

## Chapter One

### Glyoxylide

IT WAS MORE than three decades ago that a young man by the name of William Frederick Koch received his medical degree. By the time this happened the young man had already received his M.A. and Ph.D. He had already been an instructor in Histology and Embryology at the University of Michigan. He later became Professor of Physiology and Biochemistry at the old Detroit Medical College, which is now a part of Wayne University.

Dr. William Frederick Koch's career has always been the center of storm and controversy. He dared to challenge the thinking of his day and suffered the bruises of this courage the rest of his life.

His enemies ridicule his work because they say he came upon the beginning of his discovery when he was only a little more than a year out of medical college. They fail to note the scientific background of the man before he began his medical practice. They fail to recall that Thomas Alva Edison was a comparatively young man when he invented the electric light bulb, an invention that has lifted a large part of the world into a higher standard of living. They do not know that those who went to school with young Bill Koch say that he was always way ahead of his class and was the most energetic and brilliant student they knew.

The term "Glyoxylide" is a name given by Dr. Koch to a chemical substance used in a highly diluted form and stated to be a polymer of the structure  $O=C=C=O$ . Dr. Koch believes this formula to represent the only substance which can explain the assembly of the particular polymers which it readily forms.

Dr. Koch is the original discoverer and for years manufactured this product for which he holds patent rights in the United States.

D. H. Arnott, M.D., of London, Ontario, a man who has closely worked with Dr. Koch for nearly twenty years, holds the rights to produce and distribute Glyoxylide in Canada. Dr. Arnott is the originator of the methods of usage and application of the remedy in the treatment of diseases of animals, particularly mastitis and sterility of dairy cattle.

The Pure Food and Drug Department of the United States and its counterpart in Canada have endeavored to prevent the distribution of this product on the grounds that it is wrongly designated on the labels and that claims are erroneously made with regard to its value in the treatment of disease. Up to the present time the Government has been unsuccessful in proving its charges, although two lengthy trials have been held. In August 1948, the Food and Drug Department dropped its charges against Dr. Koch.

Dr. Koch is a research type of man, more interested in continuing research along this completely different approach to the treatment of disease, than in combating those who seek to condemn his work and the popularity it has achieved in many places.

Dr. Koch is a friendly, kindly, sympathetic man, an American citizen of German parentage and a staunch Christian.

Experimental studies carried out while with the Detroit Medical College led to his discovery of the oxidation procedures in the animal body and to his Theories and Postulations as to the chemical reactions occurring in the oxidation procedures. Such Postulations suggested the presence of oxidizers, chemical catalysts or enzymes as being essential to the complete oxidation of food nutrients to their normal end products in the metabolism of the tissue cells of the body.

Convinced of the presence of these catalytic substances, Dr. Koch began a systematic search by chemical analysis of body tissues for their detection. For analysis he selected brain and heart tissues as being most likely to yield these Reagents since these tissues showed a greater survival against starvation than any other tissue of the body.

He succeeded after many attempts using difficult chemical analytical methods in isolating certain substances showing marked catalytic action as Oxidizing Reagents. These substances he identified as being polymers having a unit structure of the formula  $O=C=C=C=O$  and  $O=C=C=O$ .

The former is the anhydride of malonic acid and the latter one the anhydride of glyoxylic acid. The basis of his assumption of the above formulas was the fact that they represented chemically the only substances that could explain the formation of the polymers he was able to obtain.

Dr. Koch tested the reactions of these substances in dilute solutions by animal injection and satisfied as to their safety, he commenced use of them in the treatment of hopeless cancer patients in his private practice in the Detroit area in 1918. The product has been growing in favor by all who have used it and in disfavor by all who have not used it ever since.

