



Antoine Bechamp

French biologist
1816 - 1908

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Introduction

Bechamp was one of France's most prominent and active researchers and biologists. He taught in universities and medical schools, and published widely on cell biology, disease, botany and related subjects. His would probably be a household name today if it wasn't for the activities of one *Louis Pasteur*, who history has treated very kindly indeed, considering his fake science, his tendency to steal ideas (mainly from Bechamp), falsify experimental data, and in general make claims which had no basis in fact.

I'm not running off at the mouth by saying the above. It's all quite well documented - Bechamp and Pasteur were both members of the French Academy of Sciences, and the papers they submitted, and their correspondance, both to each other and to other people, were all recorded. Even their verbal exchanges survive in the minutes of the meetings.

To cut a long story short, and it *is* a long story, Pasteur basically dug up the germ theory of disease and put his name on it. It wasn't a new idea, although he claimed to have "discovered" germs all the same. The concept had actually been outlined by other people many years before, but of course, the whole idea is wrong anyway, so it hardly matters who thought of it first. In a few years, the germ theory of disease will out there with the flat earth theory where it belongs.

Bechamp wrote several books. The last of these was [The Third Element of the Blood](#), which outlines his hassles with Pasteur, and also the details of his own theories.

Another good book is *Pasteur Exposed*, written by Ethel Hume and first published in 1923, which goes into all the details of exactly how Bechamp's ideas were twisted beyond recognition by Pasteur. None of this would matter a toss, of course, except for the minor point that western chemistry-based medicine is built on a foundation of unquestioning "Pasteurism".

THE DREAM AND LIE OF LOUIS PASTEUR

by *R. B. Pearson*

Pearson's book, originally published in the 1940's, under the title *Pasteur, Plagiarist, Imposter*, is an excellent introduction to the theory and practice of Pastuer's "science", his inability to fully understand the concepts he was appropriating, and the consequences of the vaccines that he and his followers created.

Louis Pasteur built his reputation and altered the course of twentieth century science by plagiarizing and distorting the work [Antoine Bechamp](#).

Pearson exposes facts concerning Pasteur which are still being ignored today, and provides a detailed historical background to the current controversy surrounding vaccination. The wierd thing is that even during Pasteur's lifetime, there were people who were saying that he was wrong, and that **he knew he was wrong**, but Pasteur was good at playing politics, and was in with the ruling class, so he won.

The following is the entire text of the book. The sooner we get over the legacy of Pasteur's fake science and get back to reality the better.

1.

PRIOR HISTORY OF THE "GERM THEORY"

If you back into the history of the medical profession and the various ideas regarding the cause of disease that were held by leading physicians before Pasteur first promulgated his notorious "germ theory", you will find convincing evidence that Pasteur discovered nothing, and that he deliberately appropriated, falsified and perverted another man's work.

The 'germ theory', so-called, long antedated Pasteur - so long, in fact, that he was able to present it as new; and he got away with it!

F. Harrison, Principal Professor of Bacteriology at Macdonald College (Faculty of Agriculture, McGill University), Quebec, Canada, wrote an Historical Review of Microbiology, published in Microbiology, a text book, in which he says in part:

"Geronimo Fracastorio (an Italian poet and physician, 1483 - 1553) of Verona, published a work (*De Contagionibus et Contagiosis Morbis, et eorum Curatione*) in Venice in 1546 which contained the first statement of the true nature of contagion, infection, or disease organisms, and of the modes of transmission of infectious disease. He divided diseases into those which infect by immediate contact, through intermediate agents, and at a distance through the air. Organisms which cause disease, called *seminaria contagionum*, he supposed to be of the nature of viscous or glutinous matter, similar to the colloidal states of substances described by modern physical chemists. These particles, too small to be seen, were capable of reproduction in appropriate media, and became pathogenic through the action of animal heat. Thus Fracastorio, in the middle of the sixteenth century, gave us an outline of morbid processes in terms of microbiology."

For a book published more than three hundred years before Pasteur 'discovered' the germ theory, this seems to be a most astonishing anticipation of Pasteur's ideas, except that - not having a microscope - Fracastorio apparently did not realize that these substances might be individual living organisms.

According to Harrison, the first compound microscope was made by H. Jansen in 1590 in Holland, but it was not until about 1683 that anything was built of sufficient power to show up bacteria. He continues:

"In the year 1683, Antonius van Leenwenhoek, a Dutch naturalist and a maker of lenses, communicated to the English Royal Society the results of observations which he had made with a simple microscope of his own construction, magnifying from 100 to 150 times. He found in water saliva,

dental tartar, etc., what he termed animalcula. He described what he saw, and in his drawings showed both rod-like and spiral form, both of which he said had motility. In all probability, the two species he saw were those now recognized as bacillus buccalis maximus and spirillum sputigenum.

Leenwenhoek's observations were purely objective and in striking contrast with the speculative views of M. A. Plenciz, a Viennese physician, who in 1762 published a germ theory of infectious diseases. Plenciz maintained that there was a special organism by which each infectious disease was produced, that micro-organisms were capable of reproduction outside of the body, and that they might be conveyed from place to place by the air."

Here is Pasteur's great thought in toto - his complete germ theory - and put in print over a century before Pasteur thought of it(?), or published it as his own!

Note how concisely it anticipates all Pasteur's ideas on germs. While there seems to be no proof that Plenciz had a microscope, or knew of Leenwenhoek's animalcula, both are possible, and likely, as he was quite prominent; and he, rather than Pasteur, should have any credit that might come from such a discovery - if the germ theory has any value. This idea, which, to the people of that time at least, must have accounted easily and completely for such strange occurrences as contagion, infection and epidemics, would have been widely discussed in the medical or scientific circles of that time, and in literature available to Pasteur.

That it was widely known is indicated by the fact that the world-famous English nurse, Florence Nightingale, published an attack on the idea in 1860, over 17 years before Pasteur adopted it and claimed it as his own.

She said of 'infection':

Diseases are not individuals arranged in classes, like cats and dogs, but conditions growing out of one another.

Is it not living in a continual mistake to look upon diseases as we do now, as separate entities, which must exist, like cats and dogs, instead of looking upon them as conditions, like a dirty and a clean condition, and just as much under our control; or rather as the reactions of kindly nature, against the conditions in which we have placed ourselves?

I was brought up to believe that smallpox, for instance, was a thing of which there was once a first specimen in the world, which went on propagating itself, in a perpetual chain of descent, just as there was a first dog, (or a first pair of dogs) and that smallpox would not begin itself, any more than a new dog would begin without there having been a parent dog.

Since then I have seen with my own eyes and smelled with my own nose smallpox growing up in first specimens, either in closed rooms or in overcrowded wards, where it could not by any possibility have been 'caught',

but must have begun.

I have seen diseases begin, grow up, and pass into one another. Now, dogs do not pass into cats.

I have seen, for instance, with a little overcrowding, continued fever grow up; and with a little more, typhoid fever; and with a little more, typhus, and all in the same ward or hut.

Would it not be far better, truer, and more practical, if we looked upon disease in this light (for diseases, as all experience shows, are adjectives, not noun-substantives):

- True nursing ignores infection, except to prevent it. Cleanliness and fresh air from open windows, with unremitting attention to the patient, are the only defence a true nurse either asks or needs.

- Wise and humane management of the patient is the best safeguard against infection. The greater part of nursing consists of preserving cleanliness.

- The specific disease doctrine is the grand refuge of weak, uncultured, unstable minds, such as now rule in the medical profession. There are no specific diseases; there are specific disease conditions."

Here you have Florence Nightingale, one of the most famous nurses in history, after life-long experience with infection, contagion and epidemics, challenging the germ theory 17 years before Pasteur put it forward as his own discovery! (See Ch.8, p.61).

She clearly understood it and its utter fallacy better before 1860 than Pasteur did, either in 1878 or later!

And, to see what a parasite Pasteur was on men who did things, let us digress and go back a few years, to the time when the study of germs was an outgrowth of the study of fermentation.

2

BECHAMP, PASTEUR, AND FERMENTATION

About 1854, Professor Pierre Jacques Antoine Bechamp, one of France's greatest scientists, then Professor at the School of Pharmacy in the Faculty of Science at Strasbourg, later (1857-75) Professor of Medical Chemistry and Pharmacy at the University of Montpellier, a member of many scientific societies, and a Chevalier of the Legion of Honor, took up the study of fermentation.

He had succeeded in 1852 in so reducing the cost of producing aniline as to make it a commercial success, and his formula became the basis of the German dye industry. This brought him some fame, and many more problems to solve.

Up to this time, the idea prevailed that cane sugar, when dissolved in water, was spontaneously transformed at an ordinary temperature into invert sugar, which is a mixture of equal parts of glucose and fructose, but an experiment with starch had caused him to doubt the truth of this idea.

Therefore in May, 1854, Bechamp undertook a series of observations on this change, which came to be referred to as his "Beacon Experiment". In this experiment, he dissolved perfectly pure cane sugar in water in a glass bottle containing air, but tightly stoppered. Several other bottles contained the same solution, but with a chemical added.

In the solution without any added chemical, moulds appeared in about thirty days, and inversion of the sugar in this bottle then went on rapidly, but moulds and inversion did not occur in the other bottles containing added chemicals. He measured the inversion frequently with a polariscope.

These observations were concluded on February 3, 1855, and his paper was published in the Report of the French Academy of Science for the session of February 19, 1855.

This left the moulds without an explanation, so he started a second series of observations on June 25, 1856 (at Strasbourg) in order to determine if possible, their origin, and on March 27, 1857, he started a third series of flasks to study the effects of creosote on the changes. Both series were ended at Montpellier on December 5, 1857.

In the second series he spilled a little liquid from flasks 1 and 2 during manipulation, so these two flasks contained a little air in contact with the liquid. In these two flasks, moulds

soon appeared, and alteration in the medium ensued.

He also found that the changes were more rapid in the flask in which the mould grew more rapidly.

In the other nine flasks there was no air, no mould formed, and no inversion of the sugar occurred; plainly air was needed for the moulds and inversion to occur. This proved beyond any possibility of doubt that the moulds and inversion of the sugar could not be "spontaneous" action, but must be due to something carried in the air admitted to the first two flasks.

Yet Pasteur later called fermentation "life without air, or life without oxygen."

At this time, it was quite generally believed that fermentation could not take place except in the presence of albuminoids, which were in general use by Pasteur and others as part of their solutions. Hence, their solutions could have contained these living organizations to start with.

Bechamp's solutions contained only pure cane sugar and water, and when heated with fresh-slaked lime did not disengage ammonia - ample proof that they contained no albumen. Yet moulds, obviously living organisms, and therefore containing albuminoid matter, had appeared in these two solutions.

Bechamp proved to his own satisfaction that these moulds were living organisms and that cane sugar was inverted, as he said "... only in proportion to the development of moulds. These elementary vegetations then acting as ferments."

Pasteur, apparently overlooking the air contact, challenged Bechamp's statements, saying:

"... to be logical, Bechamp should say that he has proved that moulds arise in pure sugared water, without nitrogen, phosphates or other mineral elements, for that is an enormity that can be deduced from his work, in which there is not the expression of the least astonishment that moulds have been able to grow in pure water with pure sugar without any other mineral or organic principles."

Bechamp's retort to this was:

"A chemist au courant with science ought not to be surprised that moulds are developed in sweetened water, contained in contact with air in glass flasks. It is the astonishment of Pasteur that is astonishing"

As Bechamp started with no nitrogen whatever except what was in the air in the first two flasks, it is probably the first time any growth or any kind of organism was proved to have absorbed nitrogen from the air. Apparently Pasteur could not grasp this idea!

In the preface to his last book, *The Third Element of the Blood*, Bechamp says that these facts impressed him in the same way that the swing of the cathedral lamp had impressed Galileo. He realized that some living organisms had been carried into these two flasks in

the small amount of air admitted, and acting as ferments had produced the mould and the inversion in the sugar. He compared the transformation of cane sugar in the presence of moulds to that produced upon starch by diastase, the ferment that converts starch into sugar.

He sent in his report on these findings to the Academy of Science in December 1857, and an extract was published in its reports of January 4, 1858, though the full paper was not published until September that year.

He says of these experiments:

"By its title the memoir was a work of pure chemistry, which had at first no other object than to determine whether or not pure cold water could invert cane sugar and if, further, the salts had any influence on the inversion. But soon the question, as I had foreseen, became complicated; it became at once physiological and dependent upon the phenomena of fermentation and the question of spontaneous generation. Thus from the study of a simple chemical fact, I was led to investigate the causes of fermentation, and the nature and origin of ferments."

Although Schwann had suggested airborne germs in about 1837, he had not proved his ideas; here Bechamp proved them to exist.

Yet Pasteur in his 1857 memoirs still clings to the idea that both the moulds and ferments "take birth spontaneously", although his solutions all contained dead yeast or yeast broth which might have carried germs or ferments from the start.

He does conclude that the ferment is a living being, yet states that this "cannot be irrefutably demonstrated".

But Bechamp had demonstrated it "irrefutably" in his paper, and also had proved that water alone caused no alteration, there was no spontaneous alteration, and that moulds do not develop, nor inversion occur, without contact with the air; thus some airborne organism must cause the moulds and the inversion.

According to Miss Hume, Bechamp was also the first to distinguish between the "organized" or living ferment and the soluble ferment which he obtained by crushing the moulds, and which he found to act directly on the sugar, causing rapid inversion.

He named this substance zymase, in a paper *Memoirs on Fermentation by Organized Ferments*, which he read before the Academy of Science on April 4, 1864.

Strange to say, exactly the same word is used by others whom various encyclopaedias have credited with this discovery in 1897, over 30 years later!

In this paper he also gave his final complete explanation of the phenomena of fermentation, as being due to the nutrition of living organisms; i.e. a process of absorption, assimilation, and excretion.

In the preface to his last work (The Third Element of the Blood), Bechamp says (p.16):

"It resulted that the soluble ferment was allied to the insoluble by the relation of product to producer; the soluble ferment being unable to exist without the organized ferment, which is necessarily insoluble.

Further, as the soluble ferment and the albuminoid matter, being nitrogenous, could only be formed by obtaining the nitrogen from the limited volume of air left in the flasks, it was at the same time demonstrated that the free nitrogen of the air could help directly in the synthesis of the nitrogenous substance of plants; which up to that time had been a disputed question.

