federal service. In connection with the inspection of meat for other branches of the government, including hospitals and institutions, veterinarians of the Bureau of Animal Industry often make supplementary examinations of various food products not of animal origin. Thus fruits, vegetables and bakery products frequently receive official inspection at the hands of veterinarians; and the procedure has proved to be satisfactory. This type of service is incidental, of course, but it illustrates the infiltration of veterinary service into public health activities and into the supervision of the public's food supply.

### Possible Key to Greater Human Welfare

The versatile character of veterinary work in connection with human affairs offers many arresting reflections. We have seen how veterinary science safeguards human food. In the realm of power and labor, veterinary science contributes materially to the supply and efficiency of work stock for farms and industry, likewise to the development of equines for sport and recreation. What has been done in behalf of food, health, agriculture, industry and pleasure has also been extended to help solve other types of problems. For instance, our research on tick fever opened a new field in medical science as it was first to prove that insects carry disease. This discovery was the basis for controlling malaria, yellow fever, typhus fever, bubonic plague and many other human diseases carried by insects. At the fiftieth anniversary of the American Veterinary Medical Association, held in this city 21 years ago, I pointed out that but for this pioneer work the Panama Canal would not have been built so expeditiously.

Another new medical principle was established by the Bureau in proving that the injection of sterilized cultures or dead bacteria of a disease may confer immunity to subsequent infection with virulent organisms of that malady. This discovery was also fundamental and led to the brilliant results since obtained in controlling typhoid fever and other human diseases by bacterin therapy.

One of the most outstanding discoveries in the field of veterinary science during the last two decades was made in our Bureau laboratories. Quite surprisingly this discovery definitely disclosed the intimate relationship of the causal agent of infectious abortion of cattle to that of undulant fever of man. Subsequently this phase of the work and the scientist who initiated it were transferred to the U. S. Public Health Service.

Such contributions of veterinary science to medicine suggest the possible value of still other applications helpful to man. Just as the rabbit and guinea pig serve individually as humble test animals in medicine, so also eventually human society may discover enlightening aids for the adjustments and regulations of its own economy in the scientific and regulatory procedures pursued by the veterinary profession in administering the singularly comparable affairs of our vast animal empires.

*(To be concluded)*

# SCIENTIFIC EVENTS

## REPORT OF THE BRITISH EMPIRE CANCER CAMPAIGN

At the annual meeting of the British Empire Cancer Campaign the report, which was presented and approved, stated, according to the *Journal* of the American Medical Association, that the main attack in the battle against cancer was now being directed against the cancer cell itself. Knowledge was increasing about the cell and about the chemical reactions that occur within it in the body. Such knowledge justified a sober optimism, for the enigma of the cancer cell might be looked on as the last defense of the disease. Mr. Cecil Rowntree, surgeon to the Cancer Hospital, said that the report showed that the purposes for which the campaign were founded were being fulfilled in all directions. One purpose was the coordination of research and research organizations not only within Great Britain but throughout the empire. The recent steps of setting up a panel of international correspondents, whereby they had an accredited representative in each of the great scientific capitals, added to the accuracy and promptness of their foreign information. The investigations carried out at the Cancer Hospital and at the Middlesex Hospital suggested the possibility that the ultimate cause of cancer might be something of a chemical nature produced by disordered functions within the body itself. An admirable attempt to develop a new line of attack on cancer of the esophagus by intensive roentgen therapy had been made at St. Bartholomew's Hospital. In his Garton prize essay Dr. Colwell described the action of radiations on normal and malignant cells. All these provided encouraging indications of new and profitable avenues of research. In the direction of prevention they could point to great increase of knowledge of the nature of precancerous conditions, and in particular to the likelihood of a great diminution of the incidence of industrial cancer as the result of investigations into the carcinogenic agents in lubricating oils and other industrial materials.

