the nucleus of the cell are constituted by a network of dumbbells articulated together exclusively by their balls, a network in which all the empty spaces communicating with each other form a single cytoplasmic cavity. »*
>
> vol 3 « Constitution des organismes animaux et végétaux … » 1946 Jules Tissot

New technologies confirm the existence of this living network that seems to hold the nucleus together. You can observe it with this live feed:



https://www.youtube.com/watch?v=_sKXcJCK_gw

Search « Label-free live cell imaging of a Preadipcyte cell » on YouTube to see the vidéo

What we see is a cytoplasmic network that appears to be constantly being rebuilt. Once again, we must remember that any observation must take into account the aggression suffered by the

sample observed and therefore think that this destruction-reconstruction is perhaps the result. But note in passing the LIFE in a cell.
This cytoplasmic network made up of dumbbells, as Jules Tissot called them, should not, however, call into question the role of microzymas in cells, as Jules Tissot thought, noting the remarkable work of Antoine Béchamp. (*) :

> *« e) That the universal elementary organelle, constructor of the cells and tissues of living beings of both kingdoms, is the dumbbell and not, as A. Béchamp claimed, the free mobile granular element that he called microzyma»*

In fact, at the end of the paragraph on microbial polymorphism, I stated that Jules Tissot's dumbbells are a stage in the evolution of microzymas, as Gunther Enderlein observed, and that as the medium differs from one type of cell to another, microzymas could probably be present at variable stages of evolution depending on the type of cell, stages of evolution compatible with the state of health, of course. We were able to observe them in a stem cell (see § Description of microzymas).

(*) « *The suppression of the remarkable results of Béchamp's work was the first act of this struggle against the truth. »* Tissot said in 1946.

Mitochondrial DNA

Isn't the idea that mitochondrial DNA comes from the mother deduced from the fact that no mitochondria are found in spermatozoa?
In fact, what is found in spermatozoa are essentially microzymas, lacking a cytoplasmic structure that could cause mitochondria to appear thanks to a so-called "mitochondrial fixative" that destroys this structure.
More likely, the microzymas of the new individual are derived from the microzymas of its two parents and produce the "mitochondrial" DNA required for metabolism.

Ribosomal RNA and enzyme production

> The same applies to ribosomes, which are probably just as non-existent, and so-called 'ribosomal' RNA could be produced by microzymas or their evolved form in the cell.
>
> With regard to ribosomal RNA and the production of proteins, we can wonder about the origin of enzymes. Do enzymes really follow the same production circuit as other proteins, or are they produced directly by microzymas? The question arises all the more because the enzymes themselves are essential to this production.
> Remember also that, according to Antoine Béchamp, the active principle specific to enzymes is the **vibratory movement** transmitted by the **living** ferment that produces them.
> ***« These zymases are therefore also capable of conserving part of the vibratory movement that they have borrowed from the microzymas*** *and which they can manifest and expend in the form of transformative chemical energy****.*** *»*

I found this passage in another book by Antoine Béchamp in which a certain M. Gautier (*), in spite of himself, shows **that isolated granulations of the pancreas and stomach continue to produce their enzymes even after repeated washing**:

> *« M. Duclaux, the metaphysician of the microbial system, the scientist who, in imitation of his master <Pasteur>, had called everything I had published on microzymas imaginary, finally agrees to note that I have really discovered something very special*

in the microzymas of the pancreas and gastric glands. No doubt he was reluctant, but in the end he wrote the following:

> *«It was M. Béchamp who first showed, firstly for the pancreas, then for the stomach, that it was possible to find in these organs, and to isolate by suitable procedures, very **fine granulations capable of displaying to a high degree the properties of the glands from which they are borrowed**. The forms that he attributes to them have nothing characteristic about them, and are those of all the granuliform elements contained inside living cells. M. Béchamp considers them as living, and **as producing by secretion their characteristic diastasis**; but he has given no serious proof in favour of this opinion. By even giving them the name microzyma, which he had already used for so many purposes, he himself introduced confusion into his subject and concealed his discovery. But these granulations are loaded with diastases. **This is what Mr Gautier demonstrated by washing insoluble granules from a pepsin dissolution daily through a pipe clay diaphragm. The twentieth washing water still showed significant activity**.»*

*In spite of the bad grace he puts into it, M. Duclaux nonetheless recognises in these lines the important fact that struck you so much, namely: **the microzymas of the pancreas and stomach display to a high degree the properties of the glands from which they are borrowed.** »* (5) 26ème lettre.