Thus it became evident that since the material forming the structure of moulds and yeast was elaborated within the organism, it must also be true that the soluble ferments and products of fermentation are also secreted there, as was the case with the soluble ferment that inverted the cane sugar. Hence I became assured that that which is called fermentation is in reality the phenomena of nutrition, assimilation and disassimilation, and the excretion of the products disassimilated."

He explained further:

"In these solutions there existed no albuminoid substance; they were made with pure cane sugar, which heated with fresh-slaked lime, does not give off ammonia. It thus appears evident that airborne germs found the sugared solution a favourable medium for their development, and it must be admitted that the ferment is here produced by the generation of fungi.

The matter that develops in the sugared water sometimes presents itself in the form of little isolated bodies, and sometimes in the form of voluminous colourless membranes which come out in one mass from the flasks. These membranes, heated with caustic potash, give off ammonia in abundance."

This proved that albuminoids were present, hence the little bodies were living matter. It also proves that Professor Bechamp understood the formation and growth of moulds and ferments in 1857, years before Pasteur comprehended these physiological processes!

In 1859, over a year after Bechamp's paper covering his 1857 experiments was printed, Pasteur started another experiment more in line with Bechamp's ideas, in fact apparently inspired by them.

He omitted all yeast but used ammonia, which contains nitrogen, in his solutions, and then ascribed the origin of lactic yeast to the atmospheric air. He was surprised that animal and vegetable matter should appear and grow in such an environment. He says:

"As to the origin of the lactic yeast in these experiments, it is solely due to the atmospheric air; we fall back here upon facts of spontaneous generation."

After asserting that excluding atmospheric air or boiling the solution will prevent the formation of organisms, or fermentations, he says:

"On this point, the question of spontaneous generation has made progress."

In a still later memoir plainly inspired by Bechamp's Beacon Experiment, Pasteur again constantly refers to the spontaneous production of yeasts and fermentation.

There is no question but that he still believed in spontaneous generation of germs and ferments at this time, and his reasoning appears somewhat childish when compared to Bechamp's work.

However, in 1860, he started another experiment in which he prepared 73 phials of unfermented liquid to expose at various points on a much advertised-in-advance trip. He opened and resealed various phials at different places, the last twenty on the Mer de Glace above Chamonix.

He practically repeated Bechamp's experiments here, but of course he had to use a different and more spectacular method to get attention.

From this time he veered away from spontaneous generation, and began to explain the same occurrences (fermentation) as being caused by germs in the air.

Paul de Kruif in *Microbe Hunters* (a grandiose attempt to exalt some of the original experimenters in serumology), glosses over Pasteur's willingness to steal credit for the ideas of others, and after describing his use, without credit, of Ballard's suggestion of the swan neck bottle to admit dust-free and germ-free air into a flask, says of this "high Alps" experiment:

"Then Pasteur invented an experiment that was - so far as one can tell from a careful search through the records - really his own. It was a grand experiment, a semi-public experiment, an experiment that meant rushing across France in trains, it was a test in which he had to slither on glaciers." (p.83)

However, de Kruif doubted thoroughly that it was Pasteur's, and well he might! Yet little did he realize how few of Pasteur's foolhardy claims were either his own or, in fact, even true in any particular.

In a discussion of spontaneous generation at the Sorbonne during a meeting on November 22, 1861, Pasteur had the nerve to claim, in the presence of Professor Bechamp, all credit for the proof that living organisms appeared in a medium devoid of albuminoid matter! Bechamp asked him to admit knowledge of Bechamp's 1857 work, but did not charge him with plagiarism, and Pasteur evaded the question, merely admitting that Bechamp's work was "rigidly exact". This was not an accident, but deliberate premeditated fraud; however, Bechamp was too much of a gentleman to make any unpleasant charges.

That it took several more years to get the spontaneous generation idea entirely out of Pasteur's head is indicated by the article on Pasteur in the 14th Edition of the *Encyclopaedia*

Britannica, which says:

"The recognition of the fact that both lactic and alcohol fermentation were hastened by exposure to air naturally led Pasteur to wonder whether his invisible organisms were always present in the atmosphere or whether they were spontaneously generated. By a series of intricate experiments, including the filtration of air and the famous exposure of unfermented liquids to the pure air of the high Alps, he was able to declare with certainty in 1864 that the minute organisms causing fermentation were not spontaneously generated but came from similar organisms with which ordinary air was impregnated."

Here it is again - not until 1864 did he give up his idea of spontaneous generation - and the high Alps stuff was only high theatre, well advertised in advance, to enable him to grab Bechamp's discovery, and yet have some 'new stuff' to attract attention to himself. Of course, he could not follow exactly the same methods; some one might bring up Bechamp's memoirs, hence the "high Alps" and "slithering on glaciers".

His experiments made in 1859 also indicated knowledge of Bechamp's work without albuminoids, and his evasion of Bechamp's question at the Sorbonne meeting in 1861 lends further support to such a belief, while his attacks on Bechamp would indicate that he recognized a rival and was keenly jealous.

Note that this final acceptance of ideas that Bechamp had brought forward six years earlier did not come until after Bechamp had published his complete paper, with a full and most thoroughly proven explanation of the processes of fermentation.

However, Pasteur had, on completion of his "high Alps" experiment in 1860, accepted, or began to accept, the idea that germs of the air caused fermentation; and soon he leaped way ahead to the conclusion that these germs also caused disease, as Plenciz had suggested about a hundred years before!

Of this idea, he had no more proof than Plenciz, except that it was now known there were germs in existence, which Plenciz, apparently, did not prove.

Although Bechamp had made clear the physiological nature of fermentation in his paper on his 1857 experiments (published in 1858), and had given more complete details in his 1864 paper, Pasteur apparently had not fully grasped its true nature as late as 1872, when he published a paper in which he stated:

"That which separates the chemical phenomenon of fermentation from a crowd of other acts and especially from the acts of ordinary life is the fact of the decomposition of a weight of fermentative matter much superior to the weight of the ferment."

Could anyone make such a statement who really understood the true nature of fermentative action? Apparently Pasteur did not!

In collaboration with A. Estor, Bechamp answered this with an effort to make the nature of

fermentation clear, in a paper printed on page 1523 of the same volume, in which he said:

"Suppose an adult man to have lived a century, and to weigh on average 60 kilograms. He will have consumed in that time, besides other foods, the equivalent of 20,000 kilograms of flesh, and produced about 800 kilograms of urea. Of course there is no suggestion that this mass of flesh and urea could at any moment of his life form part of his being.

Just as a man consumes all that food only by repeating the same act a great many times, the yeast cell consumes the great mass of sugar only by constantly assimilating and disassimilating it, bit by bit. Now, that which only one man will consume in a century, a sufficient number of men would absorb in a day.

It is the same with the yeast; the sugar that a small number of cells would only consume in a year, a greater number would destroy in a day. In both cases, the more numerous the individuals, the more rapid the consumption."

Is that not clear enough, even for a man whose diploma was marked "mediocre in Chemistry" (Pasteur) to comprehend? It seems that a child should be able to understand it.

Yet Pasteur repeated his statement four years later in *Etudes sur la Bier* (1876), so Bechamp's clear explanation apparently failed to have any effect - at least on him.

Here is proof that from eight to fourteen years after Bechamp had completely disclosed the physiological nature of fermentation and described its action minutely, Pasteur had not yet grasped the facts regarding the process!

In its article on fermentation, the *Encyclopaedia Britannica* says:

"Fermentation, according to Pasteur, was caused by the growth and multiplication of unicellular organisms out of contact with free oxygen, under which circumstances they acquire the power of taking oxygen from chemical compounds in the medium in which they are growing. In other words, 'fermentation is life without air, or life without oxygen'. This theory of fermentation was materially modified in 1892 and 1894 by A. J. Brown, who described experiments which were in disagreement with Pasteur's dictum."

So did Bechamp over 35 years earlier - in 1855 and 1858 - and Pasteur appropriated and perverted his ideas.

Pasteur also jumped to the conclusion that each kind of fermentation had one specific germ, while Bechamp proved that each micro-organism might vary its fermentative effect in conformity with the medium in which it finds itself. He also showed that these micro-organisms, under varying conditions, might even change their shape, as has been recently proved so conclusively by F. Loehnis and N. R. Smith of the U.S. Dept. of Agriculture and others.

Pasteur, however, proceeded to classify his germs and label each with a definite and

unalterable function, wherein he was wrong again, as we shall see later.

3

VINOUS FERMENTATION

Another step that went along with the work on fermentation in general was the discovery of the causes of diseases in French grapes.

Bechamp, hearing of the commotion over this trouble in the vineyards, quietly took up a study of it in 1862, the year before Pasteur turned his attention to the subject.

Bechamp exposed to contact with air:

1. grape-must as found on the vines,
2. grape-must filtered, and
3. grape-must decolorized by animal charcoal.

They all fermented, but not equally so, and the moulds or ferments developed were not identical in these three experiments, which of course caused him to seek a reason for this.

On further experiments, with the rigid exclusion of all air (the whole healthy grapes, with stalks attached, being introduced directly from the vine into boiled sweetened water, cooled with carbonic acid gas bubbling through it), fermentation took place, and was completed in this medium, proving that air was not required. Hence the ferment must have been carried on the grapes, and was not airborne.

Professor Bechamp concluded that the organism causing the must to ferment must be carried on the grape, its leaves, or the vines, and that it might also be an organism injurious to the plants.

He published a volume on vinous fermentation in 1863, entitled *Lecons sur la Fermentation Vineuse et sur la Fabrication du Vin*, in which he gave an intelligent discussion of the subject.

He also presented two papers on the making of wine to the Academy, entitled *Sur les Acids du Vin* and *Sur l'utilite et les Inconvenient du Cuvages Prolonges dans la Fabrication du Vin - Sur la Fermentation Alcoolique dans cette Fabrication*.

In October 1864 he presented a communication to the Academy of Science on The Origin of Vinous Fermentation, an exhaustive account of the experiments described above.

This paper was a complete study of the subject, in which he proved that vinous fermentation was due to organisms found on the skins of grapes and also often found on the leaves and other parts of the vine. Hence at times, diseased vines might affect the quality of the fermentation and the resulting wine.

Thus by October 1864, Bechamp had several authoritative papers in print, but where was his super-learned rival?

In 1862 Pasteur was admitted to the French Academy through the influence of Biot and the Mineralogical Section, which based its nomination and support on Pasteur's past work on crystallography; yet many attacks were made on his treatment of that subject, and he took the advice of friends to drop this line of work!

In March 1863, he met the Emperor and was soon sent to the vineyards to study the grape disease, with the prestige of having the Emperor's backing.

He published several papers on the vines and their troubles in the latter part of 1863 and in 1864, but apparently was still riding his spontaneous generation theory which Bechamp had so completely exploded in 1858, and he did not guess correctly as to the cause of the trouble with the vines.

In 1865 he offered five papers, and others came later, but he does not seem to have hit on the right answer to the problem until 1872, when he made the great discovery that Bechamp was right again! In this year, Pasteur presented a memoir entitled New Experiments to Demonstrate that the Yeast Germ that Makes Wine comes from the Exterior of Grapes.

As Bechamp had made the same statement in his 1864 paper and it had not been disproven in the intervening eight years, it was a pretty safe bet for Pasteur to make!

4

BECHAMP'S MICROZYMAS OR 'LITTLE BODIES'

As shown in the second chapter, Bechamp was the first to prove that the moulds accompanying fermentation were, or contained, living organisms, and could not be spontaneously generated but must be an outgrowth of some living organism carried in the air.

This much was in his 1858 memoir, six years before Pasteur came to the same conclusions.

Being first to realize that these moulds or ferments were living organisms, he naturally was also the first to attempt to determine their true nature and functions, and their origins.

On putting some under the microscope, he noted a diversity in appearance of the moulds and was soon involved in a study of cell life.

In his earlier experiments, Bechamp had used several salts, including potassium carbonate, in the presence of which the inversion of cane sugar did not take place. But when he repeated this experiment using calcium carbonate (common chalk) instead of the potassium carbonate, he found that inversion of the cane sugar did take place, even when creosote was added. This observation was so unexpected that he omitted it from his earlier memoir in order to verify it before publication of the fact.

In carefully controlled experiments he found that when chemically pure calcium carbonate, CaCO_3 , was added to his sugar solutions, no inversion took place, but when ordinary chalk, even that chipped from the native rock without access of air, was used, inversion always occurred.

On heating the common chalk to 300 degrees, he found that it lost its powers of fermentation, and on examining more of the unheated common chalk under the microscope, he found it contained some "little bodies" similar to those found in prior observations, and which he found did not exist in the chemically pure CaCO_3 , nor in the chalk that had been heated.

These "little bodies" had the power of movement and were smaller than any of the microphytes seen in fermentation or moulds, but were more powerful ferments than any he had encountered previously.

Their power of movement and production of fermentation caused him to regard them as living organisms.

He advised Dumas of his discovery of living organisms in chalk in December 1864, and later, on September 26, 1865, he wrote a letter which Dumas had published. He stated:

"Chalk and milk contain already developed living beings, which is proved by the fact that creosote, employed in a non-coagulating dose, does not prevent milk from finally turning, nor chalk, without extraneous help, from converting both sugar and starch into alcohol and then into acetic acid, tartaric acid, and butyric acid,"

Which of course was ample proof that there was a ferment, a living organism, present in both milk and chalk.

He said of these:

"The naturalist will not be able to distinguish them by a description; but the chemist and

also the physiologist will characterize them by their function.

Professor Bechamp found that the chalk seemed to be formed mostly of the mineral or fossil remains of a "microscopic world" and contained organisms of infinitesimal size, which he believed to be alive.

He also believed they might be of immense antiquity, as he had traced the block of limestone he had used to the Tertiary Period in geology; yet he found that stone cut from the solid ledge, with all air excluded, had "wonderful" fermentative powers, which he traced to the same "little bodies" as he had found to cause fermentation in his earlier experiments. He concluded that they must have lived embedded in the stone of the ledge for many thousands of years.

In 1866 he sent to the Academy of Science a memoir called On the role of chalk in butyric and lactic fermentations, and the living organism contained in it.

In this paper, he named his "little bodies" microzymas, from the Greek words meaning small ferment.

He also studied the relations of his microzymas of chalk to the molecular granulations of animal and vegetable cells, with many more geological examinations, and wrote a paper entitled On Geological Microzymas of Various Origins, which was abstracted in Comptes Rendus of the session of April 25, 1870.

