

L.C. VINCENT BIO-ELECTRONIC METHODOLOGY

An objective means of measurement of the *terrain*,
a method for early detection of the troubles and disorders of degeneration

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SUMMARY

The method developed by Louis-Claude VINCENT, which has been proven for more than forty years and tested on more than 60,000 cases, shows that certain physico-chemical parameters: pH (acidity), rH2 (potential of oxido-reduction) and resistivity (quantity of dissolved mineral salts) measured in the blood, the saliva and the urine, have characteristic values for each human illness. Cancers take hold when blood shows a drift toward a greater and greater alkalinity and becomes more and more oxidized. In marking out this drift at its start, this measurement provides a complementary technique of early detection and screening.

Louis-Claude VINCENT (1906-1988), engineer at the “Ecole Supérieure des Travaux Publics”, devoted his life to working out and elaborating a description of life via the physical definition of a *terrain* that is favourable to life.

Water appeared in this case as an electromagnetic sensor and resonator, transmitting at every moment, the external energy, first absorbed and then modulated, to the structures that it's linked to. It is revealed in this way as a mediator capable of permitting the two elementary particles of quantum nature, which are the proton and the electron, to be apparent at macroscopic scale, in particular in regulating vital phenomena.

This monumental work confirms in a spectacular manner the bases established by another important, but forgotten, individual in the history of science: Professor Antoine BECHAMP (1816-1908), a contemporary of Louis PASTEUR, whose work is fundamentally much more important than that of PASTEUR's as chemist.

The work presented here provides an original view of life: **any micro-organism endowed with life only develops in a terrain (and so in a set of conditions) that is favourable to it.** Consequently, each subject is for a large part responsible for the state of his terrain, and thus of the appearance of infections, pollutions or even internal poisonings, troubles of degeneration, etc., **which justify the interest of real preventive medicine and early detection techniques.**

History of the method

Louis-Claude VINCENT was born on 10 January 1906 in Le Puy (Haute Loire), France, and was awarded a degree in engineering from the “Ecole Supérieure des Travaux Publics” in July 1925. He specialised in hydrology and in public health work: conveyance of drinking water and collection of waste water.

As early as 1936, he observed **the following important fact and phenomenon**: “The mortality rates of illnesses of all types, and in particular tuberculosis, cardio-vascular disorders and cancers, are directly linked to the quality of the water delivered to the concerned populations. They increase, in particular, when this water is very mineralised and made artificially drinkable after physical treatments and the addition of oxidizing chemical products.”

Wanting to find a scientific explanation for these established facts, that were confirmed by numerous French and foreign statistics, L.C. VINCENT searched for the physico-chemical parameters that would make it possible to define the characteristics of a water. Around 1946, he showed that an aqueous solution can be described in a rigorous manner by three factors, which are the basis for the VINCENT bio-electronic methodology (they shall be explained later in this text):

- the pH, which measures the degree of acidity,
- the rH₂, corrected potential, which reflects the oxido-reducer capacity,
- the resistivity ρ (ρ), which gives an overall account of the quantity of dissolved mineral salts.

Armed with these three assessment criteria, he realized that any micro-organism, according to its nature, only develops in aqueous environment in zones that are well defined bio-electronically. Figure 2 represents a diagram describing an aqueous phase according to the pH and the rH₂: the mycelial forms (funguses) grow in oxidized and acid environment, the viral forms in oxidized and alkaline environment, the so-called pathogenic microbes in a more alkaline and reducing environment.

Persuaded that these micro-organisms only develop in the case of humans if the terrain, **locally**, presents the same bio-electronic characteristics that are favourable to them, L.C. VINCENT tried in vain to obtain authorisation to carry out measurements in French hospitals from 1950 to 1952. Lebanon, a country that he visited in 1952-1953, finally made it possible for him to measure the pH, rH₂ and ρ values in the blood of more than two thousand subjects, a wealth of observations that proved that **his intuition was correct** (Figure 3).

He returned to France in 1954 where he caught the attention of Mrs. René COTY, the wife of the President of the French Republic, at the International Health Technicians Exhibition in Paris. He was asked to introduce and make his work and theories known at the Paris School of Anthropology, something he continued to do until 1960.

This period was a particularly productive and fruitful one, notably thanks to the collaboration of doctors and pharmacists. It was at this moment that he expanded the measurement of the three parameters to saliva and urine, measurements that, along with those made in blood, established a real instantaneous photograph of a subject's state of health (Figure 5).

Invited to give conferences in France and abroad (in the USA, Canada, Germany, etc.), his work aroused only little interest, with the exception of a group of German doctors led by Dr. MORELL, who helped VINCENT to create the "Société Internationale de Bio-Electronique Vincent" (SIBEV) in 1972, and the registration of a patent by the NASA, which used the VINCENT technique to monitor the state of health of its astronauts, a registration that was made without the inventor's knowledge!

The first congress of the SIBEV took place on 14 and 15 February 1976 in Königstein (Germany). Organised by Dr. POHLMANN of the Max Planck Institute, it assembled one hundred and twenty doctors, researchers and official delegates. The French government sent its wishes for success. The annals of this congress make up an extremely important and significant work, which groups together all the work having been performed as of this date in the bio-electronic field. It established the results of measurements carried out on more than sixty thousand subjects.

