

**Molecular Imprinting and Optical Sensors
Cancer Biomarker Workshop
Business Development Seminar
Project Review Meeting**

Malmö University
Sunday 7 January – Friday 12 January 2018

AGENDA OVERVIEW

Sunday 7 January 18.00	Arrival Day Joint Dinner at Scandic Hotel Triangeln	
Monday 8 January	<i>At Scandic Hotel Triangeln</i>	
09.00-12.00	Introductory course and Project Review Meeting for Glycolmaging	Anette Gjørloff Wingren (MU)
12.00-13.00	Lunch for BioCapture and Glycolmaging	
13.00-19.00	Project Review Meeting for BioCapture and Glycolmaging Introductory Course	Börje Sellergren (MU) Anette Gjørloff Wingren (MU)
19.00-	Optional: A drink at Skybar, Malmö Live	



AGENDA OVERVIEW

Tuesday 9 January		
	at Forskaren 110	
08.30-08.40	Welcome by the Pro Dean, Faculty of Health and Society and Presentation Biofilms – Research Center for Biointerfaces and Open Lab Skåne	Thomas Arnebrant (MU) Therése Nordström (MU)
08.40-17.00	Molecular Imprinting and Optical Sensors	Knut Rurack (BAM)
12.10-13.15	Lunch at “Chilla&P” at Medeon	
18.45-	Boule at Boulebar , Drottningtorget in Malmö	
Wednesday 10 January		
	at HS-huset, room U406	
08.30-08.45	Welcome by the Dean, Faculty of Health and Society	Anders Kottorp
08.45-17.15	Biomarker Discovery Workshop	Ian Pike (Proteome Sciences)
12.45-13.45	Lunch in Oasen, 1 st floor	
18.00-	Optional: Activity to be announced!	
Thursday 11 January		
	at Forskaren 110	
08.45-17.00	IP & Commercialization	Justin Jordan (Proteome Sciences)
12.15-13.15	Lunch at Forskaren	
	Skissernas Museum in Lund (Museum of Artistic Process and Public Art)	
18.30	Guided walk	
19.30	Dinner	
Friday 12 January		
	Departure	



Introductory Course and Project Review Meeting

Monday January 8th, 2018

Agenda

09.00-12.00	Introductory Course and Project Review Meeting Chair: Anette Gjørloff Wingren (MU) for Glycolmaging
09.00-10.00	Introductory of the ESRs, ESR1-ESR8
10.15-10.30	Coffee
10.30-12.00	Science and technology session SAMIP detection in tumor cells, Anette Gjørloff Wingren, MU Tumor associated glycans, UCPH Molecular imprinting approaches in Glycoimaging, Knut Rurack, BAM Detection of tumor cells using digital holographic microscopy, PHIAB Cancer development and metastasis, UMU In vivo tumor models, UTU
12.00-13.00	Lunch for BioCapture and Glycolmaging
13.00-17.00	Glycolmaging Project Review Meeting Chair: Anette Gjørloff Wingren (MU)
15.15-15.30	Coffee



13:30

Summary of the Project and Review of Project Objectives

- i. Training Work package review – Current plans of partners involved (5 min) followed by 10 min discussion.
- ii. WP1: SAMIP nanoparticles as diagnostic tool for specific biomarker detection MU
- iii. WP2: Fluorescently responsive MIP nanoparticles targeting tumor specific motifs BAM
- iv. WP3: Digital holographic microscopy for evaluation of MIPs targeting cancer cell PHIAB
- v. WP4: Development and validation of cell models and magnetic separation columns targeting glycans UCPH
- vi. WP5: Development of in vivo models for glycan detection UTU
- vii. Management issues
- viii. Secondments
- ix. Training events and meetings

Project review meeting

Scandic Hotel Triangeln, Malmö University, Malmö, Sweden

Monday January 8th, 2018

Agenda

Chairman: Börje Sällergren, Malmö University

13:00 Summary of the Project and Review of Project Objectives

13:20 Work package review

*Each ESR should prepare a presentation of about 15 minutes, summarising progress achieved until date. **The PPT slides should be provided to the coordinator 1 week prior to the meeting!***