He proved that the molecular granulation found in yeast and other animal and vegetable cells had individuality and life and also had the power to cause fermentation, and so he called them microzymas also.

He called his geological microzymas "morphologically identical" with the microzymas of living beings.

In innumerable laboratory experiments, assisted now by Professor A. Estor, another very able scientist, he found microzymas everywhere, in all organic matter, in both healthy tissues and in diseased, where he also found them associated with various kinds of bacteria.

After painstaking study they decided that the microzymas rather than the cell were the elementary units of life, and were in fact the builders of cell tissues. They also concluded that bacteria are an outgrowth or an evolutionary form of microzymas that occur when a quantity of diseased tissues must be broken up into its constituent elements.

In other words, all living organisms, he believed, from the one celled amoeba to mankind, were associations of these minute living entities, and their presence was necessary for cell life to grow and for cells to be repaired.

Bacteria, they proved, can develop from microzoma by passing through certain intermediate stages, which they described, and which have been regarded by other researchers as different species!

The germs of the air, they decided, were merely microzymas, or bacteria set free when their former habitat was broken up, and they concluded that the "little bodies" in the limestone and chalk were the survivors of living beings of long past ages.

This brought them to the beginning of 1868, and to test these ideas they obtained the body of a kitten²⁵ which they buried in pure carbonate of lime, specially prepared and creosoted to exclude any airborne or outside germs.

They placed it in a glass jar and covered the open top with several sheets of paper, placed so as to allow renewal of the air without allowing dust or organisms to enter. This was left on a shelf in Bechamp's laboratory until the end of 1874.

When opened, it was found that the kitten's body had been entirely consumed except for some small fragments of bone and dry matter. There was no smell, and the carbonate of lime was not discoloured.

Under the microscope, microzymas were not seen in the upper part of the carbonate of lime, but "swarmed by thousands" in the part that had been below the kitten's body.

As Bechamp thought that there might have been airborne germs in the kitten's fur, lungs or intestines, he repeated this experiment, using the whole carcass of a kitten in one case, the liver only in another, and the heart, lungs and kidneys in a third test. These viscera were plunged into carbolic acid the moment they had been detached from the slaughtered animal. This experiment began in June 1875 and continued to August 1882 - over seven years.

It completely satisfied him that his idea that microzymas were the living remains of plant and animal life of which, in either a recent or distant past, they had been the constructive cellular elements, and that they were in fact the primary anatomical elements of all living beings, was correct.

He proved that on the death of an organ its cells disappear, but the microzymas remain, imperishable!

As the geologists estimated that the chalk rocks or ledges from which he took his "geological microzymas" were 11 million years old, it was proof positive that these microzymas could live in a dormant state for practically unlimited lengths of time.

When he again found bacteria in the remains of the second experiment, as he had in the first, he concluded that he had proved, because of the care taken to exclude airborne organisms, that bacteria can and do develop from microzymas, and are in fact a scavenging form of the microzymas, developed when death, decay, or disease cause an extraordinary amount of cell life either to need repair or be broken up.

He wrote in 1869:

In typhoid fever, gangrene and anthrax, the existence has been found of bacteria in the tissues and blood, and one was very much disposed to take them for granted as cases of ordinary parasitism. It is evident, after what we have said,

that instead of maintaining that the affection has had as its origin and cause the introduction into the organism of foreign germs with their consequent action, one should affirm that one only has to deal with an alteration of the function of microzymas, an alteration indicated by the change that has taken place in their form."

This view coincides well with the modern view of all germs found in nature, except those in the body, which are still looked on as causing the conditions they are found with, rather than being the result of these conditions, which is their true relation to them.

The Encyclopedia Britannica says in the entry on bacteriology:

"The common idea of bacteria in the minds of most people is that of a hidden and sinister scourge lying in wait for mankind. This popular conception is born of the fact that attention was first focused upon bacteria through the discovery, some 70 years ago, of the relationship of bacteria to disease in man, and that in its infancy the study of bacteriology was a branch of medical science. Relatively few people assign to bacteria the important position in the world of living things that they rightly occupy, for it is only a few of the bacteria known today that have developed in such a way that they can live in the human body, and for every one of this kind, there are scores of others which are perfectly harmless and far from being regarded as the enemies of mankind, must be numbered among his best friends.

It is in fact no exaggeration to say that upon the activities of bacteria the very existence of man depends; indeed, without bacteria there could be no other living thing in the world; for every animal and plant owes its existence to the fertility of the soil and this in turn depends upon the activity of the micro-organisms which inhabit the soil in almost inconceivable numbers. It is one of the main objects of this article to show how true is this statement; there will be found in it only passing reference to the organisms which produces disease in man and animals; for information on these see Pathology and Immunity."

The writer of the above thoroughly understands germs or bacteria with only one exception; the bacteria found in man and animals do not cause disease. They have the same function as those found in the soil, or in sewage, or elsewhere in nature; they are there to rebuild dead or diseased tissues, or rework body wastes, and it is well known that they will not or cannot attack healthy tissues. They are as important and necessary to human life as those found elsewhere in nature, and are in reality just as harmless if we live correctly, as Bechamp so clearly showed.

5

SILK WORM DISEASE: ANOTHER STEAL!

Between 1855 and 1865 a widespread epidemic among silk worms called pebrine alarmed the south of France, so much so that finally, in 1865, it drew national attention.

Professor Bechamp, early in 1865, took up the study of this epidemic entirely at his own expense, and without the aid of others, and quickly found it was caused by a small parasite.

His long experience with small micro-organisms, and the way creosote had inhibited their growth in his Beacon Experiment of 1854 and 1855, at once suggested the way out.

Hence he was able to state before the Agricultural Society of Herault the same year that pebrine was a parasitic disease and that thin creosote vapour would prevent the attack of the parasite.

However, in the meantime, the Government had taken an interest in the subject, and in June 1865 sent Pasteur down to investigate the disease.

Pasteur, with the prestige of being an official representative of the government, was able to centre all attention on his own work, to the depreciation of the work of others, though he admitted having never touched a silk worm before he started on this mission.

Nevertheless, the fact that something 'official' was being done caused agricultural societies to await his verdict, instead of at once taking up Professor Bechamp's ideas.

Pasteur's first statement on his new subject was made in September 1865, when he published a very erroneous description, claiming:

"The corpuscles are neither animal nor vegetable, but bodies more or less analogous to cancerous cells or those of pulmonary tuberculosis. From the point of view of a methodic classification, they should rather be ranged beside globules of pus, or globules of blood, or better still, granules of starch, than beside infusoria or moulds ... It is the chrysalide rather than the worm, that one should try to submit to proper remedies."

This description shows that he had no conception of the real nature of the problem.

Bechamp's comment was:

"Thus this chemist, who is occupying himself with fermentation, has not begun to decide whether or not he is dealing with a ferment."

Pasteur, about this time, dropped his work because of the deaths of his father and two of his daughters, and before going back, spent a week at the Palace of Compiègne as the guest of Napoleon III.

In February 1866, he again took up the poor silk worms' troubles and had the assistance this time of several able French scientists, yet they made very little progress on the problem.

Meanwhile, Bechamp had made further studies on pebrine, and sent a paper entitled *On the Harmlessness of the Vapors of Creosote in the Rearing of Silk Worms* to the Academy of Science.

In this article he repeated the statements he had made before the Agricultural Society at Hérault and added that:

"The disease is parasitical. Pebrine attacks the worms at the start from the outside and the germ of the parasite comes from the air. The disease, in a word, is not primarily constitutional."

He described developing the eggs or seeds of the silk worm in an enclosure permeated with a slight odour of creosote, in which he produced eggs entirely free of pebrine, and it took so little creosote that his methods were commercially practical.

However, Pasteur had not yet found the true cause of the trouble. He sent a paper entitled *New Studies on the Disease of Silk Worms* to the Academy, in which he said:

"I am very much inclined to believe that there is no actual disease of silk worms. I cannot better make clear my opinion of silk worm disease than by comparing it to the effects of pulmonary phthisis. My observations of this year have fortified me in the opinion that these little organisms are neither animalcules nor cryptogamic plants. It appears to me that it is chiefly the cellular tissue of all the organs that is transformed into corpuscles or produces them."

But again he guessed wrong, and neither he nor all of his assistants could prove statements that were false.

He also took a slap at Bechamp's paper by saying:

"One would be tempted to believe, especially from the resemblance of the corpuscles to the spores of mucorina, that a parasite had invaded the nurseries. That would be an error."

And yet Bechamp had already proved beyond question that it was nothing else but a

parasite! Possibly, jealousy caused Pasteur to take a contrary view.

Pasteur, apparently, had not finally given up his "spontaneous generation" ideas until 1862 or 1864, and since then, had ascribed all signs of fermentation, and all disease, to airborne germs, yet here he denies that this disease is parasitic! And after Bechamp's papers proved it!

Bechamp answered him in a paper entitled *Researches of the Nature of the Actual Disease of Silk Worms* which contained more proofs of its parasitical nature.

He said that the vibrant corpuscle:

"... is not a pathological production, something analogous to a globule of pus or a cancer cell, or to pulmonary tubercles, but is distinctly a cell of a vegetable nature."

In another paper Bechamp described experiments that proved the corpuscle to be an organized ferment that would invert sugar, and produce alcohol, acetic acid, etc.

This paper seemed to convince Pasteur that Bechamp was right, for in January 1867, in a letter written to Durny, Minister of Public Instruction, he began to claim all credit for Bechamp's ideas on the silk worm diseases.

Bechamp provided a still more complete account of his discovery which the Academy printed on April 29, 1867, and the same issue contained a letter from Pasteur to Dumas, dated April 24, in which he expressed regrets over his "mistakes" and promised a paper with a complete story of the disease soon.

On May 13, 1867, Bechamp sent a letter to the President of the Academy of Science pointing out Pasteur's errors and asking recognition of the priority of his own discoveries regarding silk worm diseases. He also sent another paper entitled *New Facts to Help the History of the Actual Disease of Silk Worms and the Nature of the Vibrant Corpuscles*.

In this paper he described the corpuscles as airborne and to be found on mulberry leaves, and he also described a second silk worm disease different from pebrine, which he called *flacherie*, and on which he had published a pamphlet privately, on April 11, 1867.

In the meantime he had also submitted several papers on various microscopic organisms, more or less broadening the general knowledge on this subject; one of which was a general study of bacterial development from his microzymas.

In a paper entitled *On the Microzymian Disease of Silk Worms* Bechamp gave a full description of this second disease called *flacherie*. This was published in the paper dated June 8, 1868, and on June 24 Pasteur wrote to Dumas claiming to have been the first to discover this second silk worm disease and demanding that a note he claimed to have sent to the Agricultural Society of Alais on June 1 be printed (as the records then contained no proof of Pasteur's claim to this).

Bechamp answered this claim in a note entitled On the Microzymian Disease of Silk Worms, in Regard to a Recent Communication of M. Pasteur, which was published under the date of July 13, 1867, in which he referred to his pamphlet of April 11, 1867, (revised and reprinted March 28, 1868) and his papers of May 13 and June 10, 1867, all of which were prior to any publication of Pasteur's!

However, Pasteur used his prestige as a Government representative to brow-beat others into coming to his support, and he was finally widely recognized, and Bechamp's claims as to the discoveries on silk worm diseases ignored. The majority of those who knew his claims were false were afraid to oppose anyone who was so close to Napoleon, and who had so much official standing as Pasteur then had.

In his book on the diseases of silk worms, Pasteur takes all the credit for these discoveries, and shows how ignorant of the subject he still is by ridiculing Bechamp's statements that creosote was a preventative - so he knew of them!

Miss Hume says that members of the Academy actually asked Professor Bechamp to drop his use of the word microzyma, and even to drop his work!

In Microbe Hunters, Paul de Kruif gives a slightly different version of Pasteur's work on silk worms from that outlined above. He states that Dumas, his old professor, appealed to Pasteur to help the silk worm growers of southern France, and continues:

"Anything but a respecter of persons, Pasteur, who loved and respected himself above all men, had always kept a touching reverence for Dumas. He must help his sad old professor! But how? It is doubtful at this time that Pasteur could have told a silk worm from an angle worm! Indeed, when he was first given a cocoon to examine, he held it up to his ear, shook it and cried: 'Why there is something inside it!'" (p.91.)

De Kruif also ascribes the belated discovery that pebrine was a parasitical disease to Gernez, one of his assistants, and says:

"Gernez hurried to Pasteur. 'It is solved,' he cried, 'the little globules are alive - they are parasites! They are what makes the worms sick!'

It was six months before Pasteur was convinced that Gernez was right, but when at last he understood, he swooped back to his work, and once more called the committee together.

"The little corpuscles are not only a sign of the disease, they are its cause. These globules are alive, they multiply, they force themselves into every part of the moth's body.'" (p.95.)

It is strange that with the dispute raging between Bechamp and Pasteur over who had discovered that pebrine was a parasitical disease, Gernez did not speak of his own claims in the matter - possibly a job was more important.

De Kruif continues:

"He was forty-five. He wallowed in this glory for a moment and then - having saved the silk worm industry with the help of God and Gernez - he raised his eyes toward one of those bright, impossible, but always partly true visions that it was his poet's gift to see. He raised his artist's eyes from the sickness of silk worms to the sorrows of mankind:

'It is in the power of man to make parasitic maladies disappear from the face of the globe, if the doctrine of spontaneous generation is wrong as I am sure it is!'"
(p.97.)

His forty-fifth year must have been 1867, and Bechamp had proven spontaneous generation wrong in 1855 or '56, as described earlier, at least 10 years beforehand.

Clearly de Kruif did not look far enough; the name of Bechamp, the greatest of all, and the only 'microbe hunter' who really understood their true place in nature, does not appear in his book *Microbe Hunters* at all!

In spite of all his errors in the work on silk worms, and because of his high position and royal favouritism, Pasteur was put in charge of the practical measures of fighting this parasite, and of course did not adopt Bechamp's method of using creosote vapour.

