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Surveillance of HPV in France



Prof. Jean-Luc Prétet



2-3 December, 2021
VEYRIER-DU-LAC, ANNECY, FRANCE

The National Reference Center

- **Hosted by the university hospital Besançon (2017)**
 - **Appointed by the French ministry of Health**
 - **Introduction HPV vaccination in France**
 - **Cervical cancer screening**



Historical view

Research Team

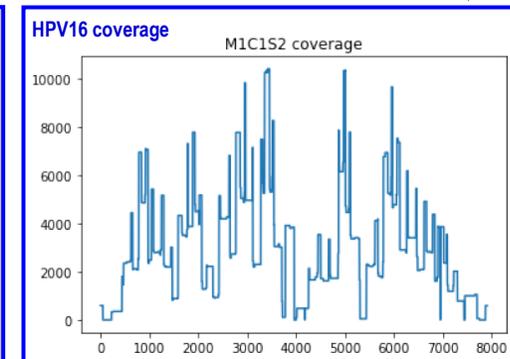
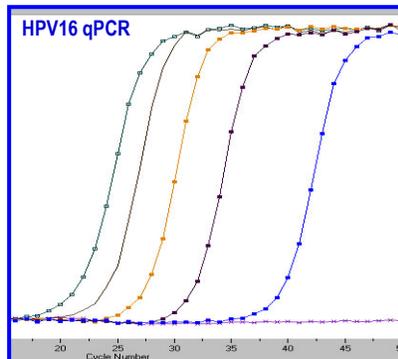
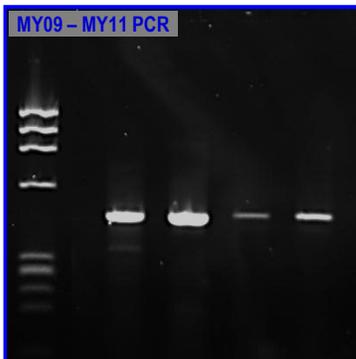
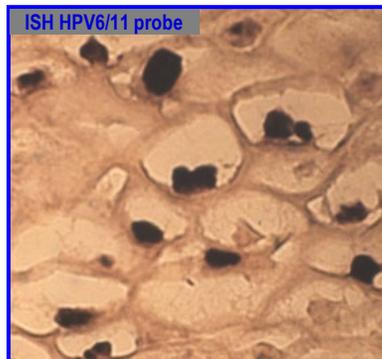
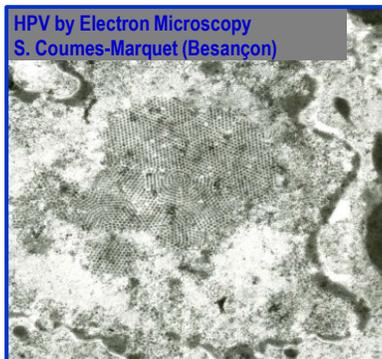
JE/EA2085
HPV
and Immunity
1996-2003

EA3181
Epithelial
Carcinogenesis
2004-07

EA3181
Epithelial
Carcinogenesis
2008-11

EA3181
Epithelial
Carcinogenesis
2012-16

EA3181
HPV
Carcinogenesis
2017-22



Virology lab

Pathology lab

Oncobiology lab.

