

at fault, and the mechanism for the reclaiming of defaulters is not yet full enough in most areas.

It appears that intensive arsenotherapy offers in a short time as good, or even better, immediate results than the standard treatment scheme, but with a vastly increased risk of toxic effects and a risk of death four times as great. Between 95 and 98 per cent of patients complete treatment by intensive methods, and default is impossible in cases sent to hospital.

All the intensive treatment schemes so far detailed require the hospitalization of the patient. The risk of early muco-cutaneous relapse is about equal in the intensive and standard treatment schemes. Only early cases of syphilis can at present be treated by intensive methods, and the patients must be followed up for at least a year after treatment.

In the light of these limitations the application of intensive treatment must be restricted. An obvious use is in the case of key personnel in the Services, particularly the Navy and Merchant Marine. The benefits of returning a man to duty with no need for further treatment are obvious when it is remembered that many ships do not carry a doctor, and that haphazard treatment on standard lines may be worse than no treatment at all.

A potential use for intensive arsenotherapy might be in the case of persons who, notified under Regulation 33B, refuse to co-operate by placing themselves voluntarily under treatment when they are discovered to be infected with syphilis. This is naturally a hypothetical case and is open to criticism from both a legal and a medical point of view. Such persons, devoid of any sense of public duty, do however exist, and it would certainly be in the public interest to have them treated as rapidly as possible. In the United States such a policy is already in operation in at least one place.

A long-term policy in the public health aspects of syphilis must not be forgotten, for the sufferer from late effects such as general paralysis of the insane or cardiac disease may become a charge upon the State. We do not know what percentage of syphilitics treated by intensive methods may yet develop late phenomena. The aim in treatment is complete cure, and to accept any method which falls short of this, even if it offers immediate benefits in rapid and permanent surface sterilization in a high percentage of cases, may be to store up trouble for the future.

The aim in research into the treatment of syphilis is to discover a scheme which will occupy as short a time as possible, which will be free of dangerous toxic effects, give a high percentage of permanent 'cures', and can be used on out-patients. A clue has been given in the animal research work of Eagle and Hogan, who found that, within broad limits, the curative dose of 'Mapharside' with any one method of treatment was largely independent of the time period over which that treatment was given. Intravenous drip methods with 'Mapharside' were consistently less effective than repeated syringe injections over the same time periods. With regard to toxicity they found that on any schedule of injections the shorter the total treatment period the lower is the margin of safety. Assuming that these considerations apply in human syphilis, they have suggested a variety of possible schemes for trial. Patients are already being treated on the experimental lines suggested.

The treatment for early syphilis in the future may

be a compromise between the present standard scheme and the intensive methods described above, and will probably last from four to ten weeks. The arsenical will almost certainly be an arsenoxide preparation injected by syringe at least three times a week, and bismuth will be used concurrently.

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OBITUARY

Dr. F. L. Pyman, F.R.S.

THE news of the death of Dr. Frank Lee Pyman on January 1 at the early age of sixty-one, after a prolonged illness, will have been received with deep regret by his many friends. Pyman was an outstanding personality in the chemical world of twentieth-century Britain, and his experimental work in medicinal chemistry has been a not inconsiderable factor in fostering the respect in which British medicinal chemistry is held to-day.

Pyman entered Owens College, Manchester, in 1899, and, after graduating in 1902, went to the Polytechnic at Zurich, where he had the good fortune to come under the influence of Bamberger, who was then at the zenith of his fame. The dissertation which followed was published in 1904, and Pyman was granted his doctorate at the University of Basle. In 1905, on his return to Great Britain, he obtained a post with T. E. Thorpe at the Government Laboratory, but stayed only a few months as he felt he had little flair for analytical chemistry.

Circumstances in another branch of chemistry were, however, propitious. The late Sir Henry Wellcome had for a decade pursued an enlightened policy of establishing laboratories for scientific research, and had allowed the results of such research to be published, a policy which, it is true to say, had ushered a new era into British pharmaceutical chemistry. In furthering this policy, Wellcome had in 1905 appointed Jowett, who had carried out noteworthy investigations under Power's directorship of the Wellcome Chemical Research Laboratories, as head of the new Experimental Department of the Wellcome Chemical Works at Dartford. Within a year, however, Jowett was raised to the position of works manager, and the vacancy thus created was filled by Pyman. This was indeed a fortunate choice, since, over the ensuing period of eight years, a succession of model papers issued from this laboratory under Pyman's name which stand comparison with any chemical work published in Great Britain during the same period. The subjects covered ranged from local anaesthetics, mydriatics and hypnotics to arsonic acids, isoquinoline alkaloids, glyoxalines and the alkaloids of jaborandi and ipecacuanha; they probably reached the height of experimental perfection in the syntheses of histamine and histidine, and in the elegant results obtained in the study of the Hofmann degradation of tetrahydroberberine metho-

In 1914 Power persuaded Wellcome to allow him to return to the United States, and it was but natural that Pyman should succeed to the directorship of the Wellcome Chemical Research Laboratories at Snow Hill, a position he held until early in 1919. The war years were strenuously devoted to the production of drugs hitherto made abroad and, in particular, the difficult problem of the salvarsans claimed much of Pyman's attention. In addition, the ipecacuanha alkaloids, so important in the treatment of dysentery, were made to reveal more of their secrets.

