**Cancer Cell Motility and the Metastatic Cascade**

**The Beyond Center for Fundamental Concepts in Science**

**Arizona State University**

**May 19 - 20, 2011**

**Agenda**

**Wednesday May 18**

6:00 – 7:30 pm Informal welcome reception

**Thursday May 19**

**Session 1: The metastatic cascade: defining the problem**

9:00 – 9:45 am Paul Davies

 Brief welcome address, outline of the subject and aims of the meeting

 “Using physics to control the spread of cancer”

9:45 – 10:30 am Isaiah J. Fidler

“Soil and seed: biological heterogeneity of cancer metastasis”

10:30 – 10:45 am *Tea/coffee break*

10:45 – 11:30 am Rod McEver

 “Navigating a cancer cell through multiple environments”

11:30 – 12:30 pm General discussion

12:30 – 1:30 pm *Lunch*

**Session 2: CTCs and the physics of the vasculature**

1:30 – 2:15 pm Peter Kuhn

“Fluid phase of solid tumors, how little we know about the third microenvironment of cancer.”

2:15 – 3:00 pm Michael King

 “Fluid forces and chemical adhesion of tumor cells in the bloodstream”

3:00 – 3:30 pm Discussion

3:30 – 3:45 pm *Tea/coffee break*

3:45 – 4:30 pm Owen McCarty

 “Cancer faces a sticky situation in the blood”

4:30 – 5:30 pm General discussion

**Friday May 20**

**Session 3: Adhesion and extravasation**

9:00 – 9:45 am Garth Nicolson

“Invasion at the secondary site: adhesion, invasion and response to trophic factors”

9:45 – 10:30 am William Muller

“Circulating cells: do they swim or just go with the flow?”

10:30 – 10:45 am *Tea/coffee break*

10:45 – 11:30 pm Brian Helmke

 “Mechanical transduction”

11:30 – 12:30 pm Discussion

12:30 – 1:30 pm *Lunch*

**Session 4: Controlling the metastatic process: new therapeutic concepts**

1:30 – 2:15 pm Daniel Irimia

 “What compels cancer cells to move?”

2:15 – 3:00 pm Konstantinos Konstantopoulos

 “Using theoretical fluid and cell mechanics to find CTC vulnerabilities”

3:00 – 3:30 pm Discussion

3:30 – 3:45 pm *Tea/coffee break*

3:45 – 4:30 pm George Poste

“The need for urgent reform in the organization and funding of cancer research and clinical trials”

4:30 – 5:30 pm Discussion

5:30 pm *Meeting ends*