

# Program of Young Researchers Symposium

September 1<sup>st</sup>

Samuelssonsalen, KI Solna, Stockholm

## Session 1. Oligonucleotide Design And Chemistry

8.55-9.00 Welcome

1. 9.00-9.15  
Lu Ni, SANKEN, *The Institute of Scientific and Industrial Research, Osaka University*  
**"44011 - Regulating circular RNA production in cells using 3-way junction forming antisense oligonucleotide"**
  2. 9.15-9.30  
Jennifer Frommer, *School of Chemistry, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom*  
**"45826 - A new architecture for DNA-templated synthesis in which abasic sites protect reactants from degradation"**
  3. 9.30-9.45  
Ujjwal Ghosh,  
**" 46074 - Synthesis of Phosphorodiamidatemorpholino oligonucleotides (PMO) using Fmoc chemistry"**
  4. 9.45-10.00  
Carolin P.M. Scheit, *Institute of Organic Chemistry, Julius Maximilians University Würzburg*  
**"46581 - How RNA catalyses RNA-methylation"**
  5. 10.00-10.15  
Niklas Freund, *MRC Laboratory of Molecular Biology, Cambridge Biomedical Campus, Francis Crick Avenue, Cambridge CB2 0QH, UK*  
**"46593 - Unlocking enzymatic synthesis and evolution of 2'-O-methyl and 2'-O-(2-methoxyethyl)-RNA by polymerase engineering"**
  6. 10.15-10.30  
Gerald Julius Chik, *Oxford University*  
**"46600 - Modular design of CRISPR guide-RNA for facile synthesis and expanded functionality"**
- 10.30-10.40 Coffee Sponsored by Novogene

## Session 2 Nucleoside Chemistry And Nucleoside Bioactivity

7. 10.40-10.55  
Marco Rabuffetti, *University of Milan, Department of Chemistry, Via Golgi 19, 20133 Milan (Italy)*  
**“45155 - Purine 5’-ribonucleotide-glutamate hybrids as potential tools to investigate the mechanism of umami taste reception”**
8. 10.55-11.10  
Hoang-Ngoan Le, *Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Kemivägen 10, SE-41296 Gothenburg, Sweden*  
**“45681 - Design, synthesis, and characterization of a novel dual-emission band uridine analogue for RNA labeling and visualization”**
9. 11.10-11.25  
Kamil Ziemkiewicz, *Centre of New Technologies, University of Warsaw, Banacha 2c, 02-097 Warsaw, Poland*  
**“45770 - Synthesis of N-substituted nucleoside phosphoramidites via Phase-Transfer Catalysis”**
10. 11.25-11.40  
Mateusz Kozarski, *Division of Biophysics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw; Poland and Centre of New Technologies, University of Warsaw; Poland*  
**“45811 - Synthesis and biological properties of novel triazolecontaining, trinucleotide analogs of the 7-mehtylguanosine mRNA cap”**
11. 11.40-11.55  
Marcelina Bednarczyk, *Division of Biophysics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw; Poland and Centre of New Technologies, University of Warsaw; Poland*  
**“45737 - Identification of small molecule inhibitors of human decapping complex PNR2-Dcp1/Dcp2 through fluorescent HTS assay”**

12.00-12.45 Lunch

## Session 3

Oligonucleotide/Rna Based Therapy;

Delivery And Targeting Of Nucleosides And Oligonucleotides

12. 12.45-13.00  
Pauline Pfeiffer, *Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden*  
**“45732 - Novel tools to label and study nucleic acids in vitro and inside cells”**
13. 13.00-13.15

Tomasz Śpiewła, *Division of Biophysics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw; Poland and Centre of New Technologies, University of Warsaw; Poland*

**“45827 - Microscale thermophoresis-based assay for evaluating the interaction of IFIT1 with capped RNAs”**

14. 13.15-13.30

Sandra P. Smieszek, *Vanda Pharmaceuticals Inc.*

**“47485 - Novel ASO based treatment shows promise in treating CMT2S: preclinical data”**

15. 13.30-13.45

Shalini Gupta, *School of Applied and Interdisciplinary Sciences, Indian Association for the Cultivation of Science.*

**“45533 - Modifying the Internal Oligo-guanidinium Transporter for Efficient Endosomal Escape of Macromolecular Therapeutics”**

16. 13.45-14.00

Abhishek Gupta, *School of Applied and Interdisciplinary Sciences, Indian Association for the Cultivation of Science, Kolkata 700032, West Bengal, India.*

**“45537 - Guanidinium Functionalized Azaproline-containing Cell Penetrating Peptide for the Delivery of PAD Peptide and PDL1 Antisense Morpholino Oligo In Vitro”**

17. 14.00-14.15

Enrico Cadoni, *Dept. of Organic and Macromolecular Chemistry, Organic and Biomimetic Chemistry Research Group, Ghent University, Gent, Belgium*

**“45783 - A Tale of Furan and nucleic acids: selective, covalent targeting of G-Guadruplexes and i-Motif DNA structures.”**

18. 14.15-14.30

Dhanu Gupta, *Biomolecular Medicine, TRACK, Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden*

**“ 48044 - In situ EV engineering for potent biotherapeutics delivery in vivo.”**

19. 14.30-14.45

Piotr Surynt, *Division of Biophysics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw; Poland and Centre of New Technologies, University of Warsaw; Poland*

**“46635 - TMG capped dinucleotide conjugates with Fluorescent Molecular Rotors that tightly bind to snurportin”**

20. 14.45-15.00

Andrea Taladriz-Sender, *Pure & Applied Chemistry, University of Strathclyde*

**“Establishing the molecular basis of altering alternative RNA splicing in Bcl-x by GQC-05”**

15.00-15.15 Coffee sponsored by Novogene

Session 4

Nucleic Acids: Structure, Recognition And Cleavage

21. 15.15-15.30  
Katarzyna Grab, *Division of Biophysics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw; Poland and Centre of New Technologies, University of Warsaw; Poland*  
**“45769 - Aptamer-based probes as molecular tools to visualize the activity of RNA decapping enzymes”**
22. 15.30-15.45  
Olga Perzanowska, *Division of Biophysics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw; Poland and Centre of New Technologies, University of Warsaw; Poland*  
**“45817 - Chemically modified poly(A) analogs as PABP ligands and translational inhibitors”**
23. 15.45-16.00  
Maja Marušič, *Slovenian NMR center, National Institute of Chemistry, Ljubljana SI-1000, Slovenia*  
**“46569 - 3'-UTR mRNA regions and interaction with SARS-CoV-2 Nsp3c peptides”**
24. 16.00-16.15  
Anisa Ulhusna, *The Institute of Scientific and Industrial Research, Osaka University*  
**“47400 - Guanine-guanine Mismatch Binding Ligand Inhibition to Base Excision Repair Enzymes' Reactions In Vitro”**
25. 16.15-16.30  
Linda Juniar, *Uppsala University, Sweden.*  
**“ 45592 - How does the iron-dependent regulator IdeR from Saccharopolyspora erythraea recognize its DNA targets?”**

Closing