AACP REPORTS

Report of the 2011-2012 AACP Special Advisory Committee on Research and Graduate Education

Yuen-Sum (Vincent) Lau (Convener),[a] Robert Blouin,[b] Diana Brixner,[c] Lynn Crismon,[d] Stephen Cutler,[e] Rodney Ho,[f] William Jusko,[g] Milap Nahata,[h] Christine Sorkness,[i] Vladimir P. Torchilin,[j] Susanna Wu-Pong[k]

[a]American Association of Colleges of Pharmacy
[b]University of North Carolina at Chapel Hill
[c]University of Utah
[d]University of Texas at Austin
[e]University of Mississippi
[f]University of Washington
[g]SUNY at Buffalo
[h]The Ohio State University
[i]University of Wisconsin at Madison
[j]Northeastern University
[k]Virginia Commonwealth University

INTRODUCTION

According to the Bylaws of the American Association of Colleges of Pharmacy (AACP), the Research and Graduate Affairs Committee (RGAC) shall provide assistance to the Association in developing its research, graduate education, and scholarship agenda. This assistance may include facilitating colleges and schools in formulating and advancing legislative and regulatory initiatives, and nurturing collaborative activities with organizations sharing an interest in issues related to the pharmaceutical sciences.

Following the retirement of Dr. Kenneth Miller, formerly Senior Vice President at AACP in June 2010, AACP made a strategic decision approved by the Board of Directors to hire a Vice President of Research and Graduate Education serving as a Chief Science Officer (CSO), who deeply understands contemporary research and anticipated scientific progress that will benefit AACP and its members. AACP seeks to deepen its relationships with all public and private funding agencies supporting the spectrum of the pharmaceutical sciences and the CSO will have greater capacity for the primary areas of responsibility in research and scientific affairs. Yuen-Sum (Vincent) Lau, Ph.D., previously the John & Rebecca Moores Professor and Chair of Pharmacological and Pharmaceutical Sciences Department at University of Houston College of Pharmacy, assumed this new role in July, 2011.

During the first transitional year, the new CSO was responsible to evaluate the existing AACP programs and make necessary improvements. In addition, President Brian Crabtree had charged AACP to create a Special Advisory Committee on Research and Graduate Education

to advise and provide assistance to the new CSO in strengthening research, graduate education, and scholarship for the academy. The recommended strategic directions included building relationships and collaboration with scientific organizations and funding agencies, leading scientists in and out of pharmacy education, creating an Academic Research Fellows Program, and strengthening and supporting graduate education.

The Special Advisory Committee on Research and Graduate Education met on Dec. 13-14, 2011 in Alexandria Virginia, during which the 2010-11 Research and Graduate Affairs Committee Report[1] and the current AACP Strategic Plan Critical Issue 5 on "Research and Scholarship" were examined and discussed. Throughout the year, the CSO contacted the committee members via electronic communication. The Committee met again through a conference call on June 26, 2012 to review the progress and discuss future agenda. This report summarizes the Committee's discussion and AACP's execution on tasks related to research and graduate affairs within the year.

NEW INVESTIGATOR AWARD PROGRAM

AACP has annually administered the New Investigators Program for Pharmacy Faculty since 1986 with the financial support of the American Foundation for Pharmaceutical Education. This source of financial support ceased after 2008. Because this program is so vital to pharmacy faculty in their early stage especially allowing them to develop novel and independent research ideas and projects, and such resources can assist them to generate critical preliminary data so they can be competitive in

applying for other extramural research support, AACP and the Board of Directors approved to resume this program in 2010 entirely supported by the AACP funds. In 2011, the Board further approved to increase the number of awards from 15 to 18 and it is now named as the AACP New Investigator Award (NIA).

In 2011, the application and review process had been revised. Briefly, the CSO offered a webinar to potential applicants on how to prepare and submit an NIA research proposal. The applicants were urged to identify a mentor for reviewing and providing guidance to their research project. The CSO also conducted several conference calls with the AACP academic section leaders to discuss about how to form application review panels and how to score applications based on scientific merit. At the end, all Section Past-Chairs were involved in the decision of selecting awardees according to the significance, quality, innovation, and approach of the proposals, and successful potential of the applicants. The aggregated information on the 2011 NIA is shown in Table 1. As a post-award measure, the CSO will begin to track their research progress by requiring awardees to submit a 6-month progress report and an end-of-year financial and scientific report. The awardees will also be provided a travel stipend and required to present their findings at the next annual meeting after the completion of the funded research projects. To better prepare the future new investigators, the CSO offered a pre-session on "Research Proposal Preparation Workshop for New Faulty Investigators" at the 2012 AACP Annual Meeting in Kissimmee, FL., which covered research application strategies for a wide range of pharmacy-related areas.

