and which states that only substances soluble in lipoid can penetrate living cells might explain the penetration of dyes in the first 2 groups (with the exception of acid fuchsin and alizarin S). But the behavior of the third group cannot be explained by his theory. For example, crystal violet and methyl violet are readily soluble in chloroform and yet they penetrate the vacuole very slowly.

On the other hand the behavior of all the groups may be explained by the theory[2] which postulates 2 or more partition coefficients and which is illustrated by the artificial system.

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Is Respiratory Anaphylaxis (Asthma) the Result of a Local or General Sensitization?*

BRET RATNER AND HELEN LEE GRUEHL.

From the Departments of Immunology and Pediatrics, University and Bellevue Hospital Medical College, New York University.

When we made our investigations[1] on respiratory anaphylaxis (asthma) we did not know whether the sensitization brought about by the inhalation of a dry antigenic dust was general or purely local in character.

If sensitization and shock are brought about through inhalation, and, anaphylactic death demonstrated by a subsequent intravenous injection, it is plausible to assume that this sensitization might be relegated exclusively to the respiratory tract. However we have no definite evidence to support either the local or general character of this particular form of hypersensitiveness.

More recently[2] we showed that a pregnant guinea pig who had demonstrated respiratory anaphylaxis throughout pregnancy actually transmitted similar hypersensitiveness to her offspring *in utero*. This points to the assumption that inhaled antigens do circulate in the blood of the sensitized animal. In order to show further proof for this fact we have carried out the following experiments.

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[2] Irwin, M., PROC. SOC. EXP. BIOL. AND MED., 1927, XXV, 127.

* This work is being carried on under "The Crane Research Fund for the Study of Allergic Diseases in Children."

[1] Ratner, B., Jackson, H. C., and Gruehl, H. L., PROC. SOC. EXP. BIOL. AND MED., 1925, xxiii, 16; *ibid*, p. 17; *Am. J. Dis. Child.*, 1927, XXXIV, 23.

[2] Ratner, B., and Gruehl, H. L., PROC. SOC. EXP. BIOL. AND MED., 1928, XXVI, 8.

Young virgin guinea pigs were sensitized by inhalation to dry horse dander dust. After a suitable incubation period, a laparotomy was performed under ether anesthesia and the uterine strip was removed. This strip was suspended in an oxygenated bath of Locke's solution and the Dale experiment was carried out in the usual manner, using an extract of horse dander as antigen.[1] After the excision of the uterine strip, the abdomen was sewed up and the animal allowed to completely recover from her anesthesia. When the animal was apparently normal again it was given an intravenous injection of the same solution used for the Dale experiment. By this method we were able to show in the same animal a positive uterine contraction and a typical anaphylactic death after intravenous injection. This was shown in 11 out of 39 animals.

This demonstrates that an animal sensitized by inhalation may develop a systemic as well as a local hypersensitiveness.

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Transmission of Fowl-Pox by Mosquitoes.

I. J. KLIGLER, R. S. MUCKENFUSS AND T. M. RIVERS.

From the Hospital of the Rockefeller Institute for Medical Research, New York.

The mode of transmission of certain virus diseases of chickens is still obscure. Fowl-pox as well as fowl plague are common diseases of the barnyard, both, according to reports, occurring during the spring and fall months. Many workers[1, 2] state that attempts to infect by contact or by ingestion of infected foodstuffs usually fail. These facts suggested the possibility of insect transmission.

Since fowl plague is not prevalent in this country our experiments were conducted with fowl-pox. Using *Culex* and *Aëdes* mosquitoes it was possible to transfer the disease from infected to healthy fowls with considerable regularity by interrupting the mosquitoes after they began feeding on infected areas of the diseased chicken and allowing them to complete their meal on the comb or wattles of healthy ones. Positive transmission of the disease was obtained even when the interval between feedings was 2 hours. As a rule,

[1] Goodpasture, E. W., "Filterable Viruses," T. M. Rivers, Williams and Wilkins Company, 1928.

[2] Todd, C., I. *Brit. J. Exp. Path.*, 1928, ix, 19.