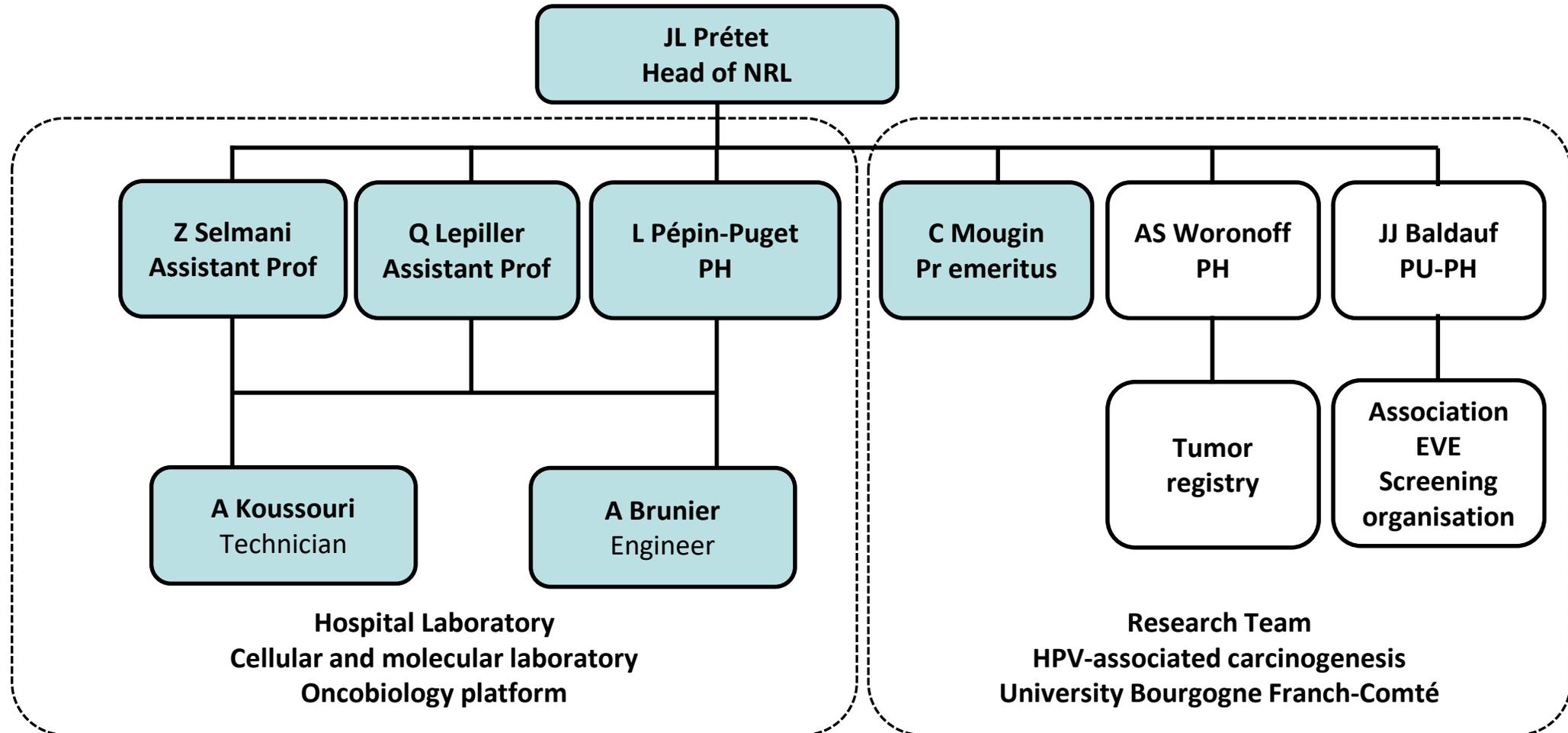
Hospital laboratory

Routine HPV testing for cervical cancer screening, genotyping, viral load

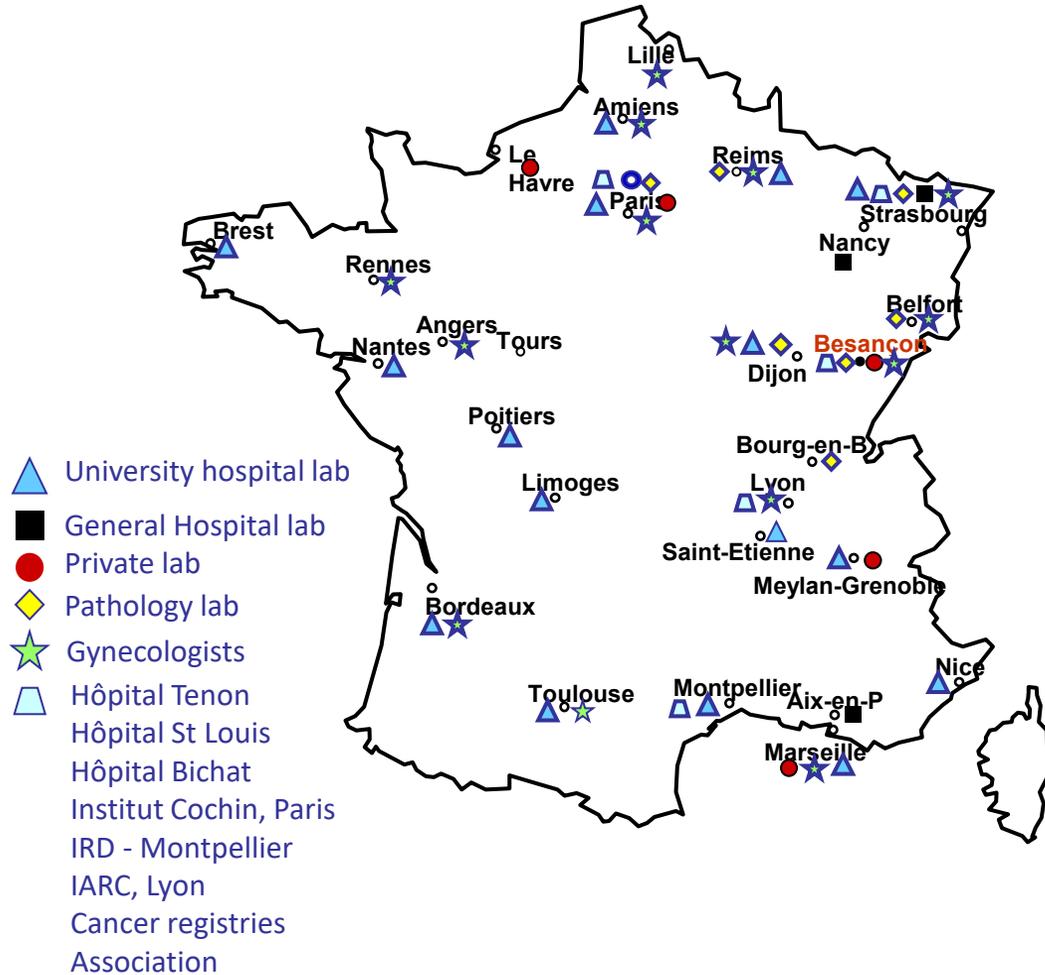
Reimbursement
of HPV testing (ASC-US)



