



HAL
open science

Biochem-Env, une plateforme leader en biochimie environnementale

Christian Mougin, Nathalie Cheviron, Virginie Grondin, Anne Jaulin, Jean
Pierre Petraud, Françoise Poiroux, Amélie Trouve

► **To cite this version:**

Christian Mougin, Nathalie Cheviron, Virginie Grondin, Anne Jaulin, Jean Pierre Petraud, et al..
Biochem-Env, une plateforme leader en biochimie environnementale. Le SEM 2018, Forum Santé,
Environnement & Molécules, Oct 2018, Alixan, France. 2018. hal-02786219

HAL Id: hal-02786219

<https://hal.inrae.fr/hal-02786219v1>

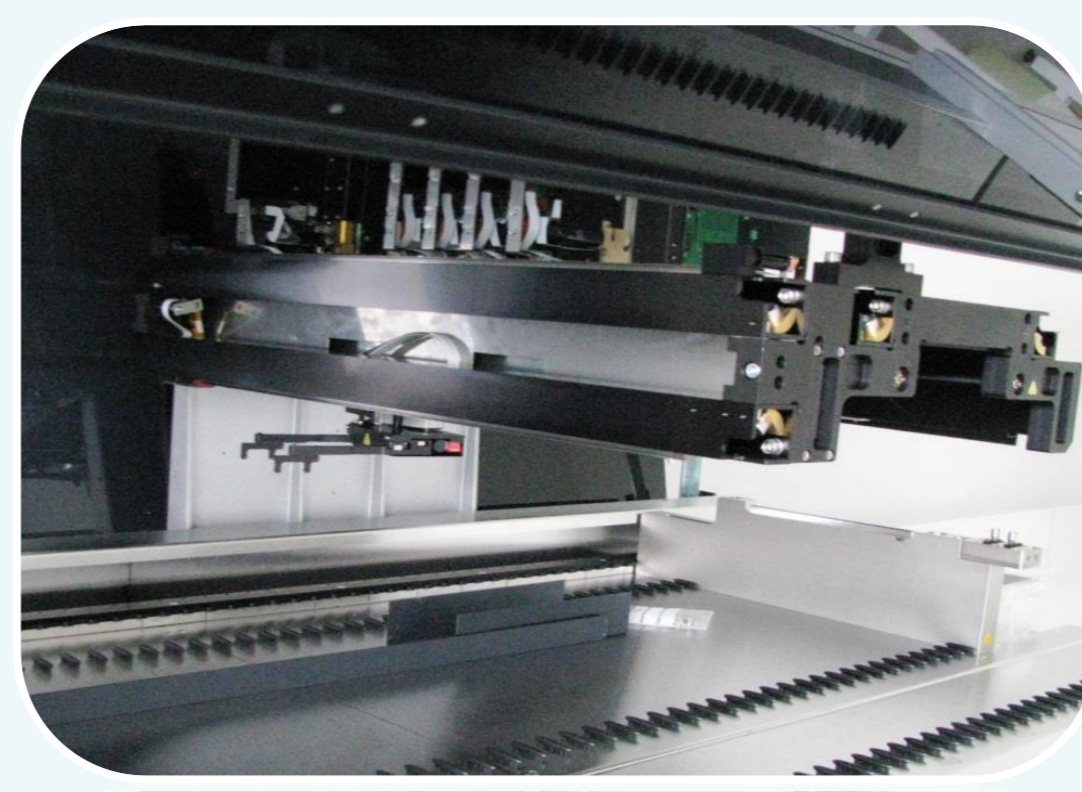
Submitted on 4 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - ShareAlike 4.0 International License



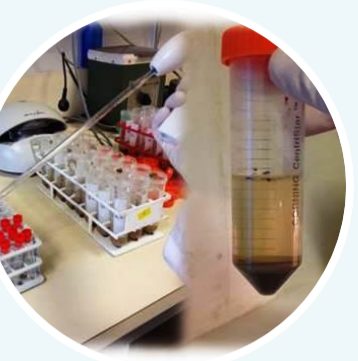
Biochem-Env, the environmental biochemistry for Research

