

# DEVELOPMENT OF THE HIGH pH CANCER THERAPY

by

**A. Keith Brewer, Ph.D.**

## **NORMAL CELL TURNS CANCEROUS:**

A normal cell will turn into a cancer cell when the supply of oxygen is cut off but the supply of glucose is permitted to continue. In the absence of oxygen the cancer cell completely loses its pH control mechanism. The glucose undergoes fermentation and the pH of the cell drops from the normal value of 7.35 to 7 and then the 6.5 range. In the low pH range the acids attack the DNA, completely destroying its template action. Messenger RNA is then drastically changed, and the control mechanism for the cell is destroyed. The acid medium also induces chromosomal aberrations, thus adding to the loss of cell control. In addition to the above, in the acid medium the enzymes within the cell become very toxic, eventually bringing about the death of the cell as well as of the host. A tumor, therefore, consists of a layer of living cells with uncontrolled growth surrounding the central mass of dead cells.

## **RESEARCH BASIS FOR THE HIGH pH THERAPY:**

The High pH Therapy has its basis in the fact that the strong alkali elements potassium, rubidium and especially cesium are readily taken up by cancer cells when they are in abundance in the adjacent fluids.

The High pH Therapy was arrived at by the author from a detailed series of physical experiments. This study consisted of a series of tests on the isotope effect through membranes of many types, namely synthetic, natural plant and animal membranes, embryonic membranes and cancer membranes of a wide variety of types. This work was followed by a series of tests on the fluorescence and phosphorescence decay patterns of a wide variety of cells.

The isotope results showed that in synthetic cells, embryonic cells and cancer cells, atoms of potassium, rubidium, and cesium are taken up and transported into the cell in proportion to the frequency with which they strike specific areas on the membrane surface. When tests were performed with all other cations in the Electromotive Series, it was found that they were also taken up and transported into the cell in proportion to the frequency with which they strike specific areas on the membrane surface, but this proved true only for embryonic and synthetic cells, not for cancer cells. In contrast, the cancer cell membrane does not attach and transmit cations below potassium in the Electromotive Series such as sodium, calcium and magnesium into the cell. Thus the calcium content of cancer cells is of the order of one percent of that in normal cells. It is the ions such as calcium, magnesium, and sodium that transport oxygen into healthy cells. It is this anaerobic condition, or lack of oxygen in the cell, as pointed out by Warburg as early as 1924, that causes the switch in the cell metabolism to a process of fermentation from glucose. This is the hallmark of the cancerous cell, the fermentation process of metabolism rather than the normal oxygenation process of healthy cells.

# HIGH pH THERAPY

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## PART I

### I. THE HIGH pH CANCER THERAPY HAS ITS BASIS IN THE FOLLOWING:

- (1) In cancer cells the pH control mechanism is completely lost.
- (2) At a pH below 6.5 and above 7.6 cell mitosis ceases.
- (3) At a pH below 6 and above 8 the life of the cell is short.
- (4) At a pH above 7.5 cancer cells become palliative, since the acid toxins formed in the cancer cells are neutralized and thus rendered nontoxic.
- (5) Cesium, Rubidium and Potassium salts of nontoxic acids are readily taken up by cancer cells in proportion to the frequency with which the atoms strike the membrane surface.
- (6) The toxic dose for CsCl is 135 gms; RbCl is 125 gms; KCL is 150 gms. The presence of Vitamins C and A reduce dosage.
- (7) Dead alkaline cells are readily absorbed by the system and eliminated in the urine.

### II. THE HIGH pH THERAPY: DAILY DOSAGES ADMINISTERED IN DIVIDED DOSES 3 TO 4 TIMES PER DAY:

- |                        |                                |
|------------------------|--------------------------------|
| (1) CsCl               | 3 to 6 grams (see notes 1,2,3) |
| (2) KCl                | 2 to 4 grams                   |
| (3) Vitamin C          | 5,000 to 10,000 milligrams     |
| (4) Vitamin A          | 50,000 units                   |
| (5) Zn gluconate       | 100 to 200 milligrams          |
| (6) Selenium (organic) | 100 to 200 micrograms          |
| (7) Amygdalin          | physician directed amounts     |

#### NOTE ONE:

Dr. Hellfried E. Sartori of the "Life Science Universal Clinic" used 6 grams per day of CsCl, administered in 3 doses of 2 grams each and taken immediately after eating. He uses this along with a full array of nutritional support substances. He has reported his research results with 50 patients in a published article. (available from Brewer Science Library)

#### NOTE TWO:

Dr. Hans Nieper has administered 6 grams per day and sometimes more, but only under direct supervision. They are given in 3 to 4 divided doses after eating. He gives the CsCl salt in a sorbitol solution to prevent any nausea. He also uses various forms of amygdalin and other nutritional support substances such as Vitamins C and A.

