Laboratory MP3CV

MÉCANISMES PHYSIOPATHOLOGIQUES ET CONSÉQUENCES DES CALCIFICATIONS CARDIOVASCULAIRES

Cardiovascular calcifications are frequent in the general population during aging but also in patients with CKD. They are associated with an increased risk of cardiovascular morbi-mortality. Vascular calcifications result from a calcium deposition localized essentially in the media of the vascular wall, and are often associated with calcified intimal atheroma plaques.
However, the molecular mechanisms involved in these processes and the consequences of cardiovascular calcifications are not yet clearly elucidated.
For more than 4 years, our research unit has worked to elucidate the mechanisms and the consequences of cardiovascular calcifications and to identify strategies to prevent or treat vascular calcifications.
Since chronic kidney disease (CKD) increases the incidence of cardiovascular calcifications, an important part of our experimental and clinical researches was developed in the context of CKD.

Masters formation option Health :

Molecular Interactions and therapeutic
Integrated systems, functional explorations, physiology

PhD formation option Biology and Health

Our research skills

Cell culture
Western Blot
Immunofluorescence
Immunohistochemistry
Flow cytometry
Molecular Biology
Animal experimentation

We are also studying several cohorts of patients in the context of collaborative projects with clinicians of the Amiens' hospital.

Our facilities

Our laboratory is equipped of several rooms dedicated to :

cell culture (Type L1 and L2 laboratories),
surgery and experimentation on animal models (rodent)

biochemistry
molecular biology
photo lab,
microscopy,
chemistry
storage

Our equipments

Thermocyclers :

- the CFX connect real-time detection system (Biorad)
- StepOne Real-time PCR system (Applied Biosystems)

Automated analysers

- A bench-top, fully automated, random access clinical chemistry analyser (RX daytona+, RANDOX)

- A multi-discipline automated system specialized in immunoassays (IDS-iSYS, Immunodiagnostics systems)

Laminar flow hoods for cell culture

Incubator (thermostated humid CO2 incubator) for cell culture

Platsforms

We have also an access to the university’s platforms :

- Plateforme d’ingenierie cellulaire et analyses des proteines (ICAP)
- Plateforme animalerie (PLATANN)
- Centre de ressources régionales en biologie moléculaire (CRRBM)
- Plateforme analytique