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RESEARCH TREND OF MEDICAL BACTERIOLOGY

By Dr. W. H. MANWARING

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DURING the last three years, conservative bacteriology has shown increasing discontent with nineteenth century theories of microbial infection and bodily resistance, a receptive attitude toward newly suggested hypotheses and alternative interpretations.

The suggested theories would offer plausible explanations for clinical non-success in the past and renewed hope of ultimate clinical victory.

I

Fifty years ago, clinicians were introduced to a new biological world. Mid-Victorian microscopists intuitively pictured the newly discovered disease germs as miniature animals or midget plants. Thus pictured, it was perhaps inevitable that they should have read into these minute pathogenic specks many of the laws and generalizations of higher biological science.

Centuries of dwindling superstition had taught modern man that, from generation to generation, each

higher plant and animal species is almost static in anatomical structure and physiological peculiarities. Minor variations, of course, were known to occur. Since the Middle Ages, however, rats had never been known to transmute into lizards, to fractionate into locusts, nor to evaporate into corrosive miasmas. It seemed logical to assume that this stability is in obedience to a general law of nature, equally applicable to microbial life. Obeying this static law a tubercle bacillus could never arise except from a pre-existent bacillus of approximately the same morphology and chemical composition. A diphtheria bacillus could never transmute into a gonococcus, nor fractionate into ultramicroscopic poliomyelitis colloids.

This static purpose of nature became a major premise for subsequent epidemiologic, diagnostic and therapeutic deductions. Tuberculosis, gonorrhoea and poliomyelitis were wholly unrelated infectious diseases, because of the postulated microbial invariability.

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