

# Annual Dutch meeting on Molecular and Cellular Biophysics

Programme Monday 28 September 2009

09:30 - 10:30	Arrival / registration / coffee & tea			<b>Room: Kempenthal</b>
10:35 - 10:45	Opening			<b>Room: Brabantzaal</b>
10:45 - 11:15	I.1	<b>T. Lee</b> (Southampton, UK) <i>How lipids regulate membrane protein function</i>	<b>Room: Brabantzaal</b>	
11:20 - 11:50	I.2	<b>D. Rhodes</b> (MRC, UK) <i>Chromatin higher order structure and regulation of its compaction</i>	<b>Room: Brabantzaal</b>	
11:55 - 12:25	I.3	<b>F. Taddei</b> (INSERM, France) <i>A systems approach to individual differences in longevity</i>	<b>Room: Brabantzaal</b>	
12:30 - 15:30	Lunch and <b>Poster session 1 (odd numbers)</b>			<b>Room: Kempenthal</b>
<b>Room: session</b>	<b>Baroniezaal</b> <i>processes at the membrane-water interface</i>	<b>Brabantzaal</b> <i>mechanics of biomolecules</i>	<b>Diezehal</b> <i>microtubule-based transport</i>	
15:30 - 15:45	O.1 <b>I. Kusters</b> (RuG) <i>Dual-color fluorescence-burst analysis (DCBFA): A new tool to study protein oligomerization at the membrane interface</i>	O.4 <b>A. Candelli</b> (VU) <i>Visualizing single-proteins on a single DNA molecule with Super-Resolution</i>	O.7 <b>J. Lindeboom</b> (WUR) <i>Arabidopsis cortical microtubules position cellulose synthase delivery to the plasma membrane and interact with cellulose synthase trafficking compartments</i>	
15:50 - 16:05	O.2 <b>S. Bonnet</b> (UU) <i>Towards molecular transporters on lipid bilayers: Photocleavage of ruthenium complexes from model membranes, and thermal back-binding</i>	O.5 <b>F. Chien</b> (LEI) <i>Nucleosome stacking defines the structure of chromatin fibers</i>	O.8 <b>L. Kapitein</b> (EMC) <i>Sorting out neuronal polarity: mixed microtubules steer dynein-driven cargo transport into dendrites</i>	
16:10 - 16:25	O.3 <b>R. Campen</b> (AMOLF) <i>Lipid hydration and its influence on membrane structure</i>	O.6 <b>J. Lipfert</b> (TUD) <i>The effect of torque on small-molecule binding to DNA</i>	O.9 <b>P. Shaklee</b> (AMOLF) <i>Collective dynamics of nonprocessive motors at the microtubule-membrane tube interface</i>	
16:30 - 17:00	Coffee and tea			<b>Room: Kempenthal</b>
<b>Room: session</b>	<b>Baroniezaal</b> <i>polymerases in action</i>	<b>Brabantzaal</b> <i>cytoskeletal organisation</i>	<b>Diezehal</b> <i>membrane detection and signalling</i>	
17:00 - 17:15	O.10 <b>M. Depken</b> (VU) <i>The nature of transcriptional pauses and their role in proofreading</i>	O.13 <b>C. Broederz</b> (VU) <i>Dynamics of transiently crosslinked cytoskeletal networks</i>	O.16 <b>S. de Keijzer</b> (RU) <i>Spatio-temporal analysis of membrane lipid remodeling during phagocytosis</i>	
17:20 - 17:35	O.11 <b>T. Hoekstra</b> (VU) <i>Inducing T7 DNA polymerase to switch stochastically between exonuclease and polymerase activity</i>	O.14 <b>L. Laan</b> (AMOLF) <i>Reliable centering of dynamic microtubule asters in microfabricated chambers by pulling forces</i>	O.17 <b>T. van Zanten</b> (IBEC) <i>Direct nanoscale optical imaging of nucleation sites for cell adhesion</i>	
17:40 - 17:55	O.12 <b>I. Vilfan</b> (TUD) <i>Real-time observation of transcription by RNA-dependent RNA polymerase transcription</i>	O.15 <b>M. Soares e Silva</b> (AMOLF) <i>Probing the structure and dynamics of actively contractile actin-myosin networks</i>	O.18 <b>F. van Hemert</b> (LEI) <i>Spatial restriction of GPCR-G protein mobility is essential for faithful chemotaxis</i>	
18:00 - 19:30	Dinner			<b>Room: Genderhal</b>
19:30 - 20:00	Coffee			<b>Room: Kempenthal</b>
20:00 - ...	I.4	<b>X. Zhuang</b> (Harvard University, USA) <i>Nanoscope imaging of biomolecules and cells</i>	<b>Room: Brabantzaal</b>	

