TRAIL

Translational Research and Advanced Imaging Laboratory

Conference

Mardi 23 Septembre 201

Lieu : Amphithéâtre de l'IECB
2 rue Robert Escarpit, 33607 Pessac

11h00 - 12h00 :

ONE-STEP KIT-LIKE RADIOFLUORINATION OF PEPTIDES AND OTHER LARGE MOLECULES

David Perrin, Professor at Department of Chemistry,
University of British Columbia, Vancouver, CANADA

One-step Kit-like Radiofluorination of Peptides and other large molecules

Peptides and other large molecules exhibit high specificity and high affinity for biological targets. When labeled with an appropriate PET isotope, they may be used as imaging agents to validate preclinical targets and guide clinical diagnoses. Of all the PET isotopes, 18F-fluoride is often preferred due to its moderate half-life and facile production at Curie levels in hospital cyclotrons. Yet fluoride is generally unreactive in water while peptides and other molecules generally require water. Typically radiosyntheses involve several steps that can take up to 3 hours. We have sought to develop a user-friendly aqueous one-step labeling method that uses organoboronates as captors of aqueous fluoride in order to enable a kit-like one-step aqueous 18F-labeling approach that can be generalized to labeling large biomolecules and to prepare dual-mode fluorescent PET tracers. Progress in this development will be discussed.

David Perrin Research and Teaching Interests:

CATALYSIS AND MOLECULAR RECOGNITION APPLIED TO BIOLOGY RESEARCH THEME :

His research uses the tools of synthetic chemistry to address questions of molecular recognition and catalysis within a biologist setting, all the while maintaining medically relevant goals. He provides a comprehensive research program at the interface of chemistry and biology, and preliminary data for these projects have already appeared in peer reviewed journals.

Contacts

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