

Review Article

The history of the International Isotope Society[†]

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Received 10 June 2007; Accepted 11 June 2007

Abstract: The author traces back to the late nineteen fifties the history of events preceding the current activities of the International Isotope Society (IIS) founded in 1986. The obvious conclusions are that there was a need for regular scientific meetings focused on topics such as the synthesis of isotopes, isotopically labelled and their applications. The various existing chemical and technical societies could not cover in their meetings such topics as efficiently as the IIS did. The Kansas City 1982 and 1985 first two unofficial meetings lead to the formation of the IIS in 1986 and then to a series of other regular symposia as 1988 (Innsbruck, Austria), 1991 (Toronto, Canada), 1994 (Strasbourg, France), 1997 (Philadelphia, USA), 2000 (Dresden, Germany), 2003 (Boston, USA), 2006 (Edinburgh, United Kingdom) and then in 2009 (Chicago, USA). The IIS also carries out its activities in yearly local Chapter meetings in the US, UK, Central Europe, Romania, Russia and China. At the same time, according to its Mission stated in the IIS Constitution (available in the www.intl.isotope-soc.org website) the IIS also encourages the continuation of the independent meetings called the International Conferences of Isotopes; the activities of an international Low Level Waste IIS committee; the publication of the IIS Newsletter and maintenance of its website); organizing various workshops and short courses; and last but not least gives its support to the Journal of Labeled Compounds and Radiopharmaceutical by contributing papers and pro-bono work on the Editorial as well as on the Advisory Board of the Journal. Copyright © 2007 John Wiley & Sons, Ltd.

Keywords: isotopes; International Symposia; expanding the knowledge of the synthesis and applications of isotopes

Dedication

I am quite honored that Professor John Jones recognized my involvement in founding the International Isotope Society by asking me to write this short history of the International Isotope Society, as perceived by me. I humbly dedicate this material to his memory and to the many contributions that John made to the success of both the International Isotope Society and the Journal of Labeled Compounds and Radiopharmaceuticals.

Introduction

Stable isotopes were used as tracers before the discovery of radioactive isotopes but were superseded by them at the beginning of World War II. Since 1945, radioisotopes developed through the atomic energy

programs throughout the world have found extensive applications in biological and medical sciences, in agriculture and in virtually every field of pure and applied sciences.

As a natural consequence, a series of manufacturers of radiolabeled compounds and related instrumentation emerged and scientific meetings were called to promote the contacts between them and the users of these products. The first five meetings concerning the preparation and applications of radioactive-labeled compounds were organized in the United States between 1957 and 1961 by the New England Nuclear Corporation (today PerkinElmer Inc.) with support from Packard Instruments and other industrial concerns. These meetings were known as 'the Symposia on Advances in Tracer Methodology' with the active promoter/organizer being Dr Seymour Rothchild. They were useful in providing basic information regarding the synthesis, purification, analysis, storage and applications of radioactively labeled compounds. They typically drew about 1000 participants for the one-day meeting.

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[†]50th Anniversary Special Issue, In memoriam John Jones.

Between 1964 and 1967, EURATOM sponsored a series of very successful meetings in Europe addressing needs similar to those addressed by the 1950s Advances in Tracer Methodology series. The Symposia in Brussels (Belgium) held in 1963 and 1966 discussed the methods of preparation and storage of labeled compounds, and the international conferences from Geneva (Switzerland, 1967) stressed the criteria for the determination of purity of labeled compounds. Further EURATOM conferences (Venice and Pisa, 1964) added to the palette of colors by extending the discussions to the applications of radiolabeled compounds in the biological and pharmaceutical sciences. Finally, the last conference held at Saclay (France, 1970) was known as the 'Symposia on Nuclear Techniques in Pharmacokinetics.'

