Annual Meeting

Board and Council Meeting Report

The Executive Board and Council met during the Annual Meeting in Boston. Following are the major initiatives and appointments approved at those meetings:

- Two members of Council were elected to the Executive Board. David DeRosier and Dorothy Beckett will each serve two-year terms (2001-2003), replacing outgoing Board members William Cramer and Steven Siegelbaum.

- The 2002 Nominating Committee was selected. Its members will be Susan Hamilton and Eve Marder, serving as Council representatives, and Wayne Hubbell and Susan Taylor, serving as non-Council representatives. Susan Hamilton will chair the Committee. Past-chair, Avril Somlyo will serve as consultant to the Committee.

- Ligia Toro De Stefani was elected to the Program Committee, replacing outgoing Council member Kathy Trybus.

- Council approved the Membership Committee's recommendation to raise the age at which a Society member may apply for Emeritus status. Emeritus status will now be available to those who have been regular members for at least ten years, are

(Continued on page 6.)

Treasurer's Report

Toni Scarpa, Biophysical Society Treasurer

Over the past 12 months the financial outlook of the Biophysical Society has been particularly good. Several goals of the Finance Committee were recently achieved: (a) after several years of losses, for the second year in a row, revenues exceeded expenses; (b) the reserve account reached the Board-mandated amount, corresponding to 75% of the Society Operating Budget; (c) several resolutions were approved which resulted in the establishment of cost revenue centers, and the capacity to do annual budgeting and allocation of net revenue on a proactive basis.

These steps, together with the re-engineering of the Society operations by a very capable office staff, the steady growth of the Society, and the enthusiasm and the volunteerism of the membership, bode well for continuing financial success and stability of the Society for many years to come.

(Continued on page 3.)

Annual Meeting Statistics

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<th>Year</th>
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Call for Nominations for Biophysical Journal Editor

DEADLINE FOR NOMINATIONS: June 1, 2001

The Publications Committee of the Biophysical Society solicits your nomination of candidates for Editor of Biophysical Journal (BJ), for a term beginning July 2002. Nominees for Editor of BJ should be highly respected for research in a specific field of biophysics, and also have a broad understanding and appreciation of biophysics.

Please send names and full addresses of your nominees to Ro Kampman in the Society office, by email (rkampman@biophysics.faseb.org) or regular mail. Nominations will be closed June 1, 2001.

Biophysical Journal

Did you know...

✓ BJ Online is a free benefit of membership?
✓ Society Members are eligible for free color figure publication in Biophysical Journal?
✓ BJ Online provides free access to all papers six months after publication?

BJ Online: http://www.biophysj.org/

BJ Online is housed on the Highwire Press website, which contains the largest number of free life science, peer-reviewed articles in the world. Visit Highwire journals at http://www.highwire.org/
Treasurer’s Report, continued from page 1.)

Membership Activities

Figure 1 illustrates the wealth of the Society by providing a 20-year perspective of the membership, scientific registration to the Annual Meeting and abstracts presented. The membership continues to increase, as shown in the report of the membership committee. After a period of 10 years, where participation (Registrations and Abstracts) in the Annual Meeting was essentially flat, activity has significantly grown over the last 3 years, and each year the previous records for registration and abstracts have been broken. In addition, this year we have a new record, that of exhibitors, which were 140 versus 111 the previous year. The latter increment was the clear result of the Society Office, which for the first time directly managed the exhibits.

FY 2000 Audited Budget

Figure 2 shows the 2000 Budget (July 1, 1999 – June 30, 2000) as recently audited and approved. When the budget was formulated, approximately 2 ½ years ago, we conservatively estimated a very limited surplus. The surplus at the end of the fiscal year 2000 (June 30, 2000) was $485,097. The reasons for this discrepancy are several: lower costs and increased subscription revenues from the Biophysical Journal, higher than expected participation at the New Orleans meeting, the capacity of proactively budgeting and the assumption by the office of several activities in a far more effective and cost-efficient fashion. For comparison,

Cash Reserve Accounts

The Society voted four years ago to maintain a Reserve Account at 75% of the annual operating budget of the Society. This should be allocated between 40% and 60% in equities and the remaining in short-term bonds, notes and CDs, at the discretion of the Treasurer and the Finance Committee.

As of 2/1/01, the 75% goal was achieved and the total Reserve Account was $2,256,159, exactly 75% of the operating budget. By comparison, in 1998 it was less than 61% of the operating budget. The annual performance of the

FY 2002 Proposed Budget

The Executive Committee approved the 2002 budget a few weeks ago. It is shown in the bottom row “2002” of Figure 3, itemized by Cost Centers. The budget anticipates an additional expenditure of $100,000 for the Biophysical Discussions (Member Services) and some decrease in fees for Society members publishing color in Biophysical Journal.

