little headway, in spite of the genius of Noguchi. Twenty-five years after Schaudinn's announcement—a period longer than that which has sufficed to change the whole face of modern physics, for example—and his predictions as to the life cycle, so much needed both for clinical comprehension and treatment research lie almost where they were when he left them. In the recent announcements of Warthin, and of Levaditi, there is little more than Schaudinn foreshadowed in his first communications.

But is there nothing left us but a sense of loss? Before it is too late, perhaps a biographer may provide us with the material for a genuine personality study of the discoverer of the *Spirochaeta pallida*. Then we may know, perhaps, his inward motivations, his possible sense of destiny, if such existed, his foibles, his forebears, his inspired moments, the molders of his personality. I regret that I have not been able to lay such a study before you. But I can console myself, and perhaps, to some degree, you, too, by asking you to consider in the light of what I have told you, what are the critical essentials of a life. Was his death at thirty-five all tragedy? He escaped all need for debunking, not having lived into the middle period when accumulated responsibility and flagging energies might have demanded first a front and then a mask to conceal a slowly creeping inadequacy. There is something Grecian, Jovian, majestic, in the end. Just as there is much in his work and his discoveries that seems to spring, as Athene, full-blown from the forehead of Zeus, so he vanishes, as she did, in a thunder-clap from the summit of Olympus. But what are the critical essentials of a life, to be measured by deeds rather than by length of days? Surely they lie not in the time or manner of the ending but in the *living*. As I name them, you will know that Schaudinn lived them. They are, to use the utmost talent, to the utmost, for good.

SCIENTIFIC EVENTS

THE UNIVERSITY OF WISCONSIN RESEARCH PATENTS

PATENTS on eleven processes discovered by twelve members of the faculty of the University of Wisconsin are controlled in the public interest and at the same time protected from possible unrestrained exploitation by the Wisconsin Alumni Foundation at the university. The peoples of twelve nations in various parts of the world are protected by these patents, which are held at the University of Wisconsin. The nations in which they have either been taken out or applied for include the United States, Canada, Great Britain, France, Belgium, Germany, Argentina, Italy, Norway, Sweden, Denmark and Brazil.

The foundation is the only one of its kind in existence at any university or college, is an organization through which the results of research at the university are used for the public benefit through corporate channels. Established in 1925, its purposes according to its charter are:

> To promote, encourage and aid scientific investigations and research at the university and to assist in providing the means and machinery by which the scientific discoveries and inventions of the staff may be developed and patented and the public and commercial uses thereof determined; and by which such utilization may be made of such discoveries and inventions and patent rights as may tend to stimulate and promote and provide funds for further scientific investigation and research within said university.

The most recent scientific discovery, for which a patent has been applied for, is the new welding process invented recently by Professor Edward Bennett.

Other processes on which the foundation has patent rights and the names of those responsible for their discovery are: Antirachitic activation of medicinal and food products by ultra-violet irradiation, by Professor Harry Steenbock; improvements in process of producing lactic and acetic acids, by Professors E. B. Fred and W. H. Peterson; liquid air freezing of hard-shell seeds, by Mr. W. Busse; use of copper and iron salts in anemia, by Professor E. B. Hart; acetic acid and glucose fermentations of cellulose, by Mr. P. A. Tetrault; apparatus for measuring venous pressure, by Professor J. A. E. Eyster; leavening agent, by Mr. E. O. Wiig; mechanic's cleanser, by Professor Farrington Daniels; pituitary hormones, by Professor F. L. Hisaw, and marine paint, by Dr. L. C. Hurd.

THE BIOLOGICAL PHOTOGRAPHIC ASSOCIATION

THE great value of microscopic motion pictures to research workers in medicine and biology has been expressed by Dr. Heinz Rosenberger, of the Rockefeller Institute for Medical Research, and others, meeting at Yale University to organize the Biological Photographic Association, the first of its kind. The *New York Herald-Tribune* reports that the organization was started with thirty-five members, from the United States and Canada, with Dr. Ralph P. Creer, director of photography in the School of Medicine of Yale University, as its first president.

