

## WALES.

## CARDIFF'S MEMORIAL TO THE LATE KING.

IT is proposed to commemorate the reign of King Edward VII by liquidating the debt on the Cardiff Infirmary, thereby making an addition to its income of at least £800 a year, and augmenting the capital of that institution, so that the new wing, with its eighty-two additional beds, can be opened for the reception of patients immediately the building is completed. Colonel Bruce Vaughan, a true friend of the infirmary, in an appeal he has issued, states that what the board of management has most at heart is to feel authorized to undertake the treatment at once of the 750 sick poor who are awaiting treatment because there is no room for them, and by so doing to set up in the chief town of the Principality a memorial to King Edward VII which he would have been the first to appreciate. The appeal is addressed to the inhabitants of the city and the county alike, because they both in equal measure profit by the work of the infirmary. The proposal to rename the infirmary "King Edward VII Hospital," in memory of his late Majesty, will, it is believed, appeal to the loyalty of the whole of South Wales. The present debt of the infirmary is £21,000. Since its foundation the infirmary has treated within its walls no fewer than 679,095 patients, at a cost for maintenance alone of £294,486 in voluntary contributions. In another respect, it is added, a great public institution like the Cardiff Infirmary is a commercial asset to the city at large. It is to-day spending a sum of not less than £15,000 a year within the city, and when the new wing is opened it will spend over £20,000 annually. Its payments to the city treasurer, in rates for water and electric light, amount to £570, apart from the cost incurred by the institution for the treatment of the Corporation employees, amounting, on an average, to over £150 a year. To-day the Cardiff Infirmary stands unchallenged as the first and greatest charitable institution in Wales. It has in the past rendered incalculable services to the community; it will in the future contribute even more effectively to the common good. It has, therefore, an unassailable claim on the first and most generous support of the neighbourhood. About £10,000 has been subscribed in answer to the appeal, the first sums received being from the Marquess of Bute, £5,250; Lewis Merthyr Company, £1,050; Lord Aberdare, £105; Major-General Lee, £100; Lady Price Fothergill, £100; National Provincial Bank of England, £100; Sidney H. Byass, Bridgend (annual subscription), £50; Mrs. Jenner Wenvoe, £50; Colonel Bruce Vaughan, £25; W. and L. Proger, £25; Mrs. R. H. Jones, £10; etc.

## TUBERCULOSIS EXHIBITION.

Newport (Mon.) gave a good start to the Tuberculosis Exhibition which was opened for ten days at the Drill Hall, Stow Hill, on Wednesday, January 4th. The hall was crowded during the afternoon. The various exhibits consisted of charts and maps contrasting the mortality due to consumption and war respectively. Models of sanitary cowsheds, travelling vans, revolving shelters, sanatoriums, labourers' cottages with surroundings where the eye at once discerned the picturesque and the objectionable. Ireland has a section of its own, but Scotland and Wales are unrepresented. The Mayor of Newport, who presided, said that they were that day introducing into Wales and the West of England a new plan of campaign which would hasten the day when the "white man's scourge" would fail to claim the victims that were falling around them in every direction. At Newport, he was glad to say, deaths from consumption of the lungs had been steadily decreasing from 3.7 per 1,000 in 1871 to 1.0 per 1,000 last year. The housing conditions of the town had been improved. They had compelled the landlords to improve over 1,000 houses, and 48 had been closed. Not only the landlords had serious responsibilities in the matter, but the tenants also, as many of the latter converted decent dwellings into insanitary ones. He dwelt at length with the

sanatoriums which had been established by the Newport Board of Guardians and the Corporation, and added that, as tuberculosis was not a local disease, he would be glad to see other authorities adopting similar measures. At any rate, Newport would do its part. The school children would be brought to this exhibition, and would write essays on what they saw and learnt. Newport would continue its school for young mothers. Mr. J. Macaulay, General Manager of the Alexander Docks and Railways Co., paid a warm tribute to the efforts of Dr. Howard Jones, M.O.H., in combating the disease. He trusted that the information intended for the adult population would be supplemented by a suitable addition to the curriculum of the schools for the training of the youthful minds. In the evening Dr. D. J. Williamson, medical officer, Paddington Dispensary for Consumptives, gave a lecture illustrated with lantern slides on the Tuberculosis Dispensary System. Dr. J. Lloyd Davies, J.P., presided.

## SWANSEA HOSPITAL.

At a special meeting of the board of management of the Swansea Hospital, held on January 4th, the question of increasing the medical staff was considered, a committee recommending: "(1) That a fourth out-patient medical officer be appointed who shall be eligible for appointment as an assistant to the indoor staff; (2) that the anaesthetists shall rank as assistant out-patient officers; (3) that an assistant ophthalmic surgeon be appointed." Dr. D. R. Edwards having signified his intention to resign the office of pathologist in order to devote himself exclusively to the electro-therapeutic department, the committee recommended that the board should approach the Corporation with a view to securing its co-operation in the establishment of a pathological and bacteriological department, and that in association with this proposed department the vaccine-therapy work of the hospital be placed in the hands of an honorary medical officer. The committee added that it still had under consideration a proposal to extend the scope of the dental department, and the question of the alleged abuse of the hospital. The recommendation was adopted. Dr. Quick was appointed assistant ophthalmic surgeon.

