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On the Resistance and Filterability of the Agent Transmitting Leucosis.*

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Blood cells preserved in 50% glycerin for 51 days produced leucosis in 3 of 4 injected fowls, after an incubation period of from 51 to 56 days. The same material, kept in glycerin for 104 days, produced leucosis in 3 of 4 fowls injected after a period of incubation from 35 to 82 days. The fresh blood employed in these tests caused leucosis in all 5 inoculated birds 12 to 45 days after injection. The fresh blood, as well as the blood preserved in glycerin, was injected in amounts of 0.5 cc.

Attempts to determine whether the agent of leucosis resists desiccation have repeatedly failed until recently fowls were injected with blood, dried rapidly *in vacuo* over sulphuric acid, at a temperature of about +4°C. and kept at this temperature for 15 days. All 3 injected fowls developed leucosis after 34 to 45 days. Likewise successful was the inoculation of blood dried over calcium chloride under similar conditions. Of 3 injected fowls 2 developed leucosis. The same fresh blood caused leucosis in 2 injected fowls, after a period of incubation of 13 to 19 days.

Previous failures to preserve this agent under similar conditions may have been due to the relatively mild activity of the agent, now increased considerably. This "increase in virulence" is manifested by the very high percentage of successful inoculations, decrease in the incubation period, and associated increase in the concentration of the transmissible principle in the blood stream as determined by titration.

Leucemic blood, kept in the refrigerator at +4°C., was still active after 7 days, but had lost its activity after 16 days.

Filtration has been much facilitated by passing blood through a coarse filter before passage through a fine filter. Plasma passed through a fine Berkefeld (W) filter after preceding filtration through a coarse filter caused leucosis in 2 of the 4 fowls inoculated. The same unfiltered plasma caused leucosis in 2 of the 3 injected fowls.

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