In comparison, the audited budgets of 1999 and 2000 are shown in the first and second rows, respectively. The current budget, 2001, as formulated 1 ½ years ago, is shown for comparison on the third row. Based upon the mid-year estimates and the success of the Boston meeting, we estimate that the net revenue will be greatly in excess of the $10,000 originally anticipated.
Reserve Account is shown in Figure 4. Equally worth mentioning is the fact that our reserve account, now at 75% of the annual operating budget, is very small historically and compared with that of similar societies.

Figure 5 shows the monthly position of the reserve account between the equity and the more liquid assets during each month in 2000. The liquid asset portion, approximately $1.2M, has been managed by Mercantile Bank Trust Division in Baltimore and has yielded in 2000 a total annual return above 7 ½% (interest plus short and intermediate term bond appreciation).

The equity portfolio is managed by the Finance Committee, in consultation with a senior financial advisor at Morgan Stanley in Chicago. The total annual return for Year 2000 was 9.7%. (Figure 6). This compares well with the Standard and Poor's 500 index (also in our portfolio), which declined approximately 10% over the same period. It is noteworthy and encouraging that the Society Equity Portfolio performed at least two times better than the SP500 Index every year during the last 10 years.

**Long-Term Financial Planning**

For the first time in its history, the Society is in a position to undertake long-term financial planning. Whereas the finances are now in order and a net surplus has been generated over the past year, the Society has grown quite dramatically over the last ten years, especially in two activities where finances are highly leveraged. Figure 7 indicates in a pie chart the sources of revenue and expenses by activity. It is apparent that the Journal and the Annual Meeting constitute 80% of the Society revenues and 76% of the expenses. The uncertainty of the financial standing of scientific journals in an increasingly expanding electronic environment and the possibility of one or more poorly attended annual meetings could suddenly produce a very large deficit which, if protracted, would rapidly exhaust reserves and require drastic financial decisions. For this reason, the Finance Committee and the Executive Committee unanimously approved a series of resolutions aimed at long-term financial planning and at minimizing sudden major shortfalls arising from circumstances noted above.

In normal years, the Society should operate within its budget without tapping into the Reserves.

The activities of the Society will be grouped in three cost revenue centers:

- The Annual Meeting
- The Biophysical Journal
- Membership Activities (such as Committees, Public Affairs, Subgroups, etc.)

Each year, the Annual Meeting should generate a profit equivalent to 10% of annual expenses.

Each year, the Biophysical Journal should generate a profit equivalent to 10% of annual expenses.

The annual budget for Membership activities should be consistent with:

- The total of membership dues
- 10% Journal
- 10% Annual Meeting
- Dues, Contributions, Donations, Grants

Hence, now that the Reserve Account of the Society has finally reached 75% of the operating budget, any net operating revenue, after ensuring that reserves level, will be distributed as follows:

- 50% to additional membership activities (i.e. the funding of the Biophysical Discussions budgeted for next year)
- 50% to new reserve accounts for the Annual Meeting and the Journal in a prorated fashion until each account reaches 20% of its operating revenues.

The establishment of a small reserve account for the Journal and the Annual Meeting will provide the following advantages:

- It will guarantee that the Society will continue to have 10% income from the Annual Meeting and the Journal even when one or both have a bad year.
- It will permit the long-range fixing of finances of one cost center without affecting pricing or activities of the others.
- It will facilitate long-term planning and experimental innovative approaches on the part of the Editor and Program Chair of the Annual Meeting.
Success has many fathers, but I would be remiss if I did not indicate the positive effect on finances, as well as in other activities, of Ro Kampman and her staff at the Biophysical Society office in Bethesda. Now that we are financially stable and in the black, we are giving back to the membership, which has loyal supported the Society, several additional benefits and cost savings. For example, Society members no longer pay for the cost of printing in color to members in the Biophysical Journal and the page charges to Society members will be drastically reduced beginning this July. Additional AV equipment for symposium and platform speakers at the Annual Meeting has been purchased. Under discussion is a decrease in fees for the abstract submission and other possible cost-saving for the membership.

If you require additional information, please visit the web site http://www.biophysics.org/biophys/society/01business where a full financial report is available. Furthermore, if you have any questions, feel free to call me at (216) 368-5298 or email me at axs15@po.cwru.edu.

