

# FROM MUTATIONAL SIGNATURES TO CANCER PREVENTION: A FOCUS AROUND THE MUTOGRAPHS STUDY

11-12 July 2019 – IARC auditorium, ground floor

## AGENDA

### DAY 1 – Thursday 11<sup>th</sup> July

8:30 On-site registration in IARC lobby

#### WELCOME AND INTRODUCTION

CHAIR: PAUL BRENNAN

9:00 **Welcome and meeting overview**

*Paul Brennan, Elisabete Weiderpass*

9:20 **What is the background to the Mutographs project?**

*Mike Stratton*

9:40 **The Grand Challenge scheme**

*Ian Walker*

9:55 **What is a mutational signature?**

**Reference set of mutational signatures from human cancer (PCAWG initiative) – 15'**

*Ludmil Alexandrov*

**Mutational signatures of environmental exposures (COMSIG consortium) – 15'**

*David Phillips*

10:25 **5000 cancers in 5 continents: where are we?**

*Paul Brennan*

10:45 Group photos and coffee break

#### SCIENTIFIC UPDATES – PART 1

11:15 **FOCUS ON OESOPHAGEAL CANCER**

CHAIR: MIKE STRATTON

**Lessons from the Golestan cohort study – 20'**

*Reza Malekzadeh*

**Learning from signatures in Barrett's and oesophageal adenocarcinoma: a work in progress – 20'**

*Rebecca Fitzgerald*

**From DNA to mutational signatures – 20'**

*Sarah Moody*

**Signature attribution and implications – 20'**

*Sergey Senkin*

**APOBEC mutagenesis – 20'**

*Mia Petljak*

13:00 Lunch – cafeteria 12<sup>th</sup> floor

14:00 **MUTATIONAL SIGNATURES FROM OTHER CANCERS**

CHAIR: ALLAN BALMAIN

**Aristolochic acid signature in liver cancer – 20'**

*Steve Rozen*

**The epigenomes of the cell-of-origin are recorded in the cancer genome – 20'**

*Paz Polak*

**The Sherlock-lung study – 20'**

*Tere Landi*

15:00 **ANALYTICAL STANDARDIZATION: INSIGHTS FROM MUTOGRAPHS**

CHAIR: DAVID PHILLIPS

**Overview of SigProfiler tools – 20'**

*Erik Bergstrom*

**Insights from pathological reviews – 20'**

*Behnoush Abedi-Ardekani*

15:40 Coffee break

## PERSPECTIVES

CHAIR: STEPHEN CHANOCK

- 16:10 Clinical implementation**  
**Path to diagnostics – 20'**  
*Manuel Salto-Tellez*  
**Signatures for disease and variant classification – 20'**  
*William Foulkes*  
**Tailoring treatment for pancreatic cancer – 20'**  
*Andrew Biankin*
- 17:10 DAY 1 CONCLUDING REMARKS**  
CHAIR: PAUL BRENNAN & MIKE STRATTON
- 17:20 End of meeting**
- 20:00 Cocktail dinner**

## DAY 2 – Friday 12<sup>th</sup> July

### SCIENTIFIC UPDATES – PART 2

- 8:45 EXPERIMENTAL SIGNATURES**  
CHAIR: JIRI ZAVADIL  
**Modelling mutation spectra of Human carcinogens – 15'**  
*Arnoud Boot*  
**Experimental modelling reveals new characteristics of mutational signatures – 20'**  
*Jiri Zavadil*  
**Mutographs repertoire of experimental signatures – 20'**  
*Allan Balmain*  
**Organoids: lessons from Mutographs – 20'**  
*David Phillips*
- 10:00** Coffee break and Poster session (Princess Takamatsu Hall)
- 11:00 Poster prizes**  
*Stephen Chanock*
- 11:05 FIELDWORK**  
CHAIR: LOUISE WALKER  
**Barretos Cancer Hospital experience – 20'**  
*Rui Reis*  
**Emerging aetiology of ESCC in East Africa – 20'**  
*Valerie McCormack*  
**The patients' perspective – 20'**  
*Mimi McCord & Maggie Blanks*
- 12:05 MUTATIONAL LANDSCAPE OF NORMAL & PRECANCEROUS TISSUES**  
CHAIR: PETER CAMPBELL  
**New insights from Mutographs liver and lung work – 25'**  
*Peter Campbell*  
**Breast cancer update – 15'**  
*Tim Butler*  
**Precancerous signatures – 15'**  
*Phoebe He*
- 13:00** Lunch – cafeteria 12<sup>th</sup> floor

## GENERAL DISCUSSION

CHAIR: LUDMIL ALEXANDROV

- 
- 14:00** **The future of Mutographs collaborations**  
**The Clinician's point of view: Potential of germline genetic susceptibility in diverse populations – 15'**  
*Patricia Prolla*  
**The Pathologist's point of view: introduction of Optimisticc and links with Mutographs – 15'**  
*Philip Quirke*  
**The Omics experts' point of views:**  
    **How epigenetic influences the cancer genome – 15'**  
    *Tatsuhiko Shibata*  
    **How adductomics can inform cancer etiology – 15'**  
    *Yukari Totsuka*  
**Grand Challenge Scientific Advisory Panel point of view – 15'**  
*Ed Harlow*
- 
- 15:15** **The complexity of the art and science of mutational signatures**  
*Stephen Chanock*
- 
- 16:00** **End of meeting**
-