



BIBS

Multiscale analyses of bioresources, bioproducts and biopolymers

— BIA Research unit INRAE Nantes —

OUR MISSIONS

To provide analytical expertise and/or data processing to the scientific community (internal/external, public/private) for exploring bioresources and bioproducts in relation to their uses



To carry out innovative methodological developments



To share our know-how, tools and methods

BIBS It's...



COLLABORATION

An open lab or the academic & private scientific community



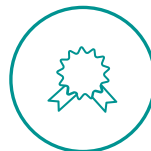
EXPERTISE

A dedicated and skilled staff including scientists, technical personnel, doctoral students, and hosting interns



RESEARCH & DEVELOPMENT

Over 50 R&D projects processed each year (national, European, international)



QUALITY

A certified ISO 9001 lab

INRAE-BIA-BIBS
(Bioresources: Imaging, Biochemistry & Structure)

La Géaudière - BP 71627 - FR-44316 NANTES cedex 3

Header: Dr Sophie Le Gall

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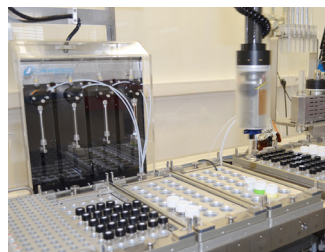
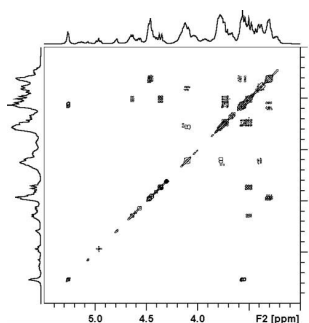
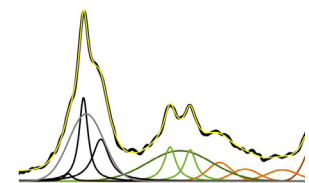
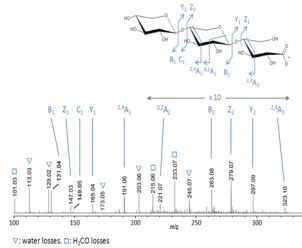
www.bibs.inrae.fr



