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Attendees: Prof. J. Jortner, Chairman, Dr. E. D. Becker, Prof. A. Chakravorty,

Prof. J. Corish, Prof. T. Cvitaš, Prof. A. E. Fischli, Prof. R. G. Gilbert,

Prof. E. J. Grzywa, Dr. A. Hayes, Prof. F. Ingman, Prof. J. W. Lorimer,

Prof. J. Miyamoto, Dr. P. M. Norling, Prof. H. Ohtaki, Prof. U. K. Pandit,

Dr. E. P. Przybylowicz, Prof. G. M. Schneider, Prof. G. Somsen, Prof. P. S. Steyn,

Prof. L. Sydnes, Prof. J. M. Ward, Prof. G. C. Wermuth, Dr. A. N. Wright,

Prof. C. H. Zhang

Secretary: Dr. J. W. Jost, Executive Director

1. INTRODUCTORY REMARKS AND FINALIZATION OF AGENDA

Prof. Jortner welcomed the members of the Bureau to the 71st meeting. He noted that the Gesellschaft Deutscher Chemiker was providing the facilities and refreshments for this meeting and those that had been held on Thursday and Friday and expressed appreciation for their kind hospitality.

Prof. Schneider suggested a modification in the sequence of the agenda in order to defer items 5 and 6 until the second day to permit additional informal discussion prior to considering those items. The President responded that the agenda had been formulated carefully to cover major business early in the meeting; he was reluctant to defer such important matters. In the absence of a motion to modify the agenda, the precirculated agenda was confirmed.

2. MINUTES OF 69TH & 70TH MEETINGS OF BUREAU

The Minutes of the 69th and 70th Bureau were accepted without change. Prof. Jortner suggested that in future minutes might be approved by correspondence.

3. MINUTES OF 125TH MEETING OF EXECUTIVE COMMITTEE AND 39TH COUNCIL

Prof. Somsen noted that the summaries of the Council and Bureau provided soon after the Geneva General Assembly had been useful. The minutes of the 125th Executive Committee and 39th Council were received. There were no questions on items not on the agenda.

4. REPORTS OF DIVISION PRESIDENTS (WRITTEN)

The President thanked the Division Presidents for their detailed and comprehensive reports. Prof. Gilbert distributed an extended version of the report of Division IV. Prof. Jortner pointed out that in future meetings of the Bureau it would be useful to review different scientific, industrial and mission oriented fields relevant to the activities of the Divisions and Standing Committees.

Prof. Lorimer noted that in the report of Division I there was a comment that a scientist from Bulgaria was unable to participate because Bulgaria was not a member of the Union. It was noted that the new category of Provisional Member had been authorized by the Council at Geneva to allow participation in such cases upon request of the Division. It was felt that greater publicity should be given to this new category of membership.

The President briefly described three interdivisional activities that were initiated in the past year.

- Biomolecular Chemistry coordinated by the President of Division III
- Materials coordinated by the Presidents of Divisions II and IV
- Environmental coordinated by the President of Division VI.

The Bureau approved the continuation of these activities.

The Bureau accepted the reports of the Division Presidents as presented.

5. STRATEGIC PLAN, 1998-9

The President noted that the generation of the Strategic Plan has been a central activity of the Union for the past year. There has been extensive consultation during this time with the global chemistry community both inside and outside IUPAC. This plan will determine the course of the Union's activities for the coming decades. The current document was circulated to the Bureau for comment. The comments received were taken into account in preparing the final version of the plan approved by the Executive Committee.

This Plan is the first attempt to describe both the inwardly directed and the outwardly directed goals of the Union. The Strategic Plan explains and articulates the policy guidelines of the Union and provides guidance to the operating arms of the Union, the Divisions and Standing Committees.

Prof. Jortner expressed the thanks of the Bureau to the members of the SDIC and especially to the Secretary General. The Bureau unanimously approved this vote of thanks.

The Secretary General noted that the process of obtaining comments had been extensive and that many useful comments had been obtained from the Bureau and incorporated in the final document. Dr. Becker then briefly described the proposed process for updating the Strategic Plan contained in the material circulated to the Bureau (see Attachment 1)

The Draft Operating Plans provided for the EC/Bureau/Secretariat, Committee on Printed and Electronic Publications and CHEMRAWN provide models for the preparation of similar plans by the Divisions and Standing Committees. These operating plans will assist in explaining IUPAC's work to others and will also provide a structure to allow Divisions and Standing Committees to examine their activities.

Prof. Jortner noted that the comments received from NAOs have been very positive. There was some discussion of the difficulty in involving the NAOs in the work of IUPAC. It was felt that the process of updating the Strategic Plan had the potential to provide a mechanism for increased involvement by the NAOs. The group was reminded that the updating process envisaged was for the Strategic Thrusts. The long-range goals are expected to require little if any modification in the medium term (5-10 years).