#### NOTE THREE:

Small doses of CsCl such as 0.5 grams per day should not be given. These small dosages will be sufficient to raise the pH of the cancer cells only into the high mitosis range, and hence may speed up the rate of cancer growth. It is essential that sufficient CsCl must be given to raise the pH into the 7.8 and above range.

#### NOTE FOUR:

The KCl and Vitamin E are given to help the normal cells which have been poisoned by the acid toxins that leak out of the cancer cells.

#### NOTE FIVE:

Direct injection of salts into the tumor mass itself is not recommended. When the mass is punctured the cancer cell toxins may leak out and poison the system. This was observed in mice.

### III. MECHANISM OF ACTION AND FUNCTION OF THE VARIOUS INGREDIENTS

(1) CsCl. Cesium and rubidium, along with potassium are powerful alkali electron acceptors. They enter the cancer cells in proportion to the frequency with which they strike the membrane surface. All three elements are effective in raising the cancer cell pH.

(2) Vitamin C. Vitamin C has been shown to drastically increase the Cs, and Rb uptake by cells due to the fact that it is readily absorbed by the cells, and being a weak acid it enhances the negative gradient across the cell membranes.

(3) Vitamin A. Vitamin A behaves the same as vitamin C.

(4) Zinc salts liberate ZnO within the cell which is adsorbed on the cell membrane. ZnO is a moderately strong electron donor, hence it materially enhances the pickup of Cs, Rb, and K ions.

(5) Selenium behaves the same as zinc.

(6) Amygdalin. Amygdalin breaks down in the cancer cells to liberate HCN. The C=N radical is adsorbed on the cancer cell membrane. It acts as a very broad and moderately strong electron donor, which drastically increases the surface capacity to pick up Cs, Rb, and K ions.

(7) Vitamin E. Vitamin E is a strong reducing agent and thus tends to remove attached molecules and atoms from the cell membrane.

#### IV. ADMINISTRATION:

Cancer patients are prone to nausea. This effect in some cases is enhanced by the administration of Cs, Rb, and K salts. This nausea effect can be reduced and usually eliminated by administration in moderate doses along with food, or preferably soon after taking food. It is therefore advisable to divide the daily dose of 6 to 7 grams of CsCl into 3 parts and administer it throughout the day after food intake. The preferred dose for CsCl is 2 grams taken after eating 3 times per day.

#### V. COMMENTS: MECHANISM OF CARCINOGENESIS

##### STEP 1

Carcinogenic type molecules become attached to the P=O radicals which characterize all membrane surfaces. In the energized state these radicals become reactive: Their reactivity depends on two factors: (1) their energy state, and (2) the electron acceptor capacity of the adjacent molecules. In the energized state the P=O radicals become very powerful electron donors. In the presence of attached molecules to the membrane surface the P=O radicals can no longer be raised to high energy quantized states.

##### STEP 2

In the ground state the P=O radicals can attract Cs, Rb, and K ions and draw them into the potential gradient across the membrane. Cs<sup>+</sup> transports 3 molecules of associated water, Rb<sup>+</sup> does 5 molecules and K<sup>+</sup> 7 molecules of water as well as glucose. Cations below K in the Electromotive Series cannot enter cancer cells. As a result oxygen which is transported by these heavier and more highly associated cations cannot enter cancer cells. In the absence of oxygen the glucose instead of being burned to carbon dioxide and water, undergoes fermentation to lactic acid. The cancer cells then lose their pH control mechanism and go acidic.

##### STEP 3

In the acid medium of the cancer cells, the positive and negative radical sequence of DNA is completely altered. Amino acids are also changed. As a consequence messenger RNA is changed and the cell loses its control mechanisms.

##### STEP 4

In the acidic medium the normal cell enzymes such as lysosomal enzymes are changed into powerful toxins, as pointed out by M. Von Ardenne of Dresden, Germany, and also as observed in the mouse experiments. These toxins leak out of the system and poison the host. They can also serve as carcinogens.

##### COMMENTS:

In the 40 plus human patients treated with cesium therapy (in the 1980's) it was observed that all pains associated with the cancer disappeared within 12 to 24 hours. In a few cases where the patient had been on chemotherapy and was taking heavy doses of morphine as much as 36 hours was required for morphine withdrawal. In every case the cesium corrected the pain problem associated with all the cancers tested. The same also was observed in the mouse tests.