Christian Mougin, Nathalie Cheviron, Virginie Grondin, Anne Jaulin, Jean-Pierre Pétraud, Françoise Poiroux, Amélie Trouvé
UMR ECOSYS, INRA, AgroParisTech, Université Paris-Saclay, plateforme Biochem-Env, 78026, Versailles, France

Context

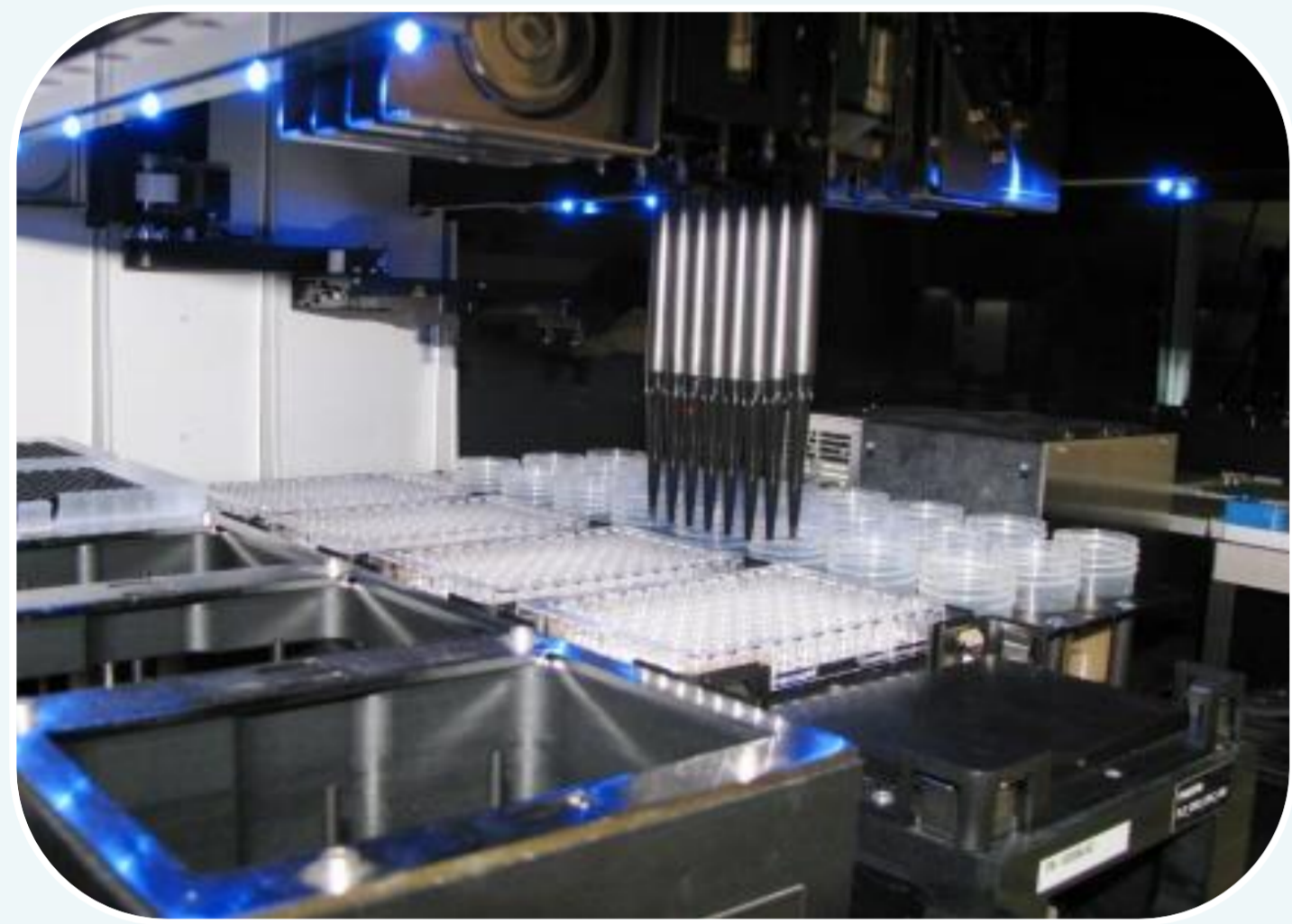
Biochem-Env is a scientific and technical platform of the infrastructure ANAEE-France dedicated to the analysis and experimentation on continental ecosystems, terrestrial and aquatic.

