

A Simple Method for the Rapid Production of Atherosclerosis in Rats¹

In our attempts to prove the etiological relationship between cancer, atherosclerosis and diabetes, a method for the rapid production of atherosclerosis was a prerequisite. Although the rat was generally considered to be very resistant against development of atheromatous arterial lesions², this animal was chosen by us in view of the facility by which it can acquire in only a few days both cancer (by transplantation of a series of malignant tumours) as well as diabetes (by the i.v. or i.p. administration of alloxan).

It is true that many authors succeeded in making rats atherosclerotic²⁻⁴, but the time required for the induction of the lesion far surpass 1 month despite the application of thyroid suppressing drugs²⁻³, X-irradiation⁵, vitamin D₂⁶ etc. Therefore, the paper of GEERTINGER and SORENSEN⁷ attracted our special attention, since these authors stated that 'massive doses of vitamin D₂ in a few-days provoke heavy clinical symptoms and histologically significant vascular changes, particularly in the aorta, coronary arteries and renal vessels of the rats'. The dosage indicated was 600,000 IU vitamin D₂ per kg body weight and per day by the stomach tube for 4 consecutive days. As we did not succeed in producing the desired atheromatous lesions by this method, it was attempted to introduce by the stomach tube a mixture of vitamin D₂ and cholesterol, dissolved in olive oil. The results were surprisingly satisfactory and it can be safely recommended to apply for 5 consecutive days, per kg body weight and per day, 1.5 ml of an olive oil solution containing per ml: 8 mg (320,000 IU) vitamin D₂ (Calciferol puriss. cryst. U.S.P.

XIV, Philips-Roxane, Weesp, The Netherlands) and 40 mg cholesterol (Cholesterin, E. Merck, Darmstadt, Germany). Extensive athero-arteriosclerotic lesions of the aorta, e.g. calcification as well as lipidic plaque formation, could be observed. Higher doses than the indicated are toxic.

Resumen. Dosis diarias de 320.000 UI de vitamina D₂ y 40 mg de colesterol, disueltos en 1.5 ml de aceite de oliva, administradas por vía oral y por kg de peso, durante 5 días consecutivos, producen en las ratas precoces y extensas lesiones ateroarterioscleróticas.

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¹ Supported by a grant of the Brazilian National Research Council (Conselho Nacional de Pesquisas), Rio de Janeiro.

² For literature see: L. C. FILLIOS, S. B. ANDRUS, G. V. MANN and F. J. STARE, *J. exp. Med.* **104**, 539 (1956).

³ R. W. WISSLER, M. L. EILERT, M. A. SCHROEDER and L. COHEN, *Arch. Path.* **57**, 333 (1954).

⁴ G. S. BAJWA, L. M. MORRISON and B. H. ERSHOFF, *Proc. Soc. exp. Biol. Med.* **138**, 975 (1971).

⁵ H. GOLD, *Proc. Soc. exp. Biol. Med.* **111**, 593 (1962).

⁶ G. F. WILGRAM, *Proc. Soc. exp. Biol. Med.* **99**, 496 (1958).

⁷ P. GEERTINGER and N. SORENSEN, *Acta path. microbiol. scand.* **78A**, 284 (1970).

CONGRESSUS

Italy

2nd International Symposium on Cytopharmacology of Secretion

in Venice, 17-22 June 1973.

The Symposium is organized by the Department of Pharmacology, University of Milan, and the C.N.R. Center of Cytopharmacology in Milan (Italy). Chairman: Prof. E. Trabucchi, Milan. Secretaries: B. Ceccarelli, F. Clementi and J. Meldolesi, Milan. Further information by the Secretariat: Istituto di Farmacologia dell'Università, Via Vanvitelli 32, I-20129 Milano (Italy).

Canada

2nd International Conference on Comparative Virology

at Mt. Gabriel, Québec, 27-29 August 1973.

Emphasis will be on virus evolution and oncogenic viruses. Further details concerning the program, housing, and registration can be obtained from: Prof. E. Kurstak, Department of Microbiology and Immunology, Faculty of Medicine, University of Montreal, P.O. Box 6128, Montréal 101, Québec, (Canada).

Austria

First International Congress for Aerosols in Medicine

in Vienna, 19-21 September 1973

Aerosols in Medicine' (Advantages and Dangers). Main Topics: 19 September: Environmental Aerosols (Air Pollution), Hygienic Aspects of Aerosols.

Secretary of the Congress: Mrs. E. Weidenhaus, Wiener Medizinische Akademie, Stadiongasse 6-8, A-1010 Vienna, Austria.

Turkey

IAEA Symposium on Radioimmunoassay and Related Procedures in Clinical Medicine and Research

in Istanbul, 10-14 September 1973.

Further information by the scientific Secretaries: Dr. E. J. Garcia and Dr. E. H. Belcher, International Atomic Energy Agency, Kärntner Ring 11-13, A-1010 Wien (Austria).