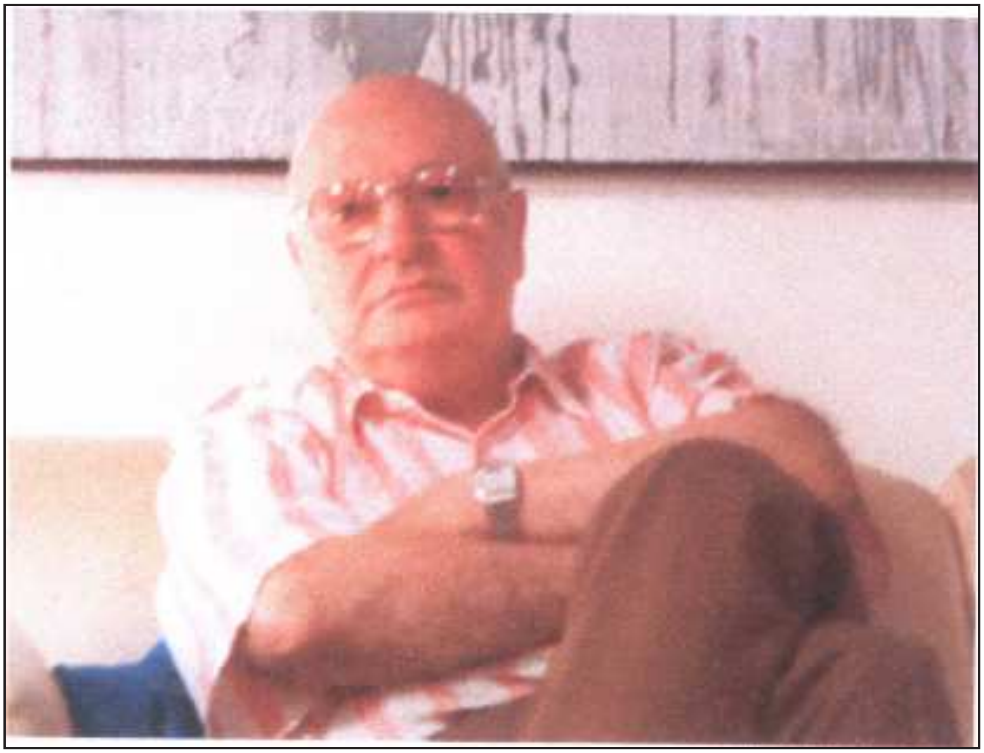
UNESCO KALINGA PRIZE WINNER – 1987
Marcel Roche



A Physician, Scientist & Scientific Leader of Venezuela

[Born : August 15, 1920, Caracas, Venezuela;
Died : May 3, 2003, Miami, USA]

Marcel Roche – A Biographical Profile

Born	:	15 August 1920 Caracas, Venezuela,
Died	:	3 May 2003 (aged 82) Miami, USA
Residence	:	Venezuela
Field	:	Endocrinology, Nuclear Medicine
Institution	:	Central University of Venezuela, International Atomic Energy Agency (1958-1960)
Alma Mater	:	Johns Hopkins Medical School
Notable Prizes	:	**Kalinga Prize Winner - 1987**

Marcel Roche (b. August 15, 1920, Caracas, Venezuela; d. May 3, 2003, Miami, USA) was a physician, scientist and scientific leader.

He was born into a wealthy family of French origin. His father, Luis Roche, was a well known urbanist. His secondary education was conducted in Paris, France, graduating in 1938. Following this, he moved to the USA and got a Bachelor of Science degree at St. Joseph's College, in Philadelphia, following by studies in medicine at Johns Hopkins Medical School, in Baltimore. After graduation in 1946, he specialized in endocrinology and nuclear medicine. Before returning to Venezuela in 1951, he carried out biomedical research for some time at the New York Institute of Public Health.

In Venezuela Dr. Roche started several pioneering works as an Assistant Professor of the Central University of Venezuela on goitre, hookworm infections and nutritional deficiencies and anaemias, especially among the poor and aboriginal people.

He was founder and director of the Institute of Medical Research at the Central University, and in 1958 he also became the Secretary General of the Venezuelan Association for the Advancement of Science. Other institutions directed by him were the Institute of Neurology and Brain Investigation, reorganized in 1959 as the Venezuelan Institute of Scientific Research in 1959. During his tenure, Dr. Roche became interested and supported the development of anthropology and study the history and sociology of science.

He was founder and director of the Venezuelan National Council of Scientific Investigation and the magazine Intersciencia, as well as being involved in the publishing of several other scientific periodicals. Dr. Roche was also a pioneer in the area of public understanding of science and a pioneer in the production of TV programs and documentary films on many science subjects. He was very active in promoting science to the public and participated in many national and international organizations promoting science. Dr. Roche was an advisor to the WHO, UNESCO, a Governor of the International Atomic Energy Agency (1958-1960), Research Director at HIMEOBS Labs and was a Member and President of the Council of the University of the United Nations inTokyo, and Secretary of the Third World Academy of Sciences.

He received many honours and degrees from Belgium, Germany, France, the United States, India and Brazil. He won the Kalinga Prize from UNESCO in the year 1987 for his Significant Science Popularization work.

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Roche Dugand, Marcel – Biography

Dr. Roche holds an M.D. from Johns Hopkins, has taught at Harvard and at Cambridge and Sussex in England and is a distinguished medial researcher. He has done major work on anemia in rural communities of South America and extensive studies of hookworm diseases, in his research fields of endocrinology and metabolism. He has been an advisor to presidents and has served on advisory committees to UNESCO, the World Health Organizaiton and the Pan American Health Organization. Dr. Roche was president of the University Council of the United Nations University in Tokyo, a member of the Pugwash Council, a former governor of the International Atomic Energy Commission and a member of the Pontifical Academy of Sciences.

Medical, scientific, manager and explainer of science, humanistic. He was the eldest son of the town planner Luis Roche, whose ancestors had come to the country in the mid-nineteenth century, and the French lady Beatrice Dugand. Early years of his childhood in Caracas and pass the age of 9 was sent to France with his paternal grandparents, enters the College Sainte Croix de Neuilly where his father had also studied, and since that time, it gives free rein to his love of music, reading and literature, publishing a companion study a monthly magazine Le Vampire, as his interest in the natural sciences by creating a herbarium stuffed with plants that sent him to Venezuela. Ending his studies he graduated with honors. Decides to study medicine and while preparing to enter the preparatory course at the Faculty of Medicine of Paris, his father anticipating the start of the Second World War, decided in 1938 to continue his studies in the United States, studied at the College Saint Joseph's

(Philadelphia) where graduates in 1942 with the title of Bachelor (Biology and Chemistry). Then, go to the School of Medicine at the Johns Hopkins University (Baltimore, Maryland), where graduates from medical in 1946. Year in which he married the painter Maria Teresa (Maruja) Rolando of which enviudó in 1970 and with whom he had four children. Just graduated from medical, spent four years in the United States, which used to specialize in and started the investigation; between 1947-1948 serves as Resident Assistant at the Peter Bent Brigham Hospital (Boston, Massachusetts), with the teachers to doctors George W. Thorn and Samuel Levine, it is dedicated to clinical studies. After entering as a Research Fellow (1948-1950) at Harvard University to conduct research in the laboratory of Dr. Peter H. Frosham in the areas of endocrinology, nutrition and diabetology, performing, along with several colleagues, their first publications in the New England Journal of Medicine, and then as a volunteer researcher at the Institute of Public Health in New York where he works under the supervision of Hans de Witt Stetten until May 1951, when he returns to Venezuela. He started working in the office of Francisco De Venanzi, who knew in 1948, in one of his visits to the country, establishing a friendship of a lifetime; From Venanzi, also hosts the Chair of Pathophysiology of the Universidad Central de Venezuela (UCV), while exercising medicine at the Hospital Vargas, both created the Medical Laboratory Analytical, the first step thsat led to the creation of the Institute for Medical Research Foundaiton Luis Roche (FLR) (1952-1958), From Roche and Venanzi at the helm was a private institution of research, supported by Luis Roche, which brought together doctors like Luis Carbonell, Cecilia P. of Coronil, Ruben Coronil, Karl Gaede, Miguel Layrisse, Antonio Sanabria, Maria Enriqueta Tejera Perez-Gimenez, Jorge Vera, Gabriel Chuchani chemical. Roche also engages in the activities of the Venezuelan Association for the Advancement of Science (ASOVAC) and its Secretary-General in 1958. In 1953 he presented his doctoral thesis at the UCV, revalidando its title of doctor in Venezuela. His stay in the FLR lets you develop a change in the investigations which were interested in the United States, there had dealt with the physiology and clinical of the adrenal, the study of uric acid metabolism and creatine in the gout and progressive muscular dystrophy using the isotope N15, heavy nitrogen; faced with the reality Venezuelan mid-fifties began a series of investigations of a basic but related ailments tropical Venezuelan, using as part of its methodlogy using radioisotopes. Along with de Venanzi, researches, in a systematic manner for the first time in the country, endemic goitre, a condition prevalent in the Venezuelan Andes, which causes abnormal function in the thyroid glad linked to the lack of iodine in food, using the radioiodine measuring and determining that the disease did not differ from that in other similar areas. Another finding of his research was the recommendation to iodize salt for human consumption, profilaxia that was hosted by the government of Colombia, significantly decreasing the presence of goiter in Venezuela, that practice was put into practice only from the eighties. Hand in hand with endemic goiter, studying anemias of rural populations, through the study of the origin and destination of red blood cells and iron metabolism and nutrition for individuals; develops this line of research with Miguel Layrisse, Estela and DiPrisco Maria Enriqueta Tejera Perez-Gimenez; for it “marked” red blood cells with radioactive chromium to determine the loss of blood through bowel between patients and accurately determine the magnitude of blood expoliada on average by a single worm anquilostomo; with a similar method but using chromium and iron measured the amount of iron that was reabsorvido; the methods used were designed by the group. The study of the iron absorption was continued by Layrisse and Carlos Torres-Martinz when they moved to the Venezuelan Institute of Scientific Research (IVIC). When falling dictatorship of Generla Marcos Perez Jimenez in

