PROGRAMME

EMBO WORKSHOP ON

RUNX TRANSCRIPTION FACTORS IN
DEVELOPMENT AND DISEASE

ORGANISERS: Marella de Bruijn and Carol Stocking

August 16-19, 2009, Oxford, UK

Sunday August 16

From 12.00  CHECK-IN
12.00-17.30  REGISTRATION
16.30-17.30  WELCOME RECEPTION
17.30-19.00  DINNER

19.00-22.00  EVENING SESSION 1
Chairpersons: Jim Neil, Stephen Nimer
19.00-19.10  OPENING OF MEETING

I. Runx proteins in development and homeostasis of epithelia and associated immune cells

19.10-19.30  Yoshiaki Ito (Cancer Science Institute Singapore, Institute of Molecular and Cell Biology, Singapore)
Role of RUNX3 in gastrointestinal tract cancers

19.30-19.50  Ditsa Levanon (Groner lab, Weizmann Institute of Science, Rehovot, Israel)
New insights into the mechanism of inflammatory bowel disease (IBD) etiology in Runx3-deficient mice

19.50-20.10  Ichiro Taniuchi (Yokohama, Kanagawa, Riken Research Center for Allergy and Immunology, Japan)
Essential requirement of Cbfb2 variant for Smad4-mediated TGFβ signals and for development and homeostasis of immune system

20.10-20.20  Boris Ratsch (Hamann lab, Exp. Rheumatology, Charité Berlin, Germany)
Short talk
Runx transcription factors control the expression of skin-homing receptors in CD4+ T cells

20.20-20.30  Kosei Ito (Graduate School of Biomedical Sciences, Nagasaki University, Japan)
Short talk
Runx3 attenuates oncogenic Wnt signaling that upregulates Cdx2 in gastric epithelial cells

20.30-21.00  COFFEE BREAK
II. Runx proteins in development and homeostasis of the breast

21.00-21.10  Eli Raveh (Gat lab, The Hebrew University of Jerusalem, Jerusalem, Israel)
Short talk
A possible role for Runx1 in mammary gland development - myoepithelial targeted knockout mice display a branching deficiency

21.10-21.30  Matthew Naylor (Garvan Institute of Medical Research, Darlinghurst, Australia)
The osteogenic transcription factor Runx2 is essential for mammary gland development

21.30-21.50  Karen Blyth (Beatson Institute of Cancer Research, Glasgow, UK)
Transgenic Runx2 expression causes pre-neoplastic changes in mammary epithelium

22:00  St Anne’s cash bar open
Monday 17 August

08.00-9.00 Breakfast

09.00-12.30 MORNING SESSION 1
Chairpersons: Nancy Speak, Yoram Groner

I. Runx proteins in development of the hematopoietic system

09.00-09.20 Roger Patient (Weatherall Institute of Molecular Medicine, Oxford, UK)
Runx1 and CBFβ play distinct roles during the emergence of haematopoietic stem cells in the dorsal aorta

09.20-09.40 Georges Lacaud (Paterson Institute for Cancer Research, Manchester, UK)
The differential transcriptional activities of Runx1 promoters define milestones during embryonic hematopoiesis

09.40-09.50 Marella de Bruijn (Weatherall Institute of Molecular Medicine, Oxford, UK)
Short talk
Non-redundant roles for Runx1 alternative promoters at the onset of mouse definitive hematopoiesis

09.50-10.00 Cherry Ng (Osato lab, Cancer Science Institute, National University of Singapore, Singapore)
Short talk
An intronic Runx1 enhancer marks hematopoietic stem cells

II. Runx proteins in development of the nervous system

10.00-10.20 Stefano Stifani (McGill University, Montreal, Canada)
Involvement of Runx1 in mammalian nervous system development: Neurogenesis and more

10.20-10.40 Joriene de Nooij (Jessell lab, Columbia University, New York, USA)
Molecular pathways of proprioceptive sensory neuron differentiation

10.40-11.10 COFFEE BREAK

III. Runx transcriptional networks in non-mammalian development

11.10-11.30 Uri Gat (Hebrew University, Jerusalem, Israel)
The evolution of the Runx factor network: Insights from the study of a basal progenitor in the sea anemone Nematostella

11.30-11.50 James Coffman (Mount Desert Island Biological Laboratory, Maine, USA)
The Runx-regulated transcriptome of blastula stage sea urchin embryos

