

AEBB CLUSTER
AGROSCIENCES
ENVIRONMENT
BIOTECHNOLOGIES &
BIOECONOMY



RESEARCH
SHARE
TRANSMIT



UNIVERSITÉ
DE REIMS
CHAMPAGNE-ARDENNE

URCA



27 800

students

1 396

researchers and
teacher-researchers

1 054

library, engineering,
administrative, technical,
social and health staff

Over

140

qualifications

5

sites

32

research units

4

federated structure

10

academic chairs
partnerships or
industrial

4

doctoral schools

15

technological platforms
and technical platforms



a DYNAMIC UNIVERSITY

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 :



AGROSCIENCES,
ENVIRONMENT, BIOTECHNOLOGIES
AND BIOECONOMY



HEALTH



HUMAN AND SOCIAL
SCIENCES



DIGITAL SCIENCE
AND ENGINEERING



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.



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.



1 Xavier Bernard
Foundation prize
awarded by the
Académie
d'Agriculture



2
CNRS
bronze
medals



1
Jean Dufrenoy silver
medal from the Académie
d'Agriculture

250

researchers and
teacher-researchers

14

research units covering
biotechnologies, plant,
soil and environmental
sciences, chemistry,
engineering sciences,
human and social
sciences and digital
sciences

3

national research
organizations:
CNRS, INERIS et INRAE

5

research chairs: AFERE,
MALDIVE, AQUASURV,
MAGICS, C212

30

years of expertise

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

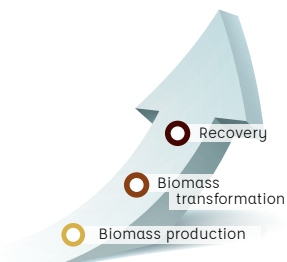


The AEBB cluster is interdisciplinary and combines academic excellence, innovation and a viticulture and agriculture specialization.

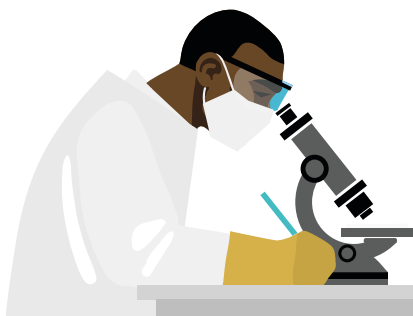
Its scientific program is organized around the bioeconomy value chain:

- ◆ 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.



02.

SHARING

Our strength 

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.





03.

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)



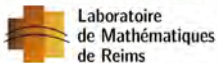
Information and
Communication Sciences
and Technologies
Research Center
CReSTIC EA 3804



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

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