The EURATOM conferences, interesting as they were, were discontinued because of the loss of financial support from EURATOM and because Dr Jean Sirchis, the initiator-coordinator of these meetings and former chief editor of this Journal, pursued other interests. While still living in Europe, I was fortunate to attend the Venice 1963, Brussels 1964 and Geneva 1967 EURATOM meetings where I also met Professor John Jones for the first time.

In the 1970s, as the technology for the production and quantization of stable isotopes advanced, in particular the development of GC/MS techniques, the use of these isotope (i.e. the ICONS) received increased attention. In 1971, Dr Peter Klein (then at the Argonne National Laboratory) organized a symposium on 'The Use of Stable Isotopes in Clinical Pharmacology', which consequently blossomed into the 'First International Conference on Stable Isotope in Chemistry, Biology and Medicine' held in 1973. These meetings continued to be staged every three years. In addition to these events, Dr Thomas Baillie organized a meeting in London entitled 'Stable Isotopes in Pharmacology, Toxicology and Clinical Research' focusing on the applications of stable isotopes and related techniques such as GC/MS in the above-mentioned fields.

Finally, after the last 1966 Symposium on Radioisotopes in Brussels, a third group of meetings emerged on a regular basis, emphasizing the growing interest and progress made in the field of short-lived isotopes and techniques such as radioimmunoassay, autoradiography, scanning, organ imaging and positron emission tomography known as PET. These meetings that are held every two years were originally organized by the late Dr Alfred Wolf (Brookhaven), Dr Michael Welch (Washington University Medical School, St. Louis, USA) and Dr Gerhard Stocklin from KFA Julich, Germany.

Events leading to the First Kansas City Symposium on the Synthesis and Applications of Isotopically Labeled Compounds, 6–11 June 1982

In summary, between 1970 and 1982 no other meetings were held in the United States or abroad concerning the topics related to the synthesis and uses of classical radiolabeled compounds. Realizing this void and having had the personal experience to attend some EURATOM conferences as mentioned above, in 1980 I brought to the attention of my employer at that time—the Midwest Research Institute from Kansas City (MRI), Missouri, USA—the opportunity, needs and benefits to start in Kansas City another chain of Symposia on the Synthesis, Analysis and Applications of Isotopically Labeled Compounds.

What was obvious to me at that time did not resonate immediately and positively with the management of the Department of the Midwest Research Institute. Perhaps not having had any previous credentials of organizing any Symposia on local, national and definitely not on an international scale, my proposal was shelved. However, that did not discourage me and a year later, while a guest at the prestigious Mission Hills Country Club of Kansas City I took the opportunity and conveyed the same ideas to Mr Miller Nichols, a prominent Kansas City socialite, real estate developer and director of the MRI Board of Trustees at that time.

The rest was history, so to speak, after an early phone call the next day from Mr Nichols to the President of MRI, Mr John McKelvey, who immediately called a meeting and appointed me to head an MRI team as the Symposium Chairman of the first Kansas City Symposium. My main task was to shape and organize the Scientific Program while my supervisor at that time, Dr Bill Duncan, was asked to manage the organizational aspects as Organizing Committee Chairman.

The time frame given to us by the Management was one year (that turned out to be 13 months from March, 1981 to June, 1982) to put together a Scientific Program, advertise the meeting, choose the venue and bring into town 'the crème de la crème' and the 'who's who' in the field of isotopically labeled compounds. The Institute generously gave us the seed money of \$15 000 and covered part of my salary from an additional fund.

While Bill Duncan and the rest of the local MRI team were choosing and contracting a Kansas City hotel (the Hyatt Regency), I contacted and gained immediate support from the following members of the *first International Scientific Committee*: A. Benakis (University of Geneva, Switzerland); Dale Blackburn (SKF, USA); A.T. Balaban (Polytechnic Institute of Bucharest,

Romania); Tom Baillie (University of Washington, Seattle, Washington, USA); Edwin Buncl (Queens University, Canada); Drs Tony Evans (Amersham, UK); Richard Muccino (Hoffman LaRoche, USA); Louis Pichat (CEN Saclay, France) and Tom W. Whaley (Los Alamos Laboratories, USA). Due to his teaching duties at that time Dr John Jones could not officially accept a position on the organizing committee given his work load on such a short notice, but was quite instrumental with his frequent advice.

