

# Introduction to the BMSS

Meetings, Grants, Publications, Networking and more....

### Michael Wright & John Dutton

Co-ordinators of the Clinical and Forensic Special Interest Group (SIG) of the BMSS

# What does the BMSS do?

- Non profit organisation run predominantly by volunteer members
- Aims are to encourage participation in all aspects of mass spectrometry on the widest basis
- Promotion of knowledge and advancement in the field
- Provide a forum for the exchange of views and information













# The History of the BMSS

- 1964 Founded
- 1965 1st meeting of the Mass Spectrometry Group (MSG) London
- 1968 First constitution adopted at 3<sup>rd</sup> meeting of the MSG
- 1974 Renamed as the British MS Group (BMSG)
- 1980 Became a registered charity on 7th December 1980
- 1981 BMSG is restructured to become the BMSS
- 1985 Organised 10th IMSC Swansea
  - Proceeds led to establishment of 7 Beynon PhD Studentships
- 1987 Aston Medal Established (8 awarded to date)
- 1993 1st LC-MS Meeting at Cambridge held every 2 years since
- 2002 BMSS President and BMSS Medal established (2 awarded to date)
- 2003 Organised 16th IMSC Edinburgh
- 2003 John Monaghan becomes first BMSS President
- 2004 1st BMSS medal awarded to Ed Houghton 27th Annual Conference, Derby
- 2004 BMSS web-site launched
- 2004 Education Initiative launched
- 2006 BMSS Sponsored Lecturer Established
- 2007 Summer studentship programmes launched



# **Membership**

£30 per year (£10 for students)

- Membership entitles you to
  - Discounted registration for meetings throughout the year
  - Mass Matters publication
  - Access to travel grants
  - Access to equipment grants
  - Summer studentship grants
  - Textbook for student members



- Special Interest Groups (SIG)
- Annual Meeting
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# How does the BMSS fit in with the NHS?

 Historically members were predominantly analytical chemists

Academia Forensics

Pharmaceutical Industry Government agencies

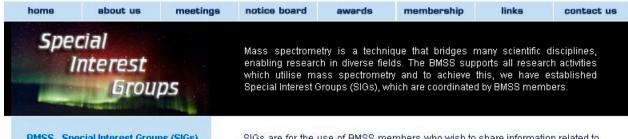
Environmental Food

Sports testing

Clinical diagnostics is now recognised as the fastest growing sector in MS



# **Special Interest Groups (SIG)**



#### BMSS - Special Interest Groups (SIGs)

- Biological MS
- Environmental MS
- Food and Nutrition
- Clinical and Forensic
- MALDI and Imaging
- Quantitative LC-MS
- Stable Isotopes

#### **Mass Spectrometry Discussion Groups**

BMSS Forum

London Biological Mass Spectrometry Discussion Group

RSC AMC Mass Spectrometry Sub Committee

SIGs are for the use of BMSS members who wish to share information related to specific applications of mass spectrometry, developments in instrumentation and the analytical technique itself, or any other activities of the Society.

Each SIG is intended to provide a forum for focused discussion and will be coordinated by a nominated BMSS member. SIG coordinators are responsible

- · Stimulating discussion and debate
- Convening meetings and/or sessions at BMSS conferences
- Maintaining an up-to-date distribution list

You must be a member of the BMSS to join a SIG, but may join multiple forums if you wish. To join, go to the individual SIG page and contact the SIG coordinator for inclusion in the group mailing list.

The BMSS and its members are also associated with a number of Mass Spectrometry Discussion Groups that support specific scientific communities and/or interests. These independent groups have regular meetings, often with invited speakers. Members of BMSS who are interested in joining should go to the specific discussion group web site (see links opposite)

If BMSS members have any feedback on existing SIGs or suggestions for other subjects/topics/applications of Special Interest, please contact either the individual SIG coordinators or the Committee member responsible for SIGs;

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www.bmss.org.uk



### Clinical and Forensic SIG

# Who are we? John Dutton

Bioanalytical Facility,
 Department of
 Musculoskeletal Biology,
 University of Liverpool



### Mike Wright

Department of
Biochemistry,
Addenbrooke's Hospital,
Cambridge University
Hospital Trust



### First tasks

- Set up a specific mail-base for Clinical and Forensic users
- Prepare a session of speakers at the next annual meeting (Cardiff 2011)
- Organise a specific 1 day meeting in collaboration with other clinical and forensic groups



# **Clinical and Forensic SIG**



### Clinical and Forensic

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### **Mass Spectrometry Discussion Groups**

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RSC AMC Mass Spectrometry Sub Committee This SIG is for people who use Mass Spectrometry in a clinical or forensic context. We hope that the Mass Spec experience held by the current members of the BMSS will assist healthcare scientists who find themselves working with these machines from the world of analytical chemistry, and that chemists embarking on clinical projects could tap into the knowledge of those members from the healthcare arena. If you would like any more information or have any suggestions then feel free to contact us.

