

An experimental platform for the evaluation of grapevine biocontrol products : understanding mode of action and optimizing strategies of use



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INRA and IFV have merged their skills and facilities to build an experimental platform dedicated to the evaluation of grapevine biocontrol products (UMTSeven). The platform, located at Bordeaux, hosts projects that promote biocontrol solutions for grapevine diseases management. The aim is to foster the public/private partnerships within the beneficial scientific environment of the Institute of vine and wine science of Bordeaux (ISVV). The platform is supported by the Carnot Plant2Pro Institute and included in the XP-BC project of the Biocontrol consortium.



Skills

- Knowledge of the biology of grape pathogens
- Collections of characterized isolates
- Artificial contaminations (lab, greenhouse, vineyards)
- Disease epidemiology
- Fine characterization of biotic interactions at different spatial scales (from laboratory to field)
- Innovative tools for the characterization of the physiological state of grapevine
- Microclimate assessment

The offer

BIOASSAYS

Doses-responses Curves (CMI et Cl₅₀)
Preventive / Curative Action Duration of action
Confrontation – competition tests
Toxin production (HPLC + genes)
Volatile compounds
Microorganism survival conditions
Diagnostic tools for detection / quantification

Missions

- Monitor scientific and technological advances
- Develops new tools and protocols
- Conduct experiments from lab to vineyards
- Propose optimal strategy for biocontrol products
- Provide training to partners

Facilities

- 2 ha with sensitive and resistant varieties for field trials
- ➢ 300 m² of greenhouse for semi-controlled cond.
- Phytotron and growth rooms
- High-throughput real time qPCR system

FIELD TRIALS

Epidemic monitoring

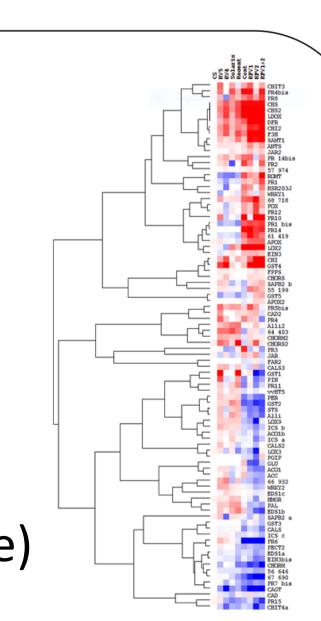
MODE OF ACTION

Resistance inducer

- BioMolChem » chip
- « NeoVigen » chip
- Polyphenols (Dualex, HPLC)

Biostimulant

Vegetative/root growth (greenhouse)
Primary metabolism assessment



- Natural contaminations
- Artificial contaminations

Grapevine physiological status

- Phenological stages
- □ Vegetative expression (Greenseeker NDVI)
- □ Harvest yield and quality
- Micro-vinification

The platform is accredited to conduct tests for the approval of new products (Licensed BPE - good experimentation practices).



