



Prof. Marcel Roche

Senior Researcher at the Inst. Venezolano de Investigaciones Científicas



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 Ma-temáticas, 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 Natio-nale 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 en-richment 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., Pérez-Giménez 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. (Comp.), *Perfil de la Ciencia en Venezuela*. Fundación Polar, 2 Tomos, Caracas, 1996.