



Centre Interdisciplinaire de
Nanoscience de Marseille



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Keywords : Molecular probes, Photoactivatable lipid probes, Nucleoside analogues,

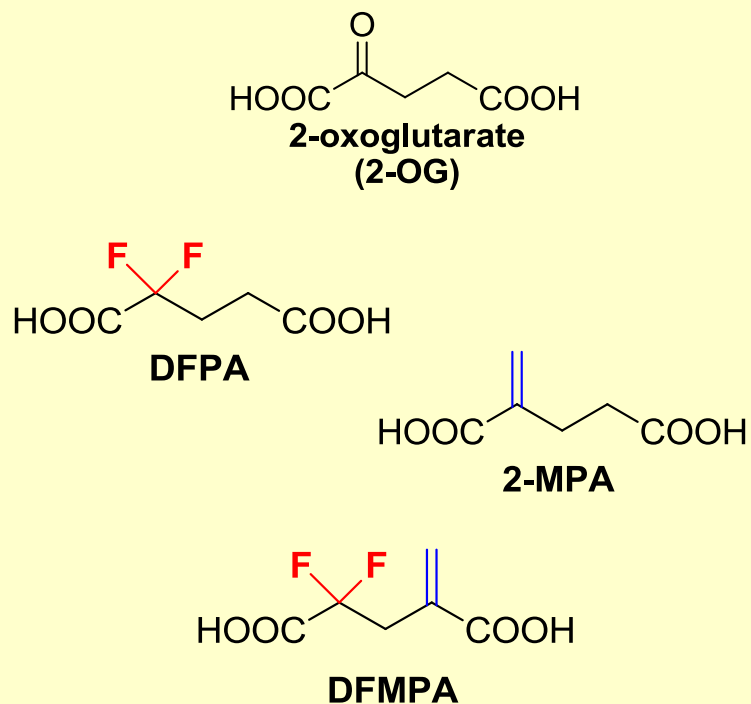
Principal Investigator : L. PENG

Fluorinated probes to study the signaling roles of 2-oxoglutarate, a key Krebs cycle intermediate

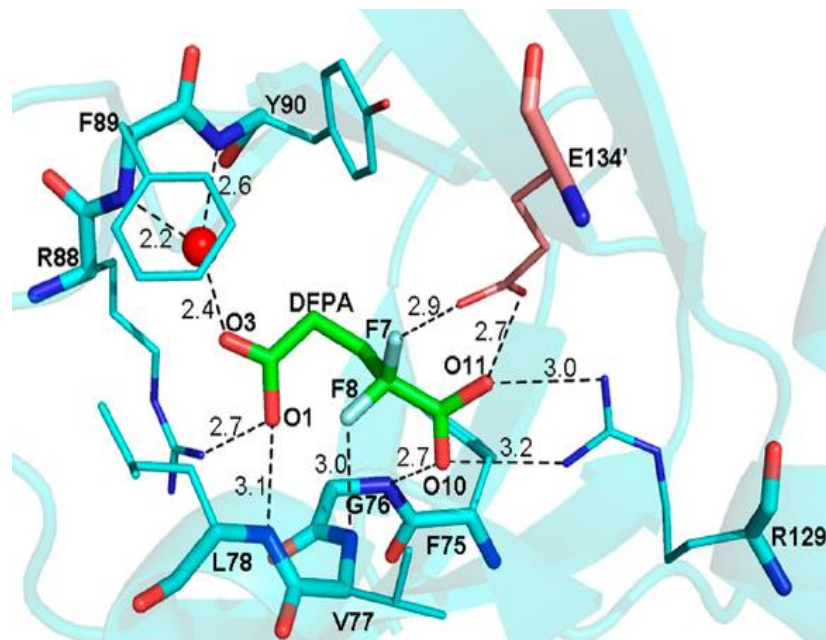
Aim: Synthesis of non-metabolizable probes to study the signaling role of 2-oxoglutarate (2-OG)

Background: *Proc. Natl. Acad. Sci. USA* **2005**, *102*, 9907; *Chem. & Biol.* **2006**, 849-856; *Org. Lett.* **2011**, *13*, 2924; *Proc. Natl. Acad. Sci. USA* **2010**, *107*, 12487.

