



# Academic Pharmacy Group Newsletter

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## **FROM THE EDITOR**

I am pleased to present the largest issue yet of the Newsletter, which I hope you will find an interesting mix of news, meeting reports and information from and about pharmacy academia. I am particularly proud to have in this issue two 'scoops', exclusive articles written for us by academic pharmacists (Professors Jim Smith and Stephen Denyer) who have made national pharmacy news in the last few months.

As always I am indebted to contributors, who have given of their time to write articles or reports of conferences and meetings and without whom our issues might be pretty thin. I would also very much welcome contributions from other members of the Group. You can write on more or less anything you like related to the sector or your job that you think would either interest your colleagues, get them nodding in agreement with or, perhaps better still, infuriate them to the extent that are spurred into penning a response, thus ensuring that our pages remain well filled. I would also welcome suggestions on how you feel the Newsletter might be improved, and ideas for new articles or features. Please contact me at: [alannathan@onetel.com](mailto:alannathan@onetel.com) or [alan.nathan@kcl.ac.uk](mailto:alan.nathan@kcl.ac.uk)

My thanks, as always, to the RPSGB staff who have helped in putting this issue together: Zoe Whittington, Research Manager, currently on secondment at the Council for Healthcare Regulatory Excellence (CHRE); Beth Allen, Acting Research Manager in Zoe's absence; and Florita Sanz, Team Secretary, Research & Development who looks after the technical production.

## **NEWS FROM PHARMACY ACADEMIA**

### **Chief Pharmaceutical Officer moves to academia**

Dr Jim Smith, who was Chief Pharmaceutical Officer for England at the Department of Health for more than four years, has retired from the post and taken up an appointment as professor of pharmacy practice and policy at the University of Sunderland. Professor Smith discusses his move and what he is aiming to achieve in his new job in the article below.

### **Some reflections on becoming an academic pharmacist**

I became a paid-up member of the academic pharmacy community in September, after almost 34 years as an NHS and, lately, Government pharmacist. Your editor said people might be interested in why I had made this change and my early thoughts on the transition.

The words 'academic' and 'academia' are too often used as pejorative terms. I have always disliked this tendency which is, unfortunately, shared by not a few of our colleagues in pharmacy. It seems to me a lazy way for people to criticise, without engaging in proper debate about issues. And it betrays a lack of awareness of the need for our profession to have strong and constantly growing intellectual roots. The fact that we have only had a University pharmacist on the Society's Council as of right since last June – and that after the idea was initially rejected by Council – is I think symptomatic.

I have enjoyed close links with the academic world for many years, through teaching, research projects, help with programme design, advisory boards and examining, holding various honorary appointments since 1977. I have had links with Bradford, Brighton, Sunderland and the University of London schools at various times and, for many years, I worked closely with the clinical pharmacology team at Newcastle medical school. So when the time came to make a change, the move into higher education felt the natural thing to do.

Working for central Government was fascinating. The policy process has its own dynamic which is quite unlike any other area of work and it is enormously satisfying to see your contribution working through into policy and legislation. But there are, of course, constraints. The process is collective and final decisions are made by Ministers. Officials – and Ministers – often have to advocate and implement policies that they have privately argued against. So the ability to think, argue and publish more freely is a big attraction of the move, which I am already enjoying.

I started my career in pharmaceuticals, working in the areas of liquid crystals and monolayers, and spent some time in product development in industry – there was a time when I saw myself as a formulator of medicines, rather than policies! I was then attracted into the NHS by the renaissance of hospital pharmacy which began in the mid-1970s. But I have never lost my interest in the pharmaceutical sciences or the conviction that they are of fundamental importance to the profession. Pharmacists should not be

barefoot doctors but real 'experts in medicines' (to use an overworked phrase that, sadly, is often far from true). Taken together, the pharmaceutical sciences constitute a core knowledge base that no other profession possesses. The underlying science of drug action is virtually absent from the nursing curriculum and is being progressively squeezed out of the medical curriculum – incredible when a prescribed medicine is by far the most frequent treatment offered to patients, and when drug regimes are increasingly complex. So we have a 'unique selling point' for pharmacists and pharmacy which we need to exploit to the full.

The trick, of course, is to integrate up to date science with clinical and social pharmacy, pharmaco-epidemiology, pharmaco-economics and all the other expertise that makes pharmacy so central to managing medicines in modern health care systems, whether in individual patients or at corporate level. We have not always managed to achieve this – recent 'practice versus science' debates have been predictably depressing. I am looking forward to helping achieve such integration in teaching and research.

#### **Early experiences of an RPSGB Council member**

In the May of this year Professor Stephen Denyer, Head of the Welsh School of Pharmacy, Cardiff University, took his place as the first academic nominee member of the RPSGB Council.

Professor Denyer reports on his first few months in office.

In March 2005 I was asked by Society staff to prepare two presentations, one on higher education and the other on pharmaceutical science, to present to members of Council following their election. It was with some amusement therefore that I found myself presenting at my own induction on 11<sup>th</sup> May 2005 as a new Council member.

I came to Council amidst warnings of past disagreements, factionalism, Council member inexperience, and excessive lay presence. What I discovered were undoubtedly historical tensions but also a keen desire to make the new Council work. I have found myself surrounded by committed pharmacy professionals and lay persons with impressive and diverse backgrounds. I have also realised that there is an absolute need to have senior pharmacy academic representation on Council given the specialist nature of this branch of pharmacy. Healthcare professions are under unparalleled scrutiny. The Society, most necessarily its staff and Council members, need to be particularly aware of the shifting professional regulatory environment in order to chart the course of the profession through such complicating features as: the Shipman and Foster reviews; national continuing professional development and fitness to practise agendas; the relationship of Charter status to statutory responsibilities; an expanding Higher Education sector; technician registration; devolution and National Boards. Arriving at even a modest understanding of these factors has required a considerable amount of dedicated work; for me, as for others, this has required the equivalent of some three to four days commitment per month. As a Council member you

are also drawn into committee roles; as might be expected I am a member of the Education and Science Committees, serving on the latter as Chair. I am also a member of the Society's Resource Management Committee and I currently chair the Section 60 Review Working Group. In this latter role, I am seeking to help define and co-ordinate Council's, and ultimately the Society's, response to the draft Department of Health Statutory Order which will define in statute the Society's responsibilities, powers and authorities.

