



From crops to clouds and back again: The dual life of the ubiquitous *Pseudomonas syringae*

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From crops to clouds and back again: The dual life of the ubiquitous *Pseudomonas syringae*.

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Since the first descriptions of *Pseudomonas syringae* as a plant-associated bacterium over 50 years ago, the vision of its ecology has moved away from ubiquitous epiphytic plant pathogen to multifaceted bacterium *sans frontières* in fresh water and other ecosystems linked to the water cycle. Discovery of the aquatic facet of its ecology has led to a vision of its life history that integrates spatial and temporal scales spanning billions of years and traversing catchment basins, continents and the planet, and that confronts the implication of roles that are potentially conflicting for agriculture and society at large – as a plant pathogen and as a beneficial actor in processes leading to rain and snowfall. This new ecological perspective has also yielded insight into epidemiological phenomena linked to disease emergence. It sets the stage for the integration of more comprehensive contexts of ecology and evolutionary history into comparative genomic analyses to elucidate how *P. syringae* subverts attack and defense responses of the cohabitants of the diverse environments it occupies. Here we will present our vision of the evolving story of the ecology and biology of *P. syringae* and the conflicting challenges and opportunities for management of plant health and ecosystem services that ensue.

The collage includes:

- A green leaf with a white powdery spot.
- A close-up of a plant stem with small leaves.
- A DNA gel electrophoresis image showing bands labeled IV_P_1, IV_P_2, IV_P_3, M_L_1, M_L_2, M_L_3, DR, and DR.
- A graph titled "low expression" and "high expression" with a dendrogram.
- A diagram of a plant cell with various organelles labeled.
- A photograph of a landscape with mountains and a river.
- A photograph of a close-up of a plant leaf.
- A photograph of a plant with white flowers.
- A circular logo for CIFB.
- A logo for INRA (Institut National de la Recherche Agronomique).
- A logo for SFRP (Société Française de Pathologie des Plantes).
- Text for the meeting:

12 ÈMES RENCONTRES
PLANTES-BACTÉRIES
11 - 15 JANVIER 2016
CENTRE PAUL LANGEVIN
73500 AUSSOIS