

2nd European Microcal Meeting

Co-organized by
Malvern Instruments, Institut Pasteur and the ARBRE-MOBIEU network

Institut Pasteur, Paris

26th-27th September, 2016

Programme

Monday September 26th (Amphithéâtre Duclaux)

Meeting Opens

08:00	Registration and Poster installation
08:45	<i>Opening remarks by the host and chair of ARBRE-MOBIEU</i> Patrick England (Institut Pasteur, Paris, France)

Morning Session 1 (*Interaction analysis: The value of orthogonal approaches*)

Chair : Patrick England (Paris, France)

09:00	<i>"The Power of Orthogonal Biophysical Methods Exemplified by an Integrative Structural Biology Study of FGFR1"</i> Geoff Holdgate (AstraZeneca, Cambridge, UK)
09:30	<i>"Combining isothermal titration calorimetry, fluorescence anisotropy and kinetic approaches to decipher the molecular mechanisms of the redox activation of the Yap1 transcription factor in S. cerevisiae"</i> Sophie Rahuel-Clermont (Université de Lorraine, Nancy, France)
09:50	<i>"What have we learned from the enthalpy database of 200 compound binding to 8 carbonic anhydrase isoforms as determined by isothermal titration calorimetry"</i> Daumantas Matulis (Vilnius University, Lithuania)
10:10	Flash presentation of posters (1 slide & 2min/talk) 9 speakers : <ul style="list-style-type: none">• Regina Adao (University of Campinas, Sao Paulo, Brazil)• Mathieu Coinçon (Stockholm University, Sweden)• Cécile Delorme (Sanofi, Vitry, France)• Andrea Gohlke (Cancer Research Institute UK Beatson Institute, Glasgow, UK)• Sergei Kuprin (Swedish Orphan Biovitrum AB, Stockholm, Sweden)• Vaida Linkuviene (Vilnius University, Lithuania)• Anna Martensson (Chalmers University of Technology, Gothenburg, Sweden)• Ksenia Maximova (Warsaw University, Poland)• Serena Rinaldo (Istituto Pasteur-Fondazione Cenci Bolognetti, Rome, Italy)• Katharina Weickhmann (Goethe University, Frankfurt, Germany)

10:30	Coffee break and 1st poster session
-------	---

Morning Session 2 (DSC : Differential Scanning Calorimetry)

Chair : Michaela Wimmerova (Brno, Czech Republic)

11:00	"Thermal dissociation and unfolding of insulin and effects of ligand interactions studied by DSC. Predictability of insulin analogue stability using DSC and correlation with other methods" Kasper Huus , (Novo Nordisk, Copenhagen, Denmark)
11:30	"Study of rabies virus by Differential Scanning Calorimetry: Identification of Proteins Involved in Thermal Transitions" Frédéric Greco (Sanofi Pasteur, Marcy l'Etoile, France)
11:50	"Using Differential Scanning Calorimetry to monitor glioblastoma evolution" François Devred (Université Aix-Marseille, France)
12:10	"DSC applied to the study of blood serum samples" Adrian Velazquez Campoy , (Zaragoza University, Spain)

12:30	Lunch
-------	--------------

13:30	Panel discussion 1 : "Best practices in DSC experimental setup and data analysis" chaired by Natalia Markova (Malvern Instruments) and Margarida Bastos (Porto University, Portugal)
-------	---

Afternoon session 1 (ITC : Isothermal Titration Calorimetry)

Chair : Chris Johnson (Cambridge, UK)

14:15	"Study of peptide/lipid interactions by ITC and DSC" Isabel Alves (CBMN, Bordeaux, France)
14:35	"Enthalpic Forces Correlate with the Selectivity of Transthyretin-Stabilizing Ligands in Human Plasma" Kristoffer Brannstrom (Umea University, Sweden)
14:55	"Affinity based definition of RNA motifs and strategic protein-RNA mutational design" Cameron Mackereth (IECB, Bordeaux, France)

15 :15	Coffee break and 2nd poster session
--------	---

Afternoon session 2 (Novel developments in the field of calorimetry)

Chair : Margarida Bastos (Porto, Portugal)

15 :45	"The underestimated potential of isothermal microcalorimetry for microbiological studies" Olivier Braissant (Basel University, Switzerland)
16 :05	"ITC studies of enzyme activity in solution and suspensions" Peter Westh (Roskilde University, Denmark)
16:25	"Use of isothermal titration calorimetry to investigate and identify novel peptide substrates for prolyl carboxypeptidase. A technology comparison" Anne-Marie Lambeir , (Antwerp University, Belgium)
16:45	"KinITC – Kinetic Revolution in Drug Discovery" Pascal Zihlmann (Basel University, Switzerland)

17 :05	Panel discussion 2 : <i>"Challenges and best practices for the application of ITC to the study of enzyme and binding kinetics"</i> chaired by Natalia Markova (Malvern Instruments)
--------	--

17 :50	3rd poster session
--------	--------------------------------------

19h30	Gala dinner
-------	--------------------

Tuesday September 27th (Amphithéâtre Jacob)

Morning session 1 (*Developments of ITC for applications in challenging areas*)

Chair : Aymeric Audfray (Lyon, France)

09:00	<i>"ITC for Structural Glycosciences"</i> Anne Imberty CERMAV-CNRS, Grenoble, France)
09:30	<i>"ITC as a tool for the characterization of self-assembled systems in organic solvents"</i> Laurent Bouteiller (Paris6 University, France)
9:50	Panel discussion 3 : <i>"Challenges and best practices for the use of ITC in non-traditional applications"</i> . chaired by Aymeric Audfray (Malvern Instruments, Lyon, France)

10 :30	Coffee break and 4th poster session
--------	---

Morning session 2 (*Binding complexity and data quality in ITC*)

Chair : Adrian Velazquez-Campoy (Zaragoza, Spain)

11:00	Joe Coyle (Astex Pharmaceuticals, Cambridge, UK)
11:30	<i>"Improved characterization of supramolecular assemblies by non conventional Isothermal Titration Calorimetry experiments"</i> David Landy (Université du Littoral, Dunkerque, France)
11:50	<i>"Ten good reasons to perform ITC experiments"</i> Eric Ennifar (Strasbourg University, France)
12:10	Panel discussion 4 : <i>"Best practices in ITC data analysis : quality optimization, and appraisal of complex binding and kinetics"</i> chaired by Eva Munoz (Affinimeter, Santiago de Compostela, Spain) and Adrian Velazquez-Campoy (Zaragoza University, Spain)
12:55	<i>Concluding remarks</i> Patrick England (Institut Pasteur, Paris, France) and Natalia Markova (Malvern Instruments)

13 :15	Lunch
--------	--------------

Afternoon Workshops (*run in parallel, maximum of 30 participants each*).

	ITC Workshop led by Aymeric Audfray (Malvern Instruments, France)	DSC Workshop led by Natalia Markova (Malvern Instruments, Sweden)
14:00	Part 1. Principles and applications of ITC. Best practices for experimental design and analysis	Part 1. Principles and applications of DSC
14:45	Coffee break	Coffee break
15:15	Part 2. Advanced data analysis. <i>(including competition assays, enzyme kinetics and binding kinetics).</i> Best practices to ensure quality of ITC data	Part 2. Advanced data analysis <i>(including sample-specific considerations).</i> Best practices to ensure quality of DSC data
	With the participation of Angel Pineiro (AFFINImeter, Santiago de Compostela, Spain)	With the participation of David Staunton (Oxford University, UK) and Margarida Bastos (Porto University, Portugal)
16 :30	end	end