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Twenty-Five Years of Failures

ABSTRACT:

I have been designing and developing new medical therapies for about 25 years, using mechanics and an engineering science mindset. I will be happy to tell you some "war stories" from this journey - especially the failures, since they teach us the most on how to develop a better future. In particular I will talk about the birth of nanofluidics, nanomedicine, transport oncophysics, multistage vectors, and injectable nanoparticle generators. Will make a case for cancer as a disease of mass transport dysregulation. Will report on our series of experiments on the International Space Station. What I am looking forward most are your questions - I will show a few slides and will be happy to take the conversation anywhere the audience wants to go. If anyone has a question they wish to pose ahead of time, please email me at mferrari@houstonmethodist.org



Mauro Ferrari

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BIOGRAPHY:

Mauro Ferrari, Ph.D. is President and CEO of Houston Methodist Research Institute. He also serves as Executive Vice President of the Houston Methodist Hospital System. Concurrently, Dr. Ferrari serves as Senior Associate Dean and Professor of Medicine at Weill Cornell Medical School in Manhattan, New York. He was the principal architect of the Cancer Nanotechnology Plan at the National Cancer Institute of the USA (2003-2005), which is the largest nanomedicine research program to date, worldwide. He has published over 500 scientific articles, 7 books, and is inventor of over 50 patents issued in the USA and internationally. Dr. Ferrari is a Fellow of AIMBE, AAAS (Biological Sciences), and ASME. He has won numerous scientific awards and recognitions, including the Founders' Award from the Controlled Release Society, the Blaise Pascal Medal from the European Academy of Sciences, the Aurel Stodola Medal from ETH Zurich. Dr. Ferrari holds a degree in Mathematics from the Università di Padova, Masters and Ph.D. degrees in Mechanical Engineering from the University of California, Berkeley, and attended medical school at the Ohio State University. Dr. Ferrari holds honorary faculty positions at several universities in the USA and internationally. He has received honorary doctorates in biotechnology, electrical engineering, and letters (theology). His prior employment includes tenured faculty positions in Engineering at the University of California, Berkeley, in Engineering and Medicine at the Ohio State University, and the University of Texas M.D. Anderson Cancer Center and Health Sciences Center in Houston, Texas.