



4^{ÈMES} JOURNÉES DU GDR AIM 3-5 OCTOBRE 2022 ORLÉANS

La mission principale du GDR AIM est de mettre la chimie au cœur de l'innovation en imagerie moléculaire. Les principaux objectifs sont de fédérer les groupes de recherche français développant des outils de chimie pour l'imagerie, de promouvoir une vision interdisciplinaire du développement des agents et de donner la visibilité à cette communauté académique.

Bienvenue !

GROUPEMENT DE
RECHERCHE
« AGENTS
D'IMAGERIE
MOLECULAIRE »

FRANCE LIFE
IMAGING
RE1

<http://gdraim.cnrs-orleans.fr/>

CENTRE INTERNATIONAL
UNIVERSITAIRE
POUR LA RECHERCHE

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1, rue Dupanloup
45000 Orléans

[Visite](#)

02 38 21 14 70



Lundi 3 octobre

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| 12h00 - 13h00 | REGISTRATION + WELCOME LUNCH |
| 13h00 – 13h10 | Opening : Éva Jakab Tóth, Franck Denat et Pascal Dumy |
| | Session 1 Chair : Éva Jakab Tóth |
| 13h10 – 13h45 | Dr. Gyula Tircsó , Debrecen, Hungary <i>Mn(II) complexes for MRI and PET imaging applications</i> |
| 13h45 – 14h05 | Julen Ariztia (Orsay) <i>Conception and ¹⁸F-radiolabelling of lipid-shell microbubbles for bimodal TEP/US imaging applications</i> |
| 14h05 – 14h25 | Svetlana V. Eliseeva (Orléans) <i>Lanthanide(III)-based metallacrowns for near-infrared optical imaging and nanothermometry</i> |
| 14h25 – 14h45 | Géraldine Gouhier (Rouen) <i>New Theranostic Probes for the Treatment of Glioblastoma</i> |
| 14h45 – 15h05 | Ibai Valverde (Dijon) <i>Synthesis of heterobivalent radiotracers and their application to prostate cancer targeting</i> |
| 15h05 – 15h30 | COFFEE BREAK |
| 15h30 – 16h45 | POSTERS |
| | Session 2 Chair : Franck Denat |
| 16h45 – 17h05 | Stéphanie Deville-Foillard (Gif-sur-Yvette) <i>High-relaxivity molecular MRI contrast agent to target cancer cells</i> |
| 17h05 – 17h25 | François Lux (Lyon) <i>Suivi par imagerie de polymères biodégradables pour la chélation métallique et la délivrance de médicaments</i> |
| 17h25– 17h45 | Lena Godec (Strasbourg) <i>Towards Molecular Light Upconverting Assemblies for Bioimaging</i> |
| 17h45 – 18h05 | Katalin Selmeczi (Nancy) <i>Development of cyanine-based agents for photothermal treatment of cancer guided by fluorescence/photoacoustic imaging</i> |
| 18h05 – 18h15 | Célia Bonnet (Orléans) et Victor Goncalves (Dijon) <i>Renouvellement du GDR</i> |
| 18h15 | FREE EVENING |

Mardi 4 octobre

Session 3

Chair : Anthony Romieu

09h00 – 09h35

Dr. Christophe PORTAL, Edinburgh, UK

c-Met Targeted Radiotheranostics

09h35 – 09h55

Eugenie Pincemail (Orsay)

Synthesis and radiolabelling of new tracers targeting P2Y12 receptors for imaging of neuroinflammation

09h55 – 10h15

Carlota Figliola (Strasbourg)

Investigation of new organic photosensitizing platforms for selective photodynamic therapy

10h15 – 10h35

Lucile Bridou (Lyon)

Oxygen probes based on lanthanide luminescence

10h35 – 11h05

COFFEE BREAK

Session 4

Chair : Nathalie Mignet

11h05 – 11h25

Xavier Le Guevel (Grenoble)

Tailoring NIR-II emitting gold nanocluster surface for theranostic applications

11h25 – 11h45

Myrtil Kahn (Toulouse)

De la chimie organométallique aux nanoparticules multifonctionnelles

11h45 – 12h05

Eric Benoist (Toulouse)

Complexes de tricarbonylrhénium(I) à squelette pyridyl-triazole : des matériaux fortement émissifs aux inhibiteurs de l'Anhydrase Carbonique IX

12h05 – 12h25

Marie Thery (Nantes)

Speciation of Ruthenium for $^{103}\text{Ru}/^{103\text{m}}\text{Rh}$ Auger Generator design

12h25 – 14h00

LUNCH

14h00 – 15h00

POSTERS

Session 5

Chair : François Lux

15h00 – 15h35

Dr. Carlos Platas-Iglesias, A Coruña, Spain

Are Fe(III) complexes an alternative to Gd(III)-based MRI contrast agents?