Thirty years is a long time for any product used in treatment of diseases to be steadily gaining favor against organized resistance and condemnation. It is indeed reassuring to be able to state at this time, that since 1946 the chemistry of the Koch products, as declared by him, has been completely proved and established by chemists of the Dow Chemical Company at Midland, Michigan. The chemical work done by the Dow chemists was commenced at the request of the late Dr. Willard Dow. The report of their investigations ends up with this statement, "The complete evidence is available to anyone interested. as a general conclusion we can say that in every single case where an experiment was possible, the results were consistent with the views expounded by Dr. Koch. We have not, as yet, secured any results inconsistent with these views."

Most of the legal and technical argument against Dr. Koch's Products and his use of them for treatment of disease conditions in man and animal, has been based upon the following assumptions by the opposition: (1) That since the chemical substances stated to be in the ampoules are recognized to be the anhydrides of malonic acid and glyoxylic acid respectively, they would in the presence of the diluent, take on water and become inert solutions of malonic acid and glyoxylic acid. (2) That regardless of whether they would or would not change to their acid form, the dilution used as stated on the dispensing label was such that the substance could not be detected by any known method and certainly such minute trace as might be present could

have no value as a treatment to cure disease. In fact, the dilutions were explained by the prosecution to the court as being “similar to a man emptying a bottle of Scotch Whisky into Lake Superior and then rushing to Niagara Falls for a drink and expecting to get a kick out of it.”

The Dow Chemists have answered Assumption No. 1 by proving that the polymers as such are present in the dose solutions and can easily be detected in dilutions much higher than those used by Dr. Koch.

In addition, Dr. Fieser of Harvard University, writing on penicillin in his book, *Organic Chemistry*, in 1944, states on page 1040, “One group (of workers) has isolated material that is active against hemolytic streptococci at a dilution of 1:32,000,000. Another group reports preparation of material that completely inhibits *Staphylococcus aureus* at a dilution of 1:30,000,000.”

And Professor Gilbert M. Smith, working at Stanford University, is reported in the February, 1947 issue of *Science Illustrated* magazine, to have effected a metamorphosis of the cells of a microscopic plant from the sessile, asexual phase, to the actively motile, mate-seeking sexual cells, by the exhibition of one part of crocetin to 250 TRILLION parts of water. There are other examples, which can be given from the current scientific literature, but these will suffice. Let no one be deceived into believing the false and unscientific propaganda put out by Morris Fishbein in the Journal of the AMA, “that because the Glyoxylide used in treating disease is so greatly diluted, it can have no effect. There are solid scientific grounds that form the basis of the dilution.”

Assumption No. 2 has been answered in part by the Dow chemists and is fully answered by the known facts regarding the chemistry of digestion and metabolism of the animal body. This may be explained as the breakdown of food nutrients as carried by the bloodstream to the tissues for utilization in the production of heat, energy and sustenance of the cellular units. Each step or stage in the utilization of these nutrients is brought about by enzymes or catalysts and most of the breakdown is by oxidization procedures in which the catalytic substances in the tissues promote the oxidization reactions but are themselves not destroyed in the process. Analogous to this is the breakdown of food in digestion, whereby every step in the process is brought about by enzymes in the digestive juices. These enzymes not being used up or destroyed in the chemical reaction, which occurs. Each food substance, proteins, carbohydrates, and fats are acted upon in successive stages of breakdown by different enzymes. In the breakdown of protein foods alone, at least four different enzymes are required and possibly several more are involved.

It is a well-established fact that these enzymes (the catalytic reagent of the digestive juices) are formed and produced by the glands of the digestive tract from the food nutrients supplied to the animal body. For example the milk-fed animal produces a gastric enzyme known as renin, this enzyme not being produced in the gastric juice of animals not receiving milk in their diet. However, if milk is again included in the diet, renin is shortly reformed in the gastric juice. It is Dr. Koch's belief that all of the enzymes and catalysts, essential to the complete metabolic activities of the body can be formed by the body, thereby, obtaining a complete and adequate diet. The biochemist, the nutritionist and the physiologist do not yet know what constitutes a complete and adequate diet for the animal body, man, or beast.

