

JOURNAL OF THE NEW ZEALAND ASSOCIATION OF BACTERIOLOGISTS

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DOUGLAS WHILLANS

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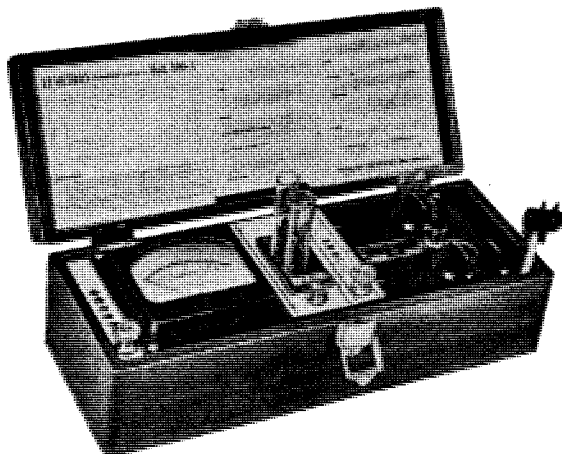
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JOURNAL
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NEW ZEALAND ASSOCIATION OF BACTERIOLOGISTS

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EDITORIAL

With the successful conclusion of our Fourth Annual Conference, we have within sight the completion of most of those tasks to which we addressed ourselves at our inception. There is, however, still the problem of the status of members of the Association, and it is our hope that due recognition will be given to the sincere efforts of senior members to maintain and improve the standard of work in our laboratories.

It is with pleasure that we record the sympathetic hearing given us by our Pathologists, and it would seem that some problems long awaiting solution will now be given the consideration they deserve.

For the problems which lie in the future we can do no better than to apply to them the good sense and feeling of responsibility which has been the keynote of our actions in the past.

**THE IDENTIFICATION OF SALMONELLA WITH
SPECIAL REFERENCE TO SEROLOGICAL
METHODS.**

S. W. JOSLAND

(From the Animal Research Station, Wallaceville)

This paper will detail the procedures followed at this institution for the investigation and identification of members of the Salmonella group, with special reference to the Kauffman-White diagnostic schema.

1. *CULTURAL METHODS*

Knox, Gell and Pollock (1942), have shown that even with a small number of different salmonella, no single medium is en-

tirely satisfactory. They concluded firstly, that selective media are indispensable for direct plating and enrichment culture; secondly, that it is an advantage to use selective media for indirect plating from enrichment media; and thirdly, that it is desirable that any solid media used should not interfere seriously with slide agglutination.

At Wallaceville specimens that have undergone decomposition have frequently to be dealt with; therefore in order to enhance the chances of recovery of salmonella, it is necessary to make a heavy primary inoculation on selective media which will suppress concomitants such as organisms of the *Coli* and *Proteus* group.

The media used are:—

- (a) For enrichment: Tetrathionate broth prepared according to the formula of Muller (quoted Kauffman, 1941).
- (b) For direct and indirect plating—
S.S. agar (Difco).
Neutral red, brilliant green lactose agar (Slavin, 1943).
Eosin, methylene blue, brilliant green lactose agar (Knox et al, 1942).

It is stressed that different batches of dye vary considerably in their inhibitory power. Consequently each series of media is tested for its ability to recover *S. cholerae suis* and *S. typhi murium*.

2. *BIOCHEMICAL METHODS*

These are rarely used; if for any reason it is thought advisable, then an organism under investigation is cultured for six days in peptone water containing the following carbohydrates sterilised by filtration; lactose, sucrose, glucose, mannite, xylose, arabinose and inosite.

With a few exceptions, if an organism is found (1) to be non-motile or (2) to liquify gelatin, or (3) to ferment lactose and/or sucrose or (4) to produce indol, or any combination of the above, it can be eliminated from the *Salmonella* group.

3. *SEROLOGICAL METHODS*

A lactose non-fermenting colony is tested for motility in broth. All salmonella excepting *S. pullorum* and *S. gallinarum* are motile, so that if these two and a few uncommon variants can be excluded, a non-motile organism need not be considered further. Should an organism be sluggishly motile, its motility can be improved by passing it through a semi-solid agar medium. That of Jordan, Caldwell and Reiter (1934) is satisfactory.

Once motility is determined, a formalinised broth culture (a 24-hour broth culture diluted with equal parts of a 0.6% formalinised saline) is tested by agglutination in the water bath against

polyvalent Oxford Standards Laboratory salmonella sera, P, S, A; P, S, B; and P, S, C. These sera contain all the known flagellar factors. Consequently a motile organism that is not agglutinated by any of these sera cannot be a salmonella. If agglutination occurs with one of these sera, then that fact serves as a guide in the subsequent determination of possible "H" factors. After the testing of the smoothness of the culture by the trypto flavine method of Pampana (1933), the communal somatic antigens are identified by slide agglutination against a series of "O" sera diluted to a titre of 1/50. If the organisms are suspended in saline without alcohol treatment, the use of phenol saline in the preparation of the antigens must be avoided, since phenol and formalin inhibit O agglutination in the presence of H antigens. Confirmation by tube agglutination using alcoholised emulsions for 24 hours at 37°C, then follows against the serum or related sera which have given positive slide agglutination. In some cases it is necessary to resort to the use of single factor "O" sera, which have been prepared by absorption. Thus the somatic group antigens are identified.

Before the identification of the flagellar antigens can be proceeded with, it is necessary to test the organism for phase, by testing for agglutination against phase 2 sera, factors 1, 5 prepared against *S. cholerae suis* var *kunzendorf*, and factor e n x prepared against *S. abortus equi*. Should agglutination occur against either of these, in order to test for specific phase 1 factors, the technique of Gard (1937) is practised, in which immune sera corresponding to the phase 2 factor already identified is added to semi-solid agar in order to immobilise the non-specific phase. Streak inoculations are then made across the surface of the medium in a petri dish and the culture incubated for 24 hours at 37°C. Should there be a specific phase, the organism in that phase will swarm away from the line of inoculation and sub-cultures into broth are made from the edge of the swarm and retested for purity of phase with non-specific sera.

Reference to the Kauffman White diagnostic schema and to the composition of the polyvalent sera with which agglutination was obtained previously will indicate the possible phase 1 antigens and these are then tested for separately with specific factor sera in the water bath at 50°C for one hour.

Once the somatic group and the phase 1 and/or phase 2 flagellar antigens are known, reference to the Kauffman-White scheme will complete the identification for all practical purposes. For a complete identification of a salmonella, however, all the antigens which are present must be identified in every instance. No two strains can be considered alike antigenically until it can be proved by absorption tests that each is able to remove the homologous agglutinins, specific, non-specific and somatic from the other—the so-called mirror test.

The process of typing a salmonella is intricate and time consuming. More than 140 types have been identified. There are more than 30 somatic factors, and the flagellar factors range from A to Z 34. It is therefore necessary to have a comprehensive battery of sera, including a Vi serum. It may not be generally known that this laboratory has prepared for its own use a wide range of salmonella sera. These sera are supplemented by a comprehensive series of typing sera generously donated by U.S.A. Army sources.

We can therefore be of assistance in the identification or confirmation of identification of any cultures of salmonella that may be referred for that purpose.

