

Editorial: Role of International Collaboration in Effective R&D

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Early this year, I had the distinct honor and privilege of being one of the recipients of China's 2013 International Science and Technology Cooperation Award, which was presented in a truly grand event held at the famous People's Hall on Tiananmen Square in Beijing on January 10, 2014. This award ceremony, which was attended by both the President and the Prime Minister of China, gave me a glimpse of the value that the world's most populous country and second economic powerhouse attaches to not only science and technology, but also to international cooperation for national development. The unmatched economic growth over the last three decades is a testimonial to this vision and policy, which few other nations seem to embrace. The relatively large fraction of GDP devoted to R&D and higher education is one indicator of the value attached by a state to science and technology. The recognition at the highest level of the international cooperative effort attests to the significance of collaboration between Chinese academics and their overseas counterparts. Often there is close interaction between academia and industry in China, which enhances transfer of new technologies that emerge from such an activity to result in an economic payoff.

I believe that many countries can benefit from following this model, which has been demonstrated to be successful, providing that suitable partnerships can be identified. It needs to be a truly win-win situation for both parties. Combining expertise and experience of two or more collaborative parties can lead to synergy and create conditions suitable for innovation. With limited financial and human resources available for R&D around the world, I believe that international collaboration will be the way to success in future. With the availability of the World Wide Web and cheap telecommunication capabilities around most of the world, it is not difficult to find good matches for collaboration.

In applied areas, e.g., drying technology, it is especially important to have industry partners as well. Of course, it is not a simple task, but certainly not a daunting one either to work collaboratively.

Personally, I have collaborated with success with researchers in many countries on different continents. There are differences in the way the collaboration can work effectively due to local cultural and administrative differences. One needs to become familiar with these in advance. I started my international collaboration with China way back in 1984 when I visited Tianjin Institute of Light Industry (now renamed Tianjin University of Science & Technology). Over the last 12 years, I have had a particularly successful collaboration in the drying area with Professor Min Zhang of Jiangnan University, Wuxi, Jiangsu Province. This led to a large volume of academic outcomes in the form of PhDs and master's theses completed, but also in terms of industrial products that resulted from the close interaction with several food processing companies in China that Prof. Zhang worked with. Another positive outcome is that a large number of the PhDs produced through this collaboration are now professors in several universities in China and are mentoring future researchers in drying technology. This was accomplished without extended visits or stays at Jiangnan campus while I was located in Singapore. I hope that this collaborative effort can serve as a model for those who wish to develop collaborative international projects. Readers interested to know details about this collaboration can freely download an e-book published by Jiangnan University to commemorate our 12-year collaboration and conferral of Honorary Professorship on me on January 13, 2014; it is available at the e-books page of <http://www.arunmujumdar.com>.

Arun S. Mujumdar
Editor-in-Chief

arunmujumdar123@gmail.com

King Mongkut's University of Technology Thonburi
Bangkok, Thailand