AEBB CLUSTER
AGROSCIENCES
ENVIRONMENT
BIOTECHNOLOGIES & BIOECONOMY

RESEARCH
SHARE
TRANSMIT
Université de Reims Champagne-Ardenne (URCA) is a multidisciplinary university offering a range of courses in all fields of knowledge that closely reflects the needs of society. Its several sites make it a local university on a human scale. Welcoming and dynamic, it offers a favourable environment for studying, student life and research.

INTERNATIONALLY RECOGNIZED HIGH-LEVEL RESEARCH

In partnership with national research organizations and France’s Grandes Écoles, it conducts high-level research in the context of major scientific projects, advanced technological resources and partnerships with socio-economic actors. Its scientific strategy supports the emergence of new themes that produce tomorrow’s discoveries and innovations.

A training and research university, URCA is organized into 4 scientific cluster of excellence:
AEBB | The Agrosciences, Environment, Biotechnologies and Bioeconomy cluster

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**a STRATEGIC CLUSTER**

The AEBB cluster helps to develop the university’s research and teaching activities in the fields of agrosciences, environment, biotechnologies and bioeconomy - flagship sectors in URCA’s specialization strategy. Its transverse activities make the AEBB a strategic cluster able to interface with other cluster of excellence. The cluster’s activities fit perfectly into regional, national and European environmental and bioeconomy strategies.

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**a PRIORITY FOR THE FUTURE OF THE TERRITORY**

With local authority and State support, the mobilization of all the actors from the world of agriculture to the academic world, pooling facilities, complementary competences, excellent research at national and international levels, in particular in relation to the CNRS labelled Condorcet research federation, expertise for the private and public sectors, and an appropriate training offer, the AEBB cluster both reflects the desire to drive research and innovation forward and helps develop the bioeconomy and its territory.

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**1** Xavier Bernard Foundation prize awarded by the Académie d’Agriculture

**2** CNRS bronze medals

**3** national research organizations: CNRS, INERIS et INRAE

**5** research chairs: AFERE, MALDIVE, AQUASURV, MAgIcs, C2I2

**50** theses in progress

**1** federated structure: FR CNRS Condorcet

**1** ABIES Doctoral School
RESEARCH UNITS

The challenges presented by the bioeconomy require a transdisciplinary approach. The AEBB cluster favours this approach, which makes it possible to link domains into global integrated actions. Large national research organizations such as INRAE, CNRS, INERIS and INSERM are also historically involved through mixed research units.

01.

RESEARCH
Our know-how

The AEBB cluster is interdisciplinary and combines academic excellence, innovation and a viticulture and agriculture specialization.

Its scientific program is organized around the bioeconomy value chain:
- Producing biomass,
- Transforming biomass,
- Developing medium to high value recovery strategies.

THE BIOECONOMY VALUE CHAIN

Researchers in the AEBB cluster have all the know-how needed to cover the bioeconomy value chain and consequently support its emergence - including in transverse disciplines such as digital technology and human and social sciences. These competences are complemented by interactions with France’s Grandes Ecoles members of the network of higher education and research institutions on the Champagne Ardenne site and the CNRS labelled Condorcet research federation.
Université de Reims Champagne-Ardenne platforms optimize, promote and offer high level technological expertise.

They organize, co-organize and coordinate the scientific and technical courses offered within URCA.

The goal of this approach is to pool resources and incorporate the high-tech resource policies present in the laboratories.

These platforms are open to all URCA teams, to academic teams outside URCA and to the industrial community.

**OPEN AND COLLABORATIVE PLATFORMS:**

- **CERFE**: field station dedicated to eco-ethology.
- **MaSCA**: platform dedicated to high-performance computing, imaging and multi-scale molecular modelling.
- **MobiCyte**: technical platform dedicated to environmental cytometry.
- **NANOMAT**: technical platform dedicated to nanofabrication and nanocharacterization.
- **PLAnet**: technical platform dedicated to the analysis of molecular compounds and the energy transformation of biomolecules and their derivatives.
TRANSMISSION
Our vocation

The Université de Reims Champagne-Ardenne AEBB cluster co-builds and sets up training tools – from first degrees to doctorates – that are adapted to current and future changes by anticipating the emergence of new jobs that require a high level of qualification.

The continuity of research is ensured through research training in the framework of the ABIES (Agriculture, Food, Biology, Environment, Health) doctoral school.

PROFESSIONAL DEGREES
- Agro-resource recovery
- Plant production
- Analytical chemistry, control, quality, environment

MASTERS
- Biology, agrosiences
- Geo-resources, georisks, geotechnical engineering
- Risks and the environment
- Vine and wine sciences
- Drug sciences
- Urban planning and development
- Applied economy
Research units

Research at the AEBB cluster

Fractionation of AgroResources and Environment
**FARE** UMR INRAE 614

Study Group on Geomaterials and Natural, Human-made and Archaeological Environments
**GEGENAA** EA 3695

Reims Institute of Molecular Chemistry
**ICMR** UMR CNRS 7312

Induced Resistance and Bioprotection of Plants
**RIBP** USC INRAE 1488

Environmental Stress and Biomonitoring of Aquatic Environments
**SEBIO** UMR I 02

Research units in link with the AEBB cluster

Digital and Engineering Sciences (SNI)

Information and Communication Sciences and Technologies Research Center
**CReSTIC** EA 3804

Molecular and Atmospheric Spectrometry Group
**GSMA** UMR CNRS 7331

Institute of Thermics, Mechanics, Materials
**ITheMM** EA 7548

Reims Mathematics Laboratory
**LMR** UMR CNRS 9008

Nanoscience Research Laboratory
**LRN** EA 4682

Materials and Mechanical Engineering
**MATIM**

Social and Human Sciences (SHS)

Planning and Political Geography
**HABITER** EA 2076

Research in Economics Management Agroressources Sustainability Health
**REGARDS** EA 6292

Healthcare

Extracellular Matrix and Cell Dynamics
**MEDyC** UMR CNRS 7369
2, avenue Robert Schuman
51100 Reims

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