

Tribute to Prof. George Klein

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George Klein died in the night between 9 and 10, December 2016 in his home in Lidingö near Stockholm, leaving his wife Eva and their 3 children with their family as well as an important scientific heritage, over 1385 publications in a number of scientific Journals. Most remarkable was his personality, kind, of easy contact, warm and friendly with an intelligent and penetrating look, open-minded and kind to colleagues and friends. All those who knew him remember his friendly and open-minded behaviour and, engaging the visitors and colleagues in hour's long conversations by walking around his house on frozen lakes in winter time with no accidents reported. Standing behind his legturn, close to the dinner table surrounded by family and guests, he never stopped reading, writing, working even in presence of dinner guests as I could also experience during my visits to the Kleins. I first met George after the end of the last war (1956–1957) when he worked as instructor in the Pathology Institute of Budapest under direction of Prof Jozsef Balo where I visited him during our medical studies with a collection of pathology-slides for microscopy to explain me the nature of underlying diseases. Soon after both of us left Hungary occupied then by the Russian troops of Staline who « liberated » Hungary from the occupation by Nazi Germany. Many University students left in those times. George with his wife Eva went to Sweden, myself with my brother

Michel went to France. We followed closely the research activity of the Kleins, visiting them in Stockholm as George visited Paris, friends and also the Pasteur Institute and was instrumental in the attribution of the Nobel Prize to Monod, Jacob and Lwoff in the 1960ies. Just a few words on the research activity of the Kleins. The Kleins introduced in cancer research an original approach, the biological study of the transformed cancer cells. From 1947, the Kleins joined the Karolinska Institute, part of Stockholm University from 1957 on George and Eva became Directors of the Institute of Tumor Biology built for them on the Karolinska Campus where I had the opportunity to visit them during the 1970ies and send to them co-workers from our laboratory to engage collaborative projects with the Kleins. The lists of their publications are available on scientific websites. Here I want only to mention one of the first and more original subjects studied by the Kleins in their Institute, the transformation of malignant cells from solid tumors to ascites-cells, living in the peritoneal cavity in suspension in the ascitic fluid, with or without invading nearby tissues. The selection pressure on cells to survive in suspension in ascitic fluid poor in oxygen became an early and important model for the study of the nature and invasiveness of tumor cells, a good model for the characterization of their genetic and epigenetic pattern (Klein G, Klein E (1955) Variations in cell populations of transplanted tumors as indicated by studies on the ascites transformation. *Exp Cell Res* (suppl 3):218–229). As an early and close friend of the Kleins, although working on a very different subject: connective tissue research, matrix biology, I never stopped to keep contact with the Kleins and remained informed of their research activity. Myself and many other friends of George will certainly miss him and wish courage to Eva, his widow.

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