When some food nutrients, minerals, or vitamins, are absent from the diet there may occur a failure to further produce some of the essential enzymes, and so the catalysts may cease to be reformed; those present may become lost or dissipated so that complete oxidization of other food nutrients cannot take place. These un-oxidized nutrients remain in the tissues and accumulate—acting as foreign bodies irritating to the tissues. Ketones, and acetone bodies are known products formed in just this manner, these substances produce the disease of Acetonemia so very serious to the dairyman. It is reasonable to suppose that many other such partially, oxidized substances accumulate, interfering with normal physiological function, well-being, and the general health of the body, so that resistance to disease becomes low and immunity to disease is lost. Pathogenic organisms and viruses, thereby, are able to invade the body and establish disease, or continued irritations of the tissues may, in certain organs and structures, lead to stimulation of cellular proliferation and cancer.

Dr. Koch points to the often occurring spontaneous recovery of animals and man from serious disease, and he attributes such recovery to a change in diet, or an improved quality of food materials that bring about a reforming of the missing catalysts, which immediately are able to bring about completion of metabolic oxidization procedures, restoring physiological function and the resulting return to health. The body tissues themselves then are enabled to throw off disease or attack and remove excess tissue proliferation.

Dr. Koch recovered two of these catalytic Oxidizing Reagents from animal tissues. He proved their chemical structure and has synthetically reproduced them. He believes there are more of these, maybe many more, which are yet to be discovered and identified. Those that he has identified, have been successfully used by Dr. Koch and others to bring about recovery, restore good health to man and animals suffering from various pathological states, as well as from some very specific pathogenical diseases.

Dr. D. H. Arnott, an outstanding Canadian medical man who has worked with Dr. Koch and used his Treatments for almost twenty years makes this statement in regard to cancer “This Treatment may be used by any family Doctor, in the homes of his patients, with it he gives hope always, considerable relief from pain generally and an absolute cure sometimes.”

The extensive trial usage of Glyoxylide in the treatment of mastitis and sterility of dairy cattle, as conducted by the British Columbia Department of Agriculture, showed beyond any question of doubt that the Treatment had merit and that it did bring about recovery in mastitis and restoration of function in sterility conditions. This work has been published and is available to anyone.

It is necessary to point out to the reader that wherever this product is being used for the first time in animal work, because of skepticism, only the worst cases, many of which are of long standing, have been submitted for Treatment. Results in many of these cases have been little short of miraculous. The same is true of the human cases that are being treated; they are in general, cases given up by medical institutions and supposedly hopeless. The Glyoxylide Treatment is asked for and sought by these people or their relatives as a last remaining hope. Here again recoveries occur much more often than mere chance could ever account for, many such recoveries are, in the words of the patient and friends, “miraculous.”

At this point in the unfolding of our book, let us quote freely from a leaflet written by Dr. D. H. Arnott of London, Ontario, Canada, entitled, "*The Prosecution of Dr. Wm. F. Koch.*" This leaflet, while brief, gives an excellent summary of Dr. Koch's prosecution, as well as some historical information, which could not be secured from anyone but Dr. Arnott.

"In May 1941, Dr. Koch sailed for Brazil, where he became engaged in demonstrating his Therapy with such good effect that the federal authorities pressed him to remain and develop what he had initiated. He did stay until late in November, during which interval he had accomplished much in health matters and had pleased the high-ranking administrative officials.

"Soon after his return to the United States, he was visited by an agent of the Pure Food and Drug Administration who led him to infer that the Administration wished to change its hostile attitude towards his discoveries, and therefore, would like to get a chance to base such change on some sound ground, and to this end desired Dr. Koch's cooperation.

"He complied by giving the agent a dark liquid with directions about its proper dilution and its administration in the successful treatment of the sick. Many times, I had seen Dr. Koch make this type of Glyoxylide concentrate, and I had produced it myself in Canada, and with other Canadian doctors used it with considerable success. It had been employed freely in the province of Alberta, where the fine results generally obtained created such popular appreciation, that in the latter part of March 1942, Dr. Koch and I were invited to visit Alberta for the purpose of giving clinical demonstrations in the use of Glyoxylide, and for which the government would place every facility requisite at our disposal.

