[TITLE] **Venture “down under” where you can influence practice through science**

[STANDFIRST] The International Pharmaceutical Federation explains why Melbourne 2014 is an event that should not be missed

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Dementia is fast becoming a hot topic, following a demand from the World Health Organization last year for the disease to become a public health priority. Alzheimer’s Disease International estimates that by 2030, over 65 million people - more than the population of France and three times that of Australia - will suffer from this condition. All over the world, pharmacists are beginning to prepare for this time bomb, learning to spot early symptoms and training as champions. But pharmaceutical scientists - those involved in the discovery, development and delivery of medicines - will also play a huge part in the future management of this disease. Next year, for example, the programme of the fifth Pharmaceutical Sciences World Congress (PSWC) includes a session on treatment strategies in Alzheimer’s disease, as well as a more in-depth look at whether or not blood-brain barrier drug transport is increased in Alzheimer’s patients.

The theme of the congress, to be held in Melbourne, Australia, from 13 to 16 April, is “Pharmaceutical Sciences beyond 2020 - the rise of a new era in health care”. It promises to bring together leading scientists in a broad range of areas in order to share their latest research and to optimize the discovery, development and use of medicines, and the International Pharmaceutical Federation (FIP) is calling on pharmacists to get involved.

**Don’t be daunted by the science**

“I think it’s absolutely essential that our pharmacy practitioners listen to our scientists, and learn from them, and I also think it’s absolutely essential that our scientists listen to our practitioners and learn from them as well. It’s at the interface between the two that real innovation will actually come,” says Ross McKinnon, PSWC2014 congress chair. Practitioners are able to identify the clinical issues that require solutions, and science is frequently the solution to those issues. The role of science is to enable the practitioner, he adds. So through understanding the role of the pharmaceutical sciences and attending the congress, you can influence how it shapes patient care and, therefore, your practice.

Australia has been at the forefront of pharmacy practice research and several sessions at the congress will focus on pharmacists’ interventions to improve adherence and individualise therapy to patient needs. “We’re trying to identify some of the key issues affecting pharmacy practice currently and have sessions that deal with how science may overcome these. Adherence and individualised medicine are two areas where science is quite advanced,” Professor McKinnon explains.

“I believe anyone with a pharmacy background should be able to follow the entire programme. It is designed specifically to provide state-of-the-art insights into specific areas of the pharmaceutical sciences, but it is presented in a way that by attending just the keynotes and plenary sessions, you can get an extraordinary general oversight of the pharmaceutical sector,” he adds.

**Get in the know**

“For those who have a main focus on the practice side, I think attending the sessions on ‘Creating the cure’ [one of six main streams of the congress] would be highly beneficial, as they focus on translation of scientific advances to the bedside,” advises programme co-chair Associate Professor Giovanni Pauletti. He also recommends a session entitled “Pharmacokinetics-pharmacodynamics for supporting clinical decisions and point-of-care dosage”.

The PSWC is the place to find out about medicines and drug delivery of the future. For example, there will be several sessions on novel nanocarriers. “There’s a big area with novel nanomaterials that are developed for drug delivery applications. . . and then the important question about the safety of these nanocarriers for clinical application,” Dr Pauletti says. You can go deeper into the topics that interest you the most, with debates, roundtables and workshops, and subjects range from natural products to vaccines.

The five other congress streams are: “East meets West” (eg, emerging markets); “Technologies for tomorrow’s medicines” (eg, green technologies); “Meeting society’s needs” (eg, pharmacoepidemiology/pharmacovigilance); “The power of shared information” and “Solving the secrets of the cell” (eg, cell therapies).

And there is one presentation not to be missed; all pharmacists will have heard of T-cells and human leukocyte antigen (major histocompatibility complex), and in the opening lecture Professor Peter Doherty, Nobel laureate for ground-breaking work in this field, will speak about “big challenges”.

**Gain a global perspective**

Those who have attended the congress in the past will see there is a fresh element in the form of local showcases. “We have unique showcases from key Asian countries: we have one from India, China, Singapore and Australia” Professor McKinnon says. This meeting, more than any other, will allow participants to see what is currently occurring in the Asia region. They will be able to find out about the advances in an area of the world that is developing very quickly, but which is frequently under­represented at international meetings, he adds.

Furthermore, sessions on biologics and biosimilars will provide a forum for heated discussion between international representatives. “In certain countries we don’t have a regulatory framework that is fully in place for biosimilars, and the US is the best example of that. We have guidelines on the development, but we don’t have an explicit regulatory framework into which these drugs are being introduced, and because of that I think there’s a lot of uncertainty for the pharmaceutical sector around biosimilars,” Dr Pauletti explains.

The congress sessions will also bring different stakeholders (eg, government, regulatory agencies and the pharmaceutical industry) together in developing partnerships that may lead to more options for patients. Such models could be important to the developing world, if they provide the much-needed research in tropical diseases, while maintaining the medicines at an affordable cost, Dr Pauletti suggests.

**Get ahead**

The congress boasts plenty of opportunities for pharmacy students, many of whom could be described as young scientists. There will be informal “Meet the experts” sunrise sessions and a career development section in the congress exhibition, as well as an education day for PhD students. “We will provide young scientists with the opportunity to present their own work and receive feedback and guidance from world­renowned experts, which we hope will foster personal development and important contacts with scientists from all over the world,” says Dr Pauletti. And since a number of human resources managers from the industry are expected to attend, advice is to come armed with your CV!

**Make a date**

With so much on offer, exhaustion might seem a potential adverse effect of attending Melbourne in 2014. But there will be room for relaxation and fun, too, be it at the congress dinner, swimming with seahorses or a spot of golf on one of the city’s 15 championship courses. Mingle, make connections and form rewarding friendships while enjoying Australia.

At the World Congress of Pharmacy in Dublin this year, FIP president Michel Buchmann said that our current depth of scientific understanding has resulted in the separation of numerous disciplines, requiring people to specialise. But a lone, isolated practitioner with generalist knowledge is no longer as effective in providing care, nor is the specialist scientist working alone creating new medicines. Moreover, he pointed out that a drug molecule only becomes a medicine with the added input of pharmacy professionals.

The opportunity to attend the PWSC only comes once every three years. It is a chance to meet world authorities in pharmaceutical sciences, find out about up and coming developments, and to optimise medicines for patients. The last congress, held in New Orleans in 2010, was attended by over 9,000 scientists and pharmacists. If you see yourself as part of the new wave of collaborative working in pharmacy, put this unique event in your calendar.

For more information, visit [www.fip.org/pswc2014](http://www.fip.org/pswc2014)