There was some discussion as to whether IUPAC could have any effect on promoting chemical research as stated in Goal 2. The consensus was that in the sense meant,

that is, in providing tools for the conduct of chemical research, Goal 2 was one to which IUPAC could reasonably expect to contribute. The group also felt that the use of the phrase chemical sciences was beneficial in emphasizing IUPAC's involvement with applied chemistry and not only basic research. The suggestion was made that the phrase "chemistry related industry" in Goal 3 could be replaced by "chemical sciences". The strategic thrusts connected to this goal should emphasize industry and applied chemistry.

Dr. Hayes noted that his Vice Presidential Critical Assessment would have as one of its areas of focus the relations of the Union with industry, especially with trade associations such as CMA, CEFIC and ICCA. He also commented that another focus of his VPCA would be relations with national chemical societies, especially those that are not the National Adhering Organization for their country.

Prof. Steyn moved that the Bureau endorse the Mission Statement as written. The Bureau then endorsed the Mission Statement.

The President asked that the Bureau approve the implementation and updating process described in the paper from the Secretary General. The Bureau unanimously approved both the implementation plan and the updating process for the Strategic Plan.

6. PROPOSAL FROM THE EXECUTIVE COMMITTEE FOR CHANGES IN ORGANIZATION AND MANAGEMENT OF IUPAC'S SCIENTIFIC ACTIVITIES

Prof. Jortner introduced the subject by noting that the Union must be aware of the globalization of science, of the need to provide a proper framework for interdisciplinary activities and of the issues chemistry and society. The service of chemistry is not a substitute for high level, high quality research, it is supplementary. IUPAC must be prepared to deal with the changing nature of the chemical sciences. The discussion of this subject will address the impact on the scientific program of the Union of the changes proposed by the Strategy Development and Implementation Committee and the Committee on Project Evaluation Criteria.

The President expressed his thanks and that of the Bureau for the rapid and effective work of CPEC under the excellent leadership of Prof. Somsen.

It is felt that the present organization of IUPAC hinders horizontal projects. The founders of IUPAC envisaged a dynamic Union, making provision for the dissolution and establishment of Commissions. Their concept of a changing structure in time was replaced by the current concept of long term Commissions with little opportunity for growth and renewal. Attempts to change this situation by concepts such as the creation of the Pool of Titular Members have been unsuccessful.

The foundations of change for IUPAC are the Strategic Plan and the recommendations of the SDIC for reorganization of the Union's scientific activities. The membership of the SDIC reflected not only IUPAC, but the entire global chemistry community. IUPAC must build on past success but modify its image. Contributions must be relevant, timely, open and of high quality. The President noted that preparation of his VPCA demonstrated to him the heterogeneous nature of IUPAC's work. It was emphasized that the aim of the recommendations is to improve the effectiveness of the Union's scientific work not its efficiency.

Prof. Jortner noted that the basic conceptual framework for the recommendations of the SDIC is that IUPAC must represent the entire worldwide chemistry community. The Union must deepen and broaden its relations to that community. It was also noted that the responses received from the NAOs are generally positive. The proposed changes are significant not as bureaucratic changes but changes of fundamental importance to global chemistry.

Dr. Becker briefly reviewed the background to the proposals made by the SDIC. The concept of Pool Titular Members had been introduced as a means of providing flexibility and encouraging new activities. It was generally felt that this had been unsuccessful. The suggestion of providing funding to projects rather than to Titular Members was made and the Secretary General wrote a discussion paper for the Executive Committee on a new way of managing the Union's scientific work. The Executive Committee endorsed the concept of a project driven system at its meeting in Jerusalem (April 1997). The SDIC was formed to determine whether the concept was viable and to develop both a Strategic Plan and an implementation plan for a new organization of the Union. The current system relies on the terms of reference of the Commissions to determine the activities carried out by each Commission. Dr. Becker pointed out that the process leading to the current proposals has taken two years, and that the report of the SDIC is long because it contains the background required for someone not involved in the process to understand the rationale for the recommendations of the Committee.

Dr. Becker then drew the Bureau's attention to item 6.5 in the agenda. He reviewed the actions that the Bureau was being asked to take. A revised text for point 9 was distributed, as was a new point 12 (See Attachment 2 for revised version). Dr. Becker observed that 3 years to implement these recommendations might seem like a long time but that it was necessary to give Commissions the opportunity to adjust. Prof. Jortner commented that this integrated process is intended to ensure quality, relevance, international impact and the participation of the worldwide chemistry community. The process is a holistic one with major changes being the responsibility of the Division Presidents and Division Committees. This is where the stability of the organization will reside during these major organizational changes.

The President introduced the report on the Project Evaluation Process. This process is the implementation of the science policy of the Union. Prof. Somsen was asked to briefly review the recommendations of CPEC.