15h35 – 15h55

Charles Truillet (Orsay)

Pharmacokinetic preclinical evaluation of radioligation strategies impact on antibody fragment targeting PD-L1.

15h55 – 16h15

Juliette Moreau (Reims)

Encapsulation de chélates de gadolinium dans des nanohydrogels de chitosane fonctionnalisés par du ZW800-1 et d'acide hyaluronique pour des sondes bimodales IRM / photoacoustique

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| 16h15 – 16h35 | Jennifer Molloy (Grenoble) <i>Design and synthesis of a multitopic pro radical probe for the detection of oxidative stress</i> |
| 16h35 – 17h00 | COFFEE BREAK |
| Session 6 Chair : Sandrine Huclier | |
| 17h00 – 17h20 | François Guerard (Nantes) <i>Etude préclinique de ciblage, d'imagerie TEP et de thérapie alpha du myélome multiple</i> |
| 17h20 – 17h40 | Véronique Patinec (Brest) <i>Monomeric and dimeric tacn-based bioconjugates for prostate cancer targeting</i> |
| 17h40 – 18h00 | Eléna Ishow (Nantes) <i>Mechanical description of nanoparticle endocytosis</i> |
| 18h00 – 18h20 | Sara Lacerda (Orléans) <i>Netrin imaging with peptide-based probes</i> |
| 19h15 | DINNER |

Mercredi 5 octobre

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| Session 7 Chair : Célia Bonnet | |
| 08h30 – 09h05 | Dr. Kristina Djanashvili , Delft, The Netherlands <i>Plug-and-play principle in design of metal-based theranostic probes</i> |
| 09h05 – 09h25 | Ewen Bodio (Dijon) <i>Aza-BODIPY and metal a winning association for multimodal imaging and theranostics in vivo</i> |
| 09h25 – 09h50 | COFFEE BREAK |
| Session 8 Chair : Victor Goncalves | |
| 09h50 – 10h10 | Bich-Thuy Doan (Paris) <i>Evaluation by MRI and optical imaging of thermally or optically triggered theranostic magnetic liposomes in vitro and in vivo against cancer</i> |
| 10h10 – 10h30 | Fabienne Dioury (Paris) <i>Radiomarquage par coordination de l'espèce {Aluminium-[¹⁸F]Fluor} : optimisation rapide de la radiosynthèse selon une méthodologie par plan d'expériences</i> |
| 10h30 – 10h45 | ORAL PRESENTATION & POSTER AWARDS |
| 10h45 – 12h00 | Discussions libres |
| 12h00 – 13h30 | LUNCH |



4^{èmes} Journées scientifiques du GDR AIM

Centre International Universitaire Dupanloup

POSTERS

JULEN ARIZTIA (CEA/SHFJ, BIOMAPS, Paris)

18F-O6-BENZYLGUANINE DERIVATIVES FOR PROTEIN LABELING BY SNAP-TAG APPROACH

CODRUTA BADESCU (CBM, Orléans)

NIR-NIR LANTHANIDE(III)-BASED METALLACROWNS WITH NON-COVALENTLY-BOUND CYANINE CHROMOPHORES

SEBASTIEN BEUCHE (CEA/SHFJ, BIOMAPS, Paris)

PET IMAGING TARGETING P53: SYNTHESIS AND RADIOLABELING OF [11C]CP31398 AND FLUORINATED ANALOGUES

FREDERIC BURON (ICOA, Orléans)

SYNTHESE ET ETUDE DE DERIVES DE DOTA FONCTIONNALISES PAR DES HETEROCYCLES ORIGINAUX POUR LA COMPLEXATION DES CATIONS LANTHANIDE(III)

FABIEN CAILLE (CEA/SHFJ, BIOMAPS, Paris)

PHOTOREDUCTION OF [11C]CO₂ TO PROMOTE RADIOCARBONYLATION WITH CARBON-11

JEAN-LUC COLL (IAB, Grenoble)

COMBINING IN VIVO PRECLINICAL IMAGING MODALITIES IN RELEVANT ANIMAL MODELS FOR ONCOLOGY

BICH-THUY DOAN (SEISAD, ENSCP, Paris)

PLATEFORME D'IMAGERIE OPTIQUE ET IRM IN VIVO LIOPA

ZOLTAN GARDA (CBM, Orléans)

FINE-TUNING THE PHYSICOCHEMICAL PARAMETERS OF A MN(II)-BASED PH-SENSITIVE PROBE BY LIGAND DESIGN

FABIENNE GOURAND (CYCERON, Caen)

RADIOSYNTHESIS OF [11C]EHT1610, A POTENTIAL RADIOLIGAND FOR QUANTIFICATION OF CEREBRAL DYRK1A BY PET IMAGING

SANDRINE HUCLIER (ARRONAX, Nantes)

