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BERM 14 retrospective: autumn in Maryland, USA

Peter Jenks

The Jenks Partnership, Newhaven House, Junction Road, Alderbury, Salisbury, Wiltshire SP5 3AZ, UK. E-mail: peter@jenks.info

The 14th Biological and Environmental Reference Material symposium (BERM14) was held at the Gaylord National Resort and Conference Centre, National Harbour, Maryland, USA, from 11 to 15 October 2015. It was, based on the feedback received, a resounding success, both scientifically and socially. The weather was perfect and the location, well, impressive as was the local organisation.

Before looking at the BERM 14 Meeting highlights it is important to put BERM into context: it is the original symposium looking at biological and environmental reference materials. The first meeting, then known as "BRM" was organised by Dr Wayne Wolf and held in Philadelphia, USA, in September 1983: 26 years ago! It was a delight to see that Wayne was part of BERM 14, supporting AOAC with their exhibition booth. Another BERM stalwart, Dr Stephen Wise, was present in his capacity of Scientific Chair. Steve told me that he had attended the early BRM meetings as a (then) young NIST Scientist. Steve's enduring support for BERM was marked by the presentation of an Award Shield by Hendrik Emons, on behalf of everyone who attended BERM Symposia over the years.

Since then, BERM meetings have alternated between Europe and North America, with a few variations in that BERM 13 followed BERM 12 in Europe. So after a gap of nine years it was high time BERM returned to the USA. The last meeting held in the USA, BERM 10, took place between 30 April and 5 May 2006 and attracted close to 200 delegates. The venue for BERM 14 was chosen to ensure there would be no space restrictions, no need to go outside during the



Dr Stephen Wise, from NIST and the meeting Scientific Chair, together with his wife proudly displaying the plaque given to them to mark more than 30 years involvement with the BERM series of symposia.

day and with plenty of dining and social options in the local area. Feedback from attendees was universally positive and the organisers can be congratulated for a job very well done indeed!

Back in 1983, that really is 32 years ago, just 25 people shared 16 presentations. Indeed, back then the idea of the application of sound chemical metrology principles to biological matrices was somewhat novel. For BERM 14 the ever increasing level of interest in reference materials fuelled interest: key features from BERM 14 include:

- 281 attendees: a new record
 - ☐ NMIs, government agencies, commercial providers, non-profits, accreditation bodies, users of reference materials
 - ☐ Scientists from 27 countries attended

- 78 invited and contributed oral presentations in 14 sessions
- 108 posters
- Almost four full days of presentations, with parallel sessions in the morning and afternoon, ran each side of 21 plenary and keynote speakers who helped set the tone for the following oral presentations.
 - ☐ In total 99 oral presentations
- Two poster sessions allowed 108 posters to be presented to the delegates.
- Twenty-three organisations, most of them producers of CRMs and or PT supported the event by sponsoring a range of opportunities.

Over time the biological aspect of BERM has grown, and this time was no different. Indeed with six main sessions looking at all aspects of metrology and reference materials in biological systems there was much to challenge a traditional analytical chemist.

Notable sessions included:

Reference Materials for Biosimilars, Pharmaceuticals and Bioanalysis, kicked off by a challenging Keynote talk by Bary Cherney from Amgen.



BERM delegates winding down in the roof top bar after a gruelling day in scientific sessions

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The BERM 14 programme demanded parallel sessions: the photo shows a speaker from ANAB talking about the development of ISO 17034.

CRM Developments for Clinical Analyses which included two fascinating talks by Hongmei Li and Liuxing Feng from the National Institute of Metrology in China looking at the application of "hyphenated" analytical techniques such as HPLC-ICP-MS and IDMS to some challenging bio molecules.

Commutability of Clinical CRMs, lead by Ingrid Zegers from IRMM, looked an area which is going to get more and more important as the demand for and use of CRMs in clinical and biological metrology increases.

CRM Developments for Food & Dietary Supplements got off to a wonderfully informative and amusing start with a plenary talk by Mark Blumenthal from the American Botanical Council in which he highlighted the many challenges associated with bringing good analytical metrology to a rapidly evolving and creatively marketed sector of the health care industry.

Reference Materials and Microbiology was kicked off by Raymond Cypess from ATCC who showed just how CRMs and best practices are essential to close the reproducibility gap that so often appears in biological measurements.

Confidence in Identification for Preparation of Biological Reference Materials asked, in a number of different ways, the fundamental question: how do you know for certain what you are measuring?

The meeting was brought to a close by a thoughtful and final plenary session by Dr Derek Craston, who holds the position of Government Chemist to the United Kingdom Government, effectively the "Supreme Court" for metrology disputes between the UK Government and UK Business! With the weight of such responsibility Derek has some very clear ideas about the need for and use of CRMs!

So, BERM 14 is over: BERM 15 is due to take place during June in 2018 and will be in Berlin, Germany, hosted by BAM and supported by IRMM. Dr Ulrich Panne, a long-time supporter of BERM, will be the Symposium Chair.



And so it is almost over: just time to look forward to BERM 15, which will be in Berlin in 2018.