Prof. Somsen noted that he did not intend to restate the report. The philosophy which guided the Committee was that the process developed must be operable, that scientific responsibility must remain with the Divisions and Standing Committees and that the creation of a bureaucratic system should be avoided. The rôle of the Secretariat had been formulated to be one of assistance, not of management. It was observed that while Prof. Klein was unable to attend the Oxford meeting, Prof. Somsen had met with him separately and his input had been incorporated in the final report. The comment was made that the process proposed was one which could have been implemented at any time in the past in the context of the existing organization. Prof. Jortner again thanked the Committee and its Chairman for their significant, complete and timely report.

During the ensuing discussion, the question was raised of the length of time for the implementation of the reorganization; the suggestion was made that the transition period should be shortened. It was pointed out that at the meeting of the Division Presidents on Friday it had been agreed to implement the Project Evaluation Process as of 1 January 1999. Point 6 should be modified to include the starting date of 1 January 1999. The creation of new Commissions after 2001 will be in accord with the existing Bylaws. It was noted that the authority to suspend existing Division rules was necessary since in many cases the rules contradict the Union Bylaws.

The Bureau discussed the question of an appropriate title for members of task groups and other IUPAC bodies. There was general agreement that while this was an important issue, as was the issue of the electorate for the Division Committee, a decision could be postponed until closer to 2001. It was also noted that point 12 addresses this question indirectly.

There was considerable discussion of the benefits of the present Commission system in aiding the identification of relevant experts within IUPAC and in allowing the participation of scientists from countries other than the major scientific centers as National Representatives. Some Members pointed out the danger of losing enthusiasm and participation of some Commission members during implementation of these proposals. It was felt that many of these potential problems could be avoided by proper implementation within the Divisions. The proposed organization gives the Divisions great leeway to set up mechanisms to ensure that participation of scientists from the global chemistry community is facilitated. The difficulty of a Division Committee having sufficient expertise to manage the wide range of activities in a Division was discussed. The group concluded that mechanisms, such as advisory groups, could be set up, if that was felt to be necessary, to enable the Division Committee to properly carry out its work. The cost of a large Division Committee should not be excessive if it meets only rarely and conducts most of its business by correspondence, as envisaged by the CPEC report. It was pointed out that the concept of accepting project proposals from non IUPAC members was one that had been viewed favorably by some chemists not currently active in IUPAC.

There was also some discussion of the time period for retrospective evaluation of projects. The CPEC report mentions a period of 2-5 years. Prof. Somsen pointed out that the impact of some projects can only be measured after as much as 5 years. After some further discussion, Prof. Somsen noted that the Committee felt that it should not specify the work of the Evaluation Committee too exactly, rather the Committee should develop its own guidelines. It was also pointed out that the CPEC report suggests that the Evaluation Committee could begin work after the Berlin General Assembly.

The President proposed that the Bureau approve the integrated program as proposed by the Executive Committee and the actions described in points 1-12.

Prof. Schneider asked if a separate vote could be taken on point 9 and the remaining 11 points. After discussion, the President put the question. There were 2 votes in favor of a separate vote and 20 opposed. The President then asked the Bureau to approve the 12 points. There were 20 votes in favor and 2 abstentions, none against.

7. DISCUSSION OF PROPOSAL BY DIVISION PRESIDENTS FOR REORGANIZATION OF THE BUREAU

Prof. Jortner introduced the subject by noting that an annual meeting of the Division Presidents, with participation by the Secretary General, is required by the Bylaws. The meeting last November was an extraordinary meeting called to discuss a proposal by Prof. Leigh for reorganization of the Bureau. Dr. Becker noted that he was not present at this meeting but that he had been asked by the Executive Committee to prepare a summary discussion paper for the Bureau. The discussion paper reviews the history of the proposals by Prof. Leigh. The report from the meeting of Division Presidents was distributed to the members of the SDIC and relevant recommendations were incorporated in the report of the SDIC. The recommendations of the Presidents' meeting regarding greater responsibility for the individual Bureau members have been incorporated in the recommendations of CPEC. Comments were made that both the Presidents meeting and the analysis of the Report by the Secretary General had been valuable as part of the process of developing the SDIC proposals and the report of CPEC.

Subsequent discussion concerned the function and purpose of the Division Presidents meeting. The meeting is seen as a valuable opportunity to discuss interdivisional projects. The comment was made that the relegation of scientific matters to the Division Presidents meeting should be avoided. The addition of a regular item to future Bureau meetings of a review of the scientific program of one or more Divisions was proposed. One of the major functions of the Division Presidents meeting is to discuss implementation details that are inappropriate for discussion by the full Bureau. It was noted that the meeting on Friday had clarified a number of operational details about the SDIC and CPEC proposals. It was suggested that a summary of the Division Presidents meeting should in future be provided to the Bureau. The Executive Director was asked to arrange future Bureau Agendas to allow at least an oral presentation by the Chairman of the meeting of Division Presidents. The comment was made that consideration should be given to a bylaw change to have the meeting of Division Presidents chaired by a person from outside the Divisions.

