

# UK therapeutic cancer prevention network

*collaborating to prevent cancer*

Farhat Din

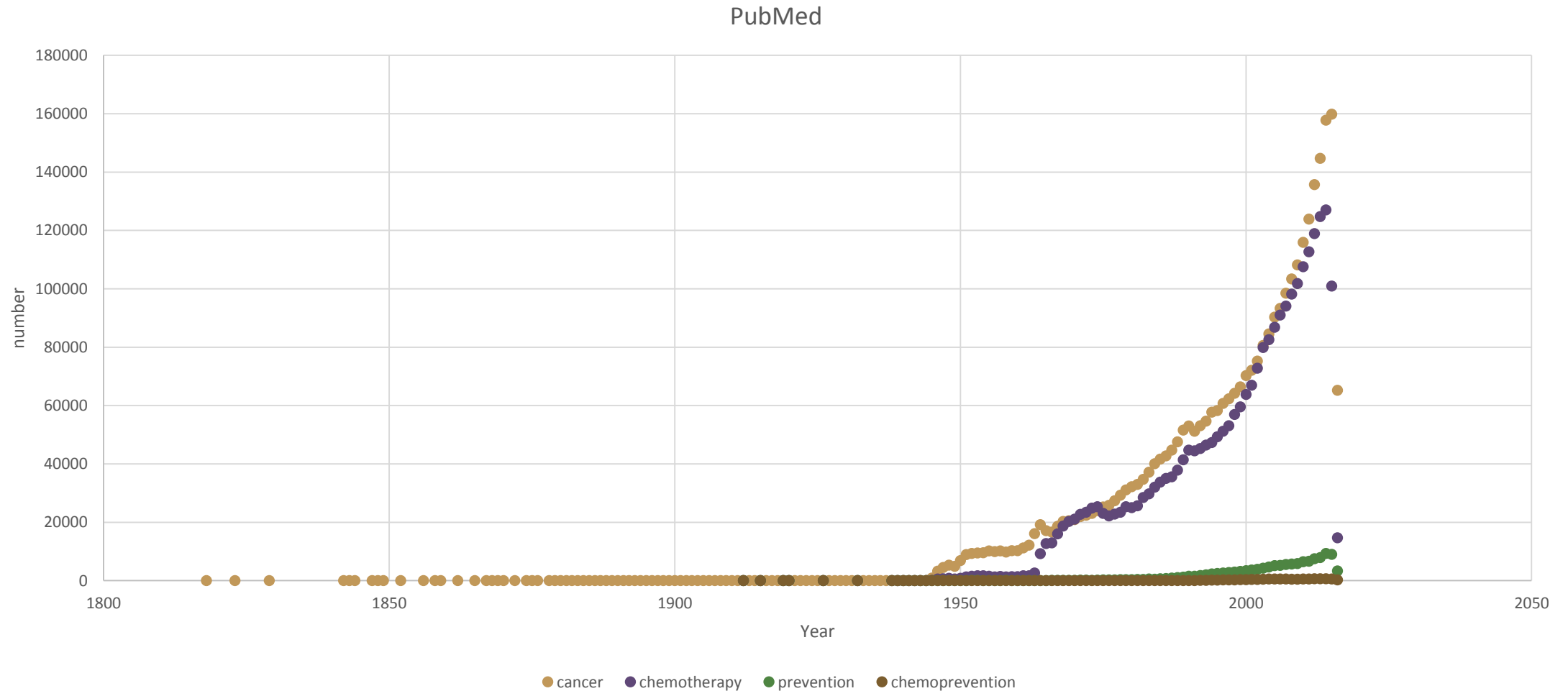
University of Edinburgh



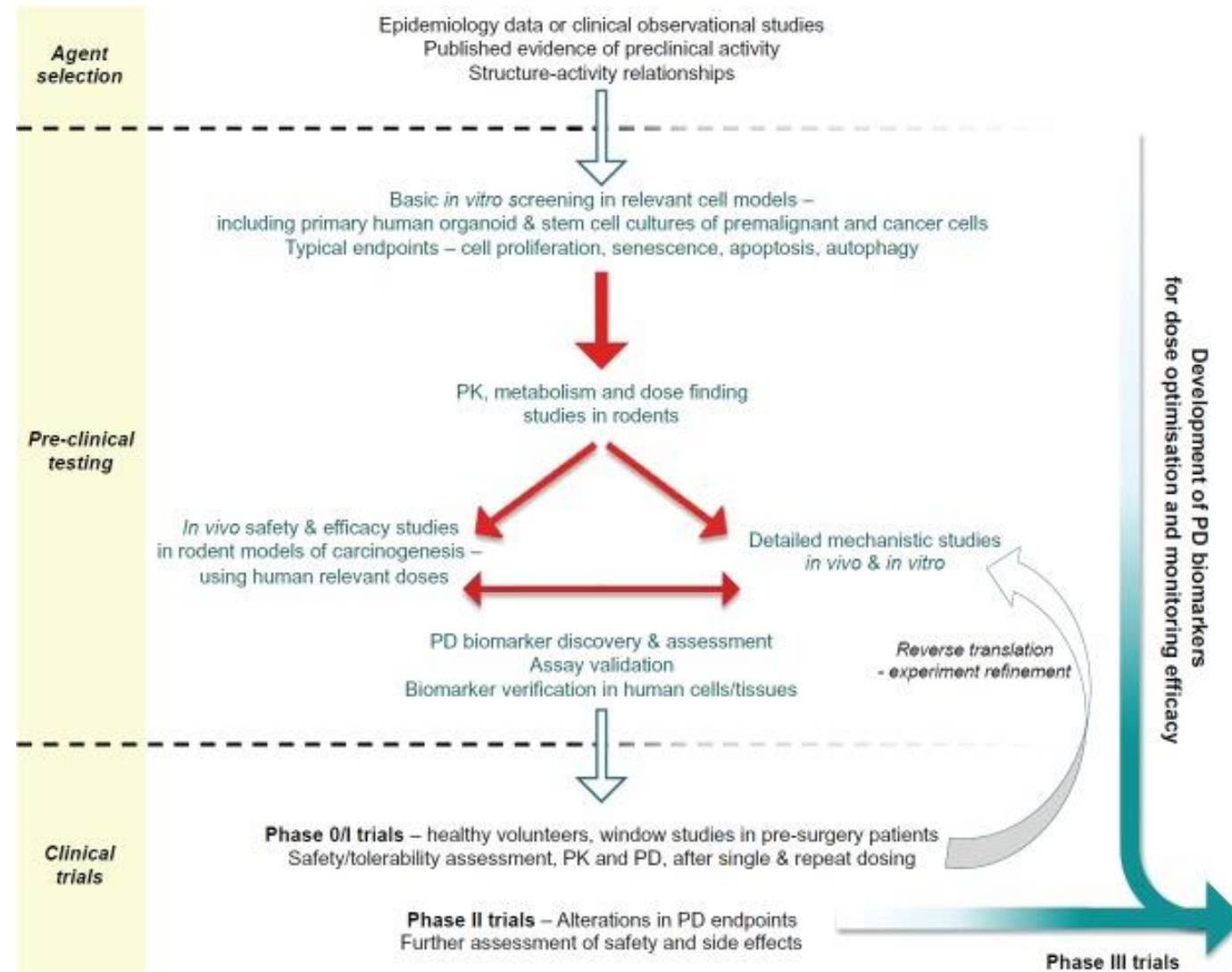
The Experimental Cancer Medicine Centre Initiative is jointly funded by Cancer Research UK, the National Institute for Health Research in England and the Health Departments for Scotland, Wales and Northern Ireland.

