

Press conference with the BBVA Foundation Frontiers of Knowledge Laureates in Biomedicine and Development Cooperation

James Allison and Nubia Muñoz stress the importance of combining prevention and new therapies in the battle to defeat cancer

- Allison, distinguished for his pioneering work in immunotherapy, declared himself upbeat about the results being obtained by combining this treatment with radio and chemotherapy, and even ventured to talk of a “cure” in the case of patients with extremely aggressive tumors who have managed ten years in remission after just one treatment
- Muñoz, who received the award for leading the development of a vaccine against the human papillomavirus causing cervical cancer, criticized the spread of false information about the side effects of vaccines, which, she remarked, is holding back preventive efforts against cancer in developing countries, and permitting the return of diseases once “vanquished” in most of the world

Madrid, 11 June 2018.- Immunologist James Allison and epidemiologist Nubia Muñoz, winners in the tenth edition of the Frontiers of Knowledge Awards in the Biomedicine and Development Cooperation categories respectively, were equally vocal at this morning's press conference on the need to combine treatment advances with prevention campaigns, in order to confront cancer. “We now know the cause of many cancers,” Muñoz points out, “but that should not blind us to the fact that smoking is to blame for 30% of all cancers worldwide, and these are cancers that can be avoided. We have to deploy the two weapons at our command: prevention and treatment.”

Allison voiced his agreement, while declaring himself upbeat about the results being achieved through combining new therapeutic strategies, like immunotherapy – an area where he is a pioneer – with surgery, radiotherapy and chemotherapy: “There is still a long way to go, and I don't believe we will ever see a world wholly free of cancer, but we are seeing a lot of progress in some cancers.”

For the Texan scientist, it is not unreasonable to talk about a “cure” in the case of patients with extremely aggressive cancers who have survived without relapse for ten years after a single treatment. This is the kind of success being achieved among metastatic melanoma sufferers by immunotherapeutic drugs developed thanks to Allison's research, although note that only in around 20% of patients.

James Allison (Texas, United States, 1948) was the first to demonstrate that immunotherapy can be an effective weapon against cancer. This was in the 1990s, by which point few researchers were prepared to bet on the strategy after decades of disappointing results. The first immunotherapy-based anti-cancer drug was approved in 2011 for the metastatic melanoma indication. And immunotherapeutic options are now being rolled out for lung, kidney and bladder cancer and tumors of the neck and head.

For Allison, “the challenge now is to understand why it doesn’t work in every patient,” and to secure the same good results for other cancers. He himself continues to contribute through his basic research, and also through the “Immunotherapy Platform” he leads with his wife and colleague Padmanee Sharma. This platform is involved in about a hundred clinical trials probing the molecular details of patients’ tissues to gauge the effect of immunotherapy.

The harm inflicted by anti-vaccine campaigns

Epidemiologist Nubia Muñoz (Cali, Colombia, 1940) was distinguished for studies involving thousands of women in forty countries which proved that human papillomavirus (HPV) was the “principal and necessary cause” – in Muñoz’s words – of cancer of the uterine cervix, one of the most lethal among women in the developing countries. Her epidemiological work led to the isolation of the seven cancer-producing HPV strains, enabling the development of such supremely effective vaccines that we can even talk – she says – of someday “eradicating” the disease.

“The tragedy is that the vaccines are not getting to the women who need them most,” Muñoz affirms. While screening has ensured a relatively reduced incidence of cervical cancer in the developed world, the picture changes radically in the developing countries, where no such programs exist. And globally, 86% of cases of cancer of the uterine cervix occur in developing countries.

The reason for vaccines not reaching these countries is not just price but also “rumors and false information about their side effects,” spread to damaging effect by social networks. The epidemiologist asked anti-vaccine groups “to return to their senses,” while calling for scientists to go more hands-on in disseminating “reliable information on vaccine safety and benefits” among doctors and the general population. She laments that in her own country, Colombia, a vaccination program that was going really well has had to be called off.

Allison stepped in here to support his colleague, citing the paradox that “in the United States, it is highly educated people that are most opposed to vaccines. They have stopped vaccinating their kids and dangerous diseases are coming back. It is madness.” The more so - he continues – since it has been proved time and again that there is no link between vaccines and autism.

The first HPV vaccine reached the market in 2006. Now there are versions capable of preventing up to 90% of cervical cancers, as well as a substantial percentage of other cancers caused by HPV, including anal and vaginal cancer and certain tumors of the mouth and throat. A recent Cochrane study (May 2018) confirmed the vaccine's effectiveness, and found no greater risk of serious adverse effects compared to placebo.

This vaccine is already in widespread use in the developed world, and the challenge now is to increase take-up in developing countries by reducing its price and improving the information reaching doctors and the general public. Nubia Muñoz remains directly involved on both fronts. Along with other scientists, she is calling for its inclusion in the male vaccination schedule, since HPV can also cause cancers in men, among them cancer of the penis.

James P. Allison bio notes

James P. Allison (Texas, United States, 1948) earned a BS in Microbiology at the University of Texas, Austin, where he went on to complete a PhD in Biological Science in 1973. He later spent twelve years at the University of California, Berkeley, where he was Professor of Immunology and Director of the Cancer Research Laboratory.

After stints at the Memorial Sloan-Kettering Cancer Center and Cornell University, and as an investigator with the Howard Hughes Medical Institute, in 2012 he joined the team at Texas University's MD Anderson Cancer Center, where he is currently Chair of the Department of Immunology, Executive Director of the Immunotherapy Platform, Deputy Director of the David H. Koch Center for Applied Research of Genitourinary Cancers and Co-Director of the Parker Institute for Cancer Immunotherapy.

He has also kept up a thirty-year association with the National Institutes of Health, where he chaired the Experimental Immunology Study Section and has served on expert panels on gene therapy, as well as organizing a think tank on cancer biology.

He sits on the editorial board of *Developmental Immunology* and *Journal of Clinical Investigation* and is a former reviewing editor of *Science*. The holder of six patents, he is also the co-founder, with his wife and scientific colleague Padmanee Sharma, of clinical stage immunotherapy company Jounce Therapeutics.

Nubia Muñoz bio notes

Nubia Muñoz (Cali, Colombia, 1940) earned a medical degree from the Universidad del Valle in Cali, Colombia, going on to specialize in pathology. She completed a fellowship in pathology and virology at the National Cancer Institute (Bethesda, United States) and earned a Master's Degree in Public Health (Cancer Epidemiology) from the Johns Hopkins University in Baltimore (United States). In 1969 she joined the International Agency for Research on Cancer

(Lyon, France), where she rose to the rank of Chief of the Unit of Field and Intervention Studies.

She is currently Emeritus Professor of the National Cancer Institute of Colombia and a consultant to the Epidemiology Research Program at the Catalan Institute of Oncology (Barcelona, Spain), the Ministry of Health and Social Protection in Colombia and the Instituto Nacional de Salud Pública (Cuernavaca, Mexico).

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