It was noted that the Secretary General's discussion paper included the comment that it might be useful to appoint Bureau members to the Standing Committees. There was also discussion of the value of Bureau members attending Division or Commission meetings during the General Assembly. This proposal was seen as being especially valuable in the case of IDCNS. It was felt that implementation of these suggestions should wait until after the reorganization has been implemented.

The President asked the Secretary General to develop, in consultation with the Division Presidents, a document regarding the structure and purpose of the annual Division Presidents meeting.

8. VICE PRESIDENTIAL CRITICAL ASSESSMENT

Prof. Jortner noted that Dr. Hayes' Vice President's Critical Assessment will be complementary to the previous VPCA.

Dr. Hayes noted that his VPCA will concentrate on three main areas:

- Standing Committees
- Relations with industry. Meetings have already been held with the Chemical Manufacturers Association (CMA, US), Confederation of European Chemical Industry (CEFIC), German Chemical Manufacturers Association (VCI).
 Meetings are planned with the International Council of Chemical Associations (ICCA, Brussels, April 1999) and Japan Chemical Industry Association (Tokyo, April 1999).
- Chemical Societies. The disconnect between the mainstream of chemical society members and IUPAC, especially in those countries where the chemical society is not the National Adhering Organization, needs to be addressed.

It was noted that while 65% of the membership of the Royal Society of Chemistry is industrial, 90% of committee members are academic. This situation is common in other chemical societies and in IUPAC. Improvement in relations with industry could lead to greater participation by industrial chemists.

9. THE UNION'S EDUCATION ACTIVITIES - A DISCUSSION

Several IUPAC groups have expressed interest in the expansion of educational activities, including the possibility of a new Division of Chemical Education. Prof. Jortner noted that it was important to keep in mind Quality, Relevance and International Impact. Education is very important but IUPAC should not try to replace governments. The President commented that he would not be in favor of the creation of a new Division as the Union's activities in this important area should be interdivisional. Following the Vice President's recommendations in his VPCA, the framework and content of IUPAC's activities in the field of Chemical Education will be addressed.

The subsequent discussion touched on the difficulty of developing effective programs in this area that meet the goals of IUPAC. There was support for the development of standards for chemical education at the University level and for promoting the exchange of information among interested parties worldwide. It was suggested that the VPCA should look closely at the rôle and activities of the Committee on the Teaching of Chemistry. The need to connect with UNESCO efforts in this area was also noted.

Dr. Becker reviewed the material on the proposed joint project with the IUBMB on standards for Ph.D. degrees. The names of participants in the joint task force have been communicated to IUBMB. The IUPAC participants are Prof. Tamotsu Kondow, Prof. Jan Verhoeven and Prof. Andrea Vasella. It is expected that the group will do its work by e-mail. This project is intended to provide guidance to Ph.D. granting departments, Ph.D. students and their mentors. The purpose of this project is not to develop recommendations on curriculum or other issues relating to the requirements set by institutions for the granting of Ph.D. degrees. The Bureau endorsed IUPAC participation in this project.

10. SCIENTIFIC PROJECTS, 1998-9

10.1. STATUS OF COMMISSION PROJECTS FROM GENERAL ASSEMBLY

Dr. Jost noted that the project database had been updated since the Geneva General Assembly resulting in a reduction in the number of projects from over 400 to less than 350. The contents of the project database will be posted on the IUPAC web site by the end of November.

10.2. POOL PROJECTS AND POOL TITULAR MEMBERS

Dr. Jost pointed out that the Pool Projects are being phased out.

10.3. OTHER NEW PROJECTS: PH; DATABASES

Dr. Becker noted that while the project approval system is being developed, projects outside the current Commission system are being approved in an informal way by the Secretary General and the Treasurer.

11. FELLOWS AND AFFILIATE MEMBERSHIP PROGRAMS

The Bureau noted that the Fellows program seems to have gotten off to a very successful start. There was concern expressed that if a Fellow returned to an active rôle in IUPAC and then returned to Fellow status, not receiving *CI* free again could be construed negatively. It was noted that the current policy on free distribution of *CI* could be changed by the Bureau. The President asked the Executive Director to generate some data on the financial consequences of distributing *CI*.

12. STATUS REPORT ON IUPAC SECRETARIAT

Dr. Jost reviewed the highlights of the written report. The current staff, Mrs. Linda Tapp and Dr. Fabienne Meyers, will not be sufficient given the new project approval process and the proposed changes in publications. Additional staff will be added beginning early in 1999.

13. IUPAC WEB SITE AND OTHER PUBLICITY ABOUT THE UNION

Prof. Jortner noted that the image of the Union has been enhanced by the various invited articles noted in the paper included in the agenda. Some discussion followed on the possibility of IUPAC becoming more directly involved in the International Chemistry Olympiad. It was decided to investigate the subject further since it seemed to be a good way to contribute to chemical education and to enhance the image of IUPAC among young chemists and educators. The exact nature of such a relationship is, as yet, unclear.

