

# BERM 14: it's that time again!

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I've been writing about the Biological & Environmental Reference Materials series of scientific symposia in this column since I started writing for *Spectroscopy Europe* way back in 2001. Since then we have had quite a few BERM Meetings, so, with the help of my long-time associate Alan W. Nichols in the USA, I thought I'd review "the story so far" as well as introducing BERM 14 which takes place between 11 and 15 October 2015 at the Gaylord National Resort & Convention Centre, just outside Washington DC at the National Harbour, Maryland, USA.

Why is this series of symposia so important? First, it has a long pedigree, going back to the early 1980s when many aspects of analytical metrology were in their infancy. The BERM series of symposia started with discussions between Dr Wayne Wolf, then a young research scientist at the US Department of Agriculture, Dr Herbert Munteau, a scientist at the EU Joint Research Centre at Ispra, Italy, and Dr Markus Stoeppler, in charge of the Environmental Specimen Bank at the KFA Institute at Jülich, Germany. They were all interested in reference materials, how to prepare stable matrix materials, how to assign values and produce meaningful certificates of analysis. This shared interest led to a decision to hold a scientific meeting. So in September 1983 BRM 1 (Biological Reference Materials 1) took place, organised by Wayne Wolf in Philadelphia, USA.

Over the last 32 years all of the issues that BRM looked at have endured, but the number of users of reference materials and certified reference materials has exploded: what was a small, essentially academic, fringe interest activity had become a global industry involving, in one way or another, every accredited and or regulated laboratory. As I write this column in late April 2015, reports from colleagues attending the 2015 European

Symposium on Food Safety in Cardiff, Wales, suggest that increased regulation in the US Food Testing sector is set to massively increase the volume of testing and the number of accredited laboratories. This will only further add to demand for reference materials.

From those early pioneers, all of whom I've had the pleasure of working with over the years, and one of which, Dr Wayne Wolf, expects to attend BERM 14, a global network of analytical metrologists has grown: many will be meeting at BERM 14, the next chapter in the story.

## Introducing BERM 14

BERM returns to the USA this year, 2015, after an absence of eight years, so there will be much to talk about! The world of reference materials, standards and laboratory accreditation is changing rapidly with a lot happening, or going to happen, over the next three years that will have a significant impact on the use of reference materials and the producer community. In particular the conversion of ISO REMCO Guide 34 into a full ISO/IEC Standard, 17034, together with a full revision of ISO/IEC 17025 will have a big impact on the analytical community. There are also signs that some instrumental analytical techniques, once only to be found as research tools, will move into mainstream analytical laboratories. Two that I find particularly interesting are quantitative NMR, or qNMR, and MALDI-TOF, a method for mass analysis of chemical compounds that combines matrix-assisted laser desorption/ionisation (MALDI) with time-of-flight (TOF) mass spectrometry.

qNMR offers precise, accurate determination of amount of substance and MALDI-TOF hints at the quantitative determination of specific bacteria as the databases underpinning the process continue to improve.

As ever BERM 14 will break new ground in that for this event Sigma-Aldrich has agreed to take over the operational organisation, plus the promotion and marketing of the event. In some respects BERM 12 laid the foundations for applying professional organisation and marketing to hosting a scientific symposium. As BERM moves about the globe and only returns infrequently to a previous organiser it makes sense to partner with commercial globally connected enterprises.

The BERM 14 Organisation Committee met for the first time during July 2014 and is already looking at exactly how to arrange what is expected to be an event running over four days and attended by upwards of 350 delegates. The BERM 14 website is up and running and the outline of the programme has been already set up with five main organised sessions to address the following general metrology topics:

- Recent developments in CRM production
- Current trends and future needs for CRMs
- Selection and proper use of CRMs
- Role of CRMs in assuring harmonisation and comparability of analytical measurements
- Improvements in availability and quality of CRMs

Within those main sessions there will be papers and posters looking at the following session topics:

- Purity assessment and quantitative NMR (qNMR)
- Challenges in reference material preparation
- Developments in reference materials for food, clinical and environmental analysis
- Reference materials for bioanalysis
- Microbiology and reference materials
- Reference materials for pharmaceuticals and biosimilars