# HIGH pH CANCER THERAPY PART II

## THERAPY BASIS:

Cancer cells lose their acid-base, pH control mechanism. Cancer cells have a low pH ranging from 7.0 to 6.5 as compared to 7.35 for normal cells. This means that they are moderately to quite acidic as compared to healthy cells.

Due to the acid state the normal enzymes formed within the cell become quite acidic and hence become toxic. Lysosomal enzymes, for example become extremely toxic.

A mass spectrographic analysis of cancer cells showed that the cell membrane readily attached cesium, rubidium and potassium, and transmitted these elements with their associated molecules into the cancer cell. In contrast cancer membranes did not transmit sodium, magnesium, and calcium into the cell: the amount of calcium within a cancer cell is only about 1% of that for normal cells. Potassium transports glucose into the cell. Calcium and magnesium transport oxygen into the cell. As a consequence of the above, oxygen cannot enter cancer cells so the glucose which is normally burned to carbon dioxide and water undergoes fermentation to form lactic acid within the cell. This anaerobic condition was pointed out by Warburg, as early as 1924.

Potassium, and especially rubidium and cesium are the most basic of the elements. When they are taken up by the cancer cells they will thus raise the pH of the cells. Since they are very strong bases as compared to the weak lactic acid it is possible that the pH will be raised to values in the 8.5 to 9 range. In this range the life of the cancer cell is short, being a matter of days at the most. The dead cancer cells are then absorbed by the body fluids and eventually eliminated from the system.

Potassium, rubidium, and cesium salts are very similar in their action to sodium. Their chlorides have about the same toxicity. The toxic dose of cesium chloride, for example, is 135 grams. Too much cesium, however, may have an over stimulating effect, since it enhances action potential of the nerves.

Cesium, rubidium, and potassium salts can be administered orally or injected into the blood stream. They may also be injected directly into the tumor mass, but this possibility requires more research. Tests today on mice and humans have all been confined to an oral intake.

## A POTENTIAL CANCER THERAPY:

The objective of this therapy is to increase the cesium, rubidium, or potassium content of the body fluids and hence induce the tumor cells to become alkaline. The dosages given below are for the first week of treatment. After that they may be increased in amount to twice the given values:

Therapy Doses (to be supervised by a physician)

2 grams of cesium chloride 3 times per day in water

1 gram of Ascorbic acid, Vitamin C, 5 times per day

100 mg. chelated zinc

Amygdalin as recommended

The cesium salt is the curative agent. The Vitamin C enhances the cell's ability to take up alkalis. The selenium and amygdalin enhance the ability of the cancer cell membrane to attach and transmit cesium or rubidium into the cell.

### EFFECTS OF THE CESIUM THERAPY:

The immediate effect of the cancer therapy is to lessen the pain and side effects of the tumor. This is a result of the cesium neutralising the effects of toxic enzymes which leak out of the cancer cells. The tumor cells eventually die and are absorbed by the body fluids and eliminated.

It is interesting to note that the areas of the earth where the incidences of cancer are very low all have foods which are high in rubidium and cesium.

Mouse tests showed that a daily rubidium intake drastically reduced the size, and apparently eliminated the side effects of cancer in mice. More recent data obtained at the University of Wisconsin-Platteville and the School of Medicine, Lubbock, Texas shows cesium to be even more effective than rubidium.

## HIGH pH CANCER THERAPY PART III

### I. BASIS:

The attachment of carcinogens to the cell membrane drastically alters what can and cannot enter the cell. This change causes cancer type cells to completely lose their pH control mechanism.

The cations  $K^+$ ,  $Rb^+$  and  $Cs^+$  can very readily enter cancer cells. Potassium ions transport glucose into the cells.

Cations below potassium in the Electromotive Series cannot enter cancer cells. It is these heavy cations that transport oxygen and amino acids into the cell. The amount of calcium in a cancer cell is only about 1% of that for normal cells.

The pH in cancer cells drops from the normal value of 7.35 to the 7 or 6 range due to the fermentation of the glucose within the cell in the absence of oxygen. In this acid medium the fluid within cancer cells becomes very toxic, eventually killing the host.

Potassium, rubidium, and cesium cations when present in the adjacent body fluids are readily taken up by cancer cells. Since these are very basic elements, their uptake causes the pH to rise to about 7.5 under normal conditions and to the 8 to 9 range when added to the fluids.

The effect of the High pH Therapy is that (1) the acid toxins are neutralized and thus rendered harmless and (2) at a pH above 8 the life of the cell itself is very short.

### II. THE TOXICITY OF CESIUM, RUBIDIUM AND POTASSIUM SALTS

The above cations when associated with nontoxic anions are relatively nontoxic. Adverse effects are noted only in very large amounts.



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