References:

- Gard, S. (1937), *Z. Hyg. Infekt. Kr.*, 120, 59.
Jordan, E. O., Caldwell, M. E., Reiter, D. (1934), *J. Bact.* 27, 165.
Kauffman, F. (1941), *Du Bakteriologie der Salmonellagruppe Copenhagen*, Einar Munksgaard.
Knox, R., Gell, P. G. H., and Pollock, M. R. (1942), *J. Path. Bact.* 54, 469.
Pampana, E. J. (1933), *J. Hyg.* 33, 402.
Slavin, G. (1943), *J. Comp. Path.* 53, 315.

Those who wish to consider further the diagnostic use of salmonella sera are referred to:

- Bruner and Edwards (1942). Serological identification of salmonella cultures. University of Kentucky Agricultural Experimental Station, circular 54.
Taylor, Joan (1944). Monthly Bulletin of Ministry of Health and Emergency Public Health Laboratory service. 3, 177.

HISTOLOGICAL METHODS

J. S. Cole

(*From the Department of Pathology, Auckland Hospital.*)

A procedure for improving the consistency of commercial paraffin wax.

In this Laboratory, considerable difficulty has recently been experienced in preparing histological sections from the commercial grades of wax available. After a series of experiments, following the suggestion of Hance, the following method was found to produce a satisfactory embedding medium.

(a) *Rubber Paraffin Stock*

Sheet crude rubber ("smoked" or "unsmoked") 20 gms.

Commercial paraffin wax ----- 100 gms.

The crude rubber is dissolved in the boiling paraffin wax, stirring constantly. It is then cooled and stored as a solid.

(b) *Embedding Medium*

Rubber paraffin stock ----- 2.5 gms.

Beeswax ----- 1.0 gms.

Vaseline ----- 10.0 gms.

Commercial paraffin wax ----- 100.0 gms.

The rubber paraffin stock, beeswax and vaseline are dissolved in the molten paraffin wax and the whole is filtered through gauze or coarse filter paper.

Notes

(1) The addition of the beeswax and the rubber does not make any appreciable difference to the final melting point of the product, but improve its consistency and prevent the formation of crystals in the wax.

(2) Vaseline is the material which alters the melting point of the wax and hence if a wax of suitable melting point is available, the addition of vaseline is superfluous.

(3) The melting point of the wax at present available in New Zealand is 60-62°C and the melting point of the finished product, 56-58°C.

(4) Increasing the proportion of vaseline beyond that given above makes the wax unsuitable for embedding purposes.

Staining Techniques.

The following are a selection of the methods in routine use in this Laboratory. Others will be published later.

Differential Stain for the Pituitary Gland.

(*Crooke and Russell. J. Path. Bact. 1935, 40, 255.*)

Method

(1) Fix in 10% formalin and embed in paraffin.

(2) Bring the paraffin sections down to water and place in the following mordant for 24 hours.

2.5% aqueous potassium dichromate ----- 95 ml.

Glacial acetic acid ----- 5 ml.

(3) Wash in running tap water ----- 2 mins.

(4) Lugol's iodine ----- 3 mins.

(5) Place in 95% alcohol for an hour or longer.

(6) Stain nuclei with Ehrlich's Acid Haematoxylin, blue in tap water, differentiate in acid alcohol, then blue again with tap water.

(7) Stain in a 1% aqueous Acid Fuchsin, 15 mins. (See note).

(8) Wash in running tap water 30 sec. to 5 mins.

- (9) Rinse in distilled water (this will prevent subsequent deposit).
- (10) Stain in Mallory's Aniline Blue mixture 20 mins. (See note).

Aniline Blue	-----	0.5 gms.
Orange "G"	-----	2.0 gms.
1% aqueous Phosphomolybdic acid		100 ml.
- (11) Wash in running tap water 30 sec. to 5 mins.
- (12) Differentiate in 95% alcohol 20 sec. to 5 mins.
- (13) Dehydrate completely with absolute alcohol, clear in xylol, mount in Canada Balsam.

Results

Nuclei—blue; Acidophile granules—orange red; Basophile granules — deep blue; Chromophobe cells — grey, non-granular cytoplasm.

Notes

(1) The great variation in the washing and differentiation times given in steps 8, 11 and 12, depends on the speed with which the acid fuchsin washes out. The degree to which the dye is removed is best controlled by holding a filter paper under the slide during washing, etc.

(2) In this Laboratory, it has been found better to decrease the staining time in acid fuchsin (step 7) to 10 mins, and increase the staining time with aniline blue mixture (step 10) to 40 mins. With this slight modification, very consistent results are obtained. It is well to remember that tissues removed surgically seem to have an intense affinity for acid fuchsin.

(3) As a control, duplicate slides should be stained, but omitting the haematoxylin nuclear stain in one set. This serves as a check on the efficiency of the differential stain.

Best's Carmine Stain for Glycogen in Paraffin Sections.

(Modification as used in St. Thomas' Hospital, London.)

Tissues are best fixed in absolute alcohol, but excellent results may be obtained after formalin fixation. Our experience in this department is confined chiefly to the latter.

Method

1. Remove the paraffin with xylol.
2. Place in equal parts of absolute alcohol and ether (5 mins.)
3. Place in a 1% solution of celloidin 24 hours.
4. Drain and allow to dry partly.
5. Harden the celloidin in chloroform. 1 min.
6. Rinse in absolute alcohol and bring down to water.
7. Stain the nuclei with Ehrlich's Acid Haematoxylin for 45 minutes.
8. Wash in tap water till blue, differentiate in acid alcohol,

then blue again with tap water.

9. Stain with Best's Carmine stain (B) for 15 minutes.
10. Place in Best's differentiating fluid (C) till no further colour comes away (1-5 minutes).
11. Rinse in distilled water.
12. Dehydrate with S.V.R. and absolute alcohol and clear in xylol. Mount in Canada Balsam.

Solutions

(A) *Best's Carmine* (Stock solution).

Carmine	2 gms.
Potassium carbonate	1 gm.
Potassium chlorate	5 gm.
Distilled water	60 ml.

(B) *Best's Carmine for use.*

Stock Carmine (A)	12 ml.
Methyl alcohol	18 ml.
Ammonia 0.880 sp.g.	18 ml.

(C) *Best's Differentiating Fluid.*

Absolute alcohol	20 ml.
Methyl alcohol	10 ml.
Distilled water	25 ml.

Results

Nuclei—blue; Glycogen—red.

Notes

(1) Best's Carmine (stock solution), will not keep longer than two months in the refrigerator.

(2) In this Laboratory in step 3, the slide is dipped in 1% celloidin for 30 seconds. The sections do not show any tendency to leave the slides, even though the celloidin treatment is greatly shortened.

Mallory's Phosphotungstic Acid Haematoxylin Stain for Nervous Tissue.

This is a most valuable method for neuroglia and is used after fixation in Zenker's fluid. When formalin fixed tissue is all that is available, the following modification has been found valuable.

Method .

- (1) Bring the paraffin sections to tap water.
- (2) Place in 5% aqueous potassium dichromate 12-24 hours.
- (3) Wash in tap water, 2 mins.
- (4) Lugol's iodine, 3 mins.
- (5) Place in 95% alcohol, 1 hour or longer.
- (6) Rinse in tap water.
- (7) 0.25% aqueous potassium permanganate, 5 mins.
- (8) Rinse in tap water.