The second congress was held in Frankfurt (Germany) in 1977. The author then had the privilege of organising the third congress in Strasbourg in 1979, where he was elected Vice President of the SIBEV. This event assembled a hundred participants from nine different countries.

It should finally be pointed out that the author succeeded in bringing about a meeting between L.C. VINCENT, Dr. MORELL and Professor Charles-Marie GROS, Head of the Department of Mastology (breast cancer) of the "Centre Hospitalo-Universitaire" of Strasbourg in 1977. The moral and ethical contract that was agreed upon, authorised performing measurements on the patients of this department. These measurements in turn made it possible to confirm, in all points, that which VINCENT and the German group had already observed prior to this (Figure 6) (see below).

Louis-Claude VINCENT died in 1988 without having received the recognition or acknowledgment that his impressive work merited.

The three fundamental parameters

pH

The value of pH provides an account of the free acidity of an aqueous phase. The physical definition indicates that it is a matter of the concentration in H^+ ions, also referred to as protons. The quantity of protons being very low, the logarithmic scale was chosen:

$$pH = -\log [H^+]$$

The pH scale ranges from -2 to 14, usually from 0 to 14, with neutrality found at 7.

From 0 to 7, the environment is rich in protons, and it is said to be acid (becoming more and more acid going toward 0).

From 7 to 14, the environment is poor in protons, and it is said to be alkaline or basic (becoming more and more alkaline going toward 14).

rH2, corrected potential

The value of rH2 reflects the **quantity of available electrons**, liable of being exchanged in the aqueous phase. The potential of classical oxido-reduction E integrates the variations of pH in its value, so it is more judicious to use the rH2 unit which is independent of the pH value.

The calculation leads to the following relation :

$$rH2 = -\log [H_2] = 33.8 E_{(V)} - 2 \log [H^+], \text{ thus :}$$

$$rH2_{(25^\circ C)} = 33.8 E_{(V)} + 2 pH \quad (E \text{ and } pH \text{ are measured using conventional electrodes})$$

The rH2 scale ranges from 0 to 42, with neutrality found at 28.

From 0 to 28, the environment is rich in electrons, and it is said to be reducing (or reduced). It becomes more and more rich going toward 0.

From 28 to 42, the environment is poor in electrons, becoming more and more poor going toward 42, and it is said to be oxidized or oxidizing.

We must also take note of the important theoretical and practical work carried out in 1990 by Dr. J. ORSZAGH, professor of Electrochemistry at the University of Mons (Belgium), to establish the legitimacy of the rH2 unit, invented by W.M. CLARK in 1928, and taken up again by F. VLES, biologist at the University of Strasbourg (Reference N° 6).

The author published an article devoted to rH2 in the "Bulletin de l'Union des Physiciens" in 1996 (reference N° 5).

Resistivity ρ

The resistivity ρ is a parameter that is inversely proportional to the concentration of mineral salts dissolved in an aqueous phase.

It is expressed in $\Omega \cdot \text{cm}$ (ohm. centimeters). Preference is often given to conductivity λ , whose variation is proportional to the concentration in electrolytes:

$$\text{conductivity } \lambda \text{ (in micro-Siemens per cm)} = 10^6 / \rho$$

With respect to blood, saliva and urine, the concentrations are included in the following field:

resistivity	0	100	200	300	350	400	$\rho(\Omega.cm)$
conductivity	-	10,000	5,000	3,330	2,850	2,500	λ ($\mu S.cm^{-1}$)
	-	7,000	3,500	2,330	2,000	1,750	~ mg/l ($\mu S \times 0.7$)
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	excess mineral charge			mineral deficiency			

It should be noted that the richer an aqueous phase is in minerals, the more permeable to electromagnetic influences it is.

L.C. VINCENT's quantification

In copying the classical laws of electricity, L.C. VINCENT worked out a calculation with the goal of identifying an energy proper to the vital liquids of the body.

Since energy $W = \text{potential } V \times \text{intensity } I$
and since $I = V / \text{resistance } r$, it can be drawn that: $W \text{ (watts)} = V^2 / r \text{ (ohms)}$

In returning to the definitions of the bio-electronic:

since the redox potential $E \text{ (millivolts)} = 29,6 (rH2 - 2 \text{ pH})$

it can be drawn that an energy $W \text{ (microwatts/cm}^3) = E^2 / \rho \text{ (}\Omega.cm)$

thus: $W_{(\mu W/cm^3)} = [29,6 (rH2 - 2 \text{ pH})]^2 / \rho$

Since this relation leads to determination of an energy per unit of volume, L.C. VINCENT calculated the potential energy stored in the blood, saliva and urine, in setting their volumes at 5 litres for blood, 1.3 litres for saliva and 1.4 litres for urine.

It is interesting to note, experimentally, that the absolute values of these energies are an index of health with respect to the references, as well as being the figure obtained in determining the difference between the energy eliminated by the urine and the sum of the energies stored in the blood and in the saliva.

In this way, in the case of cancers, the values of the bio-electronic parameters, as well as the quantification, show singular differences with respect to the state of good health (the reference being composed of young soldiers of the Joinville battalion in 1952).

