

visit them from time to time, and in the case of a patient showing a relapse at once have them removed to the asylum again: in that way many accidents might be avoided. It might be mentioned here that in cases of medical men certifying their own patients they have occasionally been subjected to much annoyance by violence from such people after their release from an asylum which would probably not happen in the case of an independent certifying medical officer. Another important point is the obtaining of work for patients recently discharged from asylums, in which endeavour they might be materially helped by such medical officers, who would probably be in touch with members of town councils, &c.

Finally, there are many cases of insanity brought to the notice of the police owing to the eccentricities or violent habits of patients, and many accidents might be avoided if in such cases an expert in mental diseases was at once called upon to make an examination. To be able successfully to obtain all these various pieces of information without causing undue offence or annoyance to patients and their friends would in many cases require much patience, tact, and judgment, but I think asylum training, especially if combined with some experience of private practice, should enable a man to cope with the majority of cases.

I am, Sirs, yours faithfully,

Hatton, near Warwick, July 23rd, 1900. O. POLHILL TURNER.

## LEADLESS CERAMIC ENAMELS.

To the Editors of THE LANCET.

SIRS,—On Nov. 19th, 1898, at page 1338, and again on Jan. 7th, 1899, at page 49, you were kind enough to notice my efforts towards the discovery and practical introduction of leadless glazes, and as you have referred to the recent Parliamentary debate on lead poisoning I should like to point out an error that some persons fall into by assuming that the general use of leadless glazes would of itself entirely remove the liability of pottery employes to contract plumbism.

Reference to statistics shows that such persons as ground-layers and litho-colour dusters yield quite a large proportion of cases, and yet they do not handle the glaze in a free state; what these people use are the *enamel colours*, which are almost invariably compounds of *fritted* lead with borax and colorant oxides (see pages 7, 8, 9, and 40 of the report by Dr. Thorpe and Dr. Oliver). To meet such cases I have for many months been laboriously experimenting with the object of discovering leadless ceramic enamels, and now I submit some specimens which, although willingly admitted to be more or less defective, are nevertheless sufficient evidence that such enamels will ultimately be practicable. Then, and not until then, will it be possible to entirely dispense with lead compounds and thus completely eradicate plumbism in potteries.

I am, Sirs, yours faithfully,

WM. J. FURNIVAL.

Granville-terrace, Stone, Staffs, July 17th, 1900.

## A MEMORIAL TO THE MILITARY AND CIVIL MEMBERS OF THE MEDICAL PROFESSION WHO HAVE LOST THEIR LIVES IN THE SOUTH AFRICAN WAR.

To the Editors of THE LANCET.

SIRS,—The Princess Christian Convalescent Homes for Soldiers and Sailors, now in course of erection at Bisley, will soon be available for use. Many of the beds have already been endowed. The Queen has given two beds, the Duke and Duchess of York one bed for a soldier or sailor, the Princess Christian one for the King's Royal Rifles, and Princess Victoria of Schleswig-Holstein and Princess Aribert of Anhalt one bed for a "green-jacket," &c. Princess Christian has suggested to me her wish that a bed should be endowed for the sole use of the non-commissioned officers and men of the Royal Army Medical Corps. I proposed that the bed should be endowed as a memorial to the members of the medical profession, both military and civil, who have lost their lives in the war in South Africa. The ready response which I have received from a few friends to whom I applied

privately, encourages me to hope that the scheme will commend itself to the medical profession generally. The amount required for the permanent endowment of a bed is £600, and towards this the Committee of the R.A.M.C. South Africa Fund has voted £200. From other sources I have received £125, and I now venture to appeal to the medical profession to make up the amount required (£275). I append a first list of subscriptions. Cheques or postal orders should be made out to Mrs. Meredith, and crossed "Barclay & Co., Princess Christian Bed." The fund, when completed, will be handed over to the trustees appointed for all the endowed beds.

I am, Sirs, yours faithfully,

CAROLINE S. MEREDITH.

21, Manchester-square, W., July 23rd.

### LIST OF SUBSCRIPTIONS.

£ s. d.		£ s. d.	
R.A.M.C. South Africa Fund ... ..	200 0 0	Lady Vaughan Williams	5 0 0
Sir William Broadbent... ..	20 0 0	Mrs. Lang Elder ... ..	5 5 0
Sir R. Douglas Powell ... ..	10 10 0	Mr. Charters Symonds... ..	3 3 0
Dr. Church ... ..	10 10 0	Mrs. W. Marshall Webb	3 3 0
Dr. Buzzard ... ..	10 10 0	Mrs. Wickham Flower ... ..	2 2 0
Mr. Alfred Cooper ... ..	10 10 0	Mrs. Barlow ... ..	2 2 0
Mr. Somerset Beaumont	10 0 0	A Friend ... ..	2 2 0
Sir T. Lauder Brunton... ..	5 5 0	Mr. Alfred Willett... ..	2 0 0
Dr. Barlow ... ..	5 5 0	Miss Ewart ... ..	2 0 0
Mr. H. T. Butlin ... ..	5 0 0	Mrs. Johnson ... ..	1 0 0
Dr. Playfair ... ..	5 0 0	Mrs. Fletcher ... ..	1 0 0
Lady Broadbent ... ..	5 0 0	Total ... ..	326 7 0

## PROFESSOR LUSTIG'S PLAGUE SERUM.

To the Editors of THE LANCET.

