Table 1. Serologic results on tuberculous serums and their fractions. Fractions are labeled according to Nichols and Deutsch (*4*).

Serum No.	Serum fraction	Titer of: Hemagglutination test	Titer of: Complement-fixation test
4	Whole serum	Neg.	Neg.
	Sup. A	Neg.	Neg.
	Ppt. B	Neg.	Neg.
	Ppt. C_2	Neg.	1: 32
5	Whole serum	Neg.	Neg.
	Sup. A	Neg.	Neg.
	Ppt. B	Neg.	Neg.
	Ppt. C_2	Neg.	1: 256
6	Whole serum	Neg.	Neg.
	Sup. A	Neg.	Neg.
	Ppt. B	Neg.	1: 2
	Ppt. C_2	Neg.	1: 16
7	Whole serum	Neg.	Neg.
	Sup. A	Neg.	Neg.
	Ppt. B	1: 8	1: 1
	Ppt. C_2	Neg.	1: 16
8	Whole serum	Neg.	Neg.
	Sup. A	Neg.	Neg.
	Ppt. B	Neg.	Anticompl.
	Ppt. C_2	1: 8	1: 8
9	Whole serum	Neg.	Neg.
	Sup. A	1: 64	Neg.
	Ppt. B	Neg.	Anticompl.
	Ppt. C_2	Neg.	1: 8
10	Whole serum	1: 20	Neg.
	Sup. A	1: 8	Neg.
	Ppt. B	1: 8	Anticompl.
	Ppt. C_2	1: 16	1: 8
11	Whole serum	Neg.	1: 16
	Sup. A	1: 4	Neg.
	Ppt. B	1: 16	1: 2
	Ppt. C_2	1: 8	1: 16

tinating and complement-fixing antibodies, yielded fractions that gave a positive complement-fixation test. Fractions of three of these serums (No. 7–9) reacted also in the hemagglutination test. Further, fractionation of two tuberculous serums (No. 10 and 11, Table 1) giving a positive reaction in one or the other test furnished proteins manifesting antibody activity of the type seemingly absent in the whole serum.

As a control, five nontuberculous serums were subjected to the same procedures. None of their fractions exhibited antibody activity in the tests mentioned.

These results demonstrate that the absence of antibodies in the tuberculous serums investigated (*6*) was only an apparent one and that fractionation of the serum proteins unmasked antibody activity. The problem whether a substance suppressing antibody was present in these serums or whether fractionation accomplished dissociation of an antibody-antigen complex is under investigation.

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6. This investigation was supported by grants from the Committee on Medical Research of the American Trudeau Society, Medical Section of the National Tuberculosis Association, and from the California Tuberculosis and Health Association.

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Availability of Crystalline DL-α-Lipoic Acid

Studies conducted in this and other laboratories during the past decade have culminated recently in the isolation of an extremely active biocatalyst that has been designated α-lipoic acid (*1*) and Protogen-A (*2*). This substance is a growth factor for several microorganisms and has been shown to participate in the oxidative decarboxylation of pyruvic and α-ketoglutaric acids.

Although α-lipoic acid has been identified and obtained synthetically in racemic form (*3–5*), it is not generally available for biological research. In the belief that the nutritional and therapeutic value of this biocatalyst will be assessed only when it is made readily available to interested investigators, we have devoted our time recently to developing an improved synthesis of DL-α-lipoic acid. As a result we have on hand a significant quantity of the crystalline substance which we wish to make available to those interested in exploring its potentialities. Requests for samples should be sent to the address given below.

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5. The racemic form is designated DL-α-lipoic acid (*3*) and 6-thioctic acid (*4*).

13 October 1954.