



Public Health  
England



## Topics to be covered

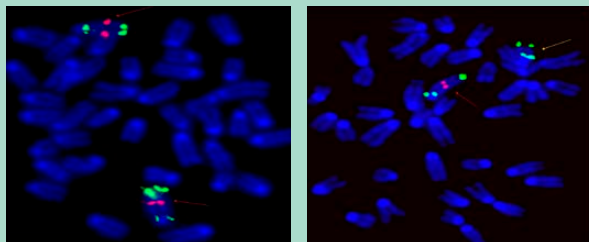
- murine models of radiation-induced leukaemia
- cytogenetic approaches and key molecular events
- physical radiation dosimetry
- importance of radiation quality
- target cells and post-irradiation metabolism
- recombination mediated translocation pathways
- new models for research
- extracellular vesicles and leukaemia
- relevance to human studies
- medical exposure as a risk factor
- epidemiology

4th-7th November 2019

## Essentials of Radiation Leukaemogenesis

Organised by the CONCERT LEU-TRACK consortium and hosted by PHE, this course aims to cover the core concepts in the study of radiation leukaemogenesis, including use of state-of-the art model systems and analytical methods

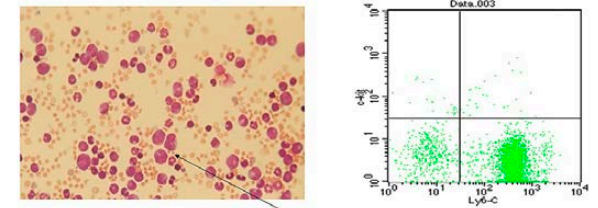
### FISH Analysis of Del2



Normal

AML

Centre for Radiation, Chemical & Environmental Hazards,  
Public Health England,  
Didcot, Oxfordshire, OX11 0RQ,  
United Kingdom



blast population

Normal



**NORMAL**

chromosome 2 heterozygous interstitial deletion with *Sfp1* copy loss

PRE-LEUKAEMIC

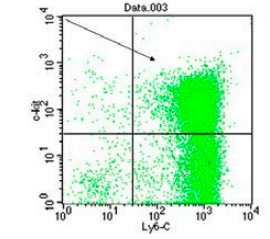
*Sfp1* point mutation R235

LEUKAEMIC

rAML

PU.1

Year(s)



AML

Verbiest et al.,  
Carcinogenesis, 2015

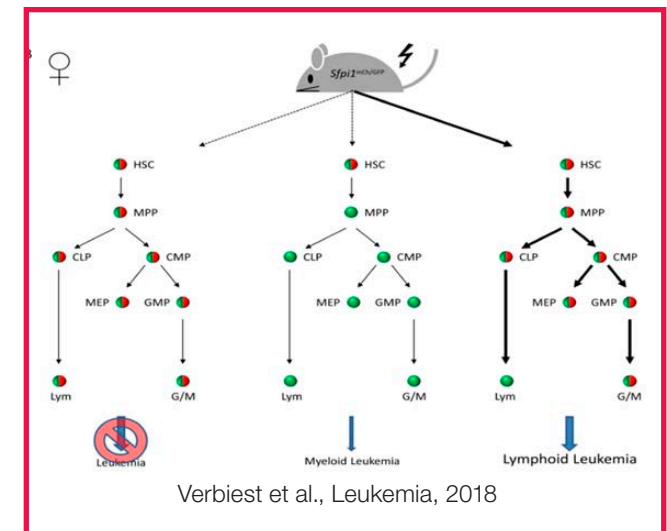
### Organising Committee

#### Dr Christophe Badie

Cancer Mechanisms and Biomarkers Group  
Leader, Radiation Effects Department

#### Dr Rosemary Finnon

Cancer Mechanisms and Biomarkers Group,  
Radiation Effects Department



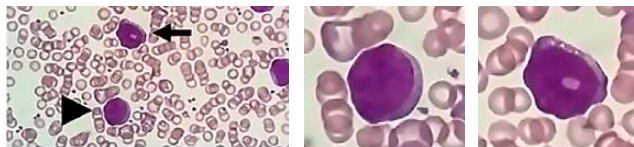
Verbiest et al., Leukemia, 2018

## Practical Sessions



### Demonstrations will be provided on essential techniques, such as:

- leukaemia diagnosis in mouse models – dissection techniques and haematopoietic tissue harvesting, blood smear preparation and differential counts, characterisation of leukaemic blast cells with immunophenotyping
- analysis of rAML-associated chromosomal aberrations with cytogenetic techniques such as FISH



Nucleated blast cells in leukaemic mouse. Verbiest et al., Leukemia, 2018.

## Speakers

### Dr Simon Bouffler

Head of Radiation Effects Department, PHE

### Dr Jonathan Eakins

Physical Dosimetry, PHE

### Dr Christophe Badie

Cancer Mechanisms and Biomarkers Group Leader, PHE

### Dr Michele Ellender

Cytogenetics & Pathology Group, PHE

### Michael Gillies

Radiation Epidemiology Group, PHE

### Melis Karabulutoglu

Cancer Mechanisms and Biomarkers Group, PHE

### Eric Rutten

Cancer Mechanisms and Biomarkers Group, PHE

### Grainne O'Brien

Cancer Mechanisms and Biomarkers Group, PHE

### Dr Lourdes Cruz Garcia

Cancer Mechanisms and Biomarkers Group, PHE

### Roisin McCarron

Cancer Mechanisms and Biomarkers Group, PHE

### Dr Serge Candeias

CEA, France

### Dr Rosemary Finnon,

Cancer Mechanisms and Biomarkers Group, PHE

### Tünde Szatmári,

OSSKI, Hungary



## Who can apply?

The course is open to MSc and PhD students as well as Post-Doctoral scientists. Preference will be given to those registered with an EU university or working in an EU country.

### Course fee:

None. Travel costs need to be paid for by applicant.

Accommodation and food provided for up to 12 participants.

## Application

### Required documents:

- letter of motivation and CV
- supporting letter from the supervisor/head of laboratory (students only)

For applications and further details, please email [christophe.badie@phe.gov.uk](mailto:christophe.badie@phe.gov.uk) or call +44(0)1235825088

### Application deadline: 30.07.2019

### Additional information:

A social event for attendees will be organised – details provided at a later date.

For updates check:

<http://www.concert-h2020.eu/en/Events>

