Welcome to the latest edition of Phi-Psi, the newsletter for APSA. Inside, you’ll find two articles on the first ever APSA regional meetings, which were held on November 17th 2007 at Caltech in Pasadena and at Mount Sinai School of Medicine in NYC. Over 100 people attended each meeting, and 40+ institutions were represented, including undergraduates looking to learn more about a physician-scientist career. Speakers included a former NIH director and leaders from academia and industry. There was even a chocolate fondue fountain at one meeting!

Our feature article this edition is about finding a collective voice within your institution via an MD-PhD student council. The article offers insight and suggestions on how to form a student council, or, if you’ve already got one, you may get some new ideas for improvement. This article will no doubt be a springboard for conversation among the institutional reps at the upcoming annual meeting.

From the Policy Committee, we have an article on an issue of importance to us all: the preliminary results of the recent APSA survey on the proposed changes to the USMLE are in. Find out what the 7,200+ students who participated had to say.

Finally, a new feature is the book review. In this edition of Phi-Psi, we review *Intuition* by Allegra Goodman, a book about the lives many of us live each day in competitive medical research. We hope you will enjoy this edition as you've enjoyed previous ones. We're always looking to improve the newsletter so feedback and submissions are welcome. E-mail us at apsanewsletter@physicianscientists.org and submit your articles to submitnews@physicianscientists.org.

From the President
Freddy Nguyen

Since the last installment of the APSA newsletter, there has been a flurry of activities within APSA, some readily apparent and some more behind the scenes which you will get to hear in more detail throughout this newsletter. November proved to be a busy travel month for many members of our leadership as we organized and attended regional meetings in California and New York which; both of which were very successful. The rise of the APSA regional meetings has been moving at quite a rapid pace as we started with our first regional meeting in Texas in 2006. Based on the current feedback, there are tentative plans in place to plan for three regional meetings in 2008 to be held in California, New York, and Texas. These are being planned for late October – early November, so be on the lookout for future announcements on these meetings.

During this same time, APSA leaders and members have been quite involved and been proactive in the evolving proposal regarding the USMLE Step exams. Having attended sessions held by the NBME at the AMA-MSS (Continued on page 5)
In 2002, second-year MD/PhD student Marlene Mathews decided that it was time that the MD/PhD program at the University of Rochester School of Medicine and Dentistry (URSMD) had its own student council. She was struck by the fact that the MD/PhD program is “fragmented by its very nature,” particularly in graduate training when students separate into their respective departments and have little chance to interact with other students in the program. Marlene notes, “the medical and graduate schools [had] always had student councils, but this was lacking for MD/PhD students,” who have unique needs. It was time to “take initiative in building a [more cohesive] community.”

Thus was born the idea for the MSTP student council at URSMD, but there were challenges to bringing this idea to life. In “developing momentum that [would] carry people from a ‘thinking’ to a ‘doing’ state,” Marlene notes her greatest challenge was “was organizing it so that only a few, committed people were in charge of making the majority of decisions, without excluding the input of other people.” There was a need to identify and distinguish those who had ideas for change and those who were willing to implement them.

Today, the student council is composed of a core of elected Chairs and several committees. The President coordinates council affairs and serves as the liaison between the student council and the program’s Executive Committee (composed of Faculty leaders). The Public Relations Chair ensures smooth communication between the student council and the student body at large. This individual also serves as the Institutional Representative to APSA. The Events Chair organizes three dinner seminars per semester during which students meet with a Clinician-Scientist in various stages of his/her career and have the opportunity to glean advice and to build rapport with fellow students. The Social Chair organizes events including wine tours, white-water rafting trips, ski trips, barbecues, and holiday parties; these events act as “social glue” for students in the program. The two Admissions Chairs provide the student voice on the program Admissions Committee.