FACULTY MENTORING/COLLABORATIVE PROGRAMS FOR RESEARCH AND SCHOLARSHIP

Faculty mentoring has been a continuous topic of discussion within the academy in past and present years.

Programming for faculty leadership and mentorship is an AACP Strategic Plan Goal (Critical Issue 1 on improving faculty recruitment, retention and productivity). Faculty mentoring is also recognized as a top priority according to the recent membership needs analysis. Following the AACP Leadership Retreat in Chicago in March 2012, Chair-elects of Council of Deans, Council of Faculty, and Council of Sections gathered and agreed to create a joint taskforce to conduct an in-depth investigation and provide recommendations on how to enhance pharmacy faculty mentoring. The AACP staff liaisons for the three Councils met and developed a framework for the Tri-Council Chair-elects to consider before developing the charges for the taskforce. The outlined framework for a comprehensive and effective Pharmacy Faculty Mentoring Plan was not intended to create a desirable fit-for-all mentoring program, instead it was designed to examine and bring forth a multidisciplinary mentoring structure with existing resources. The taskforce was asked to determine what considers a good and effective mentor-mentee relationship, what should be the desirable qualifications of a mentor, what are the responsibilities of mentors and mentees, what are the resources that are already available or should be developed for fulfilling the needs of mentees, and what mentoring pieces should be offered by the university, professional organization, or can be delivered by the modern technology. More importantly, the mentoring plan should be applicable to faculty of all disciplines and at all ranks, not just the new faculty. It is expected that this taskforce work will be completed by summer 2013.

ANNUAL PHARMACY FACULTY RESEARCH GRANT DATA REPORT

Since 1995, AACP has annually collected and published an aggregated report on Pharmacy Faculty Research Grant Data (PFRGD) for each college or school

Table 1. 2011-2012 AACP New Investigator Award (NIA) Application Statistics

Sections	Letter of Intent Received	Disqualified Letter of Intent	Final Application Received	Number Funded[a]
Biological Sciences	52	4	43	4
Chemistry	19	1	15	3
Continuing Professional Education	1	0	1	0
Experiential Education	1	0	0	0
Libraries/Educational Resources	2	1	0	0
Pharmaceutics	36	0	29	3
Pharmacy Practice	40	0	20	4
Social and Administrative Sciences	29	1	22	4
Total[b]	180	7	130	18

[a] One ranked application withdrew due to subsequent receipt of another foundation grant.
[b] Grant total amount awarded: $172,146 (individual awards range from $7,170-$10,000).

of pharmacy. The published PFRGD reports in earlier years contained primarily the NIH R01 Principal Investigator (PI) grants. Since 2002, reporting on other types of federal and non-federal awards was expanded. However, besides the NIH grants, the verification of other types of grants submitted by colleges and schools had been quite challenging. Up till 2010, a total of 11 layouts had been generated each year showing different ways that the grant data were presented in rank order.

This year, as part of AACP's continual efforts to enhance member service and improve processes, we extensively reexamined the purpose, methodology, validity, interpretation and use of faculty research grant data. As a result of that study, we decided to change the data reporting process this year. We implemented a modified system for reporting extramural faculty PI-initiated, peer-reviewed research grants that have specific research aims and a scope of work including grants from non-federal agencies. Through our lengthy verification process, we focused on data accuracy. The data collection and validation process is fully described in the report.

Guiding our work was our belief that AACP should refrain from officially ranking colleges/schools using a single parameter based on the National Institutes of Health (NIH) funding level and should refrain from providing different layouts for colleges and schools to make preferential data interpretations. Instead, we provided validated and accurate data for colleges/schools to use as each desires. In the 2011 report, to maintain full transparency, the process and methodology for generating this report were fully disclosed. The report contained not only NIH grants, but also other federal, non-federal, and collaborative research grants and subcontracts. The PFRGD will be available online to provide more interactive functionalities allowing colleges/schools to generate their own reports using their selected parameters for benchmarking purpose.

AACP is pleased to announce, in the 2011 our colleges and schools collectively received $288.4 million NIH PI grants and $415.2 million total research grants (including the NIH, other federal, non-federal, and collaborative research subcontracts). The Committee believed that NIH grants are most useful data to most schools that should be kept separate from other federal grants. Total extramural funding is also important to indicate how much research is conducted at colleges and schools. However, some of the indicators/denominators (e.g. number of FTE, Ph.D., etc.) used in the past years are quite variable from school to school and are not meaningful. On the other hand, the number of funded PI faculty, who are responsible for generating the grants would be useful and is now added.

RESEARCH ADVOCACY AND OUTREACH

The AACP Strategic Critical Issue 5 calls for the CSO to reach out to colleges/schools for the purpose of learning about organizational, financial and operational issues affecting research and graduate education at our member institutions, listening to members and nonmembers to discern their needs for programs and services, and to have opportunities to share up-to-date information about AACP with faculty and administrators.

