7th International Chromosome Segregation and Aneuploidy Workshop, Naantali, Finland, June 16-20, 2007.

Scientific Programme

Saturday 16 June 2007

Arrival in Naantali
- 10:00-16:30 Registration, setting up posters for Poster session, Spa recreational activities
- 17:00-17:45 *Opening keynote lecture*. Live analysis of the dynein-LIS1-NudE pathway in brain tissue and cultured cells. *Richard Vallee*, Columbia University, New York, USA.

- 18:30-21:00 Welcome reception at Naantali City Hall with Dinner buffet (Bus transport leaves from the front of the Spa Hotel 18:15)

Sunday 17 June 2007

Registration continues 8:00-14:00, setting up posters for Poster session

Session 1: Spindle Assembly Checkpoint Signalling
- 8:00-8:30 Bub1 is essential and maintains centromeric cohesion by activation of the spindle checkpoint. *Stephen Taylor*, Univ. Manchester, UK.
- 8:30-9:00 Surprising phenotypes of mutations in Mad2 and BubR1: Mitosis in Drosophila doesn't need the spindle checkpoint, but it does need the kinase activity of BubR1. *Roger Karess*, CNRS, Gif-sur-Yvette, France.
- 9:00-9:20 PRP4 is a new spindle assembly checkpoint protein kinase required for MPS1 and MAD2 localization to the kinetochores. *Emile Montembault*, CNRS, Univ. Rennes, France.
- 9:20-9:40 Identifying the kinetochore-derived "wait anaphase" signal of the mitotic checkpoint. *Anita Kulukian*, Univ. California at San Diego, USA.

- 9:40-10:00 Coffee/Tea break

Session 2: Spindle assembly checkpoint sub-complexes
- 10:00-10:30 How to build an anaphase inhibitor. *Kevin Hardwick*, Univ. Edinburgh, UK.
- 10:30-11:00 Centromere/kinetochore mechanism for Cenp-A recruitment and spindle checkpoint protein association. *Mitsuhiro Yanagida*, Kyoto University, Japan.
- 11:00-11:20 APC/C inhibition and rapid anaphase onset without cytoplasmic amplification. *Jagesh Shah*, Harvard Medical School, USA.
- 11:20-11:40 CyclinB1/cyclin-dependent kinase 1 (CDK1) binds the spindle assembly checkpoint (SAC) via MAD1 in a checkpoint independent manner. *Mark Jackman,* Gurdon Cancer Institute, Cambridge, UK.
- 11:40-12:00 The Mad2 conformational dimer. Structure and implications for the spindle assembly checkpoint. *Marina Mapelli*, European Institute of Oncology, Milan, Italy.

- 12:00-13:00 Lunch

- 13.00-14.00 Poster session, Exhibitor Floor Show

Session 3: Chromosome Passenger Complex
- 14:00-14:30 Dynamics of Aurora B kinase during oocyte maturation in Xenopus, *James Maller*, Univ. Colorado School of Medicine, USA.
- 14:30-15:00 Centromeric phosphorylation of histone H3 on threonine-3 converts TD-60 from an

inhibitor to an activator of Aurora B kinase. *Todd Stukenberg*, Univ. Virginia, USA.
- 15:00-15:30 Inhibition of Incenp impedes anaphase sister chromatid separation and the dynamic flux of chromosomal passenger proteins at inner centromeres. *Marko Kallio*, VTT Medical Biotechnology and Univ. Turku, Finland.
- 15:30-15:50 Phosphoregulation of Survivin by Aurora-B kinase. *Sally Wheatley*, Univ. Sussex, UK.

- 15:50-16:10 Coffee/Tea break

Session 4: Polo-like kinase 1
16:10-16:40 PICH: a new Plk1 target with a key role in the spindle assembly checkpoint. *Erich Nigg*, Max-Planck-Institute for Biochemistry, Martinsried, Germany.
16:40-17:10 Novel Plk1 substrates that control centrosome dynamics. *Naoki Oshimori*, Univ. Tokyo, Japan.
17:10-17:30 Molecular and structural basis of Plk1 substrate recognition: Implications in subcellular localization. *Guillermo de Carcer*, CNIO, Spain.
17:30-17:50 Chemical genetics reveals the requirement for Plk1 activity in positioning the RhoA GTPase and triggering cytokinesis in human cells. *Prasad Jallepalli*, Memorial Sloan-Kettering Cancer Center, USA.
17:50-18:10 Polo-like kinase 1 controls Aurora A kinase function by regulating levels of hBora, *Anna Santamaria*. Max-Planck-Institute for Biochemistry, Martinsried, Germany.