To sign up to the Clinical and Forensics SIG mailing list please click here:

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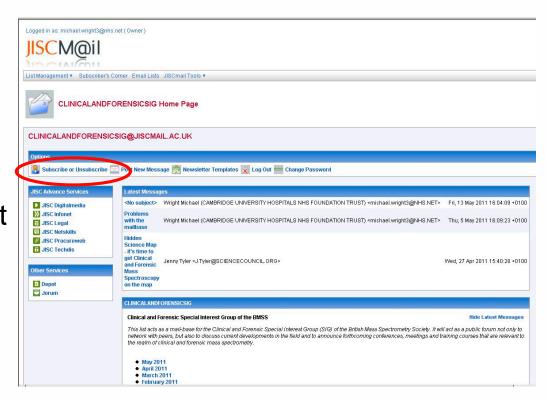
# The Clinical and Forensic SIG mail-base

 The BMSS already has a forum for discussion, however, it was felt that a separate mail-base tailored to our SIG was

required

 The mail-base is open to anyone and not limited to BMSS members

 Only restrictions are that the mail-base is not to be used for advertising of products





# Topics on the mail-base

"Our bone team want to look at low level E2. We presently have TSQ ultra +/- turboflow for such work. Has anyone worked this up with similar set up. Im aware of the application note using the TSQ vantage with LOD of 1pg/ml in BSA, and the comment on poster that this is 10 times better then TSQ ultra (with standard HPLC). Also has anyone gone down the tandem GCMS route?"

"We are currently having problems with contamination of our Waters Quattro Micro which we think is due to the solvents we are using, particularly methanol. Injecting methanol results in a number of unidentified peaks and also peaks characteristic of plasticisers. We get similar results with water, however acetonitrile seems fine. We are currently using LC-MS grade 'Fluka' methanol and water from Sigma, which we have been advised to use in the past, and have tried new bottles of a different lot number. I was wondering whether anyone else has seen similar problems with this methanol, and whether anyone would recommend methanol and water from a different supplier?"



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# **Annual Meeting**

- 3 day meeting held in September
- Covers a wide range of applications and developments in MS in parallel sessions over 3 days
- Special Interest Groups often host their own sessions
- MS training course
- Workshops
- Poster sessions
- Exhibitions



# The BMSS Conference & Exhibition Sunday 5th to Wednesday 8<sup>th</sup> September 2010





- First time away from a university setting
- Sessions comprised of:

### Day 1

Maccoll Lecture - Carol Robinson Next Generation

Environmental/Food analysis
Manufacturer/Exhibitor
Clinical Analysis

### Day 2

Plenary Lecture – Alison Ashcroft
Next Generation
Separation Science

Manufacturer/Exhibitor Biological Analysis

Day 3

Plenary Lecture – John Vickerman

Surface/Nano analysis

Instrument development

**Biological Analysis** 

Chair's invited speaker – Bob Boyd



# BMSS 2011: From Atoms to Biomolecules Cardiff city hall 11-14<sup>th</sup> September

Sunday LC-MS training course

Monday - Day 1 Maccoll Lecture -Richard Evershed

**Next Generation** 

Environmental/Food analysis

Manufacturer/Exhibitor Separation Science

Tuesday - Day 2 Plenary Lecture – David Muddiman

**Next Generation** 

**Instrument Developments** 

Manufacturer/Exhibitor

**Biological Analysis** 

Wednesday - Day 3 Plenary Lecture – Andy Tyler

Surface/Nano analysis

**MS** in Clinical Analysis

**Biological Analysis** 

Chair's invited speaker - Ron Heeren

**Free Workshop** 

LC-MS training course

Pathology LIMS interfacing



# BMSS 2011: From Atoms to Biomolecules Cardiff city hall 11-14<sup>th</sup> September

Will be hosting 2 sessions and 1 workshop on the final day of the meeting (Wednesday 14th September)

- First session will include speakers from various clinical and forensic fields
- Workshop will look at the difficulties in linking LC-MS/MS and GC-MS systems to hospital LIMS, covering the options and the questions you could ask
- Second session will be run in conjunction with the British Endocrine Society with invited speakers from this specialty





# **Meeting Costs**

- Registration at <u>www.bmss.org.uk</u>
- 3 day meeting
  - Members £330 (£120 concession)
  - Non members £380 (£140 concession)
- 1day
  - Members £140 (£50 concession)
  - Non members £160 (£60 concession)



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# **LC-MS** course and Symposium

- A 2 day LC-MS training course & 2 day symposium run every 2 years at Robinson College in Cambridge
- Historically attended by analytical chemists from academia, pharma, CRO's, food industry etc
- 2009 saw the first year where a number of NHS staff attended
- This years meeting has been compressed into a single day and run twice along-side the Cardiff meeting
- Tuesday training course has been tailored to the needs of the clinical market



