

## Registration Form

### Microbial Diagnostic Applications of Mass Spectrometry

4 - 5 April 2012

HPA Microbiology Services, Colindale

Title:	First name:
Surname:	
Address:	
Telephone:	
Fax:	
E-mail:	

I am interested in presenting a poster

Poster presentations are encouraged and will be displayed during the course of the meeting.  
The dimensions are standard (approximately 1 sq. meter).

I enclose a cheque for £50 for the conference registration made payable to 'Health Protection Agency'.  
The fee covers registration, refreshments, evening reception (first day) and lunch (second day).

CPD accreditation applied for. If you require a certificate of attendance, please tick the box

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

For further information, please contact the organisers:

**Professor Haroun N Shah**  
Mass Spectrometry Workshop April 2012,  
Head, Molecular Identification Services  
Unit, DBHT  
HPA Microbiology Services, Colindale  
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London NW9 5EQ  
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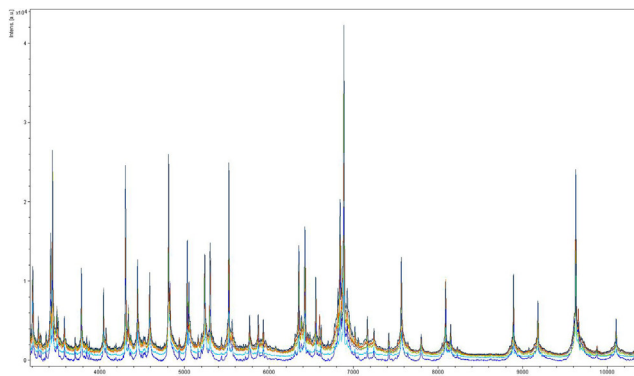
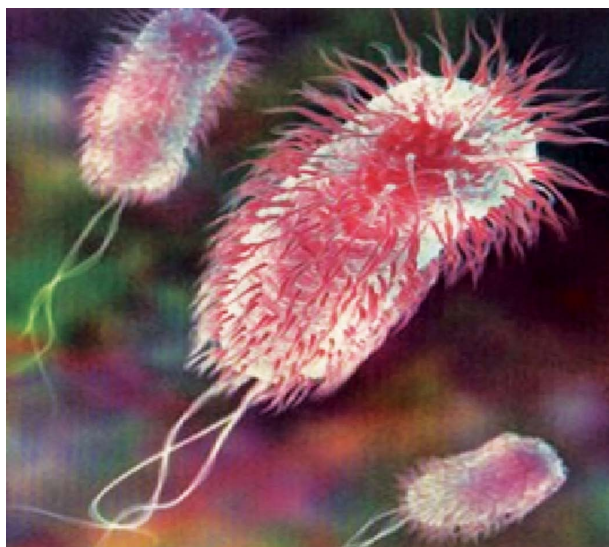
**Dr. Cleidir Santos**  
Mass Spectrometry Workshop April 2012,  
IBB/Biological Engineering Centre  
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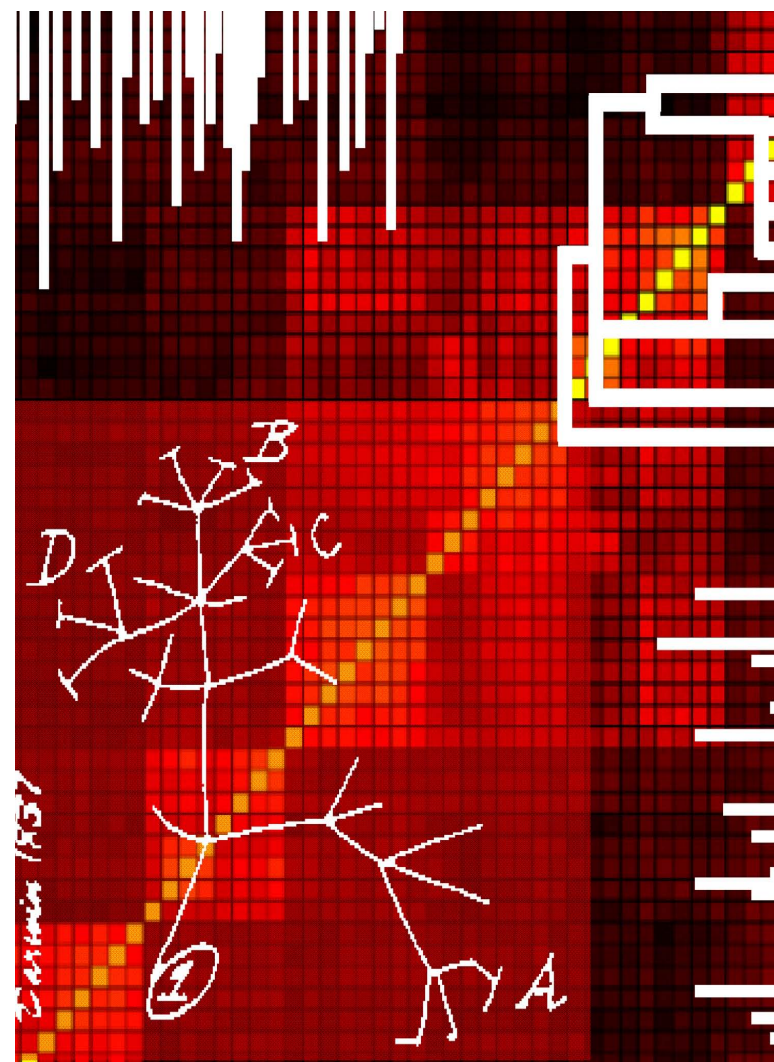
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### Microbial Diagnostic Applications of Mass Spectrometry

