

## III (928)

**Specificity of the complement deviation test in experimental tuberculosis.**

By J. BRONFENBRENNER.

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At the meeting of this Society on February 18, I reported the results of my preliminary attempts to prove the specificity of complement deviation in tuberculosis with Besredka's tuberculin, in some cases giving positive Wassermann reaction at the same time.

In this paper I would like to present the results of my experiment proving the possibility of independent existence of the two reactions in the same animal.

I produced an experimental orchitis in a series of rabbits, and on March 3d selected amongst them the animals giving positive W.R. All the animals were tested for Tb.R. but it was invariably negative.

When, however, infected with tuberculosis, part of these animals developed Tb.R. For a time both reactions were existing until W. R. disappeared in some animals spontaneously, in others, as shown on the table under the influence of salvarsan administered intravenously (0.04 gram per kilo), the Tb.R. persisting. The table on page 181 is the protocol of the experiment.

## III (929)

**One hundred parthenogenetic generations of *Daphnia* without sexual forms.**

By ARTHUR M. BANTA.

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November 17, 1911, the writer began rearing a number of pure lines of *Daphnia pulex* from large females taken in out-door ponds. The females were reproducing parthenogenetically and no males or "winter" eggs were found in the pond.

|                                 |                               | Rabbits with Experimental Orchitis. |     |         |     |               |                    |   | Normal Rabbits (Controls). |     |         |                  |  |  |
|---------------------------------|-------------------------------|-------------------------------------|-----|---------|-----|---------------|--------------------|---|----------------------------|-----|---------|------------------|--|--|
| Rabbits No.                     | 100                           | 102                                 | 105 | 109     | 111 | 117           | 118                | 130                                     | 131                        | 132 | 133     | 134              |  |  |
| March 3....<br>W. R.<br>Td. R.  | +                             | +                                   | +   | +       | +   | +             | -                  | -                                       | -                          | -   | -       | -                |  |  |
| March 5....                     | Not infected                  |                                     |     |         |     |               |                    | Infected with tuberculosis              |                            |     |         |                  |  |  |
| March 15....<br>W. R.<br>Td. R. | +                             | +                                   | +   | <+<br>+ | +   | <+<br>+       | <<+<br>+<br>+<br>+ | -                                       | -                          | +   | <+<br>+ | -<br>+<br>+<br>+ |  |  |
| March 17-21.....                | No saliv. Salvarsan intraven. |                                     |     |         |     |               |                    | Not infected                            |                            |     |         |                  |  |  |
| March 30....<br>W. R.<br>Td. R. | <+<br>-                       | -                                   | -   | +       | +   | <<+<br>+<br>+ | <<+<br>+<br>+      | -                                       | -                          | +   | -       | <+<br>+          |  |  |
|                                 | Salvarsan intraven.           |                                     |     |         |     |               |                    | No saliv. No saliv. Salvarsan intraven. |                            |     |         |                  |  |  |

The sign + meaning positive reaction.  
 The sign <+ meaning weakly positive reaction.  
 The sign <<+ meaning almost negative reaction.  
 The sign - meaning completely negative reaction.

Each line is propagated by selecting from the first brood of a young female on the day this first brood is released from the brood pouch. The selected young are placed each in an individual bottle with standard food and though examined daily are otherwise undisturbed until the first brood of the next generation appears, when the selections are made as before. Several of these lines have passed the 95th generation and one has just reached the one hundredth generation without the appearance of sexual forms in any generation. All the individuals of the first broods of each generation have been under more or less close scrutiny until they themselves reproduced. If any, or at any rate, many males had occurred they must certainly have been noticed. The method of rearing the daphnids (in individual bottles) has precluded the possibility of sexual reproduction even had males been abundant in the cultures.

There is no evidence of decreased vigor or loss of vitality in the lines. Hence it appears that there is not a necessary sexual cycle in the reproduction of this daphnid. Male daphnids, apparently of this species, have been collected at Cold Spring Harbor since this work was begun. These facts would lend evidence (if additional evidence were necessary) that the sexual cycle in *Daphnia pulex* is not an inherent necessary thing but that it is determined by environment.

*Simocephalus*, presumably *Simocephalus vetulus*, has been reared for 76 generations in one line, likewise without the appearance of sexual forms.

### 113 (930)

#### **The comparative importance of pressure and of toxicity of trikresol in subdural injections of sera.**

By **C. B. FITZPATRICK, J. P. ATKINSON, and A. ZINGHER.**

[From the Department of Health Laboratories, New York City.]

As a result of several accidents reported as being due to intraspinal administration of antimeningococcus serum containing trikresol, a number of tests were made on dogs to determine if possible whether the fatal results were due to the influence of trikresol in the serum, to the serum per se, or whether they were due to pressure.