- 20:00 Dinner at Naantali Spa

Monday 18 June 2007

Session 5: Centrosome and spindle assembly
- 8:10-8:40 TPX2-dependent Aurora-A activation is required for proper spindle assembly in human cells. *Alex Bird*, Max-Planck-Institute, Dresden, Germany.
- 8:40-9:00 Aurora-A, Plk1 and TPX2: mutual regulation and roles in spindle assembly. *Giulia Guarguaglini,* Univ. Rome, Italy.
- 9:00-:9:20 TPX2 accumulation is required for progression of meiotic maturation in mouse oocytes. *Stephane Brunet*, Equipe Physiologie du Developpement, Univ. Paris VI, France.
- 9:20-9:40 Acentrosomal spindle formation in female meiosis. *Hiro Ohkura*, Univ. Edinburgh, UK.
- 9:40-10:00 Flies with extra centrioles. *Renata Basto*, Gurdon Cancer Institute, Cambridge, UK.

- 10:00-10:20 Coffee/Tea break

Session 6: Microtubule function and kinetochore interaction
- 10:20-10:50 Regulators of chromosome movement and the mitotic spindle checkpoint. *Gary Gorbsky*, OMRF, USA.
- 10:50-11:20 Synchronizing chromosome segregation. *Helder Maiato*, Univ. Porto, Portugal.
- 11:20-11:50 Induction of mitotic dysregulation and chromosomal aberrations by the Epstein Barr Virus encoded LMP1 protein: implication in the pathogenesis of nasopharyngeal carcinoma. *George Tsao*, Univ. Hong Kong, SAR China.
- 11:50-12:10 Mps1 kinase activity is essential for chromosome alignment by controlling Aurora-B-dependent attachment error-correction. *Geert Kops*, UMC Utrecht, The Netherlands.

- 12:10-13:10 Lunch

- 13:10-14:00 Poster session, Exhibitor Floor Show

Session 7: Proteomic and genomic tools for mitotic research
- 14:00-14:30 Heterochromatin kills kinetochores: Exploring the epigenetic landscape of the kinetochore with a human artificial chromosome. *William Earnshaw*, Univ. Edinburgh, UK.
- 14:30-15:00 High-throughput functional and clinical analysis of mitosis-associated kinases in cancer. *Olli-P Kallioniemi*, VTT Medical Biotechnology, Turku, Finland.
- 15:00-15:20 Proteomic survey of cell division in Drosophila, *Pier Paolo D'Avino*, Cancer Research UK, Univ. Cambridge, UK.
- 15:20-15:40 Identification of microtubule associated proteins from the early Drosophila embryo – a 21st Century approach. *James Wakefield*, Univ. Oxford, UK.
- 15:40-16.00 Analysis of mitotic APC/C complexes by mass spectrometry. *Jakob Nilsson*, Gurdon Cancer Institute, Cambridge, UK.

- 16:00-16:20 Coffee/Tea break.
- 17:00-21:00 Steam Ship Cruise and Archipelago Dinner (Bus transport leaves from the front of the Spa Hotel 16:40)

Tuesday 19 June 2007

Session 8: Environmental carcinogens and aneuploidy
- 8:20-8:40 Lead chromate induces chromosome instability and decreased expression of key spindle assembly checkpoint proteins. *Laura Savery*, Univ. Southern Maine, USA.
- 8:40-9:00 S-adenosil-1-methionine counteracts aneuploidy and the mitotic disturbances induced by sodium arsenite. *Tzutzuy Ramirez*, Univ. Mexico, Mexico.
- 9:00-9:20 Origin of micronuclei in lymphocytes of styrene-exposed reinforced plastic workers and referents. *Hannu Norppa*, Finnish Institute of Occupational Health, Helsinki, Finland.
- 9:20-9:40 Environmental carcinogens induce chromosome instability through centrosome amplification in human lung cells. *Amie Holmes*, Univ. Southern Maine, USA.
- 9:40-10:00 Exposure of growing and maturing mouse oocytes *in vitro* and *in vivo* to bisphenol A (BPA). *Ursula Eichenlaub-Ritter*, Univ. Bielefeld, Germany.

- 10:00-10:20 Coffee/Tea break

Session 9: SAC in meiosis
- 10:20-10:50 BubR1 is essential for proper chromosome distribution during meiosis in Drosophila, *Claudio Sunkel*. Univ. Porto, Portugal.
- 10:50-11:10 Meiotic achiasmatic chromosomes bi-orient in mitotic-like manner. *Anna Kouznetsova*, Karolinska Institutet, Stockholm, Sweden.
- 11:10-11:40 Relevance of alternations in gene expression and mitochondrial dysfunction for maternal age-related nondisjunction in mammalian oocytes. *Ursula Eichenlaub-Ritter*, Univ. Bielefeld, Germany.
- 11:40-12:00 Cell cycle progression and chromosome segregation in meiosis I are controlled by the spindle assembly checkpoint in mouse oocytes. *Katja Wassmann*, CNRS, Univ. Paris VI, France.