As I had never organized an international Symposium, but participated at some before, I went immediately to the 1981 IUPAC International Symposium in Vancouver, Canada with the goal to learn as fast and as much as possible about organizing an international symposium. It was there where I also made contact with Elsevier – the publisher of the Proceedings of the Symposium. Thanks to the information I collected on this trip, the various Symposium announcements were developed and distributed to an international mailing list of over one thousand people from over 35 countries worldwide. No less effort was put in identifying sponsors, i.e. the potential donors needed to secure additional funds to the seed money given to us by the Midwest Research Institute. The producers of isotopes and of related instrumentation were quite receptive to us in promoting the idea of a Technical Exhibit to enrich the technical program.

Putting together a meaningful technical program on such a short notice was quite challenging. When we started we had no clear vision of the extent of this task but did accumulate a lot of ideas about topics and speakers from the preceding conferences. The scientific programs of the Advances in Tracer Methodology and the EURATOM Conferences were a good starting point. However, the contributions from the International Scientific Committee in recommending the various topics and the invited speakers were essential and quite significant. These ideas and contacts allowed us to end up with an impressive meeting consisting of 15 scientific sessions and seven plenary speakers stretched over a five-day symposium in 2–3 parallel sessions, with the participation of over 300 scientists from 18 countries! I remember reading in 1983 a review of the Proceedings of the 1982 Kansas City Symposium where the author commented to the effect that at the beginning he could not understand the reasons for all of these various topics to be presented in one meeting until it became obvious that it dealt with the many ways that isotopes are being manufactured and applied in so many various sciences and areas of practical interests.

The 1982 Symposium Awards were given to Professor Robert F. Nystrom, USA and John Catch, UK. At that

time, Professor Robert F. Nystrom was still teaching graduate courses in organic radiosynthesis at the University of Illinois, Urbana-Champaign and was the Director of the Radiocarbon Laboratory at the University. Dr John Catch had already retired from a long and significant career at Amersham Laboratories in the UK and his colleague Dr Tony Evans accepted on his behalf. Nystrom received his award for his life time achievements in pioneering the synthesis and applications of isotopically labeled organic compounds and Dr John Catch for his contributions in developing the chemistry and organizing the commercial production of carbon-14-labeled compounds at Amersham, UK. We, i.e. the organizers and in particular myself as a former post-doctoral research associate of Nystrom, were quite happy to pay tribute to these two scientists for their significant contributions to the field of the synthesis and applications of isotopically labeled compounds. These awards became later the basis for the Melvin Calvin and IIS Awards given at the IIS Symposia today.

In the closing remarks of the 1982 meeting, I echoed the very positive reactions to the discussions I had with the participants at the conference by saying that throughout the Symposium and at the Banquet, I had received many suggestions for future Symposia that are listed below:

- The time has come for the founding of an International Isotope Society that would be independent and broadly based.
- That this Society should include chemists, biologists, physicists and physicians among others.
- That the existence of such a Society would help in establishing and reinforcing among the international scientific community the 'personality' of the Labeled Compounds and of those who make them and use them.
- That the synthesis and use of isotopically labeled compounds is a very specialized field that deserves to have a Society the same way that carbohydrates, prostaglandins and fluorine derivatives have their own societies.
- That an International Isotope Society could bring together the NMR, PET, MS and synthetic chemistry disciplines and also new alliances among individual scientists and their programs.

The events following the First Kansas City Symposium on the Synthesis and Applications of Isotopically Labeled Compounds, 6–11 June 1982, just confirmed the validity of the above statements. Soon after the 1982 Symposium, the Midwest Research Institute received high praises from the international scientific community for being instrumental in supporting the International Scientific Committee and me with the

first Conference. There were also numerous requests made for an 'encore' of this kind of meeting!

