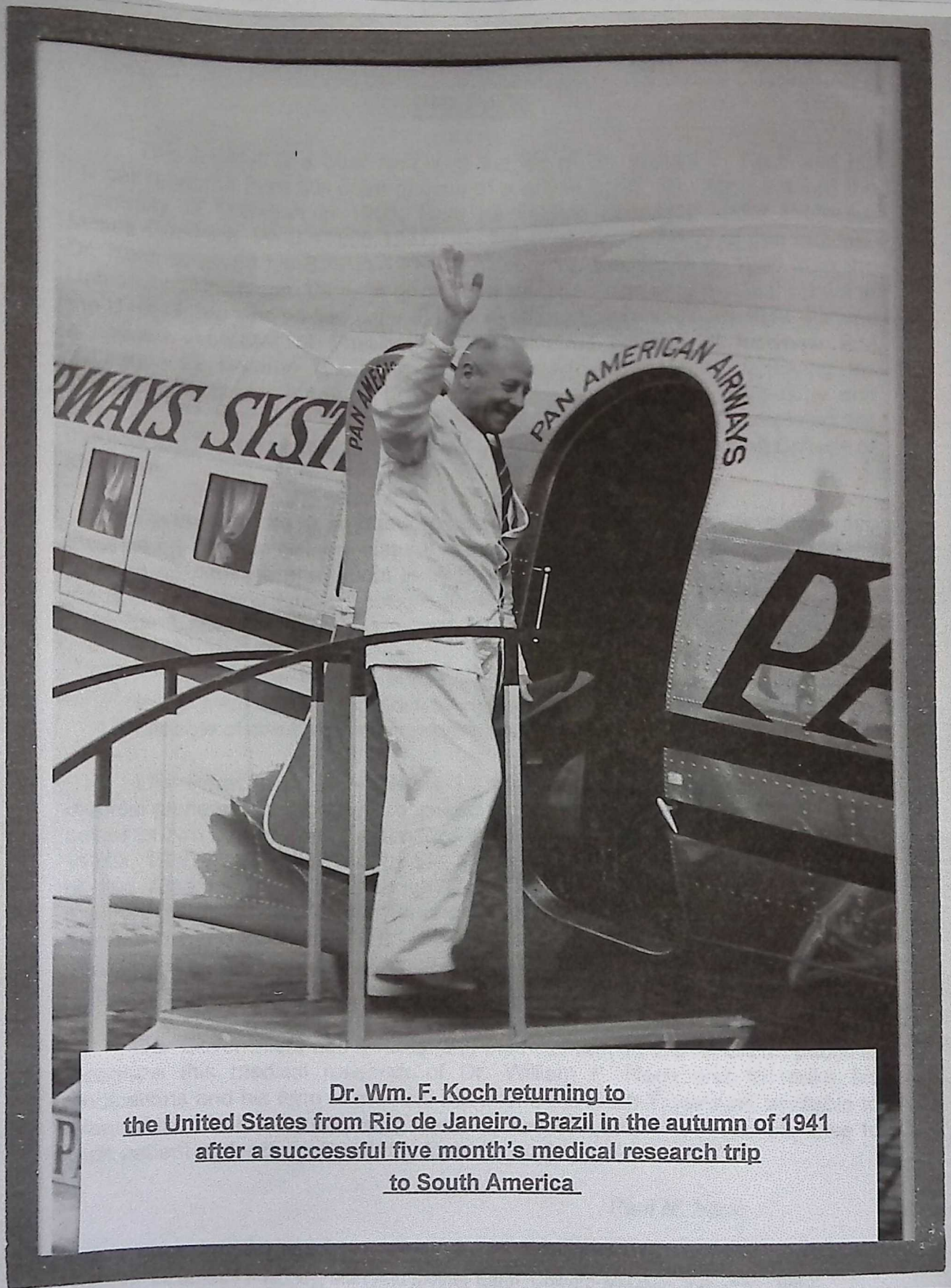
Cancer Research and the Di-Carbonyls
A Century In Review

A Brief History of the Medical Research

of

William F. Koch, B.A., M.A., Ph.D., M.D.
(1885 – 1967)

By Paul M. Koch



Dr. Wm. F. Koch returning to
the United States from Rio de Janeiro, Brazil in the autumn of 1941
after a successful five month's medical research trip
to South America

PREFACE

This booklet is a brief review of the life of Dr. William F. Koch and his cancer research from the point of view of a physiologist. Dr. Koch entered the University of Michigan in 1905. Here he studied chemistry under Professor Moses Gomberg, Ph.D. (1866-1947), the father of the chemistry of free radicals. Dr. Koch received his B.A. in 1909, M.A. in 1910, and Ph.D. in 1916 from the University of Michigan. While in graduate school and attending medical school at the U. of M., he was an instructor in Histology and Embryology. In 1914, he was appointed Professor of Physiology at the Detroit College of Medicine and subsequently became Chairman of that Department. While continuing his independent cancer research and at the same time teaching physiology and physiological chemistry at the Detroit College of Medicine he completed his medical training and received his M.D. degree in 1918 from the Detroit College of Medicine.

During his life and through his medical research, he developed his theories on the Chemistry of Natural Immunity, which principles he applied to his practice of medicine and taught to all those persons who were interested in his medical philosophy through out the world. William J. Hale, Ph.D., wrote of Dr. Koch the following:

> "Just as Pasteur identified the microscopic organisms that led to plant disease, so Koch identifies the chemical agents that are capable of combating microorganisms."*

Like Paracelsus, Semmelweis, Lister, Keen and Pasteur, and other early medical pioneers; Dr. Koch was opposed by certain financial interests and by the power of two editors of the Journal of the American Medical Association in the 1920s, 1930s, and 1940s and by the American Cancer Society to the detriment of the American people. Through their efforts, fraud was committed upon America by the United States Food and Drug Agency and the Federal Trade Commission during the 1940s which resulted in the suppression and the prevention of the rightful recognition and acceptance of Dr. Koch's medical research and the therapeutic medications he discovered.

Our Government has a moral and financial duty to the American public to recognize this medical research of Dr. William F. Koch and to make his medications and his form of medical treatment, the Koch Treatment, available to every person in this country who wants it, free of medical cost and expense to each patient under our present day form of quasi socialize medicine.

Paul M. Koch

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* Farmer Victorious – Money, Mart And Mother Earth, Coward-McCann, Inc., N.Y., 1949, p. 161. Dr. William J. Hale was the former director of organic chemical research at Dow Chemical Company in Midland, Michigan and at the time of his retirement he became the Research Consultant of Dow Chemical Company.

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Cancer Research and the Di-Carbonyls
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DEDICATION

This paper is dedicated to the principles of basic medical research and the many doctors who were on the front lines in the battle against cancer and its allied diseases during the twentieth century:

To William F. Koch, Ph.D., M.D., who in 1919 discovered a successful method of treatment for various forms of cancer[1] and its allied diseases based upon his studies of the chemistry of natural immunity and through the use of dicarbonyls in enzymatic dilutions;

To Joseph Henri Maisin, M.D., Director, Institut du Cancer, Louvain, University, who in the 1930's, just prior to World War II, successfully conducted independent and joint cancer and other medical research[2] with Dr. Koch using therapeutic medications developed by Dr. Koch.

To Otto Warburg, Ph.D., M.D., N.L., who in the 1920's discovered the basic physiological difference between the cancer cell and the normal cell and who subsequently, in 1969, came to the conclusion that anaerobiosis was the prime cause of cancer and that anaerobiosis met the demands of Pasteur.

To Albert Szent-Gyorgyi, Ph.D., M.D., N.L. who was the first scientist to isolate and identify ascorbic acid (hexuronic acid) as Vitamin C in 1932. In 1963 he discovered Retine, a growth-retarding dicarbonyl substance, that has biological activity capable of stopping the growth of cancer cells. Subsequently he identified Retine as methyl glyoxal, a dicarbonyl. In 1975 Dr. Szent-Gyorgyi wrote: "Carbonyls arrest cell division and my laboratory was led to the conclusion that it is still the carbonyls which arrest cell proliferation and it is the carbonyls which make the cell return to the resting state, after it completed division. If the carbonyls are missing, proliferation has to go on, and cancer results. We were not the first to be led to such a conclusion. A decade ago a very intuitive researcher, W. F. Koch, came to the same conclusion."[3]

To Linus Pauling, Ph.D., N.L., In 1986, Dr. Pauling, after doing extensive cancer research, wrote that some of the physiological properties of vitamin C

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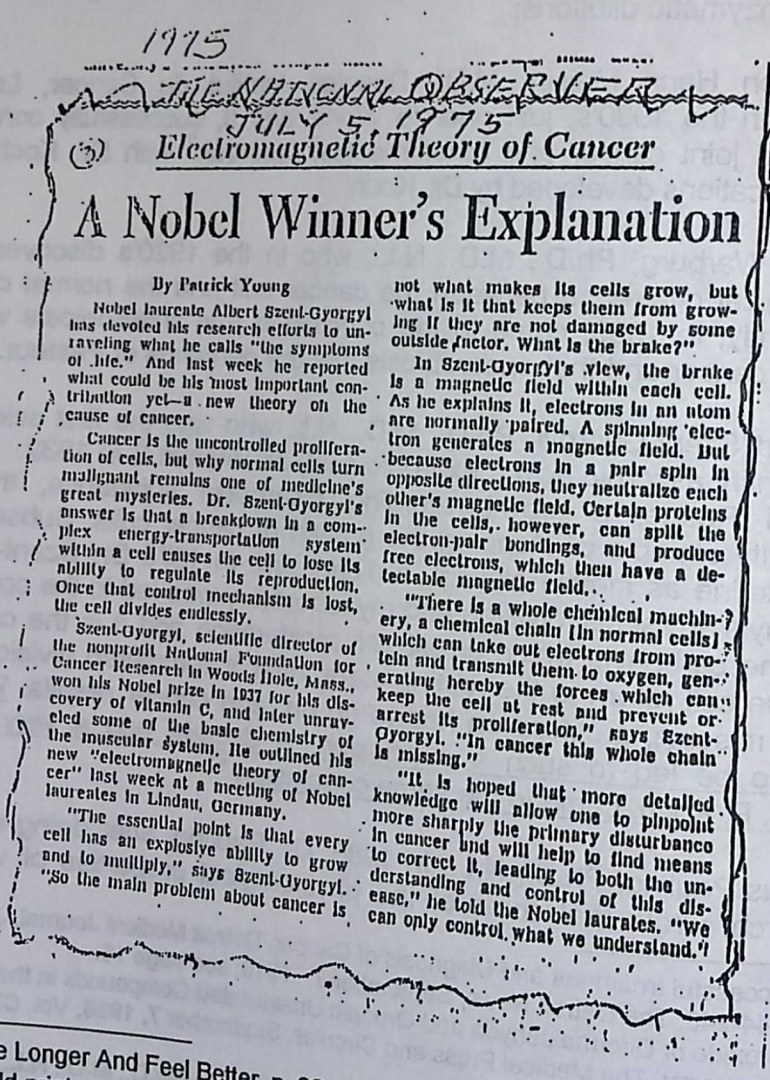
[1] A New and Successful treatment and Diagnosis of Cancer, Detroit Medical Journal, July 1919, Vol. No. 7, p 244-248; The Detroit News, September 7, 1919; see page 16.

[2] The Use of Peroxide of Diformaldehyde and Organic Unsaturated Compounds in the Treatment of Anergy and Hyperergy, The Medical Press and Circular, September 7, 1938, Vol. CXCVII, No. 5183; see page 86.

[3] The Search For A Natural Cure For Cancer, Albert Szent-Gyorgyi, Ph.D., M.D., N.L., 1975; see page 9.

(ascorbic acid) are likely to be due to the readily reversible oxidation-reduction reaction that occurs between ascorbic acid and dehydroascorbic acid, a strong oxidizing agent.[4] It should be noted that dehydroascorbic acid contains a dicarbonyl chemical structure.

The cause and successful treatment of cancer is of vital importance to all of us. In the search for the answers to the cancer problems, today's researcher should reconsider the research of yesterday. The independent basic cancer research of the past, that has been put on the back shelf by so many researchers of today, should once again be given a second look. If we want to resolve the **mystery of the basic cause of cancer and its allied diseases[5],** and at the same time come up with an effective method of treatment for these serious disease conditions it will be necessary for each researcher to open his mind to all possible theories on the causes and the treatment of these diseases. To have an ostrich like mentality will never solve these medical problems.



1975

THE ATLANTA OBSERVER

JULY 5, 1975

Electromagnetic Theory of Cancer

A Nobel Winner's Explanation

By Patrick Young

Nobel laureate Albert Szent-Gyorgyi has devoted his research efforts to unraveling what he calls "the symptoms of life." And last week he reported what could be his most important contribution yet—a new theory on the cause of cancer.

Cancer is the uncontrolled proliferation of cells, but why normal cells turn malignant remains one of medicine's great mysteries. Dr. Szent-Gyorgyi's answer is that a breakdown in a complex energy-transportation system within a cell causes the cell to lose its ability to regulate its reproduction. Once that control mechanism is lost, the cell divides endlessly.

Szent-Gyorgyi, scientific director of the nonprofit National Foundation for Cancer Research in Woods Hole, Mass., won his Nobel prize in 1937 for his discovery of vitamin C, and later unraveled some of the basic chemistry of the muscular system. He outlined his new "electromagnetic theory of cancer" last week at a meeting of Nobel laureates in Lindau, Germany.

"The essential point is that every cell has an explosive ability to grow and to multiply," says Szent-Gyorgyi. "So the main problem about cancer is not what makes its cells grow, but what is it that keeps them from growing if they are not damaged by some outside factor. What is the brake?"

In Szent-Gyorgyi's view, the brake is a magnetic field within each cell. As he explains it, electrons in an atom are normally paired. A spinning electron generates a magnetic field. But because electrons in a pair spin in opposite directions, they neutralize each other's magnetic field. Certain proteins in the cells, however, can split the electron-pair bondings, and produce free electrons, which then have a detectable magnetic field.

"There is a whole chemical machinery, a chemical chain [in normal cells] which can take out electrons from protein and transmit them to oxygen, generating hereby the forces which can keep the cell at rest and prevent or arrest its proliferation," says Szent-Gyorgyi. "In cancer this whole chain is missing."

"It is hoped that more detailed knowledge will allow one to pinpoint more sharply the primary disturbance in cancer and will help to find means to correct it, leading to both the understanding and control of this disease," he told the Nobel laurates. "We can only control what we understand."

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[4] How To Live Longer And Feel Better, p. 90, Linus Pauling, Ph.D., N.L, 1986

[5] Words in bold print and underlining in this paper are the emphasis of this author.

CHAPTER 1

"WHAT IS CANCER?"

In 1995, the American Cancer Society defined cancer as:

"Cancer is a word for a large group of diseases characterized by an abnormal seemingly unrestricted growth of body cells. Normal cells divide and grow in an orderly fashion, and during the early years of an individual's life, cell division is rapid. Once full growth is attained, normal cells of most tissues divide only to replace worn-out tissue and repair injuries. **Cancer cells divide and grow out of control.** When a mass of cancer cells build up, a tumor is formed that spreads and destroys surrounding normal tissue. Cells that break away from the original tumor may be carried by the lymph system or the bloodstream to other areas of the body where they may settle and form 'colony' tumors. When this occurs, the tumor is said to have METASTASIZED and the new growths are called METASTASES. Not all tumors are cancerous. Benign tumors, which are contained and limited in their growth, are usually not life threatening." (*Document 001881*, printed 08/04/95)

This Document (001881) goes on to say:

"Approximately 3 out of 10 Americans will develop cancer. Of that number, **40% will be considered 'cured,' that is, they will be living 5 years after diagnosis and be free from any signs of cancer.** The survival rate increases with the early detection and treatment of the cancer. Additionally, positive changes in a person's lifestyle can help prevent many forms of cancer. There are more than 100 different types of cancer, classified by the part of the body in which they arise and of their microscopic appearance. Because the behavior of each type of cancer and its response to different treatment varies, it is necessary to treat each cancer and each cancer patient individually."

The National Institute of Health (National Cancer Institute) defines the following terms in its current "booklet" publications as:

Cancer: "A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissues and can spread through the blood stream and lymphatic system to other parts of the body." and

"A term for more than 100 diseases in which abnormal cells divide without control. Cancer cells can spread through the bloodstream and lymphatic system to other parts of the body."

Chemotherapy: "Treatment with anticancer drugs."

Side effects: "Problems that occur when treatment affects healthy cells. Common side effects of cancer treatment are fatigue, nausea, vomiting, decreased blood cell counts, hair loss, and mouth sores."

Remission: "Disappearance of the signs and symptoms of cancer. When this happens, the disease is said to be 'in remission.' A remission can be temporary or permanent."

Recurrence: "The return of cancer, at the same site as the original (primary) tumor or in another location, after it had disappeared."

Cure: (There is no definition of this word "cure" in the N.I.H. booklets.)

Dorland's Illustrated Medical Dictionary (23 Ed., 1961, p.223) defines

"cancer" as:

"A cellular tumor the natural course of which is fatal and usually associated with formation of secondary tumors." (p. 223), and

"cure" as:

1) "Care and treatment of patients;" and
2) "Successful treatment." (p. 270)

THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

25 WEST 43rd STREET, NEW YORK CITY

GEORGE A. SOPER, Ph.D.

ADVISORY COUNCIL

September 27, 1926

Dr. Wm. F. Koch
Koch Cancer Foundation
3215 East Jefferson Avenue
Detroit, Michigan

My dear Dr. Koch:

Your letter of September 17th, asking for an opportunity to present the results of your studies on the subject of cancer before the Mohonk meeting was received on September 18th -- two days before the meeting opened.

You have apparently misunderstood the scope of the Mohonk meeting. It was not a suitable occasion for the presentation of new facts and opinions before the medical profession nor could such a presentation have been arranged for in the interval between the receipt of your letter and the opening of the symposium.

Very sincerely,

George A. Soper, Ph.D.
Managing Director

Sd

CHAPTER 2

BASIC MEDICAL RESEARCH

In September 1950, Dr. Albert Szent-Gyorgyi was a guest lecturer who spoke on the subject: *The Next Half Century in Biochemistry* at the dedication exercises for the new research laboratories for the Sterling Winthrop Research Institute, Rensselaer, New York. In his talk he made the following specific reference to "basic research" and "applied research" (62, o)[6]:

> "....I often hear distinction drawn between 'basic' and 'applied' research with the unspoken implication that 'basic research' is that which cannot be applied and thus is useless. There is no such difference for all knowledge is useful, all research is but applied research. The difference is merely in timing and dimension. 'Applied research' is the application of knowledge already acquired, paying cash return. **Basic research, which seeks new knowledge for knowledge's sake, new truth for truth's sake, is the foundation of the applied research of tomorrow.** All really important progress of today was abstruse, apparently useless research yesterday, and if we neglect basic research today we have cut out the roots of progress tomorrow.....Antibiotics were a few years ago merely the subject of the curiosity of two people who were interested in the theoretical problem of natural defense regulations. **A big scale reduction in human suffering can come only by such extension of basic knowledge."** (p. 46)

Dr. Szent-Gyorgyi was a strong believer in the importance of "basic medical research." This is the foundation for all scientific medical knowledge. Without basic research, there can be no foundation for applied research. Applied research is but a mere extension of basic research of yesterday. He spent his whole life conducting basic medical research for the benefit of mankind. It was this research that made it possible for him to isolate ascorbic acid from the adrenal glands and from various plant juices and then prove that this ascorbic acid (hexuronic acid) was identical to Vitamin C. Subsequently he isolated flavones from paprika and gave them the name of Vitamin P. This biological research opened the door for him to conduct very important advanced "basic cellular" cancer research which is of the utmost importance to everyone today.

In his 1963 paper *Cancer Therapy: A Possible New Approach* (62, c) Dr. Szent-Gyorgyi identified a substance he called "Retine" which inhibited cancer cell growth and "Promine" which makes cancer cells grow faster. In this paper he suggested that both Retine and Promine were of small molecular weight and of high potency and that they control normal cell division. He also wrote in 1963 that in animal experiments with retine, that daily injections of retine produced no observable toxic effect (62, d). In 1967, Dr. Szent-Gyorgyi also made reference to glyoxal derivatives as having anti-viral properties (62, f).

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[6] See section listing **REFERENCE MATERIAL AND RELATED INFORMATION**

In 1968 Dr. Szent-Gyorgyi wrote about the cancerostatic action of methylglyoxal (62, d). In his paper *Bioelectronics – Intermolecular electron transfer may play a major role in biological regulation, defense, and cancer* (62, h) he wrote:

> "The simplest alpha-keto-aldehyde is methylglyoxal (pyruvic aldehyde); this fact seemed most exciting because, as far as we know, all cells contain a very powerful enzymatic system for the conversion of alpha-keto-aldehydes into the corresponding unreactive oxyacids – for converting, for instance, **methylglyoxal into lactic acid**. This enzymatic system, called the 'glyoxalase,' occupied the attention of several of the most outstanding biochemists in the first half of this century, but the interest later faded out, for no glyoxal derivative could be found on the main metabolic pathways, nor could such a substance be isolated from tissues under normal conditions. And what is the use of an enzyme without a substrate?
>
> **"Should the inhibitor of growth prove to be a dicarbonyl, like methylglyoxal or a compound thereof,** then I had an excuse for not having been able to isolate it, **for the isolation of the expected trace amounts of such a very reactive substance would be very difficult indeed."**

Dr. Szent-Gyorgyi concludes his paper with this paragraph:

> **"A Tentative New Theory of Cancer:** One could ask what would happen if a cell lost its ability to bind its own glyoxalase? Then it would have to go on multiplying senselessly and endlessly, behaving like a cancer cell. As far as we know, the only difference between a normal cell and a cancer cell is the fact that the latter divides when no proliferation is needed. All this leads, tentatively, **to a new theory of cancer: a cancer cell is a cell which has lost its ability to bind its own glyoxalase.** Whether this theory is right or wrong remains to be demonstrated. It recommends itself by its clarity, its simplicity, and its ability to explain why such a great variety of noxious influences can lead to the same end, cancer. **The theory also has the earmark of a good theory: it can be proved or disproved. What may lend it additional value is the fact that it suggests various ways of seeking a therapy for cancer. It is regrettable that, owing to cuts in the budget, this research will have to be discontinued...."**[7]

In 1972, Dr. Szent-Gyorgyi was interviewed by Jane Kinderlehrer for Prevention magazine. She titled her article: *Liver May Hold The Secret of Cancer Prevention* (62, l). In this article Dr. Szent-Gyorgyi tells of finding an unidentified substance which he called **Retine, a substance that had the ability to retard neoplastic cell division and growth.** I quote excerpts from this article:

> "A world famous Nobel Laureate believes he is on the track of the

[7] The Federal Government has on many occasions denied research funds to Dr. Szent-Gyorgyi over the years, thus denying him the opportunity to carry on this very important basic medical research to find a "cure" for cancer.

body substance that prevents cancer in healthy people – and might cure those stricken.

