



université
PARIS-SACLAY

LIDYL

LABORATOIRE INTERACTIONS, DYNAMIQUES ET LASERS

LIDYL-UMR 9222

CEA, CNRS, Université Paris-Saclay

SEMINAIRE LIDYL

Matthew M. Brister
Case Western University, USA

Le Vendredi 30 Juin 2017 à 11h00
- Bâtiment 522 - Salle 138

“Investigation of Promising Ancestral RNA Building Blocks”

Organic molecules are typically unstable under persistent irradiation with ultraviolet (UV) light. UV photons often break covalent bonds and induce a wide variety of chemical transformations. It is therefore remarkable that life is able to thrive under continuous exposure to electromagnetic radiation from the sun. In fact, biogenesis took place long before the formation of the stratospheric ozone layer and thus under conditions of severe high-energy UV radiation. As pointed out by others, this must have resulted in an extreme selection pressure for UV protection. These considerations suggest that stability to UV radiation should have been a decisive selection criterion that determined the molecular architecture of the building blocks of life during prebiotic chemistry. Although the canonical nucleobases appear to be optimal for 'life under the sun', it is currently thought that these nucleobases evolved from a complex mixture of molecules, i.e. the "primordial soup". Hence, to understand the molecular origins of life, it is essential to identify potential prebiotic RNA candidates that could have evolved into the current nucleobases. From a group of RNA precursors composed of 81 heterocyclic molecules defined by 27 purine and 54 pyrimidine compounds, 2,4,6-triaminopyrimidine and barbituric acid stand out as promising candidates for the prebiotic ancestry of the RNA building blocks.

Formalités d'entrée :

Visiteur U.E. : Se faire connaître au moins 48 heures à l'avance pour l'établissement de votre autorisation d'entrée sur le Centre de Saclay.

Visiteur hors U.E. : Se faire connaître au moins 4 jours à l'avance pour les formalités d'entrée et se faire accompagner par un agent CEA.

Sans autorisation, vous ne pourrez entrer sur le Centre de Saclay. Tél. : 33.1.69.08.74.09- Fax : 33.1.69.08.76.39 - email : caroline.lebe@cea.fr ou veronique.gerecny@cea.fr

Dans TOUS LES CAS, se munir d'une pièce d'identité (passeport et carte d'identité - pas de permis de conduire)