

Report of the 2009-2010 Faculty Affairs Committee

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Introduction: The 2009-2010 Faculty Affairs Committee was charged with collecting information and formulating ideas regarding faculty development toward promotion and/or tenure. More specifically, the Committee was charged to 1) Create an inventory of all Schools and Colleges that have a “formal” faculty development program; 2) Create a mechanism to characterize and publicize the best practices for faculty development within research intensive and non-research intensive schools and colleges; and 3) Document the success of these programs. In addition, the Committee was requested to prepare a White Paper for submission to *AJPE* and submit a request for a special session at the 2010 Annual Meeting. In review of the charge and in consultation with Council of Faculties Chair Gary Matzke, the Committee concluded that its primary task should be to fully document the current state of affairs regarding faculty development in schools of pharmacy. Successful description of the current status of faculty development would hopefully result in appropriate next steps, including development of AACP goals regarding this issue. In order to completely collect this information, the Committee developed the following plan: 1) Review the published literature regarding faculty development for health care professions, 2) Perform a pilot survey of U.S. schools of pharmacy and 3) Develop an audience response session for the 2010 Annual Meeting to assess the current state of faculty development.

1. Review of published literature:

The Committee reviewed the published literature to assess the current state of affairs regarding faculty development toward tenure/promotion. The methodology for this review included a PubMed search, review of pharmacy education journals, including *AJPE* and *International Journal of Pharmacy Education*, and identification of white papers and position papers from health care professional academic organizations. This literature review was provided to the AACP Board in the Fall of 2009.

In its review, the Committee noted Standard Number 26 of the 2007 Accreditation Council for Pharmacy Education (ACPE) Accreditation Standards and Guidelines for the Professional Program in Pharmacy leading to the Doctor of Pharmacy Degree, which specifically advocates the school/college must have an effective continuing professional development program for full-time, part-time, and voluntary faculty and staff consistent with their responsibilities. The American College of Clinical Pharmacy (ACCP) in its recent position statement entitled, "Clinical Faculty Development," acknowledged individual institutions have unique requirements and needs.¹ In this document, ACCP delineated the need for institutional commitment and identified necessary components, e.g., comprehensive orientation program, mentoring, sustained faculty development program, teaching abilities development, and an assessment component to demonstrate program effectiveness. The American Association of Colleges of Pharmacy (AACP)

supports faculty development through its various programs, e.g., Women Faculty Special Interest Group, New Investigators Program for junior faculty.

Other Health Care Profession Academic Organizations: Other health care profession academic organizations, including medicine (AAMC), nursing (NONPF, NLN, AACN), dentistry (ADEA, AAP), physical therapy (APTA), and occupational therapy (AOTA) were evaluated for existing position papers/statements regarding faculty development of junior and mid-level faculty. Of note, no Association of American Medical Colleges (AAMC) faculty development position papers were found. Similarly, no such articles or position papers were found originating from the physical therapy and occupational therapy associations.

In contrast, the National League of Nursing (NLN) published a position paper advocating that mentoring should be the primary means for career development for nursing faculty.² However, the League also recommended that mentoring not be the total program of faculty development, also recommending formal orientation programs, mid-career mentoring, and mentoring workshops. The American Dental Education Association (ADEA) formed the Commission on Change and Innovation (CCI) in Dental Education to address the need for faculty development, particularly in the face of curricular change. In response, the ADEA developed the Institute for Teaching and Learning to improve promotion and tenure of new faculty, the ADEA Leadership Institute to improve leadership in mid-career faculty, and the Academic Dental Careers Fellowship Program to increase entry of dental students into academia. A series of invited manuscripts was also commissioned by the ADEA CCI to address environmental concerns and faculty development issues. Some recommendations included the provision of clear faculty expectations, rewarding excellence in teaching, developing a mentoring program as the cornerstone of faculty development, and maintaining an environment supporting and encouraging faculty enthusiasm.³ While these are not official position papers or statements, these represent important positions from the ADEA.

Published School of Pharmacy Faculty Development Programs: The Committee was able to find few published programs intended to enhance school of pharmacy faculty. In most instances, these programs were not associated with clearly measurable outcomes. The University of Tennessee College of Pharmacy⁴ described an approach in which faculty members assessed and identified their specific development needs in 3 programs: 1) Individual Faculty Development Grant, 2) the Seed Research Grant Program, 3) Technology Support Program. Outcomes associated with the program were not described. The St. Louis College of Pharmacy implemented a Pharmacy Faculty Academy to foster professional growth of new faculty members in an "outcomes-oriented, "frames" based manner.⁵ Key principles of the Academy included reinforcing mission, vision, and core values, continuous quality improvement through periodic, timely assessments, modeling best practices, and fostering organizational commitment. Workshops, simulations, reflections, and organized social interactions were all integral components. According to the authors, the program resulted in more highly engaged and productive faculty members who were more likely to remain long term within the College. Objective measures of success included an increase in the average publication per faculty member

per year, increase in the number of invited national lectures, papers, and posters and increased percentage of pharmacy practice faculty members with the credential of board certification.⁵ The Massachusetts College of Pharmacy⁶ developed a sustainable formal faculty mentoring program, including a mentorship committee, faculty mentoring guidelines, protégé/mentor pairs, an orientation, seminars/workshops, and meetings between the pairs. Self-perceived abilities of both protégés and mentors were reported to increase in most areas of review, however, objective measurable improvement in faculty development was not assessed.

