Crossing boundaries

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This message to the readers and authors of the journal is a message about continuity: *Accreditation and Quality Assurance* (ACQUAL) is and will be devoted to publishing conceptual and practice-oriented articles on all aspects relevant to quality, transparency and reliability of measurement results in chemical and biological sciences. By that, it aims at serving the information needs of researchers, practitioners and decision makers alike.

But this is also a message about change: an expanded team of editors will now lead this journal through its next period of multifaceted challenges. Therefore, I would like to start with thanking Paul De Bièvre, who not only founded this journal together with the late Helmut Günzler, but has been its *spiritus rector* ('driving force') for an impressive period of 16 years. I am very glad that Paul will continue to provide his ideas and opinions about metrology in chemistry for the ACQUAL community. It is also a privilege to be able to count on the experience and devotion of Heiner Korte, the continuing Managing Editor-in-Chief. With the introduction of Associate Editors, this journal acknowledges the expanding range of measurement areas and world regions, which can (and should) profit from knowledge exchange on modern concepts and approaches of quality assurance and accreditation systems. Welcome to Lindsey Mackay and Lorraine Turner who will support us on this journey! I would like to extend my welcome also to the new members of ACQUAL's Intercontinental Editorial Advisory Board who will strengthen in particular the multidisciplinary character of this journal. It should be kept in mind that ACQUAL considers the area

of 'chemical and biological measurements' in a very broad sense, meaning that, for instance, qualitative analysis (i.e. identification) and analysis of biological systems at the molecular ('nano' or 'pico') scale are in the scope as well.

The aspect of 'crossing boundaries' with regard to the different generations of scientists and different scientific disciplines in the make-up of the journal board also provides a good opportunity for reflecting on the drivers and stakeholders of ACQUAL. Nowadays, various measurement (or 'analytical') communities are creating with increasing speed huge libraries of measurement data, unfortunately often without appropriate assessment of their reliability and/or without sufficient documentation on data validation. There is no doubt that the increased understanding of the complexity of nature and of human beings, the identification and handling of societal challenges including globalisation and the advancement of technologies require sound information which is based to a large extent on measurement data. Therefore, the design, execution and evaluation of measurements have to be increasingly determined by the potential decision relevance of their results. Consequently, sector-specific concepts based on traditional scientific (and often also country-specific regulatory) boundaries have to be substituted by multi- and interdisciplinary approaches with global relevance and applicability. I have experienced the excitement and challenges of working across physics, chemistry, biology, etc. for a few decades already. It is really fascinating to identify generic issues and commonly applicable solutions while diving with 'analytical glasses' into specific problems from clinical biomarkers to nanoparticle measurements. Such frequent observations stipulate several other more general questions like: What is the best balance between specialists and generalists among scientists in teams with different goals? How specific or generic can and should a listing of

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competences of a measurement laboratory be in order to be both scientifically correct and a useful search tool for customers (think, e.g. about accreditation scopes or the tables of ‘Calibration and Measurement Capabilities’ in the Key Comparison Database of the Bureau International des Poids et Mesures—BIPM)?

I believe that the balance between the efforts to create large amounts of data and ensuring the quality of that data has to be re-established. ACQUAL is an ideal instrument for communicating corresponding approaches and knowledge across traditional boundaries between scientific disciplines, between academia, industry, regulators and public bodies, between information producers and users. As a result, the educational component of articles published in ACQUAL is more pronounced than in other journals, as its topics are usually not covered in university curricula.

I am aware that we all apply different selection criteria for reading a particular scientific journal or contributing to its content. The chosen journal may provide detailed original articles about the latest developments in my special field of scientific interest, it may publish comprehensive or critical reviews on instrumental methods or an application sector and it may be the one reporting ‘the headline news’

for one or several scientific disciplines. ACQUAL is not focused on a single scientific discipline, but it rather aims to tackle the generic challenges of establishing the reliability of measurement results, of designing fit-for-purpose quality assurance/quality control systems, of advancing the international harmonisation on measurements including underlying concepts and terminology. Thereby ACQUAL acts as a facilitator for increasing the international understanding and consensus on such issues.

Consequently, this is first of all a welcome message to all our current and future readers and authors. You are invited to participate in this consensus building by submitting to ACQUAL manuscripts on concepts, approaches and experiences regarding reliable measurement results. In addition, you can send us your comments, critical remarks and topical proposals for this journal. Also ACQUAL’s section ‘Discussion Forum’ is always available to be a platform for exchanging opinions.

Therefore, I look forward to a lively exchange with you!

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Editor-in-Chief