4 - 5 April 2012

HPA Microbiology Services, Colindale  
in collaboration with Micototeca da Universidade do Minho,  
Braga, Portugal



Following a decade of concerted research by several laboratories and various mass spectrometry companies, MALDI-TOF-MS and LC-MS/MS are now at the forefront of a new era of diagnostics in clinical microbiology.

MALDI-TOF-MS has been gaining momentum as a high throughput, low cost, rapid and accurate diagnostic tool and its applications for direct blood cultures are increasingly being reported. Although the emphasis has been largely on bacterial identification, its capability to differentiate viruses, fungi, yeast and a range of parasites are now under investigation. Consequently, a large number of databases are being assembled in various laboratories. In manner analogous to comparative 16S rRNA sequence analysis, it should be possible in the near future to develop a global database that can be expanded as more laboratories enter the field.

While the genome dictates the characteristics of a cell, the proteome is a manifestation of its expression at a given time. Thus, pathogenic determinants such as toxins, adhesins, antibiotic resistant proteins, signaling molecules etc can be elucidated using LC-MS/MS while also providing genus, species and strain-specific signatures.

Throughout Europe clinical laboratories are embracing these technologies and expanding the range of applications. Success has been driven by continuous developments in both hardware and software, however, improvements in several areas are in progress and this workshop aims to demonstrate some of these while highlighting some of the hurdles that needs to be addressed.

**VENUE:** HPA Microbiology Services, Colindale,  
Wilson Lecture Theatre  
61 Colindale Avenue  
London NW9 5EQ  
England.

## PROGRAMME 4 April 2012

12.00 – 13.45 Registration

### Session 1: Workshop on MALDI-TOF-MS and LC-MS/MS

Chair: Haroun N. Shah and Robert Tonge

13.45 - 14.00 Opening Remarks:

14.00 - 14.30 Advantages and Limits of MALDI-TOF for Routine Identification?