As to my specific goals for the future. Pharmacy education is not the only area of new statutory responsibility for the Society but it is certainly one of the more complex, and one where the previous Council had already anticipated future development. Against this background I expect: to appraise Council members of the (pharmacy) higher education environment with a view to ensuring informed and appropriate decisions are made; to actively participate, through Society structures, in education matters; to keep academic colleagues informed of, and engaged in, educational debate and development with the Society, and; to assist the Society in representing accurately the strengths and complications of Pharmacy education to Government and others. Importantly, I do not doubt the need to work closely with members of the Academic Pharmacy Group in fulfilling my Council role. I look forward to your assistance.

**New Dean for the School of Pharmacy, University Of London**

Professor Anthony Smith, currently Head of the Department of Pharmacy and Pharmacology at the University of Bath and a former chairman of the APG Committee, has been appointed Dean of The School of Pharmacy, University of London. Professor Smith, will take up the appointment in Spring 2006 following the retirement of the current Dean, Professor Alexander (Sandy) Florence CBE, who has held the post since 1989.

Professor Smith said that he was honoured and delighted to be joining The School of Pharmacy, where Professor Florence has been an inspirational leader. He very much looked forward to continuing the School's development as a world-class centre for pharmacy education and research. Dr Philip Brown, the School's Chairman of Council, said that he looked forward very much to Professor Smith joining the school. He was confident that Professor Smith would continue and build upon Professor Florence's excellent work in maintaining the school's high rating in the Research Assessment Exercise, and in ensuring that it continued to provide the range and depth of training needed by the country's future pharmacists.

**The Teaching, Learning and Assessment (TLA) project. Update on assessment.**

The TLA project is one of three major national research projects connected with pharmacy education, funded by the Royal Pharmaceutical Society's Practice Research Trust. At the APG Seminar on Student Assessment (a

report on this meeting is on page 15), Professor Keith Wilson, a member of project team, presented the following report on the Assessment component.

The research was carried out in 2004 and was based on the 2003/4 academic year. Its aim was to undertake a baseline review of the current approaches to teaching, learning and assessment in UK schools of pharmacy.

### **Methodology**

- A documentary review was undertaken of data provided by schools for 2003/4. The documents included programme specifications; module descriptors or syllabi; student handbooks; year timetables, and Section 6 of schools' last accreditation submission. These were obtained either from school websites or by personal request.
- In 2004, 24 in-depth interviews were conducted with the undergraduate programme director and/or the pharmacy practice lead in all 16 established schools of pharmacy. Interviews were tape recorded and transcribed. Analysis by question was carried out, with data reduction into themes and identification of similarities and differences.
- Focus groups with students nominated by the BPSA were held at the British Pharmaceutical Conference in 2004.
- A questionnaire survey was conducted of all final year students in all 16 schools, 15 of which returned forms, providing a sample of 1847 students. The response rate was variable between schools, ranging from 14% to 85%; this was thought to be due to the different

methods for distribution of questionnaires used within schools.

### **Results**

#### **1. Examinations**

These were the principal form of assessment in the first three years, representing on average 66% of all assessment. Examinations represented a lower loading – an average of 44% - of final year assessment, mainly due to the project. Variation between schools was most marked in the final year.

#### **2. Practice/science balance.**

Most schools had a 'front load' of science in the earlier years of the curriculum, although three had integrated curricula. Practice/clinical assessments contributed more in the third and final year: the sector average ranged from 14% in the 1<sup>st</sup> year to 42% in the 4<sup>th</sup>. There were marked variations in final year practice/clinical assessments, from 75% to 20% of the total.

#### **3. 4<sup>th</sup> Year research project**

- Projects occupied an average of 40% of curriculum time in the final year, with a range of 25% to 61%. Assessment contribution generally matched time contribution.
- There was a common approach to assessment in all schools – either double marking or moderation with a system of adjudication for differences.

#### 4. Continuous assessment

- There was a wide variety of approaches among schools.
- Practical reports, tests and assessed labs featured heavily in the first two years.
- 8 out of 16 schools used video-recorded presentations, mainly in the 3<sup>rd</sup> and 4<sup>th</sup> years.
- 9 schools used OSCEs or variants.
- 13 schools used peer assessment in some form.
- All schools had some group work.

#### 5. Assessment of competence

- Academic staff interviewed had difficulty in defining assessment of competence to practice in relation to the u/g programme.
- Competence assessment was mainly focussed on Dispensing and Law & Ethics. There was a variable pattern of assessment, but the trend was to assess these towards the earlier part of the degree. Most schools (12/16) had Dispensing assessment, and half of schools had the main L&E assessment, completed by the end of Year 3. Assessment was regarded as being more of knowledge and behaviour than of attitudes and values; interviewees in only 6 schools considered these assessments to measure the qualities required to be a pharmacist.
- The main deficits of these assessments was considered to be in assessing workplace skills, and a distinction was made between preparation for

pre-registration training and preparation for practice. However, the general view was that there was no formal articulation between the degree and the pre-reg year.

#### 6. Final degree mark

- The final degree mark is generally weighted towards the final year: average 58%, with a range of 40% to 70%.
- The contribution of the 4<sup>th</sup> Year project to the final degree mark averaged 18%, range 8% to 29%.
- Practice/clinical:science balance. The overall contribution of Practice/Clinical to the final degree mark was 40%, range 21% to 63%.

#### 7. Views on assessment

- About 70% of students who responded to the questionnaire survey thought the balance of assessment to teaching in the curriculum and the amount of formal assessments was about right. The same percentage felt that there was more assessment than on other courses. Only 15% believed that assessments adequately measured the skills necessary to be a pharmacist.
- Of staff interviewed, half thought that there was some over-assessment and there was a view that there was more assessment than in other degree courses.

#### Conclusions

- There is a heavy dependence on formal examinations.

- The focus in assessments is on knowledge and practical skills.
- There is variation between schools in the knowledge and skills that determine degree outcome.
- There is a perception that the assessment load is high.
- Dispensing and L&E are still central to professional assessment
- There is a need for a consensus on the assessment of professional and clinical competence within the MPharm, in respect of:
  - integration with pre-reg training
  - balance of knowledge, skills, attitudes and beliefs.

#### **Pharmacy Practice Research Trust Seminar**

A presentation of the project findings to date was made by the Aston research team at a seminar at the RPSGB on 19<sup>th</sup> September, under the chairmanship of Mr Peter Curphey, Pharmacy Practice Research Trustee.

Mr Curphey provided some background on the Trust and the motivations for commissioning this piece of research. He said that like every other healthcare profession, pharmacy is changing rapidly. Its knowledge and practice base is affected by external change – technological developments; changing patient expectations; new professional governance requirements; developments in other professions; and a modernising health service. These changes are stimulating a variety of responses within the profession including challenging new roles for pharmacists such as prescribing, greater clinical input and

autonomy and development of support staff roles. These developments may require changes in the education and training of pharmacists at all levels – from foundation, pre and post registration and continuing professional development. The Pharmacy Practice Research Trust therefore commissioned a survey to ascertain current teaching, learning and assessment methods across all schools of pharmacy.

