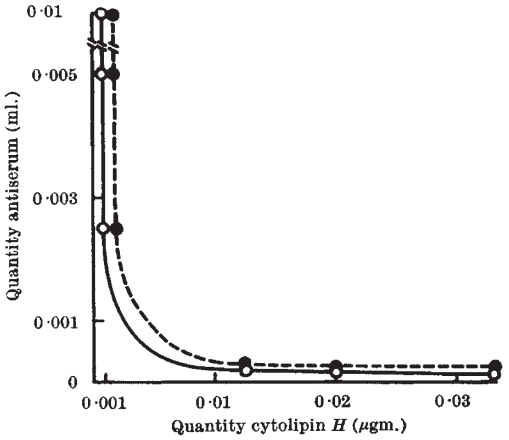

Fig. 1. Isofixation curves determined with cytolipin *H* and antisera to cervix carcinoma (broken line) and reticulum cell sarcoma (solid line). Three 50 per cent hæmolytic units (0·00375 ml. of guinea pig serum); 2 hr. incubation at 20° C. (ref. 9)

This work was supported by the American Cancer Society and a research grant (*C*-2316) from the National Cancer Institute of the U.S. National Institutes of Health, Public Health Service.

We wish to thank Dr. Morris Teller and his associates for supplying the tumour tissue and Richard Brandt for invaluable technical assistance. The carbon and hydrogen analyses were performed by the Spang Microanalytical Laboratory, Ann Arbor, Michigan.

Maurice M. Rapport
Liselotte Graf
Vladimir P. Skipski
Nicholas F. Alonzo

Division of Laboratories and Research,
New York State Department of Health, and
Division of Experimental Pathology,
Sloan–Kettering Institute for Cancer Research,
New York.
April 25.

[1] Witebsky, E., *Klin. Wochenschr.*, **9**, 58 (1930).
[2] Rapport, M. M., Alonzo, N. F., Graf, L., and Skipski, V. P., *Cancer* (in the press).
[3] Folch, J., Ascoli, I., Lees, M., Meath, J. A., and LeBaron, F. N., *J. Biol. Chem.*, **191**, 833 (1951).
[4] Rapport, M. M., and Alonzo, N. F., "Biochemical Problems of Lipids", edit. by Popjak, G., and LeBetron, E., 69 (Butterworth and Co., Ltd., 1956).
[5] Rapport, M. M., Graf, L., and Alonzo, N. F., *Cancer* (in the press).
[6] Timell, T. E., Glaudemans, C. P. J., and Currie, A. L., *Anal. Chem.*, **28**, 1916 (1956).
[7] Radin, N. S., Brown, J. R., and Lavin, F. B., *J. Biol. Chem.*, **219**, 977 (1956).
[8] Isherwood, F. A., and Jermyn, M. A., *Biochem. J.*, **44**, 402 (1949).
[9] Rapport, M. M., and Graf, L., *Ann. N.Y. Acad. Sci.*, **69**, 608 (1957).

Effect of Certain Polyphenylated Aliphatic Hydrocarbons on the Phagocytic Activity of the Reticulo-Endothelial System

In a recent communication to *Nature*, Nicol *et al.*[1] reported the effect of various stilbene compounds on the phagocytic activity of the reticulo-endothelial system, intimating that stimulation was associated with certain aspects in the chemical structure, and that the strongest stimulants possessed high œstrogenicity. The present communication reports the effect on reticulo-endothelial phagocytic activity of some polyphenylated aliphatic hydrocarbons related to the synthetic œstrogens of the diphenylmethane series.

The present experiments were carried out on 50 male white mice (*T.O.* Swiss strain) of 20–30 gm. body-weight. Five of the animals were used for assessing the effect of each compound on the phagocytic activity of the reticulo-endothelial system, each animal receiving one subcutaneous injection of 0·5 mgm. of each substance in 0·05 ml. of arachis oil daily for six days. The phagocytic activity of the reticulo-endothelial system was measured on the eighth day, as described in the previous communication[1].

Twenty-five animals were used as controls. Each received one subcutaneous injection of 0·05 ml. arachis oil daily for six days and then showed an average phagocytic index or *K* value of 13 ± 2·4.

Table 1. Effect of Certain Polyphenylated Aliphatic Hydrocarbons, containing at least one *para*-Hydroxyl Group, on the Phagocytic Activity of the Reticulo-Endothelial System

	Compound used	Phagocytic index (*K* value)	Œstrogenic activity (R.U.) (mgm.)
A	3 : 3-Di-(*p*-Hydroxyphenyl)-*n*-pentane	16 ± 2·2	5
B	3-(*p*-Hydroxyphenyl)-3-phenyl-*n*-pentane	11 ± 1·1	10
C	*p*-Hydroxyphenyldiphenylmethane	13 ± 1·7	25
D	1-(*p*-Hydroxyphenyl-1 : 1-diphenylpropane)	10 ± 0·6	100 (inactive)
E	*p*-Hydroxyphenyltriphenylmethane	8 ± 1·6	100 (inactive)
	Control values for 25 animals	13 ± 2·4	

Table 1 shows the relative *K* values of five polyphenylated aliphatic hydrocarbons investigated, together with their known levels of œstrogenicity. The results indicate that compound *E* has a profound depressant effect on phagocytosis only hitherto found following the administration of cortisone[2] in which the phagocytic index was reduced to $K = 7$. Compound *E* is the only non-steroid found by us to cause such marked depression of phagocytic activity. Compounds *B* and *D* show only a minor depressant action; compound *C* causes no alteration; while compound *A*, which is œstrogenic in the rat following doses of 5 mgm., has a slight stimulatory effect.

We are indebted to Prof. D. H. Hey for help in the interpretation of the above results and to Sir Charles Dodds for generously supplying these compounds. We also gratefully acknowledge assistance from the Central Research Fund of the University of London and from the Medical Research Council.

T. Nicol
C. C. Ware
D. L. J. Bilbey

Department of Anatomy,
King's College,
London, W.C.2.
May 21.

[1] Nicol, T., Bilbey, D. L. J., and Ware, C. C., *Nature*, **181**, 1538 (1958).
[2] Bilbey, D. L. J., Ph.D. Thesis (London, 1957).

Species Difference in Pyridine Nucleotide Synthesis by Erythrocytes

Leder and Handler[1] have described the synthesis of pyridine nucleotide from nicotinamide and glucose by human erythrocyte homolysates in amounts as much as ten times the normal content and they identified the synthesized material as nicotinamide mononucleotide. These authors also suggested that fructose diphosphate and adenosine triphosphate