

**VITION™**  
or the  
**RATIONAL (INTRACELLULAR) ELECTROLYTE SUPPLY**

I have investigated the biological and medicinal importance of minerals for 28 years—in particular the relationship between ion-pumps and the ATP-turnover—with special attention to the essential practical implications of the subject.

The conception or rather the essence of VITION™ can be summarized, as follows:

*Living, healthy cells possess*

*A/ a structure characteristic of the cell (race, organ and tissue)*

*B/ a cytoplasmic ATP-concentration characteristic of the cell (race, organ and tissue)*

*C/ an internal environment characteristic of the cell (race, organ and tissue).*

*Intracellular ion concentrations form integral parts of this “milieu interieur”. The cell membrane uses adenosinetriphosphate(ATP)-energy and ion-pumps to keep the following ions at a high concentration inside the cytoplasm:  $K^+$ ,  $Mg^{++}$ ,  $Zn^{++}$ ,  $HPO_4^-$  and  $H_2PO_4^-$ , while it keeps also with the aid of ATP-energy the antagonistic ions ( $Na^+$ ,  $Ca^{++}$ ,  $H^+$ ,  $Cu^{++}$  and  $Cl^-$ ) at a concentration lower than expected from their electrochemical gradient. The cytoplasmic ion concentrations, as coferments, determine the direction and rate of enzymatic biochemical processes. The energy used by the ion pumps is a main component of basal metabolism, therefore very high energies participate in the above processes.*

*Various effects damage the cells of the organism and they cause one of the components (see A, B and C above) to change. Such a change will sooner or later alter the other two components. This group of symptoms is described<sup>1</sup> in the literature as the “sick cell syndrome”. In addition to the decrease in the ATP-concentration, the other major sign of the syndrome is the reduction of the following ion ratio (the numerator decreases, the denominator increases):*



*The unfavourable ion milieu decreases the ATP-formation, which in turn reduces the efficiency of ion pumps, thus the ion-balance deteriorates further. As a result of negative feedbacks, vicious circles are developed. VITION™ contains the five ions in the numerator of the fraction in quantities lower than the recommended daily dose*

<sup>1</sup> “Tired cell syndrome” later “Sick cell syndrome” was described in various clinical pictures in the fifties. The concept has been forgotten nearly completely but the phenomenon does exist.

(RDD) and in the forms of well-absorbed salts . Our clinical experience shows that the administration of VITION™ has frequently reversed (as a result of positive feedbacks) the vicious circles in the sick cells (see Figure 1). The synergistic effect of the five ions is exceptionally strong.

The development objective of VITION™ research was to restore the intracellular ion milieu of sick cells. The intracellular ion imbalance is generally the result of complex problems and is inseparable from the energy(ATP)-deficiency. There is no reconstitution of the ion- and the energy-balance without cell regeneration and the two processes should simultaneously take place.

In addition to the incontestable evidence of the basic idea of the invention, my statements are supported by numerous scientific publications, monographs and clinical experience.

My conception can also be described through a different approach: balance tests have demonstrated (already not less than 50-60 years ago) that in catabolism, there is a tight correlation between the ions in the numerator of the fraction and the nitrogen (protein) balance. This balance is negative in catabolism and becomes positive in the reparation stage (anabolism) while the correlation is maintained (see Figure 2). I have come to the definite conclusions that:

1. In disease-associated catabolisms, all the so-called intracellular ion concentrations are generally decreased (while the concentration of the antagonistic ions and the amount of water is increased), the ATP concentration is reduced and the cell structures might occasionally be damaged.
2. After stabilization, a new energetic and electrolyte balance is established in the cells at a lower level. This condition may last long even until the end of life (chronically sick cell). **If the cells have recuperation reserves or the changes can be reversed partly or completely, then the cells are capable of restoring their original condition. The developed salt combination can trigger anabolism. The ratios are important, but it is even more essential to administer sufficient quantities of the five electrolytes at the same time (see Figure 1) AND THE VICIOUS CIRCLE IS REVERSED.**

Clinical observations extensively confirm the conception .

Medical literature describes the existence of “sick cell syndrome”, for example, in cardiopathies (such as ischemic heart disease, cardiomyopathy and heart infarction), atrophic liver, anorexia, various diseases of the striated muscles, (ischemic) impairment of the central nervous system. Given that the syndrome has rarely been studied in a complex manner<sup>2</sup> and even less physicians have come to the idea of treating the above clinical conditions with a selected electrolyte combination, the patent rights could always be defended. The conception is also supported by some

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<sup>2</sup> There is no method for the simultaneous determination of intracellular ions as of today, consequently there is room for speculation.

studies, which have investigated the syndrome in its complexity<sup>3,4</sup>.

Based on my clinical observations with the administration of VITION™, the following conditions/indications deserve further investigations:

- a. Administration together with non-potassium-sparing diuretics. In cardiac and cirrhosis-associated edemas, VITION™ seems to potentiate the effect of furosemide and simultaneously reduce its undesirable side effects<sup>5</sup> (e.g., asthenia).
- b. Reduction in the number of ventricular extrasystoles was observed with patients after one to two weeks of VITION™ administration (it is perhaps even more important that the feeling of palpitation decreased significantly)<sup>6</sup>.

