

Cancer Prevention Fellowship Program

NCI Summer Curriculum in Cancer Prevention

Molecular Prevention Course

August 3 - 7, 2015

Course Syllabus
2015

6001 Executive Boulevard
Rockville, MD 20852

*U.S. Department of Health and Human Services
National Institutes of Health
National Cancer Institute
Division of Cancer Prevention
Cancer Prevention Fellowship Program*

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Molecular Prevention Course

Date: August 3 – 7, 2015

Time: 8:30 a.m. to 2:30 p.m.

Location: 6001 Executive Boulevard
Rooms C & D
Rockville, MD 20852
Security/Check-in Desk – (301) 435-1470

Course Director: Lisa B. Signorello, ScD, ScM,
Deputy Director, Cancer Prevention Fellowship Program

Course Coordinators: Aili Ellen Evert

Course presented by:

Cancer Prevention Fellowship Program
Division of Cancer Prevention
National Cancer Institute
National Institutes of Health
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David E. Nelson, MD, MPH, Director

Program Staff:
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Educational Objective for the Molecular Prevention Course

The overall objective of the course is to provide specialized instruction in the principles of molecular biology as applied to the field of cancer prevention. The course focuses on the concepts, methods, issues, and applications of molecular biology in cancer prevention efforts and the genetics of cancer. Participants will have an opportunity to gain a broad-based perspective of these subject areas, including basic laboratory methodology and theory of how molecular techniques are applied to molecular epidemiology, chemoprevention, immunoprevention, multi-omics, and translational research. Lifelong learning skills include critical appraisal of molecular approaches, methodologies, and theories used in the field of cancer prevention.

After attending this activity, participants will be able to: outline and apply the principles of molecular biology in cancer prevention; describe the concepts and methods of molecular biology in the field of genetics of cancer; demonstrate theoretical knowledge of basic laboratory methodology and identify techniques in the areas of molecular epidemiology, chemoprevention, immunoprevention, multi-omics, and translational research; discuss the process of translating laboratory research to cancer prevention; and interpret methodologies and theories used in the field of cancer prevention.

The target audiences are MD- and PhD-degree holders who were selected into the Cancer Prevention Fellowship Program, and MD- and PhD-degree holders with an interest in cancer prevention and control from the NIH and the NCI, national organizations, and foreign institutions.

If you have a disability and require any assistive devices, services, or other reasonable accommodations to participate in this activity, please contact the Cancer Prevention Fellowship Program at 240-276-5626 at least one week in advance of the lecture date to discuss your needs.

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Monday, August 3, 2015

8:30 a.m. – 8:45 a.m.	Introduction/Course Overview	Lisa B. Signorello, ScD, ScM
8:45 a.m. – 10:15 a.m.	Molecular Basis of Carcinogenesis	Goli Samimi, PhD, MPH
10:15 a.m. – 10:45 a.m.	Break	
10:45 a.m. – 12:15 p.m.	Molecular Pathology in Prevention Research	Mark Sherman, MD
12:15 p.m. – 1:30 p.m.	Group Photo and Lunch	
1:30 p.m. – 3:00 p.m.	Translational Genomics	Stephen J. Chanock, MD

Tuesday, August 4, 2015

8:30 a.m. – 10:00 a.m.	Early Detection Research Network	Sudhir Srivastava, PhD, MPH
10:00 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 12:00 p.m.	Applying Molecular Markers Within Population-based Studies	Gretchen L. Gierach, PhD, MPH
12:00 p.m. – 1:00 p.m.	Lunch	
1:00 p.m. – 2:30 p.m.	Telomeres and Cancer	Bari J. Ballew, PhD

Wednesday, August 5, 2015

8:30 a.m. – 10:00 a.m.	Epigenetics and Cancer	Lifang Hou, MD, MS, PhD
10:00 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 12:00 p.m.	<i>Title to be announced</i>	Nilanjan Chatterjee, PhD
12:00 p.m. – 1:00 p.m.	Lunch	

1:00 p.m. – 2:30 p.m. *Title to be announced* Warren A. Kibbe, PhD

Thursday, August 6, 2015

8:30 a.m. – 10:00 a.m. Human Microbiome and Cancer Emily Vogtmann, PhD, MPH

10:00 a.m. – 10:30 a.m. **Break**

10:30 a.m. – 12:00 p.m. Metabolomics and Cancer Steven C. Moore, PhD, MPH

12:00 p.m. – 1:00 p.m. **Lunch**

1:00 p.m. – 2:30 p.m. microRNA and Cancer Brid M. Ryan, PhD, MPH

Friday, August 7, 2015

8:30 a.m. – 10:00 a.m. *Title to be announced* Curtis C. Harris, MD

10:00 a.m. – 10:30 a.m. **Break**

10:30 a.m. – 12:00 noon Immunoprevention Sasha Stanton, MD, PhD

12:00 p.m. – 1:00 p.m. **Lunch**

1:00 p.m. – 2:30 p.m. *Title to be announced* Christopher I. Amos, PhD

2:30 p.m. Closing Remarks Lisa B. Signorello, ScD, ScM