



Laboratoire d'Innovation Thérapeutique - UMR 7200

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Doctoral position available Gold-Catalyzed Domino Reactions: an Access to Original Heterocycles

Fellowship from the “Chemistry of Complex Systems” Labex and the Frontier Research in Chemistry Foundation (FRC)

Starting Date : October, 1st 2020

The development of rapid and efficient syntheses with significant structural diversity and complexity, using a minimum of steps, is a real challenge for contemporary medicinal chemistry. Elegant strategies combining the "steps and atoms economy" constraints and selectivity have been developed. They allow in particular the simultaneous formation of several C-C and / or C-heteroatom bonds, via metalcatalyzed domino reactions offering simple and fast access to polyfunctionalized compounds of therapeutic interest. In particular, gold catalyzed reactions have attracted much attention because of the great diversity of original and complex molecules that can be obtained from adequately designed substrates. In this context, the project proposes the preparation of original heterocycles by gold-mediated domino reactions.

This work will be done in the team “Synthèse Organique Métallo-induite et Hétérochimie” (SOMHET) in the “Laboratoire d'Innovation Thérapeutique” (UMR 7200). The team is located at the University of Strasbourg in the Faculty of Pharmacy.

Profile: We are looking for a candidate who is highly motivated by organic synthesis, with excellent theoretical and practical knowledge, as well as a good sense of communication and teamwork. Applications (CV + cover letter + recommendations letters) should be sent **as soon as possible** by email to Gaëlle Blond, coordinator of the project: gaelle.blond@unistra.fr.

Relevant publications :

- 1- *Gold(I)-Catalyzed Synthesis of Furofurans: Insight into Hetero-Diels–Alder Reactions* Pertschi R., Wagner P., Ghosh N., Gandon V., Blond, G. *Org. Lett.*, **2019**, *21*, 6084
2. *Molecular Diversity of Cyclooctatetraenes through Palladium-Catalyzed Cascade Reactions* S. Blouin, R. Pertschi, A. Schoenfelder, J. Suffert, G. Blond *Adv. Synth. Catal.*, **2018**, *360*, 2166, VIP paper.
3. *Synthesis of Polyheterocyclic Tropones by [2 + 2 + 2 + 1] Carbonylative Cycloaddition of Triynes* L. Salacz, N. Girard, G. Blond, J. Suffert, *Org. Lett.*, **2018**, *20*, 3915
4. *Synthesis of Cyclooctatetraenes through a Palladium-Catalyzed Cascade Reaction*. Blouin, S., Gandon, V., Blond, G.; Suffert, J. *Angew. Chem. Int. Ed.*, **2016**, *55*, 7208-7211