Dr A. Lateud, at one time editor of the *Journal de Medecine de Paris*, charged that whereas in 1850 France had produced 30 million kilograms of cocoons, and its output had sunk to 15 million kilograms in 1866-7 due to the epidemic, after Pasteur's methods of 'prevention' had been introduced, production shrank to 8 million kilograms in 1873 and as low as 2 million kilograms in certain subsequent years. He continued:

"That is the way in which Pasteur saved sericulture! The reputation which he still preserves in this respect among ignoramuses and short-sighted savants has been brought into being:

- by himself, by means of inaccurate assertions;

- by the sellers of microscopic seeds on the Pasteur system, who have realized big benefits at the expense of the cultivators;

- by the complicity of the Academies and public bodies, which, without any investigation, reply to the complaints of the cultivators: 'But sericulture is saved! Make use of Pasteur's system!' However, everybody is not disposed to employ a system that consists in enriching oneself by the ruination of others."

Plainly his sins found him out here - at least with those who were in closest touch with the silk worm cultivators!

It is astonishing, in view of such a failure - and after Bechamp had shown how to prevent these diseases - that Pasteur's reputation did not go down in a public scandal!

Apparently royal favour and the academies and public bodies protected him from this.

6

PASTEUR ALSO A FAKER: ANTISEPSIS

While many of Pasteur's contemporaries must have known of his plagiarisms from Bechamp's work, they were probably cowed into silence, or kept out of the press by Pasteur's bully-ragging tactics, as well as by his prestige, not only in the public eye and with royalty, but also with the "academies and public bodies" Dr Lateud refers to.

Miss Hume goes on to show that his treatment for rabies and his anthrax serum were the same colossal failure and fraud, as will be shown in Chapter Eight, and she discusses other plagiarisms on Pasteur's part, but it hardly seems necessary to go into all of these matters here. We have seen enough evidence of incompetence and fraud to forever doubt any further statements that bear his signature, but there is one more piece of work that is worth looking into.

Some years after the events we have described, Dr M. L. Levenson, M.D., Ph.D., M.A., an American physician, discovered some of Professor Bechamp's writings in New York and immediately realized that they anticipated Pasteur in certain important points. He went to France, met Professor Bechamp, and heard the story of the plagiarism from him, since which time he has done a great deal to bring Bechamp's work to public attention.

He was one of the first in the United States to recognize Bechamp's priority in regard to most of the discoveries generally credited to Pasteur, and in a lecture entitled Pasteur, the Plagiarist, delivered at Claridges Hotel, London, on May 25, 1911, outlined briefly Bechamp's claim to priority, and added the charge that Pasteur had deliberately faked an important paper!

He said in part:

"Pasteur's plagiarisms of the discoveries of Bechamp, and of Bechamp's collaborators, run through the whole of Pasteur's life and work, except as to crystallography, which may or may not have been his own. I have not investigated that part of his career, nor do I feel any interest in it. The tracings of some of these plagiarisms, though they can be clearly demonstrated, are yet somewhat intricate, too much so for this paper; but there is one involving the claim by Pasteur to have discovered the cause of one of the diseased conditions which assail the silk worm, which can be verified by any one able to read the French language. It is the following:"

After describing some of the material we have covered in Chapter 5, he continues:

"But I have a still graver and more startling charge to bring against Pasteur as a supposed man of science.

* Scientific Bluff

Finding how readily the 'men of science' of his day accepted his fairy tales, in a voluminous memoir of no value (published in the *Annales de Chimie et de Physique* 3rd S., Vol. LVIII), is to be found on page 381 a section entitled Production of Yeast in a Medium Formed of Sugar, of a Salt of Ammonia and of Phosphates.

The real, though not confessed, object of the paper was to cause it to be believed that he, and not Bechamp, was the first to produce a ferment in a fermentative medium without albuminoid matter. Now mark, I pray you, what I say - the alleged experiment described in the memoir was a fake - purely and simply a fake. Yeast cannot be produced under the conditions of that section! If those of my hearers or any other physician having some knowledge of physiological chemistry will take the pains to read this section of Pasteur's memoir with attention, he will see for himself that yeast cannot be so produced, and he can prove it by making the experiment as described.

Now mark what, supposing I am right in this, this memoir does prove. It proves that Pasteur was so ignorant of physiological chemistry that he believed yeast could be so produced, or else he was so confident of the ignorant confidence of the medical profession in himself, that he believed he could bluff it through. In this last belief, he was correct for a time. I cannot but believe that the exposure I am making of Pasteur's ignorance and dishonesty will lead to a serious overhauling of all his work.

It was Bechamp who discovered and expounded the theory of antiseptis which Pasteur permitted to be ascribed to himself. In his 'Studies on Fermentation,' Pasteur published a letter from Lord Lister, then Mr. Surgeon Lister, in which that gentleman claims that he learned the principles of antiseptis from Pasteur. I do not doubt this statement of the noble Lord, for besides accepting Mr. Lister as a gentleman of veracity, I will give you an additional reason for accepting that statement.

* Lister's Blunder

When Mr Lister began his antiseptic operations, they were generally successful, but a few days later his patients succumbed to carbolic acid or mercuric poisoning, so that it became a gruesome medical joke to say 'The operation was successful, but the patient died.'

Now Mr Lister, though a very skilled surgeon and, I believe, having great powers of observation, had established the technique of his operations upon the

teachings of a man who had plagiarized the discovery without understanding the principle upon which it was based. Not unnaturally, Lister used doses of carbolic acid, which, when placed upon an open wound or respired by a patient were lethal. But, thanks to his careful observations, he gradually reduced the quantity of carbolic acid or sublimate of mercury employed, until at last 'his operations were successful and the patients lived,' as they would have done from the beginning, had he obtained his knowledge of the principles of antiseptics from their discoverer, who had warned against the use of any but a very minute dose of carbolic acid, instead of from their plagiarist, who did not know why the dose should be so limited.

From the outline I have now given you, you may form some idea of the ignorance of the man who, for more than thirty years, official medicine has been worshipping as a little god. But this is only a small part of the mischief perpetrated. Instead of making progress in therapeutics during the past thirty or forty years, medicine - outside of surgery - has fearfully retrograded, and the medical profession today is, in my judgment, in a more degraded condition than ever before in its history. I know that at first your minds will rebel against this statement, but some facts will prove to every mind possessed of common sense that it is true."

The Danger of Inoculating

After discussing the practice of medicine in the past and saying that since Jenner's and Pasteur's days the modern effort is to make sick well, he says of inoculations:

"When a drug is administered by the mouth, as was beautifully pointed out by Dr J. Garth Wilkinson, in proceeding along the alimentary canal it encounters along its whole line a series of chemical laboratories, wherein it is analysed, synthesized, and deleterious matter prepared for excretion, and finally excreted, or it may be ejected from the stomach, or overcome by an antidote.

But when nature's coat of mail, the skin, is violated, and the drug inserted beneath the skin, nature's line of defence is taken in the rear, and rarely can anything be done to hinder or prevent the action of the drug, no matter how injurious, even fatal it may be. All the physicians of the world are incompetent either to foresee its action or to hinder it. Even pure water has been known to act as a violent and foudroyant poison when injected into the blood stream. How much more dangerous is it, then, to inject poisons known to be such, whether modified in the fanciful manner at present fashionable among Vivisectionists or in any other manner. These simple considerations show that inoculation should be regarded as malpractice to be tolerated only in case of extreme danger where the educated physician sees no other chance of saving life.

The Germ Theory Fetish

Now the forcing of these inoculations upon individuals by law is one of the worst of tyrannies imaginable, and should be resisted, even to the death of the official who is enforcing it. English speaking people need to have ideals of liberty refreshed by a study of the history of Wat Tyler, who headed one of the most justifiable rebellions in history, and although treacherously murdered by the then Lord Mayor of London, his example should be held up to all our children for imitation ..."

But revenous a nos monoutous; the entire fabric of the germ theory of disease rests upon assumptions which not only have not been proved, but which are incapable of proof, and many of them can be proved to be the reverse of truth. The basic one of these unproven assumptions, the credit for which in its present form is wholly due to Pasteur, is the hypothesis that all the so called infectious and contagious disorders are caused by germs, each disease having its own specific germ, which germs have existed in the air from the beginning of things, and that though the body is closed to these pathogen's germs when in good health, when the vitality is lowered the body becomes susceptible to their inroads."

I agree most heartily with Dr Levenson's statement that "the forcing of these inoculations upon individuals by law is one of the worst tyrannies imaginable, and should be resisted even to the death of the official who is enforcing it." Strong words, but absolutely right!

Professor F. W. Newman of Oxford University has said:

"Against the body of a healthy man Parliament has no right of assault whatever under pretence of the public health; nor any the more against the body of a healthy infant. To forbid perfect health is a tyrannical wickedness, just as much as to forbid chastity or sobriety. No lawgiver can have the right. The law is an unendurable usurpation, and creates the right of resistance."

And Blackstone says:

"No laws are binding upon the human subject which assault the body or violate the conscience."

In the case of the Union Pacific Railway vs Botsford, the United States Supreme Court said:

"... no right is held more sacred or is more carefully guarded by the common law than the right of every individual to the possession and control of his own person, free from all restraint or interference of others, unless by clear and unquestioned authority of law.

As well said by Judge Cooley:

"The right of one's person may be said to be a right of complete immunity; to be let alone."

(Cooley on Torts 29)

"The inviolability of the person is as much invaded by a compulsory stripping as by a blow. To compel anyone, and especially a woman, to lay bare the body or to submit it to the touch of a stranger, without lawful authority, is an indignity, an assault, and a trespass." (141 U.S. 250)

In 1903 Judge Woodward of the New York Appellate Court said in the Viemeister case:

"It may be conceded that the legislature has no constitutional right to compel any person to vaccination."

(84 N.Y. Supp. 712)

In the Supreme Court, Columbia County, N.Y., in 1910, Judge Le Boeuf, in the second trial of the Bolinger case, instructed the jury as follows:

"Now I have charged you that the assault which is claimed to have existed here due to the forcible vaccination, that is, if it was against this man's will, is one which you must consider. And the reason of that is: This man, in the eyes of the law, just as you and I and all of us in this courtroom, has the right to be let alone. We all have the right to the freedom of our persons and that freedom of our persons may not be unlawfully invaded. That is a great right. It is one of the most important rights we have."

I believe these quotations from court documents indicate clearly that anyone has a right to protect himself or his family from the pus-squirters of the A.M.A. by any means that may be available, and use as much force as may be necessary, even, as Dr Levenson says, "to the death of the official who is enforcing it."

Over 60 years ago the famous English physician, Dr Charles Creighton, said in Jenner and Vaccination (1879):

"The anti-vaccinationists have knocked the bottom out of a grotesque superstition."

However, it has been revived, and needs some more 'knocks'.

The doctors will not willingly give up such a lucrative practice as the use of biologicals, and so parents and the public must do something to stop this blood-poisoning. What will it be?

I have seen a little girl, upon being vaccinated (or 'inoculated'), go to school, promptly develop 'leaky heart valves' and die of 'heart trouble' about two years later, hardly ten years old. I don't believe that either her parents, schoolmates, or teacher, or even the doctor

concerned, saw any connection between the vaccination, or inoculation, and the leaky heart valves - but there was a connection - see my pamphlet *The So-called Biologicals have Created a New Form of Heart Disease*.

And thousands of such deaths are caused every year. What are we going to do to stop it?

In the whole history of mankind, the only adequate answer to tyranny humanity has had has been death to the tyrant; and the A.M.A.-ites have been tyrannical in their efforts to sell their decayed animal-pus biologicals for many years. I believe that if these efforts at compulsion, coercion or compulsory laws to force the use of any kind of biological or so-called "tests" of any kind are pushed much further, they will lead to trouble.

As we show in this book, the underlying "germ theory" is a fraud, and everything based on it is also fraudulent, and should be forbidden by law; and when the public fully realizes what a colossal fraud the use of these decayed animal-pus concoctions is, you won't even be able to jail a man for shooting a pus-doctor who tries to vaccinate, inoculate, or 'test' his children.

We will outline, further on, a safe method of controlling infections.

Dr Levenson goes on to describe disease as nature's attempt to eliminate waste, and diseased tissues as being due to improper living; and suggests plenty of fresh air, the best of sanitation, very scanty clothes such as gymnasium costumes for everyday use, and a scientific study of diet; he believes overeating causes "an enormous number of diseased conditions".

All of these ideas would undoubtedly lead to better health and longer life than can be obtained through serology.

It is now over 30 years since Dr Levenson expressed the hope that his "exposure" would lead to a "serious overhauling" of Pasteur's work, and it should be done by someone who understands physiological chemistry.

I feel as he seems to - that the allopathic mind is hardly to be trusted with such important work!

ARE BIOLOGICALS INJURIOUS?

The 11th Report of the Medical Officer of the Privy Council of England (1868) contains a paper by Dr Burdon Sanderson entitled "On the Inoculability and Development of Tubercles" (p.91). In this he describes experiments he made which proved to his satisfaction that tuberculosis often followed the inoculation of animals with various materials (mostly biological) from non-tubercular sources, and that even a wound might be followed by tuberculosis. He says in part (p.92):

"The facts from which I had concluded that tuberculosis may originate traumatically, although very limited in number, were so positive in nature that I ventured to state that the results of tuberculosis inoculation could be no longer regarded as necessarily dependent on any property or action possessed by the inoculated material in virtue of its having been taken from a tuberculous individual. The truth of this inference has now been completely established by the experiments of two of the most competent observers, Dr Wilson Fox, Professor of Clinical Medicine in University College and Dr Cohnheim of Berlin. The following paragraph contains a summary of their results, which are the more valuable as they were arrived at altogether independently and without knowledge either of each other's inquiries or mine.

From the tabular summary of Dr Fox's experiments (117 in number) it appears that of 70 animals inoculated with various products derived from the bodies of non-tuberculous patients, about half (34) became tuberculous. In addition, five animals were inoculated with putrid but originally healthy muscle, and four of them became tuberculous, as was found when they were killed at various periods from 84 to 122 days after inoculation. Of seven animals in which setons or other mechanical irritants were introduced under the skin, two became tuberculous. This research, no less remarkable for the accuracy and completeness of the anatomical details, than for the conclusiveness of the experiments, was followed only the other day by another in Berlin, which although of similar nature, appears by internal evidence to have been conducted in entire ignorance of the fact that several of the questions investigated had already been completely settled in England.

