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How does p53 function to prevent cancer?
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In that sense, p53 is considered to be the “guardian” of the genome and is one of the most important proteins to control the authenticity of the genetic material. Once p53 is mutated, this important function is lost, leading to the accumulation of genetic alterations that contribute to the malignant cellular transformations. One question, which is still very debatable, is whether the mutant p53 protein, by itself, is also functional in cells. We found that when mutant p53 was inserted into cancer cells that are null for p53, they become resistant to apoptosis, thereby making the cancers more resistant to chemotherapy [3].

Do you have a favorite paper?
In a paper I published in 1983, I suggested that p53 should be regarded as a specific marker for tumor cells. Since then, it has indeed turned out to be one of the best cancer markers in the world. This paper, although very naïve, turned out to be the most significant in my scientific career [4].

How did you balance your research with your family?
My children were born during my Ph.D. studies so I have always balanced my work and family roles. Consciously and unhesitatingly, I spent all my free time with my children and the rest of my time in the laboratory, since both were very important to me. It was neither fair nor easy, but I felt that, for me, it was definitely the right choice. I was fortunate that my children were able to benefit from the excellent education and after-school programs provided in Israel, which allowed me to work during the day, and be a mother in the afternoons and evenings. An understanding husband is always critical!

You said that women in science ‘do not advance at same rate as men’. What did you mean?
It does not make sense to see that in top international scientific meetings, only 5–10% of the scientists are female, especially when we live in a world that is composed of equal male and female populations. The relatively low numbers of top women scientists stems from a deeply serious societal tendency to penalize women who want to work and also have a family. From my point of view, any nation-wide improvement of the school system, which could provide consistent and reliable childcare from 8 a.m. to 5 p.m., would be the most practical way to help women scientists and would undoubtedly contribute greatly to solving this problem. It is an unfair society in which such childcare does not exist. Women do not want anything that they do not deserve, but just want to be given an equal opportunity.

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References

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