- (9) 5% aqueous oxalic acid, 10 mins.
- (10) Rinse in distilled water.
- (11) Stain in Mallory's Phosphotungstic Acid Haematoxylin, 24 hours.
Haematoxylin—1 gm.
Distilled water—100 ml.
Phosphotungstic acid, 1 gm.
To ripen, add 10 ml. of 0.25% aqueous potassium permanganate, or 2 ml. of an old batch of stain.
- (12) Without washing, dehydrate in 95% alcohol, then absolute alcohol. Clear in xylol and mount in balsam.

Results

Neuroglia and fibrin—blue.

Methods of staining malignant cells in use in this Laboratory.

(1) *Dudgeon's Method*

(Rec. Adv. Clin. Path. 1st ed., Churchill, 1947, p. 317.)

Successful results have been obtained with sputa, pleural fluids, ascitic fluids, urines and direct tissue smears.

Notes

- (1) Make three preparations from each specimen.
- (2) Sputa are spread and fixed immediately.
- (3) Urines and other body fluids are first centrifuged and the deposits spread on the slides. These need to be left to dry partially in air for a minute or two before fixation. Otherwise the deposits will not stay on the slides.
- (4) Tissue smears are made by scraping the tissue and spreading the material so obtained directly on the slides.
- (5) Very thick smears should be avoided as they will neither dehydrate nor clear properly.

(2) *Papanicolaou's Method*

(Surg. Gynae. Obst. 1943, 77, 449.)

The reagents for this method are available commercially. The method was originally evolved for following cell changes in vaginal smears in studies on the oestrus cycle in animals, but has since been adapted for studies of vaginal and other tissue smears in normal and abnormal human conditions.

Notes

- (1) In this Laboratory, it has been found advantageous to proceed according to Dudgeon's method as far as nuclear blueing after immersion in Mayer's Haemalum, and then to follow the Papanicolaou technique.
- (2) If slides are to be stored for some time before staining, keep in 70% alcohol after iodine treatment.

(*To be concluded*)

FOURTH ANNUAL CONFERENCE, 1948.

The Fourth Annual Conference of the New Zealand Association of Bacteriologists was held at Auckland Hospital, commencing at 10.30 a.m. on July 30th, 1948, in the Students' Room, under Ward 20.

Mr. E. L. F. Buxton, the President, was in the chair, and introduced the following speakers: Mr. J. Grierson, Chairman, Auckland Hospital Board; Mr. H. Selwyn Kenrick, C.B., C.B.E., Ch.B., F.R.C.S.E., Superintendent-in-Chief, Auckland Hospital Board, and Dr J. L. Pinniger, M.A., D.M., M.R.C.P., Pathologist, Auckland Hospital.

Mr. Grierson gave a short speech of welcome, saying that it was both a pleasure and a privilege to extend a very warm welcome to the delegates, and that his Board was interested in furthering in any way possible improvements in Hospital services, and that by these Conferences members of the Association could increase their knowledge and exchange their ideas. He complimented the Association on its great progress since its inception and wished it well for the future.

The President thanked Mr. Grierson for his speech of welcome, and for the generosity of the Auckland Hospital Board in allowing the Conference to be held within the Institution.

The President then introduced Mr. H. Selwyn Kenrick, who emphasised that in Medical Administration "team work" was most important, the Bacteriologist being a very important member of the team. He then went on to describe the separate functions of the various hospitals under the administration of the Board, and remarked that an opportunity would be given for the members of the Conference to see the separate Laboratories. He complimented the Association on its choice of programme and papers which would be presented and paid tribute to the office bearers of the Association, mentioning particularly Mr. Buxton, President, Mr. Adamson, Secretary, and Mr. Whillans, Printer and Publisher of the JOURNAL. In mentioning Mr. Adamson's name, he recalled that he had met him overseas in World War II, and stressed the important part played by the Bacteriologist in war. Mr. Kenrick then declared the Conference open.

The President, on behalf of the Council and members of the Association, thanked Mr. Kenrick for his congratulatory remarks, and took the opportunity of welcoming Dr. Craven, Medical Superintendent, Auckland Hospital, Dr. S. Hills, Acting-Director of Pathology, Auckland Hospital Board, and Dr. J. L. Pinniger.

The latter gave the following address:—

"Conferences such as the one you are holding, are very necessary to those who work in laboratories. They are valuable for more than one reason. They enable old friendships to be renewed, and new ones to be made. In this way they foster that sense of fellowship which is so necessary for any Society's well being. Business matters can most conveniently be dealt with at this time. Papers that are read help you to keep abreast with recent developments in your particular sphere. The compilation of such papers is good exercise for those of you who undertake it. You get training in the marshalling of your thoughts and you gain help from criticisms that may occur at question time. A further point of great value is that the conferences help you to see laboratories other than your own, and the work that is going on in them. On this feature, I want to direct your thoughts for a few moments.

"In your laboratory meeting to-morrow, various technical methods will be on display, and on your tour on Saturday, you will see the four laboratories of the Hospital Board. Those of you who work in hospital laboratories will help yourselves and your hospitals by studying critically those methods which you do not already use, to see whether they will be of value to you in your own places of work. If any such do prove of

value, then much pleasure will be given to the Aucklanders. Other methods may be presented which will seem faulty to you, and much pleasure again will be given to the Aucklanders if you voice your disapproval to them for by doing this you will help them to improve the service they give to their own hospitals.

"There are some important lessons I think that may be learnt from your tour of the Auckland laboratories. I would not dare to suggest that the practice of Clinical Pathology in New Zealand reaches its zenith in Auckland, even though privately, I think our claims are strong. But this fact is unchallengeable that we have the largest pathological service in the Dominion. Here are figures for you in support of this contention, four laboratories, six pathologists, a technical staff of over thirty, forming, I believe, about a fifth of the total strength of your Association.

"The laboratory had a turnover of 122,000 investigations in the year. This last figure can be turned round to represent 336 investigations for every day of the year working a seven-day week. Our very size must mean that we meet problems in terms of expansion and development long before they occur in most places elsewhere. Therefore, if any of you have cast your minds to the future, and have envisaged any such problems in your own laboratories, it is highly likely that they have already arisen in Auckland and have been solved in one way or another, for better or for worse.

"I want to direct your attention particularly to the effects the rapid expansion of Clinical Pathological methods has had on the organisation of our laboratories. The fields of morbid anatomy and histology, bacteriology, haematology and chemical pathology are daily becoming so much more specialised that, in order to keep abreast properly with the advances in each of these fields, we are finding that it is necessary to form separate departments in these subjects, each independent, but at the same time each calling upon the other for co-operation where necessary. In taking this step, we are merely following the lead given by the larger hospitals in the United States and Great Britain who found this step necessary some years ago. There are points about each of these departments that I would like to bring forward for your consideration.

"First, morbid anatomy and histology. As some of you know, I am recently from a London teaching hospital. I have been very favourably impressed by the high standard of education, keenness and efficiency of service among the technical staff with whom I have worked here, and can honestly say that this compares very well with that in England. It has, however, been a matter of some surprise to me that few display any interest in specialising in histological technique. It is often the case that the chief technician of a laboratory is a histology specialist. It is considered that the skill required in this field is easily the equal of that required in the other departments, and on the whole, the standard in this country for this reason falls short of the ideal. The point for your consideration is that sooner or later somebody has to be charge technician of the histological section of a laboratory and in my view has to have the same treatment as a charge technician in control of say, bacteriology. If this post is going to be limited to laboratory assistants as at present defined, some adjustment will be needed in your regulations.