— Toni Scarpa, Treasurer
Placement Service

The Placement Service in Boston included 82 registered candidates and 129 employers. A new system was put in place this year, with the help of Jackie Tanaka, Chair of the Minorities Affairs Committee, for undergraduate mentorships. The service allows employers to match up with minority students interested in summer placement. With additional publicity, this new program should grow in years to come. The placement service is available year round on the internet at http://www.biophysics.org/biophys/society/placement/. All ads are placed for six months and are renewable. Any ad can be edited or withdrawn at any time.

Subgroups

Bioenergetics

Bioenergetics Subgroup Symposia have concentrated in the past on the structural and functional details of mitochondrial metabolite transport proteins, electron transport complexes, the F1-F0 ATP synthase, as well as on the role of mitochondria in apoptosis or cellular suicide, which is important for normal development and tissue homeostasis. The morning session of this year’s 2001 Bioenergetics Subgroup Symposium Mitochondria and Disease, organized by Hartmut Wohlrab, Boston Biomedical Research Institute, and Maureen McEnery, Case Western Reserve University, attempted to remind the audience of the physiological role of mitochondria and how they have been implicated in several diseases. Bradford Lowell, Beth Israel Deaconess Medical Center, Boston, presented his studies on the mitochondrial uncoupling proteins two and three and put his studies very nicely in the general context of human metabolism, including obesity. Luke Szveda, Case Western Reserve University, addressed the important issue of cardiac reperfusion injuries and how free radicals affect some mitochondrial proteins. Zuoshang Xu, University of Massachusetts Medical School, presented his work on mitochondrial degeneration and dysfunction in Amyotrophic Lateral...
Sclerosis (Lou Gehrig's disease). He identified a tight association of the cystolic SOD 1 with mitochondria. SOD 1 mutations have been linked to ALS. In the final seminar of the morning session, Michael Brownlee, Albert Einstein College of Medicine, showed that normalizing mitochondrial superoxide production prevents several pathways of hyperglycemic (diabetic) damage. The symposium was well attended, demonstrating that there is a receptive audience at Biophysics meetings for seminars that put detailed structural/functional studies into a physiological context.

The afternoon subgroup symposium, organized by Kathleen Kinnally, New York University College of Dentistry, dealt with Protein Import into Mitochondria, and covered some timely aspects of protein "export" as well. Walter Neupert, University of Munich, presented an overview of the molecular machinery involved in translocating proteins across the mitochondrial outer and inner membranes, with a focus on bioenergetic considerations. Stanley Korsmeyer, Dana Farber Cancer Institute, Harvard Medical School, addressed the question of mitochondrial dysfunction and the distribution and segregation of mitochondrial DNA. Like the morning symposium, the afternoon symposium had a large and appreciative audience.

A highlight of the afternoon was the presentation of the Young Bioenergeticist Award to Gisela Beutner, University of Rochester for her postdoctoral research on calcium transport in mitochondria. This award and the symposia were supported through dues paid by the subgroup members. In addition, the symposia were made possible by generous financial support from Avanti Polar Lipids, Bristol Myers Squibb, Morrell Instruments, and Nikon Instruments.

At the business dinner held that evening, the subgroup elected new officers and names were put in nomination to fill three openings in the six-member subgroup executive committee. Carmen Mannella, Wadsworth Center, was elected subgroup chair, and Kathleen Kinnally was elected treasurer. The topic Mitochondria and Calcium Signaling was proposed for one of the subgroup's symposia for 2002, to be organized by Gyorgy Hajnoczky, Thomas Jefferson University. Voting for the executive committee and solicitation of a second symposium topic for next year's meeting are being conducted by mail and email.

The afternoon subgroup symposium had a large and appreciative audience.

Shimon Weis (center) was the 2001 recipient of the Michael and Kate Báránya Award for Young Investigators. He is pictured with Michael Báránya, Kate Báránya, and Art Horwich.

The 2001 Annual Meeting brought together over 5,000 scientists, over one-third of whom were students and postdocs.

Biological Fluorescence

The 2001 meeting of the Biological Fluorescence Subgroup of the Biophysical Society was held on Saturday, February 17. Although Enrico Gratton, the new Subgroup Chair, should actually be writing this report I took the task on myself since Enrico injured his back the day before he was to leave for Boston (to present 16 posters and one talk!) and was unable to attend the meeting. Despite the absence of Enrico, however, the first subgroup meeting he has missed, we had a great meeting. Officially there are 193 Biological Fluorescence Subgroup members, as judged by dues payments, a significant increase from last year. However, the attendance at the subgroup was actually in excess of 400 (I lost count after that!) and many people complained to me later that they could not get a seat or, in some cases, even get into the room. Of course when rooms are assigned to us, Subgroup membership is one consideration and so we were assigned a room with a nominal capacity of 250. The take-home lesson here is: please join the subgroup officially. We welcome everyone, of course, but the more official members we have the easier it is to justify a larger room and the more money we raise for our expenses such as the audiovisual equipment and amenities such as the coffee break.