(*)Wasn't it the same Mr Gautier who, on 27 December 1892, at a meeting of the Académie des Sciences, the last to be attended by Antoine Béchamp, "unhappily" admitted that it was out of the question for him to take into account the thoughts of **someone whose work he had decided to keep silent about**? (2) p.III

Technologies

The technologies are used in conjunction with computer programmes designed by humans who inevitably have a dogmatic way of thinking.
It is undoubtedly difficult to take stock of all the technologies used by researchers, and yet we need to ensure that established criteria do not risk misleading the results obtained by these technologies.

... So many other questions will have to be raised, no doubt because I have no doubt that this paradigm shift will be recognised sooner or later.

The way of the living

Yes, it's time to follow the path of the living, as shown by Antoine Béchamp.

Respect for the living

Fear of germs leads to the destruction of living things.
Ignorance of the living in us leads us to destroy ourselves.
Microzymas are the basis of living matter. They maintain this balance in us and in nature as a whole thanks to the circular movement of matter in its various forms.
Our priority is to learn to know and respect living things better, and to act in a 'biocompatible' way, whether through water, 'living' food, contact with the earth that we have lost, or the environment as a whole, without neglecting waves, subtle and immaterial elements (thoughts, stress, electromagnetic waves).

Inert material and living matter

In the foreword, I noted the difficulty for contemporary scientists of determining whether a particle is alive or not.
Thanks to Antoine Béchamp's clear understanding of the facts observed, the nineteenth-century experiments on spontaneous generation and his more specific work have enabled us to distinguish between living matter and inert matter.

If we look at things from a chemical point of view, we are made up of so-called organic molecules because they come from a living organism. What characterises these molecules is in fact their carbon structure; they are quite simply mineral; they are inert matter, genes in particular.

> *« Every chemical action has a cause:* ***matter is inert and does not transform itself****.*
> *"The chemist can form organic matter by synthesis; he is powerless to organise it: he cannot create a cell. »*

Living matter inevitably contains ferments of life, microzymas, and these ferments must be alive, capable of fermenting at least one fermentable material, and therefore capable of profound chemical transformations.
In their presence this time, the physiologist will be able to reconstitute cells or micro-organisms.
« What is alive comes from what is already alive».

What distinguishes microzymas from the inert matter of which they are composed **is precisely their living nature,** their ability to organise and build cells, various living micro-organisms and complex living organisms**.**

And let's not forget the third principle: organisation. The microzyma itself is organised. *« Life is not supported by matter alone»* (5) p.339,

But what is the reason for this exceptional nature? We need to get to the bottom of this mystery.

Antoine Béchamp inevitably wondered about the peculiarities of so-called "living" matter, even though it is composed of the same inert materials.:

> *« If we were to analyse a man, an ox or any other mammal chemically as a whole, we would find them to have the same elemental, organic and mineral composition.*
>
> *It is therefore constant that a great similarity* ***or identity of composition in living bodies***

translates into absolutely different functions. *This is as true of microzymas as it is of the beings from which they are separated.* ***Yet, functionally, there is more dissimilarity between microzymas extracted from the liver or pancreas of an ox than between that ox and a sheep***. *Let us conclude, then, that matter in its primigenic particles, or constituted in the state of organic or mineral combination, is not sufficient to explain this strange fact. No, there is no living matter;* ***there is not even any relationship whatsoever between any chemical compound or mixture of such compounds and a living organism, even a microzyma***. *But there are living devices. To get to the bottom of the mystery, let's look at this idea.*

...Now, just as the various materials that go into the composition of a machine are not that machine, so the chemical compounds that are used to form microzymas are not those microzymas. Without forcing the analogy, ***we can say that the microzyma is what it is, not only because of the properties of the matter of which it is composed, but because of its structure, because of the law that has been imposed on it, because of the nature of the movement that has been imparted to it; matter itself has nothing to do with it; it is inert, but mobile, subject to the impulse that is given to it, obeying it, but unable to attribute it to itself***. *This is how we can understand that, although morphologically and substantially identical, microzymas are functionally different.*