Originally the International Scientific Committee intended to alternate the future Symposia venues between the North American Continent (US and Canada) and Europe. However, the location of the 1985 Second International Symposium on the Synthesis and Applications of Isotopically Labelled Compounds was decided by the Management of MRI at that time to be again in Kansas City and the mechanism for doing this was put in motion again.

The 1985 local Organizing Committee was built with the help of the School of Pharmacy from the University of Missouri, Kansas City and Dr William Duncan chaired it again. Dr Richard Muccino (Hoffman LaRoche) and I (having already moved to Sandoz Pharmaceuticals) co-chaired the International Scientific Committee and were also part of the Symposium Organizing Committee.

Responding to the requests made by many participants at the first Kansas City meeting, in 1983 I sent out a questionnaire to over 2000 scientists worldwide asking for their opinion about the opportunity for continuing these meetings, their frequency and mainly whether they should be organized by existing organizations such as the US American Chemical Society, the UK Royal Chemical Society, the IUPAC, etc., or by an independent new organization to be named the International Isotope Society. Out of some 900 replies, an overwhelming majority of 74% or so voted for an independent organization – soon to be named 'the International Isotope Society (IIS).

Based on the success of the 1982 Kansas City Symposium, finding speakers, sponsors and participants for the second 1985 Symposium was much easier. Besides the usual grants given again by the isotope industry, Amersham, UK and CNRS Saclay, France, Berthold Instruments, etc., the US Department of Defense, Walter Reed Army Hospital gave us an unexpected and quite generous financial support.

The Second International Symposium on the Synthesis and Applications of Isotopically Labelled Compounds took place in September 1985 at the Vista International (today's Marriott) Hotel in Kansas City. The format of the program was similar to the preceding one – two to three parallel sessions for five days, including topics from the manufacturing of various isotopes to the synthesis of isotopically labeled compounds, their analysis and their applications.

At the Symposium dinner, we presented Professor Melvin Calvin (professor at the University of California, Berkeley, CA, USA, and 1961 Nobel Laureate in Chemistry) the 1985 Symposium Award and a present consisting of his portrait made by a local Kansas City artist, Joseph Coughlin, after a picture was given to me

in great secret by Mrs Marylyn Taylor, Professor Calvin's secretary at the Calvin Laboratory in Berkeley. In his presentation, Professor Calvin disclosed 'the origins of the first synthetic batch of C14' as being a material that was extracted by the Berkley Radiochemists from the ammonium salts that were used for several years as a protective screen for the neutrons in the walls surrounding the first cyclotron built by Ernest O Lawrence at Berkley'. Quite an important result of the interaction of the bright minds of two Nobel Laureates – Ernest O. Lawrence and Melvin Calvin!

A pioneer in the use of carbon-14 in the elucidation of bio-organic reactions, such as photosynthesis, Professor Calvin's lively presentation was quite timely for the quantum leap that was going to take place in our minds – organize an international scientific society as an interdisciplinary forum where isotopes would be the common denominator.

After the 1985 Symposium, everybody asked again for an encore! The International Scientific Committee and special invitees such as John Allen, met in a special evening session during the 1985 Symposium to discuss this matter as well as the results of the polls on the formation of an independent organization to be given the mission to continue this kind of activity.

The Birth of the International Isotope Society (IIS)

A few months later while traveling to the National Tritium Labeling Facility at the Berkeley National Laboratory, I visited Professor Calvin in his office in the Calvin Laboratory at the University of California, Berkeley. During this visit I shared with him the results of the poll and asked his advice about setting up an International Isotope Society. His first answer was quite logical 'but Alex, isotopes are not a science!' However, he accepted immediately my counter-arguments that 'isotopes are indeed a tool and a common denominator to so many branches of science' and that 'we need to have a multidisciplinary organization to perpetrate and to develop further the knowledge presented at these kinds of meetings'. Professor Calvin immediately handed me a \$100 check as seed money for starting the IIS... to which I added my own \$100 check and the rest was even more history!