BIBS

— BIA Research Unit-INRAE-Nantes —

TO EXPLORE BIORESOURCES AND BIOPRODUCTS, FROM MOLECULE TO OBJECT,
FOR FOOD, HEALTH, AND BIOECONOMY



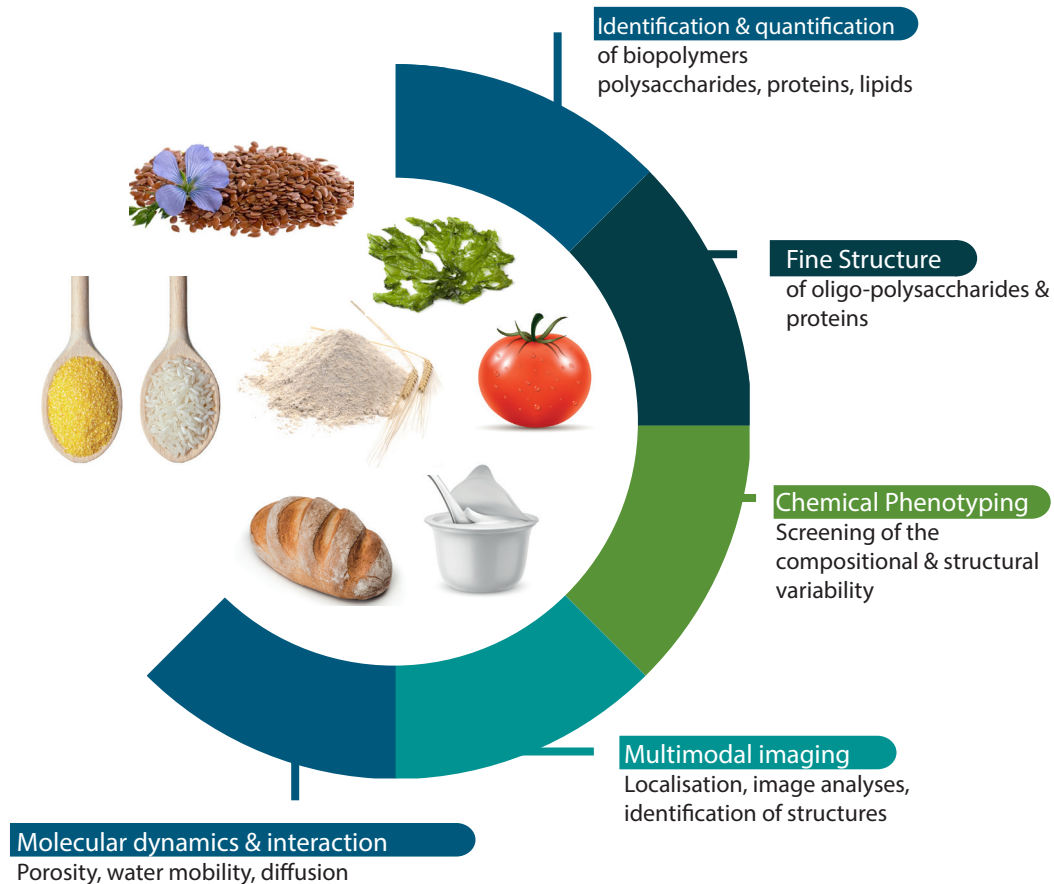
Original & diversified expertises

BIBS develops and offers methods to characterize structures in natural bioresources (plants, plant organs, by-products) as well as transformed materials up to finished products (foods, biomaterials)

What are the relationships between the structure and properties of these bioresources and bioproducts?
biological, nutritional, technological...

How do the structures evolve based on genetic and environmental variables?

How do these systems (un)build themselves?
Kinetics, biosynthesis, assembly mechanisms, degradation monitoring



Fields of Application



Plant Food



Green chemistry
Biomaterials



Marine Biology
Environment



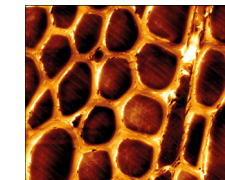
Health
Nutrition

Our equipment & digital solutions

01

MICROSCOPES

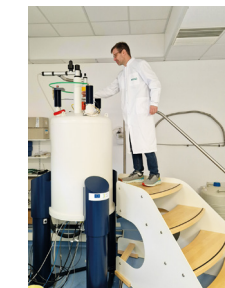
Atomic Force Microscope (BRUKER) coupled to a Raman Microspectrometer (RENISHAW)
Transmission Electron Microscope (JEOL)
Environmental Scanning Electron Microscope Quattro S (THERMO)
Confocal Laser Scanning Microscope (NIKON)



02

SPECTROMETERS

High-Field NMR Spectrometer Avance NEO 9.4T WB (BRUKER)
Low-Field NMR Spectrometers Minispec mq20 0.47T (BRUKER)
Ion Trap Amazon SL (BRUKER)
Select SERIES Cyclic IMS (WATERS)
Rapiflex Tissue typer (BRUKER)
Q-Exactive HF (THERMO)



03

CHROMATOGRAPHS

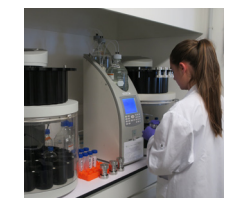
TRACE GC Ultra & TRACE GC-ISQ (THERMO)
HPAEC, ICS 6000 (THERMO)
HPSEC-RALS-LALS (MALVERN)
ACQUITY ELSD FLUO SQD2 (WATERS)
Detectors MS, FID, MALS, PAD, Fluor



04

PREPARATION SYSTEMS

• Biochemical preparations:
ASE 350 Extractors (THERMO)
Preparation automation (Chemspeed Technologies)
• Preparation for imaging:
Metal Coater (LEICA); Cryo Dip Coater (LEICA); Critical Point Dryer (LEICA); Vibratome (MICROM); Microtome (MICROM) and Ultramicrotome (LEICA)



05

NUMERICAL SOLUTIONS

Software for spectrum interpretation and annotation
Tools for alignment, fusion and image analysis
Unsupervised exploration methods for the internal structure of data