... ***The life in a microzyma is this movement that it has received and that it preserves*** *without needing to go back up the machine****; it has received this movement in its own right, it transmits it from the origin of things, and it modifies it as necessary, under various influences****, until it becomes morbid if overdriven.*

And microzymas are organisms, because they are machines in which ***the spirit has allowed this movement to be transmitted and physiologically modified***. *The microzyma being an organism thus constituted in physiological simplicity and indestructibility, having life in itself, animated and capable of forming cells, it follows that these cells are likewise living organisms like the others, because like them. They are made up of these simple, animated cogs. »* (5) p.321

Life and living matter

What kind of life are we talking about?
Our vocabulary is limited and betrays our ignorance of these irreducible vital elements which have:

- The microzymas that have developed to organise and maintain the equilibrium of a living organism form a community and act together for the **life of that organism**.
- Sometimes they take on a **life of their own**, autonomously, freed from the organism in question after its death. But don't they then contribute to the balance of the planet, acting in association with all living organisms, to the **life of the planet**?

Life before death is linked to living matter, and drives the microzymas into coordinated action. Yes, there is obviously cooperation, which ceases when there is disorganisation.
What is the impetus behind this coordination? What maintains it? What breaks it up?
We have borrowed this living matter for a lifetime. Do microzymas hold the key to understanding what we are beyond this lifetime?
Isn't the primary purpose of science to enable us to answer all questions, even if it has been diverted from its role and confined to the material aspect of things **to the point of denying the living in us**?

Doesn't life go on after death? Freed from matter, it still seems to be life, as those who have had near-death experiences can testify, but life in another form: energy? light?
Could the brilliant heart of the microzymas mentioned by Antoine Béchamp be a special interface between matter and energy, perhaps the link with the soul that personifies us? We need to look at the relationship between energy, light and matter, and in particular the biology of light. (*).

Transmission

Antoine Béchamp was an exceptional researcher who went right to the end of his questioning. He took the time to experiment, constantly comparing and varying the conditions. Some of his experiments lasted for years. He also studied and analysed the work of his contemporaries in order to broaden his own experience. Reading his first book (1) on microzymas is a real lesson in science, and yet he published it with the feeling that he had not gone far enough, that there was still so much to investigate.

Science has become complex. Today's scientists are on the wrong track, immersed in the details of inert matter, and need to rediscover the foundations of science, the foundations of life.

Antoine Béchamp's theory "**flows from the facts as from a clear source**", it is coherent in its entirety and is based on a solid approach.
This knowledge seems to me to be essential and could enable science to embark on a new path, that of the living being in its global understanding.
I hope so, and I hope that this transmission will awaken scientists and give them the desire to delve deeper into this 'big idea' that so seduced Hector Grasset.

Brigitte Fau – April 2023

(*)suggests Olivier SALIERES from the ENERLAB laboratory (https://www.enerlab.net/), specialising in the characterisation of photons of biological origin.

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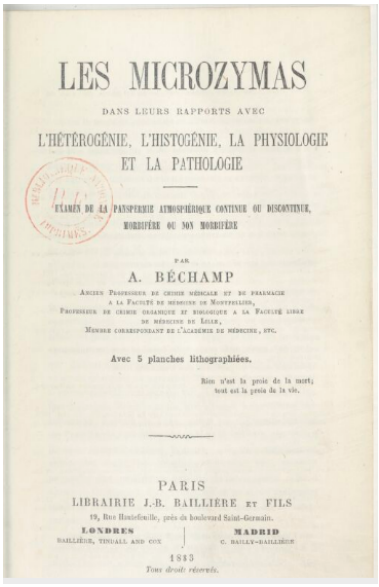

LES MICROZYMAS

DANS LEURS RAPPORTS AVEC

L'HÉTÉROGÉNIE, L'HISTOGÉNIE, LA PHYSIOLOGIE ET LA PATHOLOGIE

EXAMEN DE LA PANSPERMIE ATMOSPHÉRIQUE CONTINUE OU DISCONTINUE, MORBIFÈRE OU NON MORBIFÈRE

PAR

A. BÉCHAMP

Avec 5 planches lithographiées.

Rien n'est la proie de la mort; tout est la proie de la vie.