"Now, consider the department of bacteriology which has been created here. One of my colleagues is in charge of this department, and it is his duty to keep abreast with recent advances in the science, to ensure that all bacteriological procedures in the laboratory are being correctly carried out, and to undertake research problems small or large, to further progress in relevant spheres of this science. The position has been created for him of Bacteriologist to the Hospital Board. This is all in order, but at once it is going to cause some confusion in this country, because this is the title which you have given to the members of your Association. It seems to me that sometime or other a change of name will have to be

considered by you. Bacteriological technique forms only a fraction of your work, unless you happen to be employed whole time in a department of bacteriology. If I criticise your designation, I must offer a suitable alternative. Not only in this country is there an allergic reaction of the word technician, a reaction which I think is quite unwarranted, but for which, however, there is some justification. Chiefly this justification is for those of you who are in charge of a laboratory, and have to express opinion, or draw conclusions from the results of laboratory tests, in order to help the doctors in charge of the cases concerned. It is not easy to find a suitable alternative title—the best I have been able to think of—the New Zealand Association of Laboratory Workers or even assistants. The first is definitive, and one which can cause no shame. The English substitute has been technologist.

"I haven't much to say of the Haematology Department. It is worth while your noting that this Department has control of our blood bank, and deals with the things like the Rhesus factor. Considering how much greater the difficulties have been in the way of its development than they have been in the London area, I have been very impressed with the sterling work of the pioneers here in Auckland. The formation of adequate blood banks is one which will indirectly concern you all up and down the country, so that those of you who are visitors will not waste any time if you nose about ours and see how we are coping with the problem.

"Lastly, the Department of Chemical Pathology. This section is playing a larger and larger part in hospital pathology, and is the one perhaps which is coming to give the greatest help to the most up-to-date physicians and surgeons. With its development, it is becoming steadily more apparent, that an increasing degree of specialised knowledge is required of those in charge of the department. This knowledge is largely in the field of advanced chemical technique, but also concerns the clinical interpretation of any results obtained. In other words, the position is called for of chemical pathologist (or biochemist) to correspond with pathologist, bacteriologist and haematologist. Such chemical pathologists form one of the laboratory team in most hospitals at home, and as the demands grow bigger will be increasingly required here. Whereas, the other departmental heads are nearly always doctors, only a few chemical pathologists in England are medically qualified. This is because a good chemical pathologist has to be first and foremost a good chemist, and there are few people who have the time, money or ability to be both good chemists and good doctors. Our section of biochemistry is well developed here, and I have no doubt that not very many years ahead biochemists, or chemical pathologists will be required all over the country. An all-round knowledge of laboratory work is valuable for the biochemist, but few of the departmental heads in England have such knowledge. While it is valuable, with the increasing specialisation, it is becoming decreasingly necessary. Now this is the feature of importance to you. If any reasonably advanced chemical investigations are to be undertaken in a pathology laboratory, then there must be available somebody who has considerable skill in chemical technique; in other words, somebody who has been through a university department of chemistry. If the volume of work is large—and it will become larger everywhere—then that person must have specialised assistance. In other words, I foresee that the time will come when the only suitable candidates for the "charge" positions in biochemistry will be those who are trained chemists. As it will not be necessary for these people to have general laboratory training in addition, this may create a state of affairs for which provision will have to be made by your Association.

"All these things are merely thoughts which have turned over in my mind. In speaking them to you, I act in no authoritative capacity. I have only indulged myself thus, to show you that problems lie ahead for us all, which await solution. Forewarned is forearmed, and I suggest therefore that you think about Auckland's problems in the light of your own

future, and get yourselves well prepared for all the changes that will inevitably come."

The official party then withdrew and the President commenced with a roll call.

The following were present:—Miss E. M. Partridge and Mr. E. L. F. Buxton (Wanganui), Mr. I. W. Saunders and Mr. M. O. Ekdahl (New Plymouth), Mr. D. H. Adamson (Christchurch), Messrs. J. Pierard, H. T. G. Olive and N. J. Ellison (Wellington), Mr. S. W. Josland (Wallaceville), Mr. V. J. Hawke (Nelson), Miss M. North and Messrs. S. O. Jarratt and W. Todd (Palmerston North), Mr. G. W. McKinley (Waipukurau), Mrs. Moroney (Hastings), Miss C. Saxby, Mr. J. B. Rankin and Mr. F. Garnham (Napier), Mr. G. R. George (Rotorua), Misses J. H. MacDiarmid and Wyllie, and Mr. J. Smith (Hamilton), Mr. W. Caruthers (Gisborne), Mr. H. L. Haden (Whangarei), Mrs. H. Oliver, Misses P. B. Scott, N. Davies, F. D. Mulligan and J. Winter, Messrs. A. Bell, D. Whillans, A. M. Murphy, J. Sloan, I. M. Cole, J. S. Cole, R. Aitken, J. Callaghan, A. Fischman, D. Philip, J. Walsh, W. E. Browne, J. B. Brown, J. H. Holt, E. Robinson, R. V. Stockwell, R. Patterson, H. Little, T. Connelly and P. Curtis (Auckland).

The President's address now followed.

"On behalf of the Council, it is my pleasure to extend a welcome to all members of the Conference. This is our fourth annual conference. The Association has come through the spoon-feeding stage, has found the use of its legs and has now reached the stage where it is beginning to discover that it is an individual. Not many years ago, we as members were only concerned with our own little sphere of work in the laboratory to which we were attached. Now there is developing a growing consciousness that we are linked to a Dominion-wide organisation, and we have produced a number of members who are thinking more and more along national and international lines.

Members of the Council have felt the need for greater representation on the Executive body of our Association and would therefore urge you to give careful consideration to an important remit which will be discussed shortly.

"Members of the Council have also sensed a feeling of dissatisfaction in some quarters with the progress that has been made this year. For my own satisfaction, I have labelled this past year "PRIVATE AND CONFIDENTIAL AND NOT FOR PUBLICATION." Some members of the Council have been in possession of certain knowledge which they were ardently longing to shout from the house-tops, but the hand of officialdom has held a tight grip, and consequently publication has been delayed for a few more days.

"I can assure you all that the year just closed has been one of great activity, certainly as far as meetings are concerned and the amount of correspondence that has passed between members and the 'Powers that be.'

"Representatives have met with committees from the Hospital Boards' Association, and the Pathologists, they have represented you on the Bacteriological Officers' Salary Advisory Committee. We have done our best to get all matters under consideration finalised for the Conference, but regret greatly that such a state has not been achieved. Still as each matter is reported to Conference you will see that certain advances have been made and that we firmly believe we are right in expecting better times for our profession in the not very distant future.

"I want to heartily commend the Auckland Committee for the splendid way they have planned for this Conference; to our Editor, particularly we owe a great debt of gratitude for the way he has enhanced the reputation of this Association in the minds of many people throughout this Dominion. Auckland has set a very high standard, and we believe we are in for a very profitable time.

"I want to commend the work of the Council during the past year. Only on one occasion one member absent and that was because our Secretary was in the depths of a typhoid epidemic at Kaikoura. Even then, he managed to get his spoke in over the telephone.

"As I stressed last year, so I repeat on this occasion, we have much business before us. To keep to our time-table we must keep our minds on the matters under discussion. We must allow full opportunity for the presentation and discussion of papers and to examine the many demonstrations that have been prepared for us. So please assist the chair by being relevant in your discussions on the reports and motions that will come before you.

"My own feelings are that we are in for a profitable and happy time and that memories of the Auckland Conference of 1948 will live long in the minds and hearts of those who have been fortunate enough to attend."