WP1: Protein phosphorylations (MU1, UMU, SDU)

WP2: SCLC Biomarkers (STRATH, UIO, LNU)

WP3: Saccharide specific capture (MU2, UCPH1)

WP4: Signalling capture phases and high throughput analytical platforms (BAM1,2)

WP5: Assays development and clinical tests (UCPH2)

15:15 Coffee

17:20 Management issues

- i. Monitoring and Reporting
- ii. Subgroup leaders reports
- iii. Dissemination plan

Exchanges and Placements - see GA annex 1B, section 3.1.1

Training events and meetings - see GA annex 1B, Table 1.2.B

19:00 End

Agenda: 9 January, 2018

Molecular Imprinting and Optical Sensors (at Forskaren 110)

- 8:30 – 8:40 **Welcome by the Pro Dean**, Faculty of Health and Society; Thomas Arnebrandt
- Presentation Biofilms** – Research Center for Biointerfaces and Open Lab Skåne; Therése Nordström
- 8:40 – 9:25 **Fluorescence Assays** – Basics, Benefits and Pitfalls; Knut Rurack
- 9:25 – 9:40 Coffee; division of (11+8-4 / BioCap+Glycolmag-BAM) 15 ESRs into four groups plus gearing up for and retreat to the labs
- 9:40 – 12:10 **Experimental part** (in four groups, 4/4/4/3), each group led by one BAM ESR (Sam Burnage, Shan Jiang, Martha Kimani, Evgeniia Kislenko)
- 12:10 – 13:15 Lunch break at “Chilla&P” at Medeon
- 13:15 – 14:00 **Data analysis and wrap up of experiments** (all/groups as before)
- 14:00 – 14:45 **Making MIPs Better**; Peter Cormack
- 14:45 – 15:30 **Beyond Spectra and Intensities** - Exploiting other Fluorescence Parameters in MIP-based Analysis; Ian Nicholls
- 15:30 – 15:45 Coffee
- 15:45 – 16:30 **Determining Molecular Analytes** with Sensory Fluorescent MIPs; Kornelia Gawlitza
- 16:30 – 17:00 **MIPs in Fluorescence Imaging Microscopy**; Anette Gjørloff Wingren
- 18:45 – **Boule at Boulebar**, Drottningtorget in Malmö



Agenda: 10 January, 2018

Biomarker Discovery Workshop (HS-huset, room U406)

Learning Objectives: The goal of this workshop is to provide ESRs with an understanding of what biomarkers are, the methods available for their discovery, how they are currently used in management of cancer and for cancer drug development. There will be a group exercise at the end of the plenary sessions where groups will be asked to prepare a presentation on different aspects of cancer biomarker discovery and development.

Plenary Session

- 08.30 – 08.45 **Welcome by the Dean**, Faculty of Health and Society (Anders Kottorp)
- 08.45 – 09.30 P1. General introduction to biomarkers and their use in cancer management (Trine Grønhaug Halvorsen/Léon Reubsaet@UIO)
- Background to cancer: altered 'selfness', immune suppression, metabolic changes
 - Categories of biomarkers: clinical, molecular, DNA/RNA/protein/sugar/lipid
 - Applications of biomarkers: diagnosis, prognosis, stratification
 - Established cancer biomarker tests: imaging, histology, transcriptomics, blood tests
 - New approaches for measuring low-abundance biomarkers
- 09.30 – 10.15 P2. Glycans in cancer biology and as source of biomarkers (Henrik Clausen, UCPH)
- Role of glycans in normal biology
 - Alterations to glycans in tumour biology
 - Methods for measuring glycans (glycoproteins, glycolipids, free sugars etc.)
 - Notable glycol biomarkers used in cancer diagnosis/management today
 - Challenges for use of glycol biomarkers
- 10.15 – 10.30 Coffee and Refreshments
- 10.30 – 11.15 P3. Phosphorylation in cancer biology and as a source of biomarkers (Ian Pike, ProSci)
- Role of protein phosphorylation in normal biology
 - Alterations to phosphorylation in tumour biology
 - Methods for measuring phosphoproteins and peptides
 - Notable phosphoproteins used in cancer diagnosis/management today
 - Challenges for use of phosphoprotein biomarkers



