



Marcel Roche



Caracas, Venezuela, 15 Aug. 1920 – Miami, Florida, 3 May 2003

Title Senior Researcher at the Inst. Venezolano de Investigaciones Científicas

Field Biomedicine and Sociology of Science

Nomination 10 Apr. 1970

Most important awards, prizes and academies

Premio Nacional de Ciencias, Venezuela (1956); Premio Kalinga 1987 otorgado por la UNESCO a la Divulgación Científica; José Moradell Prize for scientific popularization (1982). Full Member: Third World Academy of Sciences (Secretary); Latin American Academy of Sciences (Caracas, Venezuela). Corresponding Member: Academia Nacional de Ciencias Matemáticas, Físicas y Naturales (Venezuela); Academia de Medicina (Venezuela); Sociedad de Biología (Argentina); Academia de Ciencias (Brazil); Académie Nationale de Médecine (France); Indian National Academy of Science (India); Académie Nationale de Médecine (France).

Summary of scientific research

It has covered three areas:

- 1) The study of rural tropical anemias and their relationship with hookworm infection. This study, of a quantitative nature, was performed with the help of radioactive isotopes. Widespread prevalence of iron absorption under many different nutritional conditions was shown. This has led more recently to the enrichment of staples with iron in certain tropical communities.
- 2) The study of iodine metabolism in endemic and non-endemic goiter areas. It has been demonstrated, among other things, that isolated Indians from the Amazon territory have all the ear-marks of iodine deficiency without goiter, and hence that iodine deficiency may be a necessary but not a sufficient condition for the production of goiter.
- 3) Over the past ten years, I have shifted to the study of sociological and historical aspects of the scientific community in a Latin American developing country, specifically Venezuela. The characteristics and evolution of such a community have been determined.

Main publications

Roche M., De Venanzi F., Vera J., Coll E., Spinetti-Gerti M., Méndez-Martínez J., Gerardi A. y Forero J., *Endemic Goiter in Venezuela, Studied with I 131*. «J. Clin. Endocrinol. Metab.», 17, 99-110 (1957); Roche M., *Elevated Thyroidal I 131 Uptake in the Absence of Goiter in Isolated Venezuelan Indians*. «J. Clin. Endocrinol. Metab.», 19, 1440-1445 (1959); Roche M., Perez-Gimenez M.E., Layrisse M. y Di Prisco E., *Study of the Urinary and Fecal Excretion of Radioactive Chromium Cr 51 in Man. Its Use in the Measurement of Intestinal Blood Loss Associated with Hookworm Infection*. «J. Clin. Invest.», 36, 1183-1192 (1957); Roche M. y Layrisse M., *The Nature and Causes of «Hookworm Anemia»*. «Am. J. Trop. Hyg.», 15, 1031-1102 (1966); Roche M. y Martínez-Torres C., *A Method for in vitro Study of Hookworm Activity*. «Exper. Parasitol.», 9, 250-256 (1960); Roche M., *Social Aspects of Science in a Developing Country*. «Impact», 16, 51-60 (1966); Roche M., *Rafael Rangel. Ciencia y Política en la Venezuela de principios de siglo*. 1era Edición, Monte Avila, Caracas, 1973; Roche M., *Mi compromiso con la ciencia*. Monte Avila Editores, Caracas, 1987; Roche M. (Compl.), *Perfil de la Ciencia en Venezuela*. Fundación Polar, 2 Tomos, Caracas, 1996.

Commemoration – Manuel Roche was Member of the Pontifical Academy of Sciences, appointed in 1968. He had an international education being able to speak seven languages: Spanish, English and French fluently,

since he learnt them at home and later he could also use properly Portuguese, Italian, Latin and Greek. He went to Senior High School in St Croix de Neville in Paris and graduated from it in 1938. He then studied Biology and Chemistry at St Joseph's College in Philadelphia, from which he graduated in 1942. He then entered the School of Medicine in Baltimore, Maryland, where he obtained a MD degree in 1946. He spent a year as an intern in Johns Hopkins Hospital between 1946- 47. He also worked as Residence Assistant in Medicine at Peter Bent Brigham Hospital in Boston from 1947 to 1948. In 1953 he obtained a Medical Degree at the Central University of Venezuela and in 1970 spent a semester at Cambridge University. As a graduate student, he was an intern in the Department of History and Sociology of Sciences at the University of Sussex, England, from 1972 to 1973. After graduation he was Assistant Professor of Semiology between 1952 and 1956. In 1958 he obtained a Professorship in Physiopathology at the Central University of Venezuela where he remained until retirement. He held the 'Simon Bolivar for Latin-American Studies' Chair at the University of Cambridge 1970-71. He was also Research Fellow at the Department of Political Investigations of Sciences – University of Sussex 1973-74. Professor Marcel Roche was the Founder and Director of the Institute for Medical Research in Venezuela (1952-58), Director of the Venezuelan Institute for Neurology and Brain Research (1958-59) and Director of the Venezuelan Institute for Scientific Research (1958-60). He was 'Gobernador' of the International Agency of Atomic Energy (1958-60), President of the Council of the United Nations University (UNU) 1978 and had 24 similar positions which he operated with success. He had a list of over 30 awards comprising Premium Order, Gran Cruces, Doctor Honoris Causa. Besides the sciences, several of them were related to popularisation of Science, Sociology and Art.

Publications – In Endocrinology and Metabolism he has a list of 40 publications; in Endemic Goitre 19 publications; in Rural Anaemia 33 publications; in Ancylostoma Experimental studies 9 publications; in Humanities in Sciences 53 publications; 12 publications of Books and Monographs; Prefaces of 6 books. Marcel Roche was a great medical scientist, a great intellectual citizen, and an excellent colleague. We deeply miss him.

Crodowaldo Pavan