Collaboration: C-C. Zhang (LCB), F. Ziarelli (Spectropôle), F. Qu (Wuhan)



Fluorinated probe DFPA in complex with NtcA, the 2-OG receptor

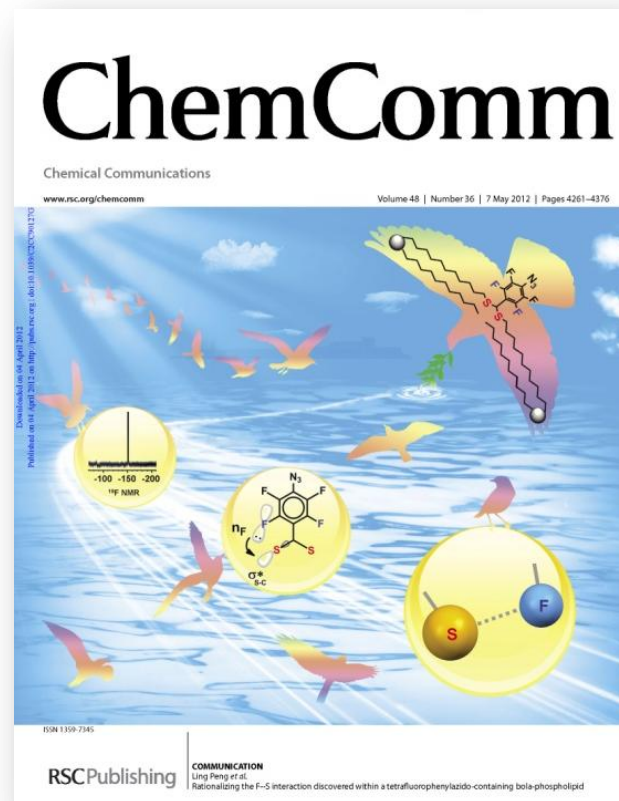
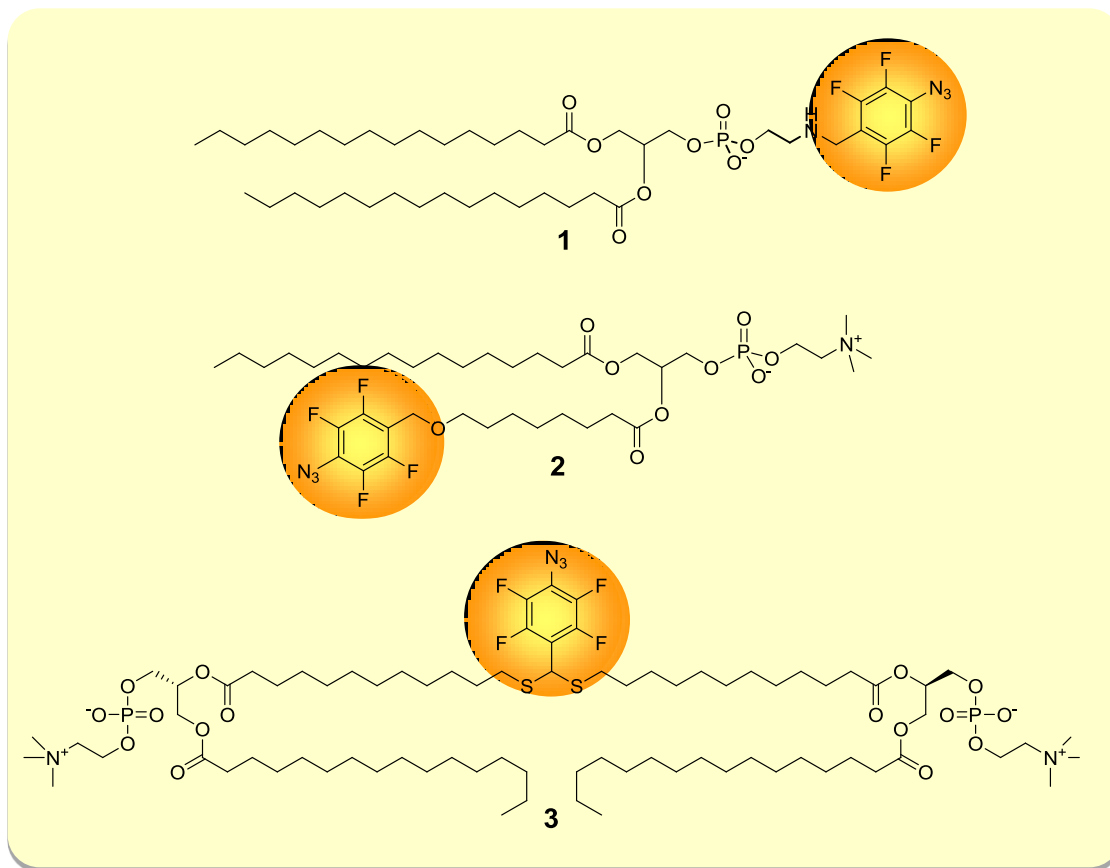