January 1958, is called by the military civic government to take charge of the Venezuelan Institute of Neurology and Brain Research (IVNIC) located in Altos de Pipe, which was founded in 1954 by a doctor and biophysical Venezuelan Humberto Fernandez Moran. Encarado to the reality of an institution still medium build, which provided some buildings and scientific equipment and technicians to operate them, but lacked investigators with the exception of Dr. Femandez Moran, urged his colleagues to come to the FLR IVNIC, open laboratories, and initiating the training of young scientists as Venezuelans. This, together with the fact that De Venanzi was called by teachers and students at the Central University of Venezuela, to take charge of the Rectory makes in practice, the FLR disappear. Thus, Layrisse, Chuchani, Carbonell and Gaede joined Roche in the new company which resulted in the Venezuelan institute of Scientific Research (IVIC), created by the military civic government headed by Dr. Edgar Sanabria on February 9, 1959. Roche was appointed its first Director (1959-1962), after the Executive hear the views of the Assembly of Researchers IVIC, as provided for the creation of statute. He was subsequently elected and ratified by the Government of the day in that office during 1962 to 1969. During this time, Roche along with his colleagues from the FLR, other Venezuelan and foreign-as Gunnar Svaetichen and Gernold Bergold had worked in the IVNIC-IVIC laid the foundation, a research institute, state, multidisciplinary (physics, mathematics, chemical biology and medicine) oriented basic and applied science, with responsibilities to train high-level scientific (postgraduate), and advise both the National Executive as to others . Until then research institutes of the State, except for the IVNIC, had been aimed at the application of knowledge to solve the pressing demands of the needs of the executive branch in knowledge. IVIC a milestone because his energy directed toward obtaining knowledge, capable of linking to the mainstream of scientific thought universal part of this, as well as Roche express years later, was the ability of its researchers to publish their findings in the most prestigious international scientific journals in their fields. This is accomplished in part by creating a layer of researchers, which you enter once the applicant has completed his scientific training, it is usually having achieved the title of a Ph.D. or an equivalent path; promotion is done based on a periodic assessment by the Commission of the Institute Clasificadora revising the production of knowledge published, in particular. These guidelines set out early and put into practice since the first term of Roche versus IVIC, led to the profesionalizara career scientist in the country. Similarly, early Roche sponsored the training of scientists in the Venezuelan IVIC, and through a first training in laboratories of the institution of newly graduated university professionals and / or disposed towards research , and then being sponsored by the institution to complete their studies abroad reaching a doctoral degree or Ph.D. All subjects were benefited by this investment, which allowed after ten years IVIC could count on an array of multidisciplinary researchers, who were working at various centres or departments: Experimental Medicine, Microbiology, Biochemistry and Biophysics, Chemistry, Ecology, Mathematics and Anthropology. It was early in the strength-date scientific information, buying complete sets of magazines and maintaining permanent subscriptions, which has enabled the IVIC have a valuable collection of periodicals, the basis of the existing library since 1981 by a decision of Board of IVIC step renamed Library Marcel Roche. In addition to the strictly scientific affairs, Roche developing institutional policies for all their employee, sponsoring the creation of the Fund Savings Institute, stimulating agremiación of wokers, the discussion of collective contracts, the creation of a medical service, a dining industry, a kindergarten and a primary school. Since the editorials he wrote for the Bulletin Internal IVIC – in part in compiling his first

book Log-63 – developed a workd to educate, explain and clarify the different aspects and problems that were appearing in the diverse community who constituted IVIC; led the first coral that had the Institute was producing a programme of popular science: Science (1968-1969) among us to be transmitted through the state televsion, Channel 5. He left his imprint also to equip the IVIC of the first works of art and the interior of their buildings as outdoor collection like that of the library has been increased by one each of the successive directors of the Institute, reaching count that one of the most important art collections in the country outdoors. During their management as director IVIC, found time to engage in research, but not in the intensity he would have liked; continuing with its work on Layrisse anaemia in rural areas, and with Carlos Torres-Martinez has dedicated his attention to the study of anquilostomo itself, which designed a device that allowed her observation and filming. As part of this documentary produced in vitro Studies of Ancylostoma caninum, which won the gold medal (1961) in the first movie review medical literature health Italian Cultural Center Film (Pavia). Anquilostomo This line of the continued until early seventies when again he had to take care of another task management. While half of his third year as Director of IVIC, was called by the executive to handle the launch of the National Council for Scientific and Technological Research (CONICIT), as its first director-founder between 1969-1972. This designation, recognizing the efforts of Roche at the helm of the Preparatory Committee of the CONICIT (1962-1965), through which scientists IVIC, UCA and the ASOVAC been made in favour of the creation of a state institution policy and planning for science. As the initiator of another institution of science in the country, a fact the foundation of the philosophy and organization of the same, to support science in the country, to benefit researchers and through grants granted on presentation of research projects reviewed by evaluators commissions composed of scientists from various institutions; stimulated the formation of human resources for the sector, through a programme of postgraduate scholarships abroad, which had persisted to this day despite attempts to centralize this type of action in the Gran Mariscal de Ayacucho Foundation. He promoted the education of science in pre-university education through the creation of the National Center for Improving Science Education (CENAMEC).

It speeded statistical knowledge of science in the country, had to do so with the cooperation of the sociologist Olga Gasparini (1932-1971) at the head of a group of sociologists who, even after he died that produced the Diagnosis of the activity research and experimental development that takes place in the country (1973). Finally defining and designing a science and technology policy, either through documents or action plans. Thanks to the action of Roche in CONICIT, was formed Research Center Astronomical Francisco Jose Duarte (CIDA), which finally was able to stay around the team astronomy (among which was a camera Schmidt), which in mid-fifties had compared the government of Perez Jimenez based on a project to modernize the old section of astronomy Cajigal Observatory located in Caracas; CIDA was located in Hato del Llano, near Merida and the University of the Andes (ULA); other institutes like Research Center for Export (CIEPE) located in San Felipe (Yaracuy) were “nationalized” when CONICIT led to the entry of Venezuelan investigators, and with the creation of the Committee on Hydrocarbons, began planning an institute of oil, INVEPET that after the nationalization would become the INTEVEP. Part of their experiences and thoughts at the forefront of the CONICIT vertería in his book Discovering Prometeo. On his departure from CONICIT (1972), Roche actually began his second career in science, but also that year he married White Flower Fombona. His stay in CONICIT had finally removed from the laboratory, but their intellectual reflection oriented toward history and sociology of science. Decides

to go to the University of Sussex, Brighton, in southern England where admitted as graduate student in the Department of History and Sociology of Science (1972-1973), under the influence of historian Roy MacLeod and physical mathematical and historian Brian Easlea. After serving as a Research Fellow (1973-1974) in the Unit for Science Policy Research (SPRU) from the same university, where he met Christopher Freeman. At the end of his return to IVIC (1973), what do specifically in the Department of Anthropology, creating Laboratory Laboratroy of History and Sociology of Science, where he wrote his classic text, Rafael Rangel: Science and politics in the early twentieth century , which was edited by Monte Avila, editing depleted in two months, a second edition came out in 1978. In 1976, organized by the Department of the Study of Science in the same IVIC, of which he was a founder-Chief until his retirement in 1990. In the social sciences, Roche was as productive as when he was a biomedical researcher. While his goal at one time was to present his thesis to get his doctorate in Sussex, Roy MacLeod what persuaded that his career he had the necessary tools to move in the area of social studies of science, becoming an exemplary figure for social scientists who recently joined a field in the seventies was new in Venezuela. In a way he fixed number of parameters of this specialty, emphasizing the key role of the history of science as part of the reconstruction of national identity, as well as the need for a history and sociology of science to locate the scientist in his Venezuelan social, economic and historical, without losing what made the prospect of contemporaneity at different times in history. Interested in enrich the training of graduate students in the IVIC convince educational authorities of the Institute of introducing curriculum in a course of study in which they give notions of history, sociology, philosophy and political science and technology (1983). At that time also served as the editor-founder of the magazine Interciencia (1976-1998); develops more widely his facet as explainer of science, writing articles in El Diario de Caracas, some of them are complied in his book My Commitment with Science (1987); because of this activity receives the Award Jose Moradell 1982, popular science given by the Circle of Science Journalism Venezuela, and in 1987 the prize awarded by the UNESCO Kalinga to the Popularization of Science. Being named Ambassador Standing before UNESCO moved to Paris to live there between 1985-1989; distance addressed Master's thesis and doctoral students, started writing his autobiography and Olvidos Memories (1996) and organized the writing of the collective work, the profile Science in Venezuela (1996), which received the Award for Best Divulgativo Book of the Year 1995, awarded by Fundalibro. When given retirement in 1990 remains active, both in their research in the IVIC in Interciencia, but for health reasons chooses to pull out in 1996. He had an active life in various scientific societies, Member (desde 1968) of the Pontifical Academy of Science, Founding Member and Secretary Academy of Sciences for the Third World (1983), President (1989-1992) of the Association Interciencia . Participated in the body publisher of magazines like Physiological Reviews, in the Editorial Board of Social Studies of Science (1973-1976), and Venezuelan Scientific Act (1978-1985), Scientrometrics (1981-1996), Arbor (1984-1996), was a member (desde 1981) Circle of Science Journalism Venezuela. Concerned about the problem of the use of science, actively participated in the Pugwash Movement which brings together scientists interested in the non-proliferation of nuclear weapons and / or mass destruction, as part of its Council (1976-1986). He represented Venezuela before various international organizations of science and culture, as Governor (1958-1960) to International Atomic Energy Agency (IAEA), member (1960-1964) of the Council of Higher Education in the American Republics (CHEAR) and its President (1964-1966); Scientific Advisor (1967)