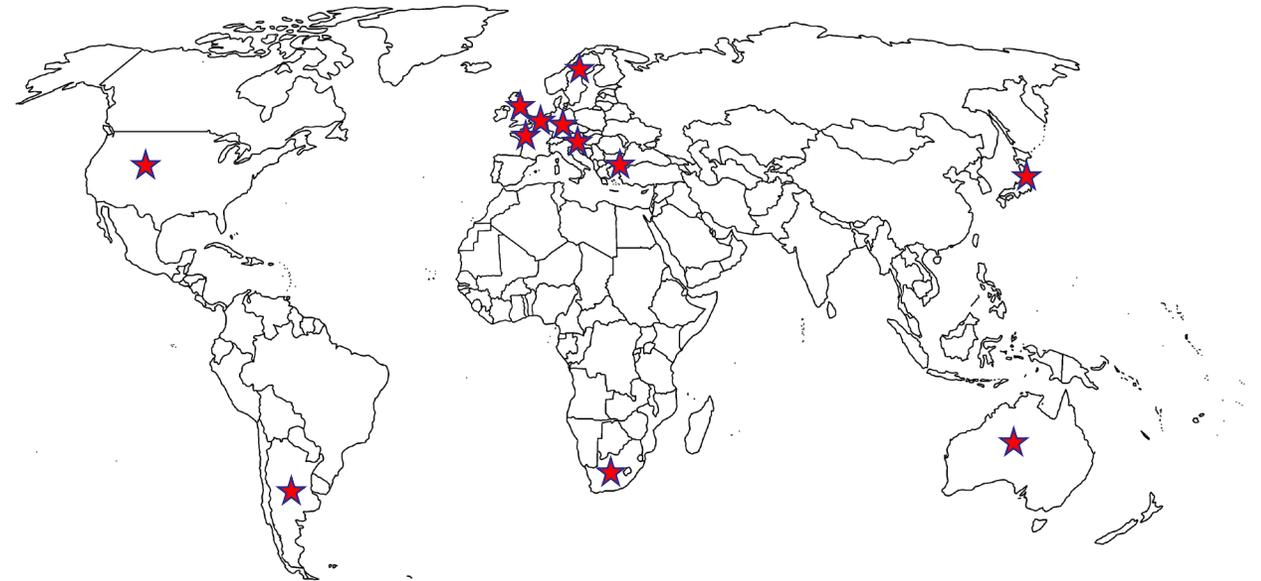
The National reference Laboratory



French and international networking



- Coordination with Pr J Dillner
- National HPV Reference Laboratories



The National Reference Center

- **Four missions**
- **1- Expertise : Primary HPV screening for cervical cancer**
 - Evaluation of HPV screening kits
 - List of validated kits for cervical cancer screening
 - Cell collection media
 - Self-sampling devices

The National Reference Center

➤ Main techniques

- HC2, Abbott Alinity m (routine screening)
- INNO-LiPA (alpha HPV)
- Multiplex PCR coupled to Luminex : alpha, beta, gamma HPV
- Real-time PCR: vaccine HPV
- Droplet Digital PCR: circulating DNA
- NGS : HR-HPV ; HPV16

➤ Technical assistance

The National Reference Center

- **2- Counselling, education and information**

- National Cancer Institute
- Santé publique France
- Ministry of health
- Evaluation of public health policies (vaccination, screening, impact...)