Greub Gilbert, Institut de microbiologie, Lausanne

14.30 - 15.00 New Horizons in the Use of MALDI-TOF for the Clinical Microbiology Laboratory

Nikos Hontzeas, bioMérieux UK Ltd

15.00 - 15.30 Investigation into *Pseudomonas aeruginosa* Virulence Factors Using HDMSE and Quantitative Label-Free Proteomics

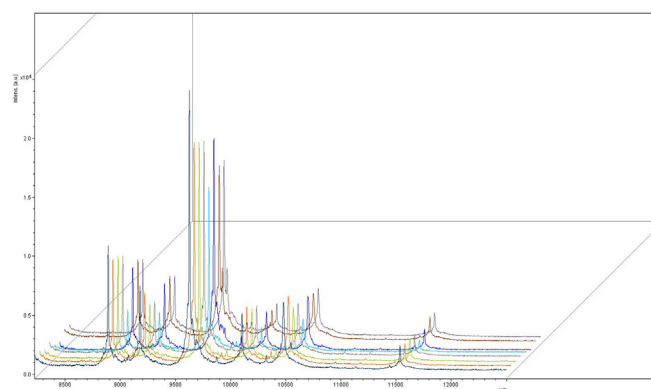
Robert Tonge, Waters Corporation, Mass Spectrometry Technology Centre, Manchester

15.30 - 16.00 Recent Developments in High Resolution and Accurate Mass Analysis of Proteomic Samples

Jenny Ho and Gary Woffendin, Thermo Fisher Scientific

16.00 - 16.30 General Discussion

17.00 - 19.00 Reception and Poster Session



## PROGRAMME 5 April 2012

### Session 2 Gel-Based and MS-MS Proteomics of Microbes

Chair: Martin Hornshaw and Raju Misra

10.00 - 10.30 Comparative Proteomics Analysis of *Clostridium difficile* using Gel-Based, MALDI-TOF-MS and LC-MS-MS Analysis  
Caroline Chilton, Saheer E. Gharbia and Haroun N. Shah, DBHT, HPA and Department of Microbiology, Leeds General Infirmary

10.30 - 11.00 *Listeria monocytogenes*; Mass Spectrometric Analysis of a Food Pathogen to Search for Mechanisms of Adaptation from Cold to Ambient Temperatures  
Martin Hornshaw and Shurene Bishop Simon, Life Science Mass Spectrometry Marketing Manager and DBHT, HPA

11.00 - 11.30 Sample Extraction and Comparative MS/MS Analysis following Gel-based and nano-LC Chromatography of Microbial Cells  
Min Fang, Raju Misra, Jenny Ho, Tom Gaulton and Renata Culak. DBHT, HPA

11.30 - 12.00 Evaluation of the diversity of *Propionibacterium acnes*: mass spectrometry versus gene sequencing  
Dominique Clermont, P. Bouvet, L. Motreff, K. Anger, and C. Bizet. Institut Pasteur, France

12.00 - 12.30 General Discussion

12.30 - 14.00 LUNCH

### Session 3 Microbial Applications of MALDI-TOF-MS

Chair: Cledir Santos and Markus Kostrzewa

14.00 - 14.30 Blood Culture Analysis by MALDI-TOF-MS  
Matthew Ellington, HPA, Cambridge

14.30 - 15.00 Application of MALDI TOF MS in a Routine Clinical Laboratory  
Nathan Reading, City Hospital, Birmingham

15.00 - 15.30 MALDI-TOF MS for Subspecies Identification and Typing of Microorganisms  
Markus Kostrzewa, Bruker Daltonik GmbH, Bremen

15.30 - 16.00 MALDI-MS for fungal identification: how far from clinical applications?  
Arnaud Riat, Stephane. P. Emonet and Jacques Schrenzel, University Hospital, Geneva

16.00 - 16.30 MALDI-TOF MS: Improved methods for the identification/characterisation and authentication of fungal strains  
Cledir Santos and Nelson Lima, Micototeca da Universidade do Minho, Portugal