Recommendations for next steps were made by the research team – areas that these covered were:

- review the articulation between degree and preregistration training;
- review the obligations of pharmacists and pharmacy organisations to support education; and
- better communication between RPSGB and schools of pharmacy.

For a copy of the published report *MPharm programmes: where are we now?* or for further details of the outcomes of this event, contact Beth Allen-Acting Research Manager (Tel: 020 7575 2466) or e-mail [beth.allen@rpsgb.org](mailto:beth.allen@rpsgb.org).

#### **APPLET and the future**

APPLET (Advancing the Provision of Pharmacy Law and Ethics Teaching) is a centre for information, teaching materials and discussion relevant to law and ethics aspects of undergraduate courses for pharmacy in the UK. It was established in 2002 as a three year project using funding from HEFCE and operates mainly through a website, operated through a collaboration between the Nottingham,



Aston and De Montfort schools of pharmacy. The project ends at the end of September 2005, but transferability funding has been negotiated to enable it to work with new or prospective Schools of pharmacy in 2006. During the summer, Professor Joy Wingfield of Nottingham University, who has led the project team, hosted regional meetings in Leeds and London to present a progress report on the project and to discuss future plans. The meeting also incorporated the Royal Pharmaceutical Society's biennial Law and Ethics update for lecturers provided by the Society's staff. Details of these presentations are available on the APPLET website: <http://www.nottingham.ac.uk/pharmacy/applet/>

### **Progress report**

Professor Wingfield reported that the project had been very successful, both financially and in terms of what it had achieved. It had delivered more within its £250,000 allotted budget and had exceeded its performance targets. The project had built up a significant body of teaching resource which was available to all law and ethics teachers, had established a community of law and ethics teachers involving all schools of pharmacy and had formulated an agreed teaching curriculum. The website had been re-designed and re-launched and now included a facility for communication and sharing of views by e-mail, 'what's new' and search facilities, and piloted and evaluated teaching material. Plans for the next few months included an evaluation of the project, dissemination of the work done through publication of papers, and a discussion of how the resources and initiatives established might be

continued beyond the project's end. The possibility of integrating law and ethics teaching with that of other health care professions was also being considered. Professor Wingfield also thought that there was scope for further research into Pharmacy Law and Ethics as an academic discipline in its own right.

### **The future**

In the remaining 18 months or so before the project ended it was planned to extend it to the five new schools of pharmacy, fostering awareness and use of the facilities, bringing in new teachers with possibly new teaching methods to share, and evaluating the existing materials in the new schools. A two-part short residential course for teachers, at nominal cost, was also planned for 2006 (for details see Noticeboard). Other possibilities for 2006 included a series of study days on teaching and assessing healthcare ethics and a conference with other health and social care professions. Professor Wingfield then considered the future beyond APPLET. There would be a need for relatively modest funding to maintain the facilities that had been established. This could be provided through a small contribution from each school of pharmacy. The Royal Pharmaceutical Society might also be persuaded to contribute to further its interest in the promotion and study of 'professionalism', as might the DoH in connection with its interest in governance for the new roles that it is encouraging pharmacists to undertake. Teachers attending the meeting considered issues concerning the future of pharmacy law and ethics teaching, for their conclusions to be

fed into the project group's deliberations.

### **Additional comments**

Professor Wingfield has provided the Newsletter with the following additional information. The three-year HEFCE teaching quality enhancement funding for APPLET officially finished at the end of September 2005. Our budget was husbanded wisely and we will carry out some of the planned activities in 2006 from our original money.

The APPLET project has been a success:

- in project management terms by staying within budget, being delivered to time and delivering outputs as promised.
- in philosophical terms by raising consciousness in a wide range of pharmacy teachers and their colleagues to the breadth and depth of topics and approaches that might be encompassed by the term "pharmacy law and ethics".
- in practical terms: over 100 pages of resource on the APPLET website, a thriving and involved community of more than 40 practice teachers across the UK, a handbook of commissioned teaching material specifically for the needs of pharmacy teachers and (in May and September 2006) two short residential courses for teachers themselves.

- In raising with pharmacy's professional body the profile of pharmacy law and ethics within the general curriculum for pharmacy teaching and engaging stakeholders in academia, from the profession, from the Department of Health, from bodies representing employers to students to oversee our direction and purpose

APPLET was managed by a partnership between Nottingham (Joy Wingfield), Aston (Keith Wilson and Mark Brennan) and De Montfort (Sandra Hall) Schools of Pharmacy ably supported by Phil Whieldon our project manager who now has a new job at St Martin's College, Cumbria. All three Schools will continue to have an input into APPLET transferability activities. We welcome further teaching material and methods for the website, suggestions for the What's New? section and hope that our community of academics will continue to talk to each other through the APPLET email group. We hope to recruit a part-time project assistant to take forward our activities in 2006 and look forward to including new Schools in our network.

Watch out for further details and booking for the short courses and further dates in 2006 for a regional meeting or two. To find out more, go to [www.nottingham.ac.uk/pharmacy/applet](http://www.nottingham.ac.uk/pharmacy/applet) or e-mail [joy.wingfield@nottingham.ac.uk](mailto:joy.wingfield@nottingham.ac.uk)

### **FUNDING OPPORTUNITIES**

<p><b>RPSGB Pharmacy Practice Trust Research Awards and Training Bursaries, 2005</b></p>
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The Pharmacy Practice Research Trust recognises that, as in any field of academic endeavour, the quality of the research produced relies heavily upon the availability of a properly equipped research workforce. The Trustees are therefore committed to supporting the development and training of the research workforce and are pleased to announce four Pharmacy Practice Research Awards and four Research Training Bursaries for 2005 with a total value of £109,315 (£49,670 allocated to the Research Awards, £59,645 allocated to the Bursaries).

The Leverhulme Trade Charities Trust is funding three Sir Hugh Linstead Fellowships:

- Miss Ranjita Dhital from the Substance Misuse Service, Central and North West London Mental Health NHS Trust will receive £31,500, which she will use to carry out an evaluation of an alcohol screening service in community pharmacy.
- Dr Jennifer Scott of the Department of Pharmacy and Pharmacology, University of Bath will receive £5,000 to conduct research on why pharmacy based needle exchange is failing to expand in response to increasing need and how this problem can be overcome.
- Dr Louise Hughes of the Welsh School of Pharmacy, Cardiff University will receive £5,000 to explore the role of the Welsh language in community pharmacy service provision in Wales.

