

UMR1059 SAINT-ETIENNE SAINBIOSE

Team PIRS: Platelet inflammatory responses to stress



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R&D OFFER

- R&D collaborative projects
- Sponsored research agreements
- CIFRE PhD Thesis (French Industrial agreement of training through research)
- Internship in public-private cotutorship (Master, engineer or other students)
- Consulting / Expertise / Training
- Access to Technical platforms
- Access to biological collection and databases (under conditions)

RESEARCH RECOGNITION - 2019

- 5 ACTIVE PATENTS
- MULTIPLE INDUSTRIALS PARTNERS
- MULTIPLE NATIONAL, EUROPEAN AND INTERNATIONAL GRANTS
- 89 PUBLICATIONS (2009-2019) SCIENTIFIC ARTICLES & BOOK CHAPTERS
- QUALITY CERTIFICATIONS
- MANY PHD STUDENTS (7 IN 2012-2019)
- PARTICIPATION TO 13 EUROPEAN PROJECTS
- MULTIPLE PARTICIPATION TO INTERNATIONAL CONGRESSES
- NATIONAL AND INTERNATIONAL GRANT EXPERTISE

RESEARCH AREA & OBJECTIVES

- Better understanding biostress in cardiovascular & osteoarticular systems (inflammation, thrombose, ageing, injury, immunity, transfusion, *in-vitro* & *in-vivo* models)
- Key role of platelets in modulating inflammation:
 - Transfusion yield
 - Inflammatory role of blood platelet & platelet cytokines/chemokines in transfusion reactions
 - Study of new agents reducing platelet activation
 - Study of platelets stimulation with bacteria (*S. aureus*, *E.coli*) in sepsis patients
- Dynamic modelling for transfusion (software, algorithms)
- Precision medicine: new solution for personalized treatments, new therapeutics targeting platelets, biomarkers during sepsis

KEYWORDS:

Platelets, Immunity, Inflammation, Algorithms, Transfusion, Sepsis

DOMAINS OF EXPERTISE

- HEMATOLOGY, PLATELETS
- IMMUNOLOGY
- INFLAMMATION

SKILLS

- CELL CULTURE, FLOW CYTOMETRY, METABOLIC INVESTIGATION, LUMINEX
- MOLECULAR BIOLOGY
- GENETICS (qPCR, sequencing), PROTEOMICS (expression, interactions, receptor interaction, purification)
- IMAGING (confocal, fluorescent)
- BIOINFORMATICS (algorithms, softwares)
- ANIMAL MODELS
- CLINICAL STUDIES
- SOCIAL SCIENCES
- QUALITY ASSESSMENTS

PLATFORMS & TECHNICAL RESSOURCES

- ACCESS TO TECHNICAL PLATFORMS:
 - Cell culture (PSM, incubators, flow cytometers, cell counter, seahorse, luminex)
 - Molecular biology (qPCR, Nanodrop, Mass spectrum, electrophoresis, HPLC & FPLC)
 - Imaging (Confocal, fluorescent microscopy)
 - Microbiology platform (incubators, bioreactors)
 - Animal platform
- ACCESS TO BIOLOGICAL COLLECTIONS:
Sam Healthy donors, patient & other biological samples (EFS, BEST group, CHU,...)