PARIS

LIBRAIRIE J.-B. BAILLIÈRE ET FILS

LONDRES | MADRID

1883

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Documents 1 to 6 can be accessed in pdf format (or via a link to BnF) from the following link - 3rd §. « Bibliographie » : https://www.bonnes-habitudes.fr/comprendre/la-théorie-d-antoine-béchamp/

Appendix

The electromagnetic functioning of living organisms - an introduction to the work of Louis-Claude Vincent

One food is regularly discovered to be an extraordinary antioxidant and becomes all the rage, until another study proves the benefits of another food and so on.
But what is an antioxidant? What does it do from an electrochemical point of view?
When I say 'electrochemical', that's already the beginning of the answer.

You may or may not be aware that metabolic reactions are essentially oxidation-reduction and acid-base reactions that take place in and through water.
A redox reaction is an exchange of electrons between a reducing agent (or antioxidant - here we go!) and an oxidising agent (electron-hungry).
An acid-base reaction is an exchange of a 'proton' (more precisely, a hydrogen nucleus) between an acid (supplier) and a base (consumer of protons).
The movement of protons produces magnetic energy, while the movement of electrons produces electrical energy. By observing internal reactions in this way from a global perspective, we are looking at the electromagnetic level.
Our human fluids are more or less charged with electrons and protons, and the electrolytes (formed by the dissolution of minerals in solution, anions and cations) will in turn more or less facilitate the passage of the electric current (movement of electrons). The difference in potential between reducing and oxidising agents can be measured: this is the redox potential (Nernst potential, in mV) which we should call the "electromagnetic" potential because it can be expressed as a function of the pH (indicating the magnetic charge) and rH2 (indicating the electrical charge) of the solution, as well as the temperature (ref.1). This potential is shown diagonally in the diagrams below, and is of the order of 220 mV for healthy venous blood, but is very high for the blood of a cancer patient. It is particularly high for an epileptic, but unlike cancer, in this case the blood is too fluid (high rho) (ref.2 and 13).

- The pH is a number between 0 and 14. The closer it is to 0, the more acidic the solution and the more protons it contains.
- The rH2 (ref.1) is a number between 0 and 42; the lower it is, the more reducing or antioxidant the solution is and the more electrons it contains.
- The resistivity rhô, in ohm.cm, measures the electrolyte charge of the solution (the more minerals the solution contains, the more conductive it is and the lower its resistivity).

These 3 parameters form the basis of the bioelectronics defined by Louis Claude Vincent in 1948.
Louis Claude Vincent had the idea of measuring these parameters for human fluids (venous blood, urine and later saliva), and in collaboration with doctors and researchers, he demonstrated a close link between the values of the bioelectronic parameters and various diseases (ref.13).

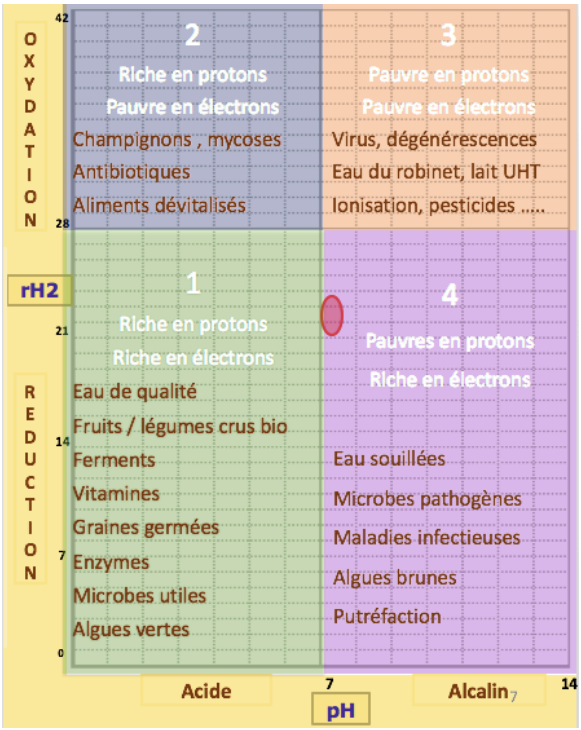
So let's get back to our antioxidants: most of the so-called diseases of 'society' are caused by excessive oxidation of the blood (rH2 > 26), hence the importance of antioxidants in compensating for this drift. Antioxidants are found quite simply in a natural (organic) diet that has undergone a minimum of processing (raw foods or foods that have been gently cooked). Roots and bulbs in particular (growing underground, so protected from oxygen) and sprouts are

highly antioxidant. Of course, ferments and natural vitamins are also valuable, as are lacto-fermented (unpasteurised) foods. Doesn't this remind you of something? The fermented papaya extract supplied to Pope John Paul II by Professor Montagnier (ref.3).