"'THE KEY TO A CURE for cancer may be just around the Corner.' This is a direct quote – not from the Cancer Society on the eve of a fund-raising drive, nor from some mysterious witch doctor in Upper Slobotnik.

"The man who believes the cancer problem is nearly licked is a Nobel prize winner, one of the world's leading scientists, a biochemist and an M.D., Dr. Albert Szent-Gyorgyi. Dr. Szent-Gyorgyi is one of the most productive researchers the world has ever known....

"The famous Nobel Laureate believes that his laboratory is on the verge of isolating a substance for which the world has long yearned – **a non toxic, cell specific substance with anti-cancer activity.**

"The source of this anti-cancer agent is liver, although the compound appears to be present in all normal (non cancerous) tissues. "

Ms Kinderlehrer, in her article, goes on to describe Dr. Szent-Gyorgyi's basic research with " Retine"; how he found it and how it functions to prevent cancer cells from dividing. To continue this important research, Dr. Szent-Gyorgyi had applied to the National Institute of Health for a research grant. Unfortunately his application was rejected.

"'Our grant application has a poor prospect,' Dr. Szent-Gyorgyi explained because, **'a discovery is, by definition, at variance with existing knowledge.'**

"'**Retine' is indeed at variance with the current search for chemo-therapeutic answers to the growing problem of cancer. It does not destroy tissue but plays a key role in growth regulation.** Dr. Szent-Gyorgyi said that he and Dr. Egyud have found **that 'retine stops the growth of cancer cells without poisoning other cells.'**

"When 'retine' is present in sufficient concentration, no cell division can occur while vital cellular processes go on unhindered, research done at the laboratory has revealed.

"'And what is a good bit of luck, and not my cleverness,' the white-haired scientist pointed out, 'is that **if a cancer cell cannot grow, it dies by itself.'**

"According to the researchers, **'retine' is normally produced by the body and, when it is, it prevents the growth of existing cancer cells.** But **the body can lose its ability to produce this substance**....Putting the 'retine' back in the body, just as we put insulin back into a diabetic's body, can stop the growth of cancer, he believes....The scientists at Woods Hole found that **cancer cells are much more sensitive to retine than normal ones, and so cancer cells may be inhibited *specifically*....'Retine' can easily be measured even in small quantities of serum because it has a strong and specific florescent emission."**

In this article, references were made to Dr. Frank Rauscher, Jr., the new director of the National Cancer Institute, appointed in May of 1972, and to the discovery of a virus called, the Rauscher virus, that produces a form of leukemia in mice. Also, it was pointed out, <u>that a lion's share of the billion dollar research budget was earmarked for virus research</u>. This article also made reference to the

following research of Otto Warburg, Ph.D., M.D., N.L.

> "As another Nobel prize winner, Dr. Otto Warburg, pointed out in his address to the Nobel-Laureates at Lindau in 1966, 'It is true that some virus-caused cancers occur in animals, but no one sure human virus-cancer has been observed so far, whereas innumerable substances cause cancer without viruses in animals and man. Thus viruses do not meet the demands of Pasteur, ***that it must be possible to trace the prime cause in every case of the disease.*** Therefore science classifies viruses as remote causes of cancer, leading to **anaerobiosis (ability to live without oxygen) which is the prime cause**, that meets the demands of Pasteur.'"
>
> "Dr. Szent-Gyorgyi estimated that $200,000, which is merely a crumb of the big cancer fund pie, would allow him in two years time to come 'very close to an actual cure for cancer.'
>
> "Some day, there is no doubt, that this cancer retarding substance must be isolated, identified, synthesized, and made available for testing on human beings. **How long must we wait?'"**

In his 1973 paper, *Bioelectronics and Cancer* (62, j), Dr. Szent-Gyorgyi made a complete review of his biological and cancer research over the years. He pointed out the importance of the biological function of the two enzyme systems which involved glyoxalase I and II and of the coenzyme, SH-glutathione and the transformation of glyoxal derivatives into the corresponding hydroxyacids and methylglyoxal into lactic acid. He explains the importance of C = O, the "carbonyl group", and O = C – C = O, the "di-carbonyl group", the simplest being glyoxal. He identifies **"retine"** as the substance that keeps cells at rest, the "off" switch to cell division, and **"glyoxalase"** as the "on switch" which bring about uncontrolled cell division. **It is glyoxalase that changed the reactive, dicarbonyl, glyoxal derivatives into the corresponding inactive hydroxy-acids.** He wrote:

> **"If 'retine' is glyoxal or a glyoxal derivative**; then the enzyme which starts proliferation could be the glyoxalase which transforms the carbonyls into inactive hydroxyacids. As shown by L. Egyud, animal cells do contain glyoxal and methylglyoxal. They contain also glyoxalase so when no proliferation is needed, these two, glyoxalase and the glyoxal derivatives must be kept separated, and damage could induce proliferation by creating disorder and letting them meet. **This could explain the biological role of glyoxalase which has been a mystery."** (p 554-5)

On page 560 (making a reference to Dr. Koch's book *The Survival Factor in Neoplastic and Viral Disease, An Introduction to Carbonyl and Free Radical Therapy,* 1961) (33), Dr. Szent-Gyorgyi wrote:

> **"The possible importance of carbonyls in regulation and carcinostatis was emphasized by W. F. Koch."**

And in his conclusion to this paper, Dr. Szent-Gyorgyi said in part:

"**The cancer problem is finite and solvable.** What is needed for its solution is imagination, the high spirit of inquiry, and the wonderful new tools of research. **It is not solvable by the combined arrogance and ignorance of politicians now trying to command science, nor is it solvable by bureaucratic dullness.**

"**In the present paper a wide alley is opened for an attack on cancer. It is made possible to pin point and correct disturbance. The road is marked out: it leads over extensive basic studies, a thorough study of all the components of the regulatory system.** There are shortcuts only to failure.

"The progress of science is marked by the penetration into increasingly small dimensions. From macroscopic anatomy biology moved to microscopy, from light microscopy to electron microscopy. At present it is dominated by the molecular concept. The next natural step will be a penetration into the electronic dimension. **Cancer, partly, is a disturbance in the electronic dimension.**

"Progress in the art of healing has always been induced by progress in basic knowledge. **The present regrettable emphasis on applied research at the expense of basic research, and the search for a cure before an understanding, can only delay the final solution. Our inability to cope with diseases like cancer indicates major gaps in our basic knowledge which have to be filled before progress can be made.**

"**The carbonyls with extended ¶ (pi) systems may be the key not only to cancer but also to other 'degenerative diseases',** like schizophrenia, muscular dystrophy and various pathological conditions of the heart muscle. **These substances represent a specific field of research which demands, for its exploration, specific experience.** The substances in question cannot be isolated and identified without use of the most modern analytical methods, and the idea must be accepted that the days of **'string and sealing wax'** are past also in biochemistry. It is for society, or rather its government, to decide whether it wants to meet the expense of having these diseases eliminated. The writer is paralyzed by the lack of means, his last three applications having been rejected by the main granting agency in biomedical research, the National Health Institutions...."

It was through this extensive basic research that Dr. Szent-Gyorgyi was able to reach the scientific conclusion that **the identity of Retine was in reality the dicarbonyl, methylglyoxal; the nontoxic chemical substance that he had isolated years earlier which was able to inhibit cancer cell division.** Subsequently, he wrote: *"The Search For A Natural Cure For Cancer"*, (1975) (62, I). In this paper he summarized his theories on cancer research with a constructive approach to finding an effective treatment for cancer.

"**There is a great need for a drug which cures or prevents cancer without harming the patient. Such an action can be expected only from a natural substance. I have to explain what I mean by 'natural'.**

"The cell is an exceedingly complicated and subtle machinery in which all functions are carefully regulated. A normal cell divides only when division is needed. A cancer cell divides also when no division is

needed. The regulators are out of order. All efforts to show the difference between the chemical makeup of a normal and a cancer cell have hitherto failed. The cellular structures are identical, only the regulators are disturbed. Something has gone wrong that has to be repaired.

"In order to be able to repair any mechanism, we must know how it is built and how it works...We can control only what we understand. To be able to repair, we must find out what has gone wrong, which screw is missing or which bolt has loosened. To replace the new part which takes over the function of the old one, is what I call a **'natural cure.'** Only by replacing the failing part, can we expect a real cure which does not damage the host. Putting in all sorts of substances which we take from the shelf, or synthesize are not 'natural,' even if taken from some plants. The same holds for high energy radiation. All these artificial therapeutic agents interfere with some basic function on which both the cancer and the normal host cell depend. They have thus to damage both.

"For years my laboratory has worked in silence to find out how the living cell regulates its proliferation. We have arrived at a fairly clear concept and hope to be able to identify soon the part which is not working properly. In my opinion, this is the only hopeful approach. It is not an easy one because the living machinery is very complex and subtle. This is not a new approach either. It is the oldest approach but it is not a sensational one and so it is very difficult to find support for it. The National Institutes of Health, the main granting agency for biomedical research, rejected my application thrice. I had no luck with the cancer society either. Everybody wants a quick cure, but **there are no shortcuts to basic research.** There are shortcuts only to failure.

"...Oxygen makes oxidation, burning possible, and oxidation produces energy. Warburg, the great German biochemist, made energy responsible for the development. But energy cannot transform, build machines, it can only drive them. But if it was not energy which provoked the development, then it had to be oxygen itself which made the difference. 'Oxidation' in scientific language means taking 'electrons,' electric particles from oxidized material. All matter is built of an atomic nuclei and electrons. Taking electrons from a substance means oxidizing it. The oxygen of the air does not take electrons from the living protein, **but there are atomic groups, called carbonyls, which contain oxygen which can take single electrons from protein, bringing the proteins hereby into a most reactive form, called' 'free radical.'** The transformed proteins have very special properties, like electric conductivity. **It is here in the electronic dimension that something is out of order in cancer. Carbonyls arrest cell division and my laboratory was led to the conclusion that it is still the carbonyls which arrest cell proliferation and it is the carbonyl which make the cell return to the resting state, after it completed division. If the carbonyls are missing, proliferation has to go on, and cancer results. We were not the first to be led to such a conclusion. A decade ago a very intuitive researcher, W. F. Koch, came to the same conclusion.** Unfortunately, he did not leave us enough information to enable us to follow his trail.

"By having carbonyls as regulating agents, the problem is by no means solved. We have to find out how the carbonyl fits into the regulation, how it is produced, destroyed and how it acts. There is still a long way to go, but **I am very confident that this is the right way and**

the end is not too far."

Dr. Szent-Gyorgyi, in his book *Electronic Biology and Cancer, A New Theory of Cancer*, Chapter 5, *Oxygen and Dicarbonyls* (1976) (62, m), describes the importance of molecular oxygen and its central role in biology and its ability to oxidize by taking electrons from other molecules. He explains the relationship between the oxygen atom and the carbon atom, the carbonyl (C = O) and the dicarbonyl (O = C –C = O) and he points out that the simplest dicarbonyl is glyoxal and that the methyl derivative is methylglyoxal. Also he points out that the simplest di-aldehyde is also glyoxal and the simplest ketone aldehyde is also methylglyoxal. He further points out that since the dicarbonyls are highly unsaturated compounds, they can not exist in a strongly reducing anaerobic atmosphere, the alpha state (the simplest or unstructured state) of cellular life. Thus, the dicarbonyls become a specific feature of his beta state (aerobic or structured state) of cell life. To obtain the full benefit of Dr. Szent-Gyorgyi's research, one has to fully study this booklet and his subsequent booklet "Living State and Cancer" (1978) (62, n).

In Chapter 20, "*Notes On History*", of this booklet, Dr. Szent-Gyorgyi made a brief reference to the research of Dr. William F. Koch with the dicarbonyls in the sixties, and Dr. Koch's claim of therapeutic action for quinones. (*The Survival Factor In Neo-plastic And Viral Diseases, A Study of the Phenomena of the Free Radical, the Double Bond, and Its Alpha placed Hydrogen Atom in the Pathogenesis and Correction of Neoplastic, Viral and Bacterial Diseases*, 1961)(33). Dr. Szent-Gyorgyi felt that the data given by Dr. Koch was not detailed enough to allow repetition. Dr. Szent-Gyorgyi further pointed out that quinones did inhibit cell division but that they were very toxic and the quinones, that he tested, he found to be devoid of therapeutic activity.

Dr. Szent-Gyorgyi was right when he said that quinones inhibit cell division but are very toxic.[8] However, he did not indicate which quinones he worked with in his research and the type of experiments that he conducted. Do to the high toxicity of para-benzoquinone, as an example, it has to be used in high (homeopathic) dilutions of (6x) 1×10^{-6} or more while conducting research experiments. When Professor Maisin was doing his research in Belgium with some of Dr. Koch's products, Dr. Maisin found that he received his best results

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[8] The NIOSH POCKET Guide to Chemical Hazards published by the U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, June 1990, identifies **Quinone (1,4 Benzoquinone) as a strong oxidizer** and gives the **TWA Exposure limits (concentrations for up to a 10 hour workday during a 40 hour work week) for Quinone as 0.1 ppm which is 1 part per 10 million or 7x dilution or 1 x 10^{-7}. Continuous exposure to quinone at this high dilution for a long period of time has a very toxic effect on the body. However, like Dr. Koch, Albert L. Wahl, M.D., C.M. found that 1,4 Benzoquinone when used in 6x homeopathic dilutions had a therapeutic effect in treatment of over two hundred fifty of his patients. As a direct result of his independent research with 1,4 Benzoquinone (B.Q.) in 6x dilutions, he wrote the book: " A Least Common Denominator in Antibiotics" in 1947.**

using these products at dilutions from 1×10^{-9} to 1×10^{-18}.[9] Though these are very high dilutions (1×10^{-18}), he said that these products still contain several thousand molecules per cubic centimeter. (52) I only wish that Dr. Szent-Gyorgyi had learned more about Dr. Koch's cancer research before he (Dr. Szent-Gyorgyi) did his cancer research with quinones.

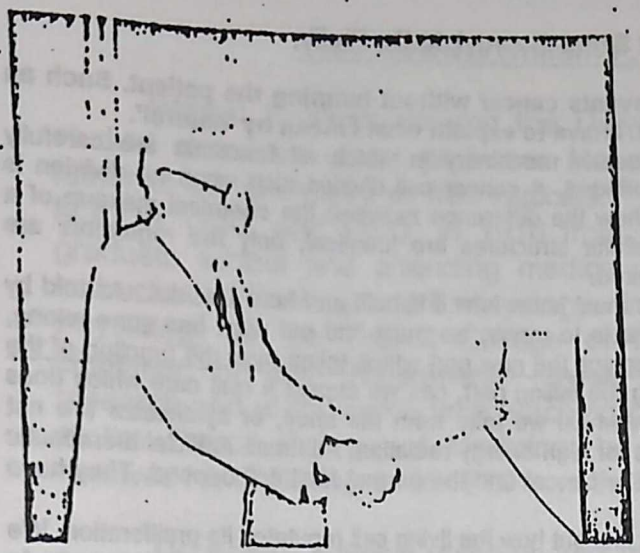
In 1979, Dr. Philip Garber contacted Dr. Szent-Georgyi in regards to my father's research and he had suggested that Dr. Szent-Georgyi meet with me in order that he (Dr. Szent-Gyorgyi) might learn more about Dr. Koch's theories, etc. Dr. Szent-Gyorgyi's wrote the following in his letter of November 1, 1979 to Dr. Garber.

> **"I can tell you, I have a great admiration for Koch. He must have been a very outstanding man. My feeling is that he had a strong intuitive feeling about the role of C=O group and especially its conjugated form as C=OC=O as one of the great regulating forces in nature.** It is very unfortunate that he never expressed this clearly and definitely in any (of) his writings known to me. I have been working myself on these lines now for years and the subject has made very great progress and it is doubtful whether the notes of Dr. Koch could help any further.
>
> "I would not like to become involved in the controversy around his name and, maybe, reproached later that I am led in my studies by the posthumous notes which Paul could put at my disposal. I also doubt whether I could find the time for their study they undoubtedly deserve. I would not like either to revive the controversy around his work. That he has met by hostility is not doubtful for me. **I know it from my own experience that people with intuition are regarded as an enemy by those who have none."**

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[9] The Use of Peroxide of Diformaldehyde and Organic Unsaturated Compounds in the Treatment of Anergy and Hyperergy, The Medical Press and Circular, September 7, 1938, Vol. CXCVII, No. 5183. For complete article see page 86.

THE SEARCH FOR A NATURAL CURE FOR CANCER



by Nobel Prize Winner Albert Szent-Gyorgyi, M.D., Ph. D.

There is a great need for a drug which cures or prevents cancer without harming the patient. Such an action can be expected only from a natural substance. I have to explain what I mean by "natural."

The cell is an exceedingly complicated and subtle machinery in which all functions are carefully regulated. A normal cell divides only when division is needed. A cancer cell divides also when no division is needed. The regulations are out of order. All efforts to show the difference between the chemical makeup of a normal and a cancer cell have hitherto failed. The cellular structures are identical, only the regulations are disturbed. Something has gone wrong which has to be repaired.

In order to be able to repair any mechanism, we must know how it is built and how it works. As told by Bernal, we can control only what we understand. To be able to repair, we must find out what has gone wrong - which screw is missing or which bolt has loosened. To replace it, a new part which takes over the function of the old one, is what I call a "natural cure." Only by replacing the failing part, can we expect a real cure which does no damage to the host. Putting in all sorts of substances which we take from the shelf, or synthesize are not "natural," even if taken from some plants. The same holds for high energy radiation. All these artificial therapeutic agents interfere with some basic function on which both the cancer and the normal host cell depend. They have thus to damage both.

For years my laboratory has worked in silence to find out how the living cell regulates its proliferation. We have arrived at a fairly clear concept and hope to be able to identify soon the part which is not working properly. In my opinion, this is the only hopeful approach. It is not an easy one because the living machinery is very complex and subtle. This is not a new approach either. It is the oldest approach but it is not a sensational one and so it is very difficult to find support for it. The National Institutes of Health, the main granting agency for biomedical research, rejected my application thrice. I had no luck with the cancer society either. Everybody wants a quick cure, but there are no shortcuts to basic research. There are shortcuts only to failure.

Life originated on a dark and airless globe on which there was no light and oxygen, and we can guess that under those very poor conditions life could develop only the simplest forms and could become continuous by proliferating as fast as conditions permitted. As the measure at which the globe cooled, the surrounding water vapor condensed and light could get through. Life utilized it and produced oxygen with it and oxygen made life develop, differentiate, build complex functions with complex structures. The problem is: How could oxygen do this? Oxygen makes oxidation, burning possible, and oxidation produces energy. Warburg, the great German biochemist, made energy responsible for the development. But energy cannot transform, build machines, it can only drive them. But if it was not energy which provoked the development, then it had to be oxygen itself which made the difference. "Oxidation" in scientific language means taking "electrons," electric particles from oxidized material. All matter is built of an atomic nuclei and electrons. Taking electrons from a substance means oxidizing it. The oxygen of the air does not take electrons from the living protein, but there are atomic groups, called carbonyls, which contain oxygen which can take single electrons from protein, bringing the proteins hereby into a most reactive form, called "free radical." The transformed proteins have very special properties, like electric conductivity. It is here in the electronic dimension that something is out of order in cancer. Carbonyls arrest cell division and my laboratory was led to the conclusion that it is still the carbonyls which arrest cell proliferation and it is the carbonyls which make the cell return to the resting state, after it completed division. If the carbonyls are missing, proliferation has to go on, and cancer results. We were not the first to be led to such a conclusion. A decade ago a very intuitive researcher, W.F. Koch, came to the same conclusion. Unfortunately, he did not leave us enough information to enable us to follow his trail.

By having carbonyls as regulating agents, the problem is by no means solved. We have to find out how the carbonyl fits into the regulation, how it is produced, destroyed and how it acts. There is still a long way to go, but I am very confident that this is the right way and the end is not too far. It is very unfortunate that the research worker on this line has to fight a battle on two fronts: one against nature to learn her secrets. This battle is interesting and hopeful. The other battle is against the narrow bureaucratic thinking. This fight is uninteresting, hopeless and very discouraging, and if not long ago a small group of people, the "Bethesda National Foundation" had not come to my help, I would have had to give up research altogether. What keeps me going is not only their financial support, but also the confidence of my fellow Americans.

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1975

CHAPTER 3

Who was Dr. William F. Koch (1885-1967)?

William F. Koch entered the University of Michigan in 1905. Here he studied chemistry under professor Moses Gomberg, Ph.D. (1866-1947), the father of the chemistry of free radicals.[10] Dr. Koch received his B.A. in 1909, M.A. in 1910, and Ph.D. in 1916 from the University of Michigan. While in graduate school and attending medical school at the U. of M., he was an instructor in Histology and Embryology. In 1914, he was appointed Professor of Physiology at the Detroit College of Medicine and subsequently became Chairman of that Department. While conducting his independent cancer research and at the same time teaching physiology and physiological chemistry at the Detroit College of Medicine, he completed his medical training and received his M.D. degree in 1918 from the Detroit College of Medicine.

Dr. Koch's medical research was from a physiologist's point of view. This research started with his studies at the University of Michigan and it opened the door to his understanding of the basic causes of disease conditions and how the body fights off the toxic state caused by diseases. Through this research, Dr. Koch was able to develop his theories on how the chemistry of the natural immune system of the body worked. He then applied these theories in the treatment of different disease conditions by working with the body's natural immune system, not against it as so many medications and present day cancer treatments do.

Initially Dr. Koch's research interest focused on the function of the parathyroid glands. He wrote several papers on this subject concluding that the **tetany**, which followed the removal of the parathyroid glands **was not** due to a disturbance of the calcium metabolism but instead **resulted from an accumulation of certain toxic substances in the body. He also observed that the urine** of the animals without parathyroid glands **carried large amounts of lactic acid**, which meant that the oxidation process was badly handicapped by the substances that were produced in the parathyroidectomized animals. **These substances had blocked the normal tissue oxidation process**. This turned out to be a momentous discovery, which paved the way for his original cancer research. By studying the tissues that survived the longest, he found out that the common feature was the presence of the di-carbonyl groups. This discovery led to a study of the tissue oxidation process and its relationship to cancer. Building on these discoveries, Dr. Koch began to study how the body's natural immune system functions in fighting off other disease conditions. As a result he developed his theories on the chemistry of natural immunity, a revolutionary approach to the understanding of human diseases.

