



1ST ANGLO-ITALIAN NUCLEIC ACIDS SYMPOSIUM

CHEMICAL BIOLOGY

Programme

Wednesday 7th October

12.00 onwards Registration

14.00 Opening remarks and announcements, Marco Di Antonio and Stefano Alcaro

Session 1

Chair: Marco Di Antonio

14.15 CYNTHIA BURROWS: Lilley Lectureship Keynote (University of Utah)
DNA and RNA Responses to Free Radical Chemistry from Oxidative Stress

15.15 IRENE ZANIN (University of Padua)
Ku70 directly binds G-quadruplex DNA at oncogenic loci, particularly at the amplified CDK4 oncogene in liposarcoma

15.45 MARIA GRAZIA NOLLI (University of Naples Federico II)
Exploring Carexanes as Natural Ligands of G-Quadruplex Structures

16.15 Refreshments

Session 2

Chair: Stefano Alcaro

16.45 MARINA BILOTTA (University of Catanzaro)
NORUS: An AI-Assisted Framework for Mapping Scientific Originality - A Nucleic Acid Case Study

17.15 CLAUDIA SISSI (University of Padua)
Higher-order non-canonical structural landscape within the human genome

17.45 YLENIA CORTOLEZZIS (University of Udine)
G-loops at the interface of FACT-dependent chromatin organization and genome stability

18.05 Poster Session with refreshments and light dinner (Aperitivo)

19.30 Close

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Gizzeria Lido, Italy





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Thursday 8th October

Session 3

Chair: Antonio Randazzo

- 09.30 FABIANA QUAGLIA, Plenary Lecture (University of Naples Federico II)
Engineering RNA Delivery: Linking Formulation Design to Translation
- 10.15 DAVID RUSLING (University of Portsmouth)
Triplex DNA: Engineering Biology at the Nucleic Acid Level?
- 10.45 AFAF EL-SAGHEER (University of Southampton)
Neutral Backbones adventures for enhanced Therapeutic Oligonucleotides Delivery and modified mRNA

11.15 Refreshments

Session 4

Chair: Roberta Rocca

- 11.45 THOMAS CATLEY (University of Sheffield)
Single molecule structural insights into nick-initiated R-loop formation
- 12.05 NAURA FAKHIRA ANTARIKSA (Imperial College London)
Investigating Multimolecular G-Quadruplexes as Mediators of Long-Range DNA Interactions in the Human Genome
- 12.25 BEATRICE TOSONI (University of Padua)
mtNDI1: A Specific Mitochondrial G4-Ligand Disrupting mtDNA Processes and Metabolism in Liposarcoma

12.45 Lunch

Session 5

CAREER PROGRESSION DISCUSSION PANEL

- 14.30 Open Discussion for Master's students and early career researcher with a panel of experts (Nature Editors, NAR Editor, Industry reps, Academic Reps (Italy and UK))

16.00 Refreshments

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Session 6

Chair: David Rusling

- 16.30** MARK SEARCEY (University of East Anglia)
Targeting Junctions: Small molecules and peptides that promote the formation of 4-way junctions in DNA and initial investigations of RNA targeting compounds.
- 17.00** ANNA DI PORZIO (University of Naples Federico II)
Exploiting G-quadruplex ligands to enhance chemosensitivity and overcome drug resistance in cancer
- 17.30** PENG WU (Max Plank Dortmund)
Phenotypic Discovery of Bifunctional Small Molecules to Modulate RNAs and RNA-Binding Proteins
- 18.00** Poster Session with refreshments and dinner
- 20.00** Close

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Friday 9th October

Session 7

Chair: Marco Di Antonio

09.30 ZOË WALLER, Plenary Lecture (University College London)

The Changing Shape in DNA

10.15 AHLEM MEZIADI (Imperial College London)

Programmable DNA condensates for stimuli-responsive control

10.35 VALERIA LIBERA (University of Perugia)

How Ligands Reshape Telomeric G-Quadruplex Dimers

10.55 ELLEN PARKES (University College London)

Magnetic activation of spherical nucleic acids enables the remote control of synthetic cells

11.15 Refreshments

Session 8

Chair: Zoë Waller

11.45 YAIR AUGUSTO GUTIERREZ FOSADO (University of Edinburgh)

Topological viscoelasticity in DNA nanostar networks

12.15 JULIETTE BUCCI (Cambridge University)

From DNA Nanotechnology to Synthetic Biology: Enzyme-Encoded Spatio-Temporal Control of Reactions

12.45 MICHELE STASI (Imperial College London)

Programming Nucleic Acids condensate with non-canonical secondary structures

13.05 Lunch

15.00 Group Sightseeing of Pizzo (optional)

20.30 Conference gala dinner

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Saturday 10th October

Session 9

Chair: Anna Artese

- 09.30 DANIELA MONTESARCHIO (University of Naples, Federico II)
Chemically modifying G-quadruplex-forming aptamers to expand their functional capabilities
- 10.00 FILIPPO DORIA (University of Pavia)
cRGD-Guided G-quadruplex ligands for precision cancer therapy
- 10.30 MATILDE SOLANGE FRANCESCA CANNISTRÀ (University of Catanzaro)
Potential therapeutic action of Hypericum perforatum extract on skin lesions via EGFR G4 stabilization: Preliminary studies

10.50 Refreshments

Session 10

Chair: Filippo Doria

- 11.30 GIULIA NICOLETTO (University of Padua)
G-quadruplex destabilisation approaches for the treatment of X-linked dystonia-parkinsonism
- 12.00 HENRIETTA JAYNE BARRYMORE SMITH (University of Sheffield)
Histone-like (HU) protein's organisation of DNA across organisms
- 12.30 ANTONIO CURCIO (University of Catanzaro)
Hit It before It Starts: Targeting a (3 + 1) Hybrid Non-canonical G-Quadruplex to Silence PARP1 in Cancer
- 13.00 Best Poster and Talk Prizes Award, Final Remarks and Symposium close

- 13.15 Visit to Catanzaro with lunch of local delicatessen (optional)

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