When Prof. Dr. Harald zur Hausen was awarded the Nobel Prize for Medicine, in 2008, Dr. Manfred Lautenschläger spontaneously offered to support the scientific work of the Nobel Prize winner by establishing a research team. This funding – one million Euros over four years – is now beneficial for PD Dr. Dr. Angelika Riemer: the young scientist wants to push the development of a vaccine at the German Cancer Research Center (DKFZ), which aims at healing even already existing infections with the cancer-producing Human Papilloma Virus (HPV).

Masiar Sabok Sir spoke with the ambitious researcher for labor&more.

Dear Dr. Dr. Riemer, in February of this year you received Prof. zur Hausen’s offer to establish your junior research group “Immunotherapy and -prevention” at the DKFZ. What were your thoughts at this time and how did this come about?

Angelika Riemer: At first I was naturally a little speechless. Prof. zur Hausen and I first met in Boston at Harvard Medical School, in mid 2008, so this was before he was awarded the Nobel Prize. Back then Prof. zur Hausen received an award from a Harvard Foundation and held a lecture on the subject. You don’t often get the chance to meet the founder of your research area so of course I attended. At the end of his lecture I felt the need to introduce myself to him. It was simply an honour for me to meet him. At the next conference we spoke in more detail about my research, since I am working on the basis of a therapeutic HPV vaccine. This is probably what led to an invitation to a symposium at the DKFZ in...
If yes, one can conclude that this peptide is actually present on the cell surface.

What would be the next step?
Up to now epitopes have usually only been identified for the most common MHC type. Such a vaccine could only be given to people with exactly this MHCtype. With regard to a universally applicable therapeutic vaccine we aim to include epitopes for multiple MHC types, so-called supertypes, so that together over 95% of the population is covered. But it is still a very long way to vaccine formulation. The next goal is epitope identification for the various MHC types.

Which types of cancer is HPV responsible for?
HPV can trigger various types of cancer. Mostly it is presented as a female problem, but that is not even half the truth. Of course, cervical cancer is the most common HPV-induced cancer. Basically however all mucous membranes in this area can be infected and transformed by HPV, i.e. also the anal area – or it can cause penile carcinomas. What is becoming more and more common are HPV-induced cancers in the oropharynx. Especially the tonsils are susceptible. HPV-induced cancers are nowadays considered to be a new subgroup of HNSCC (head and neck squamous cell carcinoma). This is of course the case in both sexes.

Would it not be sensible in this context to vaccinate men as well as women?
That would definitely be sensible, particularly with a view to eradicating the virus. It is simply a question of costs. As long as the vaccine is still so expensive, one attempts to protect only those who are most likely to develop a disease.

Which interim conclusion do you come to, after two months, regarding the framework conditions at the DKFZ?
For me this is a tremendous opportunity and challenge, which I intend to use as best as possible. Within the framework of the DKFZ and in the close proximity to other institutions such as, for example, the University of Heidelberg there is something very special in the air. There is a concentration of people who are enthusiastic about something and who want to discover things and make a difference. That makes working here extremely enjoyable and creates the perfect foundation for successful research.

Thank you for the interview and we wish you great success for the future!

Further information can be found at:
www.dkfz.de/de/immuntherapie-immunpraevention/index.html