Speaking on "Micro-cinematography in the Research Laboratory," Dr. Rosenberger declared that to-day "all institutions of learning know the value of the motion picture, particularly the microscopic

motion picture, as a means of demonstration. By their domination of time, motion pictures are of enormous help to research workers, since the human eye has its limitations." He described an apparatus set up by the Rockefeller Institute for the study of heart disease, and exhibited one taking motion pictures of human capillaries.

Mr. Herbert Ingram, of Rochester, N. Y., declared that photographic evidence should form the basis for intelligent research and case records. He said further:

Hospitals should record reliable, accurate case details with supplementary pictorial history. There must be a clinical photograph of the patient, a photograph of diseased tissue, perhaps removed, a photomicrograph of the tissue structure and, in case of cardiac disease, an electro cardiogram.

Photographs of rare skin diseases, intra-abdominal tumors, external glandular malformations, postures and a host of other pathologies provide invaluable data. The diagnosis of disease becomes much simpler by having a visual as well as written record of the progress of a disease.

Many physicians engaged in orthopedic work forget the details of patients who later become involved in medico-legal proceedings. The doctor is at a loss to explain many details of treatment and the progress of injuries without photographic evidence. Motion picture studies of surgical and medical techniques form a newer field than photography and have great possibilities as a teaching medium.

A scientific example of the value of motion pictures would be a photographic study of various gaits, such as ataxia, propulsion and Parkinson's disease. Another possible field is in animal research—to record the results of experiments in diet and in the study of the effects of vaccines.

Dr. Carl D. Clark, director of art and photography at the University of Maryland, was chosen vice-president of the association, and Theodore Nelcey, of the School of Medicine, of Yale University, secretary-treasurer. The directors named are: Dr. Louis Schmidt, of the Rockefeller Institute; Dr. A. B. Soule, of the University of Vermont, and Miss Stella Zimmer, of Syracuse University. The conference ended with an inspection of the Yale University buildings.

THE TULSA MEETING OF THE GEOLOGICAL SOCIETY OF AMERICA

THE forty-fourth annual meeting of the Geological Society of America will be held on Tuesday, Wednesday and Thursday, December 29 to 31, at Tulsa, Oklahoma, under the auspices of the Tulsa Geological Society, and on invitation of the American Association of Petroleum Geologists. Headquarters, place of registration and exhibits will be in the Mayo Hotel. The headquarters of the council will also be at the Mayo Hotel, where the scientific sessions will be held. The address of the retiring president, Dr. Alfred C. Lane on "Eutopotropism" will be delivered in the auditorium of the Central High School, on December 29, at 8 o'clock.

Fellows are urged to submit without delay the titles and abstracts of papers which they wish to present at the meeting, so that the program committee may arrange to advantage a program of the sessions. By order of the council, no paper will be considered for the program unless the title is accompanied by an abstract suitable for printing in the proceedings of the society.

All sessions are open to the general public, but the council requests each fellow to send to the secretary as soon as practicable, and not later than December 15, the names and addresses of advanced students or other persons who are seriously interested in geology and are deserving of recognition as visitors. The council will then invite them to attend the meeting.

The affiliated societies which are meeting with the Geological Society of America are:

The Paleontological Society; secretary, B. F. Howell, Princeton University, Princeton, N. J.

The Mineralogical Society of America; secretary, F. R. Van Horn, Case School of Applied Science, Cleveland, Ohio.

The Society of Economic Geologists; secretary, Edward Sampson, Princeton University, Princeton, N. J.

Section E of the American Association for the Advancement of Science will hold meetings in New Orleans, Louisiana, on January 1, 1932, and a joint session with the Geological Society of America is being arranged. On Saturday, January 2, a field trip is planned to the salt domes and salt mines of Teche County.

THE SEVENTH PAN-AMERICAN SCIENTIFIC CONGRESS

THE Seventh Pan-American Scientific Congress will be held in Mexico City from February 5 to 19, 1932.

The program of the congress will be concerned with the physical and mathematical sciences; general and applied geology; engineering; industrial chemistry; biology; scientific agriculture; medicine; hygiene and public health; anthropological and historical sciences; juridical sciences; social and economic sciences, and education.

Members of the congress will include the official representatives of the countries that decide to take part; the representatives of universities, institutions and scientific associations in American countries; the