# “...cannot treat our way out of cancer”

*Chris Wild, IARC*

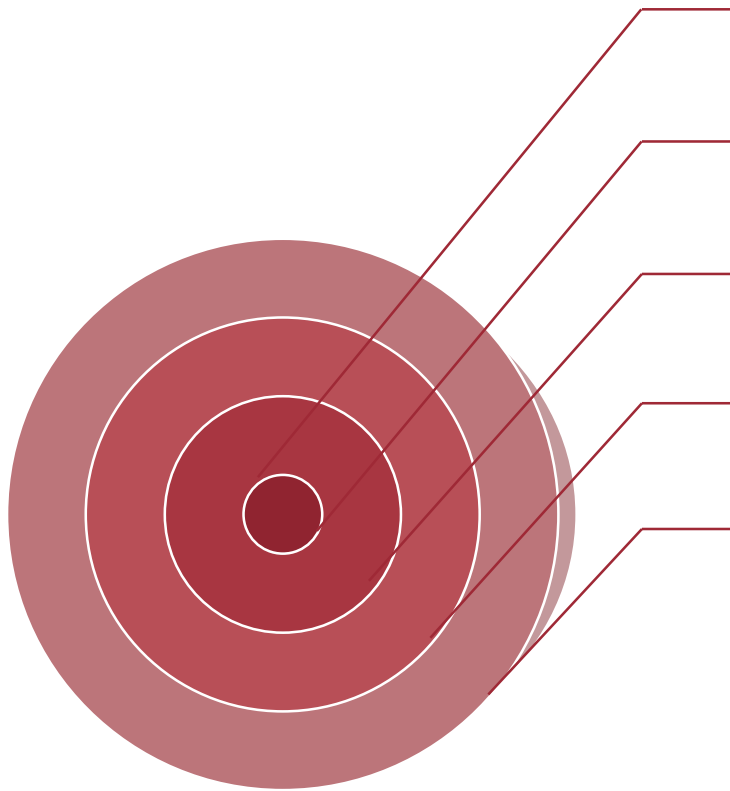


# Gap in studies to accelerate cancer prevention field



Rufini & Brown

# Vision



Cohesive multidisciplinary team of experts working together

Scientific vigour – state of the art well-characterised preclinical models

Robust evidence of activity, identification of mechanisms of action  
& rational choice of dose range for clinical trials

Reverse translation - preclinical practices informed by clinical experience

Utilise expertise in biomarker discovery and application for the  
identification of high risk patient groups and monitoring efficacy

*Identify, develop and accelerate the translation of therapeutic  
cancer preventive agents and lifestyle interventions  
into **clinical trials** and **routine clinical practice***

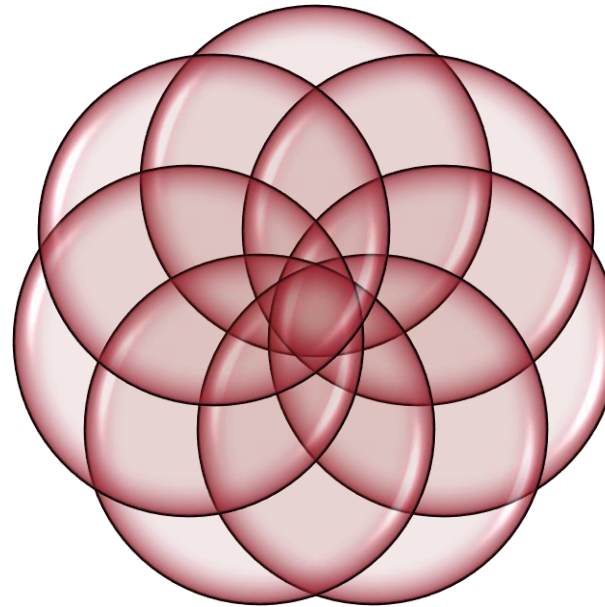
# UKTCPN Objectives

Establish network of clinical & non-clinical researchers  
Diverse complementary backgrounds

Promote collaboration-joint grant applications harnessing complementary strengths across the network

Identify areas of strength among research groups across the UK and disseminate this information to facilitate collaboration

Champion for increased research funding in the field of therapeutic cancer prevention



Provide infrastructure  
-organise scientific meetings  
focussing on therapeutic interventions  
cancer prevention

Lead the cancer chemoprevention and other therapeutic interventions field

Increase awareness of the field amongst the cancer research community, government & funding bodies