Dr. Jost described the additional features planned for the IUPAC web site, including an up to date members directory, project descriptions, membership of IUPAC bodies, complete texts of recommendations and reports. He said that in the future home pages of Divisions and Commissions could be hosted on the IUPAC web site rather than local University computers.

14. PUBLICATIONS

14.1. STATUS REPORT

Dr. Jost reviewed the problems with the publication schedules for *PAC* and *CI*. *PAC* is currently late due to delays in the submission of manuscripts. While the number of subscriptions to *PAC* continues to decline, the rate of decline seems to be less than that for most scientific journals.

14.2. APPROVAL OF SUBSCRIPTION RATES FOR 1999

Dr. Jost noted that the subscription increase for *PAC* proposed by the Committee on Printed and Electronic Publications is ~7%, significantly less than the 12% increase proposed by Blackwell. The Bureau approved the subscription rates for 1999 as recommended by CPEP.

14.3. Proposal to Reopen the Publishing Contract

Dr. Jost emphasized that the recommendation from the Committee on Printed and Electronic Publications to reopen the publishing contract is not based primarily on financial considerations, but rather, the increased flexibility foreseen if the Union becomes its own publisher for *PAC* and *CI*. The ability to set subscription rates so as to increase the subscriber base for *PAC* and the need to explore how electronic publishing could be used to further the Union's desire to make its work more widely and readily available, were seen as most important. While the dates suggested were aggressive, they were in line with being able to make a decision about *PAC* at the meeting of the Executive Committee in April 1999. A decision on book publishing could be made later, since books did not have the same regular publication schedule as a journal. An additional point to be considered is the need to set clear criteria to judge if a self-publishing arrangement is working as expected.

After some discussion, the Bureau approved the recommendation of CPEP to open the publication contract. The Executive Director was asked to prepare bid packages for *PAC* and books and to develop a more detailed analysis of the self-publishing option for *PAC*.

14.4. ENVIRONMENTAL ESTROGENS SPECIAL ISSUE

Prof. Fischli noted that this project is a joint effort of IUPAC-IUTOX-IUPHAR with financial support from ICSU for the dissemination of the special issue. Dr. Wright reviewed the history of the project and noted that each contribution had been peer reviewed. Dr. Miyamoto will present a summary of the subject of environmental estrogens at the meeting of the International Federation for Chemical Safety later this year in Yokohama, Japan. The possibility of developing a speaker pack on this subject for use by IUPAC officers and others was raised. The special issue is planned to be the September issue of *PAC* with a publication date of late November.

IUPHAR and IUTOX have agreed to purchase 200 copies each and other organizations such as the CMA and CEFIC are expected to purchase multiple copies. Dr. Miyamoto has arranged for a Japanese translation to be completed by early next year.

14.5. SPECIAL TOPICS EDITOR FOR PURE AND APPLIED CHEMISTRY

Dr. Becker reviewed the concept of a special topics editor for *PAC*. This person would not be editor of *PAC*, but rather would be responsible for developing special topic issues or review articles. Dr. Becker reported that Prof. James Bull of the University of Cape Town had agreed to accept the position. He will be in the US in October and will visit the Secretariat to discuss his plans. It was pointed out that the *Pure and Applied Chemistry* Editorial Advisory Board would need to be more active in support of the initiatives introduced by Prof. Bull.

14.6. FORUM EDITOR FOR CHEMISTRY INTERNATIONAL

Prof. Jortner discussed the concept of the Forum Editor for *Chemistry International* as intended to promote discussion of science policy issues of interest to the global chemistry community. While a number of people had been approached about this position, no one had yet been found to take on this assignment.

14.7. SUPPLEMENT TO "HISTORY OF IUPAC"

Dr. Jost reported that a final draft of the supplement to the *History of IUPAC* had been received from Prof. Brown. Dr. Becker reviewed the reasons for commissioning the supplement, especially the retirement of Dr. Williams and the transfer of the Union's records to North Carolina. The manuscript will be sent to all the current IUPAC Officers and recent former Officers for review.

14.8. DISSOLUTION OF THE *CHEMISTRY INTERNATIONAL* EDITORIAL ADVISORY BOARD

Dr. Becker noted that the *Chemistry International* Editorial Advisory Board is no longer considered necessary. The Executive Committee therefore approved the dissolution of the EAB.

14.9. ETHICAL GUIDELINES FOR SCIENTIFIC PUBLICATIONS - A DISCUSSION

Prof. Jortner noted that scientific journals are consolidating, creating the need for ethical guidelines that are international rather than only national. Electronic publication introduces new questions and issues. A small working group will be set up to address these issues. The members of the Bureau were asked to provide suggestions for participants.

15. FUTURE GENERAL ASSEMBLIES AND CONGRESSES

15.1. 40TH GENERAL ASSEMBLY AND 37TH CONGRESS (BERLIN, 1999)

Prof. Jortner noted that the Berlin Congress is the first Congress to be organized fully in compliance with the Bureau's recommendations for improving the scientific quality of the IUPAC Congress. An outstanding International Advisory Board has been established for the Congress. Prof. Jortner expressed the Bureau's appreciation of the outstanding cooperation of the Gesellschaft Deutscher Chemiker in the organization of what is expected to be a major scientific event.

