course dates 10th – 12th December 2013

Practical Proteomics

A three day course for those in industry and academia who wish to gain a theoretical and practical understanding of the exciting possibilities and developments within the field of proteomics.

Comments from previous attendees:

"An excellent balance between theory and practical"

"The lectures were first class – experts clearly really were experts."

"This course is really fantastic! Difficult theoretical material was covered very well. The enthusiasm and expertise of lecturers and practical demonstrators was incredible."

BMSP

THE UNIVERSITY OF WARWICK

Practical Proteomics

Overview

Proteomics requires the identification and quantitation of ever-smaller amounts of proteins in increasingly complex systems. Modern approaches have been established to enable this to be accomplished in an automated, sensitive and selective fashion. This course will provide the theoretical underpinning of the methods used, with ten practical sessions undertaken in a fully equipped, state-of-the-art laboratory and include sample preparation strategies, ESI, ESI-MS/MS, nanoflow LC, data dependent/independent acquisition, database searching, multiple reaction monitoring and neutral loss scans. Regular discussion groups help to reinforce theory/practical sessions and serve as a forum for exchange of ideas. Quantitative case studies from biomarker discovery to prokaryotic and eukaryotic systems will be presented.

Application Form: (Closing date for applications: 25th November 2013)

Practical Proteomics December 2013

I wish to reserve a place on the above course.

Name:.....

Address: .....

.....

..... Post Code: .....

Work Tel / Fax / Email: .....

Institution: .....

Position Held: .....

Course fee includes course dinner on evening of Wednesday 11th December, lunches, refreshments and a comprehensive course manual.

Please indicate which fee is appropriate:-

Course fee: £800 (commercial rate) £550 (academic/student rate)

To Register: Please return completed form with the full fee or a deposit of £250. Please send either a cheque made payable to "University of Warwick" or an order number and invoicing details. The balance of the course fee is required by 25th November 2013.

Please return completed application form to:

Dr. Charlotte Moonan, School of Life Sciences,
The University of Warwick, Coventry CV4 7AL UK.

10th – 13th December 2013

The course will be informal but intensive with numbers limited to 15 and a high level of staffing to encourage interaction, questions and discussion. Participants will have the opportunity to discuss their interests and research with course tutors and other participants.

A comprehensive course manual will be provided.

Theory

The lecture programme has been designed to provide the underpinning theory required in modern proteomics studies. This will include protein separation, mass spectrometric characterisation, quantification, sequencing and the use of databases for identification of proteins. This will be illustrated by the use of appropriate practical examples.

Day 1:

- ESI/MALDI ionisation
- Mass analysers
- Mass accuracy and resolution
- Intact protein molecular weight determination

Day 2:

- Protein separation approaches
- Digestion strategies
- MS/MS of peptides
- Interpretation of MS/MS spectra
- Database creation and searching

Day 3:

- Labelled and non-labelled approaches to differential proteomics
- Characterisation of post-translational modifications
- Case studies
- Recent developments

Practical Programme

Accompanying the lectures is an intensive practical programme concentrating on the skills required to carry out modern proteomic studies.

Day 1:

- Protein molecular weight determination
- Sample preparation and tryptic digestion
- Analysis of digested proteins by means of ESI-MS and ESI-MS/MS
- Nano liquid chromatography

Day 2:

- Data dependent acquisition and database searching
- Interpretation of MS/MS data
- Multiple reaction monitoring and absolute quantitation

Day 3:

- Offline database interrogation using MS/MS data
- Data independent acquisition
- Neutral loss scan
- Labelled and non-labelled mass spectrometry-based quantitative proteomics

Practical Proteomics

Course Venue

The University of Warwick ranks in the top ten of the country's one hundred universities. The School of Life Sciences has an international reputation in fundamental and strategic research. Housed on an integrated self-contained site the department has well-equipped research and teaching laboratories, support facilities, and modern teaching rooms.

The University is situated in a country setting 3 miles from Coventry on a large, scenic campus. There is easy access by road, rail (London - 60 minutes; Birmingham - 17 minutes) and air (Birmingham International Airport - 12 miles).

Teaching

Teaching by the Life Sciences BioMedical Mass Spectrometry and Proteomics Team at Warwick including Professor Jim Scrivens and Dr. Susan Slade (http://www2.warwick.ac.uk/fac/sci/lifesci/research/facilities/proteomics).

Registration

Course dates:	10th –12th December 2013
Closing date:	25th November 2013
Course limit:	15 participants
Fee:	Course fee of £800 for commercial sector employees and £550 for academics. Balance required by 25th November 2013. The course fee is non-refundable for withdrawals made less than seven days prior to the start of the course. Substitutions may be made at any time. Cheques payable to 'University of Warwick'.

Enquiries to:

Dr. Charlotte Moonan
School of Life Sciences, The University of Warwick, Coventry CV4 7AL. UK
Tel: 024 7652 3540 Fax: 024 7652 3701 Email: Charlotte.Moonan@warwick.ac.uk

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