***Day one (14th of October 2014):***

**Opening: *Prof Jonathan M Blackburn (09:15-09:30)***

**Room:** *Human Genetics Seminar room Level 4 Falmouth Building*

***D.1.1.1* Workshop part 1 (09:30-11:00*):*** Mass spectrometry- Phosphoproteomics: TiO2 phosphopeptides enrichment techniques and theory. ***Prof Boris Macek***

**Room:** *Human Genetics Seminar room Level 4 Falmouth Building*

*Tea Break* ***(11:00-11:30)***

***D.1.1.2* Workshop part 2 (11:30-12:30):**Preferred upstream sample processing protocols (e.g. cell lysis, protein extraction and digestion) for phosphoenrichment and ‘good practises’ for mass spectrometry sample preparation. ***Dr Boumediene Soufi***

**Room:** *Human Genetics Seminar room Level 4 Falmouth Building*

***D.1.2.* Lunch (12:45-13:45):**with host group Applied Chemical & Proteomic Group-Jonathan Blackburn group.

***D.1.3.* Seminar lecture (14:15-15:00):**“*Shotgun proteomics-principles and applications*” ***Prof Boris Macek*** *(PCT, University of Tubingen-Germany)*.

**Introduction:** *Prof Jonathan M Blackburn*.

**Room:** Jolly Lecture Theatre.

***Day Two (15th of October):***

***D.2.1.* Workshop part 1 (09:00-11:00):**Mass spectrometry- Phosphoproteomics:

**Station 1:** Phoshoenrichment protocol demonstration.

**Demonstrators:** *Dr Nelson C Soares & Ms Kim and Dr Boumediene Soufi & Ms Kehilwe*

**Station 2:** Setting MS scanning parameters for phosphoproteomic experiments.

**Demonstrators:** *Dr Nelson C Soares &* *Mr Shaun Garnett and Dr Boumediene Soufi & Mr Tariq Ganief*

**Room:** *Blackburn lab*

*Tea Break* **(11:00-11:30)**

***D.2.1.* Workshop part 2 (11:30-12:45):**

MaxQuant set up and run parameters for analysis of raw MS files: specifically pertaining to phosphoenriched samples.

**Demonstrators:** *Dr Karsten Krug & Mr Shaun Garnett*

**Room:***Blackburn lab*

**D.2.2. Round table meeting & Lunch (13:00-14:30)**: with participants (12 maximum including visitors): Recently there have been an increasing number of Western Cape researchers that are employing proteomics in their research projects. The two hour round table meeting with Prof Boris Macek will give the opportunity to start a pertinent critical debate about the applications of MS based proteomics within the context of South African research activities.

**D.2.3. Seminar lecture (15:30-16:30):** “*Why every health sciences lab needs a mass spectrometer*” ***Dr Mike Myers*** *(ICGEB Trieste-Italy)***.**

**Introduction:** *Prof. Jonathan M Blackburn*

**Room:** Wolfson Pavillion Lecture

***Day Three (16th of October):***

***D.3.1.*** *Workshop (09:00-12:00):*Mass spectrometry- Bioinformatics tools:

-Explanation of Max Quant output

-Normalisation of phosphoproteome to total proteome (in Max Quant)

-Validation of phospho sites using MaxQuant viewer

**Demonstrators:***Dr Karsten Krug, Dr Boumediene Soufi and Mr Shaun Garnett*

**Room:** *Health Teaching Lab 3 computer room and Blackburn lab.*

***D.3.2.* Seminar lecture (13:50-16:00):**

***D.3.2.1 “****Microbial Proteomics****” Dr Boumediene Soufi*** *(PCT, University of Tubingen-Germany)****.***

**Introduction:***Dr. Nelson C Soares*.

**Room:***Wolfson Pavillion Lecture*

**&**

***D.3.2.2 “****Proteogenomics-mass spectrometry at the interface of genomics and proteomics****” Dr Karsten Krug*** *(PCT, University of Tubingen-Germany)****.***

**Introduction:***Mr Shaun Garnett*.

**Room:***Wolfson Pavillion Lectur****e***

**Concluding remarks & Farewell: *Dr Nelson C Soares***

**Room:***Wolfson Pavillion Lecture*

***D.3.3. Visit established MS spectrometry research facilities in Western Cape.*** *We intend to take Prof Boris Macek and all the visitors through a short guide tour so that he will have the opportunity to visit other main MS spectrometry facilities in Western Cape. Specifically: mass spectrometry Unit at Dept Molecular & Cell Biology (UCT); Proteomic Unit at Stellenbosch University; Proteomic Unit at University of the Western Cape; and Proteomic Unit at CPGR.*