The Berlin Congress will build on the success of the Geneva Congress. IUPAC has been actively involved in the selection of the International Advisory Committee, which includes two Division Presidents. The focus of the Congress will be on the molecular basis of the life sciences. There was some discussion of the geographic distribution of the plenary lecturers. Prof. Jortner will discuss this subject with Prof. tom Dieck and the International Advisory Committee.

Prof. Jortner discussed the need to encourage the attendance of young scientists at the Congress. The International Chemistry Council has recommended that UNESCO contribute to a program of travel grants for attendance by young scientists from developing countries. UNESCO and the Gesellschaft Deutscher Chemiker will sign a contract for the use of UNESCO funds for this program. The GDCh and IUPAC will also contribute, for a total fund of USD 30 000. This will be sufficient to fund the participation of ~20 young scientists. The program will be announced in *Chemistry International* and in letters to various chemical societies, such as FLAQ and FACS. The selection of the participants in this program will be made by a committee of the GDCh. The Bureau approved IUPAC funding for this program.

It was suggested that the names of those selected be distributed to Division Presidents for selection of young scientists to attend Commission Meetings. Prof. Jortner proposed that the Bureau should discuss the entire issue of the encouragement of participation by young scientists in IUPAC activities at its next meeting.

Dr. Jost briefly reviewed the arrangements for the General Assembly. The meeting rooms and other facilities have been reserved at the Free University of Berlin. Arrangements have also been made for the President's State of the Union Address, the general reception and the reception for the Council. Hotel reservations will be made through a local agency. One hundred rooms have been reserved at the Hotel Steglitz within walking distance of the Free University.

15.2. 41ST GENERAL ASSEMBLY AND 38TH CONGRESS (BRISBANE, 2001)

Prof. Gilbert described the novel schedule proposed for the Congress and General Assembly. The Congress will be scheduled for morning and

evening (19:00 - 21:00) sessions. The General Assembly will be held concurrently, beginning before the Congress and ending after the Congress ends. A schematic schedule is shown in Attachment 3.

The Bureau agreed to the suggestion of the Australian organizers to use the subtitle "World Chemistry Congress". The organizers were asked to keep the registration fee in line with those charged in Geneva and Berlin. The suggestion was made that special reduced registration be made available to attendees of the General Assembly. Before the integrated schedule is approved, a detailed study will be made to verify that the required number of Commission and Committee meetings can be scheduled in the time allotted. It was noted that the themes for the Congress are still preliminary and must be examined closely to be sure there is a unified theme for the whole Congress in light of the Bureau's recommendations.

15.3. 42ND GENERAL ASSEMBLY AND 39TH CONGRESS (2003)

The National Research Council of Canada has expressed strong interest in hosting the General Assembly and Congress in 2003. An official invitation to National Adhering Organizations to submit bids for the 2003 General Assembly and Congress will be sent out at the end of October with a reply requested for 1 March 1999. It was agreed that preliminary approval will not be given lightly at the Berlin meeting and that a change in venue thereafter will be made only if there is a significant problem with the organization of the General Assembly and Congress. The annual conference of the Canadian Society for Chemistry has been moved from April to coincide with the Congress. It was noted that the size of the General Assembly in 2003 might be smaller than those in the past and a back to back schedule for the General Assembly and Congress might be a better arrangement than the simultaneous schedule proposed for the 2001 General Assembly and Congress.

16. UNESCO-IUPAC INTERNATIONAL COMMITTEE ON CHEMISTRY

16.1. WORLD CONFERENCE ON SCIENCE

Prof. Fischli reviewed the origin of the World Conference on Science: Science for the XXIst Century *A New Commitment*. The Conference is scheduled for late June 1999 in Budapest, Hungary. Attendance at the Conference will be by invitation only. Approximately 2 000 attendees are expected from Government, Science and Media. The emphasis of the WCS will be on the value of Science to Society.

Prof. Jortner noted that IUPAC had been asked to organize two afternoon seminars at the WCS. The topics for the two seminars are "Science, industry and knowledge as a public good" and "Science and new materials". Prof. Fischli will organize the first seminar and Prof. Corish and Prof. Gilbert will organize the second. Finances for the WCS will be

handled centrally by ICSU.

16.2. PROPOSED TRAINING IN INDIA & LATIN AMERICA

Prof. Fischli briefly reviewed the membership of the International Committee for Chemistry and Executive Committee of the ICC. The goal of the ICC is to determine what UNESCO and IUPAC can do together for developing countries.