In addition, the RPSGB's **Galen Award** is providing funding of £8,170 to Miss Denise Taylor of the Department of Pharmacy & Pharmacology, University of Bath to conduct a study on patient and carer perspectives of living with anti-dementia medicines.

The successful 2005 Research Training Bursary Applicants (funded by the **Leverhulme Trade Charities Trust**) are:

- Mrs Jessica Purkiss, a locum community pharmacist from Co. Durham, will receive £4,985 for a Level 1 Bursary on Research Methodology and Survey Design at Northumbria University/NoReN.
- Mr John Hall, a community pharmacist from Co. Durham, will receive £12,000 for a Level 2 Bursary to conduct an MPhil at the Graduate Research School, University of Sunderland.
- Miss Nazmeen Khideja, a pharmacy and clinical services manager from Birmingham will receive £4,500 for a Level 2 Bursary to carry out an MSc in Community Clinical Pharmacy (conversion from diploma in community pharmacy), Aston University.
- Miss Anita Sharma, a self employed locum from Manchester, will receive £38,159.57 for a Level 3 Bursary to carry out an MSc in Health Psychology, University of Bath.

Details of the application process for the 2006 Research Awards and Training Bursaries will be announced in January 2006. For further information on the 2005 Awards & Bursaries or previous individuals funded through the Research Award and Training Bursary schemes please contact Beth Allen, Acting Research Manager (Tel: 020 7572 2466, Email: [beth.allen@rpsgb.org](mailto:beth.allen@rpsgb.org)).

#### **RPSGB Practice Research Trust**

#### **Learning from innovation in pharmacy education grant holders announced**

There is a need to develop a learning and reflective culture in pharmacy education and to encourage academics to evaluate and review developments in education provision. However, many academics cite lack of time and funding as barriers to exploration of the impact of educational developments. Therefore, the Pharmacy Practice Research Trust is funding a series of small-scale studies designed to encourage pharmacy academics to evaluate and explore aspects of pharmacy education.

The scheme supports development of education policy by beginning to collect evidence and supporting the academic community to think about and share innovation in teaching, learning and assessment.

These mini-projects build on the recent "Teaching, Learning and Assessment" study launched at the recent seminar "Teaching, Learning and Assessment in the MPharm: Where are we now?" held at the RPSGB on 19<sup>th</sup> September

(see page 3 for report). They are designed to provide small amounts of funding (up to £5,000) to promote and disseminate effective learning and teaching activities. The following ten applications were successful in obtaining funding:

#### **Dr Angela MacAdam, University of Brighton**

*An investigation into which factors affect the perceived success of the experiential community pharmacy visits in year one of the MPharm programme*

#### **Dr Imogen Savage, University of London**

*Learning how to teach the "final check"*

#### **Professor David Mottram, Liverpool John Moores University**

*Evaluation of the current and future provision of pharmacy undergraduate research projects*

#### **Dr Dai John, Cardiff University in collaboration with Professor Keith Wilson, Aston University, Mr Simon Tweddell, University of Bradford and Ms Ruth Edwards, Robert Gordon University**

*Current and future methods for teaching and assessment RPSGB fitness to practise procedures*

#### **Professor Kevin Taylor, University of London**

*How do pharmacy students learn?*

#### **Miss Denise Taylor, University of Bath**

*Using videoed teaching OSCEs to aid student assessment*

#### **Dr Lesley Diack, Robert Gordon University/University of Aberdeen**

*E-learning for sharing across medical, health and social care undergraduate students: development, evaluation, assessment and dissemination of an e-learning inter-professional module*

**Mrs Dawn Bell, South Manchester University Hospitals NHS Trust**

*A study to develop and test a new method of assessment of communication skills of pharmacy undergraduate students: the patient as the assessor*

**Dr Derek Stewart, Robert Gordon University**

*Developing and evaluating an E-network of pharmacists undertaking supplementary prescribing training and their linked designated medical practitioners, which is supported by academia, aiming to enhance the period of learning in practice*

**Mrs Alison Gail Eggleton, University of East Anglia**

*Portfolio based learning and assessment: optimising its use within pharmacy*

For further details of the successful applications for the Learning from Innovation in Pharmacy Education Mini Project Scheme please contact Beth Allen, Acting Research Manager (Tel: 020 7572 2466, Email: [beth.allen@rpsqb.org](mailto:beth.allen@rpsqb.org)).

**Society relaunches PhD Scheme**

In 1998 Council agreed that the Society should fund a PhD Grant Scheme and that the Scheme would run for a period of five years. The Scheme was reviewed by the Society's Council at their meeting in October 2005 following a wide consultation exercise with

stakeholders conducted between February and May 2005. Council agreed that a new PhD Award Scheme would be launched in 2006. The new Scheme will be based on a competitive process. All schools who have accredited MPharm programmes will be eligible to host one of two PhD grants each year but each school will only be able to host one grant at a time. The Scheme will be reviewed after three years. In funding these grants the Society is looking to build academic workforce capacity amongst pharmacists and to advance scholarship in areas of science relating to pharmacy (including biological, physical and chemical sciences, clinical, social and behavioural science). Further details of the Scheme will be in the next Newsletter.

**MEETING REPORTS**

**Education at the British Pharmaceutical Conference 2005 Report by Beth Allen**

**1. Sessions**

Pharmacy education was well represented at the 2005 British Pharmaceutical Conference in Manchester. Below is a summary of the work presented and the questions it raised:

**Science or practice? Undergraduate opinions**

*JK Jesson, KA Wilson, CA Langley, K Hatfield & L Clarke*

Professor Keith Wilson, Deputy Head, School of Pharmacy, Aston University gave a presentation on student attitudes to their course which draws on the findings of the teaching, learning and assessment study in UK

pharmacy undergraduate programmes recently published (commissioned by the Pharmacy Practice Research Trust).

There has been considerable debate within the academic pharmacy profession about the balance within the curriculum of science and practice topics. To ascertain students' attitudes to this balance the 16 established UK Schools of Pharmacy were surveyed (gaining a 51% response rate). The survey responses indicated that although there is a cohort of around one-third of the students who perceive that there is too much time devoted to pharmaceutical science, the net opinion of the students is that the balance is about right.

