



## 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 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., 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. (Compil.), *Perfil de la Ciencia en Venezuela*. Fundación Polar, 2 Tomos, Caracas, 1996.