### **Introduction to Mass Spectrometry**

1 day short course

### September 2011

### Course Agenda

08:30 - 09:00	Registration and Coffee	
09:00 - 09:10	Welcome & Housekeeping	
09:10 - 09:40	Lecture 1 – Basics of Mass Spectrometry	Dr Mark Harrison
09:40 - 10:30	Lecture 2 – Ionisation techniques	Prof Rainer Cramer
10:30 - 11:00	BREAK	
11:00 - 11:40	Lecture 3 - Mass Analysers Part I: Quads and Traps	Dr Mark Harrison
11:40 - 12:20	Lecture 5 - Mass Analysers Part II: ToF's and Hybrids	Dr Jackie Mosely
12:20 - 13:20	LUNCH	
13:30 - 14:00	Lecture 5 - Sample Introduction: Interfacing MS with chromatography	Dr Steve Pleasance
14:00 - 14:40	Lecture 6 – Mass Resolution and Accurate Mass Measurements	Dr Jackie Mosely
14:40 - 15:00	BREAK	
15:00 - 15:40	Lecture 7 – Qualitative Mass Spectrometry:	Dr Tony Bristow
15:40 - 16:20	Lecture 8 – Quantitative Mass Spectrometry	Dr Steve Pleasance
16:20 - 16:40	Course summary and close	



# **The Course Tutors**



**Dr Mark Harrison**Senior scientist at
ThermoFisher Scientific



Prof Rainer Cramer FRSC Head of Mass Spec and Proteomics & Prof of Mass Spec and Bioanalytical Sciences, University of Reading



Dr Jackie Mosely Senior Research Officer Mass Spec, Electron Capture Dissociation, Novel Ionisation Techniques, Chemistry Dept, Durham University



Dr Steve Pleasance,
Managing Director of
Quotient's Bioanalytical
Sciences business unit.
Former Head of Worldwide Bioanalysis at
GlaxoSmithKline



Dr Tony Bristow
Associate Principal
Scientist in mass
spectrometry,
Pharmaceutical
Development,
AstraZeneca



# Course fees

- Course run on Sunday 11<sup>th</sup> September and Tuesday 13<sup>th</sup> September
- £350 (£200 concessions)
- Includes mass spectrometry textbook
- People attending the Tuesday course who also wish to attend the meeting will receive £50 off the meeting registration



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# **MASSMATTERS** Mobilising the future of mass spectrometry



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# The BMSS Education Initiative

- Education of the membership of BMSS is a key role of the society
- Student Travel Grants
  - The initiative funds travel grants to allow student members to attend UK based and international mass spectrometry meetings.
- The initiative funds a free mass spectrometry textbook for all new student members of BMSS



# BMSS Academic Summer Student Projects

- The projects are independently assessed for funding by the BMSS Advisory Board
- The key benefit of this activity is short-term research projects are funded in UK academic institutions
- This allows students selected for each project to gain experience in mass spectrometry, who otherwise may not have had the opportunity without this funding
- The short-term projects may also form the basis of more substantial future work programmes
- The results from the short-term projects may be used as justification for larger scale research funding applications



# Influencing chemistry education in the UK

- BMSS Sponsored Lecturer
- Established links with exam boards to advise on content of GCSE and A-level curriculum (Clinical influence?)
- Plans to write practical exercises for A- level students



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### Looking to recruit staff? **Vrs** Contact VRS on 0161 976 4000



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BRITISH MASS SPECTROMETRY SOCIETY

Your company logo could be here. Introductory price £100 per month. Contact us for further information.

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#### **Upcoming Meetings**

See below for details of relevant upcoming meetings.

If you wish us to advertise a meeting on this page, please download and fill in this proforma and mail it to us.

BMSS - 3 Day Meeting: From Atoms to Biomolecules Cardiff City Hall 11th - 14th September 2011

Latest information available from the BMSS2011 information page

### **Meetings 2011**

**Chromatographic Society Meetings** 

General Meeting

#### Analytical methods to combat the counterfeiting of medicines

16th June 2011 GSK R&D, Gunnels Wood Road, Stevenage

Sub-standard and counterfeit medicines are a great threat to public health. They may cause death due to the absence of active drug, as found in some vaccines and antibiotics, or because of the presence of a toxic material, such as the substitution of diethylene glycol for glycerol.

Counterfeit medicines are estimated to constitute more than 10% of the global medicines market and in some developing countries it is thought to be as high as 50%. One prediction is that global counterfeit drug sales will reach \$ 75 billion by 2011.

This one-day symposium looks at modern analytical methods to detect counterfeit



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# Working with other societies

- RSC
  - Chromatography & Electrophoresis/Separation Science Group & the joint meetings at Guys Hospital
  - NMR Discussion Group
  - AD
- Chromatographic Society
- Conference on Small Molecule Science (CoSMoS)
- British Society for Proteome Research
- Forensics Society
- British Vacuum Council
- British Endocrine Society



# Working with the MetBioNet

- Would like to investigate the possibility of a collaborative effort with a clinical or forensic group for each meeting (e.g. BES at Cardiff 2011)
- Meetings will be independent however each meeting will be sponsored by an instrument manufacturer (LBMSG)
- Location can either be variable or fixed. Possible Hospital/University sites located in Liverpool, Cambridge, London and Manchester.

### Suggestions?

