

Conference Call

CHEMRAWN XX Herbal Medicine for Health Care in the 21st Century

by Leiv K. Sydnes

CHEMRAWN XX, a conference on Herbal Medicine for Health Care in the 21st Century, held in Dhaka, Bangladesh 6-9 November 2015 with 240 participants from 15 countries, discussed the challenges that must be met if herbal medicines are to become more affordable and accessible globally. How can herbal medicine boost global healthcare? Through active interaction with a very attentive audience, the Future Action Committee (FAC) worked out an action plan which is now under implementation.

Herbal medicine plays an important role in primary health care for millions of people around the world. In spite of this, there have been serious concerns regarding the safety, claimed efficacy, and quality of most of these products for a number of years. These issues were seriously addressed at a workshop in New Delhi, India in 2004, where a group of natural-product scientists discussed the problem and came up with pragmatic suggestions. The event was supported by the Organic and Biomolecular Chemistry Division of IUPAC (Div III) through a project initiated and carried out by Professor Mohammad Mosihuzzaman of the University of Dhaka. A number of proposals were put forward and two were subsequently implemented in projects partly funded by IUPAC. A tangible outcome was the IUPAC Technical Report entitled, "Protocols on Safety, Efficacy, Documentation and Standardization of Herbal Medicine", which was written by a team of renowned scientists led by Professors M. Mosihuzzaman and M. Iqbal Choudhary (from H. E. J. Research Institute of Chemistry at University of Karachi, Pakistan) and published in *Pure and Applied Chemistry* in 2008 (Vol. 80, 2195-2230; DOI 10.1351/pac200880102195).

This technical report calls for a stronger scientific basis for herbal medicine. This is where IUPAC's interest comes in, because chemistry is the fundamental science for assuring reliable clinical outcomes for these plant-based products. This has been recognized by the World Health Organization, which in both 2001 and 2011 called for an evidence-based approach to, and a strategic plan for, a comprehensive enhancement of traditional medicine. Inspired by this, Professor Mosihuzzaman worked with persistence to develop a program for a CHEMRAWN conference on herbal medicine. The CHEMRAWN Committee discussed and approved a

concrete proposal for such a meeting during the 2013 IUPAC General Assembly in Istanbul, Turkey. The event, given the number XX in the CHEMRAWN series of conferences, was initially planned to be held in Dhaka in November 2014, but due to difficulties in raising enough support for the conference (see below), the meeting was eventually postponed until 6-9 November 2015.

The Conference

The conference, held at the Bangladesh University of Health Sciences (BUHS), Dhaka, was opened by a number of thoughtful speeches by a distinguished group headed by the Honourable Minister of Science and Technology, architect Yafes Osman, of the Government of the People's Republic of Bangladesh. These proceedings set the tone and were followed by a theme lecture delivered by Professor M. Iqbal Choudhary, the director of the International Centre of Chemical & Biological Sciences (ICCBS) at the University of Karachi, Pakistan. For more than one hour, he captivated a highly competent audience that included herbal-product manufacturers, representatives from the traditional pharma industry, scientists from the natural and social sciences, herbal practitioners, and representatives from international organizations, as well as professionals from regulatory agencies, with a thorough description of the many challenges that must be addressed and resolved before herbal medicine becomes an integrated part of the global health-care system. He elaborated on the complexity of the issues and showed how the path from a medicinal plant to a herbal medicine is filled with all sorts of hurdles, many of which are non-chemical. Therefore, the way forward is indeed multidisciplinary.



The theme lecture was given by Professor M. Iqbal Choudhary, Director of International Centre of Chemical & Biological Sciences at University of Karachi, Pakistan (Photo: Leiv K. Sydnes).

The following two-and-a-half days were filled with lectures, each followed by ample time for discussion, which was filled by a number of contributions from an

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active audience. The topics focused on and detailed the challenges pointed out by Dr. Choudhary. Problems related to a steady, reliable, and sustainable supply of raw materials were many, and experiences from India were very useful to know when productive measures have to be taken. In this context, traditional medicinal knowledge and other ethnopharmacological aspects are very important, as made very clear in several presentations. Another important issue, covered in detail by several lecturers, was safety. A variety of topics were discussed, including documentation by chemical analysis, new approaches to toxicological testing, adulteration, and risk assessment. A less scientific safety concern is the inaccurate and even misleading information available on the Web, which can contribute to destroying the reputation of proven, high-quality, and reliable herbal medicines.

Naturally, a part of the lecture program was devoted to recent developments in chemical isolation, chemical analysis, testing of bioactivity, and development of new *in vivo* and *in vitro* screening. A proposal to establish focal-point laboratories for chemical and biochemical analyses caught significant attention and will apparently be followed up. When properly equipped and run, and adequately engaged by the industry, such facilities could greatly contribute to the scientification of the herbal-medicine industry as a whole and certainly contribute to make safe and approved herbal medicines much more accessible.

Follow-up and Future Actions

As some of the readers will know, the CHEMRAWN committee has introduced a tool termed FAC as a precautionary instrument at all its conferences. FAC stands for Future Action Committee, which is an integrated part of any CHEMRAWN conference. Such a committee is appointed before the conference and is in session during the conference to pick up and further digest good, interesting, new, brave ideas that are put forward during the lectures, discussions, and special FAC sessions. Such a committee, with six members from six countries, was working at this conference as well, and the last session of the conference discussed a conceptual report presented by the committee. A lot of valuable feedback was received, which hopefully will become clear when papers and reports from the conference are published in due course.

A tangible outcome of the conference and all the hard work leading up to it can in fact already be noted. The fact that the preparation of CHEMRAWN XX was so successful generated a lot of support for a project, pushed forward in parallel by Professor Mosihuzzaman, to establish an International Centre for Natural Product



Conference Chair, Professor M. Mosihuzzaman, and Conference Secretary, Vice Chancellor Liaquat Ali (Bangladesh University of Health Sciences, BUHS). (Photo: Leiv K. Sydnnes)

During the closing of the conference all the hard work done by the Conference Chair, Professor M. Mosihuzzaman, Conference Secretary, Vice Chancellor (BUHS) Liaquat Ali, and the Local Organizing Committee was acknowledged with gratitude and enthusiasm, well deserved after a splendid event.

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Chemistry and Human Health

by Thomas Perun, Division VII President

The IUPAC Chemistry and Human Health Division (Division VII) met during the General Assembly last August in Busan, Korea. The annual meeting of the Division is an opportunity for the committee to review the progress of existing projects and to discuss possible new initiatives. Projects will usually result either in IUPAC recommendations or in technical reports and books. Division VII recognizes members for meritorious service to IUPAC and to the health sciences in general through its Emeritus Fellows Program. Up to three Emeritus Fellows are appointed each Biennium. Professor Doug Templeton and Professor Robin Ganellin were the most recently recognized. A brief review of the Division mission and organization follows.

Mission

The mission of Division VII is to promote pure and applied chemistry in the service of human health and well-being. Major aspects are the development of therapeutic drugs, the standardization of clinical laboratory methods, and the protection of humans from potential