
ESF Research Conferences

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ESF-COST High-Level Research Conference

**Final
Programme**

Inorganic Chemistry

Metal-Nucleic Acid interactions

John S. Latsis Public Benefit Foundation, "Pallas Athena" • Athens • Greece
12-17 November 2006

Chair: Jan Reedijk • Leiden University, NL

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Sunday 12 November	16.00 onwards	Registration at ESF-RC desk		
	20.00	Dinner		
	21.00	Welcome Drink		
Monday 13 November	09.00	Conference Opening, Jan Reedijk • Leiden University, NL		
	Session 1 • Basic matters of metals and nucleic acids Chair: Nikolaos Hadjiliadis • University of Ioannina, EL			
	09.30-10.15	Bernhard Lippert • University of Dortmund, DE	<i>Some fundamental consequences of metal coordination to nucleobases</i>	
	10.15-10.45	Einar Sletten • University of Bergen, NO	<i>Interaction between metallo-supramolecular cylinders and DNA</i>	
	10.45-11.15	Coffee break		
	11.15-12.00	Andrew Houlton • University of Newcastle-upon-Tyne, UK	<i>Covalent, coordinate and non-covalent bonding routes to modified DNA</i>	
	12.00-12.45	Mitsuhiko Shionoya • University of Tokyo, JP	<i>Artificial Metallo-DNA for Metal Array Programming</i>	
	12.45	Lunch		
	15.30-16.00	Coffee break		
	Session 2 • Theoretical aspects of M-DNA interactions Chair: Jan Reedijk •			
	16.00-16.45	Poster Flash Session 1		
	16.45-17.30	Jiri Kozelka • Université René Descartes, Paris, FR	<i>DNA crosslinking by platinum anticancer drugs: New insights into kinetics and structure</i>	
	17.30-18.00	Poster Flash Session 2		
	19.30	Dinner		
Tuesday 14 November	Session 3 • Structure and binding motifs of metals on DNA Chair: Istvan T. Horvath • Eötvös Univeristy, Budapest, HU			
	09.00-09.45	Paolo Carloni • International School for Advanced Studies, Trieste, IT	<i>Pt-DNA interactions investigated by QM/MM calculations</i>	
	09.45-10.30	Michael Hannon • University of Birmingham, UK	<i>Non-covalent DNA recognition and remarkable DNA structural effects induced by supramolecular metal-containing cylinder</i>	
	10.30-11.30	Coffee break & Poster Session		
	11.30-12.15	Giovanni Natile • Università degli Studi di Bari, IT	<i>Non covalent interactions in adducts of platinum drugs with nucleobases in nucleotides and DNA</i>	
	12.15-12.45	Juan Subirana • ETSEIB, Barcelona, ES	<i>DNA-ion interactions in oligonucleotide crystals</i>	
	12.45-13.15	Valérie Pierre • California Inst. of Technology, Pasadena, US	<i>DNA Charge Transport in DNA Repair</i>	
	13.15-14.15	Lunch		