# Steering committee

Karen Brown

Dion Morton



Vicky Coyle

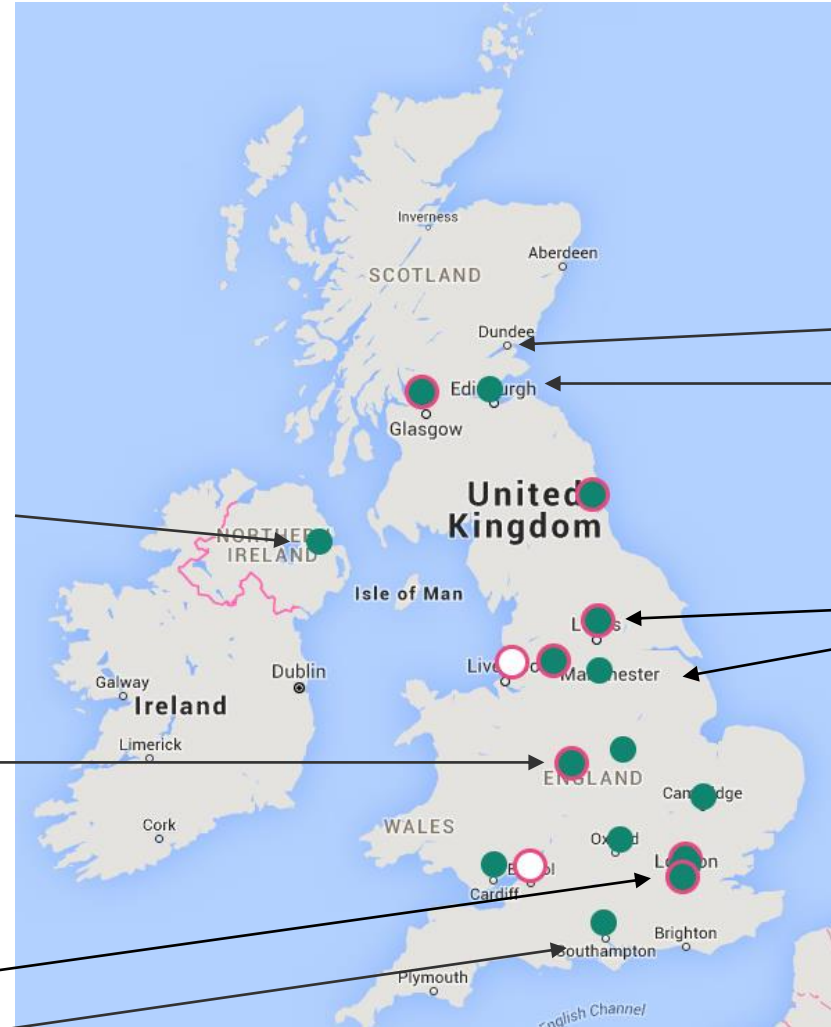
Hisham Mehanna

Farhat Khanim

Ann Williams

Ruth Langley

Diana Eccles



Albena Dinkova-Kostova

Farhat Din

Mark Hull

Gareth Evans

Andrew Renehan

Richard Mithen

Robert Mills

Omar Al Kadhi

Antonieta Melchini

*Jack Cuzick, Mangesh Thorat,  
Peter Sasieni, John Burn,  
Tony Howells, Owen Sansom*