The following record of values speaks for itself:

Perfect health – 1952

	pH	rH2	ρ	$W_{(mW/l)}$	W_{TOTAL}	
blood	7.10	22	210	260	1300	1977 Mw
saliva	6.50	22	140	520	677	
urine	6.80	24	30	3245	4543	
						- 4543 mW
						- 2566 mW

Established cancer

	pH	rH2	ρ	$W_{(mW/l)}$	W_{TOTAL}	
blood	7.60	29	170	1008	5041	6146 mW
saliva	7.30	30	251	850	1106	
urine	4.70	21	84	1441	2018	
						- 2018 mW
						+ 4128 mW

These figures perfectly illustrate the observations accumulated by L.C. VINCENT and all his collaborators (the author tested the method in the Breast Cancer Department of Professor C.M. GROS, of the "CHU" of Strasbourg in 1977 – Figure 6).

The progression of cancers is characterised by:

- blood that is more and more alkaline (the pH increases), more and more oxidized (the rH2 increases), and with a greater and greater excess content of minerals (the ρ decreases), which is expressed, in the quantification calculation, by an amount of stored energy that grows in a spectacular manner,
- saliva that drifts in the same direction as the blood,
- urines that are more and more acid (the pH decreases), more and more reducing (the rH2 decreases) and with lower and lower mineral content (the ρ increases) (the urines eliminate protons and electrons that should remain in the blood, and no longer eliminate enough of the residual minerals).

These experimental facts lead to several comments.

The notion of terrain

a) Figure 1 shows four regions, characterised by their relative richness in protons and electrons. It should be noted that each of them is only favourable to one very specific life form (Figure 2). A common application consists in ridding microbial pollutions from drinking water by treating it with a powerful oxidizing agent such as chlorine or ozone. (We carefully forget, moreover, to inform the consumers of the water in question that the absorption of chlorine leads to harmful effects for the health).

The treatment of the water in swimming pools also causes microbes to disappear, but quite often mycoses can caught there (and very likely viruses, etc.).

b) The VINCENT analyses clearly show, on our contemporaries, that our "modern" living conditions lead to a progressive alkalinization and oxidation of the blood. A good many degenerations accompany this effect. While the fact of finding viruses, since the terrain is favourable to them, does not necessarily imply that they are the responsible elements, that they are the only and true cause of the trouble (Figures 2 and 3).

c) The measurement of VINCENT's parameters is an excellent complementary technique for the early screening of troubles of degeneration, of cancers. The slow drift of the values of the blood and of the urine, as we have seen above, can be revealed very early, and lead to **preventive steps capable of stopping this unsatisfactory evolution, or even of leading to a return to normal values, if the deterioration in question is not in a too advanced state.**

A new conception of life

It is not just by chance that medicine describes to a large extent the damaging effects of **oxidizing stress** (see in appendix). Its consequences are perfectly well evaluated in the light of VINCENT's bio-electronic parameters: a blood that is more and more alkaline and **more and more oxidized**, especially because there are innumerable oxidized molecules found in it that are produced by the action of the reactive oxygenated species.

We principally attribute these damaging effects to the damage caused in the cellular environment by the free radicals, highly reactive species, whose proliferation submerges the immune defence systems. Consequently it is recommended to **take anti-oxidants** in sufficient quantities because of this.

It is interesting to note that as **early as the 1960s** L.C. VINCENT brought to our attention the alkalino-oxidant drift of the blood, that leads to early aging, atherosclerosis, thrombosis, neuro-degenerating disorders, cancers, etc., and that he already recommended at that time some simple steps to be taken:

- "**asclepias acida**": the acid doctor of the Ancients, recommending the use of vinegars, fruits and vegetables, that are all acid and reducers (their parameters are found in region 1 of Figure 1) (Figure 5),

- negativation: **the regular contact with the ground and earth**, which makes it possible to disperse the positive electrical charges created in our daily synthetic universe, and which we store because our soles are made of synthetic materials and so isolate us from the earth. A shower in the evening also makes it possible to eliminate these charges. VINCENT was able to observe that numerous cases of insomnia were due to the persistence of these disturbing electrical charges (he moreover showed that the proximity with high voltage power lines causes the rH2 value in the blood to rise, and so increases its state of oxidation),

- **physical exercise**, which permits stimulating eliminations. Several measurements on sweat have shown that it rejects a very sizeable energy potential W (Dr. M. BRUN),

- the considerable importance of the **quality of the water** that is drunk. Keeping in mind that it is advised to ingest one and a half liter of water a day, which must favourably contribute to our state of health. It plays several roles:

- the drinking water must renew our bodily constitution water, especially that which is linked to our cellular structures. And this water must be the least mineralised as possible, in order to maintain these structures thanks to its insulating properties,
- the drinking water must be the vehicle of the elimination systems. A very highly mineralised water will convey the mineral-residues that we must reject less satisfactorily,
- the minerals contributed by the drinking water, on the contrary to that affirmed by advertising campaigns, can practically not be assimilated. A too great contribution leads to a clogging of the kidneys, which in turn produces a clogging of the blood (characteristic in states of cancer).

It is indispensable that we drink water containing less than 200 mg of mineral salts per litre (see the dry residue indicated on the label): the minerals that are found in the plant kingdom are in a directly assimilable complex form.

- the great interest in **fermented food** and germinated seeds which are acidic and highly reducing, i. e. very rich in available electrons with anti-oxidizing properties.

- the complementation in **antioxydant molecules**, if necessary.

Prospect for the future

The present disclosure, although very summarized, enables us to assess the extent and the practical consequences of Louis-Claude VINCENT *and al.* works.

In laboratory, the measure of rH2 is used to reveal the anti-oxidizing ability of the polyphenols contained in food, and especially in wines.