Photoactivatable phospholipid probes bearing tetrafluorophenylazido chromophores

- Aim:** 1. Synthesis of photoactivatable phospholipid probes bearing tetrafluorophenylazido chromophores
2. Implementation of ^{19}F NMR to study biological events

Background: *Org. Lett.* **2011**, *13*, 4248; *Chem. Comm.* **2012**, *48*, 4284.

Collaborations: F. Ziarelli (Spectropôle), S. Viel (ICR), F. Qu (Wuhan)

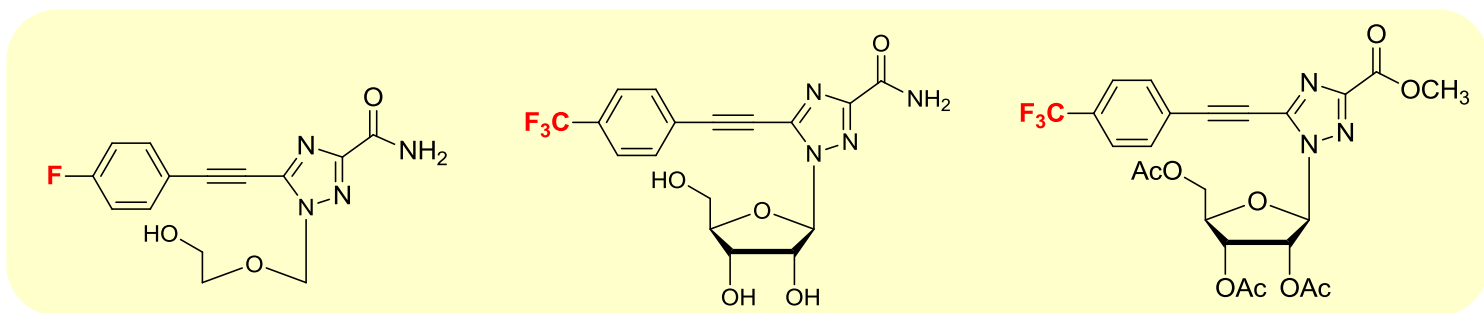


Biologically active fluorinated triazole nucleosides

Aims: Synthesis of fluorinated triazole nucleosides for therapeutical applications

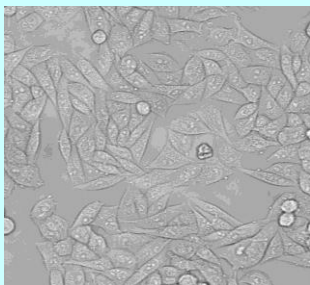
Background: PCT/BE2008/000059; PCT/EP2009/055213; *Bioorg. Med. Chem. Lett.* **2008**, *18*, 3321, *J. Med. Chem.* **2009**, *52*, 1144; *J. Med. Chem.* **2012**, *55*, 5642.

Collaboration: J. Neyts (Louven), P. Rocchi (CRCM), J. Iovanna (CRCM), F. Qu (Wuhan)

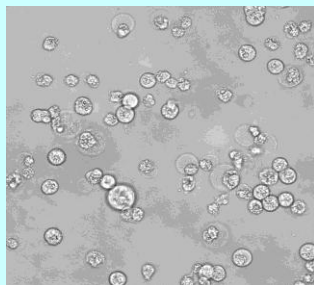


Anticancer activity against drug-resistant pancreatic cancer

Cell assay on MiaPaCa-2 cells



control



treatment

Assay on tumor-xenograft mice

