

## Scientific Program

### Tuesday, September 9, 2008

09:00-  
10:00 **Registration + coffee**

10:00-  
10:30 **Introduction**  
Zvia Agur, Institute for Medical BioMathematics (IMBM), Bene Ataroth, Israel

10:30-  
11:15 **The stem state in cancer: tumor-initiating cells are biologically distinct from stem cells**  
Dov Zipori, Weizmann Institute of Science, Rehovot, Israel

11:15-  
11:30 **Discussion**

11:30-  
12:15 **Novel Wnt/beta-catenin target genes in epithelial plasticity and invasive tumor development**  
Avri Ben-Zeev, Weizmann Institute of Science, Rehovot, Israel

12:15-  
12:30 **Discussion**

12:30-  
13:15 **Cells in Gels: Exploring Cellular Morphogenesis and Differentiation in 3-D Culture**  
Dror Seliktar, Faculty of Biomedical Engineering, Technion, Israel Institute of Technology, Haifa

13:15-  
13:30 **Discussion**

13:30-  
14:30 **Lunch**

14:30-  
15:15 **Role of mathematical modeling in deciphering crucial fate decision proteins in cancer stem cells and in harnessing them to therapy**  
Zvia Agur, Institute for Medical BioMathematics (IMBM), Bene Ataroth, Israel

15:15-  
15:30 **Discussion**

15:30-  
16:15 **Regulation of human breast cancer stem cells**  
Robert Clarke, University of Manchester, Manchester, UK

16:15-  
16:30 **Discussion**

16:30-  
17:00 **Coffe break**

17:00-  
17:30 **A “Devo-Patho” approach to stem cell differentiation: From embryonic stem cells to brain cancer stem cells**  
Luc Leyns, Vrije Universiteit Brussel, Brussel, Belgium

17:30-  
17:45 **Discussion**

17:45-  
18:30 **Approaches to controlling the microenvironment of cells**  
Claus Duschl, Fraunhofer Institute for Biomedical Engineering, Potsdam-Golm, Germany

18:30-  
18:45 **Discussion**

18:45- **Dinner**

*Workshop on “Theoretical Insights into Therapeutics for Cancer Stem Cells”,  
Kibbutz Dalia, Israel, September 9-11, 2008*

## **Wednesday, September 10, 2008**

07:30-  
08:30 **Breakfast**

08:30-  
08:40 **Investigation of Quorum Sensing of Breast Cancer Stem-like Cells using the MCF7 cell line**  
Rebecca Lamb, Hannah Harrison and Robert Clarke, University of Manchester, Manchester, UK

08:40-  
08:55 **Discussion**

09:00-  
09:30 **Controlling the local environment of differentiating stem cells**  
Christine Mißler, Fraunhofer Institute for Biomedical Engineering, Potsdam-Golm, Germany

09:30-  
09:45 **Discussion**

09:45-  
10:00 **3 dimensions and Experimental approaches to quorum sensing of MCF-7 mammospheres**  
Björn Boysen, Fraunhofer Institute for Biomedical Engineering, Potsdam-Golm, Germany

10:00-  
10:15 **Discussion**

10:15-  
10:45 **Coffee Break**

10:45-  
11:15 **General law of tumor growth and efficacy of cancer therapy: mathematical modeling and analysis of experimental data**  
Vladimir Vainstein, Institute for Medical BioMathematics (IMBM), Bene Ataroth, Israel

11:15-  
11:30 **Discussion**

11:30-  
11:45 **Growth of MCF-7 cells in 1, 2**  
Björn Boysen, Fraunhofer Institute for Biomedical Engineering, Potsdam-Golm, Germany

11:45-  
12:00 **Discussion**

12:00-  
12:20 **Wnt signalling pathway and its role in the regulation of breast cancer stem-like cells**  
Rebecca Lamb, University of Manchester, Manchester, UK

12:20-  
12:35 **Discussion**

12:35-  
14:00 **Lunch**

14:00-  
**A guided tour to Akko**

*Workshop on “Theoretical Insights into Therapeutics for Cancer Stem Cells”,  
Kibbutz Dalia, Israel, September 9-11, 2008*

## **Thursday, September 11, 2008**

07:30-  
08:30

**Breakfast**

08:30-  
09:00

**Mathematical Model for the Molecular Mechanisms of Fate Decision in Neural Stem Cells**

Yuri Kogan, Institute for Medical BioMathematics (IMBM), Bene Ataroth, Israel

09:00-  
09:15

**Discussion**

09:15-  
09:45

**TBD**

Xong / Luc, Vrije Universiteit Brussel, Brussel, Belgium

09:45-  
10:00

**Discussion**

10:00-  
10:30

**Coffee break**

10:30-  
11:00

**Therapy resistance in cancer stem cells: is differentiation therapy the answer?**

Gillian Farnie, University of Manchester, Manchester, UK

11:00-  
11:15

**Discussion**

11:15-  
12:15

**SC4 + SC3 groups**

12:15-  
13:15

**SC2 + SC5 groups**

13:15-  
14:15

**Lunch**

14:15-  
15:00

**Closing remarks**

Zvia Agur, Institute for Medical BioMathematics (IMBM), Bene Ataroth, Israel

15:00-  
16:00

**PI's meeting**