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## The depressive action of magnesium sulphate and sodium oxalate and the rapid antagonistic action of calcium.

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*A*. At the October meeting we reported that the effect of a combination of ineffective doses of magnesium sulphate and sodium oxalate is equal to that of an effective dose of magnesium sulphate alone, except that the anesthetic effect due to the combination of the two salts is of greater duration. Each of these two rabbits received about two hours ago 0.8 gm. magnesium sulphate and 0.2 gm. sodium oxalate per kilo body weight, subcutaneously. You see, they are still deeply anesthetized and paralyzed. Of the other two rabbits one received 0.8 gm. magnesium sulphate and the other 0.2 gm. sodium oxalate per kilo body weight subcutaneously. You see they behave practically normally.

*B*. Now each of the anesthetized animals receives through the ear vein, about 8 c.c. of a 2.5 per cent. solution of calcium chloride. You see that the respiration becomes deeper and more rapid almost immediately and within a minute of the beginning of the injection they turn over and sit up.

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## The pulmonary reaction to B. pyocyaneus.

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Intra-bronchial insufflation of broth cultures of *B. pyocyaneus* in doses of 10–15 c.c. were more fatal than any other organism thus far used, except *B. prodigiosus*.

The lesion produced was that of a lobular pneumonia with intra-alveolar hemorrhage and fibrinous pleurisy. The bacilli were recovered from the heart's blood and from the lungs.

Immunization experiments were successfully carried out, increasing doses of 1 to 15 c.c. being administered. Dogs survived such doses, and developed agglutinins to *B. pyocyaneus.*

In animals which survived ten days or longer, areas of unresolved pneumonia and thickened pleura were the rule.

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## A method for the separation of lipins from lipin extracts.

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Owing to the solubility of lipins in ether and alcohol we have a basis for the isolation of these substances. To separate them from their ether and alcohol solution we have several methods. As a rule these methods are expensive as most of the solvent is lost, they require considerable time and in some of the methods heat is applied, a bad procedure on account of the labile nature of some of these substances.

I have devised a method which gives good results, allows the solvent to be regained and takes little time without using heat. It is based on the fact that lipins are *insoluble in water.* The method is as follows; to the ether or alcohol extract of the lipins add cold water containing 0.5 per cent. of sodium chloride,[1] till no further precipitation occurs. The water should be added slowly without shaking or stirring, otherwise some of the lipins will be emulsified. Any of the precipitate not coming to the surface may be obtained by filtration.[2] It will be found that this precipitate contains the lipins and if one wants to obtain the phospholipins from the precipitate, simply wash thoroughly with acetone until no residue is obtained, when the washings are evaporated to dryness. The acetone removes all the lipins except the phospholipins.

[1] The addition of sodium chloride to the water helps to flocculate the lipins and by raising the specific gravity of the solution, allows the lipins to come to the surface, where they may be skimmed off by means of a spoon. Percentages of sodium chloride under 0.5 per cent. do not give good results.

[2] The solvent can now be obtained by distilling it from the filtrate.