The two proposals for training of students in Latin America and in India were reviewed by the ICC and the program proposed for India was recommended for UNESCO funding. The Indian program will provide short-term training opportunities, usually of three months, with extension possible under some circumstances. The travel expenses of the participants will be covered by the program while local costs will be covered by the Jawaharlal Nehru Center. The Bureau approved the expenditure of up to USD 5 000 per year for three years to match funds from UNESCO.

17. FINANCE COMMITTEE

17.1. STATEMENT OF ACCOUNTS FOR 1997

Prof. Ward reviewed his paper discussing the 1997 Accounts. The accounts have not been audited because the auditors have not made arrangements with a local firm to conduct the audit. After months of unresponsive behavior by the auditors, the Treasurer wrote to inform them that IUPAC would be making different arrangements for auditing its accounts. The Executive Director has contracted with a local firm to audit the Union's accounts.

The Treasurer noted some corrections to his commentary (Attachment 4)

17.2. NATIONAL SUBSCRIPTIONS

Dr. Jost noted that payment of National Subscriptions has been slow but a number of major payments were made in August and September.

17.3. REVIEW OF BUDGETS FOR 1998-9 AND CAPITAL BUDGET FOR 1998

Prof. Ward noted that the changes in the budget for 1998-9 were due to lower than expected costs for the operation of the Secretariat.

17.4. ENDOWMENT FUND

Prof. Ward briefly described the Endowment Fund and Endowment Reserve Fund authorized by the Executive Committee at its meeting at Research Triangle Park. The funds authorized in item 16.2 will come from the money earned by the Endowment Fund. Prof. Jortner reminded the Bureau that projects chosen for funding by the Endowment Fund must be in accordance with the Union's Mission Statement and Goals and

should have international impact.

17.5. FINANCE COMMITTEE MEMBERSHIP

Prof. Ward described his to date unsuccessful efforts to find a candidate to fill the current vacancy on the Finance Committee. He also noted that in order to ensure a smooth transition, he would be stepping down as Finance Committee Chairman at the meeting in February 1999.

Dr. E. P. Przybylowicz will become Chairman at that time.

Prof. Jortner proposed a vote of thanks and appreciation for the excellent management of the Union's Finances by the Treasurer and the Finance Committee. The Bureau unanimously approved the proposal.

17.6. MINIMUM NATIONAL SUBSCRIPTIONS

Prof. Ohtaki briefly described his concern that the high minimum National Subscription was preventing the chemical societies of many less developed countries from joining IUPAC. Prof. Ward then provided some background on the reasons for raising the minimum subscription. The major reason was the fact that National Subscriptions in general had been steadily increasing while the minimum subscription had remained the same for many years. Also, the Finance Committee had felt that USD 1 000 represents a relatively modest amount for full membership in the Union.

There was then a general discussion of the proposal to replace the current category of Observer Countries with that of Associate National Adhering Organization. The new category would have three classifications of membership depending on the amount of the subscription. Category C Associate NAOs would be equivalent to the current Observer Countries. while category B & A Associate NAOs would pay amounts less than the minimum subscription. They would not have voting rights, but would have the right to nominate National Representatives to IUPAC bodies. There was some discussion of granting voting rights to category A & B Associate Members. Granting voting rights to a new group of members paying less than the current minimum would further compress the number of votes related to the National Subscription. The question of a group of countries joining as a single entity was also raised. Other possible benefits for Associate NAOs were discussed, including the right to have voting members of Division Committees and other IUPAC bodies. If full membership at a reduced minimum subscription were made available to "developing countries", the Union would have to define what it meant by "developing country" very carefully, since the same amount of money can be a large or a small sum for different "developing countries".

The Bureau voted to recommend that Council change the name of the current category of "Observer Countries" to "Associate National Adhering Organizations".

The President proposed, and the Bureau agreed, that the Secretary General

and the Executive Director would prepare a document for the Executive Committee on this subject. This document would address the levels of participation possible for different categories of Associate NAOs, the possibility of regional membership on IUPAC bodies and the possibility of revising the voting table to enable voting in Council by members contributing less than the current minimum subscription.

In the course of the discussion, the Executive Director provided figures on the projected assignment of votes at the 1999 General Assembly based on the current allocation policy adopted in 1995. A number of Bureau Members expressed surprise and concern that "compression" of the voting range had occurred so soon, with only two countries now listed as having one vote. The Secretary General was asked to prepare a discussion paper for initial consideration by the EC on options for future adjustment of votes.

18. IUPAC MEETING IN AFRICA

The meeting in Durban with members of the African Association for Pure and Applied Chemistry and other leaders of the chemical community in Africa, was the most recent of the series of meetings with leaders of the chemistry community in different regions. The group which met included high level representatives who could speak for chemistry in Africa. All of the participants noted the immense challenges, the problem of "donor fatigue" and the need to let local people, not outsiders, determine the solutions to the continent's problems.

The Durban meeting covered a broad range of topics. The materials from the meeting will be published separately and distributed widely, both within and outside IUPAC. The Union has proposed that it will participate in a project with the AAPAC to develop an Electronic Scientific Highway. A second project is to be proposed by the AAPAC.