On the curative side they could point to recent ad-

vances in radiation treatment. Partly in consequence of the campaign a silent revolution had been effected, for it seemed that the recent changes witnessed in the radium practice of the whole cancer world were no mere therapeutic experiments of passing interest but evidence of fundamental change in the picture of cancer treatment. The radium bomb, so called, was coming to be regarded as a necessity of all well-equipped cancer centers. Fortunately the radium position had been materially eased by the discovery of radium deposits in Canada. It was not pretended that radium was a cure for cancer in the ordinary acceptance of the term, but in certain cases it gave results not hitherto obtained by any other method. One had only to point to cancer of the lip, tongue and uterus to realize the change in current practice. In these situations radium had in part or in whole replaced operative surgery. There was no hope that some sudden flash of genius would solve the cancer problem in a day. Every indication seemed to point to the necessity for laboratories and concentrated effort by skilled teams of workers, who, by pooling their experience and repeating and correcting one another's observations, would ultimately arrive at the truth.

## THE BARUCH RESEARCH LABORATORY AT SARATOGA

THE cornerstone of the new Baruch Research Laboratory, named in honor of the late Simon Baruch, to be built at a cost of $750,000 at the Saratoga Spa, New York, was laid by Dr. Herman B. Baruch, taking the place of his brother, Dr. Bernard M. Baruch, who was abroad. Earlier this year Dr. Baruch established the Simon Baruch Medical Research Foundation, in memory of his father. Governor Herbert H. Lehman presided over the ceremonies and Dr. John Wyckoff, dean of New York University-Bellevue Medical College, made the principal address.

Five other buildings are under construction at the Saratoga Spa—the Hall of Springs, whose cornerstone was laid in July of last year; a bath house, a hotel with sanitarium facilities, a recreation center at which scientific recognition will be given to the therapeutic values of sports, and a bottling plant which will make possible a distribution of Geyser, Hathorn and Coesa waters three times as great as that now carried on by the state.

Construction contracts for these six buildings reach a total amount of $2,786,638. Furnishings and equipment will cost approximately $1,000,000 more, while landscaping and the golf course that will adjoin the recreation center will bring the cost to $4,000,000. The Hall of Springs, the research laboratory and the recreation center are all far advanced; foundations and steel work, with much of the inclosures, of the others will be completed before winter sets in.

Four years ago $2,000,000 was appropriated by the New York State Legislature for the carrying out of the first steps of the program submitted by the special commission of which Bernard M. Baruch was chairman, a program that was adopted and made a permanent part of the public health policy of the state. This appropriation provided the $900,000 that is being spent on the Hall of Springs and $400,000 for the first unit of the research laboratory.

A Reconstruction Finance Corporation loan of $3,200,000 became available last October. It is a stipulation of the contract that the project shall be completed by the fall of 1935.

In design and equipment the research laboratory is the joint product of Dr. Franz M. Groedel, director of the Kerckhoff Institute for the Study of Affections of the Heart, Bad Nauheim, Germany, consultant of the Saratoga Springs Commission; Walter S. McClellan, medical director; Cyrus Bruce Elmore, superintendent of the plant, and Joseph H. Freedlander, who also was architect of the Hall of Springs.

## THE THREE HUNDREDTH ANNIVERSARY OF THE ESTABLISHMENT OF THE CHEMICAL INDUSTRIES

THE three hundredth anniversary of the establishment of the chemical industries in America will be celebrated at a meeting to be held in New York City by the American Chemical Society during the week beginning April 22, 1935.

According to an announcement made by Professor Arthur W. Hixson, of Columbia University, who has been appointed general chairman of a New York Committee of Arrangements, from 7,000 to 10,000 representatives of chemical science, the chemical industry and allied fields will participate. It is hoped that President Roosevelt will consent to deliver the opening address.

Professor Hixson writes:

> Leaders in industry, finance and government will unite with the chemists in centering world attention upon the nation's growing chemical industries, whose magnitude can now be computed only in "figures of astronomical proportions."
>
> With tremendous resources available in the form of nearly a half million known and unused chemical compounds, and with its highly trained and experienced technical personnel and flexible plant equipment, the chemical industry can be depended upon to lead the nation out of the depression. A survey, just completed, shows that research work has been continued without abatement by the chemical industries during the depression. Many new processes have been developed for making products that could not formerly be produced economically and many new products have been developed that have been designed to meet the needs of new and better living conditions. As soon as confidence in the