The technique of measurement of the bio-electronic parameters with respect to blood, saliva and urine is indisputably an essential tool, **complementary to other approaches**, to apprehend some organic terrains, whether from plants, animals or humans. (Figures 3 and 4).

The works led to the European Center of study of the Diabetes to Strasbourg are revealing. They were published (Figure 7).

Also, one can imagine the interest arising from such a picture of the general health condition in order to assess the efficiency of the selected therapies, for a continuous follow-up of surgical operations, and for measuring the effects of blood transfusions, vaccinations (several observations are not quite reassuring...)

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Vol. 2, 1991, p. 81-97; **Vol. 4**, 1992, p. 45-62; **Vol. 5**, 1994, p. 77-87

October 2013

Figure 1

**Four regions characterized by their density
of protons and electrons**

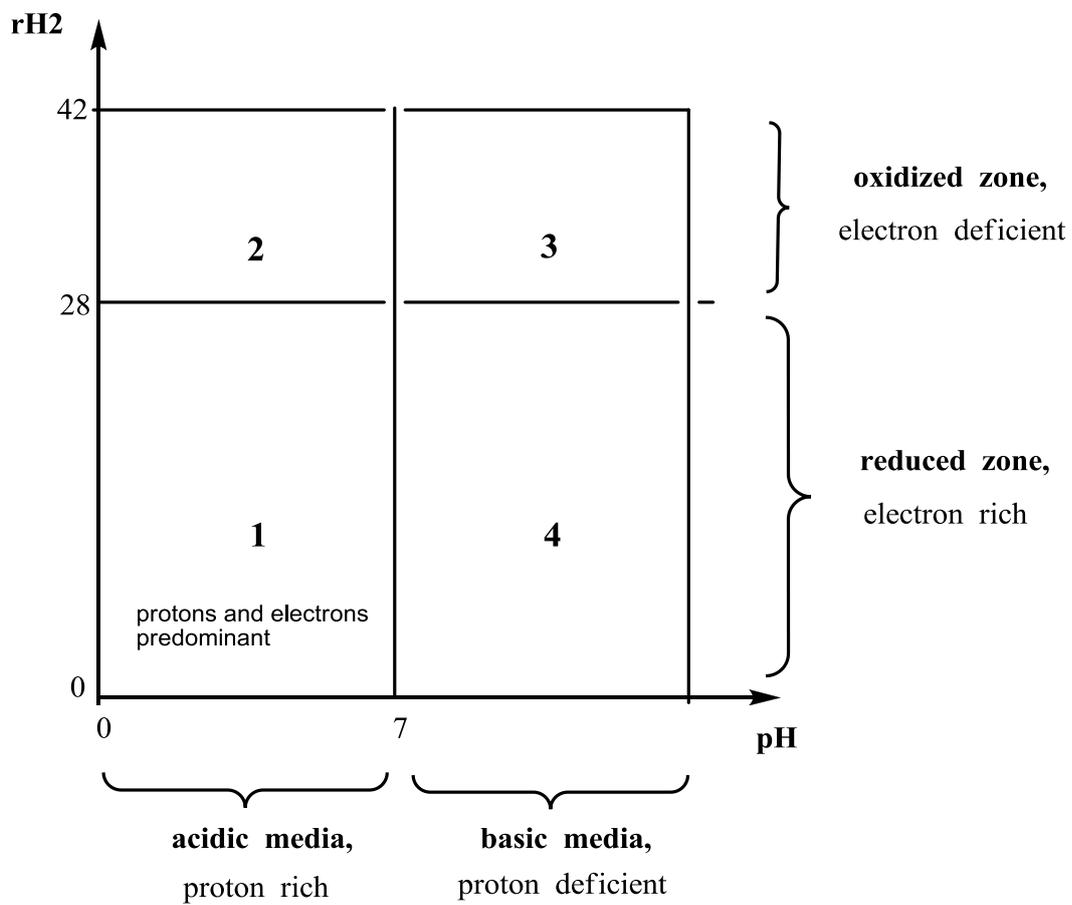


Figure 2

Four regions favorable to the development of certain microorganisms

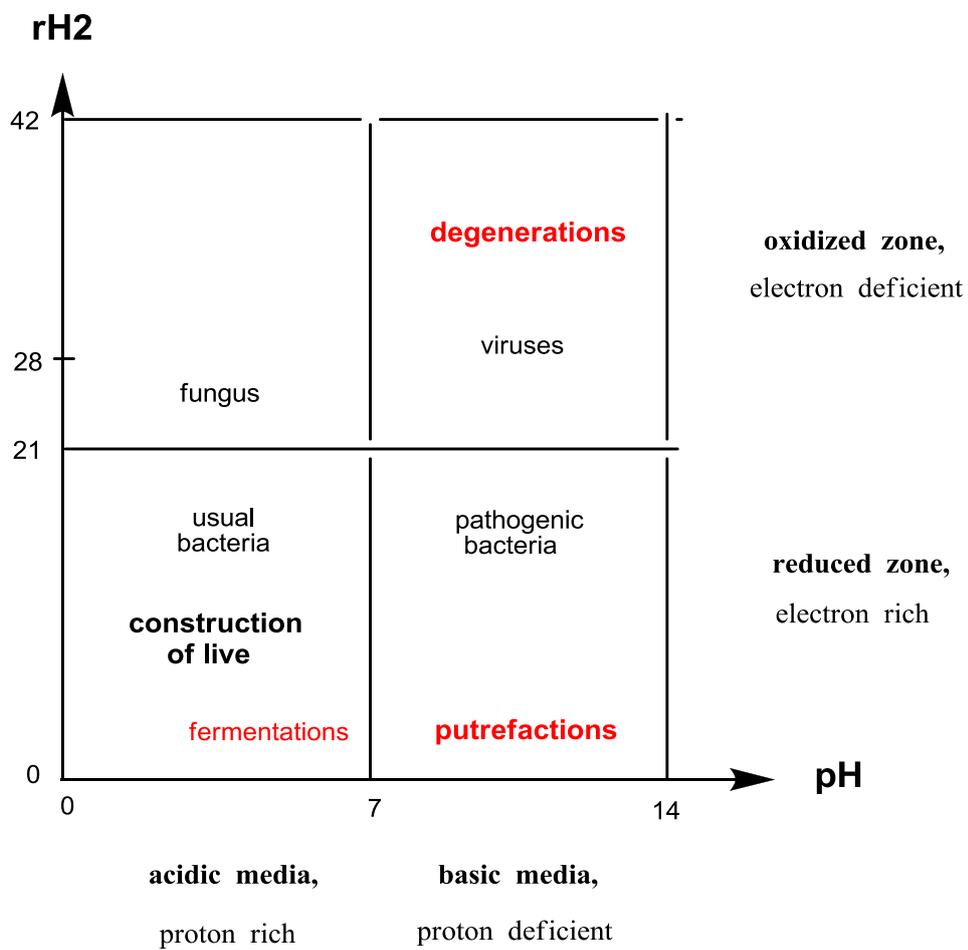
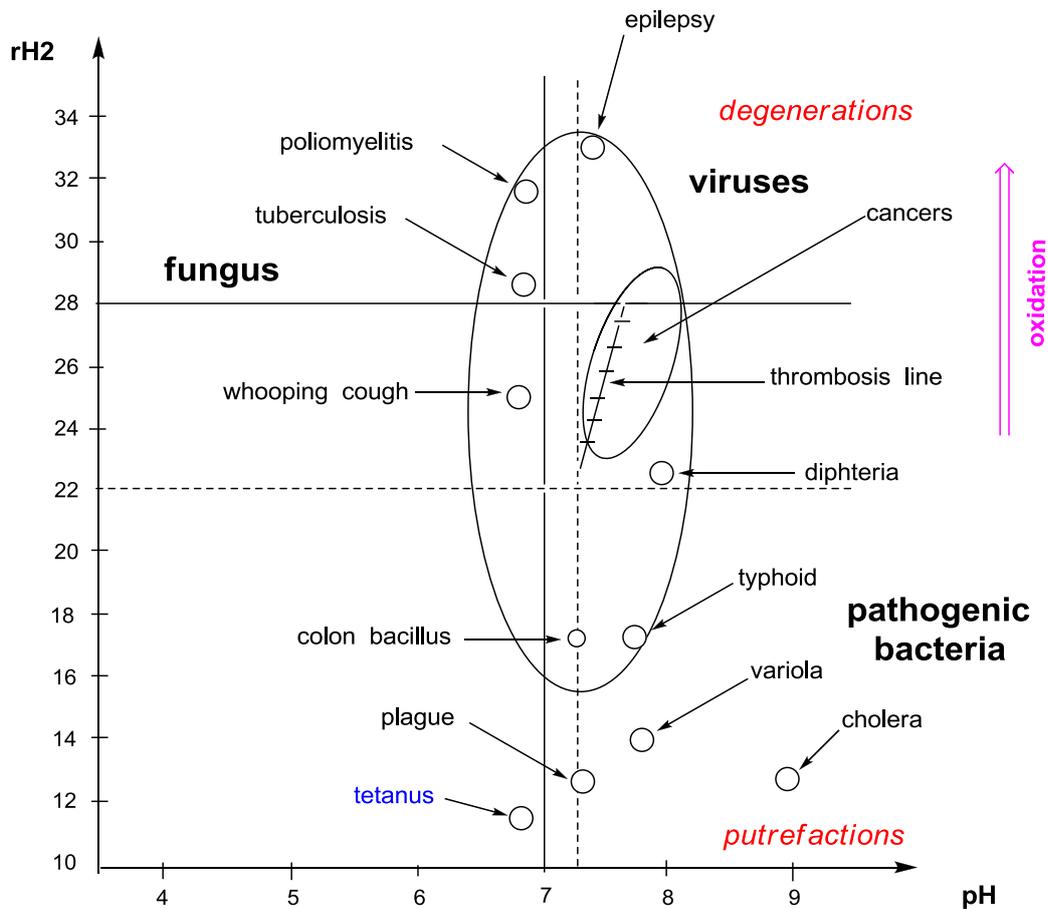


Figure 3

Some illnesses led to characteristic deviations of the rH2 - pH - ρ values of the blood