The Vincent diagram, with pH on the x-axis and rH2 on the y-axis, shows the "bioelectronic" media (below), and gives an interesting representation of the "biological terrain" to be completed with the 3rd parameter.
Remember, this third parameter, rhô or resistivity, tells us about the mineral charge of the solution. For example, a person who systematically eliminates very few minerals (urine resistivity > 80 ohms.cm) probably has a kidney elimination problem. The kidneys are often blocked because of accumulated non-assimilable minerals (ref.4) (mineral water, tap water, medicines, etc.). These minerals load the blood and form "sandy" deposits in the kidneys.
Louis Claude Vincent noted that viral diseases (oxidised blood) are associated with an excess of minerals in the blood. Could the crystallisation of excess minerals be linked to the appearance of viruses, which seem so elusive to researchers?

Bioelectronic media

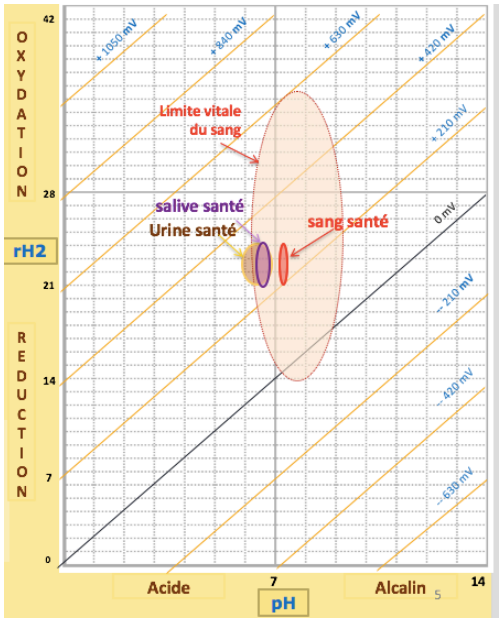
1. the life-building zone
2. the growth zone: in which growth diseases (childhood diseases) appear
3. the zone of degeneration, in which most of our social illnesses, including neuroses, appear.
4. the zone of destruction, in which bacterial diseases appear.



Venous blood for health

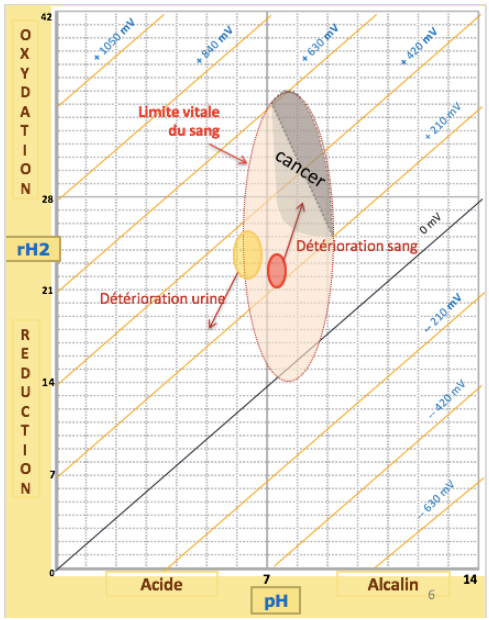
Health diagram

Homeostasis of bioelectronic parameters



Deterioration in health

in relation to our social diseases (look at blood and urine in the opposite way, in theory): blood tends to oxidise.



Restoring health

Always in relation to our societal illnesses. When there's still time, we can try to restore health by re-establishing our ground, i.e. by acting in the opposite direction to oxidative drift, thanks to our famous antioxidants (ref.5). Natural vitamin C could be our 'asclepia acida' (ref. 9) or 'acid doctor'; in any case, it is an excellent restorative.

