

Dr. Hisset's paper presents some interesting ideas. Any experimental verification of the hypothesis would almost certainly involve *in vivo* studies - there are too many imponderables to allow extrapolation of *in vitro* results to the human situation. To quote Topley and Wilson, "Principles of Bacteriology and Immunity", p. 313:

"To this we must add that antigenicity is also determined by the readiness of the appropriate cells in the animal under consideration to accept a substance as a stimulus to antibody formation - a readiness that has no necessary relation to the antigenicity of the substance in other animals."

I imagine the above also applies to haptens, simple and complex. Therefore, the prime question is probably - which cells, in what tissue, in what animal?

The idea of a literature survey in breadth is good and I would very much like to see the results of such a survey. However, given the apparent scarcity of information, I doubt whether the survey will "suffice to substantiate and disprove the hypothesis".

On the constructive side, the only system other than *in vivo* I can think of that might be of use is the production of inflammatory response in organ cultures by application of whole smoke or smoke fractions. This might possibly serve as a screening system for presence of toxicants or haptens.

Overall the project is extremely interesting and there is at least some evidence to support an allergic response mechanism connecting smoke and some diseases.

The references below may be of help to Dr. Hisset in his survey. Also without knowing Dr. Hisset's level of knowledge of this subject I recommend Zweifach's book "The Inflammatory Process", which contains a very good discussion of immune responses in inflammation. On the same terms I offer another quote from Topley and Wilson, p. 313:

"In these circumstances a substance will be antigenic only if it is too big to be excreted, too stable to be hydrolysed, and of such a configuration that it will be more readily handled by the mechanism resulting in antibody-formation than by the more direct physiological modes of destruction and elimination."

If this statement is currently applicable it may help Dr. Hisset identify the compounds of interest.

Kod Sloggett,  
Dave Bazo.

1. "Tobacco Allergy in Cardiovascular Disease: A Review", J. Harkavy, *Ann. Allergy* 20, 447-450 (Aug., 1962).
2. "Smoking and Serologic Abnormalities", C. Reiskell et al, *JAMA* 181, 674-77 (Aug., 1962).

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Cardiopulmonary Effects of Tobacco and Related Substances", D. Aviado et al, *Arch. Envir. Health* 12(6), 105-14 (1966).

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Books Quoted

1. **Zweifach, Grant & McCluskey, "The Inflammatory Process", 1965 (Acad. Press, N.Y.).**
  2. **Topley and Wilson, "Principles of Bacteriology and Immunity", 5th Edition, 1966, (Edward Arnold, London).**
- P.S. My own knowledge of immunology is negligible.**

**R.F.S.**

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