	14.15-16.00	Poster Session	
	15.30-16.00	Coffee break	
	Chair: Franc Meyer • University of Göttingen, DE		
	16.00-16.30	Helen Chifotides • Texas A&M Univ., College Station, US	<i>Binding Motifs of Dirhodium Anticancer Compounds to DNA</i>
	16.30-17.00	Sofi Elmroth • Lund University, SE	<i>Kinetics for platination of ribonucleic acids - is RNA perhaps a better target than DNA?</i>
	Short Oral Presentations		
	17.00-17.15	Palaniandavar Mallayan • Bharathidasan University, IN	<i>Interaction of Cu(II) and Zn(II) Tris-complexes of 5,6-Dimethyl-1,10-Phenanthroline with DNA: Ligand-Promoted Exciton Coupling</i>
	17.15-17.30	Bernhard Spingler • University of Zurich, CH	<i>The interaction of mono- and dinuclear metal complexes with DNA as a way to induce Z-DNA</i>
19.30	Dinner		
Wednesday 15 November	Session 5 • Anti-cancer and other applications of M-DNA interactions		
	Chair: Carmen Navarro-Ranninger, Universidad Autónoma de Madrid, ES		
	09.00-09.45	Peter Sadler • University of Edinburgh, UK	<i>DNA metallation by organometallic and photoactivated anticancer complexes</i>
	09.45-10.30	Claudia Turro • The Ohio State University, US	<i>New Transition Metal Complexes for Oxygen-Independent Photodynamic Therapy</i>
	10.30-11.30	Coffee break & Poster Session	
	11.30-12.15	Yi Lu • University of Illinois at Urbana-Champaign, US	<i>New Metallo-DNAzymes: from Fundamental Insights into Metal-Binding Sites in Nucleic Acids to Practical Applications as Metal Ion Sensors</i>
	Short Oral Presentations		
	12.15-12.30	Sunhee Choi • Middlebury College, US	<i>Mechanism and Kinetics of Oxidation of Guanosine Derivatives by Platinum(IV) Complexes</i>
	12.30-12.45	Anna Hotze • University of Birmingham, US	<i>Design of new supramolecular metallo drugs</i>
	12.45-13.00	Jens Müller • University of Dortmund, DE	<i>Metal-Ion Binding to an Oligonucleotide Containing the Artificial 1,2,4-Triazole Nucleoside</i>
	13.00-13.15	Patrick McGowan • University of Leeds, UK	<i>New titanium and ruthenium anticancer drugs and their DNA interactions</i>
	13.15	Lunch	
	14.00	Free Afternoon	
20.30	Dinner		
Thursday 16 November	Session 6 • RNA, DNA, PNA: miscellaneous topics		
	Chair: Jan Reedijk • University of Leiden, NL		
	09.00-09.45	Viktor Brabec • Academy of Sciences of the Czech Republic, CZ	<i>Conformation of DNA modified by novel antitumor platinum drugs: recognition by DNA binding proteins and repair</i>
	09.45-10.30	Chuan He • University of Chicago, US	<i>Bacterial Regulation of Metals and Antibiotic Resistance</i>
	10.30-11.15	Coffee break & Poster Session	
11.15-11.45	Victoria de Rose • University of Oregon, US	<i>Spectroscopic methods to probe the influence of metal ions on RNA folding and catalysis</i>	

	11.45-12.15	Catalina Achim • Carnegie Mellon Univ., Pittsburgh, US	<i>Ligand-Modified PNA as Scaffold for Transition Metal Ions</i>
	12.15-12.45	Janet Morrow • State Univ. of New York at Buffalo, US	<i>Lanthanide(III) ion Luminescence Spectroscopy for Mapping Metal ion Binding Sites in RNA and DNA</i>
	12.45-13.15	Fabrizio Mancin • Università degli studi di Padova, IT	<i>Increasing the efficiency of Zn(II)-based artificial nucleases</i>
	13.15-14.00	Lunch	
	14.00-16.00	Poster Session	
	15.30-16.00	Coffee break	
	16.00-16.30	Wojciech Szczepanik • University of Wroclaw, PL	<i>Inhibition of catalytic activity of trans-acting antigenomic delta ribozyme by selected antibiotics and their Cu²⁺ complexes</i>
	16.30-17.00	Roland K.O. Sigel • University of Zurich, CH	<i>NMR investigations of metal-ion binding within the catalytic core of a large catalytic RNA</i>
	17.00-17.30	Bengt Nordén • Chalmers University of Technology, SE	<i>Kinetic selection - a mechanism of nucleic acid recognition by rare-event effects</i>
	17.30	Conference Closure, Jan Reedijk & Istvan Horvath (including planning for the 2008 meeting)	
	19.30	Conference Dinner	
Friday 17 November	08.00	Breakfast & departure	

There will be no **short talks** other than those announced on the programme.
All other abstracts are accepted as **posters**.