of President Raul Leoni at the meeting of presidents in Punta del Este. Member of the University Council (1974-1980) of the United Nations University (UNU), Tokyo and Chairman of the Council (1978). Member of the Board of Trusts (1975-1977), International Foundation for Science (IFS) Stockholm, as well as the Advisory Committee for the Application of Science and Technology for Development (ACAST) (1975-1979) UN. Consultant Inter-alia: UNESCO, World Health Organization, Pan American Health Organizaiton, the Organization of American States Inter-American Development Bank, Ford Foundation. Recognized by colleagues within the country and outside the country, designársele Corresponding Member of the National Academy of Medicine of the National Academy of Sciences, Physical and Natural (Venezuela), the Argentine Society of Biology and the Brazilian Academy of Sciences. Foreign Correspondent (1984) of Académie Nationale de Médecine de France, of the Academy of Science of India (1983), Member of the Honorary Committee of the European Academy of Sciences, Arts and Letters, (1985). Elected Felow (1979) of the American Association for the Advancement of Science, for his contributions to medical science, the growth of scientific research in Venezuela, and the development of scientific cooperation inter as director of the magazine Interciencia. He was decorated with several national orders (Liberator, Francisco de Miranda, Andres Bello, Health Enrique Tejera), and foreign (Order de la Couronee, 1960 from Belgium, Great Cross of Merit for Special Services, 1978, the Federal Republic of Germany), was awarded the Doctor Honoris Causa from Case Institute of Technology (Cleveland, USA) (1960), University of the Andes (1972) Saint Joseph's University (1992); received honors as a Fellow Queens' College (1970), Cambridge, Montgomery Fellow (Summer 1982), Dartmouth College, Humanist Laureate, Academy of Humanism, Buffalo, New York, 1989, Honorary Member Society of Natural Sciences La Salle, 1992. Interested in the arts, especially in music, played cello, was integral to artistic and cultural groups serve as a Member of the Jury Income (1954-1957) Annual Hall Museum of Fine Arts (1978-1984) Founder President of the Association for Chamber Music Caracas, Member (desde 1979) Consultative Council, Society Symphony Orchestra of Venezuela, President (1977-1978) of the Humboldt Cultural Association, Caracas among others. Dominaba Spanish, English and French fluently with the mother tongue. Throughout his life he wrote poetry in French, a collection of his poems published in English under the title of Refuge du Divin (1984). Due to the wish his ashes in the gardens were watered IVIC

Yajaira Freites
Study of the Department of Science, IVIC

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ICONOGRAFÏA

- Photos in the hallway of the Directorate of IVIC in Memories and Olvido: Visions of science: website of the Department of Scientific Study of IVIC Oil Luisa Richter at the entrance of the Library Marcel Roche in the IVIC.

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MARCEL ROCHE
A Biographical Sketch

FOUNDER OF THE DEPARTMENT STUDY OF SCIENCE, VENEZUELAN INSTITUTE FOR SCIENTIFIC RESEARCH (IVRC), VENEZULA.

Marcel Roche was a Venezuelan born in Caracas (15.08.1920), doctor (University of Johns Hopkins, 1946; investigator and Venezuela revalidation 1953) in the field of the biomedicina, being centered in the endocrinology, the endemic goiter and the anchylostomiasis.

Founder and Director (1952-1958) of the Institute of Medical Researches, Foundation Luis Roche, laboratory deprived without profit aims. In 1958 he assumes the direction of the old Venezuelan Institute of Neurology in Investigaciones Cerebrales (IVNIC), which in 9 of February of 1959, after a reform, becomes the Venezuelan Institute of Scientific researches (IVIC), being its director by 10 years (1959-1969) and thus giving fitted multiple disciplines (physical, mathematical, chemical, Biology and anthropology), in addition to the medicine.

Member of the Venezuelan Association for the Advance of Science (AsoVac), participated actively from the Fifties in the conformation of the modern scientific community, being one of its outstanding leaders. It presided over (1962-1965) the Preparatory Commission of the National Council of Scientific researches and Tecnolo'gicas (CONICIT), being his founding President between 1969-1972.

Representative of Venezuela before diverse international organisms, among them like Ambassador Delegated Permanent of Venezuela before UNESCO (1985-1989), Paris, (France); like Member by own right of the Pugwash Movement, created by Albert Einstein to group the scientists who were against the use of the atomic arms and like member of their Advice between 1976- to 1986.

On a par of its work as medical investigator and manager of science developed to an extensive activity humanist. On the one hand, like founding publisher (1976-1985) of the publishing Interciencia magazine and of science, already like producing TV, written weekly in the national press, books (p.e, My Commitment with Science, 1987), and conferences; this type of activities did creditor to him of the Prize Jose Moradell 1982 of scientific spreading granted by the Circle of Scientific Journalism of Venezuela, and to the Prize Kalinga 1987 granted by UNESCO to the Scientific Spreading. And, by the other, as Head and Founder and present Emérito Investigator (1976-1990) of the Department of Study of Science (IVIC), in where he was responsible to lay the foundations the studies of sociology and history of science in Venezuela. Author of various works in this field, standing out among them his biography of Rafael Rangel: Science and policy at the beginning of century xx (1973) whose first edition was exhausted, reedited in 1978. Before his retirement he was responsible for the compilation of the collective work Profiles of Science in Venezuela (1996), being distinguished as the Best Book of Spreading, of that year.

He passed away in Miami, the U.S.A., the 3 of May of 2003.

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MARCEL ROCHE
CURRICULUM VITAE

PERSONAL DATA

- He was born the 15 of August of 1920, Caracas, Venezuela and passed away the 3 of May of 2003 in the city of Miami, the U.S.A.
- One married in 1946 with Maria Teresa Rolando, with whom had four children and of which enviudó in 1970; one married in second nuptials with White Flower Fombona in 1972.

EDUCATION

- Secondary studies in the School Saint Croix of Neuilly Paris, France, Degree of Bachelor in 1938.
- St. Joseph's College Philadelphia Pennsylvania The United States, B.S (Biology and Chemistry), 1942.
- University of Johns Hopkins Medicine School, Baltimore, Maryland The United States, M.D 1946.
- Hospital of Johns Hopkins Internal, Medical Service Osler 1946-1947.
- Hospital Peter Bent Brigham Boston, Massachussetts Attending Medicine Resident, 1947-1948.
- Medicine doctor, Central University of Venezuela, 1953.
- University of Cambridge M.A 1970.
- Graduated student, Department of History and Sociology of Science, University of Sussex England, 1972-1973.

INVESTIGATION

- Investigating member, Medicine School of Harvard 1948-1950: investigation of the physiology and clinic of the suprarenal, under the direction of George W.Thorn.
- Voluntary investigator, Institute of Investigation of Public Health of New York, 1948-1950: úrico acid investigation and metabolism of the creatina in the drop and progressive muscular dystrophy by means of the use of the N15 isotope, heavy nitrogen, under the direction of Hans of Witt Stetten.
- Sabbatic year in the Pasteur Institute (1963-1964), Paris.

In Venezuela, after 1951, investigation in:

a) Tiroidea function, with the aid of the radioactive isotope I131; relation between the lack of iodine and the presence of goiter.

b) Red globule Origin and destiny and iron metabolism and nutrition in individuals that live in the rural tropical.

c) Studies on anquilostomo including the design of an original apparatus that allows its observation and shooting.

d) Sociological Study of the Venezuelan Scientific Community.

Education

- Medicine school of Harvard diagnosis of laboratory, 1949-1950.
- Professor Asistente, Semiologia, Central University of Venezuela, 1952-1956.
- It frees Educational in Fisiopatología, Central University of Venezuela, 1958-to date.
- Professor Simón Bolivar of Latin American Studies, University of Cambridge 1970-1971.

- Investigating Member ("Research Fellow Unit of Investigation of the Policy of Science, University of Sussex 1973-1974.