"Arrangements for this invitation were agreed upon at a regular caucus of the members of the Legislature of the political party in power, held about the middle of March 1942, when three members were authorized to take appropriate action to obtain this demonstration, which would be carried out by Dr. Koch in person. That these members had been successful, that Dr. Koch and I were coming at an early date to put on the demonstration solicited and would pay our own expenses, became fairly well known to political circles in Edmonton. A week later Dr. Koch was arrested and placed under heavy bond not to leave the United States.

"There was much which was precipitate in the arrest of Dr. Koch and his brother Louis, excused by Government explanation that they feared Dr. Koch would flee to Brazil. There was no intention of his doing any such thing in face of the opportunity to carry out a strong demonstration of his Treatment for the Government of Alberta under the favorable conditions assured. If the Federal authorities of the United States believed that Dr. Koch would prove, himself, to be a charlatan while he conducted the clinical work in Alberta, why did they interfere and prevent him doing so?

"The first court action against Dr. Koch did not commence until February of the next year. It lasted four months and ended with the jury in disagreement.

"The second trial began just three years after the first trial had been commenced, during which period Dr. Koch was continued under heavy bond not to leave the United States, and was

enjoined, by court order, to take no action which could be construed as advertising.

“The charges at the second trial were identical with those of the first trial, and since Glyoxylide is the particular molecular structure, which we have been using in Canada, here from the court record are the charges, all of which the prosecution promised the jury they would prove.

Page 67, going over to Page 68, Court Record:

“MR. LOVERUD:

“Now with respect to the third type of drug, (Glyoxylide) that also has the same statement in here ‘synthetic antitoxins.’ Down below it says ‘For allergy, cancer, infection.’

“And, the Government expects to prove that those representations are false and misleading, because that represents that the drug is effective in the cure, or treatment, or mitigation or prevention of three types of diseases mentioned, allergies, infections, and cancers, whereas it is wholly ineffective for these purposes.’

“The prosecution made little effort to prove this.

Page 71:

“The evidence will also show...there is always in your body an amount of glyoxylic acid, millions if not billions of times more THAN YOU OBTAIN FROM THE AMOUNT OF GLYOXYLIC ACID WHICH IS FOUND IN THE AMPOULES.’

“The prosecution never found Glyoxylic acid in any of the Koch ampoules.”

Page 78:

“MR. LOVERUD:

“The glyoxylic acid or Glyoxylide was likewise tested out on animals and human beings. . . It was tested out for allergies because it is also offered for allergies.

“It was tested out for infection on animals and on living human beings who were sick, and found to be ineffective.’

“This shows the prosecution presented the Koch Glyoxylide as being identical with solutions of glyoxylic acid. The experts of the Dow Chemical Company proved this was not true, as the record has disclosed.

“The methods used for the pre-determined conviction of Dr. Koch were bold and unscrupulous. Those concerned threw away all ordinary, reasonable, legal precautions, through the observance of which proof of the good faith of the prosecution should be established as prescribed. The prosecution was active throughout six and a half years on the assumption that provisions of the

enactment absolved the authorities entirely from being obliged to show there ever had been any intent, on the part of Dr. Koch, to deceive the profession and the public. Therefore, should the jury be misled into believing Dr. Koch had been in error on any technical point, this would be sufficient to urge conviction.

“The most obvious source of such evidence lay in the obscurities of the chemistry which Dr. Koch had originated. What the Government expert chemists lacked to promote the conviction of Dr. Koch, they did not hesitate to invent. For Dr. Koch’s Glyoxylide, they substituted solutions of glyoxylic acid, which they presented as identical to that produced and distributed by him (Dr. Koch), and which the prosecution maintained was found in the ampoules containing genuine Koch Glyoxylide. In the next breath, they asserted they had been unable to determine that the Koch solutions contained anything but distilled water, and therefore, had assumed nothing of any therapeutic importance could be in the genuine Koch solutions.

