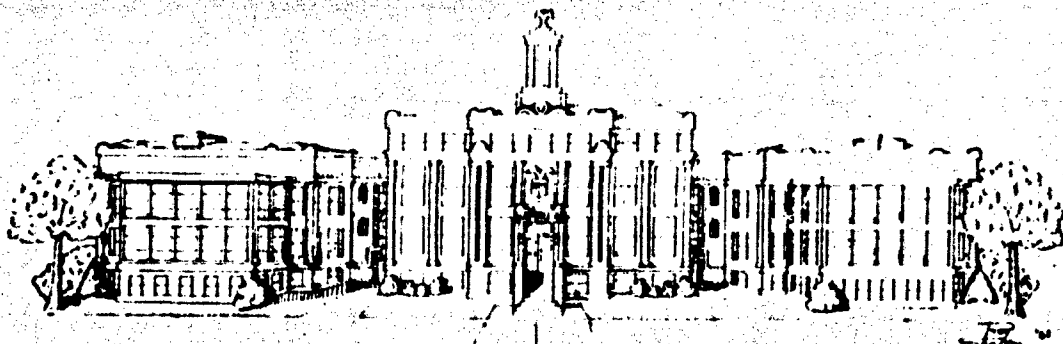


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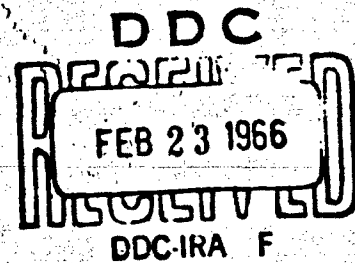


CYTOTOXICITY OF HUMAN SERA IN TISSUE CULTURE SYSTEMS

D. W. BENO, R. I. LITTLE AND E. A. EDWARDS

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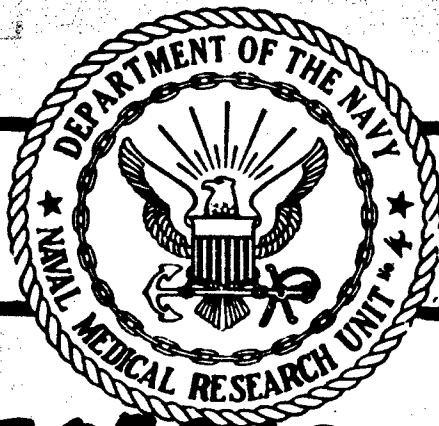
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June 1965

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BACTERIOLOGICAL PROCEEDINGS—1965

VI35. Cytotoxicity of human sera in tissue culture systems. D. W. Beno,\* R. I. Lytle, and E. A. Edwards. U.S. Naval Hospital, Great Lakes, Ill.

While performing adenovirus neutralization tests in micro-titer plates, 148 (84%) of 176 heat-inactivated human sera exhibited cytotoxicity for Hep-2 cells at a 1:2 dilution. Titers ranged from 1:2 to 1:128 in "well" and ill individuals. Curtain electrophoretic analysis indicated that toxic factor moved with the prealbumin fraction. Presence in prealbumin was confirmed by Ouchterlony tests against prealbumin antisera and by disc electrophoresis methods. For further confirmation, 15 sera from three persons with varying levels of cytotoxicity for HeLa, Hep-2, KB, and WI38 cell lines were treated by ammonium sulfate precipitation, and two other highly toxic sera were submitted to curtain electrophoresis. The fractions were then tested for cytotoxicity in HeLa and Hep-2 cell lines. Toxicity was not demonstrated by any of the globulins that were separated from the 17 sera. It was concluded that the toxic substance was a prealbumin possibly associated with some physiological change in the human body.

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(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

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13 ABSTRACT  While performing adenovirus neutralization tests in microtiter plates, 148 (84%) of 176 heat-inactivated sera exhibited cytotoxicity for H.Ep-2 cells at a 1:2 dilution. Titers ranged from 1:2 to 1:128 in "well" and "ill" individuals. Curtain electrophoretic analysis indicated that the toxic factor moved with the prealbumin fraction. Presence in the prealbumin was confirmed by Ouchterlony tests against prealbumin antisera and by disc electrophoresis methods. For further confirmation, 15 sera from 3 persons with varying levels of cytotoxicity for HeLa, H.Ep-2, KB, and WI38 cell lines were treated with ammonium sulfate precipitation, and two other highly toxic sera were submitted to curtain electrophoresis. The fractions were then tested for cytotoxicity in HeLa and H.Ep-2 cell lines. Toxicity was not demonstrated by any of the globulins that were separated from the 17 sera. It was concluded that the toxic substance was a prealbumin possibly associated with some physiological change in the human body.			

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