SIRS,—As a new series of observations with Professor Lustig's curative serum was in progress at the Arthur-road Hospital I did not intend troubling you with any communication on the subject until it was completed. But as your Special Correspondent in India, who seems to have taken the serum treatment of plague under his kind, too kind, protection and considers himself the sole arbiter of its destinies—never so happy as when sounding its death-knell and from which he appears to derive a sort of malign pleasure—is again on the warpath, the interests of truth, no less than those of science and humanity, demand that the true facts bearing upon this most vital question should be placed before your readers.

In the issue of THE LANCET of June 2nd (p. 1608) there appears from the pen of your correspondent a critique on a paper read by Dr. Alfons Mayr of the Municipal Laboratory at Bombay, wherein the various issues and conclusions arrived at by the author are so confused and mixed up by him as to prejudice those not conversant with the subject against this line of treatment and to create a distinctly unfavourable impression. And it is with a view to remove this unjust and unfair prejudice and wrong impression that I have ventured to trespass on your space, especially as I have personally conducted all the observations on the serum treatment and am solely responsible for the results achieved up to now. Dr. Mayr's paper was based, in fact, entirely upon the monthly reports submitted by me officially to the municipal corporation and such other records as I placed at his disposal.

Professor Lustig reached Bombay in June, 1897, after the first epidemic of plague had ran its course. A few sporadic cases, however, existed, and these were placed at his disposal for treatment with a curative serum he had brought with him from Florence. The results proved extremely satisfactory. As material for further observation was not available in Bombay he proceeded up country and treated some 30 cases with results equally satisfactory. When, some time after his return to Florence, he learnt that another epidemic had broken out, he offered to prepare and send down some serum with a view to test its efficacy on a sufficiently large scale, and it is needless to say that his offer was thankfully accepted by the corporation. Early in March, 1898, Dr. (now Professor) Galeotti and Dr. Poluctinci arrived in Bombay with a quantity of serum, and as the epidemic was at its height arrangements were made to begin at once with the serum treatment. As the supply of serum was to reach Bombay from time to time and at irregular intervals, and was to be limited, and as the objects then in view were to test its value on a clinical basis and to watch its effects from day to day on the more pronounced symptoms of plague, the following procedure was adopted in treating the cases. All moribund cases (those in which the action of the heart had

become gravely impaired and exhibited signs of failure or impending failure) and as also all convalescents and semi-convalescents were excluded from the treatment. The reasons for such exclusion are sufficiently obvious to all experimenters. Whenever a new mode of treatment has to be tested it is usual to eliminate all disturbing factors that tend to vitiate the final results. And as it was found from our experience of plague that the two above-named classes of cases were such disturbing factors they were excluded. The former when admitted into hospital were generally found to be beyond the reach of all possible human help, and in the case of the latter it was soon recognised that half the battle—nay, more than half and that the most important—had been already fought and won outside the hospital, and no further assistance was required. Moreover, just as the inclusion of the moribunds would not have told against the serum treatment the non-exclusion of the convalescents would have failed to convince us of its value. Nowhere, so far as I am aware, is such material selected for experiments with new methods of treatment, and in adopting this procedure there was no violent departure from the methods in vogue elsewhere—in fact, there was ample justification for it in a preliminary trial.

The first series of observations lasted from March to November, 1898, and again from February to May, 1899. During the course of this period 403 patients received the serum treatment and 1190 patients were treated by ordinary methods. The clinical effects of the serum were watched from day to day, and although in some very grave and advanced cases the patients ultimately succumbed the immediate effects on the general condition of the patients were extremely well marked, and this indicated either that the dose of the serum was too small, or that it was not strong enough, or that the treatment was commenced too late. But on the whole the improvement was quite perceptible and gratifying. When at the termination of these observations the results were tabulated it was found that the serum-treated cases had a recovery rate of 38·2 per cent., whereas that in those not so treated was 19·5 per cent. only. The latter rate was, however, not less than that of the other large public hospitals, and the combined admissions numbering 4762 in two of the largest during the same period had a recovery rate of 19·7 per cent., and thus it becomes apparent that the exclusion of moribunds and convalescents did not tell in favour of the serum by reducing to any extent whatsoever the mortality rate in those treated by ordinary methods. In fact this system of "selection" so-called or rather mis-called, was so strict and accurate as to eliminate even all mild cases, for were it otherwise the mortality rate in the serum-treated cases ought to have mounted up much higher than the average of the other hospitals.

