Chromatographic Characterisation and Purification Techniques for BioPharm Focusing on Monoclonal Antibody Derived Drugs.

Glaxosmithkline Medicines Research Centre, Stevenage Herts UK, 14 & 15 March 2012

Dr Chris Bevan, Events Coordinator, The Chromatographic Society.

Monoclonal antibodies are a very high growth segment in the biologically active molecules armoury of the Pharmaceutical industry. Annual sales are expected to exceed £35 Billion in the next four years. 23 full-size monoclonal antibodies and three monoclonal antibody fragments have been launched, with many reaching blockbuster status. An overview of the importance and value of large biomolecules to the pharmaceutical industry is evident from the data in the table below:

New Emerging Therapeutics Compared with Established Small Molecule Drugs

Rank	Product	Company	Technology	WW Sales ($m)
1	Lipitor	Pfizer, Astellas & Almirall	Chiral chemistry	13,507
2	Plavix	BMS & Sanofi-Aventis	Small molecule chemistry	9,447
3	Advair	GlaxoSmithKline	Small molecule chemistry	7,828
4	Enbrel	Wyeth, Amgen & Takeda	Recombinant product	6,455
5	Diovan	Novartis & Ipsen	Small molecule chemistry	5,825
6	Rituxan	Roche	Monoclonal antibody	5,481
7	Remicade	SGP, J&J & Mitsubishi Tanabe	Monoclonal antibody	5,293
8	Nexium	AstraZeneca	Chiral chemistry	5,200
9	Epogen/Procrit	J&J, Amgen & Kirin	Recombinant product	5,162
10	Avastin	Roche	Monoclonal antibody	4,818

The characterisation and purification of these molecules is currently one of the biggest scientific and technical challenges facing the pharmaceutical industry. This symposium will focus on solutions to these problems and discuss the unique issues presented by structurally complex, large molecular weight, biologically active molecules. An exhibition of tools necessary to address these problems will augment the lecture presentations. Experts from within the pharmaceutical industry and from instrumentation and consumable suppliers will present their latest innovations. The two day symposium will be held at the GSK R&D site at Stevenage and will facilitate delegate and exhibitor access to GSK's in-house scientists.

The afternoon of day two will feature two specialist workshops run by expert analysts from within GSK and from companies with proven solutions to the many analytical and preparative challenges incurred in characterising complex biomolecules. The aim will be to inform you with as much freedom of discussion as possible to ensure your questions and problems are addressed professionally with state of the art knowledge. In addition to chromatographic and electrophoretic separation science techniques our presenters will include mass spectrometry, NMR and structural methods to enable a more complete characterisation of these complex biomolecules.

In addition to the GSK scientists' lectures, presentations to note will be:

Analytical Development of Biopharmaceuticals and Assessment of Modification sites
Alistair D. Kippen, Director, Analytical Biochemistry, Medimmune, Cambridge

'A new approach for mAb aggregate detection – HIC with nonporous resin'
Judith Vajda, (Tosoh Bioscience)

'High Resolution methods for speeding up Bio-Therapeutic protein analysis'
Ken Cook (Thermofisher Dionex)

'Aeris: Core-Shell Technology for Proteins and Peptides'
James Rudge (Phenomenex)

'Advanced Analytical Workflows for Characterisation of Biological Entities – from intact mAbs to N-Glycans'
Ashley Sage (Agilent)

'Improved Method Development Workflows for Ion Exchange and Size Exclusion Chromatography of Biotherapeutics'
Patrick Boyce (Waters)

'Identification and characterisation of proteins'
Achim Treumann (NEPAF the North East Proteome Analysis Facility)

Possible title: 'Envoy' a product for protein disaggregation
Heikki Lanckreit, Founder of Expedeon Protein Solutions Ltd, Cambridgeshire

Porous Graphitic Carbon vs Strong Cation Exchange: Which is best in a 2D proteomics workflow?
Joanna Freeke (Thermofisher)

Quantitative analysis will also feature in the lectures as

Richard Kay QUOTIENT will give the following presentation:
'Challenges in quantifying monoclonal antibodies in biological matrices by LC-MS/MS.'

Our exhibitors and speakers have been drawn from companies and university departments who are experienced in the biomolecules area and represent separation science, structural characterisation and analytical methods. These will include specialists from mass spectrometry, NMR , particle size determination and stereo chemical and chiral fields.

In order to encourage social networking between delegates, presenters and exhibitors, a 10 pin bowling event with a buffet will be organised for the evening of March 14th at the Stevenage Hollywood bowl.

Please note: The Chromatographic Society website: **www.chromsoc.com** will publish future updates of the symposium programme as it develops.

How to Secure your Place at the Symposium:

Correspondence and bookings should be addressed to: Meeting Makers Ltd,
Crawfurd Building, 76 Southbrae Drive, Glasgow G13 1PP.
Tel: 00 44 (0) 141 434 1500, Fax: 00 44 (0) 141 434 1519
or visit: **www.meetingmakers.co.uk**

Delegate Admission Prices:

Chromatographic Society members = £250
Members of the BMSS and Royal Society of Chemistry are admitted at members prices = £250
Non-members = £300
Students, unwaged and retired = £100
EXHIBITOR AND SPONSORSHIP OPPORTUNITIES AND ADMISSION CHARGES
GOLD LEVEL SPONSORSHIP £1750
Table top exhibition stand and 20 minute lecture time integrated into the programme
Three free delegate admission places
SILVER LEVEL SPONSORSHIP £1250
Table top exhibition stand and 10 minute lecture time integrated into the programme
Two free delegate admission places
BRONZE LEVEL SPONSORSHIP £750
Table top exhibition stand and one free delegate admission place

NOTE: VAT at 20% is additionally charged on all prices