These findings prompted questions from the audience seeking an explanation of the paradox that many students, when completing their UCAS forms, cite chemistry A-level as a driver for choosing pharmacy as a degree. However, once enrolled on the MPharm many students no longer enjoy the chemistry element of the course. These issues were not addressed in this particular study presented but were looked at in a separate study to come out later this year, also conducted by Aston University and commissioned by the Pharmacy Practice Research Trust, entitled *Pharmacy Undergraduate Students: Career Choices and Expectations Across a Four-Year Degree Programme*.

**A professional development portfolio in a new MPharm degree course: students' perception of tutors' role**

*P Donyai, L Rothwell, M Webb & GJ Sewell*

Dr Parastou Donyai, Senior Lecturer in the Department of Pharmacy, Kingston University gave a presentation on pharmacy students' perception of tutors in driving the completion of profession development portfolios (PDP).

Reflection, planning, action and evaluation underpin practising pharmacists' Continuing Professional Development (CPD) and undergraduate pharmacy students' 'personal development planning'. Questionnaires and focus groups were conducted to explore the students' perception of personal tutors' role in the PDP process.

The study found that the tutor was seen as an 'agent' 'acting upon' the student. Completion of PDPs by the first year undergraduate MPharm students was a tutor driven process and highlighted the importance of the tutor role in developing students as self-supporting experiential learners ready to undertake CPD independently as practising pharmacists.

**E-learning: the capabilities and propensities of pharmacists to utilise it**

*Sally Lau*

Mrs Sally Lau of the Welsh Centre for Post Graduate Pharmaceutical Education, Cardiff University presented findings from a study investigating the extent to which pharmacists use e-learning and identifying the information and communication technology (ICT) skills needed by them to foster the use of e-learning.

32 pharmacists enrolled on an institution-based learning programme

completed a questionnaire to address the aims of the study. The results derived from this questionnaire suggested that e-learning by pharmacists is on the increase and that it is a valuable adjunct to institution based learning in maximising blended delivery. However, pharmacists have not fully developed their capabilities in the use of e-learning. It was concluded that increased training in ICT skills can foster the use of e-learning.

The question was raised that if ICT in community pharmacy could ameliorate problems of isolation, perceived lack of clinical knowledge and self confidence, why aren't pharmacists making greater use of it? Suggestions were made that many pharmacists have restricted access to ICT in the work place in terms of time and facilities.

A concern raised in the audience was that pharmacists have a responsibility to educate patients and the public to access technology to address their healthcare needs. However, this will not be achieved if pharmacists cannot themselves demonstrate competent use of the available technology.

### **Multidisciplinary learning in the MPharm degree**

*CA Langley, KA Wilson, JK Jesson, L Clarke & K Hatfield*

Dr Chris Langley, Lecturer in Pharmacy Practice & Head of Pharmacy Practice Teaching Group, Aston University presented further findings from the teaching, learning and assessment study on the mapping and documentation of current programmes in the 16 established Schools of Pharmacy.

From the study it was identified that of the 16 Schools of Pharmacy, five undertook multidisciplinary learning, one was involved in some multidisciplinary teaching and five undertook some teaching with other science students.

A number of advantages and disadvantages of multidisciplinary learning and the wide variability of its use in the MPharm were discussed. However, the majority of students found it a valuable experience and this was reflected in their support for its compulsory inclusion in pharmacy programmes.

### **Evaluating clinical performance: a study of undergraduate pharmacy students**

*M Corbo, J Patel, R Abdel Tawab & JG Davies*

Ms Maja Corbo, Division of Pharmacokinetics and Drug Therapy, Department of Pharmaceutical Biosciences, Uppsala University, Sweden presented findings from an evaluation of the clinical performance of a final year cohort in Brighton University in order to highlight clinical skills gaps.

The cohort of students was subjected to an objective structured clinical examination (OSCE) following a week-long placement. The study showed that overall, students performed best on patient counselling stations and poorly on calculation, and problem identification and resolution stations. It was suggested that a lack of clinical exposure may be, in part, responsible for the students' perceived inability to deal with 'real-life' situations. Another suggestion was a lack of confidence in interacting with a GP.

**Learning through reflection: an initial study of pharmacists on a distance learning postgraduate programme**

*P Black & D Plowright*

Ms Patricia Black, Senior Lecturer/Director of Postgraduate Studies and Courses Development Manager, Department of Medicines Management, Keele University presented a study of postgraduates undertaking a written reflective portfolio to develop themselves as reflective learners and practitioners.

This research confirmed the work of previous studies in demonstrating that implementation of reflective practice is achievable. While pharmacists initially approached reflective learning with uncertainty and scepticism the majority came to recognise the value and benefits that reflective learning has for professional practice and personal development. Ms Black explained that the written reflection is perceived as a training tool for developing the mindset and skills for deeper reflective learning and practice that imbeds reflective learning as normal for professional practice, where previously it was viewed as alien.

This raised questions in the audience as to whether reflective learning could be introduced earlier in a pharmacist's career i.e. undergraduate education, and whether this could be linked up with the development and use of PDPs.

**2. Posters**

The following Education posters were also presented at the BPC:

**International Journal of Pharmacy Practice (Supplementary issue Sept 2005, Volume 13)**

- The undergraduate research project: evidence from the 2004 teaching, learning and assessment study - (Pg R60)  
*CA Langley, KA Wilson, JK Jesson, L Clarke & K Hatfield*
- Pharmacy professionalism in the undergraduate course: a survey of undergraduate preregistration pharmacy students (Pg R63)  
*A McGovern, CM Hughes & CG Adair*
- Education and assessment of supplementary prescribers managing oral anticoagulant therapy: using an OSCE (Pg R86)  
*I Man, B Coleman & D Patterson*
- Understanding preferences in pharmacist learning (Pg R89)  
*SF Lau*

**Journal of Pharmacy and Pharmacology (Science Proceedings, Supplementary issue Sept 2005)**

- A series of practical exercises allowing iterative development of laboratory skills (Pg S-42, 75)  
*PH Rowe & PNC Elliott*
- The content of pharmaceutical biotechnology within pharmacy programmes (Pg S-43, 74)



*G Walsh & R Muller*

- Are preregistration cross-sector placements useful? (Pg S-43, 75)

*DN John, S McAteer & DK Luscombe*

- Graduates' perceptions of skills developed during the fourth year of the MPharm degree (Pg S-43, 76)

*DN John & ML Hughes*

- Pharmacy graduates' opinions on their preregistration tutors: a GB survey (Pg S-44, 77)

*DN John, S McAteer & DK Luscombe*

- Views of preregistration graduates on the transition 'from student to professional' and on the role of OSCEs for assessment during the preregistration year (Pg S-44, 78)