Joe Lakowicz, University of Maryland and the Center for Fluorescence

(Continued on page 10.)
Scenes from Boston 2001

(Left to right), Newly-elected fellows Ludwig Brand (l), Helen Berman (center), and President-Elect, Wilma Olson (r). Not pictured, George Feher, Manuel Morales, and Arieh Warshel.

Early Careers Committee Steering Group coalescing. The steering committee, led by Patricia Clark, includes Amy Harkins, Britta Schroth-Diez, Jim Vivian, Aldrin Gomes, Doug Kamen, H wyda Arafat, Gisela Behmmer, Rachel Laudadig, Christian Parry, Maurits de Planque, Kristi Wojtuszewski, and Steve Raas.

2000-2001 President Chris Miller presents Thomas Record with the Founders Award for outstanding achievement in any area of biophysics.

One hundred and forty booths, a record number for the Society, were sold for this year’s Annual Meeting. Income from exhibits allows the Society to maintain low pre-registration rates.

This year’s National Lecturer, Brian Matthews, spoke on Structure isn’t Everything, But it Sure Helps.

2000-2001 President, Christopher Miller.
Chris Miller congratulating Frederic Richards, recipient of the 2001 Distinguished Service Award.

Jane Richardson, this year’s Emily Gray Award recipient, is presented her award by Chris Miller.

President Mary Barkley discussing early career concerns at the Postdoctoral Breakfast, which was attended by more than 100 postdocs. The breakfast included a panel discussion led by Jonathan King, Dorothy Beckett and Ro Kampman.

Mary Hendrix, FASEB President, was guest speaker at the joint meeting of the Public Affairs Committee and Congressional Liaison Committees. Also speaking during the session was Pat White, FASEB’s Director, Legislative Relations. Pictured with Hendrix is Mordecai Blaustein.

Ka Yee Christina Lee (l) and Millie M. Georgiadis (r), co-recipients of the Dayhoff Award, are congratulated by the Dayhoffs (center).

More than 2,900 posters were presented at this year’s Annual Meeting.

The Hynes Convention Center.
Spectroscopy, started us off with an interesting talk on Radiative Decay Engineering, which described recent work on the use of metallic surfaces to adjust fluorophore characteristics. Simon Weiss, Lawrence Berkeley National Laboratory, then gave an exciting lecture on fluorescent nanoparticles entitled Super-Resolution Co-Localization with Q-dots. After these two opening talks, which literally were presented to a standing-room only crowd, we began the Young Fluorescence Investigator Forum. The opening talk was to be given by the winner of the Young Fluorescence Investigator Award (sponsored by the SPEX group of Jobin-Yvon, Inc.) followed by a shorter talk by Luis Bagatolli, Departamento de Química Biológica-CIQUIBIC (CONICET), Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Córdoba, Argentina. However, as it turned out Luis was the winner of the 2001 Young Fluorescence Investigator Award so he had the luxury of two time slots to present a wonderful talk entitled Looking at Lipid Domains in Free Standing Bilayers. In addition to the Award Plaque, Luis received a check for $1000 and joins an impressive list of YFI Award winners - congratulations Luis! Luis's talk was followed by two excellent presentations. Vinod Subramaniam, Max-Planck Institute for Biophysical Chemistry in Göttingen, Germany, discussed Photophysics of Green and Red Fluorescent Proteins and described recent work on the maturation of the DsRed chromophore. John Jean, Washington University School of Medicine in St. Louis, next presented a lecture entitled Excited State Structure and Fluorescence Dynamics in Nucleic Acids which described a rigorous treatment of the fluorescence properties of 2-aminopurine.