11.50-12.10 Lisa Prazak (Gergen lab, Department of Biochemistry and Cell Biology, Stony Brook, NY, USA)
Functional dissection of a Runt response element in the Drosophila blastoderm embryo

12.10-12.30 Suk-Chul Bae (Chungbuk National University, Cheongju, South Korea)
Identification of upstream regulators of Runt domain transcription factors

13.00-14.00 LUNCH

14.00-16.00 NETWORKING

16.00-18.00 POSTER-SESSION

18.00-19.30 DINNER
19.30-22.00 EVENING SESSION 2
Chairpersons: Gary Stein, Dong-Er Zhang

I. Runx proteins in bone development

19.30-19.50 Alexander Medvinsky (MRC Centre for Regenerative Medicine, Institute for Stem Cell Research, University of Edinburgh, Edinburgh, UK)
The non-redundant role of Runx1 in skeletal development

19.50-20.10 Andrew van Wijnen (UMass Medical School, Worcester, USA)
The osteogenic transcription factor Runx2 regulates components of the fibroblast growth factor/proteoglycan signaling axis in osteoblasts

20.10-20.30 Toshihisa Komori (Nagasaki University, Toshihisa, Japan)
Runx2 inhibits terminal differentiation of odontoblasts and induces transdifferentiation of odontoblasts into osteoblasts

20.30-20.50 COFFEE BREAK

II. Runx proteins in leukemia and as therapy targets

20.50-21.10 Dong-Er Zhang (University of California San Diego, USA)
Molecular targets of t(8;21) fusion proteins in leukemia development

21.10-21.30 Lucas Waltzer (CNRS UMR5547 Centre de Biologie du Développement, Toulouse, France)
An in vivo RNAi screen in Drosophila identifies modulators of the human leukaemogenic fusion protein RUNX1-ETO

21.30-21.40 Christian Wichmann (Grez lab, Georg-Speyer-Haus, Institute for Biomedical Research, Frankfurt Germany)
Short talk
Interference with RUNX1/ETO leukemogenic function by peptides targeting the oligomerization domain

21.40-22.00 John Bushweller (University of Virginia, Charlottesville, USA)
Development of small molecule inhibitors of CBF fusion proteins

22.00 St Anne’s cash bar open
Tuesday 18 August

08.00-9.00 Breakfast

09.00-12.20 MORNING SESSION 2
Chairpersons: Karen Blyth, Andrew van Wijnen

I. Runx proteins in proliferation and differentiation

09.00-09.20  Alison Woollard (University of Oxford, Oxford, UK)
Regulating C. elegans stem cell divisions in time and space: The role of
Runx/ CBFB

09.20-09.40  Motomi Osato (Cancer Science Institute of Singapore, National University of
Singapore, Singapore)
Runx, niche, and stem cell quiescence

09.40-10.00 Nancy Speck (University of Pennsylvania School of Medicine, Philadelphia, USA)
Loss of Necdin expression contributes to decreased quiescence of Runx1 deficient
hematopoietic stem cells

10.00-10.20 Anna Kilbey (Neil lab, Institute of Comparative Medicine, Glasgow, UK)
Direct regulation of sphingolipid metabolism and signaling by the Runx family

10.20-10.50 COFFEE BREAK

10.50-11.10 Claus Nerlov (Institute for Stem Cell Biology, University of Edinburgh, Edinburgh,
UK)
Runx1 protein-protein interactions during the switch from proliferation to
differentiation

11.10-11.30 Alan Friedman (Johns Hopkins University, Baltimore, USA)
RUNX1 regulates hematopoietic proliferation and myeloid differentiation

11.30-11.50 Adam Goldfarb (University of Virginia School of Medicine, Charlottesville, Virginia,
USA)
Characterization of a megakaryocytic regulatory circuit comprising GATA-1,
RUNX1, and P-TEFB

11.50-12.00 Boet van Riel (Grosveld lab, ErasmusMC, Rotterdam, Netherlands)
Short talk
Protein complex and target gene identification of Runx1 in erythroid cells

12.00-12.20 Jennifer Westendorf (Mayo Clinic, Rochester, MN, United States)
Coactivator activator (CoAA) prevents the transcriptional activity of Runt domain
transcription factor

13.00-14.00 LUNCH
I. Runx proteins in epigenetic and microRNA-mediated gene regulation

14.30-14.50  Gary Stein (University of Massachusetts Medical School, Worcester, USA)  
Runx-mediated epigenetic regulation of cell growth and phenotype for biological control and cancer