Drs Cohnheim and Frankel, to establish whether artificial tubercle owe its origin to a specific virus, introduced into the peritoneal cavities of guinea pigs portions of various tumours (carcinoma, sarcoma, condyloma, etc.) as well as portions of healthy but partly decomposed tissue. Subsequently they employed in the same way a variety of insoluble inert substances such as blotting paper, charpie, gutta percha, caoutchouc, vulcanite, etc. In

those animals that survived the immediate effects of the injury, emaciation supervened sooner or later and the animal eventually died with tuberculosis of the peritoneum, liver, spleen, lungs, and other organs, the morbid appearances corresponding in every respect with those described in my last report.

As regards the bearing of these facts on the general question of the nature and origin of tuberculosis; I concluded from my own observations that there is no structural distinction between the artificial disease and human tubercle, so long as the term is confined, as all accurate writers are now accustomed to confine it to miliary tuberculosis; but I considered it necessary to maintain a reserve as to its relation with the many pathological processes which are spoken of as tuberculosis in the common language of practical medicine and surgery.

In going so far the two distinguished pathologists already quoted have fully agreed with me. Dr Fox says:

"I must confess that sceptical as everyone must naturally at first feel on this subject, the cumulative force of the evidence in favour of the tubercular nature of these growths appears to me irresistible. We are either dealing with tubercle, or we have before us a new and hitherto unknown constitutional disease of the rodentia, consisting of growths which, to the naked eye and in their histology, correspond with all the essential features of tubercle in man; which occur not only in the organs which are the chosen seats of tubercle in man, but also in the same parts of those organs; which have the same vital characters, and the same early degenerative cheesy changes, not suppuration nor acute softening, and with no marked characters sufficient to distinguish them from tubercle."

Cohnheim says

"All the marks by which tubercle is characterized are present; the agreement of the product of inoculation with human miliary tubercle could not be more complete than it is, whether regard be had to its extended distribution and to the great variety of organs affected, (peritoneum, pleura, lungs, liver, spleen, lymphatic glands, and even the choroid), or to its macroscopic and microscopic characters."

Gould, in the second edition of his Pocket Cyclopædia of Medicine and Surgery describes "acute miliary tuberculosis" as:

"An acute and rapid form of tuberculosis, which generally occurs in persons under 15 years of age, and in which the tubercle bacilli are rapidly disseminated through the body by the breaking down of some localized form of the disease ... the duration is from 2 to 4 weeks and the termination is fatal."

Or, could not this "localized form" be introduced by a needle, in the way Dr Sanderson describes? Are not "persons under 15" the school doctor's best customers for their so-called biologicals? And does not this "rapid dissemination through the body" sound remarkably like de Kruif's description of the way in which Koch's tuberculous germs spread through his

guinea pigs? Miss Hume says in Bechamp or Pasteur?:

"It is noteworthy that neither Pasteur nor any of his successors have ever induced a complaint by the inoculation of air-carried bacteria, but only by injections from bodily sources."

I believe this would account for a very large part of our "miliary tuberculosis" in persons under 15; undoubtedly it followed the injection of some biological! And Miss Hume's description would include all biologicals of every description!

Dr Sanderson continues:

"My further inquiries lead me to believe, in the first place that these characters belong much more generally to tuberculous growths than I had at first supposed; and secondly, that those normal tissues which possess them are much more liable to become the seat of the tuberculous process than others."

This is probably the most striking evidence in print that almost any sort of inoculation can cause tuberculosis in the animal inoculated, and of course it is reasonable to deduce from this that the same non-tuberculous inoculations would cause tuberculosis in man, any man, and in all probability, from any biological product whatsoever! Yet the ignorant serum doctor will tell us that these products are perfectly harmless!

TUBERCULIN A FRAUD

The above article, which from the day it was first printed should have forever stopped the use of all biologicals on humans, was published over 20 years before Robert Koch of Berlin brought out his Tuberculin (in 1890), which proved such a terrible failure!

The Zoophilist for May 1st 1891 reported deaths in 123 "selected" cases in Berlin from November 1890 to February 1891 which caused Koch to fall "under a cloud", but he did not give up until the government finally closed him up because of the terrible death rate!

Dr Paul de Kruif describes this work of Koch's on the tuberculosis germ in rather lurid language⁴⁹, yet recent efforts to produce a serum for tuber-culosis seem to justify his words. He says of Koch's search for the microbe:

"I have it!" he whispered, and called the busy Loeffler and the faithful Gaffhy from their own spyings on other microbes.

"Look," Koch cried, "one little speck of tubercle I put into this beast six weeks ago - there could not have been more than a few hundred of those bacilli in that small bit - now they've grown into billions! What devils they are, those germs - from that one place in the guinea pig's groin they have sneaked everywhere into his body, they have gnawed, they have gone through the walls of his arteries ... the blood has carried them into his bones ... into the farthest corner of his brain ..."

Read that over when your child brings home a card from school requesting permission to put the same sort of stuff into his blood, and tear up the card! He says that Koch found and grew different families or varieties of these deadly germs. I believe that by the doctors' standards at least, this would necessitate 43 different serums to immunize one against all 43 families, and this is probably not all the varieties there are of tuberculosis germs alone!

However, de Kruif passes over tuberculin with astonishing brevity, considering the space given to other matters that were of less importance. He says apologetically:

"... he was enormously respected, and against his own judgement he was trying to convince himself he had discovered a cure for tuberculosis. The authorities (scientists have reason occasionally to curse all authorities, no matter how benevolent) were putting pressure on him. At least so it is whispered now by veteran microbe hunters who were there and remember those brave times.

'We have showered you with medals and microscopes and guinea pigs - take a chance now and give us a big cure, for the glory of the fatherland, as Pasteur has done for the glory of France!' It was ominous stuff like this that Koch was always hearing. He listened at last, and who can blame him, for what man can remain at his proper business of finding out the ways of microbes with governments bawling for a place in the sun - or with mothers calling? So Koch listened and prepared his own disaster by telling the world about his Tuberculin."

And here de Kruif changes the subject very abruptly! On page 299 he refers to it again, in discussing malaria, as follows:

"Dean of the microbe hunters of the world, Tsar of Science (his crown was only a little battered) Koch had come to Italy to prove that mosquitoes carry malaria from man to man.

Koch was an extremely grumpy, quiet, and restless man now; sad because of the affair of his consumption cure (which had killed a considerable number of people) ... so Koch went from one end of the world to the other, offering to conquer plagues but not quite succeeding."

Neither are his successes in the use of serums, nor is there any likelihood of success in that direction, as we hope to show.

J.W. Browne, B.A., M.B., Medical Superintendent of the Kalyra Sanatorium, South Australia, quotes Koch at length to the effect that, while an injection of tuberculin into a healthy person will probably start a tubercular sore, an injection into anyone already infected will counteract or 'kill' the first infection, without doing anything more!

Note that he admits that it causes tubercular sores in the well! Hence you'd better know whether you have tuberculosis or not before you take it!

However, this reversible characteristic of making the well sick, and the sick well, existed

only in Koch's imagination, as is indicated in his own work. Anyone with such a belief must be credited with care in giving such stuff only to tubercular people, and those who received it died so fast the government had to close him up! Incidentally, cattlemen have contended for many years that it made healthy cattle tubercular.

Dr Browne says:

"Up to date upwards of two hundred different forms of tuberculin have been prepared and described.

The simple fact of the matter is that no one has yet been able to repeat Koch's experiment successfully.

There is no evidence but Koch's in favour of tuberculin as a therapeutic cure for tuberculosis in guinea pigs, in calves, or in man. No one but Koch has been able to cure an infected guinea pig by the use of tuberculin of any sort or description. Koch, as Shera says, was an optimist. There is no question that tuberculin can do infinite harm. Scores of people have died prematurely at its hands. Never was there such a commercial vaccine as this one, and never has there been such a gigantic hoax. Tuberculin, Shera says, should not come within the range of vaccine therapy. Whatever good results are imputed to tuberculin must have occurred in spite of it, for its virtues are founded on experiments which cannot be repeated.

The disbeliever too, can point to many cases where the administration of tuberculin in pulmonary disease has been undoubtedly followed by disaster and, while he freely admits the undoubted powers of the tuberculin therapist to stir up the embers and kindle the fire, he has hitherto asked him in vain for any evidence of power to extinguish the fire."

He (rightly, I believe) considers pulmonary tuberculosis to be at least in part "and to a greater or less extent" a septicemia, and adds:

"The failure of vaccines to affect the disease in any but an adverse manner is thus explained. As we all know vaccines have invariably been found useless or worse than useless in septicemias."

Such statements, coming from a physician of Dr Browne's experience, should write finis on the use of tuberculin as a cure forever; and it is no better as a 'test'.

Drs Petroff and Branch, in a discussion of the B.C.G. vaccine used on children, finds that tuberculin seems to spread tuberculosis in those who have the latent or 'benign' form which vaccination is supposed to give.

Note also that the tuberculin seemed to spread tuberculosis in these cattle 'tests' as it did in Koch's experiments on humans. They say:

"Tzekhnovitzer claims that guinea pigs become hypersensitive to tuberculin after treatment with B.C.G ... 70 per cent of those infected orally and 45 per cent of those infected by the subcutaneous route react.

IMMUNITY IN ANIMALS VACCINATED WITH B.C.G.

"Guerin, Richart and Bossiera studied a large number of cattle on a farm. On this farm in 1915 in a herd of 67 head, 47 per cent reacted positively to the tuberculin test. Year after year, the positive animals were slaughtered. In 1918, 38 per cent were still positive to the tuberculin test. In 1920, the number of reactors was 41.7 percent. Vaccination in the newborn cattle started on Jan. 1, 1921. In 1922, one year after the vaccination, 20 cattle gave a definitely positive and nine a very suspicious tuberculin reaction, or a total of 45 percent of 64 head. Many of these animals were vaccinated and revaccinated. In 1923 there remained 26 of the 1919-1920 year animals, all giving a positive tuberculin reaction."

Note that after 47% were slaughtered in 1915, as were all animals testing positive in the following years, 38% were tubercular in 1918, and a full 100% of those animals which remained from the 1919-20 vaccinated group all gave a positive 'test'. This was undoubtedly due either to the vaccines used or the 'tests' themselves, which confirms the opinions of the authorities quoted above! Could any dairyman survive such a loss?

They continue:

"In the meantime, the second generation of these vaccinated animals were revaccinated, and the vaccination repeated each following year ... there is no record of how many of the vaccinated cattle became infected, as the tuberculin test was omitted on Calmettes' suggestion, as he believes that it is of doubtful value, giving no information as far as exogenous (outside) infection is concerned.

Furthermore if in the vaccinated cattle an implantation of virulent organisms has taken place, setting up only a benign tuberculosis, tuberculin administered may bring about a violent allergic reaction disseminating the virulent organisms. In such an event, progressive disease may follow ...

Gradually the animal becomes resistant to this particular organism. However, as soon as a new organism is introduced into the herd, the occurrence of the disease is much more marked than before."

They do not mention the fact that these "implantations" may also occur in your child; nor do they realise that they can come through a change of the germ in the vaccine, but such is the case, as I showed in Germ Mutation (now out of print).

As occurred with 'flu' in the war, which was merely a mutation of the typhoid germ in the vaccines used against typhoid and paratyphoid, every vaccine may produce a 'new' form of germ which, as noted above, may "make the occurrence of the disease much more marked

than previously".

This is why we had the 1918 flu epidemic, with the highest death rate on record. It is the reason Koch had so many deaths, and also the reason for the large increases in the death rates of other diseases as noted in Chapter 9.

Koch found 43 varieties or strains of tuberculosis and there are probably as many strains of any other disease. The very multiplicity of these strains, and the ease with which modification can occur on the shelf or in the tissues, is the fundamental reason why biologicals can never be used successfully.

F. Loehnis, soil biologist, and N. R. Smith, U.S. Department of Agriculture, have discussed this variability of germs at considerable length and conclude that any germ can break down into a filterable fluid and then develop into new forms that may be radically different from the original germ, their new characteristics depending mostly upon their environment. They believe this change is constantly going on in all groups of germs.

Hence new strains are always being formed and are usually more virulent than the old.

Doctors Petroff and Branch add:

"It seems that in spite of the vaccinations with B.C.G., and the sociological measures, the implantation with violent tubercle has taken place...

Lakhms of Lithuania, studying 472 vaccinated infants, reports that he obtained 10 times more positive reactions in the vaccinated children than in the unvaccinated."

The real fact is that tuberculin never had any diagnostic value. It was not offered as a test on animals until its failure as a cure on humans caused the German government to forbid such use; in other words, the manufacturers 'discovered' or invented this new use for it to preserve a market. The 'test' on cattle circumvented both the prohibition and its ill-repute as a cure, thus continuing the profits, which is all it is good for.

Read the account of the United States Agricultural Department's 'tests' on animals infected with the hoof-and-mouth disease from vaccines, in Chapter 8.

In Fasting and Man's Correct Diet, The Tuberculin Test a Fraud (out of print), Immunity (also out of print), and Drugless Cures, I give additional evidence that the use of tuberculin was a fraud, utterly useless, and that more recent serums are no better.

BIOLOGICALS MAY DISSOLVE THE RED BLOOD CORPUSCLES

It has also been found that the soluble ferments of many animal serums will, in some humans at least, dissolve the red-blood corpuscles.

Elie Metchnikoff, the famous Russian scientist, says:

"It has long been known, however, that the serum of the blood of many animals will destroy the red corpuscles of a different species. This demonstration was afforded during the period when attempts were being made to transfuse the defibrinated blood of mammals, especially of the sheep, into man. This practice had to be abandoned in consequence of the difficulties resulting from the solution of the human red corpuscles."

Later, Buchner compared the action of alexine (the name given to the substance found to cause this action) to that of soluble ferments and referred it to the category of the digestive diastases."

This alexine is probably the same thing described by Bechamp as the liquid ferment mentioned in Chapter 2, and it should not destroy or even injure perfectly healthy blood or tissues, but who is perfectly healthy?

Dr M. R. Levenson says in the preface to his translation of *The Third Element of the Blood* that Bechamp isolated a series of soluble ferments which he called zymases, but which plagiarists renamed diastases to obscure his discoveries. Likewise, Bechamp discovered the reason for the coagulation of the blood.

Metchnikoff continues:

"According to him the same alexine is capable of dissolving the red blood corpuscles of several species of vertebrates. Bordet,⁵⁶ in a series of researches made in the Pasteur Institute, confirmed this view. He came to the conclusion that the alexines of the various species of animals differ from one another. Thus the alexine of the blood serum of the rabbit is not the same as that found in the serum of the guinea-pig or dog. Nevertheless each of these alexines is capable of exerting a solvent action on the red blood corpuscles of several species."