*DN John, S McAteer & DL Luscombe*

- Why do students choose to read for a MPharm degree? Anonymous views of UCAS applicants who were invited to and attended an interview (Pg 45 (79))

*DN John*

- Usefulness of final year MPharm projects: students' opinions (Pg S-45, 80)

*D Sandhu & PC Seville*

- Usefulness of final year MPharm projects: supervisors' opinions (Pg S-46, 81)

*JA Ali & PC Seville*

- Does the MPharm degree prepare students for preregistration training? A preliminary, exploratory study using semi-structured interviews with pre-registration trainers (Pg S-46, 82)

*DN John & TS Prosser*

- Design of a web-based tutorial for acid-base equilibrium theory (Pg S-107, 247)

*JK Verdi & BR Conway*

- Differentiating inquisitive and acquisitive learning: a comparative study at the Portsmouth and Brighton schools of pharmacy (Pg S-108, 249)

*ME Billington, GP Moss, AJ Long, MH Sosabowski & MJ Ingram*

**APG Student Assessment Seminar  
- held on 14 September at RPSGB  
headquarters, London**

Dr Chris Rostron, Liverpool John Moores University - Chair, Academic Pharmacy Group Committee.  
Report by Alan Nathan  
(The report on Professor Keith Wilson's presentation on the Assessment component of the research project on Teaching, Learning and Assessment, sponsored by the RPSGB's Practice Research Trust, made at the meeting is on page 3).

**Harnessing wireless technology in practical work assessment**

*Drs Yvonne Perrie, John Marriott and John Williams, Aston University*

The presentation was made by Dr Perrie. The aim of the project was

develop effective assessment and feedback systems for use in lab practicals, to improve the learning environment and to support 'learning by doing'. The problems with existing practicals were that assessments were taking too long to mark, plagiarism was occurring, and timely and effective feedback was difficult to support, all of which produced a weak learning environment. The potential solution was to use IT based assessment in practicals, providing rapid assessment during the lab, offering timely feedback.

Assessment of the practicals comprised:

- an oral assessment of competency
- assessment of data collection, manipulation and interpretation, formatively assessed with feedback given, ensuring effective progression in the practical
- a summative assessment in the form of a quiz, assessed using a VLE (Virtual Learning Environment).

WebCT, the VLE, was used to deliver the quiz, with wireless networking to deliver it to students at their bench. Initially, hand-held systems were used as the delivery platform, but they proved not to be very user-friendly. Instead, an Apple iBook laptop with a 12" screen was used for each student. These were stored in a trolley ('mobile classroom') capable of securing the laptops, with charging facilities incorporated. Dr Perrie then provided examples of the quiz and the analysis of answers. Student perceptions of the new style assessments were very positive. Performance improved only slightly, but IT assessment may be more discriminatory. Staff perceptions

were that the new approach helped them to give more support to students' learning, to make better use of VLE, to make better use of their time, and to get more involved with practicals.

### **Exploring relationships between coursework and examination marks**

*Dr Sudaxshina Murdan, The School of Pharmacy, University of London (SoP)*

Dr Murdan said that students' coursework (CW) marks were very high, yet many students failed their exams. She showed comparative plots of CW versus exam marks which showed that the former were higher throughout the MPharm course.

Research was undertaken on the CW and exam marks of students at SoP to find out why this should be and if it was a problem. The study investigated the nature of CW for all semesters and compared exam and CW marks for all of them. Interviews were conducted with students and academic staff on the possible reasons for the discrepancy. One examination question and its related coursework were examined in detail.

### **Findings**

- Coursework was thought by students to be easy and generously marked; they had access to teachers, books and computers; the assessments were conducted while the subject was being taught; information did not have to be remembered; and students had access to their peers. The latter meant that students could discuss and share information; it also allowed some to ride on the backs of others.

- A correlation was found between exam and CW marks, but it was weak and depended on:
  - Student ability – there was less discrepancy between the two as ability rose
  - Year of study – the gap narrowed as the course progressed
  - The nature of the coursework – the gap was narrower in modules that were more interesting to students, had a higher staff: student ratio, and for work where there was no opportunity to copy from peers
- Was the gap between CW and exam scores a problem? If so, whose and does CW achieve its aim? Dr Murdan examined her own module on Emulsions to look for answers. She found that there was very little correlation between practical write-up and exam marks; that there was bunching of CW marks, with most students getting high marks; that the weakest students did not seem to be learning from CW; and that students saw CW as means of accumulating marks, rather than as a learning opportunity.

Dr Murdan concluded that coursework should be learning events but that the student focus was on the marks to be earned, and wondered what difference it would make if coursework was not marked.

### **The RGU OSCE experience**

*Ms Ruth Edwards, Lecturer in Pharmacy Practice, Robert Gordon University, Aberdeen*

Ms Edwards began by giving some background on OSCEs (Observed

Structural Clinical Examinations). They had their origins in medical education in the mid-1970s and were an assessment of clinical competency. Their use in Pharmacy education was relatively new, having only been introduced in the last 7 or 8 years. She then went on to describe how OSCEs are used in the RGU course, being first used in 1999 for a final year module and increasingly introduced into the course, now covering all except the 1<sup>st</sup> Year.

Having given an outline of a Pharmaceutical Care option OSCE (a mini-medication review in 50 minutes), Ms Edwards went on to outline the kind of questions that have to be addressed when thinking about introducing an OSCE:

- Which skills are they intended to assess? Could these be better assessed by other formats?
- What assessment tools to use, taking into account the need for validity, reliability and speed and ease of use?
- Are they to assess competency or academic knowledge? Are they to be formative or summative – or both?
- The logistics of the process – OSCEs are complex to organise, require large resources in terms of time and staff, and it is difficult to ensure the equivalence of exercises for all candidates
- Staff workload – several staff are needed for half a day, or more, at a time
- Simulated patients – who should be used? Staff may be too expert, while lay people may not know appropriate

- behaviours or responses for their roles
- Students. They find them stressful at first, but once accustomed they are appreciated as a preparation for practice.

**Assessing students using e-mail: quick, easy and kind to the trees.**

*Dr Jenny Scott, Lecturer in Pharmacy Practice, University of Bath.*

Dr Scott described how e-mail was used in a formative assessment in a Natural Products option in the 3<sup>rd</sup> and 4<sup>th</sup> Years. The module is a combination of medicinal chemistry and pharmacy practice. Students are each given an 'active' and an 'excipient' from a list of 50 of each. They are given two weeks to submit a paragraph on each, to include key information under prescribed headings. They submit their work in a single e-mail using a course code reference as title. The submission is read by a teacher and one of two responses is sent back to the student: 'OK', or 'Remedial' if not satisfactory. If the latter, the student must attend a remedial session to look at the problems and then resubmit. Advantages of the system include being easy to mark, requiring no paper, plagiarism being difficult because of the large number of combinations of substances and, if plagiarism is suspected, checking is relatively easy.