The benefits of having the student council are clear. Former council president, Adam Dziorny notes, “there are benefits from both a student and a program perspective.” In addition to providing students with means to interact with one another and to exchange ideas, the council also allows students to define “a unified voice in program issues.” This view is echoed by Program Director, M. Kerry O’Banion, MD, PhD, who finds that “by far the greatest benefit is student ownership of the program.” Recently, under the leadership of Vincent Fong, the student council played a pivotal role in working with the Executive Committee and Medical School Leadership to redefine advisory programs, to negotiate student funding, and to modify commencement exercises to better accommodate MD/PhD graduates. Current council president, Susan Lee, aims to further the student council’s reach by working with the administration to promote awareness of physician scientist careers in the community at large, particularly in undergraduate populations. This collaboration between students and faculty has been synergistic; after all, as Dr. O’Banion puts it, “the goals of both are largely the same--to provide the best training environment for our students and to see our students progress.”

Five years of growth and development in the council have provided for valuable experience in organizing and leading MD/PhD students. When asked what advice they would give to students and administrators at other institutions who might be thinking about starting a student council, former and current leaders gave the following suggestions. First, Dr. O’Banion contends, “there needs to be sufficient students in the program to form an effective student council.” A student council would have been neither feasible nor practical when the program at URSMD was composed of only a handful of students. Now, with over fifty students, such a council is not only feasible but also necessary to ensure a cohesive program. Once interest is established, Adam advises that individuals in a program should “start small and work up.” To do this, Marlene suggests that a small group of students should “build a team of people initially committed to jump-starting the organization. These people would work as a group to build momentum and establish the organization, which could then grow into something that everyone eventually could be a part of.” As a sample timeline of when council components might be established, Adam offers the following:

- **Build a group that likes to meet for pizza, and do some social events.**
- **The following year, ask for money from the program for such events, and start some lectures.**
- **Begin to integrate with the program on admissions events and on program issues.**
- **In the following years, as the idea of a council grows, begin to [take on] more responsibilities (for example), two seats on both the Admissions Committee and on the Executive Committee), and start requiring more of students (e.g., mandatory lecture attendance requirements).**

On a final note, establish ground rules immediately and start small! As Adam cautions, “if too much is tried at first, it may fail.”

Given the right mix of enthusiasm, ability, and patience, an organized student council provides for a supportive community that prepares students for positive interactions during and beyond their years in training.
The pursuit to become the next generation of physician-scientists: APSA provides an opportunity to get connected in California
Shwayta Kukreti, Ph.D., APSA Vice President, University of Illinois at Urbana-Champaign, University of California at Irvine

This year the American Physician Scientists Association (APSA) held the first ever California Regional Conference in Pasadena, California. On Saturday November 17, 2007, nearly 100 members and guests attended the meeting at the Beckman Institute at the California Institute for Technology. The attendants included students from across California including UC-San Diego, UCLA, UC-Irvine, UC-Riverside, UC-San Francisco, USC, Cal-Tech, Pomona College, and Loma Linda University. Furthermore, parents, faculty, and program administrators also attended.

The goal of the meeting was to provide students (undergraduate, MD, and MD/PhD) an open forum to better understand the training, life and career opportunities as a physician-scientist. It was the perfect combination of large group presentations with small group topic-focused sessions while leaving plenty of time for more one-on-one chats: building relationships one at a time.

The conference began with opening remarks by the California Regional Conference Chair, Kenneth Yu, MD/PhD student at Cal-Tech. Following, we were fortunate to be given a surprise address by Dr. Carmen Puliafito, Dean of the USC Keck School of Medicine. Dean Puliafito emphasized the need for physician-scientists, explaining that people with combined degrees are a “rarity”, a species going “extinct.” Afterwards I gave a brief presentation, introducing the students and faculty to the unique opportunities and needs addressed by APSA, including networking, mentoring, and outreach as well as informational resources.