14.50-15.10  Constanze Bonifer (Leeds Institute of Molecular Medicine, University of Leeds, UK)  
Chromatin unfolding by Runx1 in hemangioblasts – a molecular explanation for differential requirements during specification versus maintenance of the hematopoietic gene expression program

15.10-15.20  Gang Huang (Cincinnati Children’s Hospital Medical Center, Cincinnati, USA)  
Short talk  
Differential MLL interaction and H3K4me3 mark maintenance at PU.1 regulatory region - an epigenetic aspect of CBF related leukemogenic molecules

15.20-15.40  Issay Kitabayashi (National Cancer Center Research Institute, Tokyo, Japan)  
Roles of histone acetyltransferases MOZ/MORF in hematopoiesis and leukemia

15.40-15.50  Janice Telfer (University of Massachusetts Amherst, Amherst, USA)  
Short talk  
RUNX and lysine modifications in CD4 silencing

15.50-16.20  COFFEE BREAK

16.20-16.40  Yoram Groner (The Weizmann Institute of Science, Rehovot, Israel)  
A regulatory interplay between RUNX1 and miR-27a during megakaryopoiesis

16.40-17.00  Clara Nervi (University of Rome, "La Sapienza", Italy)  
Epigenetic regulation of microRNA-223 in normal and leukemic myelopoiesis

17.00-17.20  Lucio Castilla (University of Massachusetts Medical School, Westborough, USA)  
Role of microRNA cluster miR17-92 in CBFb-MYH11 acute myeloid leukemia

18.00  GUIDED WALK THROUGH OXFORD TO Oriel College  
(If you miss the walking tour, please make your way to Oriel College in time for the Group Photo at 7pm – approx 15/20 min walk, map in delegate pack)

19.00  GROUP PHOTO

19.15-22.00  BANQUET AT Oriel College

22.00  Oriel cash bar open until midnight.
Wednesday 19 August

08.00-9.00 Breakfast

09.00-13.00 MORNING SESSION 3
Chairpersons: Carol Stocking, Mineo Kurokawa

I. Runx proteins in leukemia /lymphoma

09.00-09.20 Stephen Nimer (Memorial Sloan Kettering Cancer Center, New York, USA)
Enzymatic modulation of Runx1 and Runx1-Eto function

09.20-09.40 Masahiro Nakagawa (Kurokawa lab, Department of Hematology & Oncology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan)
Critical regulation of NF-κB signaling by AML1/RUNX1 in normal and malignant hematopoietic cells

09.40-09.50 Rhys Morgan (Darley lab, Cardiff University, Cardiff, UK)
Short talk
The role of γ-catenin in acute myeloid leukaemia

09.50-10.10 Ewan Cameron (University of Glasgow, Glasgow, United Kingdom)
TEL-RUNX1 confers lineage specific effects on haematopoietic progenitors

10.10-10.30 Gareth Brady (Farrell lab, Imperial College London, London, UK)
Functional differences between RUNX1, RUNX3 and RUNX fusion genes in EBV-infected human B cells

10.30-11.00 COFFEE BREAK

11.00-11.10 Kimiko Shimizu (Kitabayashi lab, National Cancer Center Research Institute, Tokyo, Japan)
Short talk
Hemizygosity of AML1/RUNX1 prevents T-cell malignancy induced by loss of p53

11.10-11.30 Hironori Harada (Research Institute for Radiation Biology and Medicine, Hiroshima University, Hiroshima, Japan)
Two different AML1 mutants expressed in human CD34+ cells exhibit distinct molecular pathways and clinical features of MDS/AML

11.30-11.50 James Mulloy (Cincinnati Children's Hospital, Cincinnati, USA)
Survival signalling in t(8;21) leukemia

11.50-12.10 Christopher Klug (The University of Alabama at Birmingham, Birmingham, AL, USA)
Defining leukemia-initiating cells and cooperating pathways in development of core-binding factor-associated acute myeloid leukemia

12.10-12.30 Paul Liu (NIH, Bethesda, MD, USA)
c-Kit mutations D816Y/V cooperate with CBFB-MYH11 to accelerate leukemogenesis in mice

12.30-13.00 SUMMARY AND HIGHLIGHTS OF THE MEETING

13.00-14.00 LUNCH

14.00-19.00 OPTIONAL: POST-CONFERENCE TOUR TO ROUSHAM PARK