

ASSESSING THE *IN VIVO* EFFECTS OF *PTERIDIUM AQUILINUM* EXTRACT IN K14-HPV16 TRANSGENIC MICE

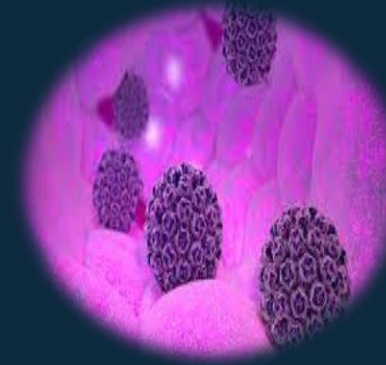
Beatriz Medeiros-Fonseca, Ana I. Faustino-Rocha, Maria J. Pires, Felisbina Queiroga, Rui Medeiros, Rui Gil da Costa, and Paula A. Oliveira

- The **Human Papilloma Virus (HPV)** is an infectious agent that causes cervical carcinoma and is associated with a high percentage of anal, vulvar, penile, oral cavity and oropharyngeal carcinomas.



Risk factors:

- Number of sexual partners
- Tobacco
- Alcohol
- *Pteridium aquilinum*

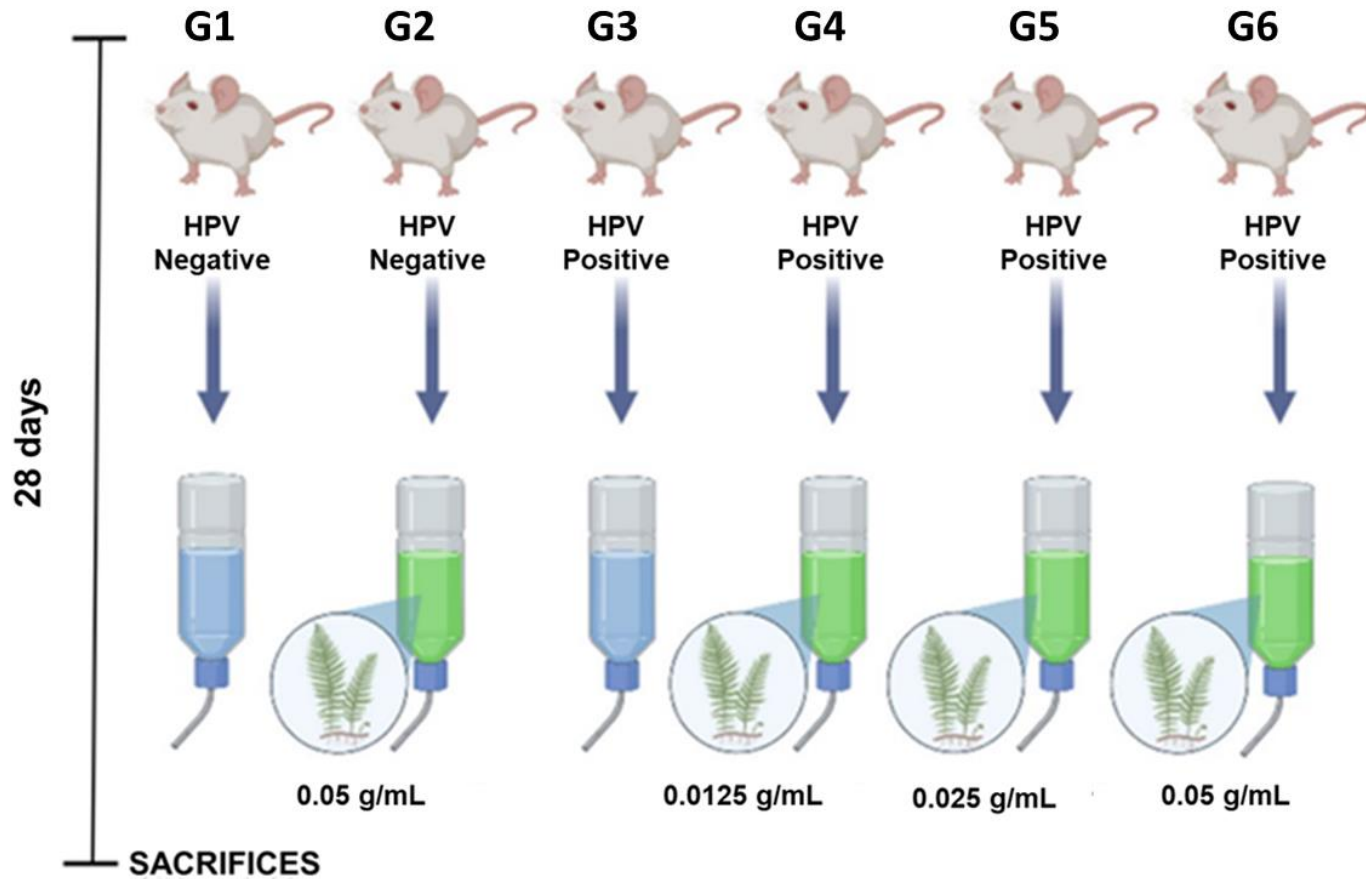


- *Pteridium aquilinum* is one of the plant species most adapted to environmental conditions.
- It is widely used as a form of food by various human populations, and in animals.
- It possesses toxic properties that can lead to various diseases.



AIM

This study aimed to assess the influence of *Pteridium aquilinum* extract on **hematological parameters** of mice that were genetically modified to carry the human papillomavirus type 16 (HPV16) oncogenes, through their drinking water.



Throughout the test, the following physiological parameters were collected:

- Humane endpoints
- Body mass
- Food and water consumption

At the end of the experimental test, biological samples were collected for further studies.

Humane endpoints: No animal reached the maximum score that interfered with animal welfare.

Body weight: All groups increased their body mass, except G4(HPV+, 0.025g/mL) and G6(HPV+, 0.05g/mL).

Consumption of food and water: Overall, transgenic animals in groups G3, G4, G5, and G6 consumed more water and extract than their counterparts in other groups. The transgenic animals in G4, G5, and G6 consumed more food compared to other groups.

Hematological parameters: The hematocrit was higher in groups that consumed the extract. Regarding hemoglobin, erythrocytes, leukocytes, lymphocytes, and platelets, the transgenic groups showed higher values compared to controls.

Conclusion



The extract can enhance the changes caused by transgenesis

However, more studies are being handled to better understand the influence of this extract in HPV16 animals.