## India.

[FROM OUR SPECIAL CORRESPONDENT.]

## ANTIMALARIAL WORK.

THE Central Malarial Committee, appointed as a result of the Malarial Conference of last year, met recently in Simla, and was attended by delegates from different provinces. Practical classes on the study of malaria are also being again held by Captain Christophers, I.M.S., while malarial experts have now been appointed in nearly all the provinces to carry out practical anti-malarial measures in connexion with the sanitary department. In addition provincial malarial committees are being formed, that in Bengal being the sanitary board of the province with the addition of further medical officers with a special knowledge of the problem. The Central Committee also issues from time to time a bulletin giving recent information on advances in the subject, which will enable the different workers to keep well abreast of the scientific knowledge of malaria. Altogether there is good promise of practical results being obtained in India in the campaign against this protean foe, while the lessons of previous failures will not be lost, but enable similar mistakes to be avoided in the future. The report of the Mian Mir Commission well shows the immense difficulty of adequate antimalarial measures in certain parts of India, and the necessity of a thorough survey of all the aspects of the problem by an expert malariologist in the particular place in which it is proposed to make a serious effort to reduce the prevalence of malaria, and the provision of sufficient funds to carry out the recommendations completely.

A HOSPITAL FUND FOR BENGAL AS A MEMORIAL  
TO KING EDWARD.

As pointed out in a previous letter, unfortunate differences of opinion greatly delayed the adoption of a definite plan for a memorial to King Edward in Bengal. After several months' discussion, during which very few subscriptions have been received, it has just been decided to drop the scheme for providing hostels for native students, which was so warmly advocated by the Lieutenant-Governor, and to adopt the suggestion of the Executive Committee to utilize the subscriptions of about five lakhs for a statue, and to form a King Edward Memorial Fund, to be applied to the following objects: (1) For the advancement of medical education; (2) hospitals; (3) sanatoriums; (4) medical research; and (5) other works of medical relief in Bengal. As the total annual income from the funds which have been collected will only amount to Rs. 15,000, or £1,000, to which the Government of Bengal will add about one-third, the absurdity of such an elaborate programme is clear. There is much regret in medical circles that the suggestion to build the greatly needed medical research laboratories in Calcutta has not been adopted, although strongly supported by the medical profession.

## Correspondence.

### THE BRADSHAW LECTURE AND CANCER.

SIR,—May I correct the dates and statements made in the JOURNAL of January 7th, 1911, by Dr. Charles Walker, on the basis of which he assigns a sequence to the work of my friends Borrel, Bridré, Clowes, Ehrlich, Gaylord, and Jensen, and also point out that the name of the French author he mentions is Morau and not "Moreau"?

1. *The transference of malignant new growths from one animal to another of the same species.* Reliable evidence of "the fact that some malignant new growths can be inoculated from animal to animal of the same species was given in the first instance by" Hanau in 1889 for the rat and not by Morau in 1893-94 for the mouse. As already stated,<sup>1</sup> many of Moran's tumours arose independently of the inoculations he made, which, however, does not detract from my estimation of his pioneer work on the transference of cancer in mice. It is quite erroneous to assert such a sequence as Morau "was closely followed by Borrel. Then came Leo Loeb (1901), and Jensen (1902), Bridré, and Ehrlich subsequently added considerably to our knowledge of this phenomenon"—that is, the manner and nature of the inoculation or transference of cancer from one individual to another. Independently of Loeb in 1901, Jensen's papers appeared in 1901-2-3 in Danish, and became generally accessible in March, 1903, in German. Bridré's first paper appeared in 1907; it did not deal with the nature of inoculation or transplantation, but with immunity. Ehrlich's first paper appeared in 1905; therein he made no reference implying that he was not satisfied that the nature of inoculation had been settled already. Statements and communications on the nature of the transference of cancer from one animal to another of the same species have appeared continuously from this laboratory from July, 1903, October, 1903, December, 1903, January, 1904, onwards, and that the subject is not yet exhausted is shown by forthcoming papers.

