
Memoranda

The Preparation of Castor Seed Allergen

Schern (1910) produced anaphylaxis in guinea pigs using extracts of castor seed, while *Alilaire* (1914) was the first to record sensitisation in man. *Grabar* and *Koutseff* (1934) showed that the allergen was distinct from the well-known phytotoxin, ricin. This allergen has been extensively investigated by *Spies* and *Coulson* (1943) and by *Spies, Coulson, Chambers, Bernton* and *Stevens* (1944), who have prepared it in a high state of purity. In spite of this, it seems that no simple method of preparing the allergen has been described. The method to be described was developed in order to obtain a supply of this substance for use in the desensitisation of a member of this department who became allergic to castor seed while carrying out work on ricin. It is inadvisable to use simple extracts of the plant for this purpose, owing to the presence of this highly toxic substance. At the same time extreme purity is unnecessary, and possibly undesirable, as *Spies et al.* (1944) have shown that their purest, carbohydrate-free, preparation had only one-tenth of the antigenic potency of an earlier, less pure fraction.

The only advantage claimed for this method is that it may be carried out without the need of any particular skill or specialised apparatus.

Experimental Procedure

50 g. of castor seed is crushed by passing it through an ordinary kitchen mincer, and placed in a flask with 200 ml. of water. The flask is heated on a boiling water bath for 4 hours, after which the contents are transferred to a large funnel and allowed to filter under gravity overnight. The filtrate is acidified with a few drops of dilute acetic acid, and one quarter of its own volume of ethanol added. The resulting precipitate is centrifuged off and discarded. Excess ethanol (at least four times the original volume of the filtrate) is now added, and the liquid again centrifuged. The supernatant liquid is poured off, and the precipitate washed with a little ethanol and dried in a vacuum dessicator over calcium chloride. The yield is about 1 %.

Prepared by this method, castor allergen is a yellowish white solid, freely soluble in water. It is without toxicity, no apparent symptoms being caused in a 25 g. mouse by the intraperitoneal injection of 10 mg., the lethal dose of ricin for a similar mouse being of the order of 0.1 μ g. The allergen is quite stable, and loses none of its activity after storing for 10 years at room temperature.

A 1 : 8,000,000 solution gives a very weak skin reaction in a sensitised human subject, but with ten times this concentration the result is clearly positive.

Acknowledgements

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References

- Schern, K.*: Arch. Tierheilk. 36, Suppl. 590, 1910.
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Grabar, P. and *A. Koulseff*: C. R. Soc. Biol., Paris 117, 702, 1934.
Spies, J. R. and *E. J. Coulson*: J. Amer. chem. Soc. 65, 1720, 1943.
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British Association of Allergists

Meeting on 23rd October, 1954

A General Meeting of the British Association of Allergists was held in the Lecture Theatre, The Wright-Fleming Institute, St. Mary's Hospital, on Saturday, 23rd October, 1954.

Dr. J. Freeman gave a talk on the "Mass Experiments on Pollens During 1949-54". He was followed by *Dr. J. Pepys* on the "Relationships of Specific and Non-Specific Factors in the Tuberculin Reaction".

In the afternoon, papers were by *Dr. G. A. Rose*, "Recent Observations on Polyarteritis", and *Mrs. R. Augustin* on "Enzymatic Activities of Grass Pollen Proteins in Relation to Skin Reactivity and Standardisation".

Mass Experiments on Pollens During 1949-54

By J. Freeman

In 1949-50 a statistical investigation was made on the effect of "a visit to America" in sensitising people to Ambrosia Pollen. The results showed a distinct increase of sensitivity amongst those who had been to America but the results were suspect because so few of the hay fever patients concerned had been to America, and also because it was impossible to define what would be an effective visit.

Bermuda grass pollen having been guaranteed by American allergists to differ markedly from English grass pollens, researches on the point were made in 1951 and 1954.