

Mariano Barbacid, Ph.D

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Mariano Barbacid was born in Madrid, Spain in 1949. He got his Ph.D. degree in Biochemistry from the Universidad Complutense of Madrid in 1974. From 1974-1978 he trained as a postdoctoral fellow in retroviral oncogenes in the group of Stuart A. Aaronson at the National Cancer Institute in Bethesda, Maryland. In 1978 he started his own group to work on the molecular biology of human tumours. His work led to the isolation of the first human cancer gene (oncogene) in the spring of 1982. Subsequently, he demonstrated that this oncogene was a mutant allele of the H-Ras proto-oncogene and owed its oncogenic properties to a single somatic mutation in its coding sequences. These seminal findings, also made independently by the groups of Robert Weinberg (MIT) and Michael Wigler (CSHL), have played a key role in establishing the molecular bases of human cancer.

In 1984, Barbacid moved to Frederick Maryland as Head of the Developmental Oncology Section and in 1988, Barbacid joined the Bristol Myers-Squibb Pharmaceutical Research Institute in Princeton, New Jersey where he became Vice President, Oncology Drug Discovery in 1995.

In 1998, he returned to his native Madrid to create the CNIO that currently houses 450 investigators allocated in twenty five research groups (see Commentary in *Cell*, **129**: 641-644, 2007). Since his return to Spain, Barbacid is concentrating on the study of the role of cell cycle regulators in vivo and on the design of new animal models of cancer using gene-targeting technologies.

Other contributions of special scientific relevance include the identification of Ras oncogenes as targets of chemical carcinogens (1984-85), the discovery of the Trk family of tyrosine protein kinase receptors (1985-88) and the subsequent demonstration that they are the signalling receptors for the NGF family of neurotrophic factors (1991) More recently (2003-07), the Barbacid lab has demonstrated that mammalian Cdks are not essential for driving the specific phases of the cell cycle but to sustain proliferation of specialized cell types. These observations have led to a new model for the mammalian cell cycle.

The relevance of his work has been recognised by several awards, including the Young Investigator Award of the American Association of Cancer Research (USA, 1986), Steiner Prize (Switzerland, 1988), Ipsen Prize in Neurobiology (France, 1994), the Brupbahr Cancer Research Prize (Switzerland, 2005) and the Medal of Honour of the International Agency for Cancer Research (WHO) (Lyon 2007). In addition, Barbacid has received several Spanish Awards and a Doctorate *Honoris causa* by the Universidad Internacional Menéndez y Pelayo (1995). He is a Member of EMBO since 1996.

Barbacid has 239 publications, including 170 original articles and 24 invited reviews in journals with impact factor (average IF 12.1) as well as 45 book chapters and proceedings of various symposia. He has an overall Hirsch "h" factor of 84.