CHAR THEM

Numerous char them of its interest, among other places in: Institut Pasteur Collége of France Columbia University. All Medical India Research Institute Cambridge University Oxford University University of Glasgow, Institute of Medical Researches (Madrid), Washington University (Seattle London University Academy of Sciences (Moscu'), Institute Victory of Girón (Havana), University Cayetano Heredia (It files), University of Buenos Aires, University of Chile, Institute of Biophysics (Rio de Janeiro), Planetarium of Bogota. In Venezuela: Central university, University of the The $andes, University of Zulia, University of Carabobo, University Francisco de Miranda.

ADMINISTRATION

- Founder and Director (1952-1958) of the Institute of Medical Researches, laboratory deprived without profit aims.
- Secretary General (1958) Venezuelan Association for the Advance of Science (AsoVAC) Director (1958-1959) Venezuelan Institute of Neurology and Investigaciones Cerebrales (IVNIC).
- Director (1959-1969) Venezuelan Institute of Scientific researches (IVIC).
- Governor (1958-1960) Agency the International of Atomic Energy.
- Member (1960-1964) Advice of Superior Education in the American Republics (CHEAR) and its President (1964-1966).
- He presided over (1962-1965) the Preparatory Commission of the National Council of Scientific researches and Tecnolo'gicas (CONICIT).
- Scientific adviser (1967) of President Raul Leoni in the meeting of Presidents in End of the East.
- President Foundador (1969-1972) of the National Council of Scientific researches and Tecnolo'gicas (CONICIT).
- Member of the University Council (1974-1980) of the University of the United Nations (UNU), Tokyo.
- Head and Founder (1976-1990) Department of Study of Science (IVIC).
- President of the Council (1978) of the University of the United Nations (UNU).
- Member of the Meeting of Trusts (1975-1977) of the "Foundation the International of the Science" of Stockholm (I.F.S)
- Member of the Consultative Committee for the Application of Science and the Technology to Desarrollo (ACAST) (1975-1979) United Nations.
- Member of the Council (1976-1986) of the Pugwash Movement.
- Director of the Interciencia Magazine 1976-1999.
- Consultant of Inter – alia UNESCO, World-wide Organization of the Health, Pan-American Organization of the Health, Organization of American States, Inter-American Development Bank, Ford Foundation.
- President (1977-1978) of the Cultural Association Humboldt Caracas.
- Member of the Publishing Council of the Scientometrics Magazine (1982-1995), Hungary.

- Charter member and Secretary Academy of Sciences of the Third World (1983) – to the date.
- President Latin American Group and of the Caribbean (GRULAC) UNESCO 1985.
- Secretary Group of the 77 UNESCO 1986.
- Ambassador Delegated Permanent of Venezuela before UNESCO (1985-1989), Paris, France. Emérito investigator of the Venezuelan Institute of Scientific researches (IVIC) and of the plan position indicator (System of Promotion to the Investigator).

LANGUAGES

- Spanish, English, French (with fluidity of maternal language), Portuguese, Italian, Latin and Greek.

ACTIVITIES LIKE PUBLISHER

- Publishing Correspondent (1969-1973) Physiological Reviews.
- Publishing Advice (1973-1976) Social Studies of Science.
- Founding publisher (1976-1985) of Interciencia.
- Member of the Publishing Council (1978-1985) Venezuelan Scientific Act.
- Member (1981- to the date) of the Circle of Scientific Journalism of Venezuela.
- Member of the Publishing Advisory Committee (1981 to the date) of Scientrometrics.
- President (1981-1983) of the Technical Commission in Publications and Bibliographical Subjects of CONICIT.
- Member of the Writing Commission, Arbor (1984- to the date).

ARTS

- Member of the Jury of Entrance (1954-1957) Annual Hall Museum Beautiful Arts.
- Producer of a documentary one “In Vitro Studies of Ancylostomas caninum “that obtained gold medal (1961): “Primary Rassegna Internacionale of the Film I gave Documentaziones Scientífica Sanitary doctor of the Culturale Center Cinematrográfico Italian” (Pavia Producer (1968-1969) of a weekly program of television, on science and technology: “Science between Us”.
- President Foundador (1978-1984), Association Pro-Mu’sica de Ca’mara, Caracas.
- Member (1979- to the date) of the Consultative Council, Society Symphony orchestra, Venezuela.
- Headress violonchelo.

HONORS

- National prize of Scientific researches (1956, Venezuela), with equipment of the Foundation Luis Roche.
- Prize G.E.N. (1957) with Francisco De Venanzi.
- Doctor Honoris Cause (1960), CASE Institute of Technology (Cleveland, U.S.A.).
- Ordre of the Couronne (1960), Belgium.
- Order Beautiful Andrés (1961), Venezuela.
- Order of the Liberator (1963), Venezuela.
- Prize Jose Gregorio Hernandez (1969) with Miguel Layrisse.
- Member (1968-to the date) Pontifical Academy of Science.
- Fellow Queens’ College (1970), Cambridge.

- Doctor Honoris Cause (1972), University of the $andes.
- Order Francisco de Miranda (1978), Venezuela.
- Great Cross of Merit by Special Services (1978) German Federal Republic.
- Chosen "Fellow" (1979) of the American Association for the Advancement of Science with the following citation: "By its contributions to medical science, the fortification of the scientific research in Venezuela, and to the progress of the inter-American scientific cooperation like director of Interciencia.
- Prize Jose Moradell 1982, of scientific spreading granted by the Circle of Scientific Journalism of Venezuela.
- Montgomery Fellow (Summer 1982), Dartmouth College.
- Member Foreign Correspondent of the Société of Biologie 1982.
- Foreign member, Academy of Science of India, 1983.
- Annual prize to the Best Scientific Work (1983), Area Social sciences, Honorary Mention, next to Yajaira Freites CONICIT, Venezuela.
- Corresponding Member (1984-) Académie Nationale of Médecine France.
- Charter member and Secretary of the Academy of Sciences of the Third World, 1984-1992.
- Member of the Committee of Honor of the European Academy of Sciences, Arts and Letters, 1985.
- Kalinga Prize 1987 granted by UNESCO to the Scientific Spreading.
- Medal of Health Dr. Enrique Tejera (Venezuela), 1989.
- Order of the Liberator, class Great Cord, 1989.
- "Humanist Laureate", Academy of the Humanismo, Buffalo, New York 1989-present.
- Member of the Association the International of Scientific Writers 1991-present.
- Interciencia President (1989-1992) Association.
- Corresponding Member: National Medicine academy, National Academy of Exact, Physical and Natural Sciences (Venezuela), Society Argentina de Biologi'a and Brazilian Academy of Sciences.
- Doctor Honoris Cause Saint Joseph's University 1992.
- Honorary member Society of Natural Sciences the Salle, 1992.
- Member of the Council of the Academy of Sciences of the Third World, 1993-present.
- Prize to the Best Divulging Book of Year 1995, granted by Fundalibro to the Profile of Science in Venezuela, Marcel Roche (Compl.), Polar Foundation, Caracas.

Padrino de Promocio'n:

- Simón Grammar school Bolivar, San Cristóbal, 1962.
- Promotion of Bachelors in Sciences, Grammar school Jose Vicente de Unda, Guanare, Edo. Portuguesa 1970.
- Nocturnal Grammar school Juan Vicente González, Caracas, 1972.
- Grammar school Francisco de Miranda, the Teques, 1972.

MARCEL ROCK PUBLICACIONES LISTED

ENDOCRINOLOGIA Y METABOLISMO

1) Thorn G.W Forsham P.H Bennett L.L Rock Mr.; Reiss R.S Slessor A.; Flink E.B. y Somerville W "Clinical and Metabolic Exchanges in Addison' S Disease Following the Administration of Compound E Acetate (11 dehydro – 17-hydroxycorticosterone acetate Trans. Assoc. Am. Phys., 62: 233-234, 1949.

2) Roche Mr.: "Algunos nuevos conceptos acerca of the hormona adrenocorticotrópica (ACTH)"Rev. Policlínica Caracas, 18: 1-28, 1950.

3) Roche, Mr.; Forsham P.H.; Forsham D.C. y Thorn, G.W.: " A Study of Cortical Adrenal Response in Health and Disease. The 48-hour ACTH Test" (Abstract). J.Clin. Endocrinol., 10: 834, 1950.

4) Thorn, G.W.; Merrill, J.P.; Smith III, S.; Rock, Mr. Y Frawley T.F.: "Clinical Studies with ACTH and Cortisone in Renal Disease". Arch.Int.Med., 86: 319-354, 1950.

5) Thorn, G.W.; Merrill, J.P.; Smith III, S.; Rock, Mr. Y Frawley T.F.: "Clinical Studies with ACTH and Cortisone in Renal Disease" (Abstract). Trans. Assoc. Am. Phys., 63:65-74, 1950.

6) Roche Mr.: "Sober foot-note preliminary los efectos clínicos E inmunológicos of the hormona adrenocorticotrópica in los procesos tifoideos". Acta Cient. Venezolana, 1:166-171, 1950.

7) Benedict, J.D.; Forsham P.H.; Rock, Mr.; Soloway S. y DeWitt Stetten Jr.H.: "Pool of Miscible Uric Acid in the Gouty Human". EDF.Proc., 9: 149-150, 1950.