2. *The natural and induced resistance of mice to the growth of cancer.* The disappearance of malignant new growths was first shown by Jensen in 1903, and not by Gaylord, Clowes and Baeslack in 1905. The statement that "mice treated with the serum of mice that had spontaneously recovered from cancer were less susceptible to inoculation than mice that had not been so treated" lacks all trustworthy confirmation, even by those who were its authors. The action of the serum of animals immunized with cancer tissue was discussed by Jensen in 1903, and by us in 1904, 1905, 1906, etc. "That the resisting power against the incidence of cancer to a given animal may be greatly strengthened by the inoculation under its skin of various specific body tissues was" not "shown" in sequence "by Borrel in 1905, Ehrlich (1906)

<sup>1</sup> Morau and Jensen's Tumour, *Lancet*, vol. ii, 1906, pp. 1469 and 1544.

and Bashford (1906-7)." Borrel's first paper on this subject appeared in 1907, whereas, Jensen treated of the immunizing effect of tumour tissue in 1903. There is no discrepancy from 1904 on, in the statements made from this laboratory on the absence of immunizing effect with small doses of living cancerous and normal tissue, and the statements made on the production of immunity by larger doses of living tissue (cancerous and normal), and its non-production by dead tissue: the demonstration of immunization by living normal tissue was first published in July, 1906. Ehrlich's first reference to immunity by cancer tissue was made in 1906, the first reference to immunity by normal tissue from Ehrlich's laboratory was made by Schöne in December, 1906.

3. *The experimental production of sarcoma.* "The patient tracing of the evolution of a carcinoma into a mixed tumour first and then into a round-celled sarcoma in the second place was" not "first accomplished by Ehrlich in 1906-7," and the sarcoma was not round-celled, but spindle-celled. This startling discovery was accidentally made in Ehrlich's laboratory in 1905. "The patient tracing out of the evolution," stage by stage, was left to later workers, and the demonstration of the basis on which the interpretation of the phenomenon—as the experimental production of sarcoma—rests—namely, the degeneration of the stroma on transplantation and the supplying of a fresh stroma by the host—as a *specific* reaction to the cancer cells had been supplied earlier by workers in the laboratory of the Imperial Cancer Research Fund.—I am, etc.,

E. F. BASHFORD.

Imperial Cancer Research Fund, London, W.C., Jan. 9th.

SIR,—I see that Mr. Kenneth Campbell "demurs to the statement that a cancer can evolve into a sarcoma." He also says: "No epithelial cell can change into a connective tissue cell."

The latter statement appears to be based upon the old superstition that when once development of the embryo has reached the stage when the three layers of cells are differentiated, the destiny of the progeny of these cells is irretrievably fixed; subsequent differentiation of the cells produced from the ectoderm being absolutely limited to the production of epiblastic tissues and similarly exact limitations also existing with regard to the mesoderm and endoderm. Zoologists have long ago abandoned this position, but I am afraid that in a few medical schools the teaching upon this point remains as it was.

Notwithstanding the enormous difficulty of separating without injury the cells produced by the earlier divisions of the ovum, it has been proved experimentally that the individual cells retain the power of producing all the tissues of the body,<sup>1</sup> up to the latest stage at which it has been found possible to separate them—that is, the sixteen blastomere stage from which sixteen complete embryos have been produced.

The most striking experiments which bear upon the retention of this general potentiality by even the most highly differentiated cells are those upon the regeneration of the crystalline lens in the eye of the salamander and *Triton*.<sup>2</sup> It must be remembered that the lens is normally produced from an invagination of the epiblastic cells. When the lens is removed a new lens is developed, but from mesoblastic and not epiblastic cells. The cells of the salamander and *Triton* are very large, so the changes can easily be followed with the greatest accuracy.

Of course, under normal conditions the subsequent differentiation of the progeny of the cells of the three embryonic layers is limited to certain types for each layer, but the general potentiality is retained in varying degrees by the cells of different tissues and different groups of animals, being retained, perhaps, to a less extent in

<sup>1</sup> H. Driesch, *Analytische Theorie der organischen Entwicklung*, Leipzig, 1894. T. H. Morgan, *Experimental Studies on Teleost Eggs*, *Anat. Anz.*, x, 19, 1895. R. Zoja, *Sullo sviluppo dei blastomeri isolati dalle uova di alcune Meduse*, *Archiv für Entwicklungsmechanik*, i, 4, 1895. E. B. Wilson, *On Cleavage and Mosaic Work*, *Arch. f. Entwickl.*, iii, 1, 1896. A. Herlitzka, *Contribuzione allo studio della capacità evolutiva dei due primi blastomeri nell' uovo di Tritone*, *Arch. f. Entwickl.*, ii, 3, 1895. H. E. Crampson, *The Ovarian History of the Egg of Molgula*, *Journal of Morphology*, xl, Supplement, 1899. And many others.

<sup>2</sup> Gustave Wolff, *Die Regeneration der Urodelenlinse*, *Archiv für Entwicklungsmechanik*, i, 3, 1895. E. Müller, *Ueber die Regeneration der Augenlinse nach Exstirpation derselben bei Triton*, *Archiv für Mikroskopische Anatomie*, xlii, 1, 1896.