# Comprehensive anatomical & therapeutic coverage

Karen Brown

Dion Morton



Vicky Coyle

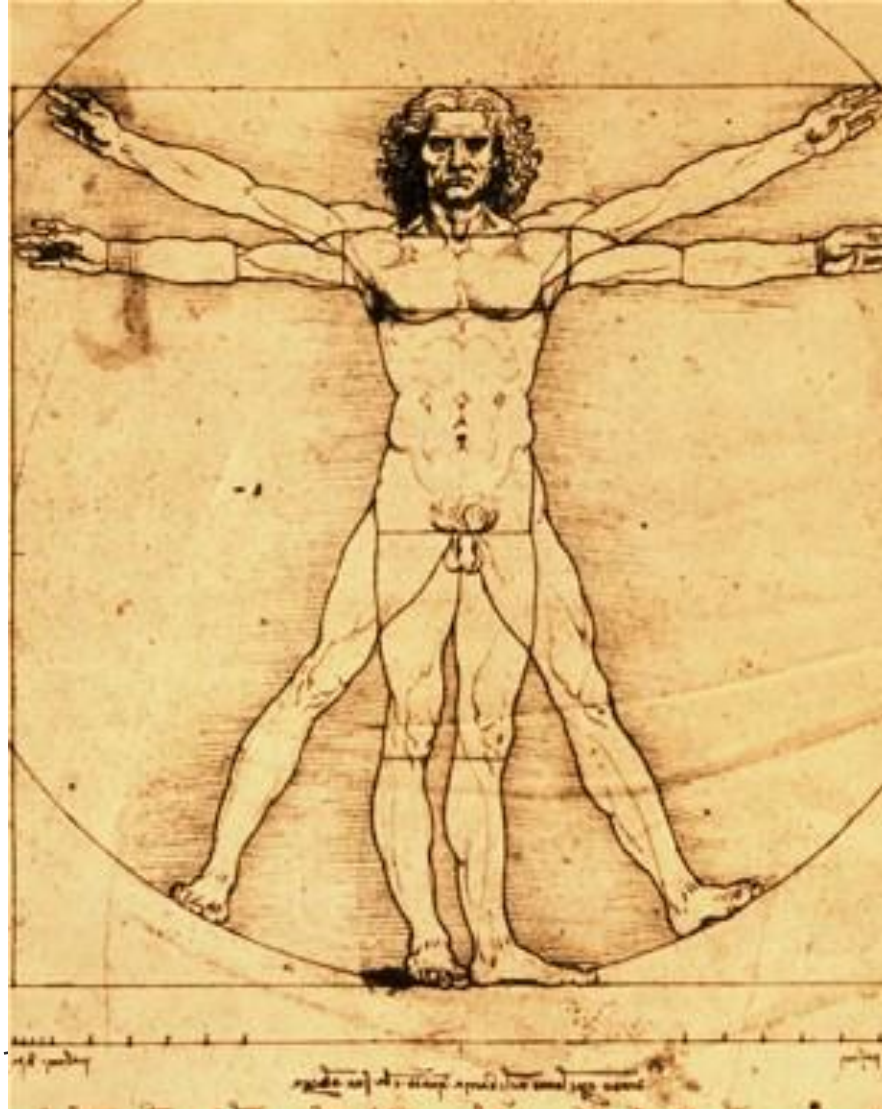
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Peter Sasieni, John Burn,  
Tony Howells, Owen Sansom*

# Patient representation is vital



[Home](#) [Centres](#) [Groups](#)

Sylvia Bailey

Maired MacKenzie





# Role in early phase trials

Integration of efforts on prevention & treatment is necessary to control cancer epidemic

Increased pre-neoplastic diagnosis → increase the burden of population requiring prevention

Therapeutic cancer prevention - expanding role in cancer management

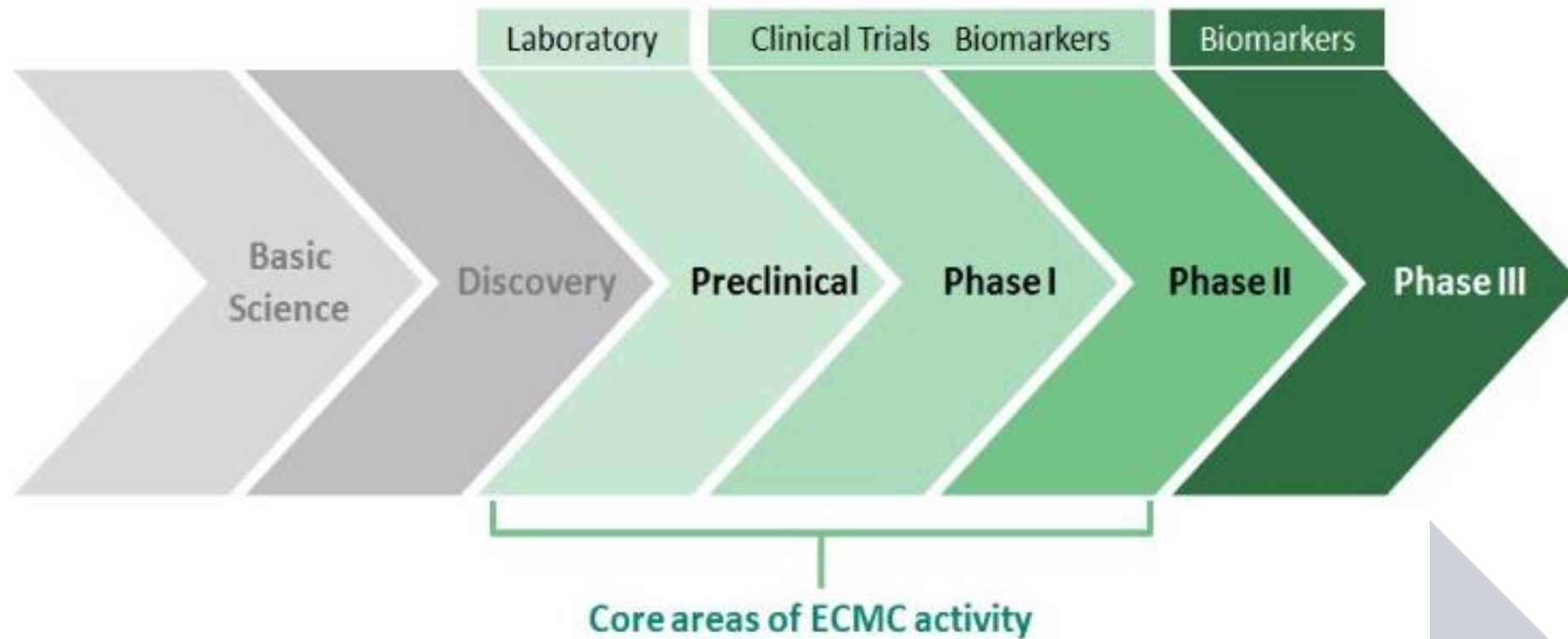
- secondary prevention.