The scientific talks began with Dr. James Economou, MD, Ph.D., Surgeon and Scientist, Director of the UCLA Jonsson Comprehensive Cancer Center at the University of California, Los Angeles. Dr. Economou explained that 21 century medicine must solve issues stemming from systems biology. This requires not only an appreciation of the complexities, but a more meaningful understanding of the flexibilities involved to maintain the system. Such an endeavor requires teams of investigators from a variety of backgrounds and disciplines. Grant agencies, especially the National Institutes of Health, are looking to scientists to solve medical conditions (effects of a perturbation to the biological system), demanding results which will change the outcomes of disease.

APSA NYC Regional Meeting in Review
Zachary Dezman, AMC Institutional Representative

The New York symposium took place at Mount Sinai School of Medicine. 140 students from 40 different institutions attended. APSA president Freddy Nguyen and David Braun, the Organizing Chair, kick off the day with a welcome and opening remarks.

Dr. Harold Varmus, the first speaker, shared his experience along his long road towards medicine and science, emphasizing the importance of a prolonged adolescence – a “walkabout” - in his personal and professional development. Dr. Varmus continued by relating the history of cancer genetics and clinical oncology, and how they were once two separate circles on a Venn diagram. As he described his career in both fields, he detailed how new knowledge and new innovations have forced the two fields to come together, as shown by today’s genetically targeted cancer treatments. Dr. Varmus concluded by addressing the need for a Human Cancer Genome Project, which would sequence the 50 most common cancers, and the need for the free dissemination of scientific knowledge.

The second speaker, Dr. Andrew Marks, also emphasized a wandering career path. He continued with a discussion of the mechanism by which chronic adrenergic stimulation of the heart, by increasing contractility in response to cardiomyopathy, may actually contribute to heart failure. Dr. Marks then discussed his own work in this field, and how his initial interest in a rather random protein led to a series of discoveries, culminating in his biotech startup company to develop his research. After completing his talk, Dr. Marks answered questions from the audience, specifically, regarding why he started his own company to develop his research instead of working through his or selling the license to industry to develop. His answer was quite interesting: he stated that a drug company may look at developing one out of a 1000 drugs in a given year, so his particular drug might easily never have received the attention he thought it deserved. Similarly, at his institution, he did not have the flexibility to develop his drug on the timescale he wanted. Creating his own company ensured that his treatment ideas would be developed as far as they could.

After Dr. Marks’ talk, the conference goers broke out into small groups for more focused sessions. Topics ranged from career opportunities for MD/PhDs, to how to find a mentor. I attended the discussion on post-medical school training options. Dr. Scoridi-Bello led the discussion and stressed the flexibility of

(Continued on page 7)
NYC meeting (Con’t)

the MD and MD/PhD programs. She spoke about how the PhD trains your mind for analytical thinking. She warned that not doing a residency seemed to close some doors for her colleagues, and that the ability to generate clinical revenue always gives physician-scientists bargaining power during their careers. Lastly, she spoke about the need for teamwork when balancing a family and career.

After the small group discussion, the last speaker of the day was Dr. Charles Sawyer. He discussed the study of chronic myelogenous leukemia over the last 40 years. His talk had several important trends: Cooperation between disparate disciplines, the “infectious disease” nature of cancer, and the accelerating pace of discoveries. The former was evident from the experts from many fields - organic chemistry, cancer genetics, and biophysics - that contributed to the development of imatinib, the prototypical rationally-designed drug. The second was how combination therapy appears to be the way to reduce the incidence of drug-resistant cancer cells causing patients on chemotherapy to relapse. Lastly, the accelerating pace of discoveries was shown by the decreasing development time from initial proposal of a treatment idea to FDA approval.

After closing comments, the day ended with a wine reception and dinner (with Chocolate Fountain!). Students from across the northeast US got a chance to meet with each other and converse with the speakers. Congratulations to David Braun for organizing a successful meeting, and we’re looking forward to continuing these discussions and getting together again at next year’s NYC regional.

Dr. Marks begins his keynote address.

Stay tuned for details for the next NYC Regional meeting this Fall.

APSA is on facebook

We are using this social networking site not only for information for upcoming meetings, but also to get to know one another outside of our annual meeting. We currently have 589 members in the APSA group on Facebook!

