

colonies may also be grown aerobically. Deep agar colonies are distinctly larger, however, than those nearer the surface; there is usually, but not always indeed, a distinct zone of inhibition at and below the surface as with obligate anaerobes which is hard to explain if this species is a facultative aerobe-anaerobe, as my findings suggest.

That the above observations, limited at first to a single strain, were not to be interpreted as indicating acclimation of this strain to aerobic life, was shown when three other French strains received from Dr. Morton C. Kahn of Cornell University Medical School were also cultured aerobically. A fourth strain labelled *B. histolyticus* by Major Jablons and received from Dr. Kahn fail to grow aerobically and also failed to produce lesions in guinea pigs. But a strain of *B. histolyticus* recently isolated by my student, Miss Emelia Peterson, from a specimen of California soil grows both aerobically and anaerobically and has been transplanted aerobically three times with no apparent change in morphology, cultural characteristics or virulence.

### 247 (2207)

#### The isolation of bacillus histolyticus from soil in California.

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During a survey of California soils for anaerobic bacteria, we encountered a strain of *B. histolyticus* which is of interest as the first recovery of this species in America and one of the few records of its occurrence in soil. All of the other cultures so far described came from war wounds in France and the only recorded proof of this organism as an inhabitant of soil, aside from the fact that most war wounds are contaminated by dirt, is a statement by the Medical Research Committee<sup>1</sup> that, "it . . . has been obtained from earth."

The soil specimen was a clay adobe from near Walnut Creek, California, which lies in a rich agricultural valley of the coast range about 12 miles from Berkeley.

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<sup>1</sup>British Medical Research Committee, Report No. 39, 1919.

The filtrate of an initial culture of this soil in a meat mash medium in the constricted tube<sup>1</sup> contained also the toxin of *B. botulinus* Type A, and it was during our effort to recover this organism that the *Bacillus histolyticus* was isolated.

The primary culture contained numerous obligately aerobic hay bacilli and it is interesting to note that while our usual use<sup>2</sup> of gentian violet easily eliminated these by selective bacteriostasis, it was impossible in six trials to eliminate a certain facultative aerobe-anaerobe which we now consider to have been none other than the *B. histolyticus* since that was the only organism that could be isolated from the subsequent deep agar colonies.

The isolated culture corresponds in all of its morphologic cultural, and pathogenic properties to the war wound strains received from Dr. Weinberg of the Pasteur Institute of Paris or indirectly from Dr. Kahn of Cornell University Medical School.

## 248 (2208)

### The failure of fermentation reactions with bacillus histolyticus.

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I wish at this time to correct a mis-statement regarding the fermentative power of *B. histolyticus* that appeared in my 1922 paper,<sup>3</sup> in which I recorded acid and gas production in glucose, and uncritically accepted the records of Henry<sup>4</sup> and the British Medical Research Committee<sup>5</sup> of fermentation of glucose, levulose and maltose, which were based, like my own, on the study of a single strain. My own result may have been due to an undetected contamination. At any rate, Weinberg and Seguin<sup>6</sup>,

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1 Hall and Peterson, *Jour. of Bacteriology* (in press).

2 Hall, *Jour. Am. Med. Assn.*, 1919, lxxii, 274.

3 Hall, *Jour. Inf. Dis.*, 1922, xxx, p. 445.

4 Henry, *Jour. Path. and Bact.*, 1917, xxi, 344.

5 British Medical Research Committee, Report No. 39, 1919.

6 Weinberg et Seguin, *La Gangrene Gazeuse, Masson et Cie*, Paris, 1917.