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[10] See footnote 57, page 143.

EARLY RESEARCH BY DR. KOCH

The following provides a very short overview of the development of Dr. Koch's theories. Since he was a very thorough physiologist, the reader is invited to follow the evolution of this thinking and how his theories evolved from his original research on the parathyroidectomized animals.

His first research project at the University of Michigan was to investigate the functions of the parathyroid glands. While there he published three papers: 1) ***On The Occurrence Of Methyl Guanidine In The Urine Of Parathyroidectomized Animals,*** Journal Of Biological Chemistry, Vol. XII, No. 3 (1912) (1); 2) **Toxic Bases In The Urine Of Parathyroidectomized Dogs**, Journal Of Biological Chemistry, Vol. XV, No. 1, July, 1913 (2); and 3) ***The Physiology Of The Parathyroid Glands***, The Journal Of Laboratory And Clinical Medicine, Vol. I, No. 5, Aug. 14, 1916 (4); [A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at the University of Michigan]. His fourth paper , ***Tetany And The Parathyroid Glands***, Medicine and Surgery, Jan. 1918 (5), was published while he was Professor of Physiology and Physiological Chemistry at the Detroit College of Medicine. In this paper Dr. Koch approached this subject matter from the point of view of the physiologist.

In 1913, it was Dr. Koch's second publication that alerted the interest of the editor of the Journal of the American Medical Association that he had come upon a new approach to the understanding of the function of the parathyroid glands and their relationship to toxicity and to disease. In the J.A.M.A.'s editorial ***"Chemical Consequences of the Removal of the Parathyroid Glands"***, Sept. 27, 1913, Vol. LXI, No. 13, p. 1049 (3), the editor reported on the importance of this research. This editorial concluded with this statement:

> "The outcome of the discovery of the toxic bases in the urine is the suggestion of Koch that the parathyroid secretion appears to be concerned also with anabolic processes related to the synthesis of nuclear contents. Whether or not such a hypothesis can be further substantiated remains to be seen; in any event the **final successful isolation of recognized toxic chemical products of traceable origin has paved the way to definite conceptions and specific lines of inquiry where hitherto the explanations have been vague and the outlook unpromising."**

This parathyroid research of Dr. Koch was subsequently confirmed by the research of Professor D. Noel Paton three years later. In *Part IV, The Parathyroids: -Tetania Parathyreopriva*, Professor Paton said: **"Lastly, the observation of Koch that methyl-guanidin appears in the urine of dogs after parathyroidectomy seemed also to hint at the connection of such compounds with the onset of tetany."** In Professor Paton's conclusions to Part IV, he said: **"The symptoms of tetania parathyreopriva are not primarily due to decrease in any constituent of the body, e.g. calcium ions;"** and **"The Symptoms are identical with those produced by the administration of salts of guanidin and methyl-guanidin."**

CHEMICAL CONSEQUENCES OF THE REMOVAL OF THE PARATHYROID GLANDS

The complete removal of the parathyroid glands is attended with fatal consequences. This experimental fact speaks decisively with regard to their importance for the maintenance of the bodily functions; it does not, by itself, give any indication of the mode in which the parathyroidal tissue determines the healthy continuance of the normal processes in the organism. As has been done in the case of other so-called glands with internal secretion, so here we may assume that they act in one of several ways —either they furnish some regulatory or stimulating product (a hormone) which is distributed to appropriate parts of the body, or they may act as antitoxic agencies, neutralizing, modifying or destroying products which would otherwise be harmful to the individual.

The most prominent symptoms of abnormality which attend the removal of the parathyroids are perhaps those of tetany. This is of itself suggestive, though by no means demonstrative, of the participation of a toxic agent in the physiologic events caused thereby. The discovery of toxic bases in large quantities in the urine of parathyroidectomized dogs by Dr. Koch[2] at the University of Michigan is therefore of more than passing interest. In every case studied methylguanidin was present in the secretion of the kidneys. When this substance was found in smaller quantities, other guanidin bases were present, so that the excreted guanidin nitrogen approached a constant. In addition to these bases others were observed, namely, beta-imidazolylethylamin, cholin, neurin and unidentified bases, although these were not distributed uniformly in the cases studied.

The histologic picture which appears in the tissues of parathyroidectomized animals is one of cellular disintegration, particularly in such organs as the liver, kidney and brain. Various degrees of chromatolysis are observed in the nuclei, and in some places the latter disappear entirely in large areas. Koch suggests that the passive protein destruction which must accompany such tissue changes may give rise to basic products and thus account

for the unusual compounds excreted. Inasmuch as in animals which have been operated on the specific toxic symptoms can be provoked by the feeding of digested protein, it may be that the toxic effects are initiated by products of intestinal or even of parenteral digestion. Normally these derivatives are incorporated in some cell molecule or stored up in some form. In the case of parathyroidectomized animals after feeding digested proteins, it is suggested that the products remain free and act as toxins. In animals operated on when no feeding occurred the symptoms increased in violence with short intermissions until death. The intensity of the symptoms doubtless followed the rate of disintegration of body protein. The pathologic condition would thus appear to be a failure on the part of the cells to build up their protein. This part of the metabolism of the cell, Koch reminds us, is regarded as the function of the nucleus. Such indications, together with the formation of free "nuclein" components, point to a nuclear atrophy. The histologic findings, moreover, show an active "nuclein" degeneration. The reputed relation of the parathyroid to calcium metabolism and the theories of glandular function built up on it have not made effective progress of late. One is not justified at present in saying that these are quite unfounded. Doubtless in the complex disturbances set up by so serious an operation as the complete exclusion of vitally important glands the interrelated consequences are varied and numerous. The outcome of the discovery of the toxic bases in the urine is the suggestion of Koch that the parathyroid secretion appears to be concerned also with anabolic processes related to the synthesis of nuclear contents. Whether or not such a hypothesis can be further substantiated remains to be seen; in any event the final successful isolation of recognized toxic chemical products of traceable origin has paved the way to definite conceptions and specific lines of inquiry where hitherto the explanations have been vague and the outlook unpromising.

[2]Koch, W. F.: Toxic Bases in the Urine of Parathyroidectomized dogs, Jour. Biol. Chem., 1913, xv, 43.

September 27, 1913

Copy of Editorial from The Journal of The American Medical Association, Vol. 61, #13

REPORTS NEW CANCER SERUM

Professor at Detroit College Stirs Medical Profession by Announcement.

Members of the medical profession in Detroit have been stirred by the announcement of a new treatment of cancer by Dr. William F. Koch, professor of physiology at the Detroit College of Medicine and Surgery, and the statement he has already clinically cured a number of inoperable cancer cases.

Dr. Koch's announcement is made in the issue of the Detroit Medical Journal, in a paper entitled "A New and Successful Treatment and Diagnosis of Cancer."

He describes the treatment as "a sub-cutaneous injection of about 30 drops of a bio-chemical compound."

RESULT OF LONG STUDY.

This compound, Dr. Koch told a reporter, is the result of nine years of study and experiment which began in the chemical laboratory of the University of Michigan, with his study of the function of the parathyroid glands, four glands, about the size of a small pea, lodged deep in the neck.

"The function of the parathyroid glands," Dr. Koch said, "was a mystery from the time these glands were discovered until some years ago, when I cleared up the matter to a point where a very important disease, Eclampsia, and the change which constitutes cancer could be studied. Eclampsia treatment will be reported soon in some medical journal." (Eclampsia is an intoxication resulting from insufficiency of the parathyroid glands. It occurs in pregnant women and is quite rare.)

The parathyroid glands are necessary to life. If they are injured the afflicted person dies in a characteristic way—in convulsions.

The first contributions to this subject were made at Johns Hopkins university. Unfortunately they were erroneous and only made the mystery deeper. It was when I discovered that when these glands are injured several poisonous substances develop from a previously useful substance that we were placed on the right track again. The poisonous bodies are certain guanidins and they develop from a hormone, which I found to be methyl-cyanimide.

COMPOUNDS ACTION.

"While testing the various organs for the presence of this compound and also testing cancer the same way, I noted the difference between cancer and normal tissue, and it is this difference that forms the basis of my cancer treatment.

"The action of this compound, which, Dr. Koch asserts, destroys cancer tissue and has no effect on normal tissue, he describes as follows:

"The serum is carried to the cancer by the blood. The cells are killed. Their osmotic pressure increases. And they become waterlogged and swell. The pressure of the swelling causes more pain until the killed part has been disintegrated and absorbed. And the absorption, or burning up, causes fever, usually occurring [illegible] after the injection.

HAS NEW CANCER TREATMENT



DR. WILLIAM F. KOCH

no recurrence of the cancer, the patients have been cured.

Although all spoke of Dr. Koch's treatment with that reserve which in discussing the value of another man's discovery of a disease-treatment, marks the utterances of reputable physicians, jealous of their own professional reputations, they were unanimous in the opinion that Dr. Koch's treatment has shown remarkable results. That, from the viewpoints of the physician, caution in declaring a "cancer cure" is natural, is emphasized by the statement of Dr. J. H. Carstens, and solemnly echoed by two others of the physicians interviewed, that "the man who discovers a cure for cancer will be the greatest man in the world."

BRILLIANT CHEMIST.

Dr. Alexander W. Blain, surgeon, head of Jefferson clinic: "Dr. Koch is one of the most brilliant physiological chemists in the country. It is too early to say he has a cancer cure, and it should not be regarded as a 'cure-all' but an adjunct to the treatment of cancer. No cure can be established until five years have shown there is no recurrence of the disease. But what he has done is this: He has made people well who were so far gone with cancer that they had only a few weeks to live. Several patients he treated for me are working hard and enjoying life a year after they 'should have been dead.' Even if Dr. Koch gets no further with his work than he is now—and he is experimenting now with his fifteenth mixture, I believe—even if he has not discovered an absolute cure for cancer, he has added years to the lives of cancer victims. There are

tion I operated on her and took out such cancerous growths as were apparent. Later, the cancer grew again. Dr. Koch gave her four injections and she is now apparently entirely well. I have seen some excellent work done with radium, but never anything so remarkable as this. Dr. Koch should be given every opportunity to prove the value of his treatment."

Dr. C. Hollister Judd, president of the medical board, Women's Hospital: "When we stop to consider that one woman in every seven and one man in every 12 have cancer, the importance of the work Dr. Koch is doing can not be overrated, though it is too early to say that he has a cure for cancer. He has been working under many handicaps. The cases given him have been the 'hopeless' ones, where the surgeons saw the uselessness or impossibility of further operation, and his treatment has shown remarkable results.

SHOULD BE HELPED.

"Everything should be done to encourage him in his work. He should not be obliged to think, for instance, of expense. Yet his serum costs him $3 an injection, I believe. He ought to be given $100,000 to carry on his work and he ought to have a ward in a hospital where he could concentrate his patients. Women's Hospital is arranging to give him 12 beds. Dr. Koch's work, which is still experimental, is important in this sense, he is studying cancer physiologically rather than pathologically. That is, instead of working on the cancer tissue of a dead person, he is working on patients who are alive. There might be a question as to which method

Continued

curbed ... [illegible] ... ing up, caused fever usually occurring up, caused fever usually, occurring up, caused fever usually occurring within about 12 hours after the injection of the serum. Cancer tissue so absorbed also serves as nourishment. If the patient has been starved a long time because of cancer of the stomach, a large cancer [illegible] ... [illegible] ... since, once killed, it supplies food element, and actually gives strength to the patient. Cancers previously treated with X-ray or radium, however, if killed by the serum treatment, gives products that are very toxic, immediately so, in some instances, to kill the patient.

Dr. Koch's treatment will not, he says, cure cancers that have previously had X-ray or radium treatment.

TYPES HUMANLY CURED.

"I have treated 30 such cases and in every instance the treatment was a failure," he said. "Except that it is a matter of electron vibrations, I am in the dark as to the exact nature of that change in the cancer chemistry induced by X-ray or radium treatment. I am now trying to solve that problem."

Neither will Dr. Koch say that his serum will cure skin cancer of breast cancer.

"I have had good results with skin cancer several times," he asserted, "but I have not had enough experience with it to say that my compound will cure it. The compound was not constructed according to the chemistry of such growths. The material I used for analysis when starting the work was rectile and stomach cancer. The types that respond best to the treatment are cancers of the liver, stomach, intestines, rectum and uterus, which are apparently rapidly and completely cured.

About ten injections of the serum, Dr. Koch says, will completely cure a stomach cancer as big as a man's head and stomach cancers are practically always inoperable.

SAD CASE CITED.

"I had a woman patient last August," he said, "with a cancerous growth as large as a watermelon. She was too weak to walk and wanted to live only until her son returned from France. I did not expect her to live a week. Today she is as well as any of us. It is the same with all stomach cases I have treated; they are either entirely cured or are failing as quickly as treatment proceeds. And the same is true of rectum or uterus cancers that have not been treated with X-ray or radium.

"If Dr. Koch's cases have been well advanced. It makes no difference in the success of the cancer treatment how near death the patient may be, he asserts.

"Just as long as the blood is circulating to carry the serum from the site of the injection through the growth, the compound will do its work," he said. "Of course some patients may be so completely exhausted as to die anyhow, or they may have some other fatal malady. If one of the patient's vital organs is destroyed, curing the cancer obviously will not save his life. He is likely to die before the cancer is cured."

CONFIRMED BY PHYSICIANS.

The stomach, Dr. Koch says, although important, is not necessarily a vital organ.

According to Dr. Koch, not one case of cancer in the history of the world had been cured by medical treatment until he discovered his compound.

Several Detroit physicians whom Dr. Koch thanks in his paper for their co-operation in his cancer treatment have confirmed Dr. Koch's statement that he has established clinical cures of cancer in specific cases. Fifty clinically cured, they explained, that insofar as can be determined without exploiting the patients by operation to justify a positive statement that no trace of cancer remains, or by awaiting five years to ascertain that there is

cancer, he has added years to the lives of cancer victims. There are nearly 300,000 victims of cancer in the country and if they could all have a few years of usefulness added to their lives, the saving to the country would be enormous. What he has already done is a blow to humanity and a great step forward in physiological chemistry.

CONFIRMATION IN DOUBT.

Dr. Walter L. Hackett, visiting gynecologist and obstetrician, Women's Hospital: "There is no question of Dr. Koch's sincerity and ability. It will take five years to determine whether or not he has a real cure for cancer, but I have enough confidence in his treatment to let him inject his serum into any cancer patient of mine. I had, as a patient, an old woman who was very far gone. Al Koch's suggestion I gave her a dose of the serum. Within 24 hours after the injection she was up and around. Today she is as well as any of us. Whether or not she will be cured by the treatment I cannot say, but I am willing to let her have the benefit of the doubt."

Dr. J. H. Cardenal: "He has apparently effected some wonderful cures, but it is too soon to say this positively. I am against publicity in the matter, as we do not want persons afflicted with cancer to flock to Detroit for treatment when they will not be able to be taken care of. Dr. Koch will get all the cases he needs."

TOO EARLY TO PREDICT.

Dr. G. H. Palmerlee: "Dr. Koch treated an old man for me. The growth seems to have reduced materially and the patient began feeling better after the first few treatments. It is too early to say that Dr. Koch has a cure for cancer. He should be given a ward in a hospital with a number of cases proved beyond the shadow of a doubt to be cancer. Then a commission of physicians should be appointed to watch the effect of Dr. Koch's treatments on the patients. If he had 100 cases of positively proved cancer and he established cures in 90 per cent of the cases, he would be getting somewhere.

"If he can cure 75 per cent of his cases—even if he has not a positive cure for all cancer—his discovery is a boon to humanity, for the man who discovers a cancer cure will be the greatest man in the world. One of the difficulties of curing cancer is that ordinarily it is not discovered until the case is too far advanced to be operated. Operations are successful if the cancer is caught early enough and if all the cancer cells are removed. If, however, a few of the cells escape and spread through the lymph tracts or the blood vessels to other parts of the body, the cancer will break out again and it is obvious that only a certain amount of tissue can be removed from the body.

WITHHOLDS FORMULA.

"Where a case has been operated and the cancer breaks out again, there is almost no curing it by further operation. The trouble with making any announcement of a cancer cure is that too much will be expected of it, as too much was expected of the X-ray and other innovations. The X-ray is of wonderful assistance in diagnosing, in locating foreign particles in wounds, obstructions of stomach or intestines, and in discovering broken or dislocated bones, but it is not a cure-all, as people thought when its discovery was announced."

The establishing of a commission of physicians to study the progress of the cases he treats is, Dr. Koch says, exactly what he wants.

"I do not want to make the formula public just yet," he declared, "because I fear it might be commercialized. The compound is difficult to make and it deteriorates rapidly. If I published it and quacks or unscientific men started mixing it and treating cancer with it, the results would be disastrous, not only possibly to the patients, but to the ultimate success of the treatment. Improperly mixed or administered the compound would fail to do its work. It would be discredited by the medical profession and it would take years to establish its value. When I have proved to the satisfaction of the medical world, that it does its work, it will be time enough to make the formula public."

A NEW AND SUCCESSFUL TREATMENT AND DIAGNOSIS OF CANCER

By WILLIAM F. KOCH, Ph. D., M. D., Professor of Physiology, Detroit College of Medicine and Surgery; Research Pathologist to the Woman's Hospital; Director of Laboratory to the Jefferson Clinic.

Statistics show that there are over 200,000 cases of cancer in this country alone. The mortality is one out of eight for females, and one out of twelve for males, in spite of the great advances in diagnosis, surgery, and in the use of X-ray and Radium. It is hardly to be wondered at that the successful treatment of this disease should be sought in some other field of endeavor, as chemistry, for instance. I am glad to be able to announce that such a search has not been barren, and that indeed a number of inoperable cancer cases have already been clinically cured through a bio-chemical treatment with which a fair portion of the Detroit Profession is now familiar.

It is the purpose of this paper to explain briefly the history and principle of this treatment in order to engage interest and co-operation in this very necessary work.

In 1912 and 1913 (I), I reported the occurence of the toxic quantities of quanidine, methyl-quanidine and other alkylated quanidines in the urines of parathyroidectonized dogs, and concluded that these substances were responsible for the sypmtoms and death of such animals. In 1917, (II), this work was amply confirmed at the University of Glasgow. In the meantime, I was able to isolate from parathyroidectomized dogs' urines the precursor of the quanidines, namely, methyl-cyanamide. (III) This substance which is formed by other body cells than those of the parathyroid glands after parathyroidectomy quite quickly combines the amino groups liberated in the metabolism of amino-acids and thus becomes a quanidine.

I was never able to isolate quanidine from any normal tissue or unputrified protein. So it was presumable that whatever quanidine was formed in the body had its origin in a cyanamide. Now by preparing the protein of the various living organs so as to kill immediately all the ferments, dry it, and free it from all fats, those groups, which are metabollically active, are preserved for study. And by applying a certain chemical compound which readily binds the cyanamide group, it appeared that all normal tissue protieds contained this group. On testing cancer proteid, however, a peculiar behavior was observed which differentiates cancer and normal protein.

This substance when purified, taken up in water and immediately injected subcutaneously into a cancer patient, causes practically no local reaction; but instead, after about 24 hours, a very decided focal reaction takes place. Wherever the cancer tissue may be, its' cells are killed, their ionic concentration increases, the osmotic pressure increases, they take up water, swell and disintegrate. The swelling causes pain and the absorbed, disintegrated products are oxidized causing fever.

Those two things, focal pain and fever, constitute a reaction which lasts all the way from 6 tot 48 hours, depending upon the amount of cancer tissue killed, and of course this depends upon the quantity of substance injected. Such a reaction occurs only in cancer cases and only in the presence of cancer tissue. After the cancer tissue has disappeared, no more reaction can be elicited, no matter how large an injection is given, an important diagnostic aid. The specificity of the substance for cancer is evidenced by the fact that while giving these injections in rapid succession (that is daily or every two days for a period of five weeks), a blood count will rise from 2,850.000 to 4,600,000 red cells and the haemeglobin from 37% to 82%. Thus the delicate red cells are not injured. At the same time a mass of cancer tissue, the size of a large cabbage, will entirely disappear, and all the signs and symptons of the particular cancer will disappear with it, function return; and the patient become clinically cured.

Stomach, liver and rectal cancer clear up the quickest. Uterus cancer responds slightly more slowly. Squamous cell carcinoma responds about one-half as fast as stomach cancer. No cases of cancer that have previously received X-ray or Radium treatment respond to this treatment at all since these agencies have altered the chemistry of the cancer cell. I therefore, cannot make any statements regarding breast cancer, since those breast cases that I have treated have all been previously rayed.

Before presenting a few brief case descriptions, I wish to express my gratitude and appreciation to Dr. Carstens. Dr. Judd. Dr. Paterson, Dr. Irvine, Dr. Palmerlee, Dr. Palmer. Dr. Blain. Dr. Watkins. Dr. Hewitt. Dr. Friedlander, Dr. Hackett, Dr. John Burleson. Dr. Ash. Dr. Van Baalen. Dr. Hurst, for the excellent cases they have offered and for their kind co-operation in the treatments of their cases. I think that interviewing them would prove more interesting and instructive than any mass of details that I could here append.

Case I: Mrs. McG———— referred by Dr. Alexander Blain, age —, weight, 97 lbs., red blood count, 2,850,000. History symptoms and examination led to the diagnosis of cancer of the Uterus, Laparotomy (July 11th, 1918), revealed carcinoma of the Uterine body and cervix with extensive pelvic envolvement. Specimen confirmed the diagnosis. The fundus was amputated and the cervix cauterized, but a large quantity of cancer left. Two weeks after the operation, she was treated with my compound, receiving six injections in the buttock. Each treatment was followed by a reaction, the focal pain was severe, and the fever reaching 104. The seventh injection gave no reaction, so the patient was allowed to return home for a rest. Blood count, 2,900,000. Two weeks later, blood count, 3,896,000. She returned for three successive trial treatments. To none of them did she give a reaction. She has been clinically cured now for a year, holding a weight of 131 pounds. Her maximum normal weight some years ago was 136 pounds. This case was prognosticated to have terminated at the latest six months after the operation. So far the treatment has added six months longer of perfect health. She is well to date.