The Bureau expressed support for this activity and thanked Prof. Steyn for his invaluable assistance in organizing this event. Prof. Jortner, Dr. Becker and Prof. Steyn were authorized to pursue joint projects with the AAPAC as described. Prof. Gilbert suggested that it might now be appropriate to review the recommendations of the Singapore meeting to determine what has been accomplished.

19. MEETING WITH FLAQ

An invitation to speak at the Board meeting of the Federación Latinoamericana de Asociaciones Químicas (July 27, 1998) was accepted by the Secretary General in order to make IUPAC better known in a part of the world where IUPAC has comparatively few members. The Executive Director also attended the meeting and both the Secretary General and the Executive Director were able to speak with the heads of several chemical societies. Extensive conversations were held with the heads of the Mexican, Peruvian, Venezuelan and Colombian Chemical Societies. Both during and after the meeting various IUPAC materials were distributed to help inform the participants of the full range of the Union's activities. An offer to host a

home page for FLAQ and its next Congress in 2000, to be held in Lima, Peru, was made to the FLAQ Board.

Prof. Jortner proposed that the next in the series of regional meetings on IUPAC should be held at the FLAQ Congress in 2000.

20. MEETING OF PRESIDENTS OF REGIONAL CHEMICAL SOCIETIES

The President briefly reviewed the attendees and purpose of the meeting held last January at Research Triangle Park. The next meeting is planned for Berlin during the General Assembly.

21. RATIFICATION OF SPONSORSHIP OF SYMPOSIA

The Bureau ratified the sponsorship of the Symposia listed in Attachment 5.

22. IUPAC BODIES

22.1. RATIFICATION OF MEMBERSHIPS APPROVED BY CORRESPONDENCE

The Bureau ratified the memberships approved by correspondence as shown in Attachment 6.

22.2. Nominations of New Members

There were no new members of IUPAC bodies to be approved by the Bureau.

22.3. RATIFICATION OF PROVISIONAL MEMBERS

The Bureau ratified the appointment of the following as Provisional Members of IUPAC Bodies:

Prof. Y. Yuthavong, Division III, Sub-Committee on Bioorganic Chemistry

Prof. Y. Thabhtaranoth, Division III, Sub-Committee on Organic Synthesis

Prof. M. M. Kizilyalli, Division II, Commission on High Temperature Materials and Solid State Chemistry

22.4. RATIFICATION OF NEW OBSERVER COUNTRIES

The Bureau ratified the approval of the Cuban Chemical Society as an Observer Country.

The Bureau approved the application of the Pancyprian Union of Chemists for Observer Country status.

23. VISA CLAUSE IN CONFERENCE SPONSORSHIP LETTERS

This item was withdrawn due to the omission of the background material from the agenda book sent to the Bureau members. This subject will be addressed at the next Executive Committee and Bureau meetings.

24. ICSU REORGANIZATION

Prof. Fischli briefly described the major changes approved by the special General Assembly of ICSU held April 1998 in Vienna.

- The name of ICSU was changed to the International Council for Science, but the logo and the acronym ICSU were retained.
- The objectives of ICSU were enlarged.
- The General Committee was abolished.
- The Executive Board was increased from 6 Officers and 6 Ordinary members to 6 Officers and 8 Ordinary members.
- Each Officer was given specific responsibilities.
- A sunset clause and review procedure was established for all ICSU bodies.

25. NOMINATIONS FOR THE KING FAISAL PRIZE

Prof. Jortner noted that the Executive Committee has recommended that nominations be made only for international prizes open to all chemists, without restriction. The Past President has been given the responsibility for making nominations, if appropriate. Prof. Fischli noted that the King Faisal Prize is given each year in one of four areas in turn, Mathematics, Physics, Biology and Chemistry. The prize in chemistry will be awarded in 1999. The Union has nominated Prof. J.-M. Lehn and Prof. A. Eschenmoser.

26. IUPAC PRIZE FOR RECENT PH. D.S IN CHEMISTRY

Dr. Becker described the Young Scientist Prize in Molecular Biology sponsored by Amersham Pharmacia Biotech and *Science* magazine. The Bureau endorsed the concept of a prize or prizes to be awarded to the best Ph.D. theses each year. The winners would be brought to the IUPAC Congress to receive their awards. The Secretary General was asked to prepare a detailed proposal for consideration by the Bureau at its next meeting in Berlin. If approved, the first prizes could be awarded at the Brisbane Congress in 2001.

27. DATES AND PLACE OF NEXT BUREAU MEETING

27.1. BERLIN, 11-12 AUGUST 1999 AND 14 AUGUST 1999

28. ANY OTHER BUSINESS

The Bureau voted to express its deep appreciation of the hospitality of the Gesellschaft Deutscher Chemiker, with special thanks to Prof. H. tom Dieck, Frau Jutta Bröll and to Fräulein Heike tom Dieck for their special efforts to make this meeting successful.