that he took life easier and was able to enjoy some of its amenities.

Next after research he enjoyed exercising his skill on difficult chemical analyses, and during his last years in Cleveland he analyzed many complex minerals for his friend and colleague, Professor H. P. Cushing, who spent a portion of his time with the New York Geological Survey. After he retired from active teaching in 1906 and went to live in West Hartford, Connecticut, he built for himself a small laboratory where he still continued making analyses of this sort for Professor Cushing and for other friends interested in geology. His last published paper was with Professor J. P. Iddings on work of this kind.

Professor Morley had a remarkably retentive mind, so that practically everything which he read was stored in his memory, whence it could be drawn whenever needed. He not only possessed a remarkable clarity of expression in writing and speaking, but what is rarer, he had the ability to make scientific and abstruse matters interesting to the layman. His public lectures on such subjects as the ether-drift experiments were always well attended and every one manifested the keenest interest in what was being said.

He was a great lover of music and a good amateur musician. In the early days he played the chapel organ at Hudson, and in his later life derived much enjoyment from the pianola. After his retirement this versatility was a great help to him in getting the most enjoyment out of life. When he became weary at his analytical work, he would turn to music for relaxation. He also took a great deal of pleasure in out-of-door life, raising gladioli or taking trips through New England in his automobile, which he always drove himself. Only last summer he and Mrs. Morley, whose death preceded his by only a few months, took a trip into northern Massachusetts and Vermont in their machine.

He was taken to the Hartford Hospital for an operation on January 21. Another operation was found to be necessary about three weeks later, which was not serious and from which he was expected to recover. Unexpected complications, however, set in and the end came on February 24, just a few days after his eighty-fifth birthday.

Thus in the fulness of years passed a truly great man. The work he left behind him in both chemistry and physics is the best memorial to his genius. His teaching service extended over a period of thirty-seven years and endeared him to several generations of students. By his colleagues he was revered for his genial personality, the wisdom of his counsel and his unselfish service. His broad culture and noble simplicity of character enriched the lives of all those with whom he was associated.

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SCIENTIFIC EVENTS

INTERNATIONAL CONFERENCE ON STANDARDIZATION OF SERUMS[1]

IN December, 1921, an international health conference was held in London, under the auspices of the League of Nations, to discuss the standardization of serums and serum reactions; in December, 1922, a second conference for the same purpose was held in the Pasteur Institute, Paris, at the suggestion and under the chairmanship of Professor Madsen, president of the health committee of the League of Nations. Professor Neufeld, director of the Robert Koch Institute for Infectious Diseases, Berlin, who, with Wassermann, Kolle and Sachs, took part in the conference, gives a report of the proceedings in the *Deutsche medizinische Wochenschrift*, January 5, 1923. The transactions were carried on by subcommittees. The first dealt with the standardization of tetanus and diphtheria antitoxins. These investigations are nearly complete, and it is expected that an agreement will soon be reached as to a generally acceptable method of titration and standardization. Heretofore, not only have other countries used standards (immunity units) different from those of Germany, but there have been fundamental differences in titration. For example, in France, not only is Ehrlich's procedure used for the titration of diphtheria serum (combinations of toxin and antitoxin), but the effect on living diphtheria cultures is also tested.

A second subcommittee took up the question of dysentery serum, which, with us, is not re-

[1] From the *Journal* of the American Medical Association.

quired to be tested. It is certain that many unfavorable observations on dysentery serum in Germany have been due largely to the use of defective serums, and that results would be improved by a standard titration approved by the state public health service. Investigations of the antitoxin test on rabbits and mice are still being carried on.

The largest subcommittee, under the chairmanship of Bordet and Wassermann, discussed the serodiagnosis of syphilis, and several reports were read on comparisons between the original method of complement fixation, and the flocculation or precipitation methods of Sachs-Georgi, Meinicke and Dreyer. These investigations are to be continued in certain definite directions by one laboratory of each of the several countries. In Germany there have been many complaints of evils arising from the serodiagnosis of syphilis, and, in consequence, an attempt was begun last year to prevent as far as possible the injuries and untoward effects that may arise from the improper application of this delicate and practically important procedure, by adopting an officially recognized and uniform method of application of the Wassermann test. This regulation has encountered considerable opposition, especially from directors of laboratories, and it is hoped that the investigations of the health committee of the League of Nations will be of great value in preparing a revision of existing regulations, which will be necessary before long.

Two other subcommittees are engaged in investigation of the antipneumococcus and the antimeningococcus serums, respectively. With regard to the former, the subcommittee expressed the opinion that an opinion as to their efficacy would at this time be premature; however, we possess reliable methods of titration, and if antipneumococcus serums of high value according to these standards are tested in pneumonia cases which are not too far advanced, we may expect, within a reasonable time, a final and reliable judgment on the value of this form of serotherapy.

With the antimeningococcus serums, serotherapy is likewise much complicated by the fact that there are several different types of causative agent, and corresponding variations in antibodies. In Germany the state has already established standards for meningococcus serum. These standards, however, give no consideration to the different serologic types, and there is therefore need for revision. Cultures and serums of the various types of organisms are being exchanged by the laboratories conducting the investigation, and the question as to what antibodies (bacteriotropins, antiendotoxins, agglutinins, antibodies causing complement fixation) shall be used to establish the titer of a given serum is being studied according to definite standards set up by the committee. We should await the results of these investigations before we revise the official standards in Germany. This is an exceedingly important, practical question; for, in the opinion of Professor Neufeld, the antimeningococcus serum is possibly the most effective therapeutic serum yet used in the treatment of human diseases.

THE STANDARDIZATION OF SCIENTIFIC SYMBOLS AND ABBREVIATIONS

A RECENT conference held in New York City under the auspices of the American Engineering Standards Committee revealed a sentiment among engineers, scientists, government officials, business paper editors and industrial executives, emphatically in favor of the unification of technical and scientific abbreviations and symbols.

It was agreed on all sides that the standardization of abbreviations and symbols would result in inestimable mental economies. The present situation with respect to the use of abbreviations and symbols in engineering, scientific and other technical fields is comparable to a language which has degenerated into a multiplicity of dialects, each of which has to be translated for the users of the others. Abbreviations and symbols constitute an ever-growing and important part of the language of engineers, scientists, industrial editors and other technical men. The use of one symbol or abbreviation for several different terms and the use of several different symbols or abbreviations for one meaning are, however, at present causing a great deal of confusion, misunderstanding and often serious errors.

The conference was called upon requests from the American Institute of Electrical Engineers, the American Society of Mechanical Engineers and the Association of Edison Illuminating