What are you waiting for? Click here to join!

Or search for “American Physician Scientists Association” in Groups
Interim Meeting in Honolulu, HI and at the AAMC Annual Meeting in Washington, DC, we were able to gather more information about some of the proposed changes. The fact gathering sessions and discussions continued with other student leaders, and other professional groups in the academic and medical community. At the conclusion of this process, we were able to put forth a survey to more objectively gather and quantify the voice of medical students on these important issues.

On a similar front, I had the opportunity to be a part of the Association of Professors of Medicine’s Physician-Scientist Initiative which brought together 100 stakeholders who were leaders of the academic community, NIH, private medical foundations, and other organizations. APSA was present at this meeting and is part of the planning committee representing the student and trainee voice on this initiative. This initiative was aimed at taking a comprehensive look at the issues facing the recruitment and retention of physician-scientists in the United States. The initiative highlighted some resounding themes including the need for mentoring, especially more formalized mentoring, an attribute that APSA has long striven to help address and to foster within our community.

As we move forward in this new year, we are coming closer and closer to our Annual Meeting in Chicago, IL. There has been a lot of activity behind the planning of the Annual Meeting which will be held with the ASCI/AAP Joint Meeting for the 4th year in a row. There are some notable new additions to this year’s meeting. The first is the expansion of the business meeting from our traditional 1 hour yearly-update-meeting to a meeting designed to involve more of our members and representative’s inputs. The business meeting will now be expanded to half a day and will include annual reports from our leaders and committees, discussions of several hot topics on which representatives will put forth resolutions or recommendations on how APSA should address the issues being presented, and invited speakers from our partner organizations furthering our goals to collaborate with other organizations to address topics such as the national and international landscape for training physician-scientists.

The Annual Meeting continues to be one of the most stellar opportunities to meet and learn from leading physician-scientists. This year’s APSA speakers are internationally known physician-scientist leaders in academia, at the NIH, and in industry, including Drs. Elizabeth Nabel, George Yancopoulos, Fummi Olopade, Joseph Miletich, Joia Mukherjee, and Kenneth Chien. There are also some new additions to the meeting including this year’s career development workshops’ focus on negotiation skills and conflict resolution, and a panel of residents/fellows in research residencies or PSTPs. Our regular events such as the career panel and the residency luncheon are back due to popular demand. As always, check the meeting website: http://meeting.physicianscientists.org/ for the most up to date information on our meeting which is continuously changing. Check it out often and register early—we look forward to seeing many of you in Chicago!

On another front, as many of you have heard me talk about time and time again is our continuous need to identify and develop electronic and web resources for our members and the physician-scientist trainee population. As the organization continues to grow, I am proud to say that we are well on our way toward the new installment of our website. Through this process, we have upgraded our servers and bandwidth to handle the higher traffic to our website. We have also been going through our website to identify new synergistic opportunities to expand the content of our website. If there are resources out there that you think we should be including or developing please let us know as always at apsa@physicianscientists.org.

Lastly, this has been a very active year thus far and I look forward to a productive new year as I finish out my last term as President of the APSA. With this in mind, I would highly encourage all of you to become more active in the organization, to become Institutional Representatives, to volunteer to serve on one of our five standing committees, or to run for one of our coveted Executive Council positions. At the Annual Meeting, you will get to hear more about these leadership opportunities. As future leaders, many of us look upon these opportunities not only to better prepare ourselves as leaders, but to further a cause that will have a positive impact on the physician-scientist trainee population, and more importantly to develop lasting relationships that will only strengthen the future of physician-scientists. Applications are available at http://applications.physicianscientists.org/. We look forward to reading all of your applications and electing the new Executive Council at the APSA Annual Meeting.

"I would highly encourage all of you to become more active in the organization, to become Institutional Representatives, to volunteer to serve on one of our five standing committees, or to run for one of our coveted Executive Council positions.”