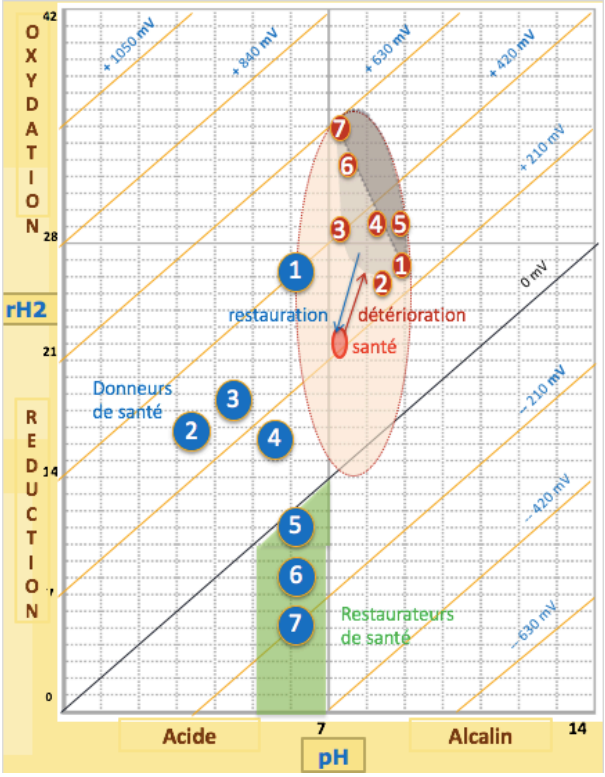
Examples of disruptors:

1. Electromagnetic pollution
2. White sugar
3. White bread
4. Digestive aperitifs
5. X-rays
6. Chemical pollution
7. **Vaccins – BCG**

(stress - heavy cooking - pasteurisation....)

Examples of restaurateurs:

1. Light water (<100 ppm dry residue)
2. Organic fruit
3. Medicinal plants, beehive products
4. Organic raw vegetables
5. Raw organic bulbs and roots
6. Lacto-fermented
7. Sprouts (earth plugs (ref.6)- vitamins - herbs.....)



The benefits of bioelectronics

Let's be clear: bioelectronics is not a diagnostic tool.
Jeanne Rousseau (ref.10) has highlighted the "cosmic" (circadian, lunar, solar) variations in bioelectronic parameters.
Measuring human fluids at a given moment cannot lead to "precise" conclusions about an individual's state of health. But it can provide some information that can be confirmed by other measurements and analyses.
What is most striking is the emphasis placed on the notion of terrain.
We can clearly see that the terrain has evolved with hygiene and industrialisation; from bacterial diseases (reduced and alkaline), we have moved on to an oxidised terrain favouring viral diseases, neuroses and degenerations. And it was in fact changes in behaviour that led to the disappearance of these old diseases, not vaccines.
And precisely because we're looking for an alternative to vaccines, bioelectronics could be an ideal tool for prevention.
For example, measuring the resistivity of blood could be invaluable for cardiologists, as the thrombosis line (ref.13) clearly shows the risk due to a loss of fluidity (very high risk with rhô < 160). It turns out that blood pressure medication increases this risk and clogs up the kidneys. There's plenty to think about.
Jeanne Rousseau would have liked to add a 4th parameter: rotatory power (ref. 10). This seems sensible to me.

In conclusion

Let's learn to understand this notion of terrain. Let's regain control of our health. As we can see, industrial food in particular, stress, the electromagnetic environment and vaccines all have a clear impact on our health. We have the means to take action on our own before we fall ill, by correcting the deviations that are gradually destroying us.

So what can we do about our electromagnetic environment? And here again is something new for many of you, no doubt: reconnect to the earth! There you can discharge the overvoltage induced by the environment by recovering the electrons from the earth, from which we are increasingly cut off (ref.6).
As far as food is concerned, it's obvious that we need a varied, natural diet.
We all too often forget the importance of water, which must be light (< 100 ppm dry residue) and hydration: our cells urgently need water (ref.4).
For more information on bioelectronics, I have a conference available on youtube and accessible from the link :https://www.bonnes-habitudes.fr/comprendre/la-bio%C3%A9lectronique-1/

Brigitte Fau (mars 2018)

