



**University of Bergen, NORWAY and  
CANGENIN/COST Action BM0703 presents:**

***Flow Cytometry for Intracellular Targets - Hands on Phosphoflow Workshop  
5<sup>th</sup> – 7<sup>th</sup> September 2011, Bergen NORWAY  
Local CANGENIN /COST Action BM0703 organizer : Bjørn Tore Gjertsen***

**This is the third time the University of Bergen organizes a Phosphoflow workshop in cooperation with Jonathan Irish from Stanford University!**

**The hands-on workshop is limited to 10 CANGENIN students/postdocs !  
Attendance fee: 300€ (includes accommodation and meals)**

#### **Lecturers / Speakers:**

**Jonathan Irish, Stanford University, CA, USA  
Jørn Skavland, University of Bergen  
Elisabeth Ersvær, University of Bergen  
Bjørn Tore Gjertsen, University of Bergen  
Stein Ove Døskeland, University of Bergen  
June Myklebust, University of Oslo  
Fridtjof Lund-Johansen, University of Oslo  
Nikesh Kotecha, Cytobank Inc. CA, USA**

Cell signalling normally governs checkpoints throughout development, and alteration of signalling plays a driving role in human diseases, such as cancer. Phospho-specific flow cytometry can characterize signalling at the network level in individual cells. This technique is especially useful in comparing subsets of cells present within heterogeneous primary tissue samples.

**Day 1** of the phospho-flow workshop will begin with tutorials and recent example applications of the technique.

**Day 2** is hands-on in the lab with practical signaling experiments and acquiring data on the flow cytometer followed by a general introduction to the Cytobank software (<http://www.cytobank.org/>)

**Day 3:** Tutorials on how to analyze data sets with Cytobank and hands on analysis with data sets from yesterdays experiments.

Please contact Marianne Enger for more information: [marianne.enger@med.uib.no](mailto:marianne.enger@med.uib.no)



# Flow Cytometry for intracellular targets

Bergen 5.-7. September 2011

*5<sup>th</sup> September*

*DAY 1*

*Lectures*

Time:	Theme:	Lecturer:
8.45 – 9.10	Registration - Welcome	
9.10 - 9.30	Cell signalling in a historical perspective	Stein Ove Døskeland, University of Bergen
9.30 - 9.50	Basic Flow Cytometry	Elisabeth Ersvær, University of Bergen
9.50 - 10.10	Phospho-flow basic: What you need to know to get started.	Jørn Skavland, University of Bergen
10.10 - 10.40	Using signalling profiles to predict and understand drug responses	Bjørn Tore Gjertsen, University of Bergen
10.40 – 11.00	COFFEE	
11.00 – 12.30	Phospho-flow	Jonathan Irish, Stanford University
12.30 - 13.40	LUNCH	
13.40 – 14.20	Controls and assay design. Examples from B cell signalling	June Myklebust, University of Oslo
14.20 – 14.40	Controls and assay design. Examples from T cell signalling	Elisabeth Ersvær, University of Bergen
14.40 - 15.00	COFFEE	
15.00 – 15.40	Microsphere-based Affinity Proteomics (MAP) a powerful tool for mapping the proteome	Fridtjof Lund-Johansen, University of Oslo
15.40 – 16.20	Phospho flow on human AML - for diagnosis and prognosis. Research project.	Jørn Skavland, University of Bergen
16.20 – 16.40	Overview of next days experiments and discussion of experiment choice	Elisabeth Ersvær og Jørn Skavland



***6<sup>th</sup> September Day 2 LAB 9:00 – 16:00***

**Topics for the day:**

***Practical Signalling experiments – Lab hands-on***

**Overall Goal:** Cytokine stimulate signalling pathways in a mixture of cell types in primary human peripheral blood mononuclear cells (PBMCs.) Using flow cytometry quantifying phosphorylated signalling proteins in PBMC subsets.

Web-based storage and data analysis using Cytobank software: General introduction by Nikesh Kotecha, Cytobank Inc.

**Signalling timecourse**

**Titration of stimuli**

**Mini profile**

***7<sup>th</sup> September Day 3 Data Analysis 9:00 – 13.00***

**Topics for the day:**

***Phospho flow - Analysis***

Phosphoflow analysis with Cytobank

Examples Signalling Kinetics

Practice with data sets from yesterday