The President moved that greetings be sent to Messrs. J. H. A. Ward and G. Rose, these members being still in hospital and unable to attend the Conference.

Apologies from members unable to attend the Conference were as follows:—Mr. J. J. G. Pedd'e, Mr. H. G. Bloore, Mrs. F. L. Isabeth, Miss M. M. Dick, Mr. H. E. Hutchings, Miss I. Kirk, Mr. C. E. Felmingham, Mrs. E. Beresford, Mr. D. J. Burt, Miss I. Munro, and Miss M. Smith. The members of many hospital laboratories were unable to attend and block apologies were received from those in the Dunedin, Wellington, Waikato and Auckland Laboratories.

Following an enquiry by Mr. N. J. Ellison re proxy voting, the President appointed Mr. G. W. McKinley to list the proxy votes, and asked that certain remits previously distributed be considered.

Mr. Ellison asked that his remit be withdrawn as it was covered by that of Mr. Jarratt, who then presented his remit as follows:—

1. "That, in Clause 14 (a) headed 'Officers and Election Thereof,' the wording of the section be changed to read 'four (4),' instead of 'three (3)' Ordinary members. (This may allow of a wider representation by the Council)."

2. "That provision now be made for the appointment of an Honorary Secretary. (The duties of Secretary-Treasurer having increased beyond expectation are, from my experience, too much for one person to handle)."

3. "That, in consequence of 1 and 2 above, Clauses '14 (a). The officers of the Association shall consist of a President, two (2) Vice-Presidents, four (4) Ordinary members, a Secretary and a Treasurer who shall all be members of the Association. These shall constitute the Council. All members of the Council shall retire annually from office, but shall be eligible for re-election."

"14. (b) The President, Vice-Presidents, Secretary and Treasurer shall be Senior Members of the Association."

"15 (b) The Secretary shall convene all meetings in accordance with instructions from time to time given by the Council and in accordance with the rules and the constitution of the Association. The Secretary shall attend all meetings and keep records of all proceedings. The Secretary shall issue all notices of meetings and shall attend to correspondence, and shall keep a roll of members and all minute books of the Association. The Secretary shall also prepare the Annual Report and shall present same at the Annual General Meeting of members."

"New Clause: '15 (c). The treasurer shall keep all necessary accounts and books to show the financial position of the Association from time to time. The Treasurer shall receive all monies on behalf of the Association, and shall keep a roll of all members. The Treasurer shall also prepare the Annual Balance Sheet and shall present same at the Annual Meeting of members."

"In Clause 25, for 'Secretary,' read 'Treasurer.'

In Clause 26, for 'Secretary,' read 'Secretary and Treasurer.'"

Mr. Jarratt then moved that this remit be included in the Constitution, Mr. Ellison seconded, Mr. Whillans said that extra representation was necessary for the progress of the Association with which sentiment Mr. Pierard approved. The remit was carried.

The next remit was brought forward by Mr. Whillans. This read:—"That the present Rule 27 be deleted and the following be substituted: 'Rule 27. A prize fund shall be established and prizes shall be awarded annually at the discretion of the Council to such Junior members as shall be deemed fit to receive them. Candidates for such prizes shall forward to the Secretary, together with their application either (a) an essay of (b) a technical study, relating to the subject of Hospital Bacteriology. In any year where a member is raised in status from that of a Junior to that of a Senior, he shall be deemed to qualify if his entry be received while he is still a Junior member.'"

The president moved, and Mr. Jarratt seconded, "That the remit be considered." Mr. Ellison moved that the "Technical study" should not be confined to Bacteriology and that the "Hospital" be deleted and that subject be changed to read "Bacteriology or allied subjects" and moved an amendment to that effect. Mr. Whillans suggested that there be two separate prizes: one for the essay and one for the technical subject. Mr. Pierard moved that the subject "Hospital Bacteriology" should be amended to read "General Laboratory Procedures." Mr. Ellison then withdrew his amendment in favour of Mr. Pierard, who formally moved his amendment. After some discussion, Mr. Pierard's amendment was carried.

The minutes of the last Conference were taken as read, as they had been published.

The Annual Report was then read by the Secretary-Treasurer, Mr. D. H. Adamson.

"On behalf of the Executive, it is my pleasure to present the third annual report of the Association.

This Association has, I think, now become accepted as a permanent body, not only by the Medical Profession, but by a considerable number of the general public. We have hastened cautiously with all our proceedings with members of the profession and with others, and we can look forward to a degree of esteem resulting from soundly laid foundations.

Membership: Membership now stands at 131—52 Seniors and 79 Juniors. This is an increase of one Senior and ten Juniors over last year's figures. The number of members in each of the four centres is as follows: Auckland, 35; Wellington, 15; Christchurch, 18; Dunedin, 7; which represents the majority of workers in each laboratory—in some cases 100 per cent. There have been four resignations during the year, retirement or for personal reasons.

Finance: The satisfactory financial status of the Association is strikingly borne out by the Balance Sheet, which I will read to you later. Subscriptions outstanding at the end of March were eight in number, but these were outweighed by subscriptions paid in advance amounting to £15. So far this year, 86 subscriptions have been paid, leaving 40 yet to come. We have entirely reimbursed the Editor for his personal overdraft on the printing press and are up to date with the running costs. Advertisements in the Journal are a great help in its support, £3 being willingly paid for a full page now, so that we can say that it is a financial success as well as upholding, and even bettering, its previously high standard. All that we can ask for is that a more varied roll of contributors be forthcoming. One article in ten years from each member will maintain present standards.

Annual Conference, Christchurch, 1947: This Conference was the first to cover two days instead of one. A number of papers on varying angles of our work were presented, and it was hoped that this year a third day might be devoted to papers alone, in order that half-hour discussions might take place between papers. However, the routine work has to go

on, and it was found impossible to arrange this, this year.

Council Meetings: Three meetings of the Executive were held during the year, the last one yesterday, as well as several meetings of special committees. Messrs. Buxton, Whillans and Adamson met the Public Service and Hospital Boards' representatives at two meetings of the Hospital Boards' Bacteriological Officers' Salaries Advisory Committee, a sub-committee of the H.B. General S.A.C. Our President will give you a report upon findings, but, although practical results are slow in coming to hand, we have had a very fair hearing and are more fortunate than some—such as the pathologists who have yet to be heard. Mr. Whillans and Mr. Buxton met the pathologists and you will hear a favourable report on their discussions about the title of the examination, and the final and intermediate syllabi. The Sickness Survey Committee has been responsible for instigating the enforcement of full medical examination and X-ray of all persons at the commencement of their traineeship, and at six-monthly intervals thereafter undergoing chest X-ray. General working conditions have been reviewed. The President, Mr. Buxton, has been unrelenting in his enthusiasm in arranging many of these matters and in ensuring that all matters were harmoniously carried to a conclusion at the appointed time.

The Journal: The Honorary Editor, I emphasise "Honorary," has put in another year of extraordinarily hard work in producing the Journal in the face of shortages of coal gas, paper, printable material and especially time.

The Executive trusts that delegates will find that they have spent an enjoyable and profitable time during this conference, and that interests and friendships have been renewed and even more closely united.

The Secretary moved the adoption of the Annual Report. Mr. Bell seconded, and the motion was carried.

The Secretary-Treasurer then read the Balance Sheet for the year ending April, 1948. This had previously been circulated to members.