8) Thorn, G.W.; Forsham P.H.; Frawley T.F.; Hill, S.R.; Rock, Mr.; Staehelin D. y Wilson D.L.: "The Clinical Usefulness of ACTH and Cortisone". New England J.Med., 242: 783-793; 824-834 y 865-872, 1950.

9) Benedict, J.D.; Forsham P.H.; Rock, Mr.; Soloway S. y DeWitt Stetten Jr.H.: "The Effect of Salicylates and Adrenocorticotropic Hormone Upon the Miscible Pool of Uric Acid in Taste". J.Clin. Invest., 29: 1104-1111, 1950.

10) Rock, Mr.; Thorn, G.W. y Hill, A.G.: "The Levels of Circulating Eosinophils and to their Response to ACTH in Surgery". New England J.Med., 242: 307-314, 1950.

11) Rock, Mr.; Hill, A.G. y Thorn, G.W.: "The Levels of Circulating Eosinophils and to their Response to ACTH in Surgery. Their Uses ace year Index of Adrenal Cortical Function". Proc. First Clinical ACTH Conference. The Blakiston Co, Filadelfia 55-69, 1950.

12) Rock, Mr.; Wynne, L.C. y Haskins, D.M.; "Therapy of Acute Poisoning Barbiturate. Carryforward of Three Boxes". Ann.Int.Med., 33: 73-82, 1950.

13) Hill, Jr. S.R.; Forsham P.H.; Rock, Mr. y Thorn, G.W.: "The Response of the Adrenal Cortex and Thyroid Nipple to ACTH and Cortisone in Patients with Hypothyroidism and the Nephrotic Syndrome" (Abstract). J.Clin.Endocrinol., 10: 823, 1950.

14) Rock, Mr.; Convit J; Medina, J.A. y Blumenfeld E: "The effects of Adrenocorticotropic hormone (ACTH) in the Lepromatous Lepra Reaction". Proc.II Clinical ACTH Conference, John R. Mote, Editor, Blakiston 1951.

15) Rock, Mr.: "Clinical Effects of ACTH in Typhoid Fever". Proc. II Clinical ACTH Conference, John R. Mote, Editor, Blakiston 1951.

16) Rock, Mr.; Convit J; Medina, J.A. y Blumenfeld E: "The Effects of Adrenocorticotropic Hormone (ACTH) in Lepromatous Lepra Reaction". Internat.J.Leprosy 19:137-145, 1951.

17) Benedict, J.D.; Rock, Mr.; Yü T.F.; Well E.J.; Gutman A.B. y De Witt Stetten Jr. H.: "Incorporation of Glycine Nitrogen into Uric Acid in Normal and Gouty Man". Metabolism, 1:3-12, 1952.

18) Rock, Mr.; Benedict, J.D.; Yü T.F.; Well E.J. y DeWitt Stetten Jr.H.: "Origin of Urinary Creatine in Progressive Muscular Dystrophy". Metabolism, 1: 13-19, 1952.

19) Vera, J, Rock Mr. To flesh there A.: "Diagnóstico y tratamiento of the hipopotasemia. Estudio of 21 casos". Acta Méd.Venezolana, 1:266-274, 1953.

20) Rock Mr.; Baquero, R.; Gómez, A.; Morreo, J.A Curiel, R.; Vera, J y Zubillaga R.: "Sober Estudio electrolitos in el post-operatiorio. — Se debe administrar potasio rutinariamente?". Acta Méd.Venezolana, 1:78-85, 1953.

21) De Venanzi F y Rock Mr.: "Fósforo inorgánico LED suero y metabolismo glucídico". Acta Cient.Venezolana, 4: 192-208, 1953.

22) Rock, Mr. y Nieves Berti R.: "Use of cortisone in certain ocular affections of the leprous one". The week Hospitals form Paris, 33: 1-2, 1953.

23) Rock Mr.: "Los electrolitos in the clínica". Acta Cientifica Venezolana, 3: 1-28, 1853.

24) Rock Mr.: "Sober the enfermedad of Addison in Venezuela". Acta Médica Venezolana, 1: 287-290, 1953.

25) Machado, H, G.H. y Rock Mr.: "Acción of the sober cortisona the infección experimental schistosomiásica in el acure. Estudio preliminar". Acta Científica Venezolana, 5: 169-172, 1954.

26) De Venanzi F, Agüero, O y Rock Mr.: "Exchanges in Blood Sugar and Serum Inorganic Phosphorus After Dextrose however Insulin Administration in Pregnancy". Acta Physiol.Latinoam., 4: 185-189, 1954.

27) Rock, Mr. y Vera, J: "Diagnosis and treatment of the hypopotassemy. Study of 22 case". The Medical Press, 79: 1642-1643, 1954.

28) De Venanzi F, Rock, Mr., y Vera, J: "Response of Serum Inorganic To Insulin phosphates in Normal and Diabetic Subjects". Proc. Soc. Exper. Biol. Med., 87 :16-19, 1954.

29) Rock, Mr.: "With Box of Pseudo-pseudohypoparathyroidism". J.Clin.Endocrinol.Metab., 15: 964-969, 1955

30) Rock Mr., De Venanzi F, Pimentel – Malaussena E, Coronil R., Rangel J.R. y Pérez – Carreño, Mr.: "Consideraciones acerca of the hiperfunción córtico-suprarrenal (presentación of cinco casos)". Memorias VI Cong. Venezolano Cien. Méd., 3: 1651-1655, 1955.

31) Rock Mr., Layrisse Mr. y Gerardi A.: "Sober Efecto LED cobalto the captación tiroidea LED yodo radiactivo in el humano". Memorias VI Cong. Venezolano Cient.Méd., 2: 1019-1024, 1955.

32) Rock Mr. y Vera, J: Cruveilhier – Baumgarten Syndrome. "Carryforward of has Case with Autopsy". Acta Med. Scand., 152:13-20, 1955.

33) Vera, J y Rock, Mr.: "With Note one the Distribution of the Serum Protein Fractions in Normal Apparently Persons in Caracas". J.La.Clin.Med., 47:418-422, 1956.

34) Rock Mr., y Layrisse Mr.: "Effect of Cobalt one Thyroid Uptake of I131". J.Clin.Endocrinol.Metab., 16: 831-833, 1956.

35) Rock Mr., Pérez-Carreño, Mr., Douaihi – Benitez, R. y Lozada L, V.I "Cirugía of mow glándulas suprarrenales". Memorias IV Cong.Venezolano Cirugía, 2: 697-713, 1957.

36) Rock, Mr.: "Nutrition and sex hormones". Ann. Nutrition Food, 11: A99-a120, 1957.

37) Pimentel – Malaussena E y Rock Mr.: "Cuatro casos of syndrome of Sheehan (necrosis pituitaria post-parto)". Acta Méd.Venezolana, 6: 188-199, 1958.

38) Rock Mr.: "Equilibrio hidroelectrolítico". In: M.Pérez Carreño Patología y Clínica Quirúrgica, 67-97, 1958.

39) Pimentel – Malaussena E, Rock, Mr. y Layrisse Mr. : "Treatment of Eight Boxes of Hyperthyroidism with Cobaltous Chloride". J.A.M.A., 167: 1719-1722, 1958.

40) Rock Mr.: "Estudios idiot isótopos radiactivos in el Instituto Venezolano de Investigaciones Científicas". Rev.Radiológica Med.Nuclear, Año 1, 1: 74-81, 1961.

BOCIO ENDEMICO

1) De Venanzi F, Rock Mr. y Gerardi A.: "Captación of yodo radiactivo (I131) por sujetos eutiroideos of nuestro medio, y algunas consideraciones sober aplicación AI diagnóstico of mow enfermedades tiroideas". Acta Méd.Venezolana, 3:114-118, 1955.

2) De Venanzi F, Rock Mr., Rodríguez, R.O Gerardi A. y Méndez-Mr., J.L "sober Investigaciones el bocio endémico inVenezuela". Acta Méd. Venezolana, 3: 200-2003, 1955.

3) Roche Mr., De Venanzi F, Spinetti – Berti Mr., Vera, J, Coll-García, E y Ríos – Teppa A.: "A estudio LED bocio endémico . I Prevalencia in the region andina". Revista Policlínica, Caracas, 23 : 213-229, 1955.

4) Roche Mr., De Venanzi F, Spinetti – Berti Mr., Gerardi A., Méndez-Martínez, J.L. y Forero J: "Iodine Metabolism in A Area of Endemic Goiter". Proc. Soc. Exper. Biol. Med., 91:661-664, 1956.

5) Roche Mr., De Venanzi F y coll- García, E: "Sober foot-note the planificación of a programa of profilaxis LED bocio endémico in Venezfuela". Acta Méd.Venezolana, 4: 55-57, 1956.

6) Gaede K, Forero J, Reyes, E.I Briese E, Spinetti – Berti Mr., Méndez-Martínez, J, Gerardi A. y Forero J: "in vitro Captación tryodotironina marcada idiot yodo radiactivo, por eritrocitos of sujetos in region of bocio endémico". Acta Cient. Venezolana, 8: 129-130, 1957.

7) Roche Mr., De Venanzi F, Vera, J, Coll E, Spinetti – Berti Mr., Méndez-Martínez, J, Gerardi A. y Forero J: "Endemic Goiter inVenezuela, Studied with I131", J.Covering joint. Endocrinol. Metab., 17: 99-110,1957.

