

Obituary: Georges Salamon

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Professor Georges Salamon passed away on October 10, 2015, at age 84. Born in Montpellier, France, from a Russian father and Polish mother, both from a Jewish Ashkenazy family, he preserved throughout his entire life a spirit of adventure gained from a stateless family having learned to transform the challenges of History into extraordinary resilience and capacity to embrace new horizons.

George received his medical degree at the University of Aix-Marseille in 1958, and obtained, with the encouragement of his teachers Hermann Fischgold, Henri Gastaut, and Robert Naquet, consecutively, the Diploma of Radiology in 1962 and of Neurology in 1965. This dual expertise in

Imaging and Clinical Neurosciences governed the impetus he gave to Neuroradiology and was the lynchpin point of a prestigious career, critical to maintaining a bridge between these two disciplines. Thus, it is interesting to note that, before joining the hôpital de La Timone in Marseilles, first as Associate Professor in 1968 and later as Head of the Department of Neuroradiology in 1972, Georges worked in private practice with Jacques Padovani and Jean-François Huguet. This trio constituted the core of an entire generation of brilliant academic neuroradiologists, pediatric radiologists, and vascular radiologists.

In the 1950s and early 60s Europe, the heart of neuroradiology was Sweden. Georges Salamon, Auguste Wackenheim, Jean Metzger in France, Giovanni Ruggiero in Italy, James Bull in England, and many others, went to Stockholm to visit the radiology departments of Erik Lindgren, Ingmar Wickbom, and later Torgny Greitz. At that time, needles and catheters for pneumoencephalography and arteriography were the main tools for investigating brain tumors, epilepsy, or stroke; likewise, in many institutions, the procedures were completed by radiologists, but interpreted by neurologists or neurosurgeons. During the VI Symposium Neuroradiologicum, held in Rome in 1961 under the presidency of Giovanni Ruggiero, Marcel David, Chief of Neurosurgery at the Pitié-Salpêtrière hospital in Paris, was the first neurosurgeon who publicly recognized “the importance of neuroradiology and its right to independent status.” We just remembered that Hermann Fischgold was, at that period, Head of Radiology at La Pitié-Salpêtrière hospital.

Georges’ first passion was neuroanatomy. Between 1965 and 1970, his doctoral thesis on the cerebral vascularization was the “bible” for his pupils and an entire generation of neuroradiologists and neurosurgeons and laid the foundation for the field of neurointerventional radiology which emerged a few years later. This work came together with the publication of the *Atlas of Arteries of the Human Brain* in 1974,

Radiologic Anatomy of the Brain in collaboration with Y.P. Huang in 1978, and *Vascularization and Cerebral Circulation* with G. Lazorthes et A. Gouazé that same year.

The microradiographic sections of injected brains originating from the unit INSERM U6 that George created in 1972 fascinated us, young neuroradiologists at the time. During these crucial years, Georges Salamon inspired so many vocations. Around that time, a new imaging technique—the CT scanner—was born in a lab in the suburbs of London and spread like a wildfire across the Atlantic, England, and Sweden, while French neuroradiologists could only watch, still making diagnoses of extracerebral hematomas or of brain tumors with cerebral angiography. The silver lining in this story was the emergence of a whole new generation of brilliant interventional neuroradiologists in France under the joint guidance of Georges Salamon and René Djindjian. Both were at the forefront of the now famous French interventional neuroradiology.

The microradiographic sections from Georges' lab—INSERM U6—quickly spread around the world. Neuroanatomy became the perfect springboard for the development of cross-sectional anatomy, CT and, shortly thereafter, MRI where the first applications were cerebral. The school of Marseilles was at the forefront.

Among the first interested in Georges' work were several enthusiastic young American and European neuroradiologists. Thus, in the 1970s and 80s, many residents, fellows, and professors traveled to Marseille from New York, Boston, San Francisco, Chicago, Milwaukee, Los Angeles, and Philadelphia, as well from Stockholm, Milan, and Tokyo. Conversely, many young French neuroradiologists crossed the Atlantic to learn the new digital cross-sectional imaging techniques and to complete their training and to introduce the new neurointerventional techniques to Europe and the USA.

Georges also impacted the emerging field of pediatric neuroradiology, realizing (like Caffey two decades earlier who founded the field of pediatric radiology) that children's brains are not simply smaller than adult brains. Georges' pupil, Charles Raybaud, became a pioneer in the new field of pediatric neuroradiology and was his successor as Head of Department of Neuroradiology in La Timone. Like Georges, Charles also later crossed the Atlantic to take charge of the Department of Neuroradiology at the Hospital for Sick Children in Toronto.

From the early 1970s, Georges Salamon embedded the speciality of neuroradiology in official national and international programs. He was one of the founding members (1970) and the President of the French Society of Neuroradiology (SFNR), as well as of the European Society of Neuroradiology (ESNR) in

1972, President of the French Society of Radiology (SFR) in 1995, and a founding member of the World Federation of Neurology in 1997. These roles brought him international recognition: in 1984, he was elected honorary fellow of the American College of Radiology, in 1994 honorary member of the Radiological Society of North America, in 1995 of the European Society of Neuroradiology, and in 2000 of the Japanese Society of Radiology.

As a tireless worker, he might, in retirement, have indulged other passions like sailing on "Chipie," his yacht, where he used to invite his numerous friends to enjoy the Mediterranean sun, or contemporary art, and painting (he was from 1989 till 1995 President of the Association of Marseilles Museums). Visiting with Georges, the Getty Museum in Los Angeles or the Vieille Charité in Marseilles was an enchanting experience.

But at age 65, this intrepid navigator burned his boats to start a new life. Meeting Noriko—then a visiting fellow from Japan—sealed his destiny across the Atlantic Ocean and they settled together in the USA. His enthusiasm for new imaging techniques and his competence in neurosciences led him first to Chicago as a research professor at the Northwestern University with Eric Russell from 1996 until 2002 and later to Los Angeles as a visiting researcher at UCLA with Dieter Enzmann. He loved to return regularly to France to visit his loved ones but also to participate in the course CT, MRI, and Ultrasound in Val d'Isère he had designed in the 70s and continued to expand, filling him with pride. Furthermore, the course gave him the opportunity until only very recently, when he was over 80, to make some beautiful downhill descents with his favorite guide, the loyal "Buddy."

Georges Salamon had a splendid career: a great researcher, a wise discoverer, a speaker who gripped audiences, gifted with a broad and open mind, loving art, the sea, his family and friends, and life. This was Georges.

To his wife Noriko, his sisters Marguerite and Yvonne, his brother Roger, his children Christophe, Marie Hélène, and Ivan, and his eight grandchildren, the European Society of Neuroradiology offers their deepest condolences.

A great man has left us. We will never forget him.

Claude Manelfe
Professeur Emeritus
Université Paul Sabatier, Toulouse III
France