- 11.15 – 12.00 P4. Peripheral Biomarkers in Blood and other Body Fluids (Jenny Persson, UMEA)
- Circulating biomarker categories (cells, nucleic acids, proteins, lipids, metabolites)
 - Sensitivity versus specificity for peripheral biomarkers
 - Relating peripheral biomarkers to disease biology
 - Translating cellular response to pharmacodynamic endpoints
 - Role in early detection

- 12.00 – 12.45 P5. Use of biomarkers in cancer drug development (Pirkko Härkönen, Turku)
- Drug targets as biomarkers
 - Defining mechanism of action
 - Biomarkers as surrogate endpoints for clinical trials
 - Companion diagnostics

12.45 – 13.45 Lunch

Technology Showcase

- 13.45 – 14.15 Cancer Biomarker Discovery: Automated HT Sample Processing (Justin Jordaan/Stoyan)

Workshop

14.15 – 17.15

ESR's to form four groups with representation from BioCapture and GlycolImaging in each group.

Their task is to prepare a presentation on the way use of biomarkers can potentially transform the way cancer is managed. This should incorporate an historical perspective, assessment of modern biomarker discovery and validation and assessment of some of the latest tools e.g. iKnife, multi-gene and multi-protein arrays and critical assessment of their limitations, and finally their proposal for how the outputs of the two ITNs will influence the future of cancer management.

They would have 2 hours to discuss and prepare their materials and each group then presents findings for 10 minutes with 5 minutes for questions. Maximum time required is 3 hours for four ESR groups.

Each group will be mentored by one of the speakers and other PIs can of course move between groups to help them. I also intend sending a list of some relevant websites/literature they can familiarise themselves with ahead of the meeting.



Agenda: 11 January 2018

IP & Commercialization (Forskaren 110)

Learning objectives for the sessions are to introduce ESR's to concepts in intellectual property, including the differences between protectable and non-protectable IP, and what qualifies a person as an inventor. As a natural progression from IP to commercial exploitation of technologies, the Technology Transfer office of Malmö University will elaborate on their role in managing innovation and intellectual property, and the models of technology transfer. Subsequently the ESR's will be exposed to their company stories by three successful entrepreneurs, followed by presentation of the newco SureCap, a start-up set to commercialise technologies developed by the BioCapture Network. Teams will be announced for the development of written business plans and pitches for the next commercial track.

08:45 – 09:30	Ian Pike: <i>Introduction to IP, patents, trademarks & knowhow</i>
09:30 – 10:15	Joa Falke: <i>The role of tech transfer offices at universities, case study Malmö University</i>
10:15 – 10:30	Tea & Refreshments
10:30 – 11:30	Ian Pike: <i>What is an invention? Who is an inventor? The differences between patents and publications</i>
11:30 – 12:15	Roger Trones: <i>GT Septech, the story of our start-up</i>
12:15 – 13:15	Lunch at Forskaren
13:15 – 14:00	Peter Egelberg: <i>The evolution of phase holographic imaging (PHI) from a research idea to publicly traded company</i>
14:00 – 14:45	Einar Pontén: <i>The story of SeQuant AB, from laboratory start-up to acquisition by Merck</i>
14:45 – 15:15	Tea & Refreshments
15:15 – 16:00	Celina Wierzbicka and Jing Chen: <i>SureCap, Business Plan Presentation & Feedback Session</i>
16:00 – 16:30	Justin Jordaan: <i>Establish student teams for Business Plan Competition (TBC at next commercialisation workshop)</i>
18:30 Onwards	Skissernas Museum in Lund and dinner (Museum of Artistic Process and Public Art)