At this point the Subgroup had a brief business session during which Enrico Gratton was unanimously elected to serve a second term as Chair of the Subgroup. This election was prompted by my remarks to the effect that; (1) A two-year tenure for the Subgroup Chair would allow for a more efficient organization of Subgroup meetings; and (2) Enrico was not there to defend himself so we had a golden opportunity to extend his chairmanship. After this election the Subgroup adjourned for a short coffee break - which I am very sorry to say did not feature cookies since we couldn't afford the $2 per cookie pricetag! The closing session of the Subgroup highlighted Advances in Fluorescence Microscopy. Maïté Coppey, Institut Jacques-Monod in Paris, France, presented a talk entitled Protein-Protein Interactions in Living Cells. Homogeneous FRET Microscopy which described her laboratory's latest work on lifetime and anisotropy decay measurements in living cells using GFP-tagged proteins. Stefan Hell, Max-Planck Institute for Biophysical Chemistry in Göttingen, Germany, then gave a talk entitled Sharpening Up Confocal Microscopy, which described his laboratory's important contributions to novel optical approaches to achieve higher resolution in fluorescence microscopy. Finally, last but hardly least, Peter So, Massachusetts Institute of Technology (which conveniently for Peter was just across the river from the Convention Center), gave an enthusiastic talk on Standing-Wave Total Internal Reflection Microscopy: Imaging and Spectroscopy at the Nanometer Level. The capacity standing-room only crowd actually stayed to the end of the Subgroup Symposium, a tribute to the final speakers who must always compete with "audience fatigue" at extended afternoon meetings. In addition to thanking once again the speakers for their truly excellent talks I want to acknowledge and give a big "Mahalo" to the sponsors of the Biological Fluorescence Subgroup. We were generously supported this year by I.S.S., Inc., Hi-Tech Scientific, Molecular Probes, Spectronic Instruments and the SPEX Fluorescence Group of Jobin-Yvon, Inc.

— David Jameson, Chair of the 2001 Biological Fluorescence Subgroup Meeting

Membrane Biophysics

30th Annual Meeting

The 30th annual meeting of the Membrane Biophysics Subgroup was highlighted by a symposium, organized by Lynne Quarmby, on the topic of intracellular calcium signaling. Speakers at the symposium included Barbara Ehrlich, Elizabeth Finch, Clara Franzini-Armstrong, Martha Cryer, William Roberts, and Rich Lewis, who described recent advances in our understanding of the properties, roles and relationships of calcium channels and calcium binding proteins in ER/SR calcium signaling. The symposium continued the tradition of being attended by an overflow audience who appreciated the excellent presentations by the speakers.

K.S. Cole Award

The K.S. Cole awardee for 2001 was Mike Cahalan, University of California, Irvine, who was honored at a dinner attended by subgroup members at Legal Sea Foods on Saturday evening. Mike Cahalan was introduced by Sarah Garber. One anecdote illustrating the care and thoroughness that characterizes
Mike’s work gave evidence that, nonetheless, “… Bertil is always right!” Mike subsequently entertained the audience with an enthusiastic talk highlighting, in particular, the pioneering work of his laboratory and many collaborators on the role of ion channels in the immune response.

**Business Meeting**

The business meeting followed immediately after the subgroup symposium. Major items for discussion again included Subgroup finances, the role of the Biophysical Society in Subgroup support, and how to promote member participation and encourage membership. The Society has indicated that some financial support for Subgroups will be provided in coming years, and it has affirmed its enthusiastic support for Subgroup functions as an important part of Society activities. It was decided to keep Membrane Biophysics Subgroup dues at their present level in order to keep Subgroup membership as accessible as possible.

The topic of student awards was revisited. There was considerable dissatisfaction with the student travel and poster awards as implemented in the recent past. The Advisory Committee will discuss possible alternatives for the future, with the particular goal of encouraging young investigators to join and to participate in Subgroup activities.

Barbara Ehrlich, Yale University, was voted Chair-elect of the Membrane Biophysics Subgroup, and she will organize the Symposium for the 2003 meeting. Bill Wonderlin was elected Secretary-Treasurer, to serve through the 2004 meeting.

**2002 Symposium**

Bob French will be organizing the Membrane Biophysics subgroup meeting in San Francisco, in 2002. The topic will be Molecular Motions Underlying Ion Channel Gating.

**Nominations for K.S. Cole Awards**

The subgroup welcomes nominations for the K.S. Cole award. The deadline for nominations is November 1, 2001. If you would like to nominate a candidate for the K.S. Cole Award, please send the nomination to a member of the Advisory Committee: Bob French, University of Calgary; Bill Wonderlin, West Virginia University; Barbara Ehrlich, Yale University; Lynne Quarmby, Simon Fraser University; David Dawson, Oregen Health Sciences University; and Sarah Garber, FHS / The Chicago Medical School.