The war years were unsettling years; Pyman had long cherished the ambition of a professorial chair, and in 1919 this goal was realized when he accepted the post of professor of technological chemistry in the Municipal College of Technology, Manchester. He entered on his new teaching duties with zest; he was an excellent lecturer, and for eight years he directed the researches of numerous students, the main theme being the chemistry of the glyoxalines. As glyoxalines are cyclic amidines, Pyman extended his investigations into this field, and the amidines were the subject of constant research up to the time of his death. The full fruits of amidine chemistry in its application to therapeutics—in this Pyman was a pioneer in Great Britain—have still to be reaped.

In 1927 Pyman was appointed director of research

to Boots Pure Drug Co., Ltd., at Nottingham, a position he occupied until his death. Administrative duties were now paramount, and he regretfully left the test-tube and allowed it to be wielded by others under his stimulating direction. During this period a return was made to the chemistry of glyoxalines, the glycerophosphates, and the isoquinoline alkaloids, but new departures took Pyman into the field of organic salts of bismuth, long-chain amines and amidines, purgatives and derivatives of harmine and harmaline; studies of all of which were enriched by his long and ripe experience.

In 1935 Pyman was fittingly awarded the Hanbury Medal of the Pharmaceutical Society for original research in the natural history and chemistry of drugs. He was chosen as president of Section B (Chemistry) of the British Association at Nottingham in 1937, and his address was devoted to an account of the extensive researches of his colleagues, on amœbicides in particular, and on antiseptics.

To the outside world, Pyman's published researches are a lasting memorial to his memory. His friends, colleagues and pupils will, in addition, remember him as an English gentleman, staunch and straight and in whom there was no guile. Widespread sympathy will be felt for his widow, his three sons and two daughters in their tragic bereavement.

HAROLD KING.

NEWS and VIEWS

Institution of Electrical Engineers

Faraday Medallist

THE Council of the Institution of Electrical Engineers has made the twenty-second award of the Faraday Medal to Dr. Irving Langmuir, associate-director of the Research Laboratory of the General Electric Company in Schenectady, N.Y., for his outstanding contributions to electrical science. Dr. Langmuir's investigations have ranged over an extremely broad field. His work on hard vacuum valves, thyratrons and gas-filled incandescent lamps is widely known. He has also worked on atomic hydrogen welding and carried out fundamental researches on oil films; this latter work led to clearer understanding of such diverse topics as thermionics, heterogeneous catalysis and surface tension. Dr. Langmuir was elected a foreign member of the Royal Society in 1935 (see NATURE, July 6, 1935, p. 14), and three years before he had been awarded a Nobel Prize for Chemistry. The Faraday Medal is awarded by the Council of the Institution of Electrical Engineers not more frequently than once a year, either for notable scientific or industrial achievement in electrical engineering or for conspicuous service rendered to the advancement of electrical science, without restriction as regards nationality, country of residence, or membership of the Institution.

Honorary Member

THE Council of the Institution of Electrical Engineers has elected Sir Ernest Thomas Fisk to be an honorary member of the Institution. This distinction has been conferred upon him in appreciation of the services he has rendered in Australasia in the field of radio-communications. Sir Ernest, who is a past-president of the Institution of Radio Engineers (Australia), was managing director from 1917, and

has been chairman from 1937, of Amalgamated Wireless (Australia), and also chairman of several other companies concerned with wireless. Originally a member of the Marconi Company, he joined a special mission to the Arctic in 1909. He has generally pioneered radio in Australia, including direct wireless communication with Great Britain, having received the first direct wireless message from England to Australia in 1918. In 1940 Sir Ernest was appointed secretary of the Economic Cabinet in Australia, and Director of Economic Co-ordination.

Agricultural Education in Great Britain

THE Minister of Agriculture has announced the Government's plans concerning the future of agricultural education. So varied have been the reactions to the recommendations contained in the Luxmore Report that it was natural that the Government should require time to digest the different points of view before reaching a decision. Two matters have been determined. The first concerns the future of the provincial and county advisory services, which are to be unified into one national service for the whole country directly under the Minister of Agriculture, and financed entirely by the Exchequer. This is virtually one of the Luxmore proposals, though it should be noted it is the system which has governed county advisory work during the War. War Agricultural Executive Committees have assumed the full responsibility for this work, and the majority of county council staffs have been seconded to these committees, while considerable additions to technical staffs have been made direct. The provincial advisory service has always been financed by the Exchequer, but the new proposals will remove this work from the control of the provincial colleges and university departments of agriculture. One cannot see any serious drawbacks to these proposals and