The Secretary-Treasurer moved the acceptance of the Balance Sheet. Mr. Olive seconded, and the motion was carried.

The Secretary-Treasurer then spoke of the death of Mr. Mawson Stewart, Honorary Auditor of the Association, and paid tribute to the able assistance he had received from him in making out the balance sheet.

The President then presented his report on salaries.

"The great question of the year has been that of salaries. You will recall that Messrs. Adamson, Ward and Hawke were appointed at the Conference of 1946 to report to the following Council meeting on the question of salaries. This report, with slight amendments, was made the basis of our earlier negotiations with the Health Department, and the Hospital Boards' Association. The next move was made by the Council in March, 1947, when it appointed Mr. Whillans and myself to act as a Salary Committee and to represent the Association before a special tribunal to be set up by the Hospital Boards' Association to consider salaries of all the Hospital Boards' employees not covered by awards. Our recommendations were forwarded to the Hospital Boards' Association, but it was several months before the tribunal met.

In the meantime, on 14th May, 1947, the Hospital Board Employees' (Conditions of Employment) Regulations, 1947, were gazetted, and these contained provisions for the setting up of Special and General Salary Advisory Committees.

The submissions we had made to the Hospital Boards' Association were now also sent to the Director-General of Health. These were the recommendations that were adopted at the last Conference where, you may remember, we agreed to the principle of minimum salaries rather than maximum. We hoped this would enable individual Boards to give increases beyond the minima stated if they so desired because we had found it very difficult to legislate for every different position in every

laboratory throughout the Dominion. However, it can be stated at this point that our idea was not acceptable to any of the Committees which we had to meet and so in the end we had to agree with the principle of maximum salaries for the various positions designated.

Shortly after our last Conference, we were asked to apply for recognition of our Association under the above-mentioned Regulations and to submit the names of four members as a panel from which the Minister could select appointees to any Advisory Committee in which a representative or representatives of our Association were required.

We submitted five names as follows: Messrs. E. L. F. Buxton, G. W. McKinley, S. O. Jarratt, D. H. Adamson and D. Whillans.

On the 5th of September last, the Minister of Health recognised our Association as being constituted to promote or safeguard the interests of bacteriologists and other laboratory officers, who are eligible to be members of our Association.

At the request of the Minister, I submitted our proposed salary scale for her consideration and included our finding re sickness among laboratory workers and questions concerning the senior and intermediate syllabuses and refresher courses.

The next step was the setting up of the Hospital Board's Bacteriological Officers' Salary Advisory Committee. Messrs. Whillans, Adamson and myself were chosen to represent the Association. Messrs. Bate, of Hawke's Bay, and Dove, of Dunedin, acted for the Hospital Boards, and Mr. Keisenberg represented the Department of Health. The Chairman was Dr. M. H. Watt, ex-Director-General of Health.

On October 20th last, Mr. Whillans and I met representatives from the Hospital Boards' Association to see if certain agreement could be reached on the questions of salaries of laboratory workers. As a result, a cost of living increase of £25 was added all round to our previous scale, and a maximum of £800 was agreed to. A new conception arose at that meeting, that of grading Senior Bacteriologists.

Mr. Whillans and I felt we had no mandate from the Association to agree to this so a meeting of the Council was arranged. The Council frowned on grading and still adhered to the principle of minimum salaries. It raised the minimum salary agreed to at last Conference from £750 to £800, and to include a Special Class for Senior Bacteriologists in Metropolitan Laboratories with a minimum of £850.

Well, on December 3rd last, the special Salary Advisory Committee met and agreed to a scale much in keeping with that submitted by our Association, except that maximum salaries have been adopted and the Senior Bacteriologists have been graded.

The grading has been carried out by the Pathologists concerned, and have been reviewed by the Salary Advisory Committee at a subsequent meeting held on June 15th.

We regret that we are not able to divulge particulars of the proposed new scale. We understand it has been agreed to by the General Advisory Committee. After that it passes through the hands of the Minister of Health, then to the Director of Stabilisation, then to the Treasury, then again, we understand, to the Health Department. The Crown Law Office has to frame all the regulations that go with the new scale. Finally, His Excellency, the Governor-General acting by and with the advice and consent of the Executive Council authorises the gazetting of the necessary regulations.

I quote a telegram received from the Minister of Health, Miss M. Howard:

"Advisory Committee's Report recently received has been referred to Stabilisation. Stop. Early finality expected."

In concluding this report we would like to pay tribute to the very kindly treatment we received on the various committees on which we served. Although every idea we put forward was not acceptable, yet we

were given every consideration, and generally speaking our demands have been fully met, even if not in the exact way we desired.

The President then moved that the report on salaries be accepted, and Mr. J. Cole seconded.

Mr. Garnham then inquired as to when he should get his £25 per annum cost of living allowance retrospective to October, 1947, as he understood some members had already received theirs.

The President said that the Hospital Boards had been circularised on the matter, and if this had not been received, application should be made to the Wages Commission. The President also stated that the cost of living allowance would be included in the new scale which would be made public shortly. Mr. Pierard said that the attention of the Wages Commission should be drawn to the matter of the extra cost of living allowance.

Mr. Ellison and Mr. Smith paid tribute to the Council for its work in connection with the new Salary scales.

The President said that under the new Salary scale that the Senior Bacteriologists would be graded and their new salaries would be paid according to their grading.

The President thanked Mr. Ellison and Mr. Smith for their generous comments and said that he would like to thank Dr. Lynch for his generosity in allowing the Association the use of his rooms for the Council meetings. The report on salaries was then carried.

The Secretary-Treasurer said that although the actual scale of salaries was yet confidential he could state that under the new scale salaries will be higher than those existing at the moment.

The Conference was then adjourned for luncheon.

The President re-opened the Conference by presenting his report on the sickness among Laboratory workers.

"On 9th September last, we reported to the Minister of Health on the question of sickness among laboratory workers along the lines of the sickness survey presented to our last Conference. We stressed the point that we felt some of the sickness had been due to crowded working conditions which exist in some laboratories and also to excessive overtime worked by some laboratory assistants.

"We asked that all laboratory workers should undergo a medical examination and chest X-ray on taking up their duties and should have further X-ray examinations at six-monthly intervals. We considered that such measures should prove a protection for the Hospital Board as well as for the laboratory personnel.

"The Minister replied on October 7th, expressing her desire that immediate efforts be directed to remedying any of the working conditions to which the high sickness attributable. The Minister requested details of the particular laboratories where the cases of sickness had been located. These particulars were immediately supplied to her.

The results of our representations are summed up in a circular letter to the Secretaries of Hospital Boards Controlling Laboratories, which states, "It is desired that Boards controlling laboratories direct special attention to the working conditions in the laboratories to ensure that they are satisfactory. It is also requested that Boards, which do not already do so, arrange that all laboratory workers have a medical examination and a chest X-ray before taking up duty and an annual chest X-ray thereafter."

"We should still recommend that endeavours be made as far as possible to have a six-monthly chest X-ray."

Mr. J. Smith said that the Waikato Hospital Laboratory staff is X-rayed at six-monthly intervals and he believes that T.B. is the only real risk run by Laboratory workers in the course of their duties.

In view of the carrying of the earlier remit enlarging the Council, the President then called for nominations for Secretary and for Treasurer

and for an extra council member.

Treasurer: Mr. D. H. Adamson was nominated by Mr. Whillans and seconded by Mr. McKinley.