— Bob French, Chair (french@ucalgary.ca) and Bill Wonderlin, Secretary-Treasurer (wonder@wvu.edu)

**Membrane Structure and Assembly**

The MSAS held their annual meeting in Boston on February 17. This year the subgroup meeting, which was attended by over 500 people, took on the theme of The Role of M embranes in Cell Death. The focus was on two aspects of this topic: apoptosis and antimicrobial peptides. John Lemasters focused on the role of changes in mitochondrial membrane permeability in the pathway to apoptosis. Richard Kolesnick discussed earlier events in apoptosis that occurred at the plasma membrane and involved sphingolipid metabolism. A product of sphingolipid metabolism that appears to be involved in apoptosis is ceramide. Paavo Kinnunen and Alicia Alonso discussed the importance of ceramide in changing membrane

— Bob French, Chair (french@ucalgary.ca) and Bill Wonderlin, Secretary-Treasurer (wonder@wvu.edu)
The second portion of the program dealt with antimicrobial peptides. A central theme was the role of lipids in determining antimicrobial specificity and the mechanism of action of these agents. Olaf Andersen illustrated how lipids, through their effects on changing the physical properties of membranes, modulate the activity of channel-forming peptides. Katsumi Matsuzaki reviewed the pore forming mechanism of magainin while Huey Huang presented an alternative view based on membrane destabilization as a consequence of peptides forming a mixed phase region. Eefjan Breukink discussed the role of lipid II in the action of nisin, while Tina van Dyk presented evidence for the promotion of selective lipid exchange by polymyxin B. Sam Gelman showed how conformationally restricted amino acids could form peptide structures that possessed at least as great an antimicrobial specificity as do naturally occurring antimicrobial peptides such as magainin. Yechiel Shai discussed the carpet mechanism for antimicrobial action. Karl Lohner pointed out the complexity of both the structural and physical properties of the lipid components of membranes and the difficulty of arriving at a simple general relationship to biological activity. Ron McElhaney also focused on the issue of lipid diversity and pointed out how the interaction of peptides with membranes was dependent on the lipid composition.

After extensive lively discussions, the meeting was followed by a brief homage to Dan Lasic, a prominent membrane biophysicist who had passed away during the past year. Chezy Barenholz, who was a friend and scientific collaborator of Lasic, gave this homage and included a review of Lasic’s principal scientific contributions.

The session concluded with a brief business meeting conducted by the outgoing Chair, Richard Epand. The membership in the subgroup has increased from 127 to 178 over the past year. A web site has been established with the help of Paul Axelsen. The URL of this site is http://www.biophysics.org/biophys/society/subgrps/msas/msas.htm

The new Chair-elect, Klaus Gawrich was introduced. Paul Axelsen was elected to this position last year and he now takes over as Chair of the MSAS.

— Richard Epand, 2000 Chair

Committees

CPOW

The CPOW sponsored a panel discussion at this year’s Annual Meeting. The topic of the panel was Navigating the Transition from Postdoctoral to Independent Scientist: A Discussion with Representatives from Industry and Academy. Panel members included:

George Thomas
University of Missouri, Kansas City
Mary F. Roberts
Boston College
Cliff Robinson
formerly of 3-D Pharmaceuticals
now at the University of Delaware
Dorothy Beckett
University of Maryland

The attendance at the discussion was excellent and topics included choosing between industry and academia, the application process, review of job candidates in academia, expectations of new independent investigators in industry and academia, and negotiating a new position. Questions posed by the audience covered a very broad range and feedback was very favorable. The discussion at this panel will be used as a basis for planning a panel for next year’s Annual Meeting. One excellent suggestion from a member of the audience is to plan a panel focused on Careers in Biophysics. This discussion will include traditional career paths in industry and academia as well as nontraditional options such as science policy and patent law.

The CPOW has now joined forces with the Education, Early Careers and Minority Affairs Committees to form a Professional Development Committee. In the future we will jointly host events that will be of interest to all members of the Society.

— Dorothy Beckett, Chair

Education

Education Roundtable

A discussion of undergraduate education in biophysics was held at the 45th Annual Meeting of the Biophysical Society, Monday, February 19, 2001, co-chaired by Bernard Chasen, Department of Physics, Boston University, and Barry Selinsky, Department of Chemistry, Villanova University.

Discussion within the roundtable centered on two issues:

1. The integration of physics into introductory biology laboratories and the integration of biology into introductory physics laboratories, with the goal of introducing undergraduate students to biophysics. Short presentations were made by Mary Ann Mycek, Dartmouth College, and Shyamsunder Erramilli, Boston University, on their efforts in these areas.

2. The concept of multidisciplinary science as an alternative to discipline-based teaching. Morton Hoffman, Boston University, gave a presentation describing his ideas on the development of a “Molecular Science” curriculum. Courses in the current scientific disciplines could be developed from a foundation in Molecular Science.