The 'founding fathers of the IIS', i.e. Tony Evans (Amersham, UK), Dale Blackburn (SKF, Philadelphia), Richard R. Muccino (Hoffman LaRoche, New Jersey), Bill Duncan (MRI) and I (Sandoz, NJ, USA), decided that the best US state to incorporate the new IIS organization was in New Jersey since Dale Blackburn, Richard Muccino and I were already residents of that state and willing to put in the needed monumental work.

Consequently, the IIS became incorporated in the State of New Jersey in 1986 as a non-profit organization, its Mission and By Laws were written the best way we could at that time and the management structure was designed around the availability of its staff – an Executive Secretary (myself) and a Treasurer (Dale Blackburn) each appointed for three years (to assure continuity), three Presidents, each for one year (to assure diversity) and a Member-at-Large also for three years (to tip any tie vote, if needed).

Shortly after the incorporation, the main focus was to successfully conduct the next Symposium. According to the popular demand to alternate the venues between the North American Continent and Europe, this Symposium took place in Innsbruck, Austria in 1988. The co-chairs of this Symposium were Tom Baillie (currently at Merck, USA) and our late colleague and friend – Professor John Jones. They decided to limit the overwhelming number of topics presented in 1982 and 1985 only to those related to biological sciences, mostly to the uses of carbon-14, Tritium, stable isotopes (Deuterium, carbon-13, nitrogen-15), iodine-125 and phosphorus-32 and phosphorus-33. The other topics related to the manufacture and uses of other isotopes in nuclear reactors, cyclotrons, various kinds of accelerators and the wide use of such isotopes in the industry, nuclear medicine, etc. were left aside with the hope that similar groups to the ‘newly born’ IIS would pick up the baton and run their own meetings.

The 1988 Innsbruck meeting was the third Symposium in the series started in 1982 in Kansas City and the first official IIS Symposium since it was organized this time by an independent international society officially incorporated in 1986 in the state of New Jersey, USA.

The tradition established by the first three Symposia was continued every three years after the following events, i.e. 1991 – Toronto, Canada (co-chairs Erwin Buncel – Queens University, Canada and George Kabalka – University of Tennessee, USA); 1994 – Strasbourg, France (co-chairs John Allen – Synthelabo, France and Rolf Voges – Sandoz Pharmaceuticals, Switzerland); 1997 – Philadelphia, USA (co-chairs J. Richard Heys – GlaxoSmithKline and David Melillo – Merck); 2000 – Dresden, Germany (co-chaired by Rolf Voges – Novartis, Switzerland and Ulrich Pleiss – Bayer, Germany); 2003 – Boston, USA (co-chairs Crist Filer – PerkinElmer Inc, USA, Keith McCarthy – Pfizer, USA and Dennis Dean – Merck USA) and 2006 – Edinburgh, UK (chaired by Ken Lawrie, GSK, UK). The next meeting will take place in 2009 in Chicago as the 10th IIS Symposium and will be chaired by Brad Maxwell – Bristol-Myers Squibb, USA, John Kennington – Eli Lilly, USA and Gary Rotert – Abbott, USA.

The Past Presidents of the Society have been: 1986–1989 E.A. Evans (UK); 1990 A.A. Liebman (USA); 1991 T.A. Baillie (USA); 1992 J. Allen (France); 1993 J.R. Jones (UK); 1994 G.W. Kabalka (USA); 1995 J.R. Jones (UK); 1996 G.W. Kabalka (USA); 1997 J. Allen (France); 1998 W.P. Duncan (USA); 1999 D. Gantz (Germany); 2000 D. Sutherland (UK); 2001 R. Voges (Switzerland); 2002 D. Gantz (Germany); 2003 D. Melillo (USA); 2004 K.W.M. Lawrie (UK); 2005 C. Filer (USA); 2006 J.R. Heys and currently in 2007 B.D. Maxwell (USA).