From the Detroit Medical Journal, July 1919
Vol. XX, No. 7, Page 244-248

Case 2: Mrs. N, age 47, referred by Dr. Blain, weight 90 lbs., bloods count, 2,200,000. Came to Dr. Blain, having been previously given up to die of gastric cancer by several Detroit physicians, was too weak and cachectic to walk or to risk a general anaesthetic, vomited everything, very marked bloody ascites—3 gallons per week—continuous abdominal pain, with acute exacerbations palpable mass as large as a loaf of bread in upper abdomen. Prognosis, about ten days to live. August 4th, Laporatomy, under local anaesthesia and abdomen explored, showing extensive carcinoma of the stomach, liver and whole upper abdomen apparently about 20 pounds of neoplasm. A small piece was taken from the liver for microscopical examination. Diagnosis returned, adenocarcinoma of pyloric origin. She was immediately given two small injections of the compound. Was having such violent reaction that her relatives took her home to die. Eight months later, she called upon Dr. Blain for another injection, because although she had rapidly recovered and did all the housework and washing for a big family, nearly the whole eight months, her stomach pain had returned the last week and she wanted further treatment. The mass in the abdomen was still palpable and about the size of a grape-fruit. Four more injections were given. Each was followed by severe pain and high fever. At present (four months after the last series of treatments began), the mass is the size of an egg, and the ascites amounts to about two gallons of clear fluid in three weeks. She feels younger, eats everything without any gastric pain distress or vomiting, and does as much hard work as any healthy woman. Her weight is now 130 lbs.. showing a gain of 40 lbs. since treatment started. Blood count, 4,200,000.

Case 3: Mrs. B. ———— referred by Dr. Hackett, weight, 70 lbs. This case is a post-operative recurrence of uterine carcinoma, involving the whole pelvis, and causing a vagino-vesicular fistulae with much discharge and considerable hemorrhage. She was taking varyingly three grains of morphine per day, very weak, very anaemic and cachectic. She was given nine small treatments, from May 3rd to June 1, responding only with slight reaction. The highest fever was 101.2°. Her recovery was gradual. The patient has no more pain, takes no more morphine, hemorrhage stopped early, there is no more odorous discharge. She is up and about, quite strong, weight 94½, showing a gain of 24½ lbs. in seven weeks. The only remaining sequel is the fistula. There are no palpable or visible signs of carcinoma.

Case 4: Mr. L————, referred by Dr. Hewett, age 56, weight (no record), blood count (no record). This patient had a squamous cell carcinoma, the size of a grape fruit, of the right cervical region, extending from above the ear to below the clavicle and involving the glands of the opposite side. Very severe pain, and frequent, copious hemorrhage had left him moribund. Several physicians had prognosticated his maximum length of life to be seven or ten days. His first injection was given January 14, 1919. He started to pick up immediately. After 16 injections he was apparently cured, no longer giving reactions. The mass was gone and the patient strong and buoyant. His neck was explored by Dr. Hewitt, who found no cancer tissue present. Allowed to go home where he has enjoyed several weeks of "life worth living."

Case 5: Mrs. S, age 72, referred by Dr. Watkins, weight (no record), blood count, 2,850,000 haem., 37%. Diagnosis of carcinoma of the stomach was made from clinical history, symptoms and clinical findings. No palpable tumor. Patient had serious gastric hemorrhage pain and inability to retain food. Treatment started May 9, 1919. Given six injections at intervals of two or three days. Reactions, rather violent. Daily blood counts showed a steady rise, till at discharge, June 9, 1919., Blood count, 4,576,000, haem., 78%. No more stomach pain, can eat anything, strength returned, cachecia disappeared and feels better than three years ago, looks ten years younger, and gained nearly 2,000,000 red cells per cu. m. m., while under five weeks' treatment and doubling her haemoglobin content; also increasing her diet in that period from ½ oz. each of milk and cream hourly, to finally bread, vegetables with meats.

Case 6: Mrs. Z, age 63, referred by Dr. Friedlander, weight (no record), blood count (no record). Diagnosis of carcinoma of the stomach by clinical history, symptoms, signs, and exploratory operation, at which a mass as large as a large cabbage was found involving the upper abdomen. Patient quite weak, could not even hold milk or toast on stomach, pain very severe. After nine injections, mass completely disappeared so far as palpation can reveal. Reactions were severe, fever reaching 104.3. All gastric symptons are gone. She eats any food, including raw onions, without any signs of distress. Gained weight and strength. Not easily fatigued.

Case 7: Mr. McK, referred by Dr. Burleson, of Grand Rapids. By examination, clinical history and symptoms, diagnosed massive carcinoma of the rectum. Patient very weak but took a room in a squalid basement in a poor quarter of the city. Diet, bananas, when he felt well enough to go after a few. He was given four treatments in the early part of June and went back home much younger and happy. On his way, stopped in at Burleson's for examination. I immediately received a visit of congratulation from Dr. Burleson, who stated that he had three of his associates examine this case after treatment and that they all agreed that all traces of the cancer were gone.

It appears from these brief case histories, that each injection does its work and that the growth does not become immune to the treatment, that destruction of the cancer removes all its noxious activities as eroding blood vessels, nerves, etc., and that the toxic products are no longer generated, so that the cachecia disappears and a return to the normal strength, body weight and blood count ensue.

I believe that you will appreciate the importance of this cancer work and believe that you are all interested in my request for co-operation. I wish to work up very fully several hundred cases for final report. I shall be glad to interview anyone regarding this matter, but for reasons that you will appreciate, wish only cases, that have not received Ray treatments.

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I. Koch Jour. Biol. Chem., 1912, Vol. XII., p. 313; Jour. Biol. Chem., 1913, Vol. XV., No. 1, p. 43.

II. Paton, Findlay, Watson, Burns, Sharp, Wishart, Quart. Jour., Phys. 1917, Vol. X., Nos. 3 and 4.

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(727 Jefferson Ave.)

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Professor Meyer Bodansky, Ph.D., in his text-book "*Introduction To Physiological Chemistry*" (1927) p. 327 (16) stated:

> **"Certain physiologists (Koch, Noel Paton and others) have attributed the symptoms of parathyroid tetany to guanidine or methyl-guanidine, which Koch found to be present in the urine of parathyroidectomized dogs. According to this view, the parathyroids control in some way the metabolism of guanidine. In the normal animal, guanidine is presumably detoxified by these glands.**

FIRST CANCER RESEARCH PAPER PUBLISHED AND THE MEDICAL PROFESSION ATTEMPTED TAKEOVER

A New And Successful Treatment And Diagnosis Of Cancer (6), was Dr. Koch's first published paper[11] on his original cancer research. This was a preliminary cancer research report to the local medical profession only. At the time of this report, Dr. Koch was seeking the full cooperation of the medical profession in order for him to set up a scientific clinical cancer research testing program for his method of treating cancer in the Detroit area. With the full cooperation of the local medical profession, he would be able to treat several hundred terminal cancer cases with his new method of treatment and then make a full disclosure of the results. This was part of his overall scientific cancer research program that had started when he was at the University of Michigan. In 1919, Dr. Koch had the full support and cooperation of about fifteen oncologists, in the Detroit area who permitted Dr. Koch to treat of some of their terminal cancer patients. He closed his paper with the following paragraph:

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"Statistics show that there are over 200,000 cases of cancer in this country alone. The mortality is one out of eight for females, and one out of twelve for males, in spite of the great advances in diagnosis, surgery, and in the use of X-ray and Radium. It is hardly to be wondered at that the successful treatment of this disease should be sought in some other field of endeavor, as chemistry, for instance. I am glad to be able to announce that such a search has not been barren, and that indeed a number of inoperable cancer cases have already been clinically cured through a bio-chemical treatment with which a fair portion of the Detroit Profession is now familiar.

"It is the purpose of this paper to explain briefly the history and principle of this treatment in order to engage interest and co-operation in this very necessary work.

"In 1912 and 1913 (1), I reported the occurrence of the toxic quantities of guanidine, methyl-guanidine and other alkylated guanidines in the urines of parathyroidectomized dogs, and concluded that these substances were responsible for the symptoms and death of such animals. In 1917 (2), this work was amply confirmed at the University if Glasgow. In the meantime, I was able to isolate from parathyroidectomized dogs' urines the precursor of the quanidines, namely, methyl cyanamide. (3) This substance is formed by other body cells than those of the parathyroid glands after parathyroidectomy quite quickly combines the amino group liberated in the metabolism of amino-acids and thus becomes a quanidine.

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"This substance when purified, taken up in water and immediately injected subcutaneously into a cancer patient, causes practically no local reaction; but instead, after about 24 hours, a very decided focal reaction takes place. Wherever the cancer tissue may be, its' cells are killed, their ionic concentration increases, the osmotic pressure increases, they take up water, swell and disintegrate. The swelling causes pain and the absorbed, disintegrated products are oxidized causing fever.

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substance injected. Such a reaction occurs only in cancer cases and only in the presence of cancer tissue. After the cancer tissue has disappeared, no more reaction can be elicited, no matter how large an injection is given, an important diagnostic aid. The specificity of the substance for cancer is evidenced by the fact that while giving these injections in rapid succession (that is daily or every two days for a period of five weeks), a blood count will rise from 2,850,000 to 4,600,000 red cells and the haemeglobin from 37% to 82%. Thus the delicate red cells are not injured. At the same time a mass of cancer tissue, the size of a large cabbage, will entirely disappear, and all the signs and symptoms of the particular cancer will disappear with it, function return, and the patient become clinically cured.

"Stomach, liver and rectal cancer clear up the quickest. Uterus cancer responds slightly more slowly. Squamous cell carcinoma responds about one-half as fast as stomach cancer. No cases of cancer that have previously received X-ray or Radium treatment respond to this treatment at all since these agencies have altered the chemistry of the cancer cell. I therefore, cannot make any statements regarding breast cancer, since those breast cases that I have treated have all been previously rayed.

"Before presenting a few brief case descriptions, I wish to express my gratitude and appreciation to Dr. Carstens, Dr. Judd, Dr. Paterson, Dr. Irvine, Dr. Palmerlee, Dr. Palmer, Dr. Blain, Dr. Watkins, Dr. Hewitt, Dr. Friedlander, Dr. Hackett, Dr. John Burleson, Dr. Ash, Dr. Van Baalen, Dr. Hurst, for the excellent cases they have offered and for their kind co-operation in the treatments of their cases. I think that interviewing them would prove more interesting and instructive than any mass of details that I could here append. (Seven cases were briefly reviewed in this paper:)

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(3) Koch Jour. Of Med. and Surg., Jan., 1918, pp. 1 to 9.

Only by chance, about a month later, a newspaper reporter for the Detroit News came across Dr. Koch's research paper and became interested in his original approach to the treatment of cancer. Thus on September 7, 1919, the following article was published in the Sunday Edition of The Detroit News paper giving a full review, to the public, on Dr. Koch cancer research.

THE DETROIT NEWS, SUNDAY, SEPTEMBER 7, 1919

REPORTS NEW CANCER SERUM

Professor at Detroit College
Stirs Medical Profession
by Announcement.

Members of the medical profession in Detroit have been stirred by the announcement of a new treatment of cancer by Dr. William F. Koch, professor of physiology at the Detroit College of Medicine and Surgery, and the statement he has already clinically cured a number of inoperable cancer cases.

Dr. Koch's announcement is made in the issue of the Detroit Medical Journal, in a paper entitled "A New and Successful Treatment and Diagnosis of Cancer."

He describes the treatment as "a subcutaneous injection of about 30 drops of a bio-chemical compound."

RESULT OF LONG STUDY,

This compound, Dr. Koch told a reporter, is the result of nine years of study and experiment which began, in the chemical laboratory of the University of Michigan, with his study of the function of the parathyroid glands, four glands, about the size of a small pea, lodged deep in the neck.

"The function of the parathyroid glands," Dr. Koch said, "was a mystery from the time these glands were discovered until some years ago when I cleared up the matter to a point where a very important disease, Eclampsia, and the change which constitutes cancer could be studied. Eclampsia treatment will be reported soon in some medical journal." (Eclampsia is an intoxication resulting from insufficiency of the parathyroid glands. It occurs in pregnant women and is quite rare.)

"The parathyroid glands are necessary to life. If they are injured the afflicted person dies in a characteristic way – in convulsions.

"The first contributions to this subject were made at Johns Hopkins University. Unfortunately they were erroneous and only made the mystery deeper. It was when I discovered that when these glands are injured several poisonous substances develop from a previously useful substance that we were placed on the right track again. The poisonous bodies are certain guanidine and they develop from a hormone, which I found to be methyl-cyanimide."

COMPOUNDS ACTION,

"While testing the various organs for the presence of this compound and also testing cancer the same way, I noted the difference

between cancer and normal tissue and it is this difference that forms the basis of my cancer treatment." The action of this compound, which Dr. Koch asserts, destroys cancer tissue and has no effect on normal tissue, he describes as follows:

"The serum is carried to the cancer by the blood. The cells are killed. Their osmotic pressure increases and they become waterlogged and swell. The pressure of the swelling causes more pain until the killed part has been disintegrated and absorbed, and the absorption, or burning up, causes fever, usually occurring about 12 hours after the injection of the serum. Cancer tissue so absorbed also serves as nourishment. If the patient has been starved a long time because of cancer of the stomach, a large cancer, paradoxical as it is, is a benefit since, once killed, it supplies food elements and actually gives strength to the patient. Cancers previously treated with X-ray or radium, however, if killed by the serum treatment, gives products that are very toxic, sufficiently so, in some instances to kill the patient.

Dr. Koch's treatment will not, he says cure cancers that have previously had X-ray or radium treatment.

TYPES READILY CURED,

"I have treated 30 such cases and in every instance the treatment was a failure," he said, "Except that it is a matter of electron vibrations, I am in the dark as to the exact nature of the change in the cancer chemistry induced by X-ray or radium treatment. I am now trying to solve that problem."

Neither will Dr. Koch say that his serum will cure skin cancer or breast cancer.

"I have had good results with skin cancer several times," he asserted, "but I have not had enough experience with it to say that my compound will cure it. The compound was not constructed according to the chemistry of such growth. The material I used for analysis when starting the work was rectal and stomach cancer. The types that respond best to the treatment are cancers of the liver, stomach, intestines, rectum and uterus, which are apparently rapidly and completely cured.

About ten injections of the serum, Dr. Koch says, will completely cure a stomach cancer as big as a man's head and stomach cancers are practically always inoperable.

BAD CASE CITED,

"I had a woman patient last August," he said, "with a cancerous growth as large as a watermelon. She was too weak to walk and wanted to live only until her son returned from France. I did not expect her to live a week. Today she is as well as any of us. It is the same with all stomach cases I have treated; they are either entirely well or getting well as quickly as treatment proceeds. And the same is true of rectum or uterus cancer that have not been treated with X-ray or radium."

All Dr. Koch's cases have been well advanced. It makes no difference in the success of the cancer treatment how near death the patient may be, he asserts.

"Just as long as the blood is circulating to carry the serum from the site of injection through the growth, the compound will do its work," he said. "Of course some patients may be so completely exhausted as to die, anyhow, or they may have some other fatal malady. If one of the patient's

vital organs is destroyed; curing the cancer obviously will not save his life. He is likely to die before the cancer is cured."

CONFIRMED BY PHYSICIANS,

The stomach, Dr. Koch, says, although important, is not necessarily a vital organ.

According to Dr. Koch, not one case of cancer in the history of the world had been cured by medical treatment until he discovered his compound.

Several Detroit physicians whom Dr. Koch thanks in his paper for their co-operation in his cancer treatment, have confirmed Dr. Koch's statement that he has established clinical cures of cancer in specific cases.

By "clinical cured" is meant they explained, that insofar as can be determined without exploring the patients by operation to justify a positive statement that no trace of cancer remains or by waiting five years to ascertain that there is no recurrence of the cancer, the patients have been cured.

Although all spoke of Dr. Koch's treatment with that reserve which, in discussing the value of another man's discovery of a disease-treatment, marks the utterance of reputable physicians, jealous of their own professional reputations, they were unanimous in the opinion that Dr. Koch's treatment has shown remarkable results. That, from the viewpoint of the physician, caution in indorsing a "cancer cure" is natural, is emphasized by the statement of Dr. J. H. Carstens, and solemnly echoed by two others of the physicians interviewed, that "the man who discovers a cure for cancer will be the greatest man in the world."

BRILLANT CHEMIST,

Dr. Alexander W. Blain, surgeon, head of Jefferson clinic: "Dr. Koch is one of the most brilliant physiological chemists in the country. It is too early to say he has a cancer cure, and it should not be regarded as a 'cure-all' but as an adjunct to the treatment of cancer. No cure can be established until five years have shown there is no recurrence of the disease. But what he has done is this: He has made people well who were so far gone with cancer that they had only a few weeks to live. Several patients he treated for me are working hard and enjoying life a year after they 'should have been dead.' Even if Dr. Koch gets no further with his work than he is now – and he is experimenting now with his fifteenth mixture, I believe – even if he has not discovered an absolute cure for cancer, he has added years to the lives of cancer victims. There are nearly 300,000 victims of cancer in the country and if they could all have a few years of usefulness added to their lives the saving to the country would be enormous. What he has already done is a boon to humanity and a great step forward in physiological chemistry."

CONFIDENCE IN KOCH,

Dr. Walter L. Hackett, visiting gynecologist and obstetrician, Woman's Hospital: "There is no question of Dr. Koch's sincerity and ability. It will take five years to determine whether or not he has a real cure for cancer, but I have enough confidence in his treatment to let him inject his serum into any cancer patient of mine. I had, as a patient, an old woman who was very far gone. At Koch's suggestion I operated on her and took out such cancerous growths as were apparent. Later, the cancer grew

again. Dr. Koch gave her four injections and she is now apparently entirely well. I have seen some excellent work done with radium, but never anything so remarkable as this. Dr. Koch should be given every opportunity to prove the value of his treatment."

Dr. C. Hollister Judd, president of the medical board, Women's Hospital: "When we stop to consider that one woman in every seven and one man in every 12 have cancer, the importance of the work Dr. Koch is doing can not be overrated, though it is too early to say that he has a cure for cancer. He has been working under many handicaps. The cases give him have been the 'hopeless' ones, where the surgeons saw the uselessness or impossibility of further operation, and his treatment has shown remarkable results.

SHOULD BE HELPED,

"Everything should be done to encourage him in his work. He should not be obligated to think, for instance, of expense. Yet his serum costs him $8 an injection, I believe. He ought to be given $100,000 to carry on his work and he ought to have a ward in a hospital where he could concentrate his patients. Women's Hospital is arranging to give him 12 beds. Dr. Koch's work, which is still experimental, is important in this sense, he is studying cancer physiologically rather than pathologically. That is, instead of working on the cancer tissue of a dead person, he is working on patients who are alive. There might be a question as to which method is more interesting to the physician, but there is no question of which appeals more to the patient."

Dr. J. H. Carstens: "He has apparently effected some wonderful cures, but it is too soon to say this positively. I am against publicity in the matter, as we do not want persons afflicted with cancer to flock to Detroit for treatment when they will not be able to be taken care of. Dr. Koch will get all the cases he needs."

TOO EARLY TO PREDICT,

Dr. G. H. Palmerlee: "Dr. Koch treated an old man for me. The growth seems to have reduced materially and the patient began feeling better after the first few treatments. It is too early to say that Dr. Koch has a cure for cancer. He should be given a ward in a hospital with a number of cases proved beyond the shadow of a doubt to be cancer. Then a commission of physicians should be appointed to watch the effect of Dr. Koch's treatments on the patients. If he had 100 cases of positively proved cancer and he established cures in 90 per cent of the cases, he would be getting somewhere.

"If he can cure 75 per cent of his cases – even if he has not a positive cure for all cancer – his discovery is a boon to humanity, for the man who discovers a cancer cure will be the greatest man in the world. One of the difficulties of curing cancer is that ordinarily it is not discovered until the case is too far advanced to be operated. Operations are successful if the cancer is caught early enough and if all the cancer cells are removed. If, however, a few of the cells escape and spread through the lymph tracts or blood vessels to other parts of the body, the cancer will break out again and it is obvious that only a certain amount of tissue can be removed from the body.

WITHHOLDS FORMULA,

"Where a case has been operated and cancer breaks out again, there is almost no curing it by further operation. The trouble with making any announcement of a cancer cure is that too much will be expected of it, as too much was expected of X-ray and other innovations. The X-ray is of wonderful assistance in diagnosing, in locating foreign particles in wounds, obstructions of stomach or intestines, and in discovering broken or dislocated bones, but it is not a cure all, as people thought when its discovery was announced."

The establishing of a commission of physicians to study the progress of the cases he treats is, Dr. Koch says, exactly what he wants.

"I do not want to make the formula public just yet," he declared, "because I fear it might be commercialized. The compound is difficult to make and it deteriorated rapidly. If I published it and quacks or unscientific men started mixing it and treating cancer with it, the results would be disastrous, not only possibly to the patients, but to the ultimate success of the treatment. Improperly mixed or administered the compound would fail to do its work. It would be discredited by the medical profession and it would take years to establish its value. When I have proved to the satisfaction of the medical world that it does its work, it will be time enough to make the formula public."

Dr. Koch wanted to continue his clinical research, on a very scientific basis, under his control and free from the influence of noncontributory interest. Though he did not have the financial backing to complete the necessary basic chemical research and at the same time do the extensive clinical testing that was necessary for acceptance of his cancer research by the medical profession, he did want to continue to work with the local medical authorities, as closely as possible. Approved clinical testing of his cancer treatment was necessary for the acceptance of his discoveries. Likewise, he did not want this important research to get into the hands of unscrupulous persons who would prematurely try to capitalize on his discoveries to the detriment of his cancer research through their incompetence. Thus he felt that it was important to him to withhold the chemical identity of the substances he was working with and the method of manufacturing them until all of his basic research had been completed and his research and treatment for cancer was officially accepted in full. Only at that time he felt it would be proper to publish a full detail report on his treatment and the identity and method of manufacturing the therapeutic agents he was using in the treatment of cancer.

As a direct result of this newspaper article a great national interest in his cancer research followed. At the time of this research, he had the cooperation of the many members of the Wayne County Medical Society and the American Medical Association including Drs. Carsten, Judd, Paterson, Irvine, Palmerlee, Palmer, Blain, Watkins, Hewitt, Friedlander, Hackett, Burleson, Ash, Van Baalen and Hurst. These doctors made it possible for Dr. Koch to treat some of their terminally ill cancer patients during this early clinical research period. At the same time, Dr. Koch continued as Professor of Physiology and Physiological

Chemistry, and as Chairmen of that Department, at the Detroit College of Medicine. He also served as pathologist on staff at Woman's Hospital and St. Mary's Hospital in Detroit and he was a member in good standing of the Wayne County Medical Society, State of Michigan Medical Society and on the Fellowship roll of the Scientific Assembly of the American Medical Association. As a member of the American Medical Association he had all the privileges of this membership with included access to all AMA approved hospitals.