**MCQs – Not just an assessment of knowledge: the Pre-registration experience**

*Mrs Cathy Geeson, RPSGB Registration Examination Question Writing Co-ordinator and Mr Mark*

*Brennan (Aston University), Member of RPSGB Board of Examiners.*

The presentation was given by Cathy Geeson, who looked at a number of factors relating to the examination. After a short account of why the registration examination had been introduced – to provide an objective assessment of knowledge underlying practice in addition to the pre-registration tutor's assessment of competence and suitability of a trainee – Mrs Geeson went on to give some detail on the multiple choice questions (MCQs) used. She explained that they address important content, be well structured to avoid flaws that benefit test-wise candidates, and to avoid irrelevant difficulty. She said that the exam had to test more than knowledge in order to develop autonomous life-long learners, to direct trainees' learning appropriately, to focus the exam on important information rather than trivia, and to identify candidates who have memorised facts but cannot apply them. Mrs Geeson said that questions were designed to test knowledge and its application, comprehension, analysis, synthesis and evaluation, and gave examples of questions that tested for these. She described how series of questions that developed practice scenarios were used, and said that questions were designed to be 'practice real'. She ended by giving an account of the rigorous quality assurance process employed by the examination board, both in reviewing questions before use and examining their performance after exams. A number of statistical analyses, including facility, biserials, the spread of incorrect answers and response rate were applied. If questions appeared to have been ambiguous in any way, or to

discriminate poorly between good and bad candidates, they were removed from the papers and not marked.

**Group assessment in the clinical pharmacy problem-based learning course at the University of Manchester**

*Dr Jenny Silverthorne and Mrs Suzanne Thomas, Clinical Tutors*

The presenters explained that Clinical Pharmacy Practice (CPP) is compulsory for all 3<sup>rd</sup> and 4<sup>th</sup> Year students. It is taught at three Manchester teaching hospitals. PBL is introduced in the 4<sup>th</sup> Year, and the aims are to assess process rather than product, as exams tend to do, and team-working and clinical skills. Assessment is made of a poster produced by students who work in groups of three. The topics are selected by the students; it represents their coursework for the module for a whole semester and 20% of the Disease Management module. Before they start working on their own there is discussion in tutorials, written guidance, a marking scheme and examples of work from previous years are provided, and there is an opportunity for formative feedback. Students are supported during their work through discussion with their tutor of their choice of subject area and formative feedback on their first draft. Students are encouraged to consult their tutor should any problems arise, and there are strategies for dealing with unresolved problems. In marking posters tutors use a scheme similar to that for conferences, etc. Marking criteria include presentation, the quantity and accuracy of information, and use of English. Equal marks are given to all group members. Limitations to the scheme include the

fact that the group process is not assessed, that there may be unequal participation, that innovation is poorly recognised, that the full range of skills associated with PBL cannot be assessed, and that there are opportunities for plagiarism.

**Using WebCT to deliver course assessments and end of semester examinations: the Manchester experience.**

*Dr Julie Andrews, School of Pharmacy, University of Manchester*

Dr Andrews said that at Manchester teachers are interested in e-learning and assessment for several reasons: new learning technologies make lots of new things possible; students are demanding more web-based materials, these facilities provide a means of dealing with assessments for ever-growing numbers of students; and they make learning more enjoyable. Dr Andrews outlined the range of learning technologies and showed examples of some of them. WebCT is being used for computer-based testing at Manchester because students with special needs can benefit from accessibility options, anonymity of candidates is guaranteed, and there is improved accuracy if marking and reporting of exam results. The University also benefits because computer-based testing speeds up marking, releases staff time (typically it reduces marking time for a 2 hour exam for 200 students from 40 hours to 10 minutes), and it gives students more time to make better informed course unit option choices through getting exam results earlier. Dr Andrews described a pilot study on 1<sup>st</sup> Year exams that had been run on-line using WebCT Respondus software, comprising 50

MCQs and 40 'text matching' questions, and which had been very successful. Manchester University has recently been awarded funding to further develop the technology, and Dr Andrews invited other schools of pharmacy that were interested to contact her with a view to collaboration.

**Peer Assessment as a tool for teaching, assessment and crowd management: Experiences from the front line.**

*Dr David Wright, University of East Anglia.*

Dr Wright said that research had shown that variations between student and tutor assessment were frequently no greater than variations between tutors, and that students can be better placed than tutors to judge assessment tasks of peers. He said that the benefits of peer assessment included: allowing students to better develop an understanding of what is expected; its potential for use as a teaching method and to develop collaborative and feedback skills; it can be less threatening than tutor assessment; and it may save tutorial time. To implement peer assessment careful induction is needed, with a clear rationale and the benefits to students explained. Procedures need to be kept simple, with clear criteria, and the method is better accepted if used formatively. It was important to select appropriate tasks for assessment, to get students to justify the marks they had awarded, to incorporate an appeals system and to get students to take ownership of their marking by signing assessments. Dr Wright described a PBL exercise that was peer assessed. It was found that the process reassured the more

motivated students that they would be rewarded and the less committed punished. There had been no appeals and no complaints from students about the process, and Dr Wright believed that it had worked because it had been implemented from day 1, year 1 of the course. He went on to describe how the peer assessment process can be used in the preparation of students' curricula vitae when applying for pre-reg places and in marking progress portfolios.

**Student assessment and a Professional Development Portfolio (PDP) in the 1<sup>st</sup> Year of a new MPharm degree course**

*Dr Parastou Donyai, Department of Pharmacy, Kingston University*

Dr Parastou began by stating that PDPs should not form part of module or course assessments, but should be assessed independently. She went on to examine the relationship between course and PDP assessments; the purpose that PDPs should serve for students; and when, if at all, they should be assessed. She said that too much emphasis could be placed on recording; instead PDPs should be used to develop reflective skills and recognise educational needs. She also thought that self-evaluation was personal and should not be subject to review by others, and she wondered what marking PDPs proved.

(Copies of handouts of all presentations at this meeting can be obtained from Florita Sanz, Team Secretary, Research & Development, RPSGB [florita.sanz@rpsgb.org]).