8) De Venanzi F, Rock, Mr. y Gaede K: "Studies in Endemic Goiter with Radioactive Iodine". Proc. 2nd .Int.Cong.Peaceful Use A. Energy, Geneva 1958, 26: 162-166 (United Nations, Geneva, 1958).

9) Roche Mr.there De Venanzi F: "Sober Estudios el bocio endémico venezolano". Rev.Soc.Colombiana Endocrinol., 2: 123-138, 1958-1959.

10) Rock, Mr.: "Elevated Thyroidal I131 Uptake in the Absence of Goiter in Isolated Venezuelan Indians". J. Covering joint. Endocrino. Metab., 19:1440-1445, 1959.

11) Rock, M. "Studies on the metabolism of iodine in endemic goiter". Proceedings II InterAmerican Symposium on the Peaceful Application of Nuclear Energy. Buenos Aires, June 1959, pp. 111-113.

12) Gaede K y Rock, Mr.: "Uptake of Triiodothyronine by Red Blood Cells and Basal Metabolic Misses in Endemic Goiter". Abstr. 21st. Int.Congr.Physiol.Sci., Buenos Aires, p.101, 1959.

13) Rock Mr.: "Incidencia of bocio in a group of indios Macoita. (Estudio Preliminar)". Boletin Informativo 1, Dpto.deAntropología, IVIC, 1: 1960.

14) Rock Mr. there De Venanzi F: "Estudios hechos in sober Venezuela fisiopatología LED bocio endémico". Revista Ministerio de Sanidad y Social Asistencia, 26: 49-60, 1961.

15) Rock, Mr., Perinetti H. y Barbeito A.: "Urinary Excretion of Stable Iodine in A Small Group of Isolated Venezuelan Indians". J.Clin.Endocrinol.Metab., 21:1009-1012, 1961.

16) Parra N, Rodríguez P., Rock, Mr. y Gaede K: "Circulating Iodothyronines in Subjects From year Endemic Goiter Area". J.Clin.Endocrinol.Metab., 22: 754-756, 1962.

17) Parra-Jiménez N, Rodríguez – García P., Rock, Mr., Gaede G.K.: "Thyroidal Plasma Hormone in Endemic Goiter". Use of Radioisotopes in Animal Biology and the Medical Sciences, 1: 515-529, Academic Press, London-New Yfork, 1962.

18) Rock, Mr.: "Endemic Goitre". Proc.V Bitter Side. Congr. Endocrinol., pp.109-122, Lima, 1961 (Sesator Lima, 1963).

19) River R., Comar C, Colonomos Mr., Desenne J y Rock, Mr.: "Iodine Deficiency Without Goiter in Isolated Yanomama Indians: Preliminary Notes". Scientific Publication, No. 165, Side American Health Organization, September, 1968.

RURAL ANEMIAS

1) Roche, Mr.: "Genesis of Tropical Anemias. Letter to the Editor". Lancet, 1: 965, 1956.

2) Traducción: Rock, Mr., Pérez – Giménez M.E Layrisse Mr. y Di Prisco, E: "Estudio of the excreción urinaria y fecal LED cromo radiactivo Cr51 in humanos y known uso como medida of mow hemorragias intestinal asociadas idiot the infección idiot anquilostoma". Arch. Venezolanos Nutr., 8 : 5-31, 1957.

3) Roche Mr. y Pérez – Giménez M.E "Estudios idiot cromo radiactivo (Cr51) E hierro radiactivo (Fe59) in pacientes idiot anquilostomiasis". Simposio Interamericano of Venezuela. Aplicación Pacífica Energía Atómica, 466-470, 1957.

4) Roche Mr., Pérez-Giménez M.E Layrisse Mr. y Di Prisco, E: "Gastrointestinal Bleeding in Hookworm Infection". Am.J.Digest Diseases, 2: 256-277 , 1957.

5) Traducción: Rock, Mr., Pérez-Giménez M.E Layrisse Mr. y Di Prisco, E: "Hemorragias gastrointestinales in the infestación idiot anquilostoma". Arch. Venezolanos Nutr., 8: 39-55, 1957.

6) Roche, Mr., Pérez-Giménez M.E. y Levy, A.: "Isotopic To trace Method for Measurement of Iron Lost Into and Re-absorbed from Gastro-intestinal Bleeding Lesions", Nature, 180: 1278-1279, 1957.

7) Pérez-Giménez M.E Rock Mr. y Díaz-Ungría C: "sober Observaciones the coexistencia del Necator americano y del Anquilostomo duodenale in sujetos parasitados from Venezuela". Acta Cient. Venezolana, 8 : 13-15, 1957.

8) Roche, Mr., Pérez-Giménez, M.E., Layrisse Mr. y Di Prisco E "Study of Urinary and Fecal Excretion of Radioactive Chromium Cr51 in Man. Its Uses in the Measurement of Intestinal Blood Loss Associated with Hookworm Infection". J.Clin.Invest., 36: 1183-1192, 1957.

9) Traducción : Rock, Mr., Pérez-Giménez M.E. y Levy A.: "a método of trazadores radiactivos para to medir the pérdida y reabsorción of hierro in lesiones hemorrágicas gastrointestinales". Arch. Venezolanos Nutr., 8 : 33-38, 1957.

10) Rock Mr.: "sober Estudios the fisiopatología of the anemia anquilostomótica idiot the ayuda of isótopos radiactivos". G.E.N., 12 : 216-222, 1958.

11) Rock, Mr. y Pérez-Giménez M.E.: "Intestinal Loss and Reabsorption of Iron in Hookworm Infection". J.Lab.Clin.Med., 54: 49-52, 1959.

12) Roche, M.: "Studies on the Pathophysiology of Hookworm Anemia Utilizing Radioisotopes". U.S.Atomic Energy Comm., TID, 7572, 160-170, 1959.

13) Layrisse, M., Blumenfeld, N., Dugarte, I. y Roche, M.: "Vitamin B12 and Folic Acid Metabolism in Hookworm-infected Patiens". Blood, 14: 1269-1269, 1959.

14) Traducción: Roche, M. y Pérez-Giménez, M.E. : "Pérdida intestinal de hierro y su reabsorción en sujetos con parasitación por anquilostoma". Arch. Venezolanos Nutr., 10: 29-35, 1960.

15) Roche, M., Pérez-Giménez, M.E. y Layrisse, M.: "Survie des erythrocytes circulants dans l'ankylostomose humaine". Revue d'Hématologie, 15: 19-24, 1960.

16) Layrisse, M., Paz, A., Blumenfeld, N. y Roche, M. : "Hookworm Anemia : Iron Metabolism and Erythrokinetics". Blood, 18 : 61-72, 1961..

17) Roche, M.: "Materiali po patofisiologuii ankilostomidosof". Rev.Meditsinskaya Parasitologuiya I Parasitárniye Bolézini, Moskva, 330-336, 1961.

18) Guevara, A., Martínez-Torres, C., Warren, L.G y Roche, M.: "Preliminary Study of Oxidative Metabolism in the Dog Hookmworm". J. Parasitol., 47 (supl.): 19, 1961.

19) Aparcedo, L., Layrisse, M. y Roche, M.: "Further Evidence for Reabsorption of Hemoglobin Iron Lost into the Intestine in Hookworm Infected Subjects". Soc.Exper.Biol.Med.,110:67-69, 1962.

20) Roche, M.: "The Use of Radioisotopes in the Study of Blood Loss due to Parasites". Radioisotopes in Trop. Med. (International Atomic Energy Agency, Vienna), 103-118, 1962.

21) Roche, M., Layrisse, M. y Martínez-Torres, C.: "Estudios sobre la fisiopatología de la anquilostomiasis". Acta Cient. Venezolana, Supl. 1 : 113-126, 1963.

22) Layrisse, M., Blumenfeld, N., Carbonell, L., Desenne, J. y Roche, M.: "Intestinal Absorption Tests and Biopsy of the Jejunum in Subjects with Heavy Hookworm Infection". Am. J. Trop. Med. Hyg., 13:297-305, 1964.

23) Layrisse, M. y Roche, M.: "The Relationship Between Anemia and Hookworm Infection. Results of Surveys of Rural Venezuelan Population". Am. J. Trop. Med. Hyg., 79: 279-301, 1964.

24) Layrisse, M., Linares, J. y Roche, M.: "Excess Hemolysis in Subjects with Severe Iron Deficiency Anemia Associated and

Nonassociated with Hookworm Infection". Blood, 25: 73-91, 1965.

25) Traducción : Layrisse, M. y Roche, M.: "Relación entre anemia e infección por anquilostomo. Resultados de encuestas hechas en la población rural venezolana". Acta Médica Venezolana, 13: 314-332, 1966.

26) C.Martínez-Torres, A. Ojeda, M. Roche and M. Layrisse "Hookworm infection and intestinal blood loss". Transactions of the Royal Society of Tropical Medicine and Hygiene, 61(3): 373-383-1967.

27) Layrisse, M., Martínez-Torres, C. y Roche, M.: "Effect of Interaction of Various Foods on Iron Absorption". American J. Clin. Nutr., 21: 1175-1183, 1968.

28) Khun, I. N. Layrisse, M., Roche, M., Martínez-Torres, C. y Walker, R.B.: "Observations on the Mechanism of Iron Absorption". Am.J. Clin.Nutr., 21: 1184-1188, 1968.

