

Research In *Bacillus X*

The B. X was isolated from ten different cases of Breast Carcinoma by Dr. R. R. Rife at the Rife Research Laboratory in San Diego, (Point Loma) California. It was carried through forty four transplants on "K" media in all ten instances.

The technique used in the isolation of this organism is, in brief, as follows; Blocks of tissue, taken under the most sterile conditions, were transferred into "K" media (previously examined for sterility). These were then placed under the direct influence of an argon filled gas tube, working under five thousand volts, for twenty four hours; then were placed in water baths with two inches of vacuum, and incubated at 37.5° C. At this time the delicate shine of growth is noticeable. From this point on as many as desired transplants can be made without repeating the foregoing operations.

The B. X is a filterable virus which filters through the W. Berkfeld filter. It is a small ovoid granule, highly plastic, and visible only with monochromatic light. The angle of refraction is $23\frac{1}{2}^{\circ}$ - and the color by chemical refraction is purple red. The length of the organism is $\frac{1}{15}\mu$ and its breadth $\frac{1}{20}\mu$. It carries an attraction to the cathode pole. Its death rate in milliamperes is 175 A.C. The X ray and Infra Red have no influence on the organism but the Ultra Violet ray slows up its matibility. The thermal death point is 42°C for 24 hours; the filament voltage is 10, and the filament amperage is .86. The plate voltage is 928, and its electronic oscillating rate is 11,780,000 cycles per second. The wave length of super regeneration of Indian tube is 17.910 meters;

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An inoculative serum was prepared by combining in a mixture, the transplants from the ten original growths with a 20 to 1 dilution of normal saline solution.

On Aug 3, 1933 $\frac{1}{10}$ C.C. of the above serum was inoculated into the breasts of two sets of white rats. One set consisting of two pregnant females with one control, and the other of two young females and one control. The serum was injected directly under the epidermis of the breasts. The animals had been kept in quarantine for a period of ninety days and were normal in every respect at time of inoculation. Seven days later the inoculated rats developed lesions (superficial) in the thyroid region and on the shoulders. These lesions varied in size and severity on succeeding days. The controls remained normal.

On Aug 21, the control of the pregnant female gave birth to two young; one died. The delivery of the inoculated pregnant female was still delayed, and the temperatures of all the inoculated animals rose from 1 to $1\frac{1}{2}^{\circ}$ F. The lesions increased in area and density and one focus in particular was decidedly excavated.

On Aug 22 one of the infected rats presented 5 young, and the other until this day has remained barren, the swelling of the abdomen which evidently was occupied by the young having gone down and returned to normal. In the offspring of the infected mother, two developed the identical type of lesions on the surface of the thyroid region. One of these grew extremely normally and the other the growth was stunted. The latter developed a severe growth on the upper portion of the right side of the jaw which consumed most of the normal tissue.

The teeth were badly malformed, and grew very long curving inward and deep into the throat. These were shortened by surgical operation. During this entire period the controls

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↳ remained normal. x

In Aug. 28th a set of male rats consisting of the same number were inoculated as in the females. The same type of epidermal foci developed, the ventral remaining normal. On Sept. 5, one of the males was posted and revealed no pathology. A lesion was excised from the shoulder of the other expected inoculated male*. On Sept. 14, the Bacillus "X" was recovered and identified in the media. The lesions on all the inoculated rats vary in size and density from day to day and in some cases clear up and break out in other portions of the epidermis.

* tissue placed in "K" media and run through the original method of technique.

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It has been demonstrated by experiment that the B. X exists in two cycles, which may be classified as forms A and B. Form A applies to B. X in its ultra filterable cycle. In this stage the organisms theoretically exist in malignant tissue. Examination of the fresh filtrate preparation of malignant tissue under 20,000X magnification, using any known system of illumination, fails to reveal the presence of living bodies.

However, after a special method of cultivation, involving the use of the Argon Ray and Vacuum conditions, the afore mentioned filtrate in K medium contains swarming myriads of the visible cycle - form B. The B. X in this form may be seen under 4,000X magnification (using monochromatic illumination) as a highly plastic anacid granule - purple-red in color.

Since experiments show that the *Bacillus* X in form A exists in malignant tissue, it is theoretically possible to change its cycle to form B by application of the Argon Ray and Vacuum conditions. After the cycle change has been accomplished (in theory), the application of the asocollatine ray at a cycles per second vibration of 11,780,000 should completely destroy the B. X in the malignant tissue.