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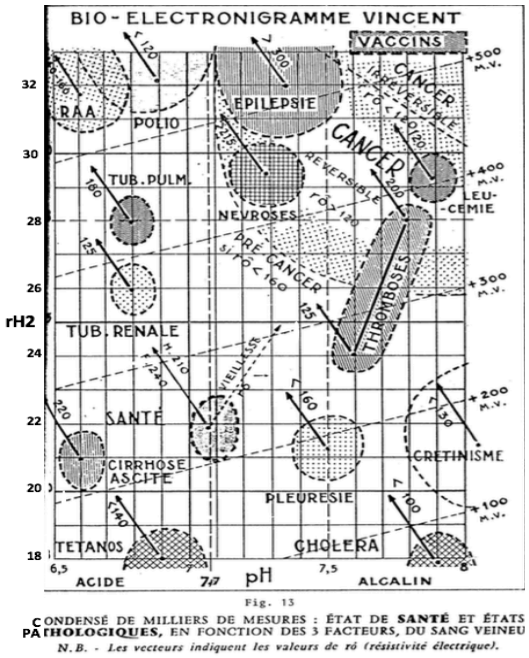
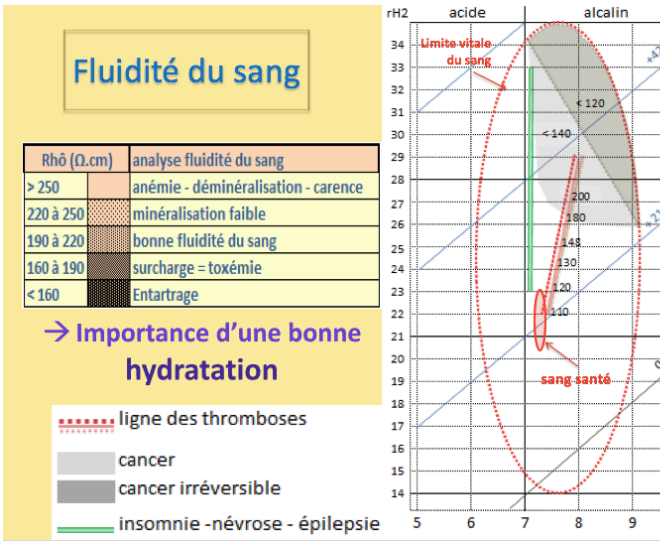


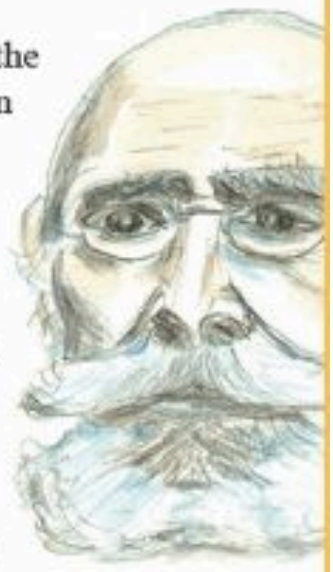
Fig. 13
CONDENSÉ DE MILLIERS DE MESURES : ÉTAT DE SANTÉ ET ÉTATS PATHOLOGIQUES, EN FONCTION DES 3 FACTEURS, DU SANG VEINEU
N.B. - Les vecteurs indiquent les valeurs de rô (résistivité électrique).



Source : https://www.aimsib.org/2018/03/01/fonctionnement-electromagnetique-vivant-introduction-aux-decouvertes-de-louis-claude-vincent/

ANTOINE BÉCHAMP : UNDERSTANDING THE LIVING

What « is really alive in the yolk » ?



There are a large number of nano-organisms in the yolk, transmitted by descent, capable of fermentation and profound chemical transformations.

Antoine Béchamp (1816 – 1908) discovered these small ferments or « **microzymas** », which he studied at length. **They are the vital element at the base of all living matter, and without them no matter could be alive.**

This booklet describes Antoine Béchamp's approach and insight into understanding life, thanks to tenacious and meticulous research and constant questioning, since the discovery of these "little bodies" which seemed unimportant and which turned out to be essential to the life of every living organism.

Scientists need to be aware of his essential work. This booklet summarises his work and will help them to do so. A paradigm shift, now inevitable, is within their grasp.

After a career as a telecoms engineer, Brigitte Fau became interested in health when she discovered, by chance, the restorative powers of fasting. Her scientific training, in biology and biochemistry in particular, led her to delve deeper into the notion of the Terrain through little-known scientific work.

On her website, she shares the knowledge she has acquired through these « discoveries » :
www.bonnes-habitudes.fr