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34) Layrisse, M., Roche, M. y Baker, S.J.: "Nutritional Anemias". Nutrition in Preventive Medicine: The Major Deficiency Syndromes, Epidemiology and Approaches to Control, Baton, G.H. y Bengoa, J.M., Eds. World Health Organization, Geneva, 1976.

ANCYLOSTOMA:ESTUDIOS EXPERIMENTALES

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Personality of Marcel Roche

El rostro social y sensible de la ciencia

Figure Signal of Science in Venezuela

If there is anyone with knowledge of the facts that can talk about about science in Venezuela, this figure bears the name Marcel Roche. Son of who was one of the most renowned urban planners Venezuelan Luis Roche, Marcel saw awakening in itself, from an early age, the interest that led him to embark on a career, whose fruits are synonymous with important and significant achievements, in favor of development and advancement of the science sector.

Medical and scientific, or "medical researcher", a term which he won once, has served as one of the leading advocates in the creation and establishment of organizations such as the Institute for Medical Research Foundation Luis Roche, the Institute Venezuelan Scientific Research (IVIC) and the National Council for Scientific and Technological Research (Conicit), just to mention the most important.

It should be noted that throughout his career, Marcel Roche has been concerned about showing the social side of science and sensitive, as well as its importance to the economic and cultural development of nations. Proof of this can be found in a number of publications and essays written by him, and his work as director and editor Interciencia, one of the scientific journals most important Spanish-speaking.

Today, science Venezuelan is indebted to this man, who has unconditionally left countless to scientific work in the country, to deliver his life to the difficult but noble task of making and promoting science in the world.

Secrets of Childhood

Marcel Dugand Roche was born in Caracas on August 15, 1920. Its origins go back to the year 1858, when his great-grandparents Joamchim Ernestina Roche and Mary Bernard, from France, decided to come to Venezuela with the firm aim to prove fortune. Fruit of the union Roche-Bernard, was

born Jean Emile, father and grandfather of Louis Marcel.

From a modest family, Marcel lived the first nine years of his life in Venezuela, along with his two sisters and Beatriz Liliane, and under the tutelage of their parents Luis and Beatrice, who in 1929 decided to send France, in order to assure studies and further training which, since its birth, has been exemplary.

In his autobiography entitled "Memories and aomissions", Roche describes with humor a story of his family education, "Mom wanted me out perfect and educadísimo. Me crying with my trousers draped with a tight elastic uncomfortable around the top of the legs my blue eyes, my blond hair pulled back and a stripe central act like a prince and besara the

hands of the ladies. Complací by never feel that anything was ridiculous." (1995)

Since childhood showed avid interest in reading of French origin, acknowledging later that while it was true that he had received an education afrancesada, once adult, was dedicated hard to know and learn about the history and geography Venezuelan and Latin American literature."…. I had the opportunity to know our history as an adult, learn our geography covering the entire territory and read Cervantes without their contour educational and pedantic, the twenty-seven years."

His arrival in France, in 1929, Marcel meant for the beginning of a new phase of his life. In living with their paternal grandparents, Jean Emile Roche and White Roche, met in Paris discipline and French culture, which is characterized by its literature, music and cuisine.

During adolescence, and thanks to their teachers, is a passion for reading poets like Francois Rabelais and Michel de Montaigne, authors also helped her explore tha path that led him to a better understanding of the world. "I intended to be a spectateur detaché, the viewer emerged from the world believed that it could observe without pasionalmente involved in it. Me become increasingly aware of the complexity of the world, especially the social world, the vast variety of opinions, of wealth Huge religious ideas, the complexities of political ideas, and, above everything, I thought – and still think-that the only possible attitude was skepticism tolerance, acceptance and understanding of many points of views, Que sais – je or I will refrain from Montaigne." (1995)

His first encounter with medicine so experienced to thirteen years of age, during the conduct of a first aid course, which received at the College Sainte Croix de Neuilly. This experience allowed him to get upclose and fractures, bleeding, burns and how to assist them. Since then, Marcel Roche was motivated by the idea of studying medicine.

His thirst for knowledge and his curiosity led him to explore the world of philosophy and humanities, thus cultivating, love and concern for the sensitive things of life. "It is not wise philosopher is sterile and proud. Narocijo Claude Bernard helped me a lot to put in their respective posts of my life, science positive on the one hand and philosophy and humanities on the other, are mutually complementary. " (1995)

In 1938, already vislumbraban wartime in Europe. That was reason enough for that, by the decision of his father, Marcel was sent to the United States to study medicine. Once based in Philadelphia, it was necessary to initiate studies at Saint Joseph's College in that city, which enabled him to level studies and prepare for college. In 1942, Roche entered Jhons Hopkins University in Baltimore, to study medicine. They learned of prominent and famous professors and clinicians, including. Rich Arnold, Louis Hamman, William Mansfield Clark Warfield Longcope and Alfred Blalock.

In 1946 (1996, p.96), then work that was published in the journal Archive of Internal Medicine.

That same year he married in Venezuela with the artist, Maruja Rolando, and then both decide to return to the United States. In 1947, he had the firm intention to exercise as a medical internist, and was accepted into the Peter Bent Brigham Hospital of the Medical School of Harvard University in Boston, a city where he also was your primogénita, Antoinette.

At Harvard serves as a Research Fellow, and is devoted to research in the field of endocrinology, nutrition and diabetology. Thereafter, provided the basis for the consolidation of a prolific career in the field of research.

Creator of Dreams, Maker of Ideas

In 1951, Marcel Roche decides to return, Maruja with his wife and their two daughters, Antoinette and Nöella, Venezuela. It was the first time, after so many years abroad, which established definitively in the land which gave birth. His first professional activities in the field next to the place recognized scientific Venezuelan Francisco De Venanzi, who offered him work on his private practice and invited him to practice in the Department of Pathophysiology, at the Universidad Central de Venezuela.

From Roche and Venanzi Founded the Medical Analytical Laboratory, located in the building Zarikian Bridge Mohedano, in Caracas. In parallel, Roche worked in the Vargas Hospital in the mornings, an experience that allowed him to learn about the diseases of the tropical region, such as schistosomiasis and hookworm.

Practiced private activity of medicine for one year only, and is devoted entirely to research. “From the beginning, however, I spent part of my time to clinical research, studying the metabolism of electrolytes – sodium, potassium, chlorine – in various pathological conditions. Sodium and potassium was determined, along with Andrew Gerardi, in a flame photometer was then novel apparatus in the country. The results are incorporated into my thesis degree of doctor and I published it then, in 1954, disorders of sodium and potassium, who edited Peace Montalvo in Madrid.” (1995)

Marcel Roche contributed, along with leading scientists Venezuelans, to day the foundation for the consolidation of scientific activity in Venezuela in 1950. Thanks to learning from abroad, and De Roche launched Venanzi, for its part, the task of establishing a teaching and research model informal doing science, from the Institute of Medical Research Foundation Luis Roche in 1952, and then at the Venezuelan Institute for Scientific Research (IVIC),.

Transcurrían time of the regime of General Marcos Perez Jimenez, and while the scientific activity in Venezuela was still nascent, there was concern a group of men and women by giving science a post in the relevant country.

On 23 January 1958, he was overthrown by General Perez Jimenez. Before the fall of the regime, the renowned scientist, Humberto Fernandez Moran performed the post of Minister of Education and was also director of the Venezuelan Institute of Neurology and Brain Research (Invic), which then would name Venezuelan Institute of Scientific Research (IVIC). For political reasons, Fernandez Moran seeking asylum in the United States, and Marcel Roche who took the reins of Invic. Then through the Ministry of Health and Social Welfare, setting up a commission composed of leading researchers and scientists as Felix Pifano, Gabriel Chuchani, Marcel Granier, Luis Carbonell, Manuel Bemporad Vegas and Martin, who teamed up to assess the trajectory of the institution and consider further changes to improve and expand its operation.

Since breast IVIC, Roche, thanks to the work of renowned national and international researchers, led efforts to make this institution one of the fmost prestigious in Latin America and the world. “At the beginning what inspired us to launch a determined program was the existence in the country or outside it, qualified persons in the investigation of a high level, around which would create a group, and for whom it would acquire the necessary equipment

and not the other way around, as had done until then. Fortunately, we can rely on individuals as Tulio and Miguel Layrisse Arends (hematology), Raimundo Villegas (biophysics), Gloria Villegas (electron microscopy), Gunnar Svaetichin (neurophysiology) and Gernot Bergold (virology) were pioneers in their respective fields, formula proved, and will soon arrive at a good number of researchers, who published at the highest level in good journals, writings submitted to arbitration by a third party." (1995)

In 1967 () 1969, during the beginning of the presidential term of Refael Caldera, Marcel Roche was named president of that institution. Although during his term in the Conicit, Roche had to face various difficulties, caused by political factors, its performance was characterized by the defense of the development and scientific advancement at any scale.

But in addition, this investigator has also highlighted important and prestigious organizations like the Academy of Sciences of the Third World Academy of Sciences Latin America, the Pontifical Academy of the Vatican, the United Nations University, which was Council president, and The Pugwash Movement, which integrates with renowned figures in various fields, which conducted the same cause: the struggle for world peace.

