

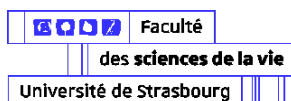
# 2019年度 ストラスブール大学派遣研究者講演会

2020年3月10日（火）16時–17時30分

理学部2号館405室

## Plant *in vitro* culture: a multipurpose technology for cross-disciplinary research and educational programs

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Tissue culture is the *in vitro* aseptic culture of cells, tissues, organs or whole plant under controlled nutritional and environmental conditions, widely used for large scale plant multiplication. Plant tissue culture techniques have also become of major industrial importance in the area of production of secondary metabolites. In this context, I developed several research projects inside IPHC (Institut Pluridisciplinaire Hubert Curien), a CNRS (National Center of Scientific Research) laboratory. Also supervised by the University of Strasbourg, the IPHC provides a motivating environment for the development of cutting-edge technologies, in the fields of chemistry, physics, ecophysiology and biology.

I will focus my lecture on three action lines, using plant cell cultures with the aim of producing:

- anti-diabetic metabolites from *Cynanchum* species, endemic to Madagascar;
- phytotoxic plant molecules able to inhibit germination or plant growth of other plants, thus being potential candidates for the development of new bio-herbicides;
- heavy-metals chelating molecules involved in the natural detoxification of plants contaminated by heavy metals, for the development of innovative phytoremediation processes.

I'll also present the "Vege-LAB" educational program, created in the University of Strasbourg in 2014. The objective of Vege-LAB is to optimize the professional integration of students from Biology and Plant Valorization courses, by putting them in direct contact with private and public research laboratories, with whom they work for three semesters on the implementation of an innovative research project. This approach places the students at the heart of their training, and allows them to approach concretely the different facets of the research professions. Vege-LAB is based on the strong involvement of public and industrial partners, alongside the members of the teaching team and of course the students.

The common feature of all these actions, situated at the crossroads of research, education and innovation, is the aim of constructing projects at the frontier of different disciplines and thus better answer to the new stakes of our society.

Websites:

- IPHC: <http://www.iphc.cnrs.fr/Film-de-presentation-de-l-IPHC.html#en>

- University of Strasbourg : <http://www.en.unistra.fr/index.php?id=21304>

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