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Programme Tuesday 29 September 2009

Room: session	<b>Baroniezaal</b> <i>protein-DNA interactions</i>	<b>Brabantzaal</b> <i>imaging cellular organisation</i>	<b>Diezehal</b> <i>protein folding and aggregation</i>
09:00 - 09:15	O.19 <b>M. Cristovao</b> (EMC) <i>Conformational changes in DNA and MutS during mismatch repair, analyzed by fluorescence spectroscopy</i>	O.22 <b>N. Dudkina</b> (RuG) <i>Dual-axis cryo-electron tomography: a powerful technique to explore intact mitochondria</i>	O.25 <b>K. Blank</b> (RU) <i>Triggering enzymatic activity with force</i>
09:20 - 09:35	O.20 <b>A. van der Heijden</b> (LEI) <i>Single basepair accuracy prediction of nucleosome positioning in vitro and in vivo</i>	O.23 <b>M. Duits</b> (UT) <i>Spatiotemporal heterogeneous particle dynamics in living cells</i>	O.26 <b>D. Dekker</b> (UT) <i>Counterion induced higher order assemblies of alpha-synuclein fibrils</i>
09:40 - 09:55	O.21 <b>M. van Loenhout</b> (TUD) <i>Dynamics of RecA on single-stranded DNA</i>	O.24 <b>C. Tudor</b> (UT) <i>Fluorescence lifetime imaging of mechanical stress-activated signal transduction pathways in drosophila cells</i>	O.27 <b>X. Periole</b> (RuG) <i>Energetics insight into twisting a cross-<math>\beta</math> structure: implication for amyloid-fibrils polymorphism</i>
10:00 - 10:30	Coffee and tea		<b>Room: Kempenthal</b>
Room: session	<b>Baroniezaal</b> <i>nanoscale detection of biomolecules</i>	<b>Brabantzaal</b> <i>photosynthesis</i>	<b>Diezehal</b> <i>protein-protein interaction</i>
10:30 - 10:45	O.28 <b>X. Janssen</b> (TU/e) <i>The rotating magnetic particles probe: A new technique to measure interactions between protein-coated particles and a surface</i>	O.31 <b>E. Romero</b> (VU) <i>Functional flexibility in the photosystem II reaction center: multiple charge separation pathways</i>	O.34 <b>R. Loris</b> (VU Brussel) <i>Rejuvenation of CcdB-poisoned gyrase by an intrinsically disordered protein domain</i>
10:50 - 11:05	O.29 <b>S. Kowalczyk</b> (TUD) <i>Detection of local protein structures along DNA using solid-state nanopores</i>	O.32 <b>T. Krüger</b> (VU) <i>Single-molecule spectroscopy reveals conformational switching in plant light-harvesting complexes</i>	O.35 <b>E. van Duijn</b> (UU) <i>Visualisation of protein complexes present during the chaperonin assisted folding cycle by ion-mobility mass spectrometry</i>
11:10 - 11:25	O.30 <b>M. Zevenbergen</b> (TUD) <i>Electrochemical detection of single molecules in nanofluidic devices</i>	O.33 <b>S. Ganapathy</b> (LEI) <i>Self-assembling natural and artificial light-harvesters</i>	O.36 <b>M. Merckx</b> (TU/e) <i>Protein conformational switches for intracellular imaging and diagnostics</i>
11:30 - 14:00	<b>Poster session 2 (even numbers) and lunch</b>		<b>Room: Kempenthal</b>
14:00 - 14:20	I.5 <b>G. Wuite</b> (VU) <i>Quantifying the physics inside the genome one molecule at a time</i>	<b>Room: Brabantzaal</b>	
14:25 - 14:45	I.6 <b>J. Herek</b> (UT) <i>Coherent control of natural and artificial photosynthetic light harvesting systems</i>	<b>Room: Brabantzaal</b>	
14:50 - 15:10	I.7 <b>P. Bolhuis</b> (UvA) <i>Insights into protein conformational changes by multiscale modeling</i>	<b>Room: Brabantzaal</b>	
15:15 - 15:35	I.8 <b>A. Akhmanova</b> (EUR) <i>'Hitchhiking' to the microtubule plus end: identification of a molecular mechanism</i>	<b>Room: Brabantzaal</b>	
15:40 - 15:45	Closing remarks		

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