Induction and analysis of antigen-specific T cell responses in melanoma patients and animal model
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In the last century, it became clear that in patients suffering certain types of cancer, spontaneous activation of the immune system can lead to complete recovery. The concept of immunotherapy is based on that notion. The intention is to stimulate T cells directed against the cancer, leading to the eradication of cancer cells. However, at the moment the methods to stimulate T cell immunity are functional in small laboratory animals only.

This thesis introduces a novel T cell vaccination method that uses a tattoo machine to inject DNA in the skin of the vaccinee. In comparison to other experimental vaccination methods DNA tattooing is very strong: besides small laboratory animals also large animals mount strong T cell responses upon tattoo DNA vaccination. Future tests in melanoma patients will point out whether DNA tattoo vaccination is equally efficient in humans and whether it may have a therapeutic effect in cancer patients.

Adriaan D. Bins (Nijmegen, 1973) studied Medicine and Biology at Leiden University. In the 2001 he started the research leading to this thesis at the Netherlands Cancer Institute / Antoni van Leeuwenhoek Hospital in Amsterdam. The work done in this period was rewarded in 2006 with the NKI/Avl Award.

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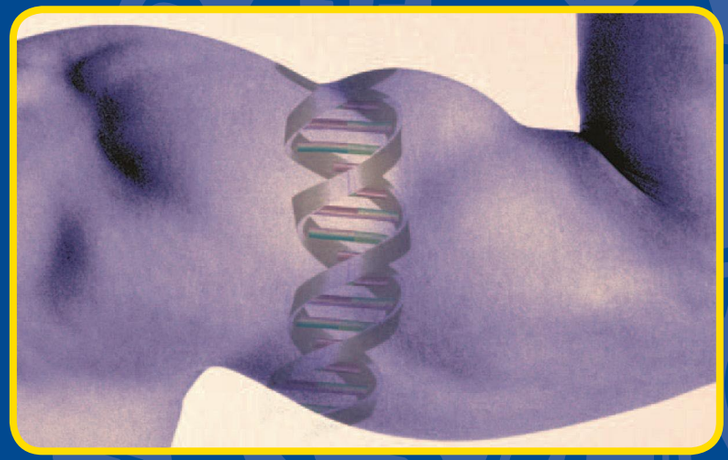

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