



## Proteomics Symposium and Workshop

**Monday to Thursday 11 – 14 July 2011**

As a follow-up to the very successful symposium held in 2009, a second two-day proteomics symposium will be held at the University of Pretoria Medical campus and CSIR on the 11<sup>th</sup> and 12<sup>th</sup> July 2011. This symposium will be followed by a split 2 day hands-on workshop for a limited number of participants where protein sample preparation (including 2D PAGE) and mass spectrometry techniques will be carried out.

The scientific program will consist of oral presentations as plenary and short talks of 15 minutes each and poster presentations, tutorials, discussion sessions and product seminars.

Time will be set aside for networking and to take advantage of a technical exhibition of gel electrophoresis and blotting equipment and accessories including protein chromatography, flow cytometry and antibody based assays to ensure a strong interaction between instrumentation and consumable companies and the scientific community.

There is no registration fee for scientific presentations, but registration is essential. A fee of R750 is payable for the hands-on workshop to cover the cost of consumables and instrument time.

We are encouraging students and researchers alike to attend to learn about what is being done in the proteomics research community, from all the sectors including adaption studies, agriculture, biotechnology, clinical, enzymology, food industry, genetics and veterinary sciences amongst others. Anyone wanting to present their work (even if it has been presented at other congresses) is welcome to do so. Please contact Duncan Cromarty to have your work included in the program.

The symposium is supported by the South African Association for Mass Spectrometry (SAAMS).

In addition discussions will also be held in respect of the NRF National Equipment Program call that has recently opened for 2011 and the establishment of a Proteomics society/Interest group.

Companies interested in participating in the first two days to exhibit are invited to contact:

Duncan Cromarty on [duncan.cromarty@up.ac.za](mailto:duncan.cromarty@up.ac.za) or 0733064220

## Registration Form

Please fill in this MS Word document and e-mail back to [duncan.cromarty@up.ac.za](mailto:duncan.cromarty@up.ac.za)

Title:

Name:

Institution:

Area/Interest of research:

Symposium attendance:                      Yes                      NO(delete which is not applicable)

Workshop attendance:                      Yes                      NO(delete which is not applicable)

Any dietary requirements (please specify):

Accommodation required?

Collection at OR Tambo required? (Possibility of the Gautrain to Hatfield in Pretoria being operational appears to be good @ R115)

The Symposium Program will start at 9:30 on Monday 11<sup>th</sup> July at the CSIR Knowledge Commons on the CSIR Campus in Pretoria:

Monday July 11 2011

8:30 - 9:15	Registration
9:30 – 9:45	Welcome and Introductions
9:45 – 10:30	Plenary Lecture
10:30 - 11:00	Break /Tea/Coffee
11:00 – 12:30	Presentations by researchers
12:30 – 13:00	Commercial presentations
13:00 – 14:00	Lunch
14:00 – 15:00	Presentations by researchers and new commercial developments
15:00 – 15:20	Tea
15:20 – 16:30	Poster Sessions
17:00 – 18:30 (or later)	Wine/Cocktails (Networking time)

Tuesday July 12 2011

8:30 - 9:00	Registration
9:00 – 9:45	Plenary Lecture
9:45 – 10:30	Plenary Lecture
10:30 - 11:00	Break /Tea/Coffee
11:00 – 12:30	Presentations by Researchers
12:30 – 13:00	Commercial presentations
13:00 – 14:00	Lunch
14:00 – 15:00	Discussions on Society/Interest Group and the NEP program
15:00 – 15:20	Tea
15:20 – 16:30	Information and grouping for Workshop attendees Poster Sessions

## **Workshop Program**

The groups will be split into two groups:

Group A: Mass spectrometer-based proteomics group. Based at CSIR Biosciences Building 20

9:00 – 16:30 for 13<sup>th</sup> and 14<sup>th</sup> July 2011

Group B: 2D gel based group. Based at University of Pretoria Pharmacology Department

9:00 – 16:30 for 13<sup>th</sup> and 14<sup>th</sup> July 2011

Places are limited for each of these workshops so please reserve your place ASAP.

These are hands on workshops in the laboratory with guidance/lectures. You will need to bring your own lab coats.

### **Preliminary program for the Proteomics Hands-on Workshop 13-14 July 2011:**

#### **1. Sample prep:**

- a. Protein solubilisation / extraction (MS compatible detergents etc.)
- b. Sample clean-up

#### **2. 2DGE:**

- a. Setting up the gels
- b. Staining (MS compatible Stains etc.)
- c. Gel Visualization, quant analysis

#### **3. In-gel digestion:**

- a. Gel handling to prevent contamination
- b. Reduction/Alkylation
- c. Correct trypsin handling to prevent optimum cleavage

#### **4. Peptide clean-up / desalting:**

- a. SPE i.e. Stage tips vs Online (considerations for each approach i.e. time, cost etc.)

#### **5. Mass spectrometry:**

- a. MALDI vs ESI
- b. Inlet / Ion Source / Mass Filter / Detector
- c. PMF vs Peptide sequencing

## 6. Data processing:

- a. Assignment of raw spectra to peptide / protein / PTM ID (common search parameters)
- b. When to use a contaminant db
- c. Working with sequenced vs Non-sequenced organisms
- d. Validation: confidence Assignment to peptide / protein / PTM ID (good vs bad hit)
- e. Biological assignment / prediction: Tools for grouping into pathways / organelles / Functions etc. i.e. BLAST, CATH, MADIBA, TAVERNA etc.

## Supported by:



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SAAMS

South African Association for Mass Spectrometry