- 12:00-13:00 Lunch

- 13:00-14:00 Poster session, Exhibitor Floor show

Session 10: Packing and gluing
- 14:00-14:20 Centromere chromatin organization in condensin-null cells. *Susana Ribeiro*, Univ Edinburgh, UK.
- 14:20-14:40 Does Shugoshin degradation trigger chromosome separation? *Anja Hagting*,

Gurdon Cancer Institute, Cambridge, UK.
- 14:40-15:00 Coordinated regulation of arm and centromeric cohesion by Aurora B. *Teresa Rivera*, CNIO, Madrid, Spain.
- 15:00-15:20 Displacement and re-accumulation of centromeric cohesion during transient pre-anaphase centromere splitting. *Maria Ocampo-Hafalla*, Cancer Research UK, London, UK.

- 15:20-15:40 Coffee/Tea break

Session 11: Kinetochore function
- 15:40-16:00 The human Nup107-160 nuclear pore sub-complex contributes to proper kinetochore functions. *Valerie Doye*, Institut Curie, CNRS, Paris, France.
- 16:00-16:20 Excess of the kinetochore protein Hec1 promotes aberrant chromosome segregation associated with spindle pole defects. *Francesca Degrassi*, IBPM at Univ. Rome, Italy
- 16:20-16:40 Mcm21R antagonizes Ch14R/Cenp-H to dynamically modulate kinetochore function in human cells. *Patrick Meraldi*, Swiss Federal Institute of Technology, Zurich, Switzerland.

- 20:00 Banquet Dinner at Naantali Spa

Wednesday 20 June 2007

Session 12: Cytokinesis
- 8:30-9:00 Centrosomal amplification and spindle multipolarity in cancer cells. *William Saunders*, Univ. Pittsburgh, USA.
- 9:00-9:20 Calcineurin-mediated dephosphorylation of dynamin II abscission rings completes cytokinesis. *Megan Fabbro*, Queensland Institute of Medical Research, Brisbane, Australia.
- 9:20-9:40 Mnk1 activity controls abscission by regulating Golgi-derived vesicles at the midbody. *Claude Prigent*, CNRS, Univ. Rennes, France.
- 9:40-10:00 APCCdh1 plays a role in re-organising the mitotic spindle at anaphase. *Catherine Lindon*, Univ. Cambridge, Cambridge, UK.

- 10:00-10:20 Coffee/Tea break

Session 13: Dynein and kinesins in mitosis
- 10:20-10:50 Cytoplasmic dynein dephoshorylation functions as a molecular switch for the spindle assembly checkpoint. *Kevin Vaughan*, Univ. Notre Dame, Notre Dame, USA.
- 10:50-11:20 Cytoplasmic dynein light intermediate chain 1 is required for mitotic progression through the spindle assembly checkpoint. *Stephen Doxsey*, Univ. Massachusetts Medical School, Worcester, USA.
- 11:20-11:50 Regulation of kinetochore function by depolymerising kinesins. *Linda Wordeman*, Univ. Washington School of Medicine, Seattle, USA.
- 11:50-12:20 Regulation of a kinesin-5 by Drosophila Wee1 kinase. *Kristin Garcia*, Univ. Colorado, Boulder, USA.

- 12:20-13:20 Lunch

-13:20-14:20 Poster session, Exhibitor Floor Show

Session 14: GTPases in mitosis
- 14:20-14:50 Anillin-mediated targeting of Peanut to pseudocleavage furrows is regulated by Ran. *Andrew Wilde*, Univ. Toronto, Canada.
- 14:50-15:10 Regulation of the GTPase Tem1 upon spindle mispositioning in budding yeast. *Simonetta Piatti*, Univ. Milan, Italy.
- 15:10-15:30 Spatial control of mitosis by Ran and importin beta. *Patrizia Lavia*, CNR-National Research Council, Rome, Italy.

Session 15: Mitosis as pharmaceutical target
- 15:30-16:00 Small molecule targeting of the mitotic spindle checkpoint: a novel concept for anti-cancer therapy. *Holger Bastians*, Philipps-University Marburg, Germany.
- 16:00-16:20 High-throughput screen for compounds causing a forced mitotic exit identifies a dietary flavonoid. *Anna-Leena Salmela*, VTT and Univ. Turku, Finland.
- 16:20-16:40 Probing the role of Aurora-kinase activity using chemical genetics. *Ellen Ridgway*, Univ. Manchester, UK.

- 16:40-16:50: Closing of the scientific sessions

- *16:50-18:30 Coffee/Tea break* with General Discussion (Next meeting). End of Poster session.

- *20:00 Farewell Dinner at Naantali Spa*