

PIAT NEWSLETTER

History of PIAT

The concept of PIAT was identified by the Industrial Pharmacy Group of the Pharmaceutical Society and competitive bidding to run the programme was won by the then Department of Pharmacy

in Manchester in 1989. The aim was to supply clearly identified training needs for employees in the UK pharmaceutical industry allowing qualifications up to the degree of MSc to be awarded. The most attractive feature of the scheme was the ability of employers and this was the main point that 'sold' the scheme to the Research Directors of ICI Pharmaceuticals, Smith Kline French, Glaxo and Burroughs Wellcome. All four agreed to help in the start up, with ICI lending the services of Dr Ray Longworth for a year, and the others offering financial help. Ray Longworth started as the first Director and put tremendous effort into promoting and administering the set up. The curriculum was planned in collaboration to retain the services of their staff while studying for PIAT qualifications, with major companies including Glaxo and ICI and a combination of authors and tutors from industry and academia were appointed. The first student entered the programme in 1989 and the first MSc graduate completed in 1995.

Following Ray Longworth in 1995 Dr David Sixsmith stayed as Director for 18 months and Dr Mike Spring followed and remained in position until 2003. Mike first worked in industry but spent the remainder of his working life in academia, researching, and teaching, in Pharmaceuticals, and he took on the job at a time when his health was deteriorating, continuing until 1999. The next Director was the highly experienced and widely respected expert in tableting, Dr John Fell, who continued until 2006. This was a time of rapid expansion for the programme with the plan to add a further four Modules, and Dr Brian Lockwood "volunteered" to lead the development.

Administration was originally carried out by Lesley Wiltshire, and Janet Anderson followed her in 1997. In 2008 Nick Clarke was appointed to administer and oversee the delivery of the four new programmes.

The Role of a Member of a Medicines and Healthcare Products Regulatory Agency (MHRA) Committee

The MHRA regulates a wide range of materials from medicines and medical devices to blood and therapeutic products/services that are derived from tissue engineering. Safety, quality and efficacy are the only criteria on which legislation to control human medicines is founded. It is the responsibility of the MHRA and the expert advisory bodies set up by the Medicines Act to ensure that the sometimes difficult balance between safety and effectiveness is achieved. MHRA experts assess all applications for new medicines to ensure they meet the required standards. This is followed up by a system of inspection and testing which continues throughout the lifetime of the medicine. Safety monitoring is also continuous and the MHRA also ensures that doctors and patients receive up-to-date and accurate information about their medicines. This is achieved by ensuring that product labels, leaflets, prescribing information and advertising meets the required standards laid down by the Regulations.



I have been an MHRA committee member for over two years and am well into my four year term of office. Meetings are timetabled to be held monthly but a number of them are cancelled on my committee. The committees are composed of representatives of interested bodies and experts in the field, in addition to lay members, plus full time MHRA staff and a chairperson. Which ever committee is involved with particular duties, guidelines are clearly laid down, and no members are allowed particular interests, namely employment in the pharmaceutical industry, or specific interests such as consultancy for a particular company. Most issues to be resolved concern product licence applications, and may be either simple or protracted, lasting over a number of meetings. On occasion representatives of the licence applicant may offer, or be invited, to attend a presentation of their case. Meetings are routinely held in the Market Towers building at Vauxhall, but may be transferred to alternative venues nearby. The picture (right) is of the Oval Cricket Ground, visited in a December meeting (when cricketers were absent!).

Degree Day—December 2009

Professor Gillian Ecclestone, tutor for PIAT module 5, visited the School of Pharmacy at the December degree ceremony where her daughter Sarah was awarded her PhD



New Module Tutors

Dr Lesley Stanley has taken over the writing of the new Toxicology module "Molecular and cellular methods" and will continue as module tutor. Lesley has wide academic and industrial experience, having worked for De Montfort School of Pharmacy, run CPD at Oxford University, and working for CXR. Dr Brendan Gilmore from Queens School of Pharmacy, Belfast has taken over the writing of Pharmaceutical Microbiology module No. 8 and will tutor it. He is currently editor of the industry standard textbook "Pharmaceutical Microbiology", 8th edition.

An original PIAT author, Dr Orla Cassidy has just agreed to update Module 3, "Preformulation Studies 2", which she wrote 10 years ago.

New Students

Over the last 12 months we have registered students from new geographical origins, namely Malta and Lithuania, and both are planning to carry out MScs.