- **3- Epidemiological surveillance**

- Specific studies from NRL
- Collaborative studies

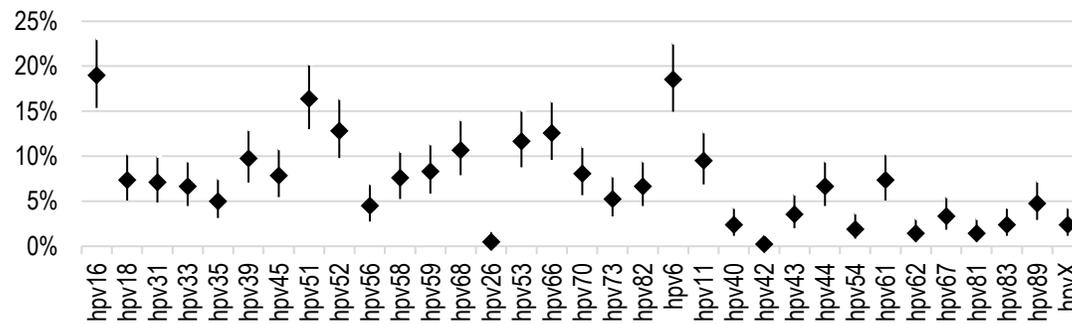
- **4- Alert**

HPV in HIV- MSM: MémoDépistage

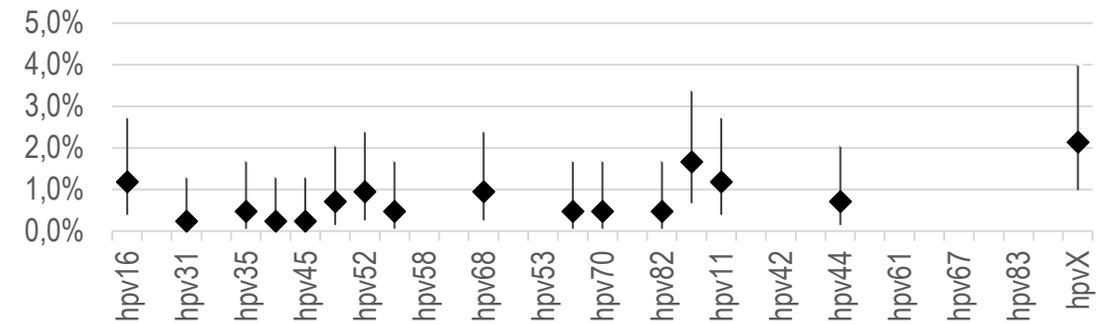
- HPV distribution in oral and anal self-samples
- 421 HIV- MSM undergoing self testing for different STD
- HPV type distribution
 - Anus: 82%, multiple infection in 58% of samples
 - H&N: 11%, Multiple infection in 1% of samples



HPV genotype distribution (Anus)



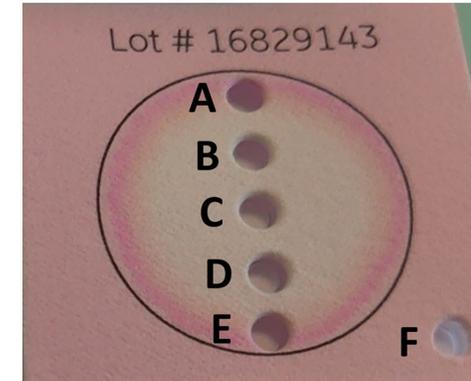
HPV genotype distribution (H&N)



HPV in the general population

■ Long term storage of cervical samples

- Use FTA® cards
- HPV and cellular DNA stability
- Biobank at room T° for 5 yrs at least
- Stored cervical samples from a cohort of vaccinated women



Prétet et al. 2021

■ Survey on sexuality in France : expected 3000 participants (male and female)

- Vaginal and penile self-sampling in the general population
- HPV genotype distribution
- Study planed in 2022



Evaluation of vaccine efficacy

■ **IMPACT study** : ClinicalTrials N° NCT04167501

- HPV genotype distribution in CIN2/3 in non vaccinated and potentially vaccinated women (according to age at CIN2/3)
 - 600 high grade lesions genotyped
 - Results are currently being analyzed

Manuscript in preparation

■ **i-Predict**: Vaccination effectiveness in French female student

- 1000 young women (18-24 years) recruited for CT screening from self-sample
- Half of them are vaccinated
- HPV genotype distribution

université
de **BORDEAUX**
Département Sciences Biologiques et Médicales



Centre de recherche
en Épidémiologie
& Santé des Populations



■ **EDiTH G**

- 400 cervical HSIL/cancers in French Guyana
- HPV genotype distribution
- Before the introduction of School-based vaccination program



Thank you