Biochem-Env represents a strategic service for analyzing ecosystems (soil, sediment, macrofauna...) in the field of environmental biochemistry, for agro-environmental research.



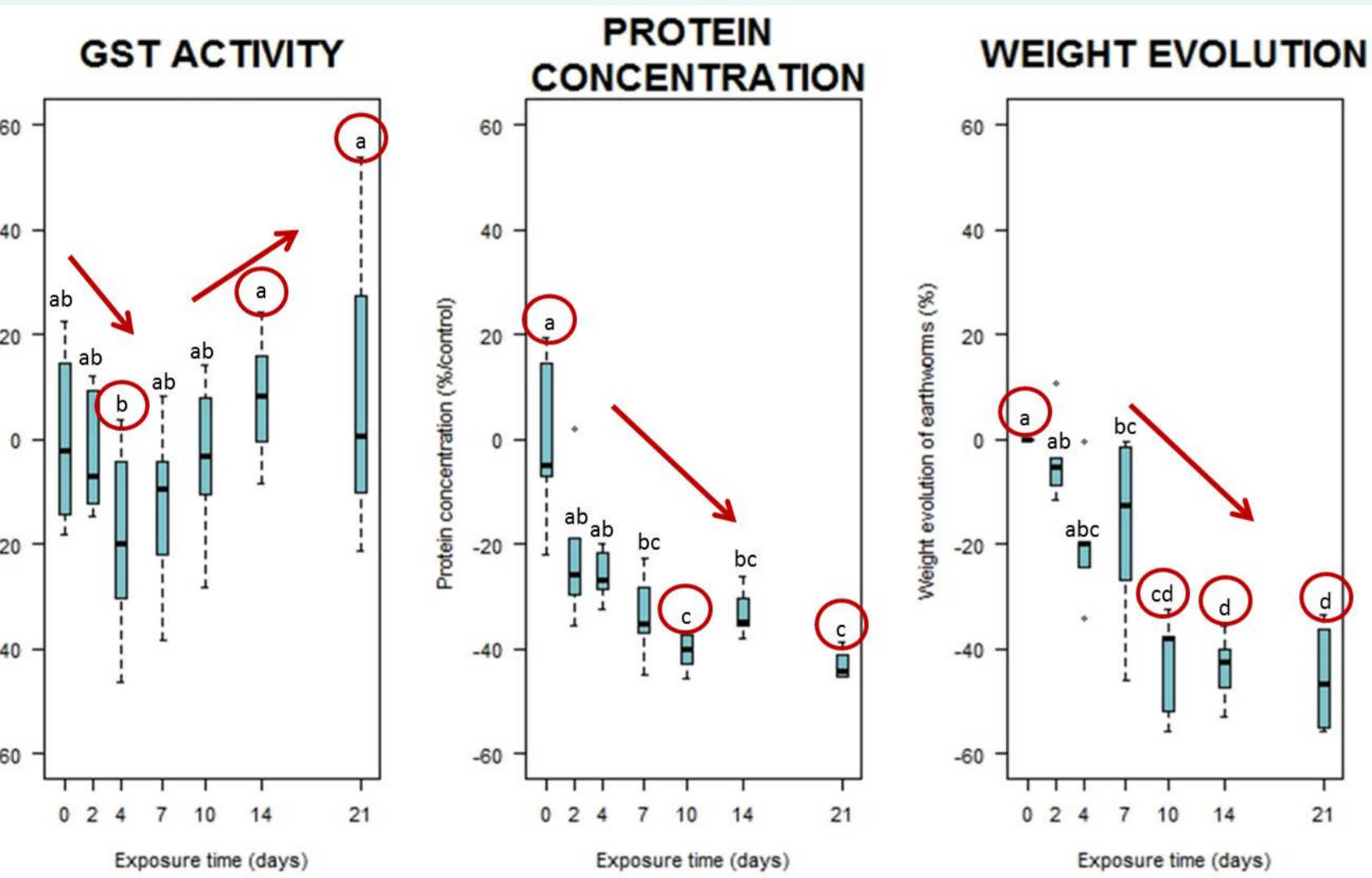
Innovation for environmental biochemistry

