The National Mastitis Council regional meeting held in Ghent, early August 2014 was honored by the presence of the NMC President, Professor John Middleton of the University of Missouri, USA. Afterwards, M²-magazine spoke to Prof. Middleton about the meeting and his work.

- The NMC regional meeting held in Belgium, your views on the success of the meeting?
  Prof. Middleton: “This year’s Regional meeting held in Ghent, Belgium was the first time the organization has ventured across the Atlantic, and what an exceptional meeting! With over 650 attendees from 51 countries, the meeting was likely the largest meeting in NMC history. My sincere thanks on behalf of the NMC membership to Sarne De Vliegher, Sofie Piepers and the whole M-team for a well-prepared and executed meeting that offered something for everyone from scientific sessions to short courses and farm visits.”

- Does the choice of venue, outside of North America, indicate a broadening of the horizons of NMC?
  Prof. Middleton: “As a global organization for mastitis control and milk quality it was a logical progression for the organization to move outside the United States and engage colleagues from around the world in a new setting. Ghent offered something for everyone, not only from a scientific standpoint, but also the potential to study local history and architecture on the 100th anniversary of the beginning of World War One.”

- Do you think the location enabled delegates from more countries and organizations and institutions to attend? Do you have any positive feedback from attendees?
  Prof. Middleton: “Given the diversity of countries represented, that is a hard question to answer, but certainly the venue was readily accessible by air, train or car for attendees from across Europe and further afield, which likely impacted enrolment. Everyone I spoke with indicated it was an excellent venue and excellent gathering of people from around the globe interested in mastitis control and milk quality.”

- Your term as President of NMC - what have been the highlights, what progress has the organization made and how would you like to see it develop in the future?
  Prof. Middleton: “NMC has existed since 1961 and the efforts of the organization and its members have led to significant improvements in udder health and milk quality.”

Professor John Middleton, University of Missouri, USA

“The Ghent meeting is an example of thinking outside the box”
North America will expand our global presence and hopefully engage new members."

- Your position at University of Missouri - what is it, what are your responsibilities, what are your recent and current research interests?

  Prof. Middleton: "I am a Professor of Food Animal Medicine and Surgery in the Department of Veterinary Medicine and Surgery as well as the Assistant Director of the Agricultural Experiment Station for the College of Veterinary Medicine. My faculty appointment includes teaching undergraduate, professional (DVM degree), and graduate students, providing clinical service to clients of our teaching hospital, and conducting research on mastitis and milk quality. Current research is focused on coagulase negative staphylococcal mastitis in dairy cattle, molecular characterization of bacterial mastitis pathogens, heifer mastitis, and mastitis interventions during the dry period. In the next few months we will be beginning a series of studies on mastitis in dairy goats."

- What should universities and research organizations be considering in the future as subjects for research on animal health/mastitis/use of antimicrobials, etc.? What are the major issues?

  Prof. Middleton: "Multidisciplinary research efforts which address not only disease and disease interventions, but the complex interactions of human, animal, and environmental health will be needed. With a growing global population and the increasing demand for animal protein, the impact of animal agriculture and the anthropogenic influences of how we manage livestock on animal, public and environmental health need to be understood so that we remain good stewards of the world’s resources."

"Right or wrong, antimicrobial use in livestock is a huge target and one which is being highly scrutinized by legislators in developed countries. There is no doubt that antimicrobial use can lead to the development of resistant strains of bacteria. However, there is limited evidence in dairy cattle that antimicrobial use has had an impact on human or animal health. This will continue to be an area of intense debate and one which we need to be prepared to deal with, not only from the standpoint of providing reasoned arguments to our opponents, but also being prepared, as an industry, with strategies to maintain animal health under tighter and tighter legislation that limits antimicrobial use in livestock."

- To what extent have the results of research on bovine mastitis been applied on dairy farms? Or is it the case that more needs to be done to ensure dairymen apply existing knowledge as they try to control the disease?

  Prof. Middleton: "NMC has existed since 1961 and the efforts of the organization and its members have led to significant improvements in udder health and milk quality. Adoption of new practices based on published research takes time and can be an uphill battle with some farmers. In human medicine, for example, data shows that it takes an average of 17 years for knowledge generated in randomized clinical trials to be incorporated into clinical practice if the evidence is not promoted. The incorporation of social science into mastitis research and understanding farmer motivations for implementing or not implementing certain animal health strategies is a step forward for our profession and as mentioned above, we need to continue to integrate multidisciplinary approaches into our research. The figure suggests we are making improvements in milk quality over time in the USA."

- The dairy industry in the State of Missouri - what is the situation?

  Prof. Middleton: "In 2013, Missouri was milking 92,000 cows on 1,236 dairy farms with an average herd size of roughly 42 cows. The number of dairy cows declined from 117,000 cows in 2005. Over the same period, U.S. milk production per cow increased from 19,565 lb (8,875 kg) to 21,822 lb (9,898 kg) per lactation, but Missouri milk production per cow decreased from 16,026 lb (7,269 kg) to 14,663 lb (6,651 kg). There has been significant investment in pasture-based dairy systems in Missouri over the last 10 years and this might explain the decreased milk production per cow noted over the last 8 years. The University of Missouri has a confinement free-stall dairy facility in Columbia, Missouri and a pasture dairy in Mt. Vernon, Missouri."