Stratification of at risk populations using predictive biomarkers & precision medicine

Evaluation of these therapies

- same skills
- MDTs as advanced disease

CRUK & UKTCPN  
ECMC key role to conduct biomarker studies and develop the tools to target therapies for these patients



Dose escalation of dietary-derived agent in volunteers to assess safety, tolerability, pharmacokinetics & metabolism

Pre-surgical window trial cancer patients- target-tissue concentration & drug pharmacodynamic effects with repurposing potential

Dose-finding trial- effect of therapy on aberrant crypt foci, precursor to CRC

Randomised trial - effect of a repurposed drug on CT-detected lung nodules, represent potential pre- or early invasive neoplasia

Randomised biomarker trial of a new preventive combination in subjects with precursor lesions, such as breast intraepithelial neoplasia

# 2015-2016 UKTCPN meetings

## Edinburgh Feb 2015

Vitamin D-Gene-Environment interactions in CRC- Malcolm Dunlop

## Bristol Sept 2015

Inflammatory microenvironment in zebrafish models – Paul Martin

Cancer epidemiology integrated research- Richard Mithen

## Leeds Jan 2016

Off-label/ licensing- Claire Potter , Medicines, Pharmacy & Industry group

PPI strategy-Mark Hull

## Prevention is better than cure – cancer chemoprevention in 2015

Tue 03-Nov-2015

15:40-17:40

Room 3B

Host: Jack Cuzick

This session will cover several topical areas in chemoprevention research in 2015.

It will draw on examples spanning from 'bench to bedside' to highlight emerging areas, as well as reflecting on lessons learnt and past achievements using the more traditional approaches to chemoprevention studies.

This session will delve into what advances in basic science, stratification and mouse-models can bring to the therapeutic cancer prevention studies of the future. It will address how epidemiological approaches to prevention studies can be joined up with new opportunities for sequencing cancer genomes and improved preclinical models, to identify candidate agents and biomarkers for chemoprevention, including repurposed drugs.

It will also examine how new strategies for personalised prevention can give rise to more cost-effective and focused approaches to research in chemoprevention that will ultimately bring benefits to patients faster.



### Speakers

Andrew Chan, Massachusetts General Hospital, USA

Jack Cuzick, Queen Mary University of London, UK

Karen Brown, Leicester, UK

### Panel



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cancer prevention network  
collaborating to prevent cancer

Anthony Howell, University of Manchester, UK

Farhat Khanim, University of Birmingham, UK

Ruth Langley, MRC Clinical Trials Unit at UCL, UK



Ilaria Mirabile @1ila · 3 Nov 2015

Panel discussion with speakers and members of #ECMC #UKTCPN #chemoprevention #NCRI2015 [ecmcnetwork.org.uk/network-groups...](http://ecmcnetwork.org.uk/network-groups...)