CHECK OUT THE APSA WEBPAGE

www.physicianscientists.org
Changes to the USMLE?
Eric Schauburger; Chair APSA Policy Committee

As many students are aware, there have been several tentatively proposed changes to the United States Medical Licensing Exam (USMLE). The two main proposals include combining the Step 1 and Step 2 exams into a single exam and a move to cease use of a numerical score in favor of a pass/fail.

As a student organization that is dedicated to the training of physician scientists, APSA members and leaders became concerned about how the changes might impact basic science education and, also how these changes could affect student physician scientists, who often take one year or more off in their training to perform research. Therefore, the Policy Committee was charged with addressing the (rather large) issue. At the time, it appeared that the largest source of student input regarding the proposed changes was chiefly from student panel discussions. Although several student organizations were aware or concerned about the proposed changes, it appeared that little was being done to find out what students actually felt about the changes. Therefore, APSA stepped into a role of leading the national student response to the proposed changes.

The survey, “Student attitudes and perceptions of the proposed changes to the USMLE,” was developed to gather student input regarding the key aspects of the proposed changes. This 14 question survey included several demographic questions so that conclusions could be made from the many different types of medical student. The survey was launched in early December 2007 and has been distributed almost exclusively through student email listservs of partnering organizations, APSA institutional representatives and by other concerned students.

Although a complete analysis of the survey has just begun, we feel that it has been undeniably a success. The analysis has progressively become a very large project and now includes several math and statistics graduate students who are working for free (o.k., the occasional mocha latte).

A preliminary analysis of the survey was done in order to begin to provide data to several partner organizations who are also studying the changes. At this time, over 7,200 medical students (MD and DO) from 170 medical schools (151 U.S. schools) have participated in the survey (representing approximately 8.5% of the entire U.S. medical student population). The initial analysis revealed that students are against combining the USMLE 1 and 2 (students tend to become more opposed to the combination as they progress in training). In addition, students felt that the proposed changes would worsen the quality of basic science education. Also, among several other conclusions, it was found that female students were more opposed to combining the Step 1 and Step 2 exam but are more in favor in changing to a pass/fail grading system compared to male students (who would have guessed???)

The Policy Committee and other APSA leaders have been in contact with several important players in the review of the USMLE. We are also partnering with other student organizations to make sure that student voices, including those of physician scientist students, are heard. It is our goal to keep you informed as the proposed changes are implemented.

For more information regarding the tentatively proposed changes or if you have not yet taken the survey, please go to http://survey.physicianscientists.org.

Leading the national student response to the tentatively proposed changes has been a major undertaking for the Policy Committee. In addition, several other projects are underway including:

• Studying the tentatively proposed changes to the USMLE and developing methods of generating student feedback and methods of influencing change to better train students, especially physician scientist students.
• Increasing the availability of the Ruth L. Kirschstein National Research Service Awards (F30): Currently, this important funding mechanism is available for only eleven of the 27 NIH institutes. We are advocating on students’ behalves, that this be expanded to give more students a place on the NIH funding roadmap.
• Studying the leaky pipeline of female and minority physician scientists and working to develop strategies to prevent attrition.
• Examination of current clinical scientist training pathways, and developing strategies to help refine/further develop these programs.

Through the projects that the Policy Committee has undertaken, we have developed important relationships with several other student organizations, and thus have increased the visibility of APSA, and, in turn, increased awareness of the importance of training physician scientists.

We invite feedback and participation from all APSA members—what are important issues that you feel should be addressed? Feel free to contact: eschauberger@physicianscientists.org.

Grant Deadlines
NIH F30 : April 8
NIH F31: April 8
NIH F31 Diversity: April 13
Department of Defense:
Prostate Cancer: May 22
Health Disparity: June 11

For more help and further information check out the NIH grant website:
http://grants.nih.gov/grants
Following, Dr. Allen Yang, MD, Ph.D, Hematologist-Oncologist, Asst. Professor, Keck School of Medicine, University of Southern California presented on the topic of ‘celebrating the past, looking forward to the future.’ Dr. Yang shared a survey of historical accomplishments: from Watson and Crick (the revelation of the double-stranded nature of DNA), the importance of the Coolidge Family (for those who would like to know: the son of President Coolidge died of sepsis), to the power of programming and data mining as seen through the search results by Pubmed. Dr. Yang then shared important advice: ‘HAVE FUN!...Do what you love...Everything is important.’ The training is long, and thus must be what one truly loves. He also reminded us of the most important reasons for pursuing a combined degree: personal satisfaction in knowing that physician-scientist training is fun as well as important for improving the quality of medicine and care provides to our future patients.