Visits

Brian Lockwood visited the European Association of Faculties of Pharmacy in Catania in June to present a poster on PIAT entitled "Pharmaceutical Industry Advanced Training (PIAT) – Accredited Professional Development for the Medical and Healthcare Industries".

Future Conferences

1 September 2010 - 3 September 2010
UK-PharmSci 2010
University of Nottingham, Nottingham, UK.

Industry Relevant Pharmaceuticals Electronic Textbooks

From January 1st a number of textbooks of industrial importance have been added to the University Library e-resources, and are accessible worldwide. These include;

Tablet and capsule machine instrumentation, Armstrong (Pharmpress)

Pharmaceutics: delivery and targeting, Perrie (Pharmpress)

Pharmaceutical Compounding & Dispensing Study Guide. FASTtrack Series. Langley (Pharmpress)

Handbook of pharmaceutical excipients, Rowe (Pharmpress)

Global Pharmaceutical Marketing: A Practical Guide to Codes and Compliance, Grice (Pharmpress)

Clarke's analytical forensic toxicology (Pharmpress)

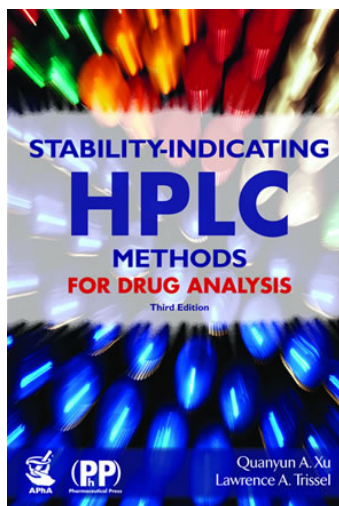
Basic pharmacokinetics, Jambhekar (Pharmpress)

Statistical issues in drug development, Pates (Dawsonera)

Applied clinical pharmacokinetics, Bauer (Dawsonera)

These can be accessed via the catalogue or mylibrary.com (Pharmpress) or Dawsonera.

Book Review—*Stability-Indicating HPLC Methods for Drug Analysis*



High Performance Liquid Chromatography (HPLC) has become the major assay technique in the pharmaceutical industry due to its ability to separate the majority of active drugs and their metabolites, in addition to the all important decomposition products, and its ability to resolve entities of wide ranging polarity, and ease of computerisation. This book is a unique and comprehensive collection of previously published stability-indicating HPLC methods, giving full

experimental conditions in 1,028 analytical methods covering 572 actives in total. The major benefit of this book is timesaving in searching for a suitable method. Separate sections in the text cover experimental details, including procedures for dilution, extraction and derivatisation, retention data, and information on standard curve, intra- and inter-day variation, plus limits of detection and quantitation.

The book is available as hardback and as an e-book in Medicines Complete.

Open Access Journals and Other Information Sources Available in Pharmaceutical Education, Research and Development

Open access (OA) is defined as the availability of a published item without charge to the user, for the right to read, download, print or distribute the item. The major suppliers of OA material are Not-for-profit publishers, which include learned societies and university presses whose interests are beyond making profit. There are a number of organisations prominent in OA, including PubMed International, BioMed Central, Highwire Press, J-Stage and J-East, Open J-Gate, and Free Medical Journals.

Open access journal full text links have been provided for 235 journals and 49 magazines in disciplines of pharmaceuticals, pharmacology, toxicology, physiology, clinical pharmacy, epidemiology, chemistry, pharmacognosy, microbiology, biotechnology, bioinformatics and multidisciplinary pharmaceutical sciences.

In addition to full content availability several journals offer a range of free back files or back issues, for examples see the pharmaceuticals journals below;

AAPS PharmSciTech www.aapspharmscitech.org 2000-2007 Vol 1 to Vol 8

Acta Pharmaceutica <http://public.carnet.hr/acphee>; <http://hrcak.srce.hr> 2003 Onwards Vol 53 Onwards

Asian Journal of Pharmaceutics www.asiapharmaceutics.info 2007 Onwards Vol 1 Onwards

Dissolution Technology www.dissolutiontech.com 1994 Onwards Vol 21 Onwards

Drug Delivery System www.jstage.jst.go.jp/browse/dds 2006 Onwards Vol 1 Onwards

Drug Metabolism and Disposition www.dmd.aspetjournals.org 1997 Onwards Vol 25 Onwards