The newspaper reporter, who wrote the aforementioned article, recorded the spontaneous and supporting statements of several of the local oncologist that were working with Dr. Koch at that time. These doctors reported to the public their degree of success with his experimental cancer treatment and their supportive medical opinions of Dr. Koch's cancer research based upon their own personal experiences with his method of treating cancer patients in their personal practice of medicine. This voluntary support came at a time just prior to the attempted takeover of Dr. Koch's cancer research by the local medical profession. I quote in part three of these statements from this newspaper article:

a) Dr. Alexander W. Blain said:

"**Dr. Koch is one of the most brilliant physiological chemists in the country**....what he has done is this: '**He has made people well who were so far gone with cancer that they had only a few weeks to live. Several patients he treated for me are working hard and enjoying life a year after they should have been dead**...I believe—even if he has not discovered an absolute cure for cancer, **he has added years to the lives of cancer victims....What he has already done is a boon to humanity and a great step forward in physiological chemistry**'."

b) Dr. Walter L. Hackett said:

"There is no question of Dr. Koch's sincerity and ability.... **I have enough confidence in his treatment to let him inject his serum into any cancer patient of mine. I had, as a patient, an old woman who was very far gone.** At Koch's suggestion, I operated on her and took out such cancerous growths as were apparent. Later, the cancer grew again. **Dr. Koch gave her four injections and she is now apparently entirely well. I have seen some excellent work done** with radium, **but never anything so remarkable as this. Dr. Koch should be given every opportunity to prove the value of his treatment.**"

c) Dr. C. Hollister Judd, President of the Medical Board, Women's Hospital said:

"When we stop to consider that one woman in every seven and one man in every 12 have cancer, the importance of the work Dr. Koch is doing can not be overrated, though it is too early to say that he has a cure for cancer. He has been working under many handicaps. **The cases given him have been the 'hopeless' ones, where the surgeons saw the uselessness or impossibility of further operation, and his treatment has shown remarkable results.**"

The above newspaper article was followed by additional newspaper articles in the local papers on Dr. Koch and his cancer research and a proposed testing of his treatment for cancer by the Cancer Committee of the Wayne County Medical Society. At the time Dr. Koch had been experimenting with twenty-two different compounds to determine the degree of therapeutic effect each may have on different forms of cancer. This unofficial experimental cancer research had been conducted by Dr. Koch with the full cooperation of a group of local A.M.A. doctors, who permitted their terminal cancer patients to be treated by Dr. Koch in various Detroit Hospitals.

In late September 1919, the following newspaper article was published in one of the local Detroit newspapers.

"DOCTORS SEE PROGRESS IN CANCER FIGHT"

"Wayne County Medical Society Plans to Give New Serum to the World"

"The Koch cancer serum is to be given to the world.

"Dr. James H Carstens, president of the faculty of the Detroit College of Medicine and Surgery made the announcement today.

"The Wayne County Medical Society, which is closely affiliated with the American Medical Association, will distribute the serum through a committee of five.[12] It will be manufactured by Prof. William F. Koch and his associates in the laboratories of the medical college (The Detroit College of Medicine).

"Mayor Couzens is expected to ask permission of the city council to turn over a section of the Herman Kiefer Hospital for Detroit tests. He discussed the matter with Dr. Carstens yesterday.

"No claim had been made as yet that the serum will 'cure' Cancer. But a nation-wide effort will be made to learn just what the preparation will accomplish. Really marvelous results have been achieved by Dr. Koch in Detroit, physicians report and the medical society is unanimous in the belief that the profession everywhere should be given the opportunity to try out the serum and report on its effects. In this way a successful march upon the dread disease at last may be accomplished. Again the attempt may fail. Time will tell.

"Recently, through publication in a medical journal of an article by Dr. Koch, news of the serum was spread abroad. Newspapers took up the cry with the result that today every train is bringing cancer sufferers to Detroit; every hour more telegrams and letters from the hopeful who, misled in the belief that a 'cure' actually has been found, hope to obtain some of the serum, or come to Detroit for personal care and observation.

"This rush of afflicted persons to the city perhaps has hastened the decision of Prof. Koch and his associates to give the serum to the medical profession. Physicians everywhere now will be given the opportunity to use the preparation under every conceivable condition and upon every variety of

[12] This was the beginning of the attempted take over and control of Dr. Koch's cancer research and treatment by some members of the local medical society.

the disease. The serum will rise or fall upon the verdict of the profession in whole, and in this finding Prof. Koch and his friends are content to concur."

This article pointed out the extensive interest and wishful involvement of certain members of the Wayne County Medical Society in Dr. Koch's cancer research. It also pointed out the importance of proper, independent, scientific clinical testing in the support of all cancer research. Certain members of this medical society already knew, first hand, that some of their terminal cancer patients had "clinically recovered"[13] from various forms of cancer through the use of the Koch Treatment when other methods of cancer treatments had failed. This article also indicated how Dr. Koch's cancer treatment would be taken over, controlled and distributed through the Wayne County Medical Society, a division of the American Medical Association. It should be noted that some of the members of this medical society expected that they would individually receive financial benefit through the early commercialization of Dr. Koch's cancer research and treatment as soon as his method of treatment had been officially approved. After these doctors learned that Dr. Koch was interested in proving the therapeutic activity of his discoveries and that he would not go along with their proposed exploitation of his research, they prematurely closed down this investigation after about six weeks. They then tried to blame Dr. Koch for their own actions. The medical doctors who were willing to continue to support Dr. Koch's cancer research soon succumbed to the influence and pressure placed upon them by those members of their society who had had great expectations of receiving financial rewards from the commercialization of Dr. Koch's research and treatment for cancer under their auspices. Dr. Koch's refusal to yield to the dictates of these local medical leaders laid the groundwork for further A.M.A. official opposition to Dr. Koch, his medical research and his treatment for cancer.

The success of this basic cancer research, that Dr. Koch had started while at the University of Michigan many years earlier and which was financed mostly on his own, was of primary importance to him. Both his father and his father-in-law had died from this dreaded disease and he did not want this to happen to anyone else. Dr. Koch wanted to be able to treat hundreds of cancer patients in a scientific manner, free from a political bureaucracy, in order for him to fully document each cancer cure. This was a full time scientific medical research commitment on his part and he knew that the meager laboratory facilities made available to him, at the Detroit College of Medicine, were inadequate for him to continue his cancer research there. When he had learned from the Detroit College of Medicine that it was unable to give him the necessary financial support for him to continue his cancer research at the Detroit College of Medicine, Dr. Koch wrote the following letter of resignation to the Board of Education for the City of Detroit.[14]

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[13] The accepted five year period for proof of a "cure" had not passed at the time of this report though the treated terminal cancer patients appeared to be clinically recovered according to their treating doctors at that time.

[14] This was the department for the City of Detroit that had complete financial control over the Detroit College of Medicine and Surgery at that time.

DETROIT COLLEGE OF MEDICINE AND SURGERY
Detroit, Michigan

Wm. F. Koch, Ph.D., M.D.
Prof. of Physiology and Physiological Chemistry

Oct. 17, 1919

Board of Education
Detroit, Michigan

Gentlemen:

"In so far as the physiological research which I am now carrying on requires my whole time and because it appears that the Board of Education of the City of Detroit cannot support this work, I beg you to accept my resignation from the chair of physiology of the Detroit College of Medicine and Surgery.

Sincerely,

Wm. F. Koch

This official cancer investigation that had been started in late fall of 1919, lasted for only a few weeks and then it was prematurely terminated by the committee. Dr. Koch had been permitted to treat only nine terminal cancer cases and not all the cancer patients that he had been promised he would be able to treat. Also the hospital facilities offered him were grossly inadequate for conducting a proper scientific cancer investigation of his treatment. After the investigation started, it become apparent to Dr. Koch that he would not receive the full cooperation from all of the members of the Cancer Investigation Committee that had been appointed to conduct the Herman Kiefer Hospital clinical cancer tests. Their antagonism and lack of cooperation resulted in the premature closing of this clinical cancer investigation of his treatment. At the time this investigation was closed, one of the official cancer patients, Mrs. Edith Fritts, was discharged from the hospital. She elected to continue treatment in Detroit under Dr. Koch's personal care rather than to return to Toledo, Ohio to her local doctor who had given her up as having an incurable form of cancer. While under Dr. Koch's medical care, she made a full recovery from her cancer.

As a direct result of the failure of this cancer investigation committee to cooperate with Dr. Koch and because of the erroneous report that was published on the first page of the weekly issue of the Wayne County Medical Society's Weekly Bulletin on the December 22, 1919, Dr. Koch wrote the following letter to the Wayne County Medical Society.[15]

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[15] *The Wayne County Medical Society Weekly Bulletin*, Jan. 5, 1920, pp. 4-6

Detroit News - Dec. 16-1919

NO VERDICT ON KOCH REMEDY

Medical Society Committee Reports Failure; New Body Is Named.

The merit or lack of merit of the cancer treatment evolved by Dr. W. F. Koch, of this city, is left an open question by the investigating committee of five doctors appointed by the Wayne County Medical Society, according to the committee's report to the society Monday evening.

The committee report complained that because of the "negligent" treatment accorded by Dr. Koch to the nine patients placed in the Herman Kiefer Hospital by the department of health for the test, no conclusions could be reached. After asserting that the number of visits paid the patients by Dr. Koch was insufficient, the report said that "some of the patients were disgusted, some left, and the rest were sent home, closing our connection with the matter."

"It can be readily seen," the report concluded, "that with the few and irregular treatments given, nothing could be accomplished, and nothing found out about the value or lack of value of the treatment."

The committee, of which the members were Drs. J. Henry Carstens, W. P. Manion, J. H. Andries, J. Walter Vaughan and James E. Davis, asked to be discharged.

When Dr. Carstens, in response to a question by Dr. E. W. King, concerning his personal opinion of the treatment, replied in the same tenor as the committee report, Dr. King moved the appointment of a new committee.

"We want to know whether this is a bunco game or not, before we have thousands of patients coming here from all over the country," he said. The society therefore named a new committee—Drs. William A. Evans, H. K. Shawan and H. R. Carstens—which will investigate the cases treated directly by Dr. Koch and report next week.

CURE FOR CANCER TO BE GIVEN TEST

Mrs. Koch

Medical Society to Investigate Dr. Koch's Treatment.

Under the auspices of the Wayne County Medical society the cancer treatment recently perfected by Dr. William K. Koch, of the faculty of the Detroit College of Medicine and Surgery, has entered upon its decisive trial. A selected list of cases are now under treatment, or soon will be placed under treatment with the consent of a group of Detroit physicians and surgeons interested in the subject, and will be closely observed.

It is not probable, however, that any definite opinions will be reached for a number of months. Dr. James H. Carstens, president of the faculty of the Detroit College of Medicine and Surgery, put this period of investigation at four months when questioned Thursday evening at his home.

"We do not intend to raise any false hopes," he said. "Of course, the treatment of Dr. Kocht is promising, else we would not be bothering with it. It is not a serum, as it has been frequently called, but a synthetic preparation or compound.

"It will be thoroughly tried in Detroit by our own men for a period of three or four months. Then, if it has the results that are expected, it will be more widely distributed among physicians throughout the country.

"It will not be possible to tell anything definite about its curative qualities for some years—say five years. Cancer is not like scarlet fever that it can be cured quickly. It is a matter of slow development."

Dr. Koch Assails Critics.

The Koch letter to the society reads in part:

"I am greatly indebted to those members of the Wayne County Medical society that have given their clinical support. It was to be expected that there would be those calumniators, however, who at the time expected that financial advantage would accrue to them from the work. Moreover, there always are those who are jealous.

"I shall contribute my findings only when I can establish them completely and scientifically, so completely that any question can be answered by the scientifically obtained facts in hand."

Dr. Koch charges that the Wayne County Medical society committee did not co-operate with him in its original investigation.

Could Be No Common Aim.

"One member," the letter reads, "never visited the hospital and attended only the final meeting to subscribe his name to the report of my negligence.

"Other members of the committee who seemed to be fair and unbiased at first soon came under the sway of those whom they knew and were distinctly unfriendly to me and my work. There was thus no common aim and could be no co-operation.

"The fourth paragraph of your committee's report says I promise much and charge well. Nothing is further from the truth. I promise nothing. My patients know this, and I require them to be examined from time to time by the physician who refers them to me. This aids my judgment as to the results and keeps the patients accurately informed. I have referred already to the 30 per cent that pay and the 70 per cent that do not.

Will Continue His Work.

"Otherwise the best co-operation the Wayne County Medical society can give is to leave alone a matter they have never advanced. I should not be asked to give my time to any activity that cannot aid me in placing this work for the treatment of cancer on a distinctly scientific basis. All my time is needed and given to this end. In future I shall have no time for any further activities that are not directly constructive to the intrinsic value of this work."

MEDICS UNFAIR, HOLDS DR. KOCH

Cancer Specialist Asks Society "Leave Alone a Matter It Has Never Advanced."

Treatment, While Criticized, Deemed Worthy of Trial, in Weekly Bulletin.

Dr. W. F. Koch's controversy with the Wayne County Medical society over the merits of his cancer treatment still seethes. He is alternately criticized and praised in the weekly bulletin of the society which will appear Monday.

The publication will reprint a letter from Dr. Koch in which he says that "the best co-operation the Wayne County Medical society can give is to leave alone a matter they have never advanced," and which criticizes as unfair the society's representatives who investigated his treatment.

Bulletin Defends Committee.

The bulletin defends the committee as composed of "five men whose reputation is beyond reproach both in their fair-mindedness and their desire to see the medical science advanced."

Dr. Koch charges that a member of the committee who is supposed to have a corner on cancer tissue turned his back on him and refused the introduction when this work was first started and Dr. Koch was introduced to him for cancer material.

The bulletin contends that documentary reports of 50 cases treated by Dr. Koch at Grace Harper and St. Mary's hospitals, in Chicago, proved that only three showed clinical improvement and 11 died.

Recognizes Value of Research.

In conclusion, however, the bulletin says:

"Dr. Koch's study of cancer is now experimental and improperly supervised, but when he is willing to co-operate he should have a sufficient number of beds and cancer cases so that he can carry on his experiments in a scientific manner.

"We recognize Dr. Koch's ability as a chemist and with proper supervision and material he may in chemistry find something worth while. Certainly, medical research along any line is a thing to be encouraged, but only a few investigations turn out to have immediate, positive value."

DETROIT, MICHIGAN, TIMES

MAYOR OFFERS DR. KOCH HELP

Invites Physician To Discuss Cancer Remedy; Suggests Use of City Hospitals.

Mayor Couzens has invited Dr. William F. Koch, professor of physiology at the Detroit College of Medicine, whose new treatment for cancer was announced Sunday, to call at the City Hall for a conference looking toward the extending of municipal facilities to the physician to aid in the development of his treatment.

"If through the city's hospitals or municipal departments we can be of any assistance to Dr. Koch we will offer them to him," the Mayor said.

STUDIED NINE YEARS.

Dr. Koch's treatment is the result of nine years' study and experiment, which began at the University of Michigan. Dr. Koch studied the functions of the parathyroid glands at the state university and developed his treatment.

The doctor said that his treatment will cure cancers of the liver, stomach, intestines, rectum and uterus. Ten injections of the serum, it is claimed, will cure a stomach cancer as big as a man's head.

FORMULA IS WITHHELD.

All of Dr. Koch's cases have been well advanced. For the present he is withholding his formula, fearing it might become commercialized or fall into the hands of quacks. He invited the establishment of a commission of physicians to study the progress of his cases. This may result from the Mayor's invitation.

Mayor Couzens is interested in the reported cure. As one of the trustees of Harper Hospital he has come into contact with prominent physicians with whom he may discuss means of assisting Dr. Koch.

Koch Cancer Cure Theory Accepted

The theory of Dr. William S. Koch, of Detroit, relating to a cure for cancer was accepted Saturday by five visiting doctors, it was announced after a private conference.

Dr. Koch has produced an antitoxin which he has used in 1,100 cases of cancer and it has been successful in 30 per cent of these cases, according to his report.

The visiting doctors who are here investigating the theory are Dr. C. Everett Field, of New York; Dr. Carroll Allen, of New Orleans; Dr. L. L. Dill, of Logansport, Ind.; Dr. Albert Lynch, of Omaha, Neb., and Dr. Frederick Dugdale, of Boston, Mass.

VOICE OF THE PEOPLE

TOLEDOAN TELLS OF KOCH CANCER CURES

To the Editor: Have read several articles recently in your columns relative to Dr. William F. Koch and have been informed that your columns are open for him to make any defense he has against his detractors. While there is really no defense to be made, as a man cannot be called on to defend himself until he is at least charged with wrong doing, I feel that I know much concerning him and his work that should be made public.

My first acquaintanceship with him and his work began in about 1918 or 1919 and in the following manner. Mrs. F. F. Fritts, whom with her husband and family had occupied one of our apartments for a long time, became afflicted with a cancer in the abdominal region, and of course her husband spared neither time nor money in her behalf, finally taking her to Flower hospital in this city where three leading physicians made an exploratory operation, found her so full of cancer that no removal of it, nor of any part of it, could be made, and proceeded thereafter to give her opiates only, to ease the pain until the apparently inevitable end should come. Her normal weight had been 172 pounds, but she had become reduced to 97 pounds.

A few months later Mrs. Holland, my wife, was a delegate to the triennial convention of the Episcopalian church, that year held in Detroit, and while there, through a Detroit physician, she learned of Dr. Koch and of his experiments in the matter of cancer. She immediately reported to Mr. Fritts who went to Detroit and arranged to place Mrs. Fritts in Herman Kiefer hospital where the experiments were then taking place, it being the only way to obtain the desired treatment. Mrs. Fritts was taken to Detroit, accompanied by a nurse, Mrs. Holland also going and staying for about a week. Mrs. Fritts took Dr. Koch's treatment, then in the course of development.

Three or four weeks later Mrs. Holland again went to Detroit and took Mrs. Fritts from the hospital to the St. Clair hotel, Mrs. Fritts walking to the street car and from the street car to the hotel and at the same time carrying a grip. About a month later Mrs. Fritts returned home to her family in our apartments where she gradually regained her strength and where she is still living in normal health. Physicians have several times examined her and can find no evidence of her former, or of any other, ailment. She can be seen and conferred with at any time.

Later my wife developed (or rather we learned of her having it) an internal cancer. She had been annoyed, not apparently seriously, for about six years with what seemed to be indigestion. She suddenly became worse, being either confined to her bed or having to be assisted in moving around the house, but we attributed it for a long time to being the result of an auto accident, she having been run into by a reckless driver. She decreased from her normal weight of 162 pounds to 110 pounds before we discovered the real trouble—that it was a cancer extending from the interior of the stomach through the pylorus into the duodenum, and that it was taking 20 hours for a cup of malted milk to pass through.

Having before us the experience with Mrs. Fritts, we had Dr. Koch treat Mrs. Holland. This was two years ago and she is now and for a long time has been apparently perfectly normal. She not only does her own work but assists in public institutions with which she is affiliated.

We are also engaged rather extensively in agriculture, and last January, Jesse Sullins, one of the farm tenants and a man of high standing, had an internal hemorrhage, vomiting blood until the physician from the neighboring village despaired of his life but managed to keep him alive by injections. Shortly thereafter he had another but less severe hemorrhage with a vomiting spell. He also had slow but constant internal bleeding as was shown by the excretions.

On learning of it I at once visited his physician, who told me that Mr. Sullins had an ulcer and a growth which he feared was malignant, and whether malignant or not, there were no prospects for him except what might possibly be done with such experts and equipment as the best of hospitals might afford, and that he doubted whether they could do anything for him.

Mr. Sullins not being able to travel to Detroit, I brought him to Toledo in a heated sedan and had him examined by the Toledo & Ohio Central railroad company surgeon who pronounced it a cancer extending from the stomach back into the liver. At my request Dr. Koch came to Toledo and before consulting with the surgeon made a diagnosis agreeing with that of the surgeon, and then gave him a treatment. His hemorrhages and slow bleedings ceased. The doctors can find no evidences of the former growth. He seems fully recovered except that he has not had time to fully recover his strength, our main difficulty with him being trying to keep him from running the heavy farm machinery and working too hard, and thus overtaxing his vitality while convalescing.

These are only the specific cases within our own circle. If any one desires further specific information, I will be glad to give it to the extent of my ability.

RUBEN HOLLAND.

Suite 971 Spitzer building, Toledo, Ohio, June 21, 1924.

CONTRASTS COURTESY OF BUS TO CAR MEN

To the Editor: The announcement in a recent issue of the Free

VOICE OF THE PEOPLE

CURED, WOMAN LAUDS KOCH'S CANCER CURE

To the Editor: A few days ago I noticed Mr. Holland's statement in the press regarding the Koch cancer cure, also saw an article in our Kalamazoo paper, written by the Wayne County Medical association, and wished I might have the opportunity of letting this association and others know that nearly five years ago Dr. Koch cured me of cancer of the liver.

I was taken very ill, could not eat, was losing strength and flesh very rapidly and had a terrible cough. My doctor said I must be taken to the hospital at once, where an exploratory operation was performed and the doctors found a large cancer of the liver. They gave me 10 days and possibly two weeks to live.

Some may say that perhaps the doctors were mistaken in their diagnosis but my surgeon, Dr. McNair, of Kalamazoo, is a man of years of experience and when he says "cancer" you can depend on it that he knows.

As soon as I could be moved to Detroit I started the Koch treatment. What appealed to my family when they went to see Dr. Koch was, when they stated my case and asked him if he could cure me, he said "I don't know. I will do my best." He was honest and has always been the same, always ready to do all he could for humanity's sake, so when they call him a quack and a fake you cannot wonder. I feel like telling others that I am positive that he has something wonderful.

Instead of criticising him and making false statements about him as the medical association has done, why not think of the poor sufferers they may be keeping away from this treatment?

If they have no faith in it, they could at least keep still until they could further investigate, but I am glad to know that there are doctors who are large enough to realize what Dr. Koch has and who are investigating it and finding out for themselves.

When Dr. Koch considered me cured he wanted me to go to my doctors for an examination. I hated to as both physicians were opposed to my going to Dr. Koch as they had not heard of him and thought he might be a fake, but finally I went and Dr. McNair gave me a thorough examination and when through said, "He surely is a 'miracle man.'"