Secretary: Mr. McKinley was nominated by Mr. Haden, and seconded by Mr. Jarratt.

Mr. Jarratt was nominated by Mr. McKinley seconded by Mr. I. M. Cole.

Council member: Mr. Ellison was nominated by Mr. Whillans and seconded by Mr. Jarratt.

Mr. Olive moved that nominations for Treasurer be closed, seconded Mr. Bell. Mr. Adamson was elected Treasurer.

Mr. Adamson read out the proxy votes and Mr. I. M. Cole and Mr. G. R. George were appointed as scrutineers.

The election of President then followed. This resulted in the election of Mr. Ellison by a small majority over Mr. Buxton.

Mr. Ellison, in thanking the delegates for the confidence shown in him in electing him President of the Association, hoped that he would be able to live up to Mr. Buxton's high standards, and moved that Mr. Buxton be made a life member of the Association in appreciation of his many services to the Association. This was carried with acclamation.

Mr. Buxton thanked members for making him a life-member of the Association and paid tribute to his fellow officers and particularly to Mr. Ellison who had helped him on many constitutional matters concerned with the Association in the past, and felt sure he was "handing over the reins" to capable hands.

The election of Vice-Presidents resulted in Mr. E. L. F. Buxton and D. Whillans being elected.

The election of Secretary resulted in a close win for Mr. S. O. Jarratt over Mr. G. W. McKinley.

The election of ordinary members of council resulted in Messrs. McKinley, Olive, Samuels and Ekdahl being elected.

The ex-President then read the report on the proposed syllabus for examination for the "Certificate of Proficiency in Bacteriology and Clinical Pathology," under the headings:

Title of Senior Examination; Revision of Senior Syllabus; The need for an Intermediate Examination and the Syllabus for the same; Refresher courses.

The Council considered that these matters came under the provisions of the "Hospital Board Employees' (Conditions of Employment) Regulations, 1947, in clause 3, sub-section 1 which states in effect that the Advisory Committee shall advise the Minister upon any matters concerning the conditions of employment of any classes of employees, and upon any complaints or disputes that may arise in connection therewith.

Acting on this belief, we included in our submissions to the Minister of 9th September last, our point of view in connection with the aforementioned matters. When we endeavoured to have these matters discussed at the meeting of Bacteriological Officers' Advisory Committee, the chairman ruled that they were outside the scope of the Committee.

Our next procedure was to refer these matters again to the Minister of Health, who had previously stated that she had asked for a report from the Director-General of Health.

After waiting for several weeks, the Minister replied on May 11th, as follows:—

"As regards the syllabus for the Examination of Hospital Bacteriologists and the institution of an intermediate examination, the Department must, wherever possible, be guided by the advice of the pathologists. As these matters have received earlier consideration by the pathologist, it is proposed that on the next occasion that a meeting of the pathologists is arranged, endeavour be made to have representatives of the Hospital Bacteriologists meet them and discuss your Association's aims, both for

the alteration of the syllabus and the institution of an intermediate examination.

"With regard to the institution of refresher courses for Hospital Bacteriologists attached to other than base Hospital Laboratories, you will probably be aware that in some instances special arrangements to that end had been made on previous occasions for a temporary exchange of Hospital Bacteriologists between the larger and smaller laboratories. Inspecting pathologists are being asked to make specific recommendations for similar arrangements in other cases so that the Boards concerned can be approached."

Well, the Council thought that this letter contained good news. Unofficially, we heard that the Pathologists were meeting in Wellington on May 26th, so as we had little time to make arrangements, we put a call through to the Health Department and secured permission for a small delegation to wait upon the Pathologists during their Conference. This was reported in the Journal. Mr. Whillans and I were the delegation, and we felt very happy about the reception given to our proposals.

A small Committee of Pathologists, Drs. Mercer and Pullar, conferred with Mr. Whillans and myself on June 15th, and as a result there are movements on foot which we hope will greatly benefit the future of our profession. Dr. Pullar offered to try his hand at revising the Senior Syllabus and in a telephonic communication with him this week, he hoped to forward his proposals to Dr. Mercer this week. Dr. Lynch, who is also a member of the Advisory Committee of Pathologists, called in to see me recently and assured me of his sympathetic attitude towards aims in raising the status of the profession. Then this week I received the following letter from the remaining member of the Committee, Dr. Mercer, informing me just how far matters had proceeded. This is a copy of his letter, dated 22nd July, 1948.

"May I express my best wishes to you for a successful Conference in Auckland next week. I am quite sure that the hard work which you, yourself, and the officers of your Association have put in over the past months will bear fruit in the future.

"In all contacts which you have had with Pathologists, the attitude of your Association has been constructive to a degree. I thought I should write to tell you that as a result of our meeting on June 15th, Dr. Lynch, Dr. Pullar and I constructed a report in some detail which has been circularised to all pathologists. We are now receiving replies from them on any suggested modifications. Although I cannot tell you anything final, it is quite clear that there is very general agreement with the matters that we were able to finalise together. I expect that the Director-General of Health will call a meeting of his Advisory Committee of Pathologists quite soon."

There you have the present position of our year's deliberations with the Minister of Health, the Director-General of Health and the Pathologists.

Personally, I feel we have made a great advance, and I hope that we will have something concrete to report to you from next Council meeting, which may not be many weeks hence if all these proposals reached conclusion in the near future.

Mr. Ellison was asked to consult Mr. Drake, of the Health Department, on the desirability of using the title "Diploma" for our senior examination. We will be pleased to inform the Conference on the result of his interview."

Mr. Ellison stated that Diplomas are only granted to people taking University subjects and attending University lectures. The Certificate of Clinical Pathology and Bacteriology cannot at the moment be called a diploma (that is a Government Regulation).

Mr. Whillans stated that when Mr. Buxton and himself met the Pathologists' Committee to discuss the salary scale, the question of the Diploma

had arisen. The Pathologists conducted the discussion in a very frank manner, and, although an agreement on this matter had not been reached, he was gratified at the treatment Mr. Buxton and himself had received. Mr. Whillans also stated that the Committee of Pathologists was very sympathetic to the aims of the Association and agreed that the present title was unsuitable. Mr. Whillans suggested that the Certificate of Proficiency in Medical Laboratory Practice would be a better title.

Mr. Ellison then asked the assembly for suggestions as to what the title of the examination should be.

Mr. Buxton suggested two examinations should be taken and the first be called The Junior State Examination, the second The Senior State Examination.

Mr. Olive suggested that the Association should adopt the line of the English Association Bacteriologists, that is, Members, Associates and Fellows of the New Zealand Association of Bacteriologists.

Mr. Ellison stated that he didn't think the Association had a large enough membership to warrant the titles, Members, Associates and Fellows.

Mr. Pierard proposed the matter of titles should be left for consideration at a later date.

Mr. Ellison suggested that a committee of three members other than Council members should be appointed to consider any suggestions received concerned with titles.

The President appointed the following members to this Committee: Mr. Pierard (convenor), Mr. Ekdahl, Mr. Aitken.—Carried.

The President then called for nominations for Auditor, and the Treasurer proposed Mr. Ian Davis, of Christchurch.—Carried.

The President drew attention to the fact that the Association's overseas corresponding member, Miss Byers, had returned to New Zealand and proposed Miss May Palmer-Brown as the Association's new overseas corresponding member. Miss Palmer-Brown is at present doing Laboratory work in connection with Atomic research workers. Mr. Bell seconded, and the proposal was carried.