- Use of robotics to increase the flow of analyses, measurement accuracy and repeatability
- Development and use of standardized methods
- Development of a mobile lab
- Quality management system
- Open Science



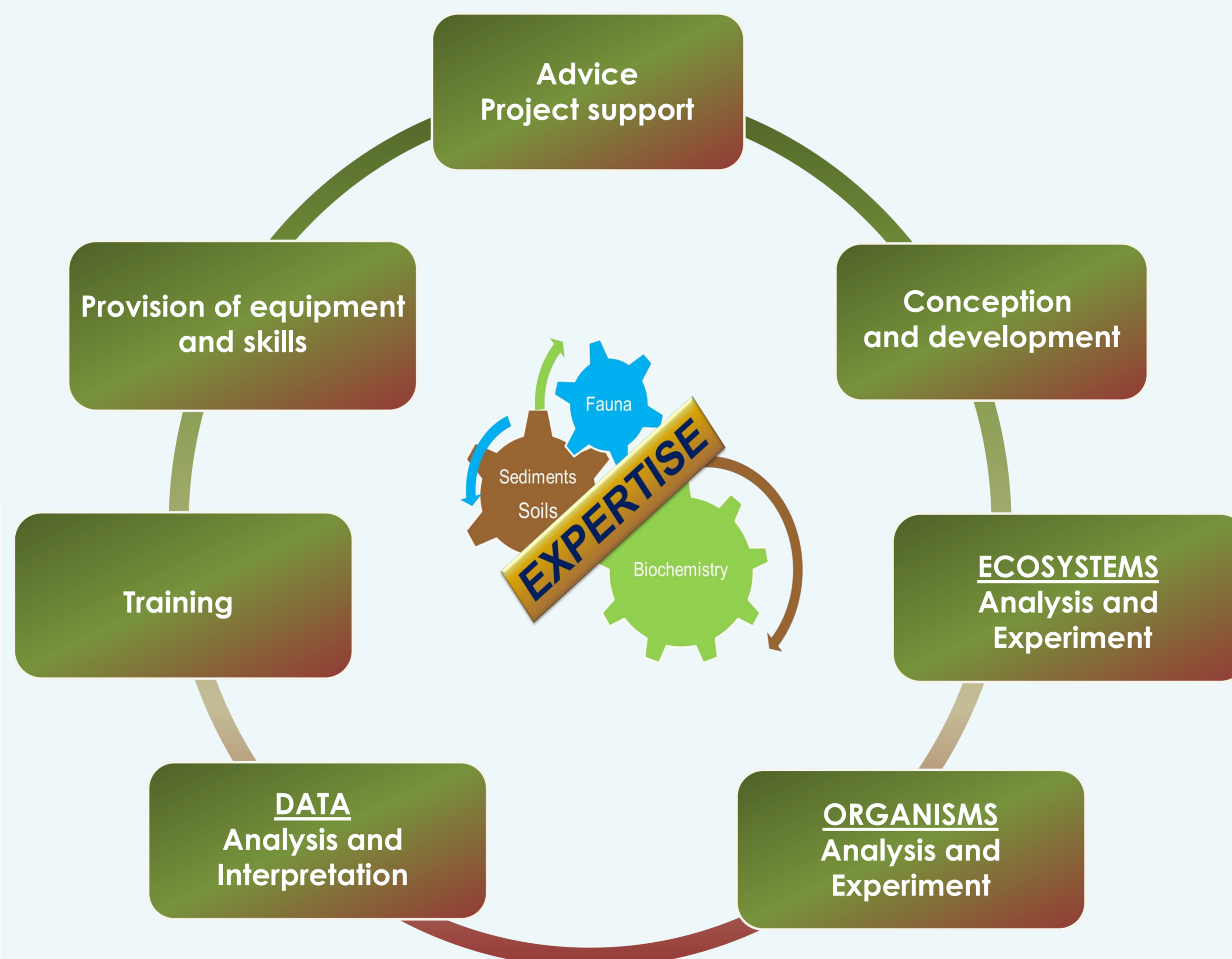
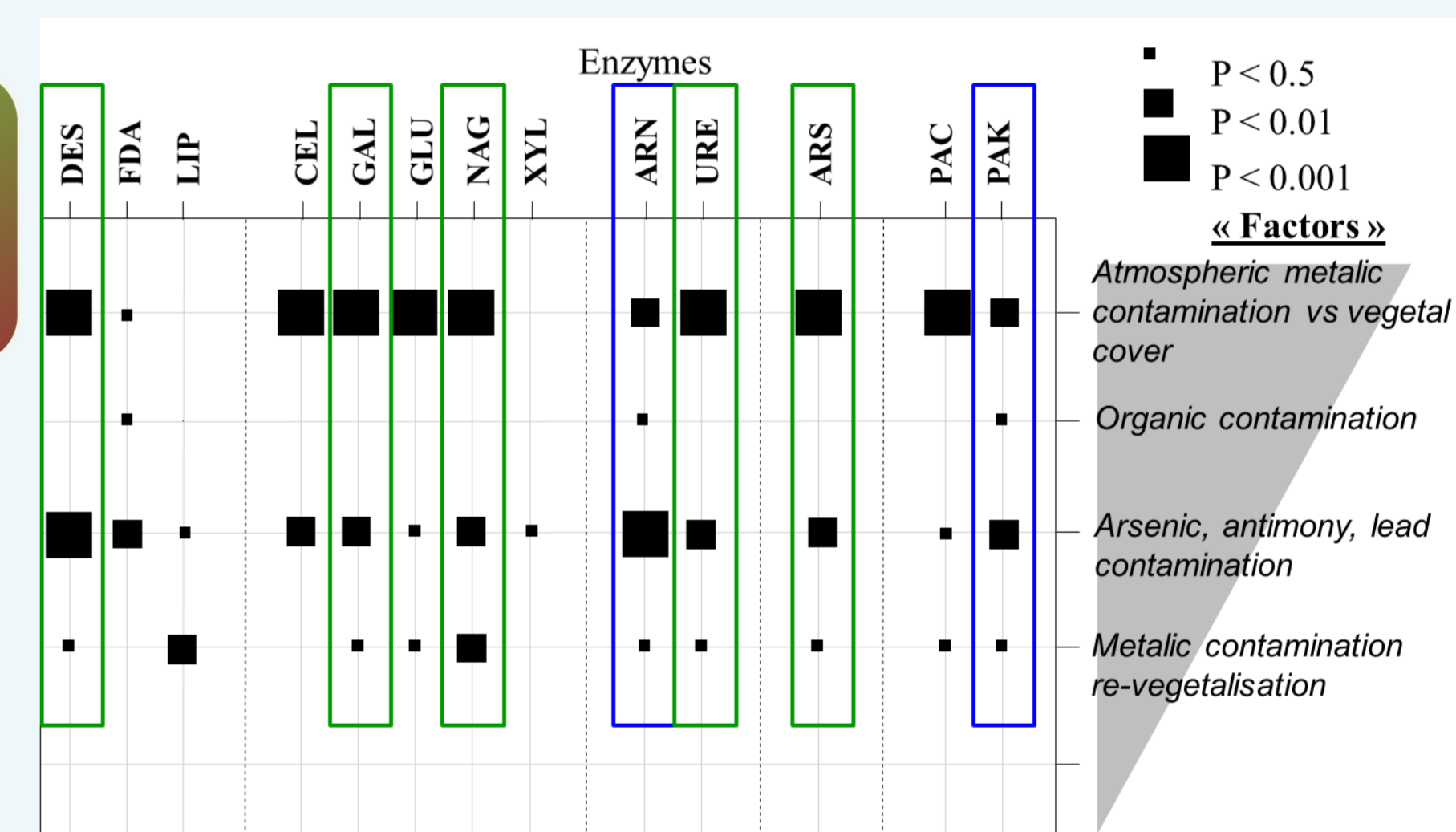
Responses of earthworms exposed to the insecticide Cypermethryn at 10 agronomic doses

> Significant effects of the time of exposure



Impacts of chemical contamination on soil enzymatic activities

> Metals are more active than organics



Biochemical indicators measured

In soils and sediments

- Enzymes involved in biogeochemical cycles and the metabolism of macromolecules
- Indicators of metabolic activity

In invertebrates

- Energetic reserves and macromolecules
- Enzymes of the oxidative stress
- Enzymes of detoxification

