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**STD-AIDS and  
Infectious Diseases**

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## **Neoantigen discovery in non-small cell lung cancer**


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Advances in next generation sequencing and bioinformatics have allowed the prediction and the identification of neoantigens that are endowed with exquisite tumor specificity and ability to induce T cell reactivity, which render them promising targets for cancer immunotherapies. Herein, taking into consideration the prevalence of the HLA-A0201 allele, we aimed at identifying a set of HLA-A0201 restricted neoantigens in NSCLC patients and evaluating their immunogenicity and specificity. Results showed the presence

of immunogenic neoantigens; derived from genes such as TP53 and CDH10, etc. that are experimentally good binders with high affinity and ability of inducing a T cell response in vitro as compared to their WT counterparts suggesting a higher immunogenicity and specificity. These findings warrant more investigation of the therapeutic applications of these neoantigens aiming at enhancing anti-tumor immunity.

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