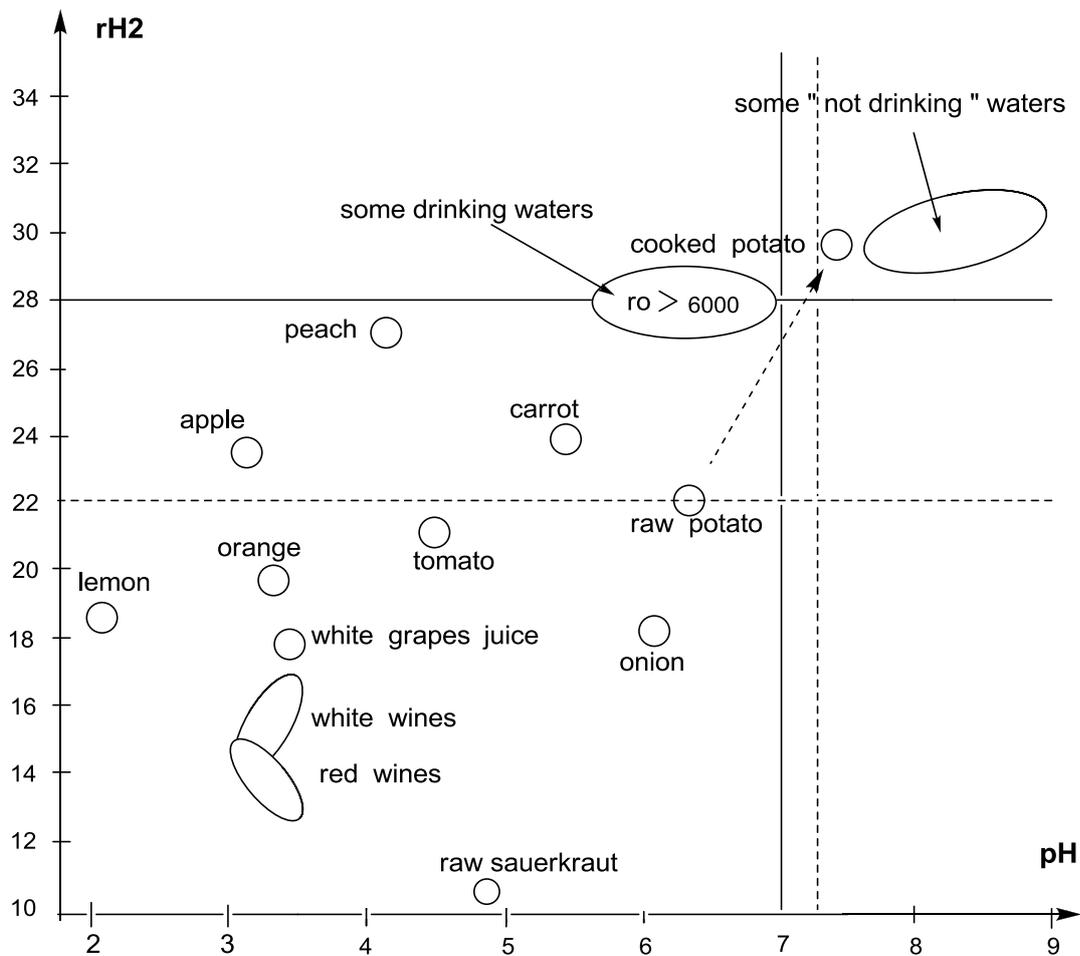


The case of the tetanus is interesting : it develops only in very reducing environment (lack of oxygen). By treating the wound with oxidizers (hydrogen peroxide e.g.), its incidence is seriously limited, without recourse to the vaccine.

It would be useful that the doctors acquaint and apply the works of Prof. DELBET (1861-1957), French surgeon, who stopped the debuts of tetanus by means of a slow intravenous injection of a magnesium chloride solution (published in 1915) !