“Glyoxylic acid in water produces a clear colorless solution. The Government expert chemists never diluted and used the dark liquid with which Dr. Koch, in good faith, had provided them in the fall of 1941, or they would have obtained the same fine clinical results, which medical men and veterinarians, associated with me, had observed.

“In order to convict him, they substituted glyoxylic acid for the material they had received from Dr. Koch and these solutions of glyoxylic acid, their experimental and clinical experts gave evidence that they had been found useless for therapeutic purposes. Under cross-examination by defense counsel, the Government top chemists were obliged to admit that they had known the chemical reactions used by Dr. Koch might yield a solution very much different from that, which the prosecution had substituted for the purpose of having him convicted.

“Members of the staff of the Dow Chemical Company gave evidence that Dr. Koch had correctly described the chemical structures, which he had discovered and had employed in the treatment of the sick, and that this solution contained no trace of glyoxylic acid.

“So punishing was the defense cross-examination of these Government expert witnesses, followed by the unshaken evidence of experts from the staff of the Dow Chemical Company, that the Government offered no evidence in rebuttal.”

“At the first trial I had been four days on the witness stand during which I had given evidence in defense of Dr. Koch. I had promised to appear again in his defense at the second trial. I was prevented from so doing by united action, which is without precedent, I believe, taken by the Department of Justice, the Department of State, and the trial Judge. Instead of being allowed to give evidence, again in defense of Dr. Koch, after the second trial had been proceeding for a month, these two Departments united in notifying me that the prosecution expected me to appear as a witness against Dr. Koch. This request I refused in the following reply:

“March 8th, 1946.

“Mr. Charles E. B. Payne,

“American Consulate,

“Sarnia, Ontario.

“My Dear Mr. Payne:

“Canadian vital statistics reveal that coronary thrombosis with the much less common but closely related condition, angina pectoris, produced 455 out of every 1000 recorded deaths; while cancer is responsible for only 118.5 fatalities.

“In 1935, I found that the Koch Treatment controlled the progress of coronary thrombosis and angina pectoris, and reversed the pathological trend, with the result that in 90% of these conditions a measure of dependable good health was restored.

“In 1936, my brother, Dr. H. G. Arnott was stricken with a very commanding attack of coronary thrombosis. I gave him the Koch Treatment and he is alive today.

“In 1940, I, myself, suffered from a very prostrating attack of coronary thrombosis and injected the Koch Treatment with the result that I am comfortable and active today.

“For these and other reasons I refuse to appear ‘as a Government witness at Detroit.’

“Yours sincerely,  
“D. H. ARNOTT.”

“Were I to have acted as a Government witness, no matter how few, trivial, or irrelevant might be the questions which the prosecution would asked me to answer, the rules of Michigan Court procedure would have precluded my presentation of the evidence, which Dr. Koch’s lawyers had obtained from me for his defense.

“Upon my refusal to become a Government witness, a suggestion was made to the Judge by prosecution attorneys, that I might be extradited like a criminal and thus brought into court against my will. When this proved to be impossible, the Judge declared he would consider holding me as a material witness if I ventured within his jurisdiction during the trial.

“Upon advice of my own Canadian attorney, I refused to enter the jurisdiction of the Court unless a stipulation as to my personal freedom were given. As this was not forthcoming, counsel for both sides was informed that if my Testimony were required it would have to be taken by a Commission in London, Ontario.

“These three Federal powers united in preventing the defense from offering important direct evidence, which Dr. Koch’s attorneys had received from me, and this advantage seized early in the trial by the prosecution, never was modified during the remaining four months of court action.