Since joining AACP, the CSO had visited 15 colleges and schools, which included University of Texas in Austin (July 6, 2011), University of Washington in Seattle (September 8), University of British Columbia in Vancouver (September 9), University of Kentucky (October 13-14), University of Minnesota (October 27-28), Duquesne University (November 14), University of Pittsburgh (November 15-16), UC-San Diego (February 15-16, 2012), University of Southern California (February 17), University of North Carolina (February 28-29), Northeastern University (March 13-14), Massachusetts Colleges of Pharmacy (March 16), Albany College of Pharmacy (April 11-13), and University of Maryland (April 16). The CSO attended the American Association of Pharmaceutical Scientists meeting (Oct. 24-25, 2011) reaching out to basic pharmaceutical scientists and graduate students, who do not routinely attend the AACP annual meeting. The CSO also attended the Pharmacy Deans Research Group meeting in Tucson, AZ and met with a few faculty at the University of Arizona campus (January 13-14, 2012).

The AACP Science Office and Advocacy Office have jointly assembled relevant faculty research expert panels to examine directions, methodology, and policies surrounding pharmacy and pharmaceutical research at the request of funding agencies. For example, a Patient-Centered Outcomes Research Institute (PCORI) panel was formed and chaired by Dr. Diana Brixner of University of Utah College of Pharmacy, which reviewed and provided insightful comments for the revision of PCORI's Translation Table Framework. The similar approach for advocating pharmacy and pharmaceutical research will be continued by experts in the academy. It was also suggested by the Committee for AACP to establish relationship with funding agencies and nominate more scientists to serve on councils and review panels within funding agencies.

PROPOSED ACADEMIC RESEARCH FELLOWS PROGRAM

Following the recommendation of the 2010-11 Research and Graduate Affairs Committee[1], AACP has considered the design of a new Academic Research Fellows Program (ARFP) modeled upon the successful Academic

Leadership Fellows Program, which is currently in its 9th year. The ARFP was envisioned to accelerate the careers of promising pharmaceutical scientists as collaborative research leaders. The structure and feasibility of the proposed ARFP were further discussed this year.

Previously it was thought that ARFP should be designed to advance the research of individual faculty at mid-career level and bring new dimensions to their research and professional development. The CSO and this Committee recognized that organizing an ARFP for individuals from diverse backgrounds and disciplines would be difficult to manage. AACP should not replicate some programs that offer research proposal writing workshops that would require a lot of personalized effort and cost-associated resources to train or retrain a faculty one-on-one from an organization stand-point. The Committee believed that mentoring individual faculty in research and scholarship could be best handled at college/school level. However, the academy needs more better-trained mentors, who understand the whole research enterprise and who can help to build research teams and programs at home institutions. Therefore, the ARFP should be designed to train researchers not only to advance their own research programs, but also for them to mentor their colleagues at all ranks and disciplines.

The ARFP is currently at its development stage aiming for an inaugural class in 2013. The main expected outcomes of the Fellows Program will include getting to know and making relationship with major funding agencies, learning the process for developing and managing a successful research program, achieving effectiveness in research advocacy, establishing a contemporary graduate program that will offer a multidisciplinary curriculum, and identifying training grants and individual fellowships for graduate students. Potential trainers and facilitators for the Fellows Program will be research leaders from academia, NIH and other federal agencies, foundations and associations, and industrial entities.

GRADUATE PROGRAMS AND STUDENT RECRUITMENT

The Committee recognized that AACP needs to examine and develop products for better marketing pharmacy and pharmaceutical graduate degree programs and for helping schools to recruit quality graduate students, especially among the US graduates. Colleges and schools that offer graduate degrees should make sure that their programs are rigorous and their graduates are well trained and prepared for the future biomedical workforce. We should also encourage more research scientists to consider academic pharmacy jobs and assist them to become excellent and competitive research investigators. AACP had now linked its Web site listing graduate degree programs in North America to individual school's Web page that will allow potential applicants easy access to the degree programs offered by colleges and schools of pharmacy. AACP staff is also exploring the possibility of listing the graduate degree programs within the web-based PharmCas portal, which currently only contains college/school pages for the centralized PharmD degree application and admission. The CSO has worked with the American Association of Pharmaceutical Scientists and the AACP Graduate Education SIG on how to enhance graduate education and programs, to identify more resources for supporting graduate students, dual-degree students, and to stimulate their interest in research. Further investigation and discussion on developing and implementing a good business model for graduate and post-graduate programs concerning the quality of teaching/research assistants, residents, postdoctoral fellows, and faculty is also warranted.

REFERENCES

1. Brueggemeier RW, Clark AM, Das SK, et al. The path forward: the future of graduate education in the pharmaceutical sciences: the report of the 2010-2011 research and graduate affairs committee. *Am J Pharm Educ.* 2011;75(10).