

AGENDA
Animal Models for Cancer Interception and Precision Prevention
Virtual Workshop
Sponsored by the Division of Cancer Prevention and Division of Cancer Biology
National Cancer Institute
October 13-14, 2022
Times listed are for Eastern Daylight Savings Time

Day 1: 9:00 AM – 5:30 PM

9:00-9:10 AM

Welcome

Philip Castle, Ph.D., M.P.H, Director, DCP/NCI

9:10-9:15 AM

Altaf Mohammed, Ph.D., Workshop Co-Organizer, DCP/NCI

9:15-10-15 AM

Keynote Speaker: Charles Swanton, F.R.C.P., B.Sc., Ph.D.

Role of environmental carcinogens in lung cancer initiation: insights from mouse models

Session I

Status of the Current Cancer Prevention Research Animal Models

Co-Chairs: Ming You, M.D., Ph.D. and Altaf Mohammed, Ph.D.

10:15-10:40 AM

Speaker 1: Chinthalapally (CV) Rao, Ph.D., University of Oklahoma

Carcinogen Induced and Genetically Engineered Models (GEM) for Cancer Interception

10:40-11:05 AM

Speaker 2: Ming You, M.D., Ph.D., Houston Methodist Cancer Center

Animal Models Testing Aerosolized Drug Delivery Approaches for Lung Cancer Chemoprevention

11:05-11:30 AM

Speaker 3: Melissa A. Pegues, Ph.D., U.S. FDA

Nonclinical Considerations for Safety Evaluation of Drugs Intended to Reduce the Risk of Cancer

11:30-11:55 AM Speaker 4: Michael T. Lewis, Ph.D., B.S., Baylor College of Medicine
Toward Early Detection of Breast Cancer and Prevention of Disease Recurrence

11:55-12:30 PM **Lunch**

12:30-12:55 PM Speaker 5: Cory Abate-Shen, Ph.D., Columbia University Irving Medical Center
Lessons learned from studying mouse models

12:55-1:20 PM Speaker 6: Kevin Dodd, Ph.D., National Cancer Institute
Statistical aspects of preclinical cancer prevention studies

1:20-2:00 PM **Panel Discussion with Session I Speakers**

2:00-2:10 PM Break

Session II

Precision Animal Models for High-Risk Cancer Cohorts

Co-Chairs: Shyam Sharan, Ph.D. and Bob Shoemaker, Ph.D.

2:10-2:35 PM Speaker 1: Bob Shoemaker, Ph.D., National Cancer Institute
Genetically Engineered Mouse Models of Lynch Syndrome

2:35-3:00 PM Speaker 2: Shyam Sharan, Ph.D., NCI Center for Cancer Research
BRCA mouse models for functional analysis of genetic variants and breast cancer prevention

3:00-3:25 PM Speaker 3: James M. Amos-Landgraf, Ph.D., University of Missouri
The interplay of host genetics and the gut microbiota on rodent models of familial colon cancer

3:25-3:35 PM **Break**

- 3:35-4:00 PM Speaker 4: Ludmila Szabova, Ph.D. Frederick National Laboratory for Cancer Research, NCI
Ovarian cancer models for Cancer Prevention Research
- 4:00-4:25 PM Speaker 5: Wen Xue, Ph.D., University of Massachusetts Medical School
Precision cancer mouse model development through genome editing
- 4:25-4:50 PM Speaker 6: Robert S. Chapkin, Ph.D., Texas A&M University
Molecular insights into the mechanisms linking diet and microbial metabolites to colon cancer risk
- 4:50-5:30 PM **Panel Discussion with Session II Speakers**
- 5:25-5:30 PM **Adjourn**

Day 2: 9:00 AM – 5:30 PM

Session III

Animal Models for Immunoprevention

Co-Chairs: Phil Daschner, Ph.D. and Karolina Palucka, M.D., Ph.D.

- 9:00-9:25 AM Speaker 1: Karolina Palucka, M.D., Ph.D., The Jackson Laboratory
Humanized mice to study interactions between human cancer and immune system
- 9:25-9:50 AM Speaker 2: Shannon Kenney, M.D., University of Wisconsin-Madison
Humanized EBV mouse model
- 9:50-10:15 AM Speaker 3: Silvia Guglietta, Ph.D., Medical University of South Carolina
Loss of complement C3a receptor in a novel model of spontaneous colorectal tumorigenesis: potential for immunoprevention and therapeutic interventions

10:15-10:40 AM Speaker 4: Guillermina (Gigi) Lozano, Ph.D., The University of Texas MD Anderson Cancer Center

Modeling the p53 tumor suppressor pathway in mice

10:40-11:10 AM **Panel Discussion with Session III Speakers**

11:10-11:20 PM **Break**

Session IV

Next Generation Models for Prevention Research

Co-Chairs: Anirban Maitra, M.B.B.S. and Goli Samimi, Ph.D., M.P.H.

11:20-11:45 AM Speaker 1: Anirban Maitra, M.B.B.S., The University of Texas MD Anderson Cancer Center

Preclinical models of pancreatic cystic neoplasia

11:45-12:10 PM Speaker 2: Fariba Behbod, Pharm.D., Ph.D., University of Kansas Medical Center

Mouse-INtraDuctal: An in vivo model for studying breast cancer progression

12:10-12:35 PM Speaker 3: Ji-Yong Julie Kim, Ph.D., Northwestern University

Bioengineered Models of the Female Reproductive System: Understanding uterine diseases

12:35-1:10 PM **Lunch**

1:10-1:35 PM Speaker 4: Paul Macklin, Ph.D., Indiana University Bloomington

Virtual experiments with multiscale agent-based models

1:35-2:00 PM Speaker 5: David Tuveson, M.D., Ph.D., Cold Spring Harbor Laboratory

Pancreatic Cancer Progression using Model Systems

Session V

Large Animals for Translational Research

Co-Chairs: Amy LeBlanc and Amit Kumar

- 2:00-2:25 PM Speaker 1: Amy K. LeBlanc, D.V.M., D.A.C.V.I.M., Center for Cancer Research, NCI
What Pet dogs can teach us about cancer
- 2:25-2:50 PM Speaker 2: Paul Grippo, Ph.D., University of Illinois Cancer Center
Large Animal Platform for Earlier Pancreatic Cancer Detection and Prevention
- 2:50-3:15 PM Speaker 3: Stephen A. Johnston, Ph.D., Calviri, Inc
Dogs Are Not a Model: Status of a Canine Preventative Cancer Vaccine Trial (VACCS)
- 3:15-3:35 PM **Panel Discussion with Session V Speakers**
- 3:35-3:45 PM **Break**

Session VI

Brainstorming and Future Directions (Selected Speakers and NCI Panel)

Moderators: Altaf Mohammed, Amit Kumar and Phil Daschner

Panel: TBD (Speakers plus NCI members)

- 3:45-4:45 PM **Breakout Panel Discussion I**
Breakout Panel Discussion II
- 4:45-5:30 PM **Reconvene for final discussions**
- 5:25-5:30 PM **Adjourn**