He continues, on page 95:

"It may, however, be admitted that the action of alexine (complement) comes under the category of phenomena that are produced by soluble ferments. The substance which dissolves the red blood corpuscles of mammals or a portion only of those of birds, undoubtedly presents great analogies to the digestive ferments. As has been mentioned repeatedly, it is very sensitive to the action of heat and is completely destroyed by heating for one hour at 55 degrees (C). In this respect, it closely resembles the macrocytase of macrophagic organs which also dissolves red corpuscles. As it is the macrophages which ingest and digest the red blood corpuscles in the organism, it is evident that alexine is nothing but the macrocytase which has escaped from the phagocytes during the preparation of the serums."

On page 401 of the same book, discussing artificial immunity against toxins rather than microbes, he says:

"When micro-organisms, living or dead, are introduced into an animal, it is found that anti-toxins do not as a rule, appear in the fluids; in these cases, the reaction is set up mainly by the microphages. The microphages represent the principal source of anti-toxins."

Is this point clear? All animal blood serums can dissolve the red blood corpuscles of several other species of animals, and many of them, for example that of the sheep, can dissolve the red blood corpuscles of man!

It is also possible that due to the wide variations in the character of the blood and blood serum, etc., both in the animals used and in the patients treated, due to both individual and possibly also racial differences, the serum from any particular animal might have a very injurious effect on the blood or other body fluids of a percentage of human patients treated, as indicated by the many deaths that follow the use of anti-toxin, even though it might not be injurious to all.

Note that they compare this stuff to a soluble ferment, which can go through a china filter, and eat red blood corpuscles, pink dynamite and other things; and this is "the principal source of anti-toxins."

It may be true that most horses' blood serum will not dissolve human red blood corpuscles, but how can we know, with all the variations possible, both in the horse, and in man, that some particular horse serum will not dissolve the red blood corpuscles of one or more children in any school which the serum squirts choose to 'protect', as they call it?

This might be the direct cause of the tuberculosis discussed above, and many other troubles that often follow the vaccination of thousands of children, and others.

We quoted Professor Bechamp as to the amount of material a solvent ferment can digest in Chapter 2, and Bechamp and other authorities say that a solvent ferment will survive much higher temperatures than 55 degrees C. This danger, therefore, exists in almost every biological on the market!

There is also the danger that some serum might contain the alexine of some animal other than a horse, which could be even more dangerous.

Furthermore, even though a serum cannot dissolve the red blood corpuscles, it might dissolve the leucocytes, the so-called white corpuscles, and this tendency seems to be much more common; in fact, it seems to be the basis of the process of artificial immunity!

For instance, Metchnikoff says:

"When into the peritoneal cavity of vaccinated guinea-pigs a certain quantity of cholera culture containing virulent and very motile vibrios is injected, we find that in the peritoneal fluid drawn off by means of a fine pipette, the vibrios have undergone profound changes in the refractory organism. Even a few minutes after the injection of the vibrios, the leucocytes disappear almost completely from the peritoneal fluid; and only a few small lymphocytes and a

large number of vibrios, the majority of which are already transformed into granules, are found; and there is presented a most typical case of Pfeiffer's phenomenon.

Alongside the round granules may be seen swollen vibrios, and others which have kept their normal form, but all are absolutely motionless. Some of these granules are gathered into small clumps, others remain isolated in the fluid. When to the hanging drop containing these transformed vibrios a small quantity of a dilute aqueous solution of methylene blue is added, we observe that certain granules stain very deeply, while others take on merely a very pale tint, scarcely visible. Many of these granules are still alive, because it is easy to watch them develop outside the animal and elongate into new vibrios. A large number of the granules, however, no longer exhibit any signs of life and are evidently dead.

R. Pfeiffer and certain other observers affirm that the granules may be completely dissolved in the peritoneal fluid just as a piece of sugar dissolves in water. We have repeatedly sought for this disappearance of the granules in hanging drops of the peritoneal fluid, without being able to find any diminution in the number of these transformed vibrios, even after several days. Nor have we been able to observe the phenomenon of the solution of the granules. It is, at any rate, indisputable that this granular transformation is a manifestation of very profound lesions undergone by the cholera vibrios under the influence of the peritoneal fluid of the immunized animal.

On the other hand, one is compelled to the conclusion that the granular transformation is due, as we shall see later, to a fermentative action of the peritoneal exudation."

Some authorities have considered the leucocytes to be an essential part of the blood, in which case their dissolution should be a dangerous loss to the person concerned. In my opinion, however, the leucocytes are nothing more than body waste or refuse in the process of elimination, and their dissolution immediately places a liquid toxic poison in the blood with no means of preventing it being absorbed, wherever the blood goes, into any and all tissues. Hence the possibility that the brain, the heart, or other organs not intended to handle these toxic poisons might absorb some of them.

Have you ever seen two leucocytes that were the same size or shape? They appear to vary widely in both characteristics - looking, in fact, more like crumbled cheese than living tissues.

GERMS IN SERUMS MAY ATTACK THE HEART VALVES

Other authorities have described other dangers in the use of serums, for instance Dr E. C. Rosenow, then of the Mayo Clinic, said over 25 years ago that certain varieties of germs in serums used in his experiments had "an affinity for the heart valves"!

He describes experiments in which he found that the green-producing variety of germs in

the serums attacked the valves of the heart, while a certain hemolyzing variety attacked the body joints, thus causing rheumatism!

In November 1925, the Chicago Health Department stated that:

"...more children of the ages of 10 to 14 die of heart disease in Chicago than of all other children's diseases put together!"

If Dr Rosenow's statements are true, do you wonder that Chicago children are dropping dead on the street, with all the serumization that is practised in our schools? In the olden days, it was very rare for a child of 10 to 14 years of age to die of heart disease.

Dr Frederick Hoffman, LL.D., Consulting Statistician of the Prudential Insurance Company of America, said:

"Heart diseases in all civilized countries are the leading cause of death and of a vast amount of physical impairment. As far as it is possible to judge, the relative frequency of heart disease in proportion to population has everywhere been increasing during the last two decades, although evidence to this effect is more or less conflicting."

While most diseases that kill mankind off have gone down at an almost wonderful pace since sanitation was first introduced to the world, this particular one is increasing, for some reason the authorities profess not to understand.

Note that those immigrants from countries having compulsory vaccination die off at a rate three to four times higher than immigrants from countries not having compulsory vaccination.

There is no doubt that there are other causes to be considered, such as sanitation, living conditions, diet, and that the relative vitality of the different races may vary, so why should these death rates seem to divide simply on their vaccinal conditions? And granting this, why does heart disease lead all other diseases in the difference between the high rates and the low?

It seems to me that this chart alone is very conclusive evidence that the statements we have quoted in this chapter, as to biologicals causing both tuberculosis and heart disease, are correct.

In regard to Italy, which passed a law for the compulsory vaccination of infants in 1888, we still class it in the 'without' column, because in 1910, the time of this census, probably not over 25% of the immigrants in New York State would be under 22 years of age and thus affected by the law, and it is very likely that the law was inefficiently enforced for the earlier years, thus allowing many to escape. Furthermore, all of those vaccinated would still be too young for the full effects of any injurious biologicals to become fully developed by 1910, hence Italy's inclusion in the unvaccinated column.

Statistics of later years seem to indicate that Italy now has death rates comparable with

other countries having compulsory vaccination, which can only serve to strengthen the idea that the fad for serums is the cause!

Dr Rosenow also speaks of other troubles that may follow the use of biologicals.

In a series of articles based on the influenza epidemic of 1918 and published in The Journal of Infectious Diseases, and also in the Collected Papers of the Mayo Clinic, Vols 10, 11, and 12, he describes many changes in serums or in patients which rendered the serum useless.

In Vol. 10, page 919, he observes of the pneumococcus-streptococcus group, of which he thought mutation forms were responsible for the 1918 pandemic:

"... marked changes in morphology, growth characteristics, infective powers, and immunological reactions. Many of these changes appear to be true mutations."

On page 949 of the same volume, he ascribed deaths following the use of certain serums to some change or mutation in either the serum or patient.

While, I believe, a serum is supposed to cure by 'agglutinating' all germs of that exact kind which it finds in the body, when there is a slight difference in germs, or changes occur, either in the patient's germs or in those in the serum, no "agglutination" takes place, and the patient is apt to die, unless sanitary or other measures are taken to save him.

Most regular physicians will say in such a condition that there is no hope, but if drugless physicians are called in, or if enemas are given, there is more than hope. In fact I believe two or three enemas a day and an exclusive fruit juice diet for a while would save the great majority of these cases.

However, this is not meant to be a discussion of the treatment of disease, which is covered in other books.

That this change or mutation of germs is a very serious handicap in treating diseases by means of serums or vaccines is indicated all through the series of ten papers that Dr Rosenow published in Vol. 12 of the Mayo Clinic papers.

He says in Vol. 12, page 920, that the serum used on some guinea pigs "tended to localize in the lungs".

In Vol. 12, page 1001, he says:

"Moreover, marked changes in the immunological condition as measured by agglutination tests have occurred in a number of strains following successive (intratracheal) animal passages."

He added that when the changes occurred, "no good effects were noted".

If passage through animal tissue will cause "marked changes in the immunological condition", how can anyone know that passage through human tissues, for example from the arm into the body, will not do the same?

And where can you find a serum or vaccine that has not had an animal passage at some previous time? They are nearly all propagated in animals at present and a substantial percentage of all "passages" seem to cause a change. In table 4 he shows 35 changes in 44 cases, and one of the other nine had changed in a previous experiment; that makes changes in over 81% of the tests!

So you see, this change is no minor accident; in fact, it occurs with great frequency, as Bechamp proved many years ago.

And these changes in the germs mentioned are of vital importance, as they often merely substitute a new disease for the one vaccinated against.

Pasteur seemed to recognize the importance of this point as he vehemently denied its possibility to the very last, and made bitter personal attacks on Bechamp and other colleagues who opposed his ideas for this reason.

Now that this has been proven so overwhelmingly, we can see how a vaccine for any one disease could start some other disease through these mutation forms. We shall then need more serums for the new disease, or more likely, several new diseases may develop, and so on, ad infinitum.

In the pamphlets *Germ Mutation and Immunity, Artificial vs Natural*, I give some important evidence indicating that the 1918 influenza epidemic was caused by mutation in vaccines used to 'prevent' typhoid in the armies in Europe.

When they inoculated against typhoid, they soon found that they had a para-typhoid on their hands, and the percentage of paratyphoid in those inoculated was identical to the second decimal place with the percentage of typhoid in those not inoculated.

And when they gave two "shots", one for each of these, they discovered a second paratyphoid, so to be scientific they called them 'A' and 'B.'

And, as scientists must always be 'scientific', they then gave the boys three shots, one for each of the above diseases, whereupon they found a fourth 'disease' - influenza - and the world's highest recorded death rate at that! The Surgeon General of the A.E.F. said of this 'influenza':

"The ordinary clinical picture of typhoid paratyphoid is frequently profoundly modified in vaccinated individuals ... intestinal types of supposed influenza should always be considered as possible typhoid until proven otherwise. Vaccination is a partial protection only, and must be reinforced by sanitary measures."

Furthermore, supposing that there is no change and that a serum or vaccine 'agglutinates'

perfectly, what proof have we that it will either prevent or cure any disease?

Elie Metchnikoff, says:

"The most carefully studied case of the relations between natural immunity and agglutination is of that encountered in the anthrax bacillus. We owe it to Gengou, who at the Liege Bacteriological Institute carried out a very detailed investigation of this question.

He showed that the bacillus of Pasteur's first anthrax vaccine is agglutinated by the blood serum of a great number of animals. But he also showed that the serums which have the greatest agglutinative action on this bacillus do not come from the most refractory species. Human serum agglutinates most strongly the bacillus of the first vaccine (in the proportion of one part of serum to 500 parts of culture) but man is far from being exempt from anthrax.

Pigeons' serum, on the other hand, is completely without any agglutinative power, although this species resists not only the first vaccine but very often virulent anthrax. The serum of the ox, a species susceptible to anthrax, is more agglutinative (1:120) than that of the refractory dog (1:100).

All these facts fully justify the conclusion formulated by Gengou that we cannot establish any relation between the agglutinating power and the refractory state of the animals to anthrax ... this conclusion may be extended to the phenomena of the agglutination of micro-organisms and to those of natural immunity in general."

It is quite likely that most physicians will acknowledge that when the changes in a germ as described above occur, there is practically no possibility of it preventing or curing any disease, and while these changes may not run as high as 80% with all biologicals, nevertheless we have shown that it can and does occur with sufficient frequency to render all such methods utterly unworthy of confidence, and unfit to rely on to any degree.

And Professor Metchnikoff's statement that agglutination is of no value as an indication of immunity or curing power seems to wipe out any small remaining chance that serums can be beneficial, under any conditions.

In other words, it seems that when we get vaccinated and fail to catch any disease afterwards, it is either only an accident, or is due more to our natural immunity than to the serum.

8

ANIMAL SEROLOGY: ANTHRAX

Miss Hume says that a Frenchman named Delafond in 1838 announced that small rod-like objects were to be found in the blood of animals having splenic fever or charbon, now called anthrax, and when Pasteur brought out his one specific germ for each kind of fermentation, Devaine suggested that these little 'rods' which he named bacteridia might be parasites and the cause of the splenic fever. However, his experiments were contradictory and it was not proven. Later in 1878 Koch made some studies in which he discovered a formation of spores among his "bacteridia".

When Pasteur heard of this he declared:

"Anthrax is, therefore, the disease of the bacteridium, as trichinosis is the disease of the trichina, as itch is the disease of its special acarus."

He claimed that the blood of an animal vaccinated with anthrax serum contained no other organisms but the bacteridia. As he considered these exclusively aerobic, the blood must be imputrescible, because putrescence, he believed, was due solely to an anaerobic germ. (Later, when the Professors of the Turin Commission drew contrary conclusions from similar experiments, he charged that they had used sheep whose blood was "septic" as well as tainted with anthrax!)

He claimed that a mixture of aerobic germs, (the bacteridia) and anaerobic germs (of putrefaction) would "neutralize the virulence" of the bacillus anthracis and, if injected into animals, would protect them from infection.

