

## SCNAC 2017 PROGRAM

**Monday, 5.6.2017**

**Chairman:** **Michal Hocek**

8:45	9:00	M. Hocek	Opening
9:00	9:40 PL1	I. Willner	Nucleic Acid Nanostructures Exhibiting Programmed Machinery and Catalytic Functionalities
9:40	10:20 PL2	N. Sugimoto	Non-canonical World of Nucleic Acids under Molecular Crowding

10:20 10:50 Coffee Break

**Chairman:** **Scott Silverman**

10:50	11:20 EYIL1	C. Höbartner	The structural basis of DNA catalysis and fluorogenic labeling of RNA modifications
11:20	11:40 OC1	D. Sen	In vitro selected DNazymes and ribozymes and their links to biology
11:40	12:00 OC2	A. Fleming	4n-1 is a "Sweet Spot" in 2'-Deoxycytidine Homopolymers adopting i-motif folds
12:00	12:20 OC3	E. Funder	New Discoveries within Phosphorothioate LNA
12:20	12:40 OC4	A. Istrate	Manipulating the properties of tricyclo-DNA by 2'-fluorination

12:40 14:30 Lunch

**Chairman:** **Nathan Luedtke**

14:30	15:30 Sorm Award	A. Marx	Copying of unnatural and natural nucleic acid modifications
15:30	15:50 OC5	M. Hocek	DNA Modifications for Sensing, Cross-linking or Switching of DNA-Protein Interactions
15:50	16:10 OC6	M. Hollenstein	Synthesis of modified nucleoside triphosphates for selection experiments

16:10 16:30 Coffee Break

**Chairman:** **Oliver Seitz**

16:30	17:10 PL3	S. Silverman	DNA as an Enzyme
17:10	17:30 OC7	M. Kuwahara	Simple Method for Biomarker Detection: Signal Amplification by Ternary Initiation Complexes
17:30	17:50 OC8	D. Perrin	DNazymes and Aptamers with Protein-like Functionalities Derived from Modified dNTPs
17:50	18:10 OC9	C. K. O' Sullivan	Selection, characterisation and analytical application of DNA aptamers against the anaphylactic allergen, Lup-an 1, $\beta$ -conglutin
18:10	18:30 OC10	J. Spacek	Detection of brand new unnatural base pairs in in vivo prepared plasmid DNA by electrochemistry with the good old hanging mercury drop electrode

19:00 22:00 Jena Bioscience Beer Party and Dinner

## Tuesday, 6.6.2017

**Chairman:** **Andreas Marx**

9:00	9:40	PL4	<b>T. Carell</b>	DNA bases beyond Watson and Crick
9:40	10:00	OC11	S. Becker	Formation of purine nucleosides and its modifications under plausible prebiotic conditions
10:00	10:20	OC12	H. Sugiyama	Chemical Biology of Nucleic Acids: DNA Origami and Artificial Genetic Switch

10:20 10:50 Coffee Break

**Chairman:** **Thomas Carell**

10:50	11:20	EYIL2	<b>N. W. Luedtke</b>	A Bioorthogonal Chemical Reporter of Nucleoside Drug Metabolism
11:20	11:40	OC13	A. Granzhan	Macrocyclic DNA Ligands: Smart DNA-Lesion Binders and Inhibitors of DNA Repair
11:40	12:00	OC14	A. Madder	Modified nucleic acids for crosslinking and catalysis
12:00	12:20	OC15	B. Y. Michel	Dynamics of 5-MethylCytosine Flipping by UHRF1: How Long Does It Take to Convey an Epigenetic Mark?
12:20	12:40	OC16	T. Lavergne	Topologically controlled G-quadruplex foldamers: design and application

12:40 14:30 Lunch

**Chairman:** **Hans-Achim Wagenknecht**

15:30	15:10	PL5	<b>C. Meier</b>	Developing Prodrugs of antivirally active Nucleoside Triphosphates - Against all odds, it works!
15:10	15:30	OC17	S. Vasilyeva	SiO <sub>2</sub> nanoparticles as a vehicle for delivery of nucleoside triphosphate analogues into cells
15:30	15:50	OC18	T. Kraus	Synthetic transporters of modified nucleoside triphosphates across cell membranes
15:50	16:10	OC19	P. Kumar	Triazole -linked Locked Nucleic Acids: Synthesis and Hybridization Properties
16:10	16:30	OC20	J. Brčić	DNA oligonucleotide with GGGGCC repeats implicated in ALS and FTD folds into two distinct G-quadruplex structures