I could tell you of many cases that I know of that I have been cured by Dr. Koch and am ready at any time to assist anyone with this disease.

I feel very grateful to Dr. Koch for being here as I know if it had not been for his treatment and wonderful care I would not be here today.

We know the knife has never cured anyone of this disease, so I urge everyone afflicted to look into the Koch treatment, for they will surely reap results.

MRS. D. M. VAUGHAN,
Plainwell, Mich.
227 Hicks avenue, Box 504.

EDITORIAL DEPARTMENT

The Journal of the
American Medical Association

In your reply please refer to these initials GHS

535 North Dearborn Street, CHICAGO, August 5, 1920.

Dr. William F. Kooh,
355 Sheridan Avenue,
Detroit, Michigan.

Dear Doctor Kooh:

Your letter of the 3d inst. has been received. In this you say that you have been working for years on a treatment for cancer, that you desire to place it before the medical profession in the proper way, and ask for my advice. You further state that you would like your report to be authoritative, and that you can see no better way than by submitting the material which you propose to incorporate in your report to a committee appointed by the American Medical Association.

By "material" I presume you mean the clinical data and your experience and observations. This you of course must realize would be biased. If you think you have a cure for cancer, your duty to humanity is to make the cure available for humanity. The way to do this is to remove all secrecy as to the composition of the product used and the method of using it, let independent investigation be made, and publish the results. I understand that the Wayne County Medical Society at your request appointed a committee to carry out such an investigation, and that, due to lack of cooperation on your part, the findings were not conclusive.

Yours very truly,

Geo. H. Simmons

AMERICAN MEDICINE
18 EAST 41ST STREET
NEW YORK

H. EDWIN LEWIS, M.D.
EDITOR
IRA S. WILE, M.D.
ASSOCIATE EDITOR

November 4th, 1920.

Dr. Wm. F. Koch,
355 Sheridan Ave.,
Detroit, Michigan

Dear Doctor:-

We have been much impressed with a most interesting and valuable article by you which appeared in a recent issue of the Medical Record, and are taking the liberty of writing to you to solicit a contribution from you on any medical topic for early publication in American Medicine.

As you may know American Medicine is one of the most widely read and quoted medical journals in America and assures you an audience that is not exceeded by that of any other high class medical monthly.

We are constantly striving to make American Medicine helpful and inspiring to the thinking medical men of the country and it is because we believe any article you may send us will aid us in these efforts that we are asking you to become a regular contributor to our pages.

Hoping you have something in hand you can send us in the near future, and assuring you that we will "leave no stone unturned" to make our relations most pleasant and satisfactory, we remain,

Faithfully yours,

The Editors of American Medicine

H. Edwin Lewis

Editor-in-Chief

HEL/RR

WM. F. KOCH, A.M., Ph.D., M.D.
Detroit, Michigan

December 22, 1919

"To the Wayne County Medical Society:

"Gentlemen – A committee appointed by the Wayne County Medical Society met me last Friday and requested me to present information regarding my cancer treatment.[16]

"I was told the information was desired so as to ascertain:

1. Whether the work was worth continuing.
2. To dispel misunderstandings and prevent further false reports that have arisen against my methods.

"Now the first question requires no answer. This method has tentatively cured a sufficient number of cancer cases to demonstrate that there is a scientific principle underlying it. This principle needs development, both chemical and clinical, so there can hardly be any question about whether the work is worth while.

"The second question can be answered by a short history of this work.

1 " Only cases beyond other means of help have been treated by me. For a long time, indeed, most of the cases that have come to me were moribund before treatment. A large number of these cases needed most urgent relief from changes secondary to the cancer. They offered material for experiment rather than cure.

2. "The first compounds used were tentatively curative in carcinoma of gastrointestinal and endometrial origin, but there was the possibility of preparing a large number of closely related compounds all of which should possess some positive or negative value in treating cancer. Moreover, there were types of cancer that did not respond to the first series of compounds and the fact that rayed cancer was clinically different from unrayed cancer made it paramount to prepare as many of the compounds of the series as could be prepared and to try them clinically for positive or negative value. Most of the time since last March was spent preparing and testing these compounds. Now, **when we remember that the rule in advanced cancer is that the patients run their course and die**, instead of getting well, as in pneumonia, for instance, and since the vitality of my patients was, as a rule, very low, and because they were treated by compounds of uncertain action used in sequence as they were prepared, the number of tentative recoveries was necessarily small; but yet some valuable information has come from the small amount of autopsy material. Likewise, pieces of tissue removed during treatment have given valuable information. Of the

[16] Note that Dr. Koch refers to his treatment as a "cancer treatment", not a "cancer cure"; it was the Wayne County Medical Society refers to this treatment as a "cancer cure".

clinical results, a number of tentative cures have been established, also a number of clinical improvements, all of which has demonstrated that among the 22 compounds used, as far as can be judged from the small number of cases treated, one compound specifically kills cancer arising in the gastrointestinal tract and endometrium and endocervix; one compound kills breast cancer of one type only, specifically; one compound kills rodent ulcer specifically. Several compounds have no demonstrable effect, and several recently prepared compounds very markedly increase the rate of growth of cancer of the gastrointestinal tract and prostate.

"So much for the results to date.

"The maintenance of the work was for the first year entirely personal. The meager facilities of the Laboratory of Physiology of the Detroit College of Medicine and Surgery were used then also. Since March about 30 percent of my patients have contributed to the work. The other 70 percent are treated free.

"In regard to cooperation: **I am greatly indebted to those member of the Wayne County Medical Society that have given their clinical support. I believe they are physicians in the true sense of the word. It must be expected, however, that the necessary element of falsifiers have in their number those and their adherents who at one time expected that financial advantage would accrue to them from the work. Moreover, there always are those who are jealous.**

"My aim is entirely idealistic, and so far as I know now, I shall contribute my findings in every detail only when I can establish them completely scientifically, so completely, indeed, that any question can be answered by the scientifically obtained facts in hand.

"In order to establish this work in such a way, money is needed to pay a clinical staff. Ehrlich was given a million dollars to find a remedy for syphilis. **I have attacked this heretofore impossible cancer problem on my own resources, together with the very small facilities of my college laboratory.**

"From this effort something tangible has developed, which, if applied in the treatment of cancer, should relieve many sufferers, and which, when scientifically extended, should afford new means of relief.

"Whether or not the Wayne County Medical Society wishes to cooperate with me is up to the society. The cooperation must be spirited. In the first place, the attitude expressed in the editorial in the Bulletin of December 22 must be corrected. The first paragraph of this editorial is false, as the editor could have easily determined if he had taken the trouble to ascertain. The third paragraph is also a misrepresentation. **The Board of Health and the Wayne County Medical Society offered something which at first promised to become the long hoped for chance for a scientific study, but very soon proved to be only an opportunity for something not worth while, simply a preliminary clinical report.**

"Such a report we already have, and no report is of value unless the compounds are reported. This I will consent to do only

when I can make a scientific report showing the how and why certain compounds act on cancer.

"To make such a report, a clinical staff and at least one paid chemist and one assistant chemist is necessary. I was not able to secure a chemist under less than one-year contract, and the beds at Herman Kiefer hospital were not allotted for that time. Indeed, the superintendent informed me four weeks after the beds were granted that they would be needed for contagious diseases. No working arrangement could thus be made for the desired report. **Then the committee did not cooperate with me. One member never visited the hospital and only attended the final meeting to subscribe his name to the report of my negligence.**

"Another member, who is supposed to have a corner on cancer tissue, when this work was first started and when I was introduced to him to ask for cancer material, turned his back on me and refused the introduction. **Other members of the committee, who seemed to be fair and unbiased at first, soon came under the sway of those whom they knew and said were distinctly unfriendly to me and my work. There was thus no common aim and could be no cooperation.**

"The fourth paragraph says I promise much and charge well. Nothing is further from the truth. I promise nothing. My patients know this, and I require them to be examined from time to time by their physician that refers them to me. This aids my judgment as to the results and keeps the patients informed accurately. I have referred already to the 30 per cent that pay and the 70 per cent that do not.

"The last paragraph of the editorial touched on the secret of my success. I try to discuss this problem with those I respect sufficiently in the hope that they will offer encouragement and guidance; and from them only do I wish to receive it.

"Otherwise the best cooperation the Wayne County Medical Society can give is to leave alone a matter they have never advanced. I should not be asked to give my time to any activity that cannot aid me in placing this work for the treatment of cancer on a distinctly scientific basis. All of my time is needed and given to this end. In the future I shall have no time for any further activities that are not directly constructive to the intrinsic value of this work."

Sincerely yours,

W. F. Koch

On Christmas Day, December 25, 1919, the following article appeared in the Detroit Free Press. This newspaper article illustrated the importance of independent financial support for basic medical research, free from the control of the politicians and the medical associations.

"KOCH ASKS AID TO TEST CURE"
"Won't Some One Pay Cost of
Real Trial? Is Plea of Cancer Foe"

"'Is there not some rich man in Detroit with enough interest in his fellow men to pay the bare expenses of the trial of a cancer cure that has already shown enough tentative cures to have attracted the attention of physicians of prominence in New York, Chicago and Detroit, as well as of minor practitioners in all parts of the country?'

"'This was the query Wednesday evening of Dr. W. F. Koch, whose assertion that he has discovered 22 chemical compounds useful in the treatment of as many different varieties of cancer, has been under investigation by the Wayne County Medical society. The investigation resulted in a disagreement that found an airing at last Monday evening's meeting of the surgical section of the society.

"Wants Nothing for Self"

"'I don't want a penny for myself,' continued Dr. Koch, referring to the reported intention of the Wayne County Medical Society of asking the city authorities to pay him a salary of $5,000 a year and place a full staff at his disposal for 12 months in an effort to fully test his claims. 'What I want and what I am determined to get before I go ahead with any test are the right conditions.

"'The Ford Hospital, for instance could easily place 50 beds at my disposal, or rather at the disposal of the test, for one year. The city could provide nurses and chemists and other attendants necessary for a proper investigation of the results of the treatments. It would cost probably $65,000, but this is an insignificant amount when you remember that Sir Edward Speyer gave Ehrlich $1,000,000. and that the German scientist experimented with 610 compounds before he discovered the famous '606'.

"'I have an offer to go to Chicago but have decided to refuse it because the conditions are not the ideal ones for which I am searching. '

"In Touch With Other Cities"

"'I probably will read a paper before the February meeting of the American Congress of Internal Medicine in Chicago and I am in touch with New York doctors of prominence. If Detroit will not prove itself big enough for this thing, I am sure some other city will.'"

Following the December 22, 1919 Wayne County Medical Society's Weekly Bulletin's first biased, untruthful and misleading report on their investigation of Dr.

Koch's cancer treatment, the Cancer Committee published, on January 5, 1920, a second cancer committee report with more false and misinformation. This second article in their Bulletin ended with the following paragraph:

> "The study is now 'experimental and improperly supervised,' but when Koch is willing to cooperate he should have a sufficient number of beds and cancer cases so that he can carry on his experiments in a scientific manner. **We recognize Dr. Koch's ability as a chemist,** and with proper supervision and material he may in chemistry find something worth while. Certainly, medical research along any line is a thing to be encouraged, but only a few investigations turn out to have immediate positive value."

What Dr. Koch wanted, and what he was asking for, was the full support of the public and the local medical profession to permit him, as the research scientist and discoverer of a new method for the treatment for cancer, to be able to carry on his scientific research with up to date scientific facilities, free from the control of third persons, who had contributed nothing in the past to his research and who did not understand the scientific principles on which his treatment for cancer worked. Dr. Koch knew that his cancer research was still in the research and development period. With the full cooperation of several friendly local doctors, he had already been able to demonstrate a few "clinical cures" in the treatment of some forms of cancers for a period of less than the approved "five years period", the accepted standard guide for establishing a complete "cancer cure." He wanted to expand the scope of his research and perfect his treatment before it was to be given to the public for general use.

At that time Dr. Koch, as a member in good standing of the American Medical Association and a Fellow of the Scientific Assembly of this association. He was of the opinion that he should seek the guidance of Dr. Simmons, the current editor of the J.A.M.A., on how best to present his research to the medical profession through the cooperation of the Journal of the A.M.A. It was back in 1913 that this same editor of the J.A.M.A., in one of his editorials, had previously given favorable recognition to Dr. Koch for his original research on the function of the parathyroid glands.[17] Thus by letter to Dr. Simmons, Dr. Koch proposed to submit a preliminary report to the J.A.M.A. for publication. This report would be an introduction to the medical profession of his proposed research project, which he wanted to undertake with the full cooperation of the A.M.A. He also wanted to conduct a large scale cancer clinical research testing program on terminal cancer patients, under ideal conditions, at an A.M.A. approved hospital outside of Detroit, Michigan. After this had been completed and his full research had been published and accepted by the medical profession, he would then be able to publish full disclosure of the identity of each of his therapeutic medications he was working with. Thus on August 3, 1920, Dr. Koch wrote the following letter to Dr. George H. Simmons, the journal's editor, for advice on how to proceed with this matter.

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[17] Journal of The American Medical Association, Sept. 27, 1913, Vol. 61, No. 13, p.1049;

Aug. 3, 1920

"Dr. George H. Simmons
Chicago, Ill.

Dear Dr. Simmons:

"I have been working for the last few years on a treatment for cancer, which requires now to be presented to the medical profession in the proper, and I need your advise in further procedure.

"I would like my report to the profession to be authoritative in placing the scientific status and clinical value of this treatment and I can see no better way than that the material for this report be worked up and reported under the supervision of a committee appointed by the A.M.A. In order that there should be no undesirable secrecy I am willing to submit for publication in the Journal a preliminary report with ample material to explain the working of the treatment.

"It might convenience matters if the material for the final report be worked out at the University of Mich. Hospital, if such a step could be arranged.

"I would like to know your disposition of the matter and should appreciate any advice you may be kind enough to give.

Sincerely,

W. F. Koch"

To this letter, Dr. Koch received the following reply.

The Journal of the
American Medical Association

EDITORAL DEPARTMENT

5335 North Dearborn Street, CHICAGO, *August 5, 1920*

"Dr. William F. Koch
355 Sheridan Avenue
Detroit, Michigan

"Dear Doctor Koch:

"Your letter of the 3d inst. has been received. In this you say that you have been working for years on a treatment for cancer, that you desire to place it before the medical profession in the proper way, and ask for my advice. You further state that you would like your report to be authoritative, and that you can see no better way than by submitting the material which you propose to incorporate in your report to a committee appointed by the American Medical Association.

"By 'material' I presume you mean the clinical data and your experience and observations. This you of course must realize would be

biased. If you think you have a cure for cancer, your duty to humanity is to make the cure available for humanity. The way to do this is to remove all secrecy as to the composition of the product used and the method of using it, let independent investigation be made, and publish the results. I understand that the Wayne County Medical Society at your request appointed a committee to carry out such an investigation, and that, due to lack of cooperation on your part, the findings were not conclusive.

Yours very truly,

George H. Simmons"

After reading Dr. Simmons's letter, Dr. Koch came to the conclusion that Dr. Simmons proposal was unrealistic and premature to the principles of sound medical research. It would be unscientific for a researcher to turn over his preliminary research to others to test before he had first completed all of the basic research himself. This is why completed basic research is so important to the original researcher. A researcher does not want another person to try to duplicate one's original research until that research has been perfected. If a person, in trying to duplicate the original research of another, is incompetent and fails then this failure, unfortunately, is a reflected upon the discoverer. Dr. Koch had been testing over twenty different substances, and he knew that some of these products had therapeutic action against certain forms of cancer and some substances had no effect at all against any form of cancer. Dr. Koch also knew that there still was more basic research, on his part, that had yet to be done by him before he could release full details of his work. He wanted to fully identify the chemical structure of this material that he was working with and to perfect the chemistry of these therapeutic agents before he could publish all of this information. He also wanted to be able to identify the types of cancer conditions that each of these products would be most effective in treating. This type of research could only be done under his direction and scientific control and through large-scale clinical trials in a modern impartial hospital, such as the hospital at the University of Michigan. Once the validity of his research had been clearly established and accepted by the medical profession, it would then be proper for him to make full disclosure of his scientific discoveries. Even today, no university, research laboratory and/or pharmaceutical company makes full disclosure of their basic research to the public until the validity of their discoveries have been established and accepted. It should be noted that Dr. Frederick G. Banting did not reveal all of the information on the preparation of insulin until he received his first patent in the 1920s. Like Dr. Banting, Dr. Koch felt that it was important to withhold the full identity of the substances he was working with to prevent incompetent or unscrupulous manufacturers from flooding the market with specious or untested preparations and at the same time claiming their products to be the Koch medications. Such actions by unauthorized persons would do his research and his name great harm.

At about this time a group of important Chicago doctors, high up in the American Medical Association, who had learned about Dr. Koch's cancer research and the success he was having in the treatment of some forms of cancer, became

very interested in his form of treatment. Their intent was to take complete control of Dr. Koch's cancer research and commercially develop it since they already knew that X-ray, radium and surgery had a limited value in the treatment of cancer patients. They would market his medications to the medical profession under their absolute control and Dr. Koch would become their employee. To accomplish this, they offered Dr. Koch one million dollars and the use of a modern research laboratory if he would accept their offer. They also told him that if he refused their offer, that they would destroy him and his work. To their offer, Dr. Koch said "no".

It was not until February of 1921, that the Journal of the American Medical Association started to make its national attacks on Dr. Koch.[18] In spite of these false attacks by the J.A.M.A. on Dr. Koch and his treatment for cancer, he continued his independent research in Detroit, Michigan with the limited funds at his disposal. While accumulating additional research information on the cause and treatment of cancer and at the same time perfecting his treatment for cancer, Dr. Koch found it necessary to respond to this fraudulent misinformation that had been disseminated by the organized medical profession controlled from Chicago, Illinois.[19] On March 10, 1922, Dr. Koch wrote the following open letter to the medical profession.

WM. F. KOCH, A.M., Ph.D., M.D.
Detroit, Michigan

March 10, 1922

"Dear Doctor:

"The purpose of the letter is to call your attention to certain events of importance to medical science, the public welfare and the honor of three medical societies.

"I am therefore submitting some data to you to show that the 'haste' of the two committees officially appointed by the WAYNE COUNTY MEDICAL SOCIETY several years ago who condemned my cancer work, led to false conclusions, for of the several cases officially 'investigated' at the Herman Keifer Hospital in 1919 even the farthest advanced turned out cured. I am enclosing two case histories as proof. Likewise the claim of the A.M.A. that their 'independent investigation' indicated that my work had no value not only falls flat, but the quality of the A.M.A. service to the profession is clearly revealed.

"You may read the report of Committee No. 1 in the W.C.M.S. Bulletin of December 22, 1919. Of the five committee men appointed to serve as judges for this report only three ever saw the cases under investigation; and as fast as individual cases received a treatment or two and showed the first signs of improvement they were sent out of the hospital under some pretext and when the most hopeless case of all, Mrs. F.,

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[18] Journal of the American Medical Association, Feb. 12, 1921, Vol. 76, No. 7, p 466; and February 19, 1921, Vol. 76, No. 8, p 537;
[19] See Chapter 11, The Power of the A.M.A. and Its Journal, page 123.

described in the enclosed folder, showed astounding recovery they closed the whole investigation alleging my negligence and reporting 'no results'.

"Committee No. 2 was appointed to investigate my private cases. They made no investigation; framed up a report the same Monday evening they submitted it to the society; were mistrustful of the nature of their original drafts; combed them down so as 'not to be too raw to get by' and within sixty minutes submitted their finished product. This appears in the Bulletin of Jan. 5, 1920. They had not seen one of my case records yet condemned them all.

"I have let more than two years pass for the case to prove itself. It has succeeded, but the misconception created by the W.C.M.S. activities have not been universally corrected because I have refrained from necessary publicity. I am therefore sending you the enclosed case histories to show what the W.C.M.S. tried to hide when investigating the treatment.

"When the profession has acquired a decently receptive spirit I shall be in a position to keep my promise of dedicating the treatment."

Very sincerely yours,

WM. F. KOCH

The two cancer cases referred to in the above letter were the cases of Mrs. Charles James of Union City, Michigan and Mrs. Edith Fritts of Toledo, Ohio. Dr. Koch first treated Mrs. James on November 4th at Herman Kiefer Hospital. A second treatment was given to her on November 7th. She was subsequently discharged from this hospital and sent home on November 26, 1919 after she started to improve. After she was discharged from this hospital, Dr. Koch did not hear anything further on her condition until June 20, 1920, when her local doctor reported to him on her gradual improvement and return to health. The second cancer case to be treated by Dr. Koch at Herman Kiefer Hospital was that of Mrs. Edith Fritts. On July 16, 1924, Mrs. Fritts' husband wrote the following letter, in the form of an affidavit, to Dr. Koch reviewing the history of Mrs. Fritts' cancer condition, her diagnoses and prognoses under orthodox medical care prior to receiving the two experimental Koch treatments at Herman Kiefer Hospital. When this investigation was closed in December of 1919, Mrs. Fritts was discharged from the hospital and she continued under Dr. Koch's personal medical care in Detroit.

Mr. Fritts, in his affidavit-letter, briefly tells of Mrs. Fritts' follow up medical care from Dr. Koch while she stayed in Detroit and the final results she received from of the use of the Koch treatment. It should be further noted that when Mrs. Fritts left Herman Kiefer Hospital, with her nurse to go to the St. Clair Hotel, she was able to walk from the hospital to the street car and then walk from the street car to the hotel carrying her own suitcase. At the time Dr. Koch released Mrs. Fritts to return home to Toledo she traveled by way of interurban car without the aid of a doctor or a nurse. Her local, Toledo, doctor did report to Dr. Koch on her progress during the recovery period.

Toledo, Ohio
July 16, 1924

"My dear Dr. Koch:

"I have had so many inquiries regarding your treatment for cancer from people that have heard of the wonderful cure of Mrs. Fritts that I feel it my duty not only to you but to the thousands of sufferers from this disease to publicly state just what the results of your treatment were in the case of my wife.