In reality these two germs are only different developments or outgrowths of Bechamp's microzymas, and should have much the same effect anywhere, namely that of scavengers of dead tissues or waste. Their action should be similar, and not counteractant to each other, as is indicated in Chapter Two.

Dr Colin, another member of the Academy, promptly challenged Pasteur's statement on the grounds that anthrax was sometimes found in a virulent stage, yet devoid of the "bacteridia".

In the next session (March 12, 1878) Dr Colin charged that Pasteur had suppressed two statements in the printed record that he had made on the floor during the prior session, i.e.

"that the bacteria of anthrax do not develop in the blood of healthy animals" and "that the bacteria will not supply germs to the organisms," which left Dr Colin's criticism of these statements 'in the air', and, in addition, he charged that Pasteur had deliberately falsified the records of other criticisms Dr Colin had made; a nice charge to make against a 'scientist'!

On April 30, 1878, Pasteur read before the Academy of Science a paper entitled The Theory of Germs and their Application to Medicine and Surgery 67, which also bore the names of Messrs Joubert and Chamberlain as co-authors. This was his first effort to sell the 'germ theory'.

In this, among many false claims, was the statement that he had discovered "the fact that ferments are living beings", giving no credit to Bechamp whatever.

This paper also claimed that an infinitesimal quantity of their last produced culture was capable of producing anthrax with all its symptoms; yet their first experiments with it were failures, as the cultures, when sowed, produced a small spherical germ that was not even virulent, instead of the typical anthrax rods expected!

This was probably a true mutation but was not so recognized, the authors apparently believing it due to an impurity getting into their cultures.

The London Times of August 8, 1881, about three years later, quotes Pasteur as saying before a sectional meeting of an international medical congress in session there:

"... in the study of micro-organisms there was an ever present source of error in the introduction of foreign germs, in spite of the precautions that might be taken against them. When the observer saw first one organism and afterwards a different one, he was prone to conclude that the first organism had undergone a change. Yet this might be a pure illusion ... the transformation of a bacillus anthracis into a micrococcus did not exist."

Note that he said this 21 years after Miss Nightingale made her famous statement that any germ could turn into another, as quoted on page five.

And when their own experiments failed to bear out their claims that their culture would produce anthrax or any of its symptoms, and the germs that were produced had no resemblance to the anthrax germ, either in appearance or virulence, why should others believe that they could prevent anthrax by any such "culture"?

But Paul de Kruif, in *Microbe Hunters*, a glorification of many famous pioneer serum faddists, paints a most astonishing picture of Pasteur's work on anthrax, and gives many startling details regarding the facts of the matter.

After describing the silk worm failure, he says:

"But one of Pasteur's most charming traits was his characteristic of a scientific Phoenix, who rose triumphantly from the ashes of his own mistakes ... so it is not surprising to find him, with Reux and Chamberlain, in 1881 discovering a

very pretty way of taming vicious anthrax microbes and turning them into a vaccine."

He describes Pasteur's demonstration of his anthrax vaccine at Pouilly-le-Fort, in May and June of that year in great detail, including the elaborate preparations, and he dwells on the fact that this experiment was framed by his enemies to destroy him, and that Pasteur realized that he was cornered, that he must succeed or else abandon his work on germs.

It seems to me that we have now seen too many cases of deceitfulness, prevarication and deliberate fraud on Pasteur's part to place much confidence in his good faith under such conditions, and in fact one is justified in looking with suspicion on this experiment. Here were 48 sheep - 24 supposed to be vaccinated, lived, while 24 not vaccinated, died. In such a number the treatment might be differentiated quite easily. He could have injected the unvaccinated sheep with a slow poison and he might have used pure sterile water, or a syringe with a perforated piston, in a pretended injection of the vaccinated sheep! And his assistants might have believed such a trick harmless and justifiable! Or it might have been concealed from them!

This 'miracle', as de Kruif describes it, seems to be the only success in a long series of failures; the one result that gives the only real support to Pasteur's claims. After all the double-dealing and fraud that we have proven elsewhere, are we not entitled to be sceptical of this? Does not his past conduct suggest that he could have been loading the dice? And he does not seem to have been able to repeat the success elsewhere!

De Kruif says of this fact (p.165):

"Gradually, hardly a year after the miracle of Pouilly-le-Fort, it began to be evident that Pasteur, though a most original microbe hunter, was not an infallible god. Disturbing letters began to pile up on his desk; complaints from Montpotheir and a dozen towns of France, and from Packisch and Kapuvar in Hungary. Sheep were dying from anthrax - not natural anthrax they had picked up in dangerous fields, but anthrax they had got from those vaccines that were meant to save them! From other places came sinister stories of how the vaccines had failed to work - the vaccine had been paid for, whole flocks of sheep had been injected, the farmers had gone to bed breathing 'Thank God for our great man Pasteur', only to wake up in the morning to find their fields littered with the carcasses of dead sheep, and these sheep - which ought to have been immune - had died from the lurking anthrax spores that lay in their fields.

Pasteur began to hate opening his letters, he wanted to stop his ears against snickers that sounded from around corners, and then - the worst thing that could possibly happen - came a cold, terribly exact, scientific report from the laboratory of that nasty little German Koch in Berlin, and this report ripped the practicalness of the anthrax vaccine to tatters. Pasteur knew that Koch was the most accurate microbe hunter in the world!

There is no doubt that Pasteur lost some sleep from this aftermath of his glorious discovery, but God rest him, he was a gallant man. It was not in him to admit, either to the public or to himself, that his sweeping claims were wrong ...

What a searcher this Pasteur was, and yet how little of that fine selfless candour of Socrates or Rabelais is to be found in him. But he is not in any way to be blamed for that, for while Socrates and Rabelais were only looking for truth, Pasteur's work carried him more and more into the frantic business of saving lives, and in this matter, truth is not of the first importance.

In 1882, while his desk was loaded with reports of disasters, Pasteur went to Geneva, and there before the cream of disease-fighters of the world, he gave a thrilling speech, with the subject: How to guard living creatures from virulent maladies by injecting them with weakened microbes."

And according to de Kruif, Koch made a devastating attack upon Pasteur's statements in a paper published shortly after this, in which he charged that practically all of Pasteur's claims for his anthrax vaccine were false, that his vaccines were not pure, that he had concealed the bad results that had followed the wholesale use of the vaccines, and he closed with:

"Such goings-on are perhaps suitable for the advertising of a business house, but science should reject them vigorously." (p.168)

De Kruif adds:

"Then Pasteur went through the roof and answered Koch's cool facts in an amazing paper with arguments that would not have fooled the jury of a country debating society."

How can de Kruif so praise a man, and describe the 'miracle of Pouilly-le-Fort' as "amazing as any of the marvels wrought by the Man of Galilee", after giving such devastating evidence that his work was a failure, his ideas false, and the man himself deliberately dishonest, making false claims and concealing the extent of his failures?

In 1881 the Sanitary Commission of the Hungarian Government said of the vaccine viruses used in the anti-anthrax inoculation:

"The worst diseases, pneumonia, catarrhal fever, etc., have exclusively struck down the animals subjected to injection. It follows from this that the Pasteur inoculation tends to accelerate the action of certain latent diseases and to hasten the mortal issue of other grave affections."

Plainly it failed in their tests also, and the Hungarian Government forbade its use in that country.

It was not long before his vaccine was proven a failure elsewhere as well. In March 1882, a commission composed of members of the faculty of the University of Turin, Italy, undertook to conduct tests regarding the value of this anthrax prophylactic. A sheep having died of anthrax, after the learned professors had vaccinated some other sheep with Pasteur's cultures, they inoculated both these vaccinated sheep and some unvaccinated sheep with the blood of the dead sheep. All of the sheep, both vaccinated and unvaccinated, subsequently

died, proving the vaccine utterly worthless.

After about a year of dispute and passing the buck by correspondence, the Turin professors published a pamphlet in June 1883, containing some of Pasteur's contradictory statements together with their cutting criticisms thereof, under the title *Of the Scientific Dogmatism of the Illustrious Professor Pasteur*, which was signed by six professors of high standing. This, by citing contradictory statements Pasteur had made in different papers, along with their comments, just about destroyed his theories on anthrax.

This paper was translated into French, but Pasteur, with some adroit dissimulation, managed to survive the blow, and went on pushing his anthrax vaccine.

He soon had bacteriological institutes for experiments and the production and sale of his various serums and vaccines established in many parts of the world, the one in Paris being probably the first.

In 1888 an institute in Odessa, Russia, sent some anti-anthrax vaccines to Kachowka in southern Russia, where 4,564 sheep were soon vaccinated, and 3,696 of them promptly turned up their toes and died; a death rate of 81 percent, and from a supposed 'preventative' vaccine at that!

Dr Lutaud says in *Etudes sur la Rage* (p.419) that Pasteur was compelled to compensate many owners in France for animals killed by his vaccines.

FOOT AND MOUTH DISEASE

Mr C. M. Higgins, of drawing ink fame, of Brooklyn, N.Y., some years ago wrote a book entitled *Horrors of Vaccination* in which he drew attention to the fact that official publications of the United States Government ascribed several epidemics of foot and mouth disease in this country directly to the use of vaccines or serums; especially those of 1902, 1908, and 1915.

The Chief of the Bureau of Animal Industry of the US. Department of Agriculture says in his report for 1902 (page 394):

"Most veterinary text books state that foot and mouth disease is a mild infection and that only 1 or 2 percent of the animals attacked die from it, the reader being left to infer that the losses do not exceed 2 or 3 percent of the value of the animals. Such a conclusion would be a grave mistake."

However, it seems to have been mild before its cause was traced to vaccines. The Secretary of Agriculture says in the department Year Book for 1914, page 20:

"There were outbreaks of foot and mouth disease in this country in 1870, 1880, 1884, 1902, and 1908. Since the close of the fiscal year 1914, the sixth outbreak has occurred. The first three, those of 1870, 1880 and 1884 were comparatively trifling. Those in 1902 and 1908 were more grave. The present one is the most serious and extensive of all."

In 1902 the outbreaks occurred in the New England States. In 1908 it originated in Detroit. The origin of each of these new outbreaks was traced to the importation of vaccine virus for the propagation of vaccine for use in vaccinating people against smallpox. The vaccine was imported from Japan where the foot and mouth disease exists. Each of these outbreaks was stamped out by methods which have proved most effective in preventing the disease from gaining a footing. These methods involved the killing of all infected and exposed animals, the burying of the carcasses, and the thorough disinfection of all premises with which the animals may have come in contact."

The first part of the 1914 outbreak was ascribed to "an imported article used in tanning" (hides?) but when this was stamped out, a recurrence occurred near Chicago, in August 1915, that was traced to a Chicago laboratory making hog-cholera vaccines. Foot and mouth disease was found in 8 of 11 herds that had used this vaccine.

The Secretary of Agriculture says of this in the 1915 Year Book (p. 27):

"It seems certain that this infection was produced by contaminated hog-cholera serum prepared in Chicago, in October 1914, at an establishment where the disease had not been known to exist at any time.

... pending investigation, all shipments of serum from Chicago were prohibited. It was found that some of the product of the establishment had been used on 11 herds of hogs.

... a few infected hogs were found in eight of the herds and all 11 herds were slaughtered at once."

Although they had found the disease in 8 herds on which the vaccine had been used, they decided to 'test' the serum, and what a test!

They knew, or were very sure, that the vaccine had given the hogs the foot and mouth disease, yet the first four tests on a total of 52 animals were all negative, but they had plenty of perseverance, and in the fifth 'test' and on the 62nd animal tested, they found foot and mouth disease!

If it took 'tests' on 62 animals to obtain proof that a vaccine that had already caused the disease could do so again, how can anyone know that it would not take two or three or more times 62 'tests' any other time, assuming, of course, that these are tests, which, again, I don't believe!

And after such a failure, how can any doctor or veterinarian consider any tests, such as the Schick, Dick, Tuberculin, Wasserman, etc., of any value whatsoever?

With all the evidence we have given that germs can change their characteristics, from Miss Nightingale and Professor Bechamp, to Lohnis, Rosenow and others, how can anyone expect a germ to remain constant through any 'test' or remain true to its original characteristics after being 'tested'?

The Secretary of Agriculture says of these so-called 'tests' - on the same page:

"This is regarded as proof that the suspected serum actually was infected. Why the standard test used on 61 of the animals failed to reveal this fact is a matter for scientific investigation, and the bacteriologists of the department are at work on the problem. At the time of manufacture one half of one percent of carbolic acid was mixed with the serum as a preservative. It is now believed that the acid, acting as a germicide, may have attenuated or partially destroyed the virus so that tests previously considered safe failed to establish the presence of the infection."

If they had no better luck than Pasteur had with his anthrax tests, it will be a long time before they find out very much!

As the average serum is only some toxic decomposing proteins, and some germs that are really reworkers of dead tissues or waste, but which the doctors believe to be the cause of the dead tissues they are found with, the germs are very apt to change their characteristics as the toxins break up, just as they have repeatedly been shown to do elsewhere in nature.

Consequently, many serums would not remain constant through 61 tests, nor would anyone who sells serums to the public be likely to make 62 tests before telling their customers that it was pure serum!

Even after it is 'tested' it may change in storage, and how do they know when they have the right germ in the serum anyway, as the best authorities admit that some germs, such as the smallpox germ, have not been isolated?

The Secretary of Agriculture says (of the hoof and mouth disease) on page 29 of the same volume:

"Up to the present time the germ has not been identified, although the scientists of Europe have studied the disease exhaustively for years."

They killed 168,158 animals valued at about \$5,676,000 to suppress the 1914-15 epidemic.

Circular No. 325 of the Agricultural Department says:

"Immunization in the 1914 outbreak was out of the question, as the only serum thus far produced gives but a passing immunity of only a few weeks duration, unstable at best."

Mr Higgins pointed out that the disease is more prevalent in countries that have compulsory vaccination than in others.

The U.S. Dept. of Agriculture quotes Dr Loeffler, head of the department handling the trouble in Germany, as saying before the 7th International Congress of Veterinary Surgeons at Baden Baden in 1899:

"Foot and mouth disease is spreading more and more every year and every year it costs the German Empire enormous sums. Necessary measures have been taken with the greatest care; suspected grounds have been closely quarantined; this measure had been extended to whole communities and even to entire districts; disinfection had been carefully carried out; and notwithstanding all this, the disease kept spreading."