16:30 21:30 Alios Biopharma Poster Session and Dinner

## Wednesday, 7.6.2017

**Chairman:** **Chris Meier**

9:00	9:40	PL6	<b>R. Schinazi</b>	Development of Ideal Pangenotypic HCV Regimens
9:40	10:00	OC21	R. Nencka	Nucleoside inhibitors of arthropod-borne flaviviruses
10:00	10:20	OC22	A. M. Downey	Progress Toward Protecting Group-Free Synthesis of Nucleosides

10:20 10:50 Coffee Break

**Chairman:** **Annemieke Madder**

10:50	11:20	EYIL3	J. Kowalska	Exploring „clickable” phosphate analogs to create biologically-active nucleotide mimics and probes
11:20	11:40	OC23	M. Warminski	Structural studies on therapeutically relevant mRNA 5' cap analogues in complexes with eukaryotic translation initiation factor 4E by X-Ray crystallography
11:40	12:00	OC23	M. Manoharan	Chemically modified siRNAs for human therapeutics
12:00	12:20	OC25	P. Nielsen	Double-headed nucleotides – condensing the information
12:20	12:40	OC26	M. De Fenza	Novel PiperidinyI Iminosugar-Based Nucleosides as Selective Pharmacological Tools

12:40 14:00 Lunch

14:00 20:00 Free afternoon

20:00 24:00:00 Chemgenes Conference Dinner

## Thursday, 7.6.2017

**Chairman:** **Cynthia Burrows**

9:00	9:40	PL7	K. V. Gothelf	Templated Assembly of Polymers and other Materials
9:40	10:00	OC27	H.-A. Wagenknecht	Light-driven functions in DNA
10:00	10:20	OC28	L. M. Wilhelmsson	Nucleic acid base analogue FRET

10:20 10:50 Coffee Break

**Chairman:** **Kurt Gothelf**

10:50	11:20	EYIL4	A. Rentmeister	Chemo-enzymatic modification of eukaryotic mRNAs
11:20	11:40	OC29	S. Seergazhi Gopalan	Probing Nucleic Acid Structure and Function Using Multifunctional Nucleoside Analog Probes
11:40	12:00	OC30	E. Westhof	An integrated, structure- and energy-based view of the genetic code
12:00	12:20	OC31	B. Nawrot	Non-canonical base pairs in codon-anticodon recognition
12:20	12:40	OC32	G. Leszczynska	Why Nature introduced S-geranyl to the wobble 2-thiouridines of transfer RNAs

12:40 14:30 Lunch

**Chairman:** **Eric Westhof**

14:30	15:10	PL8	C. Richert	RNA-Induced Formation of Peptides in the Absence of Enzymes
15:10	15:30	OC33	J.-L. Mergny	Quadruplexes are everywhere!
15:30	15:50	OC34	O. Seitz	Exploring Multivalency by DNA-programmed spatial screening
15:50	16:10	OC35	A. Kellert	Polynuclear MetalloDrug—Nucleic Acid Interactions: New Therapeutic and Biochemical Applications

16:10 16:30 Coffee Break

**Chairman:** **Jean-Louis Mergny**

16:30	16:50	OC36	A. Ono	Characterization of Duplexes containing metal ion mediated base pairs
16:50	17:10	OC37	M. Smietana	Remote control of RNase H activity using the boronic acid/boronate ester switch
17:10	17:30	OC38	M. Caruthers	Synthesis, Biochemistry, and Biology of New Morpholino and Thiomorpholino DNA Analogues
17:30	18:10	PL9	C. Burrows	Epigenetics of Guanine
18:10	18:30		M.Hocek	Concluding remarks

19:00 20:00 *Organ Concert*

20:00 21:30 *Dinner*