



2nd Nucleosides and Nucleotides: synthetic and biological chemistry

Third Announcement

Tuesday, 20th April 2021

A virtual symposium



RSC INTEREST GROUP
BIOLOGICAL AND MEDICINAL
CHEMISTRY SECTOR



RSC INTEREST GROUP
NUCLEIC ACIDS

Synopsis

Nucleosides are key structures for current drug development and have established roles as antivirals and anticancer agents. Their (poly)phosphorylated nucleotide counterparts are critical tools for chemical biology and sequencing technologies. In recent years, nucleotides have also become fundamental building blocks for the preparation of altered genes and coding systems for synthetic biology. This meeting seeks to explore and celebrate the chemistry that drives the development of modern nucleoside and nucleotide chemistry. It will bring together scientists who work at the interfaces of synthetic and biological chemistry to deliver new tools and insights for biology, and new leads for drug development.

Programme

- 09.45 Welcome
- 09.50 *Systems chemistry: on the origins of nucleic acids*
Matthew Powner, University College London, UK
- 10.20 *Functional-GNA nucleosides: synthesis, biological activity & applications in Xeno-nucleic acid chemistry*
Konrad Kowalksi, University of Łódź, Poland
- 10.50 Presentation by Carbosynth Biosynth, UK
- 10.55 *Polymerase synthesis of base-modified nucleic acids for diagnostics, imaging and chemical biology*
Michal Hocek, Academy of Sciences of the Czech Republic
- 11.25 Refreshment break, exhibition and posters
- 11.55 *Chemoenzymatic synthesis of NDP sugars as chemical biology tools to explore the GDP-D-mannose dehydrogenase from *Pseudomonas aeruginosa**
Gavin Miller, Keele University, UK
- 12.25 Presentation by BLD Pharmatech, UK
- 12.30 *The making and breaking of nucleoside polyphosphates using polyphosphate kinases*
Jenny Andexer, University of Freiburg, Germany
- 13.00 Lunch break, exhibition and posters
- 14.00 *Discovery of 3'-deoxy modified purine nucleoside analogues as potent leads for the treatment of sleeping sickness* - **Fabian Hulpia**, Ghent University, Belgium
- 14.20 *TUC-1: a novel ferronucleoside with anticancer activity in pancreatic ductal adenocarcinoma (PDAC)* - **Marium Rana**, University of Birmingham, UK
- 14.40 Presentation by High Force Research, UK
- 14.45 *An introduction to oligonucleotide therapeutics* - **Ben Andrews**, GlaxoSmithKline, UK
- 15.15 Refreshment break, exhibition and posters
- 15.45 *Eco-friendly approaches for the synthesis of dinucleotides and related compounds*
Béatrice Roy, University of Montpellier, France
- 16.15 *Harnessing the power and potential of palladium catalysis for the synthesis of chemically modified nucleosides* - **Yogesh Sanghvi**, Rasayan Inc, USA
- 16.45 *Polymerase synthesis of base-modified nucleic acids for diagnostics, imaging and chemical biology* - **Saulius Klimašauskas**, Vilnius University, Lithuania
- 17.15 *Diversifying biocatalytic C-alkylation by mapping S-adenosyl methionine cofactor space*
Glenn Burley, University of Strathclyde, UK
- 17.45 Poster prize-giving
- 18.00 Close

Twitter

#Nucleosides21



Registration and Exhibition

Please refer to our website

Secretariat Contact

RSC BMCS Secretariat, Maggi Churchouse,
maggi@maggichurchouseevents.co.uk,
+44 (0)1359 221004

Sponsors

We are grateful to our confirmed sponsors for their support of this symposium.

AstraZeneca 

 **GLEN**
GROUP
part of Alkermes UK/USA/Canada

 **oxeltis**
OXE|IT2

Websites: <https://www.maggichurchouseevents.co.uk/bmcs>

<https://www.rscbmcs.org/events> and www.rsc.org/nucleicacids