**Monash-King's Pharmacy  
Education Symposium: Exploring  
issues relating to assessment**

*Dr Parastou Donyai, Department of  
Pharmacy, Kingston University*

Monash University, Australia and King's College London held the third pharmacy education symposium in Prato, Italy in July. Plenary presentations, contributed papers, interactive workshops and personally-arranged learning sessions explored issues surrounding assessment in traditional, practice and virtual environments at the three-day event. An overview of the symposium was published in the *Pharmaceutical Journal* in August (*PJ*, 6 August, p171). Here, more detail is provided on two important forms of assessment currently being debated in pharmacy. Multiple choice questions are quick, cheap and easy to mark, outlined Dr Leva Stupans who teaches pharmacology at the University of South Australia. Once constructed, they present no issues around academic interpretation but their potential for assessing deep learning is uncertain. Studies have shown low correlation between outcomes of MCQs and short-answer questions, but the latter are harder to assess. So how can quality MCQs be created? The MCQ has three components: the 'stem' provides the relevant information based on which the 'lead-in' asks the actual question, followed by answer 'options'. The *stem* should focus on important concepts and assess the application of knowledge, including as much of the essential information as needed (rather than options) without being tricky and/or

unnecessarily complicated. The *lead-in* should be a direct question that can be answered with the options covered, while avoiding negative phrasing. The *options* should be grammatically parallel, of the same length, plausible, logically presented, mutually exclusive and compatible with the rest of the question. Generic drug names should be used, as should homogenous language. Options should avoid vague/imprecise words (e.g. "usually"), absolute terms (e.g. "never"), the "none of the above" or "all of the above" phrases, and subsets that are collectively exhaustive (e.g. "decreased...", "increased...", and "remained the same..."). There should be just one best answer. These MCQ characteristics are drawn from the University of New Mexico School of Medicine resource website, Teacher and Education Development, <http://hsc.unm.edu/som/ted/>.

While MCQs are acknowledged to test knowledge, the objective structured clinical examination (OSCE) is often branded as the definitive test of competency. Dr Paul Rutter, previously of Portsmouth University explained. OSCEs are used widely in healthcare, having originated from medicine. They comprise a series of 'stations' through which candidates rotate, facing a simulated task or problem which they must address by performing specific activities. Candidates can be involved in both 'interactive' and 'non-interactive' stations. The former require the student to interact with a patient/actor (e.g. patient), while being assessed by a trained examiner using a standardised marking scheme. The latter are assessed akin to written examinations. But pharmacy has been slow to take up the OSCE. Less

than half of schools of pharmacy responding to an international survey reported using some form of OSCE within their programmes, with over half initiating them just in the last 5 years. Where used, OSCEs are testing students in their final and penultimate years, similar to the medical model. They are mainly being used in pharmacy practice to assess patient counselling skills, calculations, response-to-symptoms, prescription handling, ethical dilemmas and so on.

So why use them? OSCEs mimic the real world and can be standardised and, importantly, they can assess communication skills, argued Dr Rutter. In order to run OSCEs, you need well-defined blueprints that detail the performance criteria. Planning is of the essence – you need to think in the context of the total available examination time, factoring in ‘rest’ stations (where students are not assessed). Of course, time and effort must be invested in writing and gaining consensus on the individual test scenarios. Piloting OSCEs is essential and this can help refine various key features. Every station must be achievable in the set time and a simple marking scheme should help assess performance in that time. Station-specific performance is often marked using binary responses that indicate pass or fail (yes/no). A global rating scale is also used to indicate a student’s overall ability at the station, for example, effective communication (pass/borderline/fail).

There are issues to consider around recruiting and training patients/actors and examiners (and their reimbursement) and signing up administrative and technical support. It is important to train the OSCE

examiners, for example by asking them to score video-recorded OSCEs and by involving them in some role-reversal as students or actors. Community pharmacists can be trained to make up the pool of OSCE examiners, non-interactive stations can be used to deal with the cost implication of increasing student numbers, and there needs to be guidance on how to manage non-attendees and ill candidates. Despite the composite nature of OSCEs schools of pharmacy should be encouraged to use this form of assessment both formatively and summatively and to help in this process, perhaps validated OSCE stations could be shared among the schools.

The next Pharmacy Practice Symposium takes place in 2007. For more information, pictures and dates log on to [www.vcp.monash.edu.au/practice/symposia/](http://www.vcp.monash.edu.au/practice/symposia/)



# NOTICEBOARD



## Forthcoming Events

**7 February 2006**

**Small scale manufacturing**

**AstraZeneca, Loughborough**

Royal Pharmaceutical Society and Academy of Pharmaceutical Sciences symposium

[www.rpsgb.org/science](http://www.rpsgb.org/science). For further information please e-mail: [science@rpsgb.org](mailto:science@rpsgb.org)

**20 - 22 March 2006**

**Arden House European Conference 2006**

**Controlled Release Development and Technologies**

**Harrington Hotel, Kensington, London**

Jointly with Academy of Pharmaceutical Sciences and American Association of Pharmaceutical Scientists - [www.rpsgb.org/science](http://www.rpsgb.org/science). For further information please e-mail: [science@rpsgb.org](mailto:science@rpsgb.org)

**3 & 4 April 2006**

**Health Services Research and Pharmacy Practice Conference**

**University of Bath**

Call for Abstracts is now open on the website (<http://hsrpp.org.uk>)

For further information please contact: Dr Marjorie C Weiss, Senior Lecturer, Department of Pharmacy & Pharmacology, University of Bath, Bath BA2 7AY Tel: 01225 386787

**20 & 21 April 2006**

**What Next for the MPharm?**

**Academic Pharmacy Group - Easter Conference**

**Aston Business School, Birmingham**

To register your interest please contact Florita Sanz ([florita.sanz@rpsgb.org](mailto:florita.sanz@rpsgb.org))

**26 to 28 April 2006**

**Pharmacovigilance of Herbal medicines: current state and future directions**

**Royal College of Obstetricians and Gynaecologists, Regent's Park, London**

Submissions of abstracts for poster presentations by **9 December 2005**

[www.rpsgb.org/science](http://www.rpsgb.org/science)

For further information please e-mail: [science@rpsgb.org](mailto:science@rpsgb.org)

## Courses

**A short residential course for teachers of Pharmacy Law and Ethics (provisional details)**

Delivered in two parts:

Level 1: Evening Sunday 14 May to lunchtime Tuesday 16 May, 2006

Level 2: Evening Sunday September 10 to lunchtime Wednesday 13 September, 2006

Venue: Nottingham

Cost: £100 per part, inc. accommodation and meals

For further information please contact: Professor Joy Wingfield ([joy.wingfield@nottingham.ac.uk](mailto:joy.wingfield@nottingham.ac.uk))