We reported our experience on indications a. and b. at the Congress of Hungarian Cardiologist, Balatonfüred in 1993. We underlined in our presentation that VITION™ stopped the cachexia associated with cardiac decompensation, in other words, it turned catabolism into anabolism. According to the latest state of art, cardiac decompensation is classified as a malign disease whose most important associated phenomenon is the catabolism, which is considered irreversible.

- c. Alcohol detoxication, alcohol abstinence. VITION™, as an adjuvant therapy, significantly reduces the somatic symptoms of alcohol withdrawal and decreases the period of detoxication<sup>7</sup>. I have reported my experience in this field on seven occasions, among them at the 2<sup>nd</sup> Congress of the Hungarian Addictologist Association, where it was received with positive reactions.
- d. Certain organic diseases of alcoholic origin<sup>8</sup>, e.g., in vascularly decompensated liver cirrhosis, VITION™, as an adjuvant (together with diuretics), resulted in the elimination of resistant ascites in the majority of patients. In alcoholic polyneuropathy, VITION™ was administered together with Vitamin B1, and frequently an objective improvement was observed after a few weeks, which could be demonstrated also by ENG results. Remission with traditionally treated patients is generally observed only after several months. The positive changes (which practically never take place spontaneously) are conspicuous in these clinical cases, probably due to the fact that toxic agent (alcohol) has already been withdrawn in the treatment stage.

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<sup>3</sup> I. Dorup: Magnesium and potassium deficiency, its diagnosis, occurrence and treatment in diuretic therapy and its consequences for growth, protein synthesis and growth factors. Acta Phys. Scand. 150: Suppl. 618, 1-55. 1994.

<sup>4</sup> W.E.C. Wacker et al: J, Theor. Biol. 20 : 65-78, 1968.

<sup>5</sup> It is described in the literature that treatment with non-potassium-sparing diuretics results not only in excessive potassium and magnesium elimination but also in phosphate and zinc deficiencies.

<sup>6</sup> The so-called benign ventricular extrasystoles are generally not treated because the risk:benefit ratio of the majority of anti-arrhythmic agents is unfavourable. The absence of therapy would call for an effective product with no side effects. Clinicopharmacological investigations would be promising in this indication because an objective test method (HOLTER) is available.

<sup>7</sup> VITION™ is also effective in the treatment of the symptoms of hang-over, so it could be used as a product for primary prevention.

<sup>8</sup> Sikter: Clinical importance of feeding up patients suffering from vascularly decompensated liver cirrhosis of alcoholic origin and polyneuropathy. Presentation in the Scientific Circle of the Saint Rokus Hospital, Budapest in 1997.

- e. To support the roboration of anorexic patients. (See also paragraph d.)  
VITION™ improves the appetite to an astonishing extent, which is not accompanied always by an increase in body weight or obesity because the metabolism rate is probably increased at the same time. (Remember: VITION™ acts towards the restoration of the genetically coded relations.)
- f. To influence hyperventillation towards normalization. Hyperventillation plays an important role in several clinical conditions, including panic disease. The US patent was granted to use VITION™ in the treatment of panic disease.

### **A Brief History of VITION™**

**1976** The inventor came to the idea how to adapt the 2<sup>nd</sup> Law of Thermodynamics to cell biology.

**1976-1989** Details of the theory were elaborated.

**1989** A contract was signed with EGAL —a small-scale Hungarian pharmaceutical manufacturer— for the development of VITION finished product.

**1990** Hungarian and international patent applications with the aid of EGAL.

**1992** EGAL goes bankrupt but the National Institute of Pharmacy registers VITION™ granules in sachets of 1.6g, under the number of OGYI 358/1992, as a parapharmaceutical product.

**1992** A limited company (S+V Kft) is formed with the participation of the inventor to take over the manufacturing and marketing rights of VITION™ from EGAL. The costs of the international patent applications soon overburden the budget of S+V Kft.

**1999** The owners of S+V Kft. returns all rights to the inventor who keeps on maintaining the patents.

**1992-2001** VITION™ was marketed in Hungary. The special dosage form (granules in sachets) did not become popular and VITION™ was used in a relatively small segment of the market. It should be noted, however, that side effects were not reported during the 10-year period.

**2000** The inventor signed a contract with RZB Inc., a US company. At springtime, Scitecnutrition-VITION is marketed in the USA, as a food supplement and natural anabolic agent used in body building. The market leader in the USA was a ZMA (magnesium and zinc) product which is generally considered as the prototype of natural anabolic agents. [It should be noted in this respect that the inventor applied for a patent in Hungary in 1990, which is still valid and contains two components, namely magnesium and zinc.]

**2003** The inventor has initiated steps to register VITION™ hard-gelatin capsules as an over-the-counter drug in Hungary.

## Composition

The registered composition of VITION™ sachets:

Magnesium aspartate	1146 mg
Potassium hydrogen phosphate	228 mg
Potassium dihydrogen phosphate	178 mg
Zinc aspartate	16 mg
Excipients to make	1600 mg

Approved dosage: two or three times a sachet daily before meals or half an hour before bedtime.

## Intellectual property rights

Hungarian, English, German, USA and Australian patents + registered trade name in 13 European countries.

**Priority date:** 10 May 1990.

### Countries with valid patent protection

Hungarian patent 207.800, Australian patent 651824, British patent 0530220 (EU number), German patent 69127541.6-08, and US patent 5,348,749.

All the intellectual property rights are owned by the inventor:

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