There was lively discussion on both of the above issues. There appears to be a small but very active contingent of faculty who teach at Predominantly
Undergraduate Institutions (PUIs) that are members of the Biophysical Society. In addition to research and networking with colleagues, these scientists are interested in educating undergraduates in biophysics. These people would like to see the addition of programs in undergraduate education at the Annual Meeting. Possibilities would include:

1. A symposium on educational techniques in biophysics.
2. The addition of "biophysics education" as a possible poster category.
3. An undergraduate poster competition, similar to the graduate student poster competition currently run by the Society.
4. The addition of a laboratory component to the On-Line Textbook.
5. A definition of a "biophysics curriculum" that can be used in an undergraduate biophysics major or concentration.

Although the turnout was relatively small, there does appear to be sufficient interest to warrant future activities in undergraduate education at the meeting. Undergraduate students should be encouraged to attend the meeting and present research; these students will ultimately enter our research programs. Greater exposure to undergraduate students will generate a larger pool of higher quality graduate students.

All comments and suggestions are welcome. Please forward these to Barry Selinsky (selinsky@chem.vill.edu), Barnard Chasan (bc@bu.edu), or Suzanne Scarlata (Suzanne@dualphy.pnb.sunysb.edu). — Suzanne Scarlata, Chair

Membership

Each year, the Membership Committee analyzes membership statistics and trends. Below is a summary of this year's analysis, which was presented to Council.

Membership Trends

This year, the upward trend in Society membership continues unabated as indicated in the bar graph entitled Total Membership. Overall, the Society membership has grown by 24.2% since 1995. The 2001 membership has now topped 6000. The Biophysical Society was incorporated as an international society and maintains broad representation as shown in the graph below. Slightly more than one quarter of the members reside in countries other than the United States.

The breakdown by dues category is shown in the pyramid chart on this page. In chronological order, they are Student, Early Career, Regular and Emeritus. Scanning the past years for which there are complete statistics (1995-2000), one sees that there has been growth in all of the categories. Thus, it is important to note that creating a Postdoctoral category in 1997 and changing it to Early Career in 2000 did not simply "rob" the Regular category of some of its younger members and the revenue they were contributing. Although there was a small dip in the Regular category in 1997, there was a greater influx in the Postdoctoral category. Thus, we conclude that this transitional category is paying off by encouraging newly minted biophysicists to begin affiliating with the Society earlier.

What Do Members Want?

Members vote on the worth of the Society in several ways besides dues: with their feet at the Annual Meeting and with their choice of journal for their manuscripts.

Graph 1 Total Membership 1995-2000

Graph 2 2000 Geographical Distribution

Graph 3 Membership Categories in 2000

Graph 4 Employment Sector in 2000 (3165 respondents)

March 2001 Newsletter 13
From our surveys and through anecdotal remarks, we believe that members view participation in the Annual Meeting as the greatest benefit of membership. The ability to sponsor an abstract and to receive a discounted registration fee are both important. At the New Orleans Annual Meeting in 2000, 48% of members attended the Annual Meeting and 70% of attendees were members.

Biophysical Journal has been a benefit of membership for Regular members for approximately a decade. Although it was distributed initially in print form, BJ Online is now a benefit of membership to all member categories.

Without accounting for members who submit more than one manuscript in a single year, we estimate that 14% of the membership contributes manuscripts to BJ. This figure is essentially identical for the three years for which statistics are available. It is not known how these break down by section of the Journal; although, it is evident that some sections have more contributions than others.

Membership Demographics
We are beginning to collect statistics on attributes of our membership body that will help us evaluate whether programs would benefit a particular subset of the Society.

- Employment Sector—the doughnut chart shows the distribution among the three largest pools: Academic, Industry, and Government. As expected, most are in academia; however, 14% of our members are split between industry and government.

- Funding—in broad strokes, the bar graph below represents the sources of support listed by members who responded on their dues notice questionnaire. Although NIH is the most well-represented source, it is useful to learn that the US-NSF serves about one third as many. The number of members receiving support from other non-NIH public sources in the US was of similar magnitude to that of NSF. The private agency mentioned most frequently was the US American Heart Association and, notably, there were many students and postdoctoral members with fellowship support from it.

Committee Activities
This year the Membership Committee held its first New Member Breakfast during the Annual Meeting in Boston. Over 100 new members stopped by to have a cup of coffee and chat with other new members as well as Executive Board and Council members. Several Committee recommendations were presented to Council this year and were approved, including the increase in age requirement for Emeritus status, from 62 to 65, and the approval of free subgroup membership for students.

The Committee has always included in its roster a member from the former Postdoctoral (now Early Career) dues category. We would like to enlist an individual from the Student category and one from the Early Career category to serve on the Committee. We welcome suggestions of individuals who would enjoy and benefit from participation in this way.

