THE BACTERIOLOGICAL ASPECT OF TUBERCULOSIS.

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DR. McWEENEY read a paper on this subject and demonstrated a series of illustrative microscopic preparations and photographs. With regard to the morphology of the tubercle fungus he mentioned that he had never failed to detect genuinely ramified forms in sputum whenever he had leisure to seek them out. The type of ramification was that of the genus *Cladothrix*, and from the researches of Fischel, Coppin Jones, Hayo Bruns, and Ledoux-Lebard, there could be no doubt of the biological affinity of the tubercle fungus with *Streptothrix* and *Actinomyces*. He gave reasons for refusing to admit the spore-nature of the unstained bodies so often found embedded in the rods, and pointed out the hygienic importance of that fact. He emphasised the value of the staining reaction, long considered to be peculiar to the tubercle and leprosy bacilli, but now known to be shared by a smegma bacillus, and by the pseudo-tubercle bacilli isolated by Moeller and others from cow-dung—by Moeller, from the leaves of Timothy grass near the Görbersdorf Sanatorium, and by Rabinowitsch, from butter. Cultures of the three last-named organisms were demonstrated as well as slides showing their remarkable resemblance to the genuine tubercle organism. The cause of the staining reaction was the presence in the sheath of the bacillus of a peculiar *wax*, as was shown last year by Aronsen. This underwent gradual extraction by alcohol and ether, with the

result that the bacilli lost their specific staining reaction, a fact which may account for their gradual disappearance from tissues that have been treated for histological purposes with these substances. The relation of the bacillus of human to that of avian and piscine tubercle was discussed and cultures of these organisms demonstrated. The discovery by Ledoux-Lebard of the bacillus of fish-tuberculosis and the recently demonstrated inoculability of poikilothermous animals with a variety of a bacillus capable of thriving at ordinary temperatures were pointed out as important recent additions to our knowledge. The pathogenesis and modes of infection of the human system were then described, and the relative frequency of the conceptional, placental and post-natal origin of the disease discussed, and determined in the light of recent research. An attempt was likewise made to appreciate the importance of the rôle played by sputum, meat and milk in the dissemination of tuberculosis, and the speaker recounted his own experiences of tuberculin injection as the diagnostic method applied to cows, and laid stress upon what appeared to be the relative infrequency of the disease amongst Irish dairy cattle. The practice of keeping them "on grass" for more than six months of each year might be regarded as an "open-air" mode of treatment applied to the bovine race. He concluded by earnestly deprecating over zeal in the adoption of measures intended to be preventive, but which by involving irksome restriction or intolerable publicity would speedily be found to defeat their own purposes.