The International Conferences on Isotopes (ICI)

The decision taken at the 3rd venue in 1988 in Innsbruck to limit the topics of the IIS Symposia to Biological and Pharmaceutical Sciences did not prevent the presentation of the topics related to the production of the other isotopes and their industrial applications to be discussed at separate international meetings. These meetings eventually became known as the International Conferences on Isotopes (ICI) and were started by another group of dedicated individuals first in 1995 in Beijing, China and then followed by meetings in 1997 in Sydney, Australia; 1999 in Vancouver, Canada; 2002 in Cape Town, South Africa; and 2005, Brussels, Belgium. The 6th ICI meeting is in preparation and will be hosted in 2008 in Jeju Island, South Korea.

By participating and contributing at the ICI meetings Vancouver, Cape Town, and Brussels, I could see that they were well attended and well sponsored, mostly by the isotope industry and by various international and national government nuclear agencies.

However, unlike the IIS meetings after 1985, the organization of the ICI Symposia depends upon those dedicated individuals and interested organizations, who step up at the end of each Conference before the ICI Steering Committee (consisting mostly of previous organizers of ICI meetings) and be given the mostly unbinding assignment to organize the next event. The reason for this is that to this date the ICI activities are not consistently coordinated by any organization and do not follow any given set of rules.

Contrary to this, in the IIS, the authority and responsibility of choosing the chairs and locations of its Symposia is given by virtue of its Constitution and By Laws to the elected IIS Executives which in today's terminology is the Board of Trustees. Organizing financially self-sufficient and top quality international Symposia is still the main activity of the IIS and is guaranteed by its reputation and continued financial independence.

Other activities promoted by the IIS

Local chapters

The idea of organizing local chapters for the IIS came up first as the needed opportunity for the IIS membership to be able to meet locally between the once every three years international Symposia. Local chapters were first started in 1988 in the United States and were followed by Canada (1989 in Orangeville, Ontario and 1990 in St. Jovite, Quebec), thanks to the efforts of Professor Erwin Buncl and, respectively, John Rolston and to the sponsorship by Ontario Hydro and the Atomic Energy of Canada Ltd.

In the United States, I organized the first meeting of the US Northeast Chapter in 1988 while I was at Sandoz/Novartis. This was the beginning of the series of various IIS Chapter meetings. The first one to follow was the meeting of the Central US Chapter organized by Gary Rotert in Chicago in 1988. The Northeast and Central US Chapter meetings continued to be held at least once a year and have been hosted by an ever-increasing number of enthusiastic IIS members ever since. The format of these meetings ranged from 'one day in-next day out' to just 'one-day' meetings. Organizing the Chapter meetings became an attractive training ground for the more complex tasks – organizing international Symposia.

In 1991, our German and Swiss colleagues Rolf Voges (Sandoz Pharmaceuticals) and Werner Hassler (ANAWA Trading, Switzerland) started the well-known series of the Central European IIS Chapter meetings in Bad Soden. Shortly after, the United Kingdom IIS Chapter meetings were also started and once joined forces with the German Chapter. The European IIS membership, occasionally including speakers from Romania and Russia, continued to attend the UK and Central European Bad Soden IIS Symposia which will be the Fourteenth meeting in June 2007. I attended the first meeting of the IIS Chapter of the People's Republic of China in 1992, organized by Professor Zonquin Xia at a nice resort not too far from Shanghai. The Russian and the Romanian Chapters were started in 1987 with mostly a local attendance but they do report on their meetings in the IIS Newsletter and now in the IIS web site.

