



17th International Conference on the Science of Botanicals, Apr 3-6 Oxford, Mississippi

What is so special about the International Conference on the Science of Botanicals and why Mississippi?

Mississippi is not the first place that comes to mind when you think of state of the art science regarding herbal medicines but it is home to the National Center for Natural Products Research (NCNPR) at the University of Mississippi. The NCNPR is widely regarded as one of the leading centres of its kind in North America and is increasingly attracting researchers and students from across the world. Though the work of the centre is broad, it has a focus on issues related to herbal medicine quality, herbal medicine adulteration and the development of cutting edge analytical techniques. The importance of its work is reflected by the fact that its primary source of funding comes from the US federal government notably the Food and Drug Administration and the United States Department of Agriculture (USDA). This gives the NCNPR a unique perspective on the herbal medicine sector.

In my opinion, there are a number of reasons why the International Conference on the Science of Botanicals (ICSB) is a conference that people involved in herbal medicine and the natural health products sector should consider attending:

- The science and research presented is of the very highest quality. The information provided is cutting edge, pragmatic and relevant. For any academics/researchers working in this area, industry representatives working in the areas of Quality Assurance and Standard setting, members of scientific cadre of industry associations or government agencies attending this conference is a must. Though presentations are heavily weighted towards basic science and issues of product quality safety and analysis, the conference also includes clinical and policy presentations;
- It is one of the few, and definitely the largest annual conference in the Americas, that blends research and science with the role of regulation. This provides for a unique perspective and helps provide a real worldview. Given the relationship that NCNPR has with the US FDA, often very senior people from the agency are presenters and/or in attendance. Senior executives and leaders from other sectors, notably industry, are also in attendance.
- The conference organizers have achieved a safe and respectful environment for discussion on both the positive and negative parts of the sector. Not every one present is as supportive of the herbal medicine sector as you might expect,



making for a lively but always productive debate. Many, many projects and new partnerships have been built at this conference.

- ICSB is also a great place for students and scientists/researchers new to the field. It provides high quality information and the opportunity to become mentored by some of the leaders in the field especially around issues of herbal medicine quality and adulteration.

Conference highlights

The conference was set over four days with plenary sessions in the morning and then presentations split into two or three streams based around specific topics for the rest of day. Examples of streams this year were *Natural Products Discovery and Regulation; Clinical Toxicology Investigations Impacting Supplement Safety Surveillance; Analytical Methods and Reference Materials for Botanical Dietary Supplements; International Perspectives on Botanical Research; Safety and Quality Evaluation of Botanicals; and Future Initiatives on Dietary Supplements*.

One of the main objectives of this conference is to support and mentor new and emerging researchers, as such the organisers always ensure that there is an active poster session. Like the formal presentations, these abstracts cover a broad range of topics and subjects and are of the highest quality.

Since one of the main aims of the conference is to support networking there was plenty of time scheduled for just that with dinners and receptions held throughout the conference. The games scheduled for the Wednesday are a firm fixture in the program and always popular. There was also time set aside to tour the impressive facilities of the NCNPR and the University of Mississippi.

Though all presentations at the conference were of the highest quality, here are some highlights.

- A number of presentations from FDA scientists and officials provided updates on work underway in the USA and things planned for the future. A Canadian perspective describing the work around the new proposed self-care product regulations was provided by Krista Coventry from Source Neutraceutical Inc. and garnered much interest from the audience.
- Dr. Dan Fabricant, Executive Director of the Natural Products Alliance, used his experience both in industry and as former head of the group responsible for dietary supplements regulations at the FDA to highlight some of things industry can expect from the FDA in the coming years. These included the on-going discussions around the draft New Dietary Ingredient guidelines, GMP certification, the potential impact of actions by states and municipal

governments and industry initiatives such as the Supplement Safety and Compliance Initiative (SSCI).

- Dr. Victor Navarro, an investigator for the US Drug Induced Liver Injury Network (DILIN), described the work being done by the network in identifying the link between dietary supplements and liver disease— identifying herbal medicines and dietary supplements as one of the most prevalence caused of therapeutic product induced liver disease after prescription medicines. Those who seemed particularly at risk were consumers who took appearance and performance enhancing supplements (APES). Given the number of supplements often taken by individual consumers, Dr. Navarro identified the difficulty in determining what agents were causing what problems and whether, the adverse event, was due to a poorly manufactured product or an adulterant. To address the question of product quality, it was announced that NCNPR would be working with DILIN to determine how to separate the ingredients that are potential causes of harm to the liver as well as to verify that the correct ingredients are actually present in a particular product (no harmful adulterants).
- Professor Rick Kingston, from SafetyCall International Poison Center and the University of Minnesota College of Pharmacy, emphasized the importance of accurate adverse event reporting and how the information gathered by the FDA could be better used and collected. In his presentation, Prof. Kingston provided some ideas as to how the FDA could improve the process such as linking the original adverse event report to the database entry and identifying the current status of an investigation. The system could also improved if the manufacture reporting the suspected adverse event could and would provide more complete reports, identify what information was unavailable and why, discuss plausibility if the report and discuss confounding variables.
- The importance of analytical techniques was the theme of an ongoing series of lectures entitled: *Analytical Methods and Reference Material for Botanical Dietary Supplements*. The presentations ran the full gamut of the subject and some common themes seemed to be identified. These included the continued need for complete libraries and repositories of referenced materials and botanical voucher specimens; that the tests being used must be “fit for purpose” in ensuring botanical dietary could be analysed accurately; and that analytical methods and techniques are an evolving field to which industry must remain, and become more, committed.
- To take full advantage of the diversity of the audience and to support debate, on day 3, for the first time, the organizers hosted a one-hour town hall. Questions regarding product quality were the main topics of discussion as well as the importance of making sure what was on the label was in the bottle. An important aspect that was emphasized was: never forget the central role of the



consumer in helping them make informed decisions; being more aware of the importance of product quality in making these decisions; and being aware that media attention is increasingly making product quality an important factor for consumer decision-making. While it was agreed that some parts of the dietary supplement industry had responded to these challenges, more needs to be done by all parts of the dietary supplement industry.

Where can I find more information about the conference?

You can find more detail about specific presentations often with links to presentations and abstracts at the ICSB website - www.oxfordicsb.org/index.php. This website also includes presentations and details of previous ICSBs over the years.

Who attended?

This year the conference had 275 participants: most came from academia and the research community, especially in areas dealing with herbal medicine product quality and analysis; as always ICSB attracted a diverse group of participants including regulators and other government agencies, practitioners, educators, consultants, representatives of the dietary supplements industry as well as medical device companies and members of the media.

Though most participants came from the USA and Canada, there were many other international attendees including those from India, China, Australia, Brazil, Abu Dhabi, Kuwait and South Africa. This reflects the global nature of the NCNPR that has established relationships with other research centres and government agencies from across the world.

Are the dates set for next year?

The 18th ICSB is scheduled to take place in Oxford, Mississippi from April 9 to 12, 2018. More details will be posted on the ICSB website as they become available.