

hypersensitivity reactions^{4,17,29}. The existence of such a relationship might be tested by determining if the response to PHA-M is impaired in cultures of leucocytes from patients with active sarcoidosis, a disease in which there is often an impairment of delayed skin reactions to a variety of antigens³⁷.

The relationship between the mitogenic and hemagglutinating effects of PHA is of considerable interest. There is evidence that the hemagglutinating activity can be present in the absence of mitogenic activity³⁸. The possibility that the mitogenic activity could exist in the absence of hemagglutinating activity was supported by the work of GENEST³⁹. He used a semi-purified PHA preparation and stated that '...filtration through a Seitz filter (disc S-1) inhibits the agglutinating capacity but not the mitogenic activity of our vacuum desiccated extracts. This inhibition does not appear following filtration of lyophilized material'. No further details of this phenomenon were presented.

In the studies performed herein, the erythrocyte agglutinating activity of PHA-M has been removed, but the blastogenic and mitogenic activity has been retained. Presumably, the hemagglutinating factor has been adsorbed to or otherwise inactivated by the erythrocytes during their agglutination. The method used here was suggested by the observation of RIGAS and OSGOOD¹ that the agglutinating activity of the supernatant of their PHA decreased during the process of hemagglutination. While this paper was in preparation, it was reported that substances with 'leucocyte growth factor activity'⁴⁰ and mitogenic activity⁴¹ had been obtained free of erythrocyte agglutinating activity.

The data presented above strongly suggests that the erythrocyte-agglutinating and blastogenic activities of PHA-M reside in separate molecules. Because of the

method of preparation of PHA-M¹, it is quite possible that these molecules are proteins. In this regard it should be noted that PHA-M has been shown to contain many proteins⁴¹. Further characterization and purification of the active factors of PHA-M by chemical, electrophoretic and immunologic means, would be of great interest⁴².

Résumé. Phytohémagglutinin a transformé en cultures brèves plus de 70% des petits lymphocytes de personnes normales, de nouveau-nés et d'hypo- γ -globulinémiques en cellules blastoïdes, mais moins de 3% des lymphocytes de malades avec leucémie lymphatique chronique. L'action blastogénique existe dans l'absence érythrocyte-agglutinante. On discute la signification de ces découvertes.

J. H. ROBBINS⁴³

Departments of Microbiology and Medicine, and Cell Research Laboratory, The Mount Sinai Hospital, New York (U.S.A.), August 27, 1963.

³⁷ R. A. GOOD, W. D. KELLY, J. RÖTSTEIN, and R. L. VARCO, *Progr. Allergy* 6, 187 (1962).

³⁸ A. DE LA CHAPELLE, *Lancet* 1961i, 1348.

³⁹ P. GENEST, *Lancet* 1963i, 828.

⁴⁰ T. PUNNETT and H. H. PUNNETT, *Nature* 198, 1173 (1963).

⁴¹ J. H. ROBBINS and A. W. WACHTEL, *Lancet*, 1963ii, 406.

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⁴³ *Present address:* Clinical Neuropharmacology Research Center, National Institute of Mental Health, Saint Elizabeths Hospital, Washington (D.C., U.S.A.).

CONGRESSUS

Czechoslovakia

Third European Regional Conference on Electron Microscopy

Prague, August 26 – September 3, 1964

The Conference on Electron Microscopy in Prague will deal, as usual, with physics and construction of electron microscopes, as well as biological, medical, chemical, metallurgical and technological subjects connected with electron microscopy, related fields such as electron diffusion and interferometry, ion emission and x-ray microscopy will also be welcome. Exhibits of electron micrographs as well as commercially available equipment for use in electron microscopy and related fields are planned.

Persons interested in participating are kindly requested to apply not later than June 30, 1963, to the following address: The Organizing Committee, 3rd European Regional Conference on Electron Microscopy, Prague 1964, Albertov 4, Prague 2 (Czechoslovakia).

Niederlande

Holländisch-Deutsche Analytikertagung im Frühjahr 1964

Eindhoven, 20.–23. Mai 1964

Symposium über *Moderne Methoden der Analyse organischer Verbindungen*, organisiert von der Fachgruppe «Analytische Chemie» der Gesellschaft Deutscher Chemiker und von der Sectie voor Analytische Chemie van de Koninklijke Nederlandse Chemische Vereniging. Das Symposium steht unter der Patenschaft der Analytischen Sektion der IUPAC. Unterthemen des Symposiums: Elementaranalyse, funktionelle Gruppen. Konstitution organischer Verbindungen, Molekülspektroskopie. Trennverfahren, Wanderungsverfahren, chromatographische Verfahren. Analyse von Hochpolymeren. Analyse von Naturstoffen, klinische Analyse.

Auskunft: GDCh-Geschäftsstelle, 6000 Frankfurt (Main, Deutschland), Postfach 9075, oder Sectie voor Analytische Chemie van de Koninklijke Nederlandse Chemische Vereniging, zu Händen von Herrn Dr. J. J. Engelsmann, Kastanjelaan, Eindhoven (Niederlande).