The second series of observations was commenced in May, 1899, and is still being continued. The object with which this series was started was to determine the statistical value of the serum, and hence it was resolved to conduct observations on 1000 cases of plague, 500 to be treated with the serum and 500 by ordinary methods, the latter acting as controls, and the cases were to be taken for treatment *alternately* in the order of admission and *without any attempt at exclusion of any sort*. But objection to this method of treatment was the preponderance of either moribunds or convalescents in either set vitiating the final results. It was, however, anticipated that in two such large sets of 500 cases each these would equalise at the end, and thus no undue advantage would accrue to one side or the other. We shall see further on whether and to what extent this anticipation was justified by practical experience. Further, in order to arrive at strict accuracy and to eliminate all errors some standard had to be fixed as to what cases should be classed as moribunds and as convalescents. It was therefore determined to fix the limit for the former at 24 hours, and all patients dying within 24 hours of admission were considered as moribunds, but it was subsequently found that a large number died between 24 and 27 hours of admission, and hence 27 hours was adopted as the standard. As regards convalescents,<sup>1</sup> all those that had gone over the acute stage of the disease and had a normal temperature or thereabouts and had suppurating or suppurated and open buboes were considered convalescent.

And now as to the results. Up to the end of last month

480 cases have been treated with the serum, and 480 cases have become their controls, under ordinary treatment:—

	No.	Died.	Recovered.	Percentage of mortality.	Percentage of recovery.
Serum cases ...	480	328	152	68·33	31·67
Control cases ...	480	382	98	79·58	20·42

The serum cases show a recovery rate of 31·67 per cent., whereas the controls have a rate of 20·42 per cent., a difference in favour of the serum of 11·25 per cent. But the above results are not strictly accurate, and have been rendered fallacious by the undue preponderance of moribunds and convalescents in each series. The anticipation at first entertained about the equalising of these has not been realised in actual practice and thus an element of error has been introduced into the statistics. The 480 serum cases were found to include 139 moribunds and 28 convalescents, whereas the controls had 145 and 38 respectively. The former had an advantage over the latter of six less moribunds, whereas the latter were better off in convalescents by 10. Hence for a strictly accurate comparison, the only course open is to eliminate all the moribunds and all the convalescents from either series, and then deduce results from those remaining. If that is done, the results stand as below.

	No.	Died.	Recovered.	Percentage of mortality.	Percentage of recovery.
Serum cases ...	313	189	124	60·38	39·62
Control cases ...	297	237	60	79·79	20·21

The percentage of recovery stands thus at 39·62 per cent. for the serum cases, and 20·21 for the controls, a difference of 19·08 per cent. in favour of serum. These results clearly indicate the value of serum treatment in those cases that are really acute and fit for treatment, and show that in these it is possible to very nearly double the recovery rate by the use of serum. These differences in the percentages do not, however, show the full value of the serum treatment, and that could only be arrived at by following the method adopted by Professor Haffkine in determining the life-saving value of his prophylactic inoculations against plague. That system is based on calculating the relative ratios of mortality amongst the inoculated and non-inoculated, and if the same system be adopted for the serum treatment the ratio of recovery in the serum cases as to control cases would be as 1 of control to 1·55 of serum in *all* cases, and 1 to 1·96 when the moribunds and convalescents are excluded from both the series. Or to put it in another way, if 100 cases out of a given number recover under ordinary treatment the same number if treated with the serum would give 155 recoveries. And therefore the percentage of recovery is enhanced in one case by 55 per cent. and by 96 per cent. in the other.

These, Sirs, are the plain and unvarnished facts with regard to the use of Professor Lustig's serum in the treatment of plague and they place before the reader the truth, the whole truth, and nothing but the truth. We have no reason to be dissatisfied with the progress made within two years of its application. Neither the mode of its preparation nor its application at the bedside have yet been finally determined and it is only by further research, experiment, and prolonged clinical observation that we shall be enabled to place it on a proper basis. So far as we have gone we have been able to prove that the serum treatment is the only treatment that can in any way appreciably reduce the high mortality of plague and we abide by our experience. When the diphtheria antitoxin required more than a decade for its perfection is it not reasonable that sufficient time should be allowed for the application of a serum against a much more rapidly fatal and more deadly disease like plague? And is it demanding too much of special correspondents to ask them to withhold awhile their *obiter dicta* and let those best conversant with the subject to work out, quietly and undisturbed, their destiny until they reach their goal, which has but one and only aim in view—viz., the lessening of human suffering and the saving of human life?

I am, Sirs, yours faithfully,

N. H. CHOKSY, M. D.

Chief Medical Officer, Arthur-road Hospital.

Bombay, July 7th, 1900.

## "RODENT CANCER OF THE CORNEA."

To the Editors of THE LANCET.

SIRS,—The interesting case published under the above title by Mr. Sydney Stephenson in THE LANCET of July 21st

<sup>1</sup> All those that were taken as convalescents in both the series ultimately recovered, and there was not a single death amongst them.