Drug Metabolism and Pharmacokinetics www.jstage.jst.go.jp/browse/dmpk 2002 Onwards Vol 17 Onwards

PDA Journal of GMP and Validation in Japan www.jstage.jst.go.jp/browse/pda 1999-2006 Vol 1 Onwards

Polymer Journal www.jstage.jst.go.jp/browse/polymj 1970 Onwards Vol 1 Onwards

The Open Drug Delivery Journal www.bentham.org/open/toddj/index.htm 2007 Onwards Vol 1 Onwards

The Open Drug Metabolism Journal www.bentham.org/open/todmj/index.htm 2007 Onwards Vol 1 Onwards

The Open Macromolecules www.bentham.org/open/tomacroj/index.htm Journal 2007 Onwards Vol 1 Onwards

The Open Nanoscience Journal www.bentham.org/open/tonanoj/index.htm 2007 Onwards Vol 1 Onwards

Chemistry and Analysis journals are also available, but there is poor overall coverage. A number of (trade) magazines in pharmaceuticals are available including;

Biopharm International www.biopharminternational.com 2001 Onwards Oct 2001 Onwards

Pharmaceutical & Medical Packaging News www.devicelink.com/pmpn 1998 Onwards Jan 1998 Onwards

Pharmaceutical Manufacturing www.pharmamanufacturing.com 2002 Onwards 2002 Onwards
Pharmaceutical Technology www.pharmtech.com 2002 Onwards Aug 2002 Onwards 5
Pharmaceutical Technology Asia www.ptasiapacific.com 2007 Onwards Mar 2007 Pacific Onwards 6
Pharmaceutical Technology Europe www.ptemag.com 2002 Onwards Oct 2002 Onwards

Clinical Trials news can be found at;

Applied Clinical Trials www.actmagazine.com/appliedclinicaltrials 2001 Onwards Jul 2001 Onwards

Preclinica www.preclinica.com 2003 Onwards Mar/April 2003 Onwards

The best advice for finding this type of free information is simply to search the journal/magazine web site. The situation is constantly changing with new content appearing frequently.

Home Office Licence for CD (Licensed) Drugs

The School is currently planning to relinquish its licence to hold Cannabis, Coca and raw Opium which it has held for as long as licences were required by law. The cause of this is the planned increase in fees to an unacceptable level (previously free). This is a sad decision to make as we have a historical collection of balls (cannonballs) of raw Opium from the 19th century, plus numerous samples of Cannabis resin and herb. All these items were legitimate articles of commerce when the collection was established. Until recently Cannabis was used for Forensic Science practicals and a further generation ago these materials were displayed on open access and even handled by students in lectures and practicals. With current legislation and risks involved with controlled drugs this collection has no further current use.



Poppy Capsule, Cannonball of Opium, Opium Pipe

New Developments

PIAT is currently applying for university accreditation of another version of the programme which is designed for students (mainly international) to carry out a fulltime one year MSc in Manchester. The modules currently available can be studied in Manchester along with a 3 month (60 credit) practical dissertation. This programme is specifically intended for students currently not working in industry, but who plan to do so after their degree.

Publications

The June edition of European Industrial Pharmacy has published an article on PIAT and also generously included an advert for the programme. European Industrial Pharmacy is the official publication of the European Industrial Pharmacy Group and membership is open to all pharmacists in the Member States of the EU, currently including around 13,000 members (further information is available at www.eipg.eu/).

Rowarth Pharmacies

The School of Pharmacy recently accepted a donation of Pharmacy antiques from a South African pharmacist, Lynette Butler. She was the last pharmacist in an established pharmacy family owning three businesses in Pretoria, South Africa. The family opened the first in 1888, and a further two soon afterwards. One of these was inadvertently lost in a card game shortly afterwards! The picture shows plenty of bottles (exposed to daylight) but there is little visible evidence of solid dosage forms.



PIAT Graduands— Certificate and MSc 2010

Páraic Ellard, MSc with Distinction
James Henton, MSc with Merit
Graham Lane, Msc with Merit
Mark Lynam, MSc with Merit
Eng Chin Peh, Msc with Merit
Charlotte Yates, Certificate Pass

Congratulations!



FUTURE ISSUES...

- Trends in the area focus of leading pharmaceutical companies
- Medicines complete review
- Site visits

Brian Lockwood
Director of PIAT
July 2010