The final presentation was given by Dr. C. Glenn Begley, MD, Ph.D, Vice-President and Global Head of Hematology and Oncology Research at Amgen Corporation, California. Dr. Begley explained that MD/Ph.Ds have a “tremendous opportunity” to make a difference; they are attempting to “rewrite the medical textbooks.” After explaining a bit about the core expertise and focus at Amgen, especially in the area of cancer research, Dr. Begley went on to explain the relationship between industry and academia.

For example, take the challenge of cancer. Dr. Begley explained that people at universities come up with ideas, but they cannot make them into therapies, whereas a company would support such an endeavor. Industry projects are directed by the market, whereas a scientist may have more autonomy in direction and research focus as a Principal Investigator. In a company, research direction is significantly impacted by stock practices, thus working in such an environment demands flexibility: the emotional attachment is to the company, not to the specific project.

The formal conference ended on a high note with 2 parallel panel sessions: “The inside scoop of the MD/Ph.D success.” These sessions were designed to provide an intimate environment for open discussion. MD and MD/Ph.D students had an opportunity to learn about life, training and other opportunities after completing combined degree programs.

The undergraduates took advantage of the special opportunity to hear from not only the MD/PhD students (from across CA), but also from Sandra Mosteller, Program Administrator, CalTech-USC MD/PhD Program as well as Dr. Lawrence Sowers, Chair of the School of Medicine, Professor and Associate Dean of Loma Linda University.

The California Regional Conference brought everyone together with a common mission: the pursuit of the physician-scientist. The keynote speakers/panelists were inspiring, sharing their knowledge and experience to assist us all in our personal pursuit to become the next generation of physician-scientists.
Lighter Reading: A Review of “Intuition” by Allegra Goodman
Zachary Dezman, Albany Medical College Institutional Representative

Intuition is a story about the competitive world of medical research. It focuses on the Philpott Institute, a once-prestigious laboratory which is now a shadow of its former self. All of the familiar players are there like graduate researchers, frustrated with their lack of progress and doubting whether their thesis projects will ever be completed. In this book, an affluent physician brings his clinical expertise to the lab and makes all of the students’ work seem impressive, yet somehow…just doesn’t seem to get what they do (see “Nine types of Principle Investigators” below). Then there’s also the exacting lab director who’s struggling to keep it all running. As the book opens, the Institute is beginning to run out of funding. In the midst of these pressures and personalities, one student, Cliff Bannaker, begins to see amazing results. His girlfriend, Robin Decker, watches as Cliff becomes the star of the lab, as his findings may turn the fortunes of the Institute. Torn by jealousy, she begins to doubt the validity of his work. Alas, the fate of love in the lab.

Intuition is an accurate portrayal of the personalities and pressures faced by many graduate students in the medical sciences. Any graduate student will be able to read this book and sympathize with the characters and the issues they face; after all it's good for us to enjoy something other than science books... dare I say 'leisure reading,' for a change!

Other “Lighter Side” suggestions:
The Selfish Gene
   Richard Dawkins
Better
   Atul Gawande
The Trouble with Testosterone
   Robert Sapolsky
Intern
   Sandeep Jauhar
House of God
   Samuel Shen
Intern Blues
   Robert Marion

Submit your review to:
submitnews@physicianscientists.org

Coming up in the next newsletter:
The Complete Guide to the MD/PhD Degree
   Ben Rosner & Jayakar Nayak
Reviewed by Brenda Marsh, OHSU

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