"In July 1918, Mrs. Fritts was first taken ill; from then until June 1919, she was examined and treated by several physicians. Her case was diagnosed as appendicitis, colitis and other maladies, but she did not respond to any treatment. At the beginning of her illness she weigh 172 pounds. By June, 1919, she had lost weight constantly, weighting only 97 pounds. At that time I took her to Dr. George Jones, a very prominent specialist. He and his associate, Dr. A. N. Smith, after three days examination decided to call in Dr. Louis Smead, one of our recognized surgeons. At the conclusion of their examination, Dr. Jones informed me that they were agreed that there was a growth in the abdomen, but could not say whether it was malignant or not; **that the only way to determine was by operation**. This operation was performed the next morning by Dr. Smead, Drs. Jones and Smith both being present. After possibly one half-hour Dr. Jones came from the operating room to where I was waiting and informed me ***that they had found the trouble to be cancer***, and in such a shape that an attempt to remove it would undoubtedly prove fatal, consequently there was nothing to do but close the wound and keep the patient as comfortable as possible. Both Dr. Jones and Dr. Smith **told me that nothing further could be done; that it was simply a case of but a few months to live.** In about two weeks the wound had healed and we were able to take her home.

"From then until October 1919, Dr. Smith called frequently but admitted he could do nothing for her. Early in October I heard of Dr. Koch's treatment and that he was conducting an experimental clinic in Herman Kiefer Hospital at Detroit. Accompanied by Dr. Smith, I went to Detroit and saw Dr. Andries, one of the committee appointed to watch this experimental work. We arranged to have Mrs. Fritts admitted to Herman Kiefer Hospital. A few days later we took her to Detroit, Dr. Smith and her nurse going along. Patient was in the hospital three weeks during which time she received treatment from Dr. Koch. At the time, after some disagreement, it was decided to close the hospital to Dr. Koch's patients, but as Mrs. Fritts was apparently being benefited by the treatment, I decided, if possible, to have Dr. Koch continue to treat her. I saw Dr. Koch and he told me he would continue the treatments if it was possible for her to get to his office. I made arrangements for her and her nurse to go to a hotel. From there they went to Dr. Koch's office at appointed times for two weeks. At that time she had so improved that she was able to return to Toledo (Ohio) on an Interurban car. From that time on improvement was apparent and after several visits to Dr. Koch's (Detroit) office, he pronounced her cured. Today, four years later, she is enjoying splendid health, doing all her own housework, besides

enjoying all social activities, weighs one hundred and sixty pounds. A feeling of profound gratitude prompts me to make this statement."

Sincerely yours,

F. F. Fritts (Signed)

F. F. Fritts, being personally known to me, swears the foregoing is a true statement to the best of his knowledge and belief.

John H. Laycock (Signed)
Notary Public
My commission expires: Aug. 9, 1926

Four years later, on April 9, 1928, Mrs. Edythe M. Fritts executed the following affidavit. This was over eight years since she was first treated by Dr. Koch in November of 1919 for cancer at Herman Kiefer Hospital and over five years since she had made a clinical recover from her cancer.

"STATE OF MICHIGAN)
) SS.
County of Wayne)

On this ninth day of April, A.D., 1928 before me, a notary in and for the above County, personally appeared EDYTHE M. FRITTS, to me personally known and who being first duly sworn deposes and says that she has taken the Koch treatment, as explained in the affidavit of her husband, F. F. Fritts, and that at this date, April 9,1928, she is in splendid health and holding a weight of 160 pounds.

Edythe M. Fritts (Signed)
245 Glendale Avenue, Detroit, Mich.
Subscribed and sworn to before me this 9th day of April A.D. 1928

Frank J. Powers (Signed)
Notary Public, Wayne County of Michigan

My commission expires: Sep 24, 1928"

Mrs. Fritts remained cancer free during the rest of her life. In the spring of 1935, as the result of an accident, she died. At the time of her death, an autopsy was performed and no trace of malignancy was found. It should be noted that Mrs. Fritts' case was also one of the official cases evaluated as part of the subsequent November 5th, 1923 investigation conducted by the Wayne County Medical Society Cancer Committee at Dr. Koch's request. [20]

[20] Also see "Voice of the People" articles.

On October 14, 1923, Dr. Koch wrote the following letter to Dr. Frank Kelly, President of the Wayne County Medical Society, requesting a new investigation of his treatment for cancer. By this time, Dr. Koch had accumulated additional scientific research information in support of his treatment for cancer with proof of actual cancer recoveries that had occurred since the incompleted 1919 Herman Kiefer Hospital investigation which had been prematurely stopped by the Wayne County Medical Society's Cancer Committee in December of 1919. Dr. Koch wanted to give the Wayne County Medical Society's Cancer Committee an opportunity to be able to once again review his cancer research, some of his cured cancer cases and to be able to personally examine each recovered patient.

WM. F. KOCH, A.M., Ph.D., M.D.
Detroit, Michigan

October 14, 1923

Dr. Frank Kelly
Pres. W. C. M. S.
Detroit, Mich.

Dear Dr. Kelly:

"In the fall of 1919, the Wayne County Medical Society invited me to submit my treatment for cancer to investigation by a committee appointed by the society's president. The investigation was started at the Herman Kiefer Hospital on several cases of cancer. Two-fifths of the committee did not see the cases at all and I was also judged neglectful in the treatment of the cases, so the investigation was prematurely closed before any of the cases could recover.

"Of the several cases treated, at least two of the most severe made a complete recovery and are perfectly well today. This fact has become widely known throughout the profession and laity. And as other cancer victims have been similarly benefited by the treatment, the request has been frequently made and the duty emphasized, that I turn the treatment over to the profession so that it may be used to do the most good.

"I have resolved to do my duty in every detail if the Wayne County Medical Society will do its part in placing the treatment in the hands of the profession. If the W. C. M. S. is willing to take this step in the fight against cancer, I invite the appointment of a suitable committee, including the president of the W. C. M. S., to examine the results obtained in the cases treated at the Herman Kiefer Hospital and reported in accordance with the evidence obtainable today, four years after the cases were treated.

"If this committee should desire it may also examine the evidence in many cases of cancer cured in my private practice and report on them.

"If this committee should then desire it may arrange and conduct such procedures toward placing the treatment in general use, as the instruction of the profession in the scientific and practical details, the distribution of material, and all other measures belonging to the common good.

"The only qualifications of the committee I must demand is that it be manned with such as consider the importance of this work as above such interests as might interfere with their effectivity in carrying on the work of the committee.

"I would like a reply by Thursday of this week.

Respectfully yours,"

Wm. F. Koch

On November 1, 1923, a meeting of the Cancer Committee of the Wayne County Medical Society was held after the committee chairman had first consulted with the American Medical Association's national office in Chicago, Illinois, as to how their cancer committee should proceed in this matter. At the time of this committee meeting the following letter, that had been received from the Journal of American Medical Association's Propaganda Department, stating the policy of The Journal of the A. M. A., was read to the Committee members.[21] It said:

October 29, 1923

Dr. Harry C. Saltzstein
306 Kresge Bldg.
Detroit, Michigan

Dear Dr. Saltzstein:

"There appears to be no reason or warrant for a further examination of the Koch 'cancer cure.' This man had his opportunity; in fact, two opportunities, with results that are a matter of record.

"In spite of the unfavorable report of the Wayne County Medical Society and the publicity that was given to this report, both through the society's official bulletin and also through the Journal of the American Medical Association, Koch has continued to commercialize his alleged cure.

"To take any further official action in this case would, in our opinion, simply serve to advertise Koch and give his 'cure' a dignity which is not in the public interest."

Very sincerely yours,

The Journal A. M. A.
Propaganda Department

However, in November of 1923, the Wayne County Medical Society did permit its Cancer Committee to review Dr. Koch's cured cancer cases. Dr. W. A.

[21] June 30, 1924 Bulletin of the Wayne County Medical Society

Dewey[22], a retired professor of materia medica and therapeutics, Homeopathic Medical School, University of Michigan, was permitted to attend this committee's November 5th, 1923 meeting and to take notes as Dr. Koch's representative. The Cancer Committee, sometime later, sent Dr. Dewey a copy of its report on this cancer committee meeting and investigation of the Koch Treatment. Upon receiving this report, Dr. Dewey wrote the following letter to Dr. Koch in which he (Dr. Dewey) described the proceedings of this committee. Dr. Dewey also went on to express his reaction to the manner in which this cancer committee conducted its investigation. .

Of the fifteen cases that were presented to this committee, two of these cases were cured patients dating back to the original 1919 Wayne County Medical Society's cancer investigation of Dr. Koch's treatment for cancer at Herman Kiefer Hospital.

Middlebury, Vermont
October 25, 1924

"Dear Dr. Koch;

"I have received what is termed the latest report on your treatment.

"This claims to be an account of the seance held on November 5th, 1923, at which I was present and took notes of each case.

"For a studied intent to falsify, a premeditated determination to condemn everything, and an un-scientific, un-American assumption to be judge, jury and prosecuting witnesses, the report of this so called committee outstrips in bias, unfairness and mendacity anything that has ever been my lot to observe in a medical practice of forty-four years.

"The frankness with which you presented these cases, giving the committee all the details and referring them to original records and to the family physicians, showed your honest desire to have an honest investigation of your method.

"The composition of the committee being for the most part surgeons and Radium or X-ray 'experts,' a class that assumes cancer to be curable only by these methods, was unfortunate in the first place, and in the second place, no member of the committee was in my opinion, qualified to sit in judgment on your treatment, by education, experience or by right.

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[22] For the benefit of those persons who do not know, just who, Dr. W. A. Dewey was; I quote from the caption that appeared under a full page picture of Dr. Dewey, honoring him, in the 1918 edition of the University of Michigan year book, The Michiganensian, page 231.

"To us who know him a profound scholar,
To the people a valued friend,
And to the profession an honored educator."

"The greatest American authority on cancer is doubtless L. Duncan Bulkley, senior surgeon of the New York Skin and Cancer Hospital. He has probably seen and treated more cases ten times over than has been seen or treated by the combined membership of this 'official' committee.

"Dr. Bulkley declares first that cancer is not a surgical disease, and that neither surgery, X-ray, nor Radium have changed in any way whatever the ultimate mortality of cancer in forty years. It was 90% in 1884. It is 92% in 1924. This is the result of surgery, X-ray and Radium treatment[23].

"I can corroborate Dr. Bulkley's declaration, for in a practice of nearly forty-five years I have yet to see a single case of cancer, save a few semi-malignant epitheliomata, that have been cured by these measures, and my experience has been in hospitals of both this country and Europe.

"However, to return to this really grotesque report—anyone who reads it will be impressed by its 'scientific' deductions.

"I hope that some day your treatment will have an investigation before a body of seekers after the truth. These you will not find in American official medicine, which is a trust to keep all progress not coming from its own, out of the field.

"Should the Pasteur Institute investigate it, I am quite sure you will not suffer from false and trumped up reports upon it, and moreover, the investigation will be thorough, with a foremost desire to find out the truth, and not to get control of your procedure."

Best wishes,

W. A. Dewey

These comments of Dr. Dewey are sufficient to show the world why each of these Wayne County Medical Society's cancer committees were unable to come up with an fair, honest and unbiased report to the detriment of all cancer patients.

Mrs. William F. Koch, a member of an old Ann Arbor family, actively supported Dr. Koch's fight against cancer. She would speak on the subject of cancer at group meetings. I quote from an article that appeared in an Ann Arbor paper during the 1920s.

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23 As a supplement to the statistical cancer mortality rate of 90% to 92% quoted by Dr. Dewey; I add the statement of Dr. Francis Carter Wood, a F.D.A.'s cancer expert witness, given in testimony on behalf of the govemment during the 1943 F.D.A trial on Friday, January 29, 1943:

"About 95 per cent of all well established cancers prove fatal."

WEST SIDE GROUP MEETS

"Another interesting meeting Monday evening was that of the West Side Child Study club held at the home of Mrs. Burr L. Boylan. Mrs. William F. Koch read a paper on cancer and its relation to children.

"'Statistic from the most reliable insurance companies reveal that the death rate from cancer has increased 50 percent in the last 20 years,' she said. 'Twenty years ago, cancer was only encountered in those past 60. In the last decade it has been found in children of all ages. Whatever the cancer elements or germs might be there must be first a hereditary predisposition and second, a fertile basic soil. That the cause of growth of cancer does not follow the present laws of bacterial infection, is no reason why it may not have laws of its own, which we now accept but cannot as yet identify,' Mrs. Koch told the women.

"Dr. Strong of Bussey Institute of Harvard university, stated that, 'Cancer cannot develop except in persons in whom there is a hereditary cancerous strain. Even though the person be tainted at birth, he cannot develop the disease spontaneously but only through the agency of environmental factors.'

"'The most reliable family records are those reported by Dr. Warthin of University hospital,' the speaker declared. 'These family histories were collected from those attending the clinic at the hospital and are more complete than is likely to be the case in large city hospitals with the foreign born clientele.'

"'Heredity also influences not only the characters of the tumors themselves but also their location in the body.' Dr. Charles H. Mayo states that he has produced cancerous growths in strawberries, roses and trees, and that he has trained plants to resist the disease and has made others subjects to it. He states heredity is a strong factor and 65 per cent of all people die of the diseases that killed their ancestors.'

"'It is a general impression of the medical profession and the public that cancer does not occur in children but more than 1,000 cases have been reported between the ages of 9 and 15 years', she asserted."

On another occasion, when a newspaper reporter asked Mrs. Koch about her husband's cancer research and treatment she said:

"'My father died of cancer and Dr. Koch's father died of a cancer. He and I both fear for our children, and all he asks is a fair hearing from medical men. Hospitals in Detroit have ignored him and the university hospital at Ann Arbor also has ignored him. When he submitted some of his cures to Detroit medical men, some of them were interested and others went away laughing.

"'It is only through the encouragement of people whom he has cured, and determination he has to do something creditable that he has been able to withstand the heart-breaking work and the disheartening attitude of other physicians. It has been a terrible strain on both of us, but for the sake of the children, whatever is accomplished must bear his name.

"'Doctors over all the country are using Dr. Koch's formula. He will give it to any doctor. He wants only a fair hearing.'"

A NEWSPAPER REPORTER'S INVESTIGATION

In 1929, Cash Asher, a reporter for the Detroit Free Press at that time, was given an assignment by his editor to investigate a group of five medical clinics that were operating in the downtown area of Detroit. During this investigation he worked with the Michigan State Police with the purpose of putting this medical "quack" organization out of business. As a result of his successful investigation, the local, Wayne County Medical Society, asked him if he would be willing to also investigate Dr. Koch. Mr. Asher said yes. He wrote the following about his investigation of Dr. Koch:

> "The success of this effort pleased the American Medical Association, and I was asked by the Wayne County Branch in Detroit to serve as publicity director of a drive to enlighten citizens about the danger of cancer and the importance of an early examination. After this was over, the chairman of the Cancer Committee told me, facetiously perhaps, that virtually 'every woman in Detroit with a pain or a pimple had been into his office.' He asked me then if I would investigate Dr. William Frederick Koch, who had a clinic on Jefferson Avenue. He said that Koch was a clever quack, and I agreed to undertake the assignment.
>
> "I picked up his trail at the University of Michigan, read his writings, sought to find some 'crime' that the medical profession could bring against him.
>
> "Almost everyone I talked to believed that Koch was a quack. He was not orthodox. He was outside the established, accepted channels. I learned through hospital records of cases of cancer that had been pronounced incurable, and then had been given the Koch treatment.
>
> "I went to see several of these and I found men and women who had been restored to health after all other therapies had failed, and hope was gone. They were well and happy, and enthusiastic over what had been achieved...."

Mr. Asher then described the cancerous conditions of a few of the patients that he had interviewed who had been given up to die and who had recovered from this dreaded disease with Dr. Koch's medical treatment. Then as a curious reporter, he went to see Dr. Koch and talked with him at great length. Dr. Koch answered every question of Mr. Asher "fully and freely". Dr. Koch went on to say:

> "'The Free Press will never publish anything favorable about me,' he said. 'In fact, I am regarded as a medical outlaw.'
>
> "'But it seems that you have cured cancer.' I replied,
>
> "'Yes, many, many cases; but the American Medical Association is trying to put me in jail. They want me to surrender everything I have learned to them, and I could get a million dollars by selling out. I have been approached by a group that wants to commercialize my products. But I have not finished my researches, and I am afraid of what would happen if they got hold of my formulas. I will give them to the world when they are ready, and you can say, if you write anything, that I will surrender them for investigation to any commission or committee that approaches the subject sympathetically and is qualified to do clinical and field research.'"

Dr. Koch supplemented the information that Mr. Asher had researched on his own about Dr. Koch's life, as well as, the case histories on many cured patients. Mr. Asher then left to complete his investigation and report for the Chairman of the Cancer Committee of the Wayne County Medical Society. (*Science In Exile*, p. 37 (69))

> "I bade him good-bye and left. There was a quizzical expression in his eyes as I turned away, and I felt that he was communicating to me that what I had learned would never reach the light of day or night on the printed page.
>
> "But I was tremendously impressed and convinced. This was an amazing reportorial find...had the curse of cancer been lifted at last?
>
> "When I, the detective-reporter, made my report to the Chairman of the Cancer Committee of the Wayne County Medical Society, I presented in writing the evidence I had found. The Chairman read my report with growing irritation. His face reddened. He had wanted me to obtain the evidence against Koch. Finishing the report in some degree of apoplexy, the Chairman proceeded to tear it into fine pieces, which he threw into a wastepaper basket.
>
> "'I hired you to do a job, and you came in with a lot of hog-wash.' He said.
>
> "'I came in with the facts, as I found them.' I countered, angrily.
>
> "'Hell!' he exploded. 'Every scientist in medicine knows that this man is a charlatan. He has been investigated by cancer specialists.'
>
> "'And I am only a newspaper reporter?'
>
> "'Yes - - and completely wrong.'
>
> "'What about Mrs. G., who recovered when your specialist opened her up and found too much cancer tissue to dare to operate on her?'
>
> "'She got well because the tissue was exposed to the atmosphere. That has happened before in cancer.'
>
> "He wrote out a check and handed it to me. It was for seventy-five dollars. I thanked him and left, glad to get back into the sunlight.
>
> "I then submitted a copy to the managing editor of The Detroit Free Press. He read it with interest, but advised me that the newspaper could not use it because Koch was under fire from the American Medical Association, and doctors in general.
>
> "'**We have to accept the truth of authority, and sometimes overlook the authority of Truth,**' he said, quoting from something he had read as a journalist." (p 38).

We Americans talk a lot about the "Freedom of the Press," but where is this freedom when the "Press" fails to be feel free to speak out? Must the **"Truth of Authority" replace the "Authority of Truth."** Why must the dictatorial policies and power of a medical society overrule the power of the press? The failure to print Mr. Asher's report is a good example of the failure of the "Press" to be the spokesman of the public and for the public. This failure of the "Press" to publish a scientific truth is but one example of "Medical Censorship" in our country of the worst kind. The "Free Press!" and "Freedom of Scientific Truth!." Where are you to be found? What happened to the First Amendment to our Constitution in our country? Has it been misplaced by the **"Truth of Authority?"**

CHAPTER 4

Dr. Koch's Philosophy on General Health Care

During the 1920's a few newspapers were willing to print articles on some of Dr. Koch's early theories on health and on the causes and treatment of cancer. He stressed the relationship of poisons of all types, their accumulation in the body and their relationship to the cause of certain types of cancer. In the following newspaper article, Dr. Koch stressed the importance of "healthy living" as a cancer preventative measure. Today, his ideas are now being advanced by the many modern day health advocates and the medical profession in general. What was common sense to him in the 1920's has become common sense to us all today.

"DECLARES BASIC CANCER CAUSES, BODY POISONS"

"M' Alumnus Says Education Will Aid in Eradication"

"'Education of the masses of people on the basic causes of cancer is one of the most potent weapons for control of the dreaded disease which is taking more than 250,000 lives in the United States annually and steadily increasing its toll, Dr. William F. Koch, University of Michigan alumnus, nationally known biological chemist and head of the Koch Cancer Foundation of Detroit, declares in a review of late developments in the field of cancer.

"'It is an error to assume that the cancer growth itself is the cause of the disease, and the use of surgery, radium and X-rays for removal or destruction of such growths results in very little benefit, Dr. Koch asserts.

"'Cancer is caused by toxins or poison within the body, and these basic causes must be cleared up to really help the sufferer, he states. Medical science must look to antitoxins for an effective remedy, Dr. Koch concludes on the basis of results obtained with a synthetic antitoxin now in use.

"'The toxin that causes cancer is produced by germs that are able to multiply in certain recesses of the body, including tonsillar crypts, sinuses and in the constipated large intestines' Dr. Koch explains. 'Proper diet and cleansing of the large intestines, the removal of persistently bad tonsils and infected teeth, healthful exercise, fresh air and sunlight – in other words the old fashioned way of living – will do much in the prevention or postponement of cancer. Education of the people in a healthful mode of living is vitally important in the fight to control cancer.

"'We observe that each generation of an afflicted family develops cancer earlier in life. Where the grandparents developed the disease in the seventies or eighties, the parents develop it in the sixties and the children develop it in the forties or the thirties and we often see it in infancy or childhood.

"'Perhaps the most important scientific advance of the last decade in the fight against cancer is the demonstration that the toxin that causes the disease can be changed from a deadly poison to an absolutely harmless

and even useful substance simply by altering its molecular structure in a definite way. In setting up the cancer growth nature simply tries to evolve an antitoxin to combat the poisons, but does not go far enough.'"

The importance of diet to avoid toxicity was also brought out in the 1937 lecture, "Diet as a Basic Cause of Disease," by M. Beddow Bayly, M.R.C.S., L.R.C.P. In his lecture he made a brief reference to the teachings of Dr. Koch which I quote here. Mr. Bayly said:

"Mr. J. E. R. McDonagh, one of the most eminent of modern bacteriologists, regards intestinal toxaemia as the basic cause of most chronic diseases, and has declared:

> "'If it were possible to rid humanity of chronic intestinal intoxication, disease would become almost extinct.'

"It is here that the importance of the work of Dr. William F. Koch, of Detroit, may best be appreciated. By a series of brilliant investigations into the chemistry of the body, which were entirely unconnected with experiments on animals, he has shown that the absorption of certain products of the decomposition of animal proteids into the system results in their being eventually 'absorbed,' i.e., chemically attached, to the molecular particles of protoplasm which constitutes the cells of the body.

"The effect of this is that the oxidation processes of cell-life on which the healthy growth and normal functions of each individual cell depends is more or less inhibited.

"Just as one might imagine, by way of analogy, the effect of smoke on the glass of a lamp in which shines a light, so one can, I think, glimpse in some degree what the effect of a chemical substance intimately adherent to the minute cell-particles of every organ in the body might ultimately entail.

