



Germanium Data From Europe

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Germanium may be one of the most promising therapeutical substances of recent years. In Japan in 1987, at the International Conference on the Therapy of AIDS, six potential anti-AIDS drugs were discussed. One of these was a germanium compound.¹ A placebo controlled study has been performed in the Cuernavaca Civic Hospital in Morelos, Mexico, with germanium. Twenty volunteers with AIDS were given germanium or a placebo next to a standard treatment for eighteen months. The health of eighty percent of the germanium group improved.²

These data have been reported at an international germanium convention in Nijmegen, the Netherlands, held in November 1988. At this symposium, results were presented regarding the clinical application of germanium. Several European clinicians had been invited to present their experience with germanium.

This was the second conference in Europe on germanium. The first took place in Hannover, West Germany, in 1984. At that time results were presented about germanium-lactate-citrate (Ge-LC), a compound which is used in Europe next to germanium-sesquioxide (Ge-132). There are other organic germanium compounds like germanium-aspartate, germanium-lactate, germanium-citrate and sodium-ascorbico-citrico-succinico-germanate. In experiments regarding stability, toxicity, mutagenity and teratogenicity (Na-ascor-bico-citrico-succinico-germanate appeared to be teratogenic), germanium-LC turned out to be the best form. In the 1980's much research has been done on this compound, especially at Polish universities. Of course, toxicity studies are always necessary, but in the case of organic germanium there is a special reason. The pharmaceutical company Smith, Kline and French (this company developed Tagamet) has patented

another organic germanium compound, spirogermanium. Many studies have been done with this agent, especially in the treatment of cancer, and it appears to be neurotoxic. In animal studies with germanium-LC no toxicity showed up. Samo-choviec and Lekim gave 96 rats different dosages of Ge-LC from 0 to 5000 mg/kg/ day (over a period of twenty weeks). None of the animals became ill or died. The general condition, the growth, the food intake and the motoric activity were, in all groups, the same and normal.³ Many other toxicological studies have been performed without finding any negative effects. Germanium-LC has been applied mainly in Germany. The application has been observed in 35 practices and clinics where 118,000 dosages of Ge-LC have been given. Side effects of Ge-LC have not been reported, though dosages went as high as 180 mg per day.⁴

At the Hannover convention other specifics on Ge-LC were presented.⁵ Fifty percent of Ge-LC is absorbed within one hour. The plasma reaches its top level two hours after administration. The elimination of Ge-LC is very rapid. After three days germanium has been totally excreted via the urine.

From studies in Japan it is known that Ge-132 has immuno-modulatory activity,⁶ (a review article). It activates macrophages and increases the production of natural killer cells. Probably the most potent effect is the induction of interferon, because of which germanium has anti-virus activity and is effective in the treatment of AIDS. At the University of Hannover experiments with Wistar rats showed that Ge-LC increased the concentration of glutathion (GSH).^{7 8} The concentration of malion-di-aldehyde (MDA) was decreased. MDA is a metabolite of fatty acids, which are peroxidized by free radicals. The fact that GSH raised and MDA dropped, indicates that germanium inhibits the peroxidation of fatty acids.

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Clinical results confirm the immune stimulating effects of germanium. Case-studies were reported at the convention in Nijmegen. The lecturers agreed upon the fact that, when they applied germanium, they saw striking effects. The comparison was made with selenium, of which sufficient research is available in its treatment of many degenerative diseases. For many years it too was thought to be toxic to the human body. But with selenium, the dramatic effects of germanium were never seen.

The Belgian physician Fobelets follows his patients with a special diagnostic method, the Fiche Reticulo Endothelial Differentielle after Vernes-Augusti. (With this French method the progress of a disease can be followed by the precipitation profile of proteins in the blood. Immunity, allergies and infections can be measured.) He discussed four patients with poly-arthritis, mono-arthritis (of the knee), pyoderma gangrenosa and metastases of a mama-carcinoma. Firstly he has treated these patients with his standard non-toxic therapies like neural therapy, thymus extracts, ozone-therapy, anti-oxidants and other nutritional means, but these did not bring desired results. Then he decided to give 45-90 mg germanium per day. Not only did the patients feel better, but he also found that the precipitation profiles improved, especially an improvement of the immune capacity. The allergic profile disappeared as well, according to the Vernes-Augusti method. The patient with the mama-carcinoma got 45 mg germanium three times daily, every three days. The rationale behind the intermittent administration is that every physiologic phenomenon occurs bi-phasically and to take into consideration the principle of action and reaction, the patient is allowed time to recuperate. After two months treatment, the patient recovered. The pain disappeared and appetite improved. Also her general energy increased. The protein-precipitation-profile slowly returned to normal and the oncologists of the Jules-Bordet-Institute in Bruselles declared

that her condition was 'very satisfying'.

The experiences of Dr. Fobelets were confirmed by the other lecturers. Germanium has been applied in all kinds of diseases, mainly with an immunity component, such as arthritis, allergies, cancer, *Candida albicans* infections, Raynaud's disease and AIDS. These data correspond with those of Kazuhiko Asai, the pioneer on organic germanium.⁹

Although the therapeutic value of germanium may not yet be thoroughly established, these initial results are very encouraging.

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