Figure 4

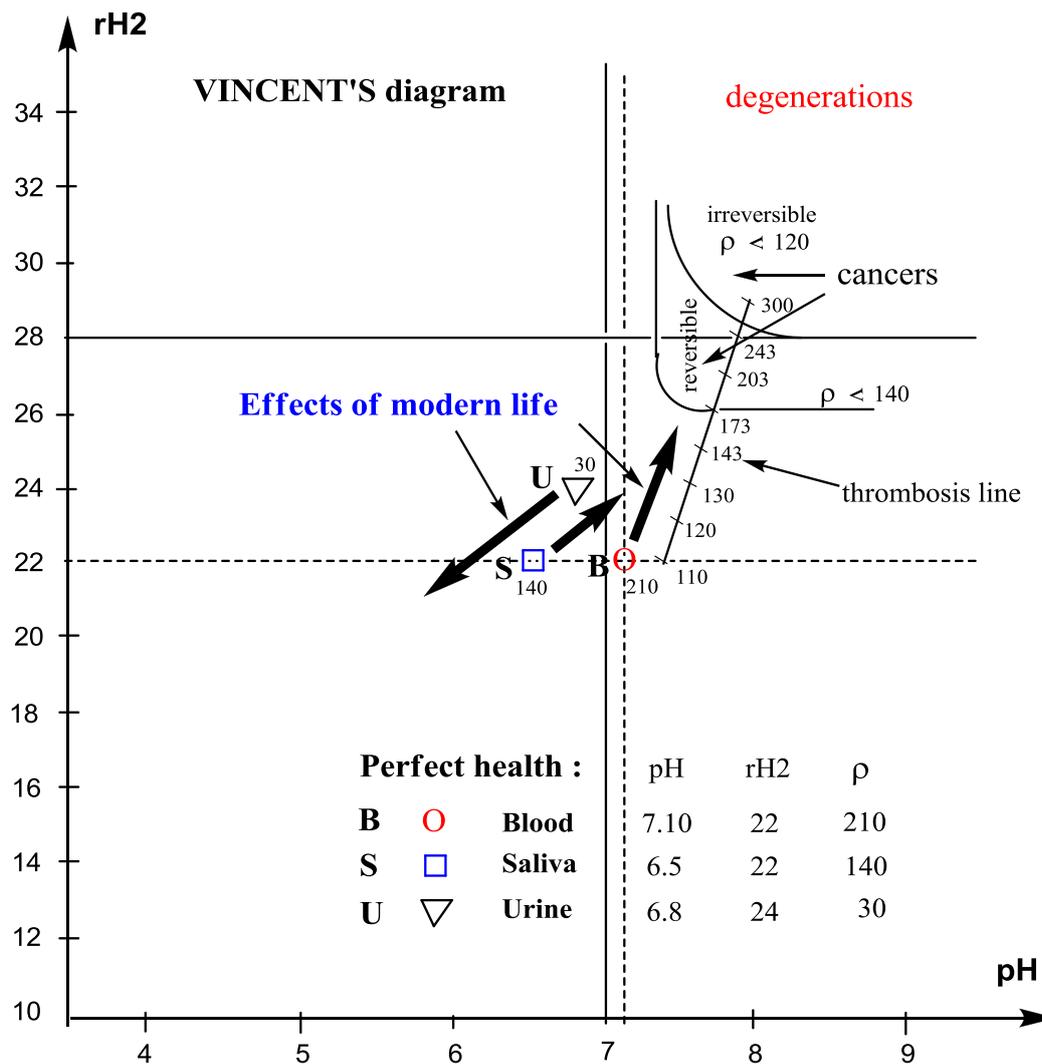
Some values of plant extracts



It should be noted that the cooking leads a simultaneous effect of alkalization and oxidation.

Figure 5

The rH2 - pH - ρ values of blood, saliva and urine : an overview of the health state



The urine eliminates protons and electrons which should stay in the blood. It is the first alarm.

When the representative point of the blood is on the " thrombosis line ", with a resistivity close to that indicated, there is risk of thrombosis by proteins precipitation (observations of L.C. VINCENT).

Figure 6

Measures (pH/rH2 of blood) carried out by the author, in 1977, in the Breast Cancer Department of the Public Hospital of Strasbourg