The activities of the IIS low-level radioactive waste (LLRW) committee

The regulations of the low-level radioactive waste (LLRW) disposal vary from country to country. The IIS identified this topic as being quite vital for its activities from the very beginning and made the needed quantum

leap to bring the users of isotopes and the regulating agencies in closer contact. The future of the synthesis and applications of compounds labeled with isotopes such as Tritium, carbon-14, I-125, etc. was and continues to be very much dependent on these regulations and/or over-regulations. The IIS membership responded in force and enthusiastically to the call of the IIS management in the early 1990s to educate its members, given the regulating government organs and the public on the many aspects of the uses of isotopes and the disposal of the waste resulting from these activities. By better defining what LLRW is, the disposal of it was treated by all parties involved with more efficiency and a better understanding. Topics related to LLRW were presented at the various International and local chapter IIS Symposia as well as in separate meetings. A special LLRW committee was constituted by the IIS around a 'core membership' consisting of Gary Rotert (Abbott), Larry Weaner (R.W. Johnson), Phil Williams, Jim Hicks, Kenneth O'Brien (Perkin Elmer Labs), Brad Maxwell (Bristol-Myers Squibb), myself and more recently Brad Keck (P&G). The LLRW committee relentlessly championed this work over all these years starting with the 1994 IIS International Symposium in Strasbourg. A full account of its activities to date can be found in the LLRW section of the IIS web site.

IIS Newsletter

In the beginning, a modest 'one man band' kind of work (when I would be writing most of the materials published), the IIS Newsletter soon turned into a collective work to which an increasing number of IIS members took increased interest in contributing rather than just reading it. Currently, the IIS puts out one hard copy a year under the dedicated work of Dr Mike Marx, Aptuit, Lenexa, KS, USA. The publication covers a wide range of topics ranging from current events to advertisements placed by the manufacturers of radiochemicals and/or related analytical instrumentation to acknowledge their Corporate(Associated) membership and to help the IIS.

The IIS website

The IIS web site at www.intl-isotope-soc.org has grown well and is a current reflection of the activities of the International Isotope Society. By logging onto this site, readers can view current and past events as well as the Constitution and By Laws of the IIS, minutes of the Board of Trustees and Board of Representatives meetings or those of the various Chapter meetings. The new design allows now for archiving materials that are

currently still scattered on the shelves in the offices of various IIS members, ready to be stored and shared with everybody else if submitted to the IIS web site organizers. Finally, local chapters are being given their own space in the web site to enter their news and to maintain their Chapter Web site following a simple set of rules supporting the ideas of sharing information of common interest rather than posting commercial advertising unrelated to IIS activities. Those interested in posting advertisements are encouraged to contact the IIS Secretary for further reference to the IIS webmaster.

Workshops and short courses

The mission and principal aims of the International Isotope Society are to encourage throughout the scientific community the advancement in knowledge of the synthesis, measurement, and applications of isotopes and isotopically labeled compounds through the effective promotion of awareness and actions on key issues by providing a communications network and forum through its membership. Overall, the International Isotope Society aims to promote the uses of isotopes and isotopically labeled compounds for studies to further improve the quality of life worldwide' (quote from the IIS Mission statement).

These principles were applied by the IIS until now by organizing regular international Symposia as well as local Chapter meetings. During some of these meetings, short courses and workshops were also organized catering mostly to the general profile and participation of the IIS membership. Recently, the BoT has decided to extend these activities and broaden its reach to Universities. The IIS is seeking among its members volunteers for guest lecturers to support programs in interested universities and Summer Schools such as the ACS summer schools organized by Professor Mantica of Michigan State University at San Jose State University and Brookhaven National Laboratory. Those interested in supporting these courses or suggesting others are encouraged to contact the ongoing IIS President as well as any member of the Board of Representatives that are listed in the IIS web site.

Proceedings of the IIS Symposia

The Proceedings of the IIS Symposia have been edited by the co-chairmen and published by Elsevier and J. Wiley. The Journal of Labelled Compounds and Radiopharmaceuticals has been quite instrumental in publishing many materials that have been presented at the chapter meetings as well as those from the 2006

International IIS Symposium that took place in Edinburgh, UK.

