Arizona State University

ARIONA CANCER AND EVOLUTION CENTER and BEYOND CENTER FOR FUNDAMENTAL CONCEPTS IN SCIENCE

Tracing the Deep Evolutionary Roots of Cancer

Workshop April 23rd-24th, 2018
April 23 – 25, 2018

Scottsdale

Agenda

Sunday April 22nd – Garden Courtyard
6:30 – 8:00 pm  Informal welcome reception

Monday April 23rd – Pueblo Room I
9:00 – 9:30 am  Paul Davies
Brief welcome address, outline of the subject and aims of the meeting

Session 1

The need to re-conceptualize cancer
9:30 – 10:00 am  Carlo Maley
“New approaches to cancer and evolution”

10:00 – 10:45 am  Robert Austin
“The lessons of failure”
10:45 – 11:00 am  Discussion

11:00 – 11:30 am  Tea/coffee break

11:30 – 12:15 pm  Thomas Bosch

“Why cancer will never be eradicated”

12:15 – 12:30 pm  General discussion

12:30 – 2:00 pm  Lunch – Vista Verde Dining Room (2nd Floor)

**Session 2**

**Evolution and development**

2:00 – 2:45 pm  Athena Aktipis

“Cancer across species”

2:45 – 3:30 pm  Carlos Sonnenschein

“Shortcomings of the somatic mutation theory”

3:30 – 4:00 pm  Discussion

4:00 – 4:30 pm  Tea/coffee break

4:30 – 5:15 pm  Ana Soto

“Cancer: the embryo’s evil twin”

5:15 – 5:30 pm  Discussion

**Tuesday April 24th – Pueblo Room I**

**Session 3**
Phylostratigraphy

9:00 – 9:45 am   Tomislav Domazet-Loso

“Cancer as a window on the past”

9:45 – 10:00 am   Discussion

10:00 – 10:45 pm   David Goode

“Ancient genes drive cancer”

10:45 – 11:00 am   Discussion

11:00 – 11:30 pm   Tea/coffee break

11:30 – 12:15 pm   Mark Vincent

“Cancer as a re-primitivized phenotype”

12:15 – 12:30 pm   Discussion

12:30 – 2:00 pm   Lunch – Vista Verde Dining Room (2nd Floor)

Session 4

Cancer as an ancestral phenotype

2:00 – 2:45 pm   Susan Rosenberg

“Randomness and non-randomness in mutations”

2:45 – 3:00 pm   Discussion

3:00 – 3:45 pm   Kimberley Bussey

“Cancer as a mutator response to stress”

3:45 – 4:00 pm   Discussion
4:00 – 4:30 am  
*Tea/coffee break*

4:30 – 5:15 pm  
Dany Adams

“Bioelectric determinants of phenotypes: an ancient mechanism”

5:15 – 5:30 pm  
Discussion

**Wednesday April 25th – Pueblo Room I**

**Session 5**

**A theory of cancer: lessons from physics and mathematics**

9:00 – 9:45 am  
Charley Lineweaver

“The need for testable predictions”

9:45 – 10:00 am  
Discussion

10:00 – 10:45 am  
Sui Huang

“The mathematics of phenotypes”

10:45 – 11:00 am  
Discussion

11:00 – 11:30 am  
*Tea/coffee break*

11:30 – 12:30 pm  
Sara Walker

“The software of cancer”

12:30 – 2:00 pm  
*Lunch*

*Meeting ends*