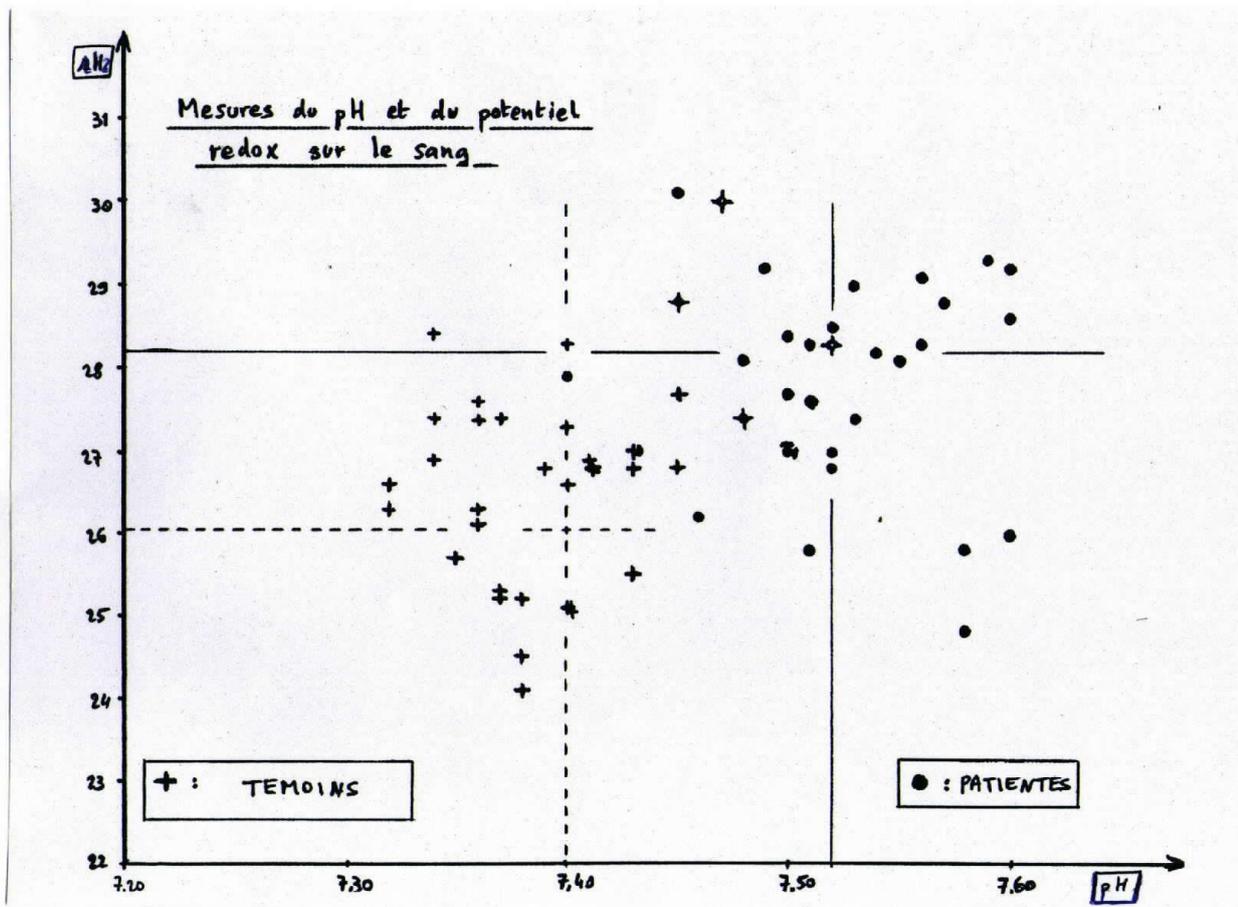


Figure 7

Intérêt des données bioélectroniques, pH et rH2, dans l'évaluation du caractère oxydant du plasma de diabétiques de type 1 et 2 en fonction de leur HbA1c

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Introduction

La bioélectronique permet de déterminer le caractère oxydant ou réducteur des milieux en fonction de leur pH et du rH2. Le rH2 est lié au potentiel redox et au pH par la formule de Nernst ($rH2 = -\log(H2)$). Les thromboses surviennent préférentiellement dans des milieux de rH2 > à 22 (sujets sains < à 21). Une étude a montré une augmentation du rH2 chez les rats diabétiques, les valeurs étant corrélées au degré d'hyperglycémie .
Le but de ce travail est de déterminer le pH et le rH2 de patients diabétiques de type 1 et 2 dont l'HbA1c était < ou > à 8% en les comparant à des sujets sains afin d'évaluer le caractère oxydant du plasma de patients atteints d'une pathologie dont le potentiel oxydant est important.

Paramètres fondamentaux

Le pH : rend compte de l'acidité d'une phase aqueuse. La définition physique indique qu'il s'agit de la concentration en ions H⁺, encore appelés protons. Son échelle s'étend de 0 à 14 avec neutralité à 7.
Le rH2 (potentiel d'oxydo-réduction) : reflète la quantité d'électrons disponibles susceptibles d'être échangés dans la phase aqueuse. Son échelle s'étend de 0 à 42 avec neutralité à 28. De 0 à 28 le milieu est riche en électrons donc réducteur. De 28 à 42 il est pauvre en électrons donc oxydant.

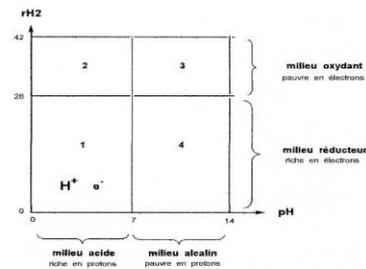


Figure 1

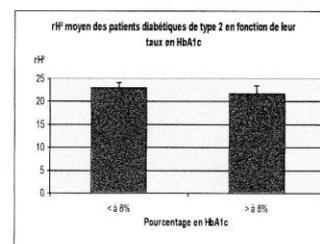
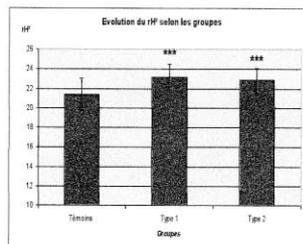
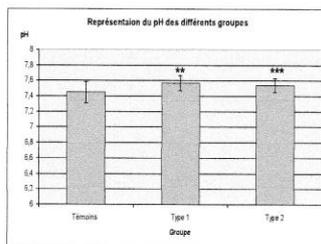
Patients et méthode

Vingt-deux sujets sains (GS, 31ans, IMC: 23kgm²), 20 type 1 (G1, 49 ans, IMC: 26kgm², HbA1c :7,5±0,3%) et 55 type 2 (G2, 62ans, IMC: 30kgm², HbA1c :7,1±0,2%), clairance MDRD > à 60ml/min, glycémie à jeun < à 1,50 g/l.
Méthode : Sang sur EDTA, Les valeurs de pH et de rH2 mesurées sur le sang conservé moins de 4h à 4°C.
Statistique: comparaison par analyse de variance.

Résultats : Moyenne ± Ecart-type

	pH	rH2		pH	rH2
GS	7,45±0,03	21,41±0,34	GS vs G1+G2	p<0,01	p<0,01
G1	7,50±0,02	23,19±0,29	GS vs G1	p<0,05	p<0,05
G2	7,54±0,01	22,87±0,17	GS vs G2	p<0,05	p<0,05

Une différence significative persiste entre GS vs G1 < à 8% de HbA1c et GS vs G2 < à 8% de HbA1c pour le pH et rH2; p<0,01. Pour des glycémies < à 1,50 g/l, la valeur de rH2 n'est pas corrélée à l'augmentation de l'HbA1c.



Conclusion et perspectives

Le rH2 est un indice biochimique global reflétant le caractère oxydant d'un liquide, il est élevé dans les thromboses et dans les diabètes de type 1 et 2 par rapport à une population saine de référence qui nous a permis de valider la technique. Contrairement aux résultats chez le rat diabétique, la valeur du rH2 n'est pas corrélée à celle de l'HbA1c. D'autres facteurs, tel que les traitements de l'hyperglycémie et/ou des hyperlipémies peuvent modifier ce paramètre qui mérite d'être exploré plus avant en clinique et corrélé à d'autres marqueurs du stress oxydant.

Remerciements : laboratoire du CEED Strasbourg