The relationship with the Journal of Labelled Compounds and Radiopharmaceuticals

In its 50 years of existence, the Journal of Labelled Compounds and Radiopharmaceuticals has been the flagship of the international scientific community for the publication of scientific papers related to the field of labeled organic compounds and later on also for radiopharmaceuticals. All of the current Editors and Advisory Board members of the Journal are also active members of the International Isotope Society and their contributions to the Journal do reflect the mission statements of the IIS. The 'adoption' of the Journal by the International Isotope Society as its official journal was a natural move that benefited both sides – the publisher and the scientific community.

Rewriting of the IIS Constitution

Being one of those who contributed to the writing of the original constitution of the IIS and its By Laws and to the rewriting of the last version, I inspired myself from the basic principles advocated in the United States Declaration of Independence. These principles were – equality of its members regardless of their country of residence, freedom to choose their representatives by democratic vote and keeping the balance of powers between the private membership and the industrial sponsors.

The original IIS Constitution written together with William P. Duncan, Richard Muccino and Dale Blackburn was by all means not perfect but fulfilled its role at the given time. The first refinement of its formulation was done by John Keppler from the Research Triangle Institute, North Carolina at the request of the IIS President, at that time William P. Duncan. In 2001, the newly elected Board of Trustees consisting of Dietrich Gantz, Rolf Voges, Ulrich Pleiss, Ken Lawrie, Richard Heys and Dave Melillo decided to do a thorough rewriting of the IIS Constitution and invited me to take part in the BoT meetings dedicated to this task.

We agreed to take note of the evolution of the IIS, the need to involve more the membership in carrying out its principles and to create new instruments for the growth of the IIS. The following summarizes the improvements and changes achieved by the new IIS Constitution and its By Laws:

- Broaden the scope of activities of the IIS by encouraging and/or supporting activities of other

related groups (industrial applications of isotopes; short-lived isotopes; radiopharmaceuticals) to join and function as independent divisions of the IIS. These independent divisions will be running their activities, such as international and local Chapter Symposia, under the umbrella of the IIS while keeping both their financial and scientific independence. The members of these divisions will be able to elect their own representatives to the IIS Board of Representatives and Board of Trustees in direct proportion to the size of their membership.

- Enhance the financial responsibility and accountability for the IIS funds at all levels (Chapter, Society and Symposia budgets) by electing a Chief Financial Officer to work closely with the Treasurers from these levels at implementing the Budgets approved by the BoT.
- At today's stage of development, the Society can and should consider partial financial remuneration for some essential work carried out by its members. So far, all activities of the IIS at local and international levels have been carried out 'pro bono' – volunteer work.
- Stimulate membership activities at the local Chapter level and acknowledge internationally, the achievements of their officers by including via elections local chapter Presidents and Treasurers in the newly formed IIS Board of Representatives (BoR). This board was preceded by the Advisory Board that was appointed by the BoT, rather than being elected by the members of the given chapters.
- Redefine the role of the Board of Representatives as a group of people who by virtue of their talents,

knowledge, financial support and willingness to put forth their work to enhance the activities of the BoT. The BoR will become the training ground and pool for recruiting, via election, the future management of the Society.

- The membership in the Board of Representatives will no longer be a 'rubber stamping' popularity contest and process among the voting IIS members. The new Board of Representatives consists of people who have been elected as delegates by the membership of given chapters who know them best plus five candidates to the various positions of the Board of Representatives who were not elected on the BoT, due to a lower number of votes than the winning, but who's experience and dedication remains of great value to the IIS.
- The Chair of the BoR is the seventh member of the BoT and is to be elected by his/her peers. The role of the Chair of the BoR is to lead this body, to encourage its members to submit new ideas to the BoT, to be aware of the multifaceted tasks that both the BoT and the BoR carry out over the life of the IIS as well as to new tasks that either of these two bodies could take upon themselves.

In conclusion, the IIS has become a successful international scientific organization due to the knowledge and dedication of its membership to good science and fellowship and to the fact that its members understand and cherish the idea to not be dominated by any special interest group.