"Moreover, these chemical products of faulty diet have more than merely inhibitory properties. By virtue of their intrinsic power of altering the wave-length of radiations reaching the cell they may, and do eventually, elicit a vibratory response from the cell-life which takes the form of an exaggeration of one of the normal functions of the particular cell or tissue: for instance, of cell-division (i.e., growth) or of autolysis (i.e. death). The final result of this disordered metabolism is seen, according to Koch, in the development of malignant growths such as cancer, or of tuberculosis.

"It is not possible to do more than touch briefly upon this fascinating and illuminating theory here, and to add that its correctness finds convincing support in the effectiveness in practice of the chemical remedy which Dr. Koch has devised to destroy this basic toxin at its very point of attachment to the body-cells, its chemical *point d'appui*.

"It will be sufficient for our present purpose if these profounder concepts of disease causation are borne in mind when dealing, as now we must, with some specific instances of disease in relation to diet." (pp. 8 & 9)

Mr. Bayly concluded his paper with the following:

"Sir William Arbuthnot Lane declared in 1933: **'Everyone can avoid cancer who is prepared to keep internally clean by eating natural foods and drinking plenty of water.** I have never yet operated for cancer upon a healthy person.' While we need not necessarily accept this opinion as representing the whole truth about the problem, for there is evidence that the adoption of such ways of living does not always prevent the development of cancer, **there can be little doubt in our minds but that they are vitally important factors, and, combined with the system of detoxification devised by Dr. William F. Koch, provide us with the most hopeful means of ridding humanity of this menacing scourge."** [24]

DIET UPDATE - 1948

Dr. Koch wrote the following paper on the importance of diet and The Great Biological cycle in late1948.

Diet – Important Neglected Features

This subject, diet, pertains to two large departments of science, biological and food chemistry and we might say that food chemistry is coextensive with the whole subject of chemistry. Now, if we stop to realize that chemistry has advanced to the point where it would take several lifetimes to read all that is reported to date and it would require all the time one has without eating and sleeping to keep up to date on the developments of chemistry from day to day, we can easily see that the task of reaching a perfect knowledge of diet is too great for any one human being.

I wish to compliment you, Ladies and Gentlemen, because you are vegetarians and that you have been practicing a system of diet that is as perfect as it ever shall be and that you are doing this without too much bother about the chemistry of foods and the chemistry of the body.

You are following the diet prescribed by the Creator who alone is all wise and knew every detail of the creation including all its chemistry and physics and all the physiology that we know today or will ever know in the future. Very early in the Holy Bible, the All Wise Creator laid down a system of diet which was entirely vegetarian, – grain, vegetables and fruits and man was directed to follow it. So long as he did follow it he got along all right, for men in those days lived to be hundreds of years old, but men changed, crop failures, perhaps, or simply the plain lust for blood induced him to follow the ways of the wild beasts who preyed upon other animals for their existence. I have the suspicion that all animals, though carnivorous as we state today, were at one time herbivorous or vegetarian. I know of dogs that have been raised up on raw vegetables all

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[24] *Diet as a Basic Cause of Disease*, A Lecture, by M. Beddow Bayly, M.R.C.S., L.R.C.P.; Published by The Health Education And Research Council, 15 St. Jame's Place, London, S.W.1, 1937.

their lives, who have never been given meat, raw or cooked, and who refuse to eat it. They make a meal of raw carrots, potatoes, onions, apples, and whole rye bread as we do. They have as much or more energy than other dogs and certainly have better control of their muscles and are definitely more intelligent and just as well or better developed then other dogs and since this is true of dogs it can be equally true of cats and other carnivorous animals.

People have the notion, or may I say prejudice, that they must eat meat every day to get strong and keep strong. This is a fallacy which must be corrected for two reasons. Meat does not supply a complete dietary and meat is definitely toxic. The toxic factor may lie right in the meat itself, but it is certainly true that after meat gets into the colon of man or animals it can there be acted upon by the intestinal flora and be converted into exceedingly toxic chemical substances; namely, the aromatic amines and aromatic hydroxy compounds such as iso-butyl-catechol and similar substances. I will return to the nature of the toxic effects they produce later, but I wish to state here that a man could kill himself in a couple of weeks if he would eat four pounds of meat a day during that period. The smaller the amount of meat eaten by anyone the better off he is, for the two reasons just given.

THE GREAT BIOLOGICAL CYCLE

Animal life is provided for in the economy of Nature by plant activity. Plants do two things. They take energy from the sun and they take the waste products from man's metabolism; that is, his action on food and the substance from his body after he dies and converts this back into food to support animal life. Man depends upon plants as the source of energy, the food that provides the energy, and the food that provides the substance of his body. Bacteria normally hold a position of changing dead animal waste into proper food for plants. They have as an important position in the economy of Nature as animal and plant life. Bacteria were never intended to be bom enemies of mankind. Nature never harbored such a destructive principle. After sufficient thought it would not be difficult to arrive at the conclusion that if Nature had incorporated into her make-up the destructive ideas that the Medical Profession holds regarding germs or cancer, it would have gone out of business eons of centuries ago. We may look upon the apparent destructive forces as accidental departures that are both comprehensible and correctable and I with to return to this subject later on.

Let me first mention that the environment of germs in the colon acting upon dead animal flesh is quite different from what takes place when an animal rots in the ground. The colon does not carry the molds and other organisms which convert the toxic substances produced by bacterial action upon dead animal tissue into harmless substances by induced oxidation. The detoxifying molds are just being understood today and the active principles the produce are just beginning to be understood as to identity and mode of action. These substances are classified as antibiotics, a very poor name, indeed, for they are not antibiotic at all. They are correcting agents as will appear shortly if I can get to that phase of the subject, but let me say here that these antibiotics, so-called, gramicidine, Penicillin, Streptomycin, Penicillic acid, clavicin, and many others are in reality antitoxins because they carry to completion the

oxidation of the toxic elements produced in the colon by the earlier bacterial action on dead animal flesh. I wish to give this subject of oxidation some attention later on because of its great import. Curtailed, suppressed, or blocked oxidation is basic to disease in my humble opinion, and the cure and prevention of disease depends upon restored oxidation. This subject is of importance then to the great industries that make huge profits on sickness. The most recent knowledge of the action of antibiotics demonstrates the correctness of this statement for chemically they are autoxidants. This is confirmed by Geiger and Conn and by Warren and others.

However, let me first call your attention to the nature of food produced by plant life. As stated before, it supplies all of the amino acids, all of the salts, carbohydrates, and fats required by animal life. In addition, it supplies the vitamins, the trace elements, and certain conserving food materials which protect the important organs of the body against exhaustion and, therefore, against serious disease. The grains or cereals are the most important food in this connection. In the center of the grain you find the starch which carries the energy for animal life which when oxidized in the body yields carbon dioxide and water and the energy captured from the sun. This energy is used by the vital processes of the animal. The surface of the grain which has several layers, of course, carries the important principles which help the body burn the starch and liberate the energy from it. I wish to speak of the three classes of food essentials carried by the surface of the grain and I wish to do this so you can take advantage of this knowledge and use it to keep from getting sick and to be more efficient in your life activities. Let us look upon primitive man for a moment. We find him tilling the soil with a stick; naturally, he could not till heavy soil like clay because he had no instruments for doing so, so he scratched around in sandy soil and planted food which he found grew best there. This seed, we learn from experience, was rye. When rye grows on sand, the roots of the plant dissolve silicon from the sand and carry it up to the surface of the grain where the sun strikes it and produces certain chemical compounds made up of silicon and oxygen. These are oxidation catalysts which protects the body against poisons that could produce disease. You should recall that silicon is a sister element to carbon and can take its place to a certain extent in a variety of chemical compounds. When silicon is substituted for carbon, the compound is quite different in some of its properties; for example, the petroleum oils are hydrocarbons. We use them for lubricating our machinery. These carbon oils freeze solid at Winter temperatures. If we make a lubricating oil synthetically using silicon instead of carbon, we have hydrosilicons instead of hydrocarbons. The lubricating properties of hydrosilicons are far better than those of hydrocarbons and, furthermore, these hydrosilicons do not freeze at Winter temperatures, but remain fluid. One of the greatest contributions to the winning of the war was the wonderful foresight of the chemists of The Dow Chemical Company who foresaw the invasion of Russia by the Germans and who knew that the German war machines would freeze tight for the Winter and would not be useable because they used hydrocarbon lubricating oils which froze solid at the Russian Winter temperature, so The Dow Chemical Company produced hydrosilicons in large quantities and supplied them to the Russians who could then use their tractors, tanks, and guns freely, while the Germans could not maneuver at all. This made it possible to win the

war for all of which our dear Russian friends are kicking us in the nose.

The production of oxysilicons by the plant in its grain surfaces is not received with equal fervor by those who control our sources of food materials and should know about these things. The flour that receive the gold medals and recommendations of the medical association contain none of these valuable God given principles. They cannot even support the life of the lowly rat. Denuded white flour is despised by the rat and welcomed by the supposedly intelligent humans and is recommended by the great authorities of the medical association. In the flour mills the rat goes from sack to sack of white flour, bites a hole in it and looks for food, but fails to find it, so he attacks the next sack and so on failing to fine what instinct calls food. The miller realizing that he is losing money this way, plants bags of whole grain flour or whole grain about the mill so the rats can find real food easily and leave their commercial products alone. Instinct tells the lowly rat what food is. Intelligence does not direct the human so successfully. Of course, the bosses of the medical association and of the Food and Drug Administration of our Govemment know just as well as any food expert that the white flour is a snare and a delusion and they know that white flour contributes to the production of disease by depriving us of the food essentials present in the surface of the grain.

Let me call your attention to the fact that it is not just the cellulose in the surface of the grain that gives it value. The bran that you buy in packages is about as good as paper when you consider it from a nutritional standpoint. The surface of the grain contains the gluten which is the protein of the grain and this contains glutamic and glutaric acids. Glutamic acid is a great brain food. Humans, world-wide, need lots of it and it holds a place in the oxidation mechanism. The surface of the grain also contains the trace minerals such as cobalt, manganese, fluorine, iodine, and other important elements, even though they are necessary only in the very highest dilutions as 10×10^{-30} power. The surface of the grain also contains what we might call the insulin factor. This factor is able to metabolize the starch within the tissue of the body. It takes the place of insulin in this particular job. It thus protects the pancreas from exhaustion and the pancreas does not have to work nearly as hard and can last much longer is serving the body because of the activity of this grain surface factor. You would think that it would be a smart proposition to extract this insulin factor from the grain surface which is being thrown away and wasted every day in thousands of tons and supply it to the poor people who eat the white flour now and thus protect them from getting diabetes; and you would think that a benevolent Govemment would supply the public with knowledge of this insulin factor and would encourage the extraction of this insulin-like factor from this thrown away material and supply it to diabetics. They could take it by mouth and would not have to go through the job of injecting insulin into their systems every day. The prevention and treatment of diabetes by this procedure should be given carefully controlled study so that its exact importance will be realized and established. In the meantime, we should follow the old fashioned milling methods and grind our grain just before using.

There are many virtues in foods that are not even recognized and certainly not understood, so we cannot talk about them, but even in these virtuous foods there are factors that prove disadvantageous when taken in too large a quantity or when taken by people who are ill. I wish to call

attention to the acids in fruits. Oxalic acid in unripe fruits, berries, rhubarb, and spinach is not oxidized in the body and can combine with the living or colloidally adsorbed cations as calcium and carry them out into the urine. Tartaric acid is likewise resistant to being oxidized and it too robs the body of its salts. The loss of divalent cations tends to aggravate pain and toxicities. Persons with weak oxidation capacity such as the cachectic cancer cases and nephritics find it difficult to burn citric acid in the body and it too may serve as a salt thief in such persons; whereas, in normal persons this does not happen unless very large amounts are taken.

The flavor materials in the citrus fruits and the oils that give fragrance to fruits, wood, and flowers all contain double bonds between carbon atoms which give them much the same ability to depress the oxidations within the tissue that turpentine shows. Such substances may injure a weak liver. Persons who eat too freely of the citrus fruits when arriving in Florida are known to come down with a liver congestion and sometimes become critically ill. I have myself, with others in good physical condition, drunk large amounts of citrus fruit juices and tried out the lifting capacity of the muscles at various periods thereafter and found that it was reduced by the citrus juices. The same is true with grape juice and wines. One must use his head in such matters.

Widespread in nature we find the atomic groupings, – the conjugated system of carbonyl and ethylene linkages; in the buttercup, the butterfly wing, in the sex hormones, Progesterone and Testosterone, which Adair and others have demonstrated are protective against cancer. Vitamin K also possesses it and it is present in vitamin C which Warren demonstrated could destroy the cancer causing poisons produced synthetically which are now so well known. It is present in Clavicin, Penicillic acid, Streptomycin, and other antibiotics as demonstrated by Geiger and Conn two years ago. Adair's work was just reported this year, but others have demonstrated the same fact two years ago. Recently Dr. Albert Wahl of Mount Vision, New York, reported on 250 cases of chronic and incurable diseases treated by Benzoquinone which is a double arrangement of this conjugated system just mentioned. His paper was received with great acclaim and just recently Dr. Potter, a Professor at the University of Wisconsin, according to Science News Letter of September 27, 1947, speaks of the relation of the oxidation mechanism to cancer. I quote as follows:

> ***"So long as cells have free use of oxygen, including a normal supply of the enzymes or body catalysts that promote oxidation, they burn up food supplies and remain normal.' 'The outstanding feature of cancer growth seems to be tied up with a slowing down of the oxidation process that in normal cells burns up as work or other form of energy expenditure, possible growth materials brought to them by the blood."***

All of the statements made by these eminent scientist regarding the relation of the oxidation mechanism to natural immunity which protects us against disease or that point out the process is an induced auto-oxidation affair.

To show how powerful this conjugated system of carbonyl and ethylene groups supplied by Nature really is, let me refer to the plant

product, Crocetin, from Crocus Sativus. It was demonstrated by the Swedish scientist, Stanstrom, two years ago and by Professor Smith of Deland Stanford University this year that a tiny amount of Crocetin diluted up two and a half trillion times with water was able to change the sex characteristics of capons to the normal rooster type, This dilution is two and a half more dilute that the solution I used. Nature (does) shows positive action in the high dilutions mentioned.

This paper had not been completed at the time Dr. Koch returned to Brazil to continue his research that he had started in Rio de Janeiro in the summer of 1941. Thus, I have presented that portion of his paper that is material to diet and related research. In 1961 Dr. Koch wrote the following on the subject matter of Catalytic Dilutions.[25]

"The philosophy of the dominant therapy has been, up to now, to saturate the patient with as much destructive agent as possible, so as to destroy the enemy invader without too much injury to the patient.[26] Quinine and atabrine in Malaria, and the present-day antibiotics are examples. So, safe concentration is the logical procedure under this system. This is pharmacology. On the other hand, the physiological approach has different aims. It is corrective and restorative, and induces the changes it wants. Then, the question becomes what are the physiological ranges of concentration in which the remedy shows best action by actual measurements and careful observation. The question not only is how dilute must the solution of the reagent be, but also how concentrated dare it be and still retain physiological activity. A look at the physiological natural reagents that carry activated carbonyl groups will show how high nature dilutes them for best action. As a starter, no better guide could be chosen. Here, again, we see that our postulate of nearly half a century of application is just recently received support from the physiological processes of Nature herself.

"A dilution of one part of a reagent to a trillion of water carries thousands of billions of molecules in each cubic centimeter. Since only one molecule is required to start a catalytic action[27] that can grow with geometric progression, nature is not stingy when she supplies vitamin B_{12} in quantities so small that they can act normally in concentrations of 1×10^{-9} or one part to a billion. Only three micrograms is an effective therapeutic dose. Only 0.01 millimicrogram gives definite growth response to bacteria. (U.S. Pharmacopeia Vitamin B_{12} Study Panel). Echinochrome A, is a naphthaquinone without one double bond carrying a free hydrogen atom. Its O/R potential is only 0.080 v. This is because the molecule has five hydroxyl substituents where hydrogen instead would have raised the potential 0.3 v. higher. Still it is active in inducing motion in Sea Urchin eggs in dilutions of $1{:}2 \times 10^{-9}$ (Fieser, 1944 Edition,

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[25] The Survival Factor In Neoplastic And Viral Diseases, William F. Koch, Ph.D., M.D. pp. 91-2, 1961.

[26] This has been the same standard followed by oncologists in the treatment of their cancer patients with X-ray and radium, over the years, and it is now the standard followed with modern cancer chemotherapy; "Kill the cancer before you Kill the patient with the treatment."

[27] Note: Free radicals act as catalysts to spark chemical reactions and changes in other molecules. Antioxidant Revolution, Kenneth H. Cooper, M.D., p.20.

page 753). Crocin belongs to the carotenoid family and presents two terminal carbonyl groups conjugated with ethylene linkages, a chain of seven, with four methyl substituents. The carbonyl groups are part of the terminal carboxyl groups that have each been esterified with gentiobiose. It is active in the highest dilutions as demonstrated by Kuhn and Kuhn and Moewus – (1938 -1940). Only one molecule is required to determine sex activity in the C. augamentos F. simplex and Chlamydomonas genus of algae. Thus the dilutions may be higher then one part to a trillion of water, and Prof. Gilbert Smith, in 1947, reported the production of motility in certain plant sex cells by use of only one part of this reagent to 250,000,000,000 parts of water. Heparin is active in suspending blood coagulation in amounts so minute that there is no method to detect its presence (Fieser – p. 487 – 1944 Edition), and acetyl choline (Karrar – p. 239 – 1947 Edition), is able to renew suspended contractions in the intestinal muscle of the surviving guinea pigs in a dilution of one part to 1,000,000,000 parts water. Since biological reactions are so much more refined than laboratory manipulations, one can not judge physiological activity by chemical detection or measurements. Likewise, clinical results are not to be predicated by the swing of a chemical balance. One thing must be observed, however, and that is when high dilutions are used, freedom from interfering reagents or measures are imperative, and the work must be more careful and scientific than when crude work is being done on a mass-action scale. The chemistry of the free radical and mesomeric electron displacement will give biochemistry a different hue from the conceptions of the pharmacology laboratory that have controlled up to this time. The dosage and dilution are matters of expert decision, based on experience and enlightenment, not upon prejudice or superstition.

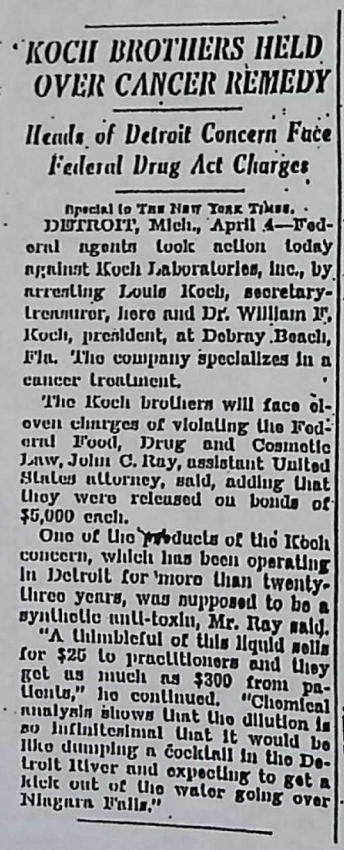
"Following the 1955 and 1958 editions of this book, some eminent biochemists such as Szent-Gyorgyi, have expressed opinions supportive to our basic philosophy with regard to the position of the free radical (lone electron) in carcinogenesis and other biochemical fields. This is indeed a gratifying advance over the dominant approach, and its correctness has already been established for decades as our text demonstrates."

One should note that Homeopathic Medicine has been recognized by the Food and Drug Laws of the United States since the first F.D.A. law was passed by Congress. High dilutions like 10×10^{-30} power are not uncommon in Homeopathic Medicine, yet the F.D.A. and its employees and agents, including U.S. Attorney John C. Ray, tried to make these dilutions look ridiculous. Their irresponsible and fraudulent statements to the press on Good Friday, April 3, 1942 about the dilutions of Glyoxylide is but one example of F.D.A. misrepresentation. The following information appeared in a statement in the press, in various forms, through out the United States and in Time Magazine following the F.D.A.'s announcement of the 1942 indictment.

"Last week the Koch Bros. were arrested for violating the Federal Food, Drug and Cosmetic Act. Their brew was found watery. Said Assistant U.S. Attorney John C. Ray: 'Chemical analysis shows that the dilution [of Glyoxylide] is so infinitesimal, that it would be like dumping a cocktail in the Detroit River and expecting to get a kick out of the water

going over Niagara Falls.'"

This statement by Mr. Ray is but one small example of the exaggerated, fraudulent and false statements and claims that have been made by the Food & Drug Administration over the years about Dr. Koch's therapeutic medications. It would be impossible for Mr. Ray, or anyone else, to calculate the diluted content of such a cocktail (if this trick were ever tried by the F.D.A.) once it reached Niagara Falls, if it ever did reached Niagara Falls. The F.D.A. knew that all homeopathic medication are scientifically determined and this also held true for Koch's Glyoxylide and all of the other Koch medications.[28] The F.D.A. was fully aware of this fact that the Koch medications were scientifically produced. Crocetin, that is listed above, is only one of many known substances and chemical that have proven biological action in the range of homeopathic dilutions used by Dr. Koch. There are over eighteen chemicals listed in the NIDSH POCKET Guide to Chemical Hazards, June 1990, that have toxic biological activity at various high dilutions. Federal Laws require that workers must be protected from these very highly diluted chemicals. Also, the government wants the lead content of water reduced to no more than 8 parts per billion (8×10^{-9}). and that arsenic be reduced to 1 part per trillion (1×10^{-12}) because of the toxic effect of these chemicals



KOCH BROTHERS HELD OVER CANCER REMEDY

Heads of Detroit Concern Face Federal Drug Act Charges

Special to THE NEW YORK TIMES.

DETROIT, Mich., April 4—Federal agents took action today against Koch Laboratories, Inc., by arresting Louis Koch, secretary-treasurer, here and Dr. William F. Koch, president, at Debray Beach, Fla. The company specializes in a cancer treatment.

The Koch brothers will face eleven charges of violating the Federal Food, Drug and Cosmetic Law, John C. Ray, assistant United States attorney, said, adding that they were released on bonds of $5,000 each.

One of the products of the Koch concern, which has been operating in Detroit for more than twenty-three years, was supposed to be a synthetic anti-toxin, Mr. Ray said.

"A thimbleful of this liquid sells for $25 to practitioners and they get as much as $300 from patients," he continued. "Chemical analysis shows that the dilution is so infinitesimal that it would be like dumping a cocktail in the Detroit River and expecting to get a kick out of the water going over Niagara Falls."

[28] See Chapter 12, NEW FOOD & DRUG LABELS in reference to dilutions, p. 141.