

SCIENTIFIC PROCEEDINGS.

ABSTRACTS OF COMMUNICATIONS.

One hundred thirty-fourth meeting.

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President Jackson in the chair.*

21 (2253)

A study of the anaphylactogenic properties of aqueous extracts of pollens and Le Page's glue.

By MATTHEW WALZER and ELLA F. GROVE (by invitation).

[From Cornell University Medical College, and the New York Hospital, New York City.]

A study, with the Dale method, of a series of isolated guinea pig uteri, from animals injected with extracts of timothy and giant ragweed pollens, confirmed the findings of Parker that pollen extracts are antigenic. The uterine horns were found to be specifically sensitive only to the pollens with which the animal had been injected. This specificity exists even for pollens generically closely related; in other words, all attempts to obtain contractions in uteri sensitized with giant ragweed pollen by the use of low ragweed pollen extract as the antigen were unsuccessful.

Intravenous injections of the specific concentrated antigen in sensitized guinea pigs failed to kill any of the animals by acute anaphylactic shock. Precipitins could not be demonstrated in any of the animals' sera, nor have attempts at passive transfer of the sensitivity as yet met with success.

Le Page's Glue has antigenic properties very similar to those of pollen extracts.

The characteristic feature, which differentiates this group of

antigens from the known anaphylactogens, is their ability to elicit second, third, fourth, and more contractions from the same sensitive horn, by the repeated addition of the *same* amount of antigen to a fresh bath. This failure to conform with the quantitative rules governing the successive partial neutralization of precipitins, as demonstrated by Coca and Kosakai, and confirmed by the authors in the anaphylactic guinea pig uterus, together with the failure to demonstrate precipitins and passive transfer of sensitivity in this group of animals, makes it problematical whether we can include these antigen-antibody reactions under the heading of anaphylaxis as we understand that term at present.

22 (2254)

The nature of the pollen atopen.

By ELLA F. GROVE and ARTHUR F. COCA.

[From Cornell University Medical College, and the New York Hospital, New York City.]

It has been assumed that the exciting agent of atopic coryza and asthma in pollen is a protein.

We were at first inclined to the belief that this agent was a non-dialyzable protein, on account of the observation that, although about two-thirds of the nitrogen of the pollen extract could be eliminated by dialysis, the atopic activity of the extract remained unaltered.

This belief was proved to be incorrect by the further observation that, after digestion of the protein with trypsin, and thorough dialysis, the pollen extract was found to be just as active as before this treatment, although no trace of its original nitrogen content remained in it.

This result seems to place the pollen atopen in the general category of the enzymes, without, however, in any way demonstrating that the substance possesses the function of an enzyme.