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**Title:** Human papillomavirus targets crossroads in immune signaling

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# Stellingen

01. High-risk human papillomavirus (hrHPV) upregulates and exploits the cellular proteins UCHL1 and IFRD1 to impair signaling initiated by both innate and adaptive immune signals (*this thesis*).
02. The attenuation of CD40 signaling in keratinocytes by hrHPV highlights the importance of the cellular immune response in the clearance of hrHPV (*this thesis*).
03. HrHPV induces resistance in keratinocytes to anti-proliferative signals secreted by the immune system (*this thesis*).
04. Hampered expression of cytokines and chemokines during EGFR signaling (*this thesis*) suggests that cell growth requires local suppression of immune responses.
05. It is crucial to impair immune-driven RelA-associated NFκB-responsive gene expression for hrHPV to persist.
06. Enhancing the expression of pro-inflammatory and anti-proliferatory genes in hrHPV-infected keratinocytes is a promising therapeutic strategy.
07. Studies on basic HPV virology should focus more on the influence of the viral episome and not only on one or more of the early proteins *per se*.
08. Viruses are evolutionary playgrounds, they tell us how cells work.
09. 'It is the mark of an educated mind to keep a thought without accepting it' *Aristotle, Metaphysics, 384 - 322 bc*
10. 'Science is a way of thinking much more than it is a body of knowledge' *Carl Sagan, Broca's Brain, 1986*
11. 'Science is not only a disciple of reason but, also, one of romance and passion' *Stephen Hawking, Interview with Parade, 2010*
12. 'Life is either a daring adventure, or nothing' *Helen Keller, Let Us Have Faith, 1940*

Bart Tummers