The Foot and Mouth Disease Commission of the U.S. Department of Agriculture published a chart⁷³ showing the trend of foot and mouth disease in Germany from 1886 to 1924, which is reproduced on the opposite page.

Note the tremendous increase in deaths that accompanied the first general use of serums in 1920!

The U.S. Department's Farmers Bulletin No. 666 says:

"Foot and mouth disease has prevailed in Europe for a great many years and has occasioned tremendous economic losses there.

In Italy, France, Switzerland, Germany and Russia the plague has existed so long and has gained such a foothold that it is economically impossible to fight it with the American methods of slaughter and disinfection."

In Germany in 1911, 3,366,369 cattle, 1,602,927 sheep, 2,555,371 hogs and 53,674 goats were affected, or 7,578,371 animals of a total number of about 51,319,000 farm animals in the country at that time. As the chart indicates that about 247,000 farms were affected that year, this would give about 30.6 animals per farm. If the 1920 figures of 746,571 farms affected averaged the same, it would run to nearly 23,000,000 animals, close to half the number of animals in Germany! They used serums this year also, which probably helped spread it.

The same bulletin quotes one scientist as saying:

"... that unless all the affected farms were absolutely isolated and the movement not only of live stock but of persons absolutely prohibited, the disease could not be stamped out. Such a quarantine is of course utterly impossible to enforce."

Italy, France, Germany and Switzerland have compulsory vaccination, hence large vaccine plants that can spread the disease, as occurred in the cases cited in the United States.

And of course neighbouring states with or without compulsory vaccination would be overrun by importation from these countries, though some, such as England, kept it out pretty well.

Other places where vaccination is pushed, such as Brazil in South America, also have the disease, while Canada, the United States, Mexico, Australia and New Zealand, all of which

are comparatively free from intensive vaccination drives, also seem to have only sporadic attacks of foot and mouth disease, which are generally easily stamped out.

How can the 'scientists' account for this?

RABIES OR HYDROPHOBIA

According to Farmers Bulletin No. 449 of the U.S. Agricultural Department, no one can catch rabies from an animal that bites them unless the animal has the disease. Furthermore, less than 15% of those bitten by a rabid dog and not treated will generally contract the disease. This is very different from the hullabaloo generally raised by the self-styled 'regular' doctors, and especially by health officers, over every dog bite they hear of. In an official publication such as the Farmers' Bulletin, this is quite an admission; unofficial and anti-vivisection sources of information generally place the percentage much closer to zero.

Bulletin No. 65 of the U.S. Hygienic Laboratory at Washington also admits that those who die after treatment die earlier than untreated cases! It says:

"Treatment. Nitsch has pointed out that in a large series of cases the deaths in spite of the Pasteur treatment occurred on average earlier than in untreated persons (64.5 to 90 days).

There is some reason to believe that the rabies virus as it occurs in nature varies much in virulence, and that this is in some way related to the geographic distribution." (p.21)

To anyone who read Chapter 7 it will be evident that (assuming it has value), one should not use a serum from a distant location if this is true, as the possibility of 'agglutination' would be very small where there were such variations. And to this they add:

"Inoculation with spinal fluid obtained during life is wholly unreliable as it usually fails even in true cases of rabies." (p.36)

The New York Anti-Vivisection Society has published several pamphlets from which the following information is taken.

They state that rabies is a very rare disease except where dogs have been injected with rabies serum, in which case it very often develops.

According to their views, a dog unable to find green grass to eat in winter is very apt to develop worms or maggots, or both, in the intestines, often perforating them, and driving the dog frantic. In this condition the dog will bite at everything blindly, foam at the mouth, and run amuck generally, refusing water and seeking solitude.

Hay, grass, hide or bones fed to the dogs will cause the irritable conditions to disappear.

There are no real grounds for supposing that madness, as found in humans, occurs in dogs, nor can it be proved that the bite from a distracted animal can produce madness in anyone

bitten. Further, so-called rabies can be shown to be the direct result of serum injections.

Competent authorities claim that in so-called 'real' rabies, a dog never foams at the mouth, but has a small amount of brownish stringy discharge hanging from the lips, and the eyes have a fiery glare.

In epilepsy, the dog trembles, his jaws clamp violently and his voluntary muscles are powerfully convulsed; there is a copious discharge of white frothy saliva; he utters sharp cries and when recovering from the fit, the eyes are dull and stupid. This might be due to fright, or heat in summer.

They quote doctors of unquestionable authority as saying that no rabic germ has been found; and that finding so-called Negri bodies is no proof that the dog has rabies; as "they are found when all symptoms are absent and when all are present, so the diagnosis of rabies is pure guesswork", according to J.A. McLaughlin, D.V.S.

Even by A.M.A. standards no successful serum can be made without the right germ, so this might account for the large number of deaths that follow the Pasteur treatment.

Some doctors say the bite of a rabid dog is absolutely harmless to man. C. W. Dulles, M.D., a famous authority on dog diseases and hydrophobia who looked up the records in many cities, says over a million dogs and cats were handled by dog catchers in 14 years, with many thousands of bites, but no treatment - and not a single case of hydrophobia appeared in these cases.

He and other doctors had posted for years standing offers of \$100.00 to \$1,000.00 for a genuine case of dog hydrophobia and had no claimants, though thousands of dogs were being killed yearly because of scares; one place claiming that 92% of those killed in one year had hydrophobia!

These doctors say chaining or muzzling a dog that has always been free is apt to cause the very irritability we want to avoid.

PASTEUR'S TREATMENT CAUSES RABIES

In man, they say the death rate in France in cases of so-called rabies is 19 per 100 - the highest in the civilized world - and the same as before the Pasteur Institute was established, and cases of hydrophobia have enormously increased, while just across the Rhine in Germany, hydrophobia is almost unknown.

The year before Pasteur started his treatments there were four deaths from hydrophobia in Paris, the year after there were 22! Not only France as a whole, but each department of France, and in fact every country that has allowed the Pasteur 'treatment' to be introduced, have all shown a sharp increase in the number of deaths from hydrophobia after such introduction!

In England there were several Pasteur Institutes doing a thriving business prior to 1902, when a commission was appointed to investigate rabies and the serum treatment, and the

Institutes were abolished. They have had no hydrophobia since.

They claim that over 3,000 people died in England before 1902 after being bitten by dogs and then taking the Pasteur treatment, while more recently the London Hospital treated 2,668 persons bitten by dogs without using the Pasteur treatment, and none of them developed hydrophobia!

While these are not complete figures for England, there are nearly 6,000 cases of dog bite treated in institutions; and of these only those who had taken the Pasteur treatment died. Why not try something different?

And there has never been a case of hydrophobia in Norway, Sweden, Iceland, Denmark, Holland, Belgium, New Zealand and Australia, because those countries will not tolerate a Pasteur Institute within their borders.

They say the Pasteur treatment is very often the cause of rabies, is always dangerous, sometimes even murderous, and is never beneficial.

J. W. Dodson, M.D., of Brockport, N.Y., wrote years ago:

"If people would only think for themselves and not blindly follow the agitator or grafter we would soon be relieved of this pest, rabies."

For a safe, sane and logical treatment that has saved patients with rabies for over 100 years, we would recommend the Buisson Bath, a hot vapor or steam bath that is fully described in Drugless Cures by this author.

THE TUBERCULIN TEST

As the so-called tuberculin test has been rather fully discussed in the pamphlet The Tuberculin Test a Fraud, and in Chapter 7 of this volume, it seems hardly necessary to say more on this subject here.

Needless to say, it is as big a fraud as a 'test' on animals as it was as a 'cure' for humans, and there is a great deal of substantial evidence that the testing vaccine (or its needle) causes tuberculosis in cows and other animals, as it did in the human subjects used in Koch's experiments.

It should be absolutely forbidden, and those who use it should be barred from practice.

9

REAL IMMUNITY

Many years ago the famous English physician Alexander Haig proved in "Uric Acid in the Causation of Disease" that the break-down of human cell tissues was due primarily to uric acid formed in the break-down of protein, and that all animal flesh contained some uric acid when eaten, hence was much more potent in starting this break-down than plant foods, which were all free of uric acid when fresh. He contended that germs were merely of secondary importance, and never the cause of the various conditions of ill-health with which they were frequently found.

Surprising confirmation of his ideas seems to come from some experiments conducted by F. M. Pottenger, M.D., and D. G. Simonsen on cats.

They put two groups of cats on diets of meat and vegetables, identical except that in one group the meat was given raw, and this group seemed to maintain normal good health throughout the experiments. In the other group the meat was all cooked, and this group showed an astonishing break-down of health in all the animals.

They found every sign of lack of minerals, such as incomplete development of the skull or other bones, bowed legs, rickets, curvature of the spine, paralysis of the legs, convulsive seizure, thyroid abscesses, cyanosis of liver and kidneys, enlarged colon, and degeneration of the motor nerve ganglion cells throughout the spinal cord and brain stem, with some cells affected in the cerebellum and cerebral cortex.

Strange to say none of the cats on raw meat had any of these troubles at all, yet millions of humans are afflicted with one or more of them, and have no conception of the cause, and neither have their doctors in most of the cases.

They add, of these cats:

"The deficiency renders the experimental animals so deplete in important vitalizing factors that the third generation is unable to live beyond the period corresponding to childhood in the human being."

Why did only those cats fed cooked meat have all these troubles?

We must remember that all protein contains nitrogen and sulphur, which when released in

the body combines with water and other matters to form destructive uric acid and sulphurous or sulphuric acids, all of which must immediately be neutralized by the alkaline minerals to prevent cell destruction. If no minerals are instantly available, they will destroy living tissue to get them. This in turn will release more nitrogen and sulphur to continue the process ad infinitum.

Furthermore, all forms of animal flesh contain proteins and acids which are broken down during the process of digestion, and these experiments prove conclusively that cooking meat breaks down a great deal more protein, causing the formation of more of these acids, which clearly were what wrecked the cats' lives. If humans want to avoid the same or equivalent results, they must give up cooked meat, and I believe should give up all meat, for the rest of their lives.

These acids break down body tissues, and germs arise merely as scavengers; if we can stop the break-down of tissue through a diet free from these acids, we can also end the danger from germs, as well as the troubles from decalcification and eliminating meat. Reducing the total protein eaten would accomplish this in a large measure.

Dr M. Hindbede, famous Danish dietician, says a 150-lb. man can live on half an oz. of protein a day, and be healthier than a person eating a greater amount; and he adds it should be vegetable protein.

In biblical times, people ate fruit and nuts and had good health to ages beyond 900 years, but in Noah's flood, fruits and nuts were so depleted that man has eaten meat, raw and cooked, ever since and suffered and died like these cats.

Dr J. Bitner, of Yakama, Washington, has cured intestinal infections in young children by withholding all milk and protein from the patient for two days, and giving a quantity of apple pulp, which has considerable antiseptic effect. He cured about 90% of his cases with this two-day treatment, although he had many relapses among the 10% when they were allowed milk and protein.

This, I believe, was due to the short treatment not completely eliminating all of the waste protein in the system. Four, six or eight days or even longer periods without milk or protein in the more severe cases have better results.

However, he only had one death in 946 cases, a far better record than the average physician usually has in such troubles. See my book *Prolongation of Life Through Diet*, pp. 77-82.

There are many authorities who maintain that a well mineralized system such as we would have on a vegetarian or fruitarian diet would be absolutely immune to germ action of every kind.

Dr J. Greer says in *The Physician in the House* and also in *The Drugless Road to Perfect Health* that in cases of diphtheria, if the patient gargles the throat with lemon juice every hour, it will cut the false membrane loose so that it will come out.

Possibly more frequent gargling would be better, and an exclusive fruit juice diet for a few

days would quickly restore normal health.

"A very high percentage of all physical disturbances in the tropics are intestinal - some wrong food, some wrong drink, a few germs.

All in all the chief danger is with what is eaten and what is drunk; and the thing is so simple, unless you are a glutton, that it seems absurd that everybody traveling along the equator should not be fit all the way."

In an article entitled Lemon Squashing 'round the World in the Saturday Evening Post of July 24, 1926, (p.68), Samuel Blythe advises all visitors not acclimated to tropical countries to entirely avoid meat and liquor, to reduce to a minimum the amount of proteins and starches eaten, and to subsist principally on fruits and vegetables. He adds:

"Lemon squash is the panacea for tender feet in the tropics. It is the regulator, the reviver, the protector against fever, the assassin of germs, the foe of tropical acidity, the enemy of rheumatic conditions, the quencher of thirst, the general efficient hygienic handy-man within the body.

There is no doubt that the two most beneficial fruits known to man are the orange and the lemon, and it is in the tropics that the lemon shines with the greatest effulgence.

It is a hygienic policeman that polices the body, paying strict attention to the liver, supplies richly the needed mineral salts, and when burned in the process of digestion leaves an alkaline ash that neutralizes the acids that are so copiously the result of tropical living conditions. The lemon is a friend, aid and companion, and the way to utilize it is in squash."

He goes on to say that lemon squash is a lemonade as we know it, made from fresh lemons, while bottled lemonade in the tropics is a citric acid preparation usually artificial in composition, and should be avoided. He also advises no sugar or very little, and to see that the squash is made from the fresh fruit and good water. He adds:

"Get it and drink it by the quart. Drink 5 or 6 or 7 or 10 lemon squashes a day. Drink one every time you feel thirsty, but always between meals, never at meals ... lap them up. They are cool, they are refreshing, they taste good, and they surely are life-preservers ... you will be better off without tea and coffee.

Literally I lemon-squashed my way around the world. Not a day passed when I was in the tropics that I did not drink 8 or 10 of them, and in the cooler climates I took 2 or 3. I drank them straight without sugar ... fruit and sugar do not make a good food or drink combination.

The result was marvelous. The lemon squashes kept all bodily functions regular, kept me in perfect health, and I am quite a way past my 50th birthday. I did not have an ache, a pain a digestive disturbance, a physical qualm of any sort ... and was perfectly fit and perfectly well all the way. Just a little care

about food and the assiduous consumption of lemon squash did it."

The same drink - lemonade - as well as others, such as pineapple juice, grapefruit, oranges, and the cold pressed juices of the green leafy vegetables, and beets, carrots, tomatoes, etc., are all rich in the minerals needed to control acidity.

And we can use smaller quantities of them if we avoid meats and liquors and hold the quantity of acid-forming proteins and starches to the minimum needs of the body.

A correct diet will control any infection as well as most other forms of ill health.

End