

A Time for Renewal

by John Corish



After the difficult financial times that we have experienced in recent years we are now in a period with the opportunity for recovery, renewal, improvement, and growth. In better times it is too easy to coast along on the wave taking the comfortable pathways and to fail to critically examine the benefits and costs of decisions. One of the better outcomes of a recession is that it sharpens critical functions by making necessary a general examination and questioning of every choice made. Even the magic of our chemistry could not empower IUPAC to complete immunity from the global financial malaise and, as I have reported previously, two of our income streams—those from publications and investments—have inevitably been reduced. It also has been an expensive few years for us with the excitement and success of the International Year of Chemistry still fresh in our thoughts.

How are we now renewing ourselves and planning new growth into the future? Dealing first with the two declining income streams, we have entered into a partnership with De Gruyter publishers for the production of *Pure and Applied Chemistry* and *Chemistry International*. The complex change of publisher at the beginning of this year has been accomplished smoothly and our newly-appointed Acting Secretary General, Colin Humphris, is leading a very close and active liaison with our new partners to complete the transition and to iron out any wrinkles remaining in the

new arrangements. With respect to our investments, the Finance Committee meeting in February advised that we undertake an examination of our portfolio with a view to adopting a somewhat more aggressive, though still prudent, investment policy and this has been done. Again we are currently in discussion, this time with professional financial advisors, so that our portfolio will be more actively managed and we will maximize the returns on our funds.

The Finance Committee also recommended that the Union make every effort to control our expenditures and this is being implemented in every aspect of our business, for example in the day-to-day expenses at the Secretariat and in our postage and other communication costs. In response to the recommendation, the Bureau at its recent meeting tasked a group to examine the schedule for our larger meetings such as the General Assembly to ensure that they are both efficient and economical and provide the best possible value for money—the changes recommended will be seen in the next General Assembly in 2015 in Korea. The guidelines for the reimbursement of travel and subsistence expenses have also been revised for this biennium so that receipts must now be furnished for all claims submitted. This will provide a proper set of records for our annual audit as well as ensuring that everyone is fairly and correctly reimbursed for their expenses up to the *per diem* limit. In terms of growth, the Bureau recommended the acceptance of applications from four new NAOs and IUPAC extends a very warm welcome in 2014 to Colombia, Costa Rica, Kazakhstan, and Senegal. The Membership Relations Committee will continue to actively seek and encourage additional new members to join us.

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Dr. Lynn Soby appointed IUPAC Executive Director

On 24 July 2014, the officers of IUPAC announced the appointment of Dr. Lynn Soby as IUPAC Executive Director.

Dr. Soby is a chemistry graduate who gained a PhD in Macromolecular Science and Engineering and an Executive MBA in the Management of Technology from Case Western Reserve University. She received a MS in Chemistry from Ohio University and a BS in Chemistry from Boston College. She has held senior positions in industrial research and in technology development with BF Goodrich and Avon Products compa-

nies, which included actively setting up research and technical organizations in many countries around the world. She has worked as a business analyst and most recently held the position of Vice President Innovation and Commercialization at Research Triangle Institute (RTI) International in North Carolina.

Dr. Soby brings a valuable blend of science, technology, and business administration to the role of Executive Director at a time of change for IUPAC as the Union approaches its centenary. The officers are sure the IUPAC community will welcome Dr. Soby to her new role and are all looking forward to working with her.

Synthesis at the Interface of Chemistry and Biology

community to exploit chemical libraries and screening technologies that is not generally competitive with pharmaceutical or biotechnology research interests is in the area of orphan and neglected diseases. For example, there exist both a large research opportunity and a major unmet medical need with respect to molecules that kill persistent *Mycobacterium tuberculosis* (the biology of persistors is largely unknown), or molecules that target nonessential host factors that are required for viral replication (HIV, HCV, Dengue, etc.), but which will not mutate rapidly. To this end, we recently identified a molecule from a cell-based biofilm screen using *Mycobacterium smegmatis* that kills both replicating and nonreplicating Mtb as well as XDR drug resistant strains. These molecules down-regulate key mycobacterial persistence genes, and function by inhibiting two activities—the cell wall biosynthetic enzyme DprE1 and the biosynthesis of an essential molybdenum cofactor. Analogues of this compound show excellent activity in chronic models of Mtb in rodents. In addition, there are a large number of orphan diseases (type I diabetes, muscular dystrophies, spinal muscular atrophy, childhood cancers, Rett syndrome, Fragile X, Huntington disease, etc.) for which no good treatments exist. The identification of

molecules that modulate these disease processes may ultimately lead to new therapies as well as provide new insight into the biology of many of these diseases.

Conclusion

Chemistry continues to evolve from its historical focus on molecular structure, reactivity, and synthesis to take on the challenge of making small and large molecules and even systems of molecules with tailored properties and functions. This requires improved theoretical and analytical tools, as well as innovative new synthetic strategies. Given the remarkable array of functions found in biological molecules, Mother Nature offers help in this regard through an approach to synthesis that seamlessly interfaces biology and chemistry. Hopefully, the examples illustrated above from our work, and the many other elegant examples in the literature, convey the exciting and highly relevant opportunities that exist for chemical synthesis at the interface of the chemical and biological sciences. 

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Treasurer's Column (continued from page 2)

Even if done grudgingly a Treasurer can sometimes admit that there are other things that are as important as and perhaps even more important than money to the lifeblood of an organization. Good communications among its members and with the world at large is one of these and, in terms of general renewal, the Bureau has set as a major objective for the coming year to have a new or updated website in place by the time of the General Assembly in August of 2015. A task force, which will consult widely with the membership to establish its needs, has been established under the leadership of Bonnie Lawlor, Chair of the Committee on Publications and Cheminformatics Data Standards. This will create the vision for the website and develop informed recommendations. Every organization also needs a constant supply of new volunteers to renew and keep its business abreast of the new developments. To this end, IUPAC is streamlining the election process whereby the membership of its Divisions and

Standing Committees are chosen so that we have a more transparent and effective recruitment process. Another vital necessity for success is a coherent and far-seeing strategic plan for the future and the need has been identified to draw up a contemporary strategic plan for IUPAC that will better reflect our objectives and define how these can be achieved in the modern environment. Our President, Mark Cesa, is leading a group that is formulating a new strategic plan for IUPAC for the coming years to ensure that it continues to serve the world community of chemists in both academic and commercial endeavours and continues to provide the language and standards that our subject needs to further enhance its unique and vital contribution to the progress and betterment of humankind. An IUPAC renewal is indeed very much in the air. 

John Corish <jcorish@tcd.ie> has been treasurer of IUPAC since January 2008. He has served IUPAC at many levels since 1979, including chair of the Subcommittee on Materials Chemistry, president of the Inorganic Chemistry Division, and member of the Finance Committee.