EVALUTATION OF SC(III) COMPLEXATION WITH A PYRIDINE SCAFFOLD FOR THERANOSTICS APPLICATIONS

MANON ISAAC (CBM, Orléans)

MAGNETIC RESONANCE IMAGING (MRI) CONTRAST AGENT TO DETECT ZINC BOUND TO HUMAN SERUM ALBUMINE (HSA)

SALLA LAHDENPOHJA (CEA/SHFJ, BIOMAPS, Paris)

MICROFLUIDIC SYNTHESIZER IMIDEV™ IN THE PRODUCTION OF 18F-RADIOTRACERS

ANLI MAHAMOUD (IPHC, Strasbourg)
BISPIDINE COMPLEXES FOR MRI

KYANGWI PATRICK MALIKIDOGO (DMC, CEA, Grenoble)
MRI PROBE WITH ZINC FINGER SCAFFOLD FOR Zn^{2+} DETECTION BASED ON Q VARIATION

SANDRA MEME (CBM, Orléans)
MANGANESE-BASED CONTRAST AGENTS FOR VASCULAR MRI IN MICE

DAOUDA NDIAYE (CBM, Orléans)
UNPRECEDENTED KINETIC INERTNESS FOR A $Mn(II)$ -BISPIDINE CHELATE: A NOVEL STRUCTURAL ENTRY FOR $Mn(II)$ -BASED IMAGING AGENTS

ALINE NONAT (IPHC, Strasbourg)
LUMINESCENT MOLECULAR AND SUPRAMOLECULAR COMPLEXES OF $Ln(III)$ AND THEIR APPLICATION TO LIGHT UPCONVERSION

CECILE PERRIO (ISTCT, Caen)
DEVELOPPEMENT D'UNE $[^{18}F]$ FLUOROSULFOTETRAZINE HYDROPHILE POUR LA STRATEGIE DE PRECIBLAGE EN TEP

LUCAS PETITPOISSON (IPHC, Strasbourg)
OCTADENTATE BISPIDINE CHELATORS FOR $Tb(III)$ COMPLEXATION: PYRIDINE CARBOXYLATE VERSUS PYRIDINE PHOSPHONATE DONORS

MYLENE RICHARD (CEA/SHFJ, BIOMAPS, Paris)
RADIOLABELING OF BIOMOLECULES WITH AN ORIGINAL EXO-MALEIMIDE PROSTHETIC GROUP

SYLVAIN ROUTIER (ICOA, Orléans)
SYNTHESIS, CHIRAL RESOLUTION AND PRECLINICAL EVALUATION OF $[^{18}F]$ FBVM ENANTIOMERS, A POTENT PET TRACER FOR VESICULAR ACETYLCHOLINE TRANSPORTER

CYRILLE SANTERRE (CEA/SHFJ, BIOMAPS, Paris)
APPORT DE L'IMAGERIE PAR SPECTROMETRIE DE MASSE AU DEVELOPPEMENT DE NOUVEAUX RADIOTRACEURS POUR L'IMAGERIE PAR TOMOGRAPHIE PAR EMISSION DE POSITONS

SEBASTIEN SAOU (ICMUB, Dijon)
OCTA-METHYLIMIDAZOLIUM ZINC PHTHALOCYANINE FLUOROPHORE STAINS NUCLEOLUS IN MURINE $B_{16}F_{10}$ MELANOMA CELLS AND PERFORMS PHOTODYNAMIC THERAPY

OLIVIER SENEQUE (LCBM, Grenoble)
LANTHANIDE-BASED BIOPROBES FOR LIVE-CELL IMAGING

JULIEN SOBILO (In Vivo Imaging Center, Orléans)
IN VIVO IMAGING CENTER - ADVANCED TECHNOLOGIES FOR ANATOMIC, FUNCTIONAL AND THERAPEUTIC EXPLORATION

FREDERIC SZEREMETA (CBM, Orléans)
MRI AND MRS AT CBM'S MO_2 VING PLATFORM

CHARLES TRUILLET (CEA/SHFJ, BIOMAPS, Paris)

PHARMACOKINETIC PRECLINICAL EVALUATION OF RADIOLIGATION STRATEGIES IMPACT ON ANTIBODY FRAGMENT TARGETING PD-L1

ROMANE VIZIER (ICMUB, Dijon)

DEVELOPMENT OF A TRACER FOR NUCLEAR IMAGING OF IDIOPATHIC PULMONARY FIBROSIS

KATHARINA ZIMMETER (BCB, Institut de Chimie, Strasbourg)

SYNTHESIS, SPECTROSCOPIC AND RELAXOMETRIC CHARACTERIZATION OF CU(II)-RESPONSIVE MRI AGENTS



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