Discloser Scientific Vocation

The legacy until now by Dr. Marcel Roche is intimately connected with his work as an analyst, critic and explainer of scientific reality Venezuelan. In the works written by the medical training, we can appreciate his concern for the study of the various historical, socio-cultural, economic and political factors that have contributed to the scientific development his panoamericano and Venezuela.

Among the books written by Marcel Roche highlights: Log (1963), Science (1968) among us, Discovering Prometeo (1975), My commitment to science (1987), his autobiographical book, Memories and omissions (1996) and Profile of Science in Venezuela (ed.), (1996), just to mention a few.

On several occasions, and thanks to his experience, he stressed the role of the researcher as a man of science and the obstacles he had to overcome in order to successfully bring their work, especially in developing countries. His concern about placing the role of science among the priority activities for the development and progress of the country, led him to emphasize the role of the scientist as a benefactor to society. In the book entitled "The Science among us," published in 1968, Roche describes a fluid prose, its relationship with science researcher: "The scientist, which scientist, is not interested at all, rather truths Passengers – transmissible, yes, but changeable and fluid – which serve to jump to other truths, catenario endless process, and with justification twofold: One, the full pleasure of playing the game of human cogitation reality and, two, the desire to arrive at practical applications that enhance the welfare of the community." (1968)

In addition, Roche has clearly shown concern about the scope and significance of basic and applied research that is taking place in Latin Amierica, while also highlighting the importance of both critically and staff.

"It is my impression that many of our active researchers showing some disdain, thinly disguised, thinly disguised, to applied research, and to the practical invention, the Edinson. Do not know what is due to such an attitude, if it actually exists, but it is clear that the country must increasingly promote research directed toward immediate goals without abandoning basic research, which will continue to form the basis of our scientific progress." (1968)

In a text written by the investigator IVIC, Michael Laufer, he pays tribute to this character that has

unquestionably left their mark on the history of science Venezuelan: “In the context of that tribute on this occasion we pay Marcel Roche as Researcher Founder and Director Emeritus of the Institute, I believe that of all his qualities, the most

important has been to stop growing. Since his numerous positions, in his laboratory at its department at the Directorate IVIC, the Conicit, Roche has grown to others. It is impossible to do justice in these few words, the role that Marcel Roche played in the development and professionalization of scientific research in Venezuela, and particularly in the consolidation and development of our institute. Roche left grow at the institution and left to grow its people. Stopped We all grow under the highest standards of academic excellence.”

At present, Marcel Roche, who lives with his second wife called Flower Roche has eighty-two years, of which a large portion of them have been devoted entirely to the practice of science. It can be said with certainty and firmness, Roche is one of the most important examples of scientific discipline and consistency, not only in Venezuela but also in the world. Today his legacy will remain forever, among his most devoted disciples, and those who found it sufficient grounds to continue with the zeal and courage difficult, but rewarding path of science.

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Library Marcel Roche (Vision and Mission) (Venezuelan Institute of Scientific Researches)

Date and Place of Birth	:	15 August 1920, Caracas (Venezuela)
Scientific Discipline	:	Biomedicine
Academic Title	:	Professor
Institute Address	:	Venezuelan institute of Cientificas Investigations (IVIC), Department of Study of Science, Section 21827, 1020-A Caracas (Venezuela)

The Library Marcel Roche is the greater source of bibliographical references for science and the technology in Venezuela.

In 1996, the offered size of the collection and services were determining factors so that UNESCO granted the designation of REGIONAL LIBRARY FOR LATIN AMERICA and the CARIBBEAN to him.

Its mission is to select, to acquire, to organize and to recover scientific and technical, necessary data fo activities of investigation, opportune and efficient way, with the vision of being the greater supplier of services and products of information in science and technology for the area of Latin America and of the Caribbean, maintaining the highest standards of quality on watch.

MARCEL ROCHE LIBRARY

(Dr. Carlos Rivas Cols, Caracas – Venezuela, March, 2000)

The Library at the Venezuelan Institute for Scientific Research (IVIC) is known as the "Marcel Roche" Library, so named after Dr. Marcel Roche, IVIC's first Director. It was founded in 1959, the same year IVIC was created as the first institution devoted to scientific research in the country. It started as small library to satisfy the bibliographic requirements of an also small scientific community, consisting of 26 investigators, most of them devoted to medical research. As the years went by, the library was growing in size and its multidisciplinary character became apparent. At the arrival of the new century, and millennium, on its forty first birthday, the library holds the distinction of being the "Unesco Regional Library for Science and Technology", the most complete of its kind south of "Rio Grande". Throughout the years the different Directors, Chief of Librarians, M. Türk, H. David, J. Bringas and X. Jayaro (presently in charge) and the different commissions of investigators in charge of defining library policies have created a tradition of selecting the most important publications of both books and periodicals to endow the collection of the best sources of information. These policies have launched the library into being the largest collection of scientific technological documentation in Latin America with an asset value in 500 million Dollars. Such an invaluable collection includes 90.000 books and subscriptions to more than 6.000 technical and scientific journals in different languages. The large majority of them in English, 4.400 are up to date and 3.800 from the first volume ever published. In addition to the printed material the library owns 55 data bases in compact discs and it is quickly catching up with the latest technologies in library science by making all the time new acquisitions in this area as well as undergoing a major automation process which will provide an efficient computerized service directly linked to national and international data bases. The modern building that houses the library has a usable area of 6.000 meters and a capacity for 600 readers. It occupies three of the four floors available. The ground floor is occupied by the reception, the main reading room and a storage room, mostly for keeping reference books, serial of abstracts and advances in different subjects. The second floor is devoted to displays of the recently acquired books and periodicals, there is also a reading room, and a storage room for periodicals printed since 1983 up to the present. And finally the third floor is a large storage room for periodicals printed before 1983, some of them go back to the 1980's. The fourth floor is reserved for future expansions. The user may find computer terminals for on line searching in the main reading room and photocopying services on the first and second floors. The prevailing pleasant atmosphere and quietude invite to intellectual activity. Every year the library offers it service to approximately 150.000 users including professors, investigators, students and other professionals of different specialties.

The different subjects represented in the library are mainly in the field of Anthropology, Biophysics, Biochemistry, Ecology, Physics, Physiology, Genetics, History of Science, Immunology, Mathematics, Medicine, Microbiology, Chemistry, Sociology and others.

The library is a national pride and it should be noted that many visitors, from other countries are surprised at the variety of subjects kept within those four walls. Let's hope that the good will demonstrated so far by our Government will prevail many years to come to preserve this valuable legacy for future generations.

Carlos Rivas Cols
IVIC Investigator

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Professor Marcel Roche
OBITUARY

The distinguished Venezuelan scientist Marcel Roche died of a stroke in Miami in May 2003, aged 82. During his tenure of the Simon Bolivar Visiting Professorship in Latin American Studies, he was a Fellow of Queens 1970-71. He greatly enjoyed his sojourn in Cambridge and kept in touch with some of the Fellows for many years.

Marcel Roche was born in Caracas into a wealthy Venezuelan family of French origin and he was sent to Paris for his secondary education, graduating in 1938. He continued his education with a Bachelor of Science degree at St Joseph's College, Philadelphia, before training as a doctor at the John Hopkins Medical School, Baltimore. He trained as an endocrinologist and was an early specialist in nuclear medicine, doing research with the New York Institute of Public Health. Returning to his native Venezuela in 1951, he did pioneering work, especially among aboriginal tribes, in the investigation and treatment of goiter, of hookworm and of nutritional deficiencies and anaemias. He became an Assistant Professor of the Central University of Venezuela and was Founder and Director of the Institute of Medical Research, set up by his father, the city planner Luis Roche. In 1958, after the fall of the dictator Perez Jimenez, as Secretary General of the Venezuelan Institute of Scientific Research, a multi-disciplinary center of all the sciences. Under Roche's direction, the Centre flourished, encouraging young scientists in Venezuela. Roche was particularly instrumental insetting up an anthropology department and a department to study the history and sociology of science.

As well as his year in Cambridge, Roche spent a year as a Visiting Fellow at the University of Sussex. He was Director-Founder of the Venezuelan National Council of Scientific Investigation and the magazine Intersciencia, as well as being involved in the publishing of several other scientific periodicals. He made scientific film documentaries and produced a weekly science programme on television. He was prominent in organizations promoting science all over Latin America and was an advisor to the WHO, UNESCO and other international organizations. He held office as a Governor of the International Atomic Energy Agency and was a Member and President of the Council of the University of the United Nations in Tokyo. He was Secretary of the Academy of Sciences of the Third World. In Venezuela, of course, he received many honours including the Order of the Liberator (Gran Cordo), but was also the receipient of honours and degrees from countries as diverse as Belgium, Germany, France, the United States, India and Brazil. **He won the Kalinga Prize from UNESCO for his influential work in encouraging science.** He was a Fellow of the American Association for the Advancement of Science and a member of the Pontifical Academy of Science.

In retirement he wrote biographies of influential Venezuelan scientists and other books on science, began a collection of art now housed in the Venezuelan Institute of Scientific Research and built up the library of the Institute now named after him. He was a great music lover and was Foundation President of the Association Pro-Música de Cámara, Caracas, and a member of the Council for the Venezuelan Symphony Orchestra. He was himself an accomplished cellist. He was a life-long pacifist and a member of the Council of the Pugwash Movement.

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