— Madeline Shea, Chair
M adeline-shea@uiowa.edu

Six student travel awardees seated with Program Chair, Joe Falke (fourth from right). 80 students applied for the competitive awards, which were awarded to 28 students evaluated by an Education Committee subcommittee.
Dear Members of the Biophysical Society,

This brief is to inform you of some new developments in the Biophysics Textbook Online. As most of you know, the Biophysical Society has embraced the idea of a free, web-based and comprehensive textbook that covers all areas of modern biophysics. The book is divided roughly into 25 volumes. Each volume will eventually contain 10-20 chapters that cover key areas for which, in many cases, no well-developed pedagogical material exists. The chapters are written by experts and controlled for quality, content, and uniformity by the editor of the corresponding volume. Managed for many years by the founding Editor, Vic Bloomfield, and Carol Gross in St. Paul, the BTOL is moving to Bethesda under the direction of Educational Committee with special assistance from Dianne McGavin and Drita Schruefer.

What sets the BTOL apart from the 100s of websites that already exist is the creation of an edited and uniform standard that will further the education of all areas of biophysics throughout the world. The International Union of Pure and Applied Biophysics (IUPAB) at a recent Council meeting voted to adopt the BTOL as its official teaching organ and is committed to promoting the textbook worldwide. Quoting Tony North, the Secretary General of the IUPAB, “We should give publicity to the project through IUPAB NEWS, which is circulated to our 50 national bodies, to a number of biophysical societies, to other individuals, and through the IUPAB website.” In early 2002 the IUPAB will sponsor a meeting in Moscow to discuss electronic publishing, featuring the BTOL. Also, at the next International Biophysics Congress in Buenos Aires, April 2002, I will deliver a lecture in the Education Symposium, thus solidifying our worldwide position in this area.

These activities will enhance the exposure of the already successful textbook and its authors. This February total hits were 23,644 for html pages and 31,582 for pdf downloads, up from 14,187 and 16,523, respectively, in January. We also have a new homepage; for those of you who have not looked at the book lately, it might be worth a peek. New additions will include three chapters on intermolecular forces by Adrian Parsegian, a chapter on surface charge by Gerald Ehrenstein, and another on stochastic processes by Harold Lecar. We also welcome fresh leadership in the volumes on Electrophysiology (Bob French), EPR (Al Beth) and spectroscopy (Joe Beecham).

Where do we go from here? In some respects this is still an experimental venture in gathering and delivering teaching material in biophysics. The Society is convinced that the Biophysics Textbook Online can be an important mechanism for developing pedagogical resources, but it will only be successful if active scientists and teachers are willing to devote the time and effort to building a useful collection of material. We are always looking for ways to improve and suggestions for topics, links to our homepage and recommendations for authorship are welcome.

I urge you to participate in this project by using the textbook and advertising it in your classes and among your peers. Welcome to the BTOL, the latest news in biophysics education.

http://www.biophysics.org/biophys/society/btol/

— Louis J. DeFelice, Editor-in-Chief, Biophysics Textbook Online

The Biophysical Society Discussion Meeting

Frontiers in Structural Cell Biology: How Can We Determine the Structure of Large Subcellular Machines?

April 19–22, 2002
Asilomar, California

Call for papers will appear in the September Newsletter.

What Are Discussions?

The Discussions are small meetings, which focus on a cutting-edge or emerging topic in biophysics; topics that benefit from intense discussions. The meetings are patterned after the Faraday Society and have a unique format that stresses discussion over formal presentations. Plenary sessions consist of five-minute presentations by speakers, followed by a 25-minute discussion. In addition there are shorter presentations and poster sessions. This format allows for greater, less-inhibited participation by participants. The meetings are limited to 200 participants and last for approximately 4 days. The 2002 Discussions will be the seventh such meeting organized by the Biophysical Society.
UPCOMING EVENTS

April 1-5, 2001
Multi-day Symposium at the 2001 Meeting of the American Chemical Society
San Diego, California
For more information, e-mail Jan Hoh, jhoh@jhmi.edu or Joyce Wong, jywong@bu.edu

May 7-8, 2001
AAPS Workshop on Dissolution: Current and Emerging Practices—Methodology, Technology and Regulatory Issues
Arlington, VA
Contact: Debbie Werfel
E-mail: GreifJ@aaps.org

July 1-5, 2001
Gordon Research Conference on Mechanosensing: Mechanotransduction and Mechanically-evoked Signaling Cascades in Microorganisms, Plants and Animals; 7th in the Gravitational Effects on Living Systems Series
Connecticut College, New London, CT
Applications to attend and to present posters are encouraged.
Contact Ruth Anne Eatock, eatock@bcm.tmc.edu or Mike Gustin, gustin@rice.edu
http://www.grc.uri.edu/programs/2001/gravliv.htm