The President then gave the results of the Junior Prize Essay competition, the winner being Mr. R. Patterson (Auckland).

Mr. McKinley then opened a discussion on the Junior Member of the Association. Mr. McKinley stated that when a committee of Junior members was formed at the last conference, the idea was received with enthusiasm. Mr. I. M. Cole (Auckland), Mr. D. J. Burt (Wellington), Mr. R. Bridger (Christchurch), convenor, Miss M. Scott (Dunedin), Miss B. E. Tracey (Hamilton), Mr. C. E. Felmingham (Palmerston North), Miss I. Munro (Waipukurau), Mr. A. L. Schwass (Nelson).

Mr. McKinley said that Miss Munro had written circulars to the Junior members in the East Coast area and had not received any replies or suggestions.

The President then called upon Mr. I. M. Cole to talk about the activities of the Junior members in Auckland. Mr. Cole stated that he was nominated to serve upon this committee in his absence. He also stated that in Auckland the Junior members had had meetings to discuss their problems and then talked them over with Mr. Whillans, and, if necessary, he could present them at the next Council meeting.

Mr. McKinley urged that the Junior Advisory Sub-Committee idea be carried further as the interest of the Junior members in the Association must be retained.

The President said he would give the Junior Advisory Sub-Committee all his support, but suggested an alternative would be to elect one or two Junior members to the Council. The President also suggested some women members should be elected to the Council.

Mr. Jarratt said he would be sorry to see the Junior members lose interest in the Association, and in his office of Secretary he would give

them; his wholehearted support.

Mr. Ellison inquired as to the present major problems confronting the Junior members. He stated that as the new President, he would be glad to receive any letters concerning these problems.

Mr. Jarratt said the chief problem was the lack of technical and theoretical training for Juniors and having to "cram" in their fifth year for their examination; but then an Intermediate Examination would be a solution to this problem, and would also like the Junior members to address any problems to him.

Mr. Whillans then gave his Editor's report on the Journal. He stated that the present Journal finances were in a good position. The cost of advertisements had been increased by 50 per cent. There was at present £15 in hand, but more equipment was needed, and this would be purchased gradually.

The lack of articles for publishing was causing the Editor great concern. The Editor would like the closing date for articles for publication to be three months in advance and all other material one month in advance. Also letters to the Editor would be very much appreciated and he wished to thank all the members who wrote letters to the Editor which were published in the last issue of the Journal. He stated also that articles need not be confined to Senior members of the Association. Matter taking up the space of one quarter of a page would be appreciated. Unless more publishing material was forthcoming he could not carry on. Mr. Whillans also asked that Sub-Editors be appointed to help him with his task.

Mr. Pierard proposed that Mr. Whillans should receive the assistance of Sub-Editors, and proposed Mr. Ekdahl as an assistant sub-editor. Mr. Saunders seconded.

Mr. McKinley proposed Mr. Olive as the other sub-editor. Mr. Ekdahl seconded.

Mr. Olive proposed Mr. Fastier as a Sub-Editor in his place, and asked that the matter be delayed until Mr. Fastier's consent could be obtained to the proposal. The President then proposed that the matter of Sub-Editors be brought up at the next Council meeting. Mr. Bell seconded, and the motion was carried.

The President moved that an Honorarium of £10 be presented to the Editor, Mr. Whillans, in appreciation of his services to the Association. Mr. Pierard seconded, and the motion was carried.

Mr. Olive proposed that a letter of thanks be sent to Dr. Lynch for the use of his rooms for Council meetings. A letter of thanks also be sent to the Honorary Auditor.

Mr. Jarratt proposed a letter of thanks be sent to Mr. Selwyn H. Kenrick, Drs. Pinniger and Hills, and the Auckland Hospital Board for the use of the rooms for the Conference; also a vote of thanks to Mrs. H. Oliver, Miss D. McKenzie and Miss Armstrong for the catering for the Conference. A vote of thanks to Miss P. Scott for taking the minutes of the Conference, a letter of thanks to Miss Martin, Dietitian, for preparation of the morning and afternoon teas, to Mr. Packer, house manager of the Auckland Hospital, to the Auckland Hospital Board, and to the Press.

This was carried by acclamation.

Mr. Jarratt stated that as time was rather short, he proposed that the matter of registration of Bacteriologists be left in abeyance and should like to know the members' views on the doubtful advantages of registration.

Further business was adjourned for the presentation of papers.

Mr. Adamson presented his paper on Cases of Amoebiasis contracted in New Zealand.

The Conference was then adjourned until the following day at 9.30 a.m.

The next day, Saturday, July 31st, the following papers were presented:—

J. B. Brown (Auckland), Hormones.

Mr. S. W. Josland, The Salmonellas.

Mr. Jarratt (Palmerston North), The Salmonellas.

Mr. Whillans (Auckland), Photoelectric Colorimeters and Spectrophotometers.

The President then asked Mr. Pierard as Convenor of the Committee appointed the day before as to what conclusions his committee had reached concerning the new titles for the Certificate of Proficiency in Bacteriology and Clinical Pathology. Mr. Pierard said that up to the present no conclusions had been reached and referred the matter for further consideration.

The President proposed that next Conference be held in Wellington, and that a tour of the Animal Research Station be arranged. Mr. Josland replied that the Directors of the Animal Research Station would be delighted to conduct a tour of the station, but certain arrangements had at first to be made as for travel, accommodation, etc.

The matter was deferred for further consideration.

The Fourth Annual Conference was then formally closed.

On Friday evening, 30th July, the Auckland Hospital Laboratory was thrown open for all interested. A very large number of exhibits had been arranged in all branches of Laboratory work and a very full and interesting evening was passed by all. One of the local staff stood by each exhibit and gave all information on each under their care. This was supplemented by typed cards of information beside each exhibit.

On Saturday afternoon, 31st July, a bus tour of the Green Lane, Cornwall and Middlemore Laboratories was made and delegates were able to compare the facilities in each of the Laboratories.

On Sunday morning, 1st August, a few of the delegates were taken on a conducted tour of Auckland, thus ending a most memorable Conference.

COUNCIL MEETING

This was held in the Department of Pathology, Auckland Hospital, 29th July, 1948.

There were present Messrs. Buxton, Ellison, McKinley, Adamson and Whillans. The apologies of Messrs. Ward (who was in hospital and was unable to attend the Conference), and Mr. Jarratt (detained in his laboratory), were received.

The following were elected as members:—

Juniors: Miss E. I. Hicks (Wanganui), and Messrs. S. A. Eames, G. Brazendale and A. Fischman (Auckland), Miss Barbara Smith (Waipukurau), Mrs. R. E. Parker (Wellington), Miss J. Morrish (Christchurch).

Senior: Mr. L. Reynolds (Wellington).

The following were noted as having attained Senior status on passing the Certificate Examination:—

Miss N. R. L. Davies and Mr. J. Callaghan (Auckland).

Misses M. Low and M. Ongley and Mr. H. T. G. Olive (Wellington).

Miss E. M. Partridge (Wanganui) and Mr. D. J. Burt (Greymouth).

Resignations were received with regret from Misses N. Scott, A. M. Macmorran and M. H. Scott, the last-named giving a donation of 10/6 to the Association.

General discussion then took place on the running of the Conference and the arrangements of accounts. Mr. E. L. F. Buxton gave a donation of 10/6 to the Publishing Fund.

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