

Écrit par TRAN Guy Mong Ky

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## PROSTATIC CANCER AND HUMAN PAPILLOMAVIRUS (HPV): AUTO-IMMUNE THROMBOCYTOPENIA INDUCED BY GARDASIL AND CERVARIX VACCINE HPV L1 MIMICKING PLATELET GPV

### Présentation

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**BACKGROUND** Among the auto-immune complications occurring after anti-HPV vaccination (Gardasil and Cervarix), was reported thrombocytopenia ( *Pugnet G, 2009*). Odds Ratio (OR) for Serious Autoimmune Adverse Events (SAAEs) reported by the

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ystem (VAERS) from Jan 2006 through Dec 2012 is OR=1,3 (95% CI=0.48-3.5) ( *Geier DA, 2015*

) for thrombocytopenia. If severe, this thrombocytopenia can conduct to cerebral hemorrhage and eventually death.

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**METHODS** Amino acid sequences comparison between HPV L1 and platelet gpV. We centered the alignment on the FP and related LP motifs (Leucine L replaces Proline P). Platelet alloantigen, P1T, on glycoprotein V is associated with neonatal alloimmune thrombocytopenia ( *Ertem M, 1994* ). Measles was investigated versus platelet gpIIbIIIa on the FP motif.

**RESULTS** Platelet gpV was aligned with HPV (types -16,-18, -6, -11,-31,-33,-52,-58) L1 of Gardasil 9.

perfect molecular mimicry ALPDG was found between HPV-61,-72,-81 L1 and platelet gpV.

A common motif LPDT was found between rubella virus nsp and HPV-18 L1. Rubella can induce thrombocytopenia ( *Okazaki N, 2011* ). There is a common motif ALPD between gpV, HPV-11 and HPV-6 L1. Anti-gpV specific antibodies are also particularly evident in Varicella virus thrombopenia ( *Mayer JL, 1996* ) and are cross-reactive with platelet ( *Wright JF, 1994* ): Varicella ORF 24 and rubella nsp share the ALPDT motif.

There was a perfect molecular mimicry between Measles P protein strain Mvi/Victoria.AUS/12.99 (Bankamp B, 2008) and platelet gpIIb:

platelet gpIIb

**782-RGNSFP-787**

Measles P protein strain Mvi/Victoria.AUS/12.99

**199-RGNSFP-204**

The other Measles virus strains have

**RGNNFP**

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**CONCLUSION** The perfect 100% molecular mimicry ALPDG, centered on a Proline, between HPV-61,-72,-81 L1 and platelet gpV raises the question of the etiology of the so-called "idiopathic" thrombocytopenic purpura. It is advocated to research HPV-61,-72,-81 as possible culprits, either by PCR or Metagenomics (*Johansson H, 2013*). HLA-DR3 may be a risk factor. The alimentation must be strictly controlled, avoiding in particular aspirin and alliaceous. The obligatory vaccination by

**Measles**

Mumps

**Rubella**

vaccine, associated with Zoster-

**Varicella**

vaccine (

*Okazaki N, 2011*

) and 3 doses of Gardasil or Gardasil 9 or Cervarix, may enhance further the auto-immune response against platelet gpV and induce autoimmune thrombocytopenia. Gardasil 9 is particularly worrying.

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