Ilaria Mirabile @1ila · 3 Nov 2015

.@ECMC\_UK at stand 57 for more info on the #UKTCPN [ecmcnetwork.org.uk/network-groups...](http://ecmcnetwork.org.uk/network-groups...) #NCRI2015

BCI @QMBCI

Excellent talk on setting up studies that fully consider physiology & pharmacokinetics in #prevention #NCRI2015 [twitter.com/LeadingEdgeSci...](https://twitter.com/LeadingEdgeSci...)



1



Ilaria Mirabile @1ila · 3 Nov 2015

Can we exploit mechanisms to personalise #chemoprevention? Andrew Chan @MassGeneral #UKTCPN #NCRI2015



2



# Drug re-purposing

Co-ordinated by Karen Brown, Dion Morton, Farhat Khanim, Jack Cuzick, Vicky Coyle

- Screening of drugs available to the UK/EU market with the aim of testing and re-purposing for a prevention setting
  - Exploit expertise in drug repurposing and epidemiology/biostatistics
  - Combined expertise in preclinical test systems and conducting window trials, using mechanism-based molecular endpoints as surrogate endpoints
  - Across multiple cancer types
  - Aim → to advance drugs to tertiary prevention trials

*Comprehensive ambitious programme covering several cancer types – difficult to conduct in other countries*

# Drug re-purposing

## Off Patent Drugs Bill

debated twice by House of Commons & yet to progress beyond Second Reading

12 January 2016

Joint Assoc. of Medical Research Charities & Department of Health Roundtable event  
-develop a better shared **understanding of issues raised by new uses for existing drugs**  
- **UKTCPN representation** (Karen Brown; Tony Howell)

Output prepared currently:

**Position paper -restricted access to off-patent drugs & therapeutic cancer prevention**



# Collaborative proposals in progress

Mechanisms of action aspirin grant proposal

-submitted to EME -Langely & Din

*Small grants*

James Thorne-Breast Cancer UK

Mangesh Thorat- CRUK Cancer Prevention Innovation Workshop

Farhat Din- CRUK Cancer Prevention Innovation Workshop

# 2016-2017 Aims

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**Raise profile & standing of the network to a position where we are the first call nationally for advice/opinions on therapeutic prevention to support policy makers**

**Raise the profile of the UKTCPN and wider ECMC internationally by building links and collaborations with European researchers**

**To maximise public involvement in therapeutic cancer prevention discussion**

**Organise scientific conferences, symposia and workshops**

**Provide collaboration among investigators and develop joint grant applications**

# BACR-ECMC CONFERENCE



Deadline for abstract submission : June 1th  
Deadline for early bird registration : June 8<sup>th</sup>

<http://www.bacr.org.uk/events/>

BACR Chemoprevention Conference in Bristol.  
Great speakers packing out a fascinating day.  
[#UKTCPN](#) [#chemoprevention](#)

## *the way forward*

July 18<sup>th</sup> – 19<sup>th</sup> 2016  
University of Bristol  
School of Chemistry



### OVERVIEW:

This multidisciplinary meeting will address the enormous opportunities and some of the challenges faced by researchers in the field of therapeutic cancer prevention. It will draw on examples spanning from 'bench to bedside' and beyond, to highlight what advances in basic and translational research can bring to the prevention trials of the future.

### SESSIONS:

- Dietary interventions for cancer prevention
- Aspirin – what else do we need to know?
- Overcoming barriers to prevention and the way ahead
- Drug repurposing – what next?
- New approaches and recent advances

### SPEAKERS:

Bernardo Bonanni	Milan, Italy	Farhat Khanim	Birmingham, UK
John Burn	Newcastle, UK	Ruth Langley	London, UK
Rob Coleman	Sheffield, UK	Richard Mithen	Norwich, UK
Jack Cuzick	London, UK	Chris Paraskeva	Bristol, UK
Andrea De Censi	Genova, Italy	Carlo Patrono	Rome, Italy
Farhat Din	Edinburgh, UK	Michael Pollack	Montreal, Canada
Malcolm Dunlop	Edinburgh, UK	Peter Rothwell	Oxford, UK
Michelle Harvie	Manchester, UK	Owen Sansom	Glasgow, UK
Mark Hull	Leeds, UK		

## Unique multidisciplinary team with National Coverage

Brings together scientists involved in research to **developing therapies** for **prevention / delay** development of malignancy