“During the first trial, I had struck a powerful and surprising blow against the prosecution when I produced strong evidence that under my direction, Koch’s Glyoxylide had been used freely and successfully to cure, to mitigate, to treat, and to prevent recurrence of mastitis, the number one

destructive disease affecting fine dairy cattle. This work had continued to make notable progress in Canada, under my direction, with results so favorable that in spite of the united action to prevent me from appearing again for the defense of Dr. Koch, a thousand pages of evidence, highly favorable to the use of Glyoxylide in Veterinary Medicine, was presented so effectively that the Government offered no evidence in rebuttal. It was based upon actual fieldwork in the use of Glyoxylide, which had been carried out by the Department of Agriculture of the Province of British Columbia through a Committee appointed by the Minister on October 4th, 1944. Seven men on this Committee volunteered to appear in Detroit, and to help in the defense of Dr. Koch. Each had played an important part with me in the work done by the Government in British Columbia, and felt it to be his duty to do so.

“The Government had undertaken to prove the Koch Therapeutic Materials were wholly ineffective ‘in the cure, or treatment, or mitigation or prevention of the three types of disease mentioned’ which were allergy, cancer, and infection.

“They made no consistent attempt to do so; instead, they proved something different, which Dr. Koch never had used, was wholly ineffective. They had no case. But they had a Judge, and he directed the jury to find Dr. Koch guilty as charged, even if from the evidence adduced they decided that the Koch Materials had been successful in treating all known forms of cancer, all known infections, and all allergies, except one.

“Nevertheless, the jury again disagreed and to that extent the prosecution again had failed.”

Dr. Arnott is still in the battle, fighting, trying to make those who will not see learn the truth he has known for so many years.

On the other hand, when the background material for this book was being gathered, it was quickly apparent that there was too much to be used.

There were incidents, which came to our attention that seemed almost unbelievable if they were not so well corroborated by witnesses who were willing and did give sworn affidavits to prove these happenings.

For example, two ladies living in Michigan who were potential witnesses, in behalf of Dr. Koch, were subjected to such a stream of abuse that it is difficult to believe such things could happen in America.

These ladies are Mrs. Paul E. Worley and Mrs. John Duda.

An actual attempt was made to eliminate Mrs. Worley via a hired thug who came to her when she was alone to “talk about Dr. Koch.” Mrs. Worley never knew what good health was until she took the Koch Treatment. She was a specimen much gone over by the University Hospital in Ann Arbor. She was born with a spinal curvature and was in very bad shape with cancer, a bad heart, and general sickness. She was one of those persons who had been sick most of her life.

Mrs. Duda suffered so severely from rheumatoid arthritis that she had to sit and lift herself up

from step to step, in order to reach the second floor of her home. She is completely free of the complaint and now takes care of her family of four all by herself.

These two ladies have been such a shining example of what the Koch Treatment can do, that dozens of people from their community have taken advantage of Dr. Koch's discovery and been helped.

Consequently, they were made the object of a telephone campaign of threats of violence, if they kept up their promotion of the Koch Treatment. Strange voices called them at peculiar times and did this for years, made threats to them, and then hung up. If we had not been directly involved in some of these incidents, it would have been hard to believe.

There must be a strange reason why these enemies of mankind want to do away with the Koch Treatment, when they go to such great lengths to intimidate and stop witnesses from testifying. They must have a powerful motive. For some reason, they have chosen just Mrs. Duda and Mrs. Worley as objects of this type of their activities. The big question, the reason for this insane and frantic opposition to Dr. Koch begins to unfold in the next Chapter.

As the 1954 edition goes to press, we wish to add the note that Mrs. Worley passed away last year. After the brutal attack on her by a member of the Purple Gang\*, who attempted to murder her and did succeed in giving this little lady many blows at the base of the neck, before her dogs got loose and ran the attacker off the scene, she was never the same. Serious complications from the beating and choking took their toll. She will always be remembered, by all who knew her, as a courageous person who was not afraid of the truth. \*( The Purple Gang or Sugar House Gang, was a criminal mob of bootleggers and hijackers composed predominantly of Jewish-American gangsters operating in Detroit in the 1920's. Known for extortion, murder, armed robbery, kidnapping, and assaults.)