Attitudes and experiences of pharmacy educators towards faculty development programs have been evaluated.⁷ While many faculty reported participating in informal faculty development programming, few faculty reported completion of formal programs. Many respondents considered the mentoring received in their first academic position to be inadequate. Problems confronting pharmacy practice faculty specifically pursuing scholarship include insufficient time and "an inability to identify a research question and how to answer it."⁸

Faculty Development for Tenure Track Faculty: A number of initiatives have been used in both academic medicine and pharmacy to enhance faculty performance for tenure track, research-based faculty. Mentoring programs, research development coursework and start-up funding are commonly used approaches. Some universities offer professional development funds which can be used to attend conferences, pay membership dues, and cover other professional expenses. Protected time for research and financial incentives, such as the NIH Loan Repayment Program (<http://www.lrp.nih.gov>), are commonly utilized mechanisms intended to improve tenure track junior faculty research productivity. Similarly, new faculty can also request for protected time for the conceptualization, creation, and preparation of new courses or course materials. Short- and long-term sabbaticals allow learning of new techniques in research and teaching and exposure to other national and international schools. While the above tools are commonly used as instruments to increase research output and, thus, faculty development, relatively few of them have been systematically evaluated to determine if they are successful.

Faculty Development of the Clinical Scientist: Two AACP task forces have defined the optimal training/skill development program for clinical scientists.^{9,10} The first task force recommended that doctor of pharmacy students possess a strong foundation in basic sciences and be introduced to basic research principles.⁹ This task force also suggested clinical scientist training include either a doctorate degree in health professions followed by a doctor of philosophy, or a dual clinical doctorate/doctor of philosophy program. The report also emphasized the importance of continued clinical skill development in the patient care setting. Involvement of academic pharmacy coupled with establishing community pharmacy-based primary care Practice-based Research Networks (PBRNs) was suggested as a means to increase collaboration with health providers in the community.

While the first task force was focused primarily upon training clinical scientists to conduct research in the area of bench to bedside (T1), the second AACP task force

focused on exploring academic pharmacy and research to prepare the next generation of pharmacist scientists to conduct T2 research, from the bedside to patient care.¹⁰ The task force further recommended strong interdisciplinary research teams as a means of enhancing competitiveness for research. It was also suggested junior clinical faculty be encouraged to enter research training programs (K awards and similar programs) early in their academic careers, and all pharmacy practice faculty be involved in T2 research as either co-investigators or as part of a PBRN.¹⁰ Lastly, it was also suggested the AACP and colleges/schools of pharmacy promote pathways of faculty development to enable faculty to participate in practice-based translational research, including PBRNs.¹⁰ The American College of Clinical Pharmacy (ACCP) Research Affairs committee authored a white paper on the State of Science and Research in Clinical Pharmacy.¹¹ The manuscript compares different funding streams and training options, competencies to be achieved, and gaps between the current and project status of clinical scientists in the profession of pharmacy.¹¹ Lack of mentorship is identified as a key barrier for junior investigators; enhanced mentoring programs and multidisciplinary collaboration with successful research programs are recommended as strategies for development of successful pharmacy researchers.¹¹

ACCP recently charged the Research Affairs Committee to provide recommendations for the optimal pathway(s) for preparing doctor of pharmacy graduates to be competitive clinical and translational scientists.¹² Similar to recommendations by others, the Committee recommended research-focused postgraduate education including clinical training (degree-granting fellowships or doctor of philosophy plus residency training), and National Institute of Health (NIH) funding sources for junior investigators.¹² This article did not address faculty development for clinical science faculty.

NIH sponsored a special conference entitled “Pharm.D. Pathways to Biomedical Research.”¹³ The meeting summary described the importance of exposure to both clinical and research training in the doctor of pharmacy and postdoctoral curriculum. It recommended that doctor of pharmacy graduates complete either a doctor of philosophy degree or postdoctoral fellowship to prepare for a research career. It also described mechanisms to increase funding opportunities (e.g., Clinical and Translational Science Awards [CTSA], NIH K awards) for early career research-focused faculty. Research training was recommended for all pharmacy students and postdoctoral training, including a doctor of philosophy degree and/or a research-intensive fellowship for those interested in research careers. Recommended skill development approaches for the pharmacist scientist included mentoring of junior investigators and collaboration between practice and research-based faculty. The report did not describe career development programs or expected outcomes.¹³

The Association of American Medical Colleges (AAMC) Task Force on Clinical Research (CRTF II) recommendations are similar to those of the AACP task forces. These recommendations include research education in medical school and residency training, followed by earning an advanced degree, mentorship, and postdoctoral

training.¹⁴ It also recommended new junior faculty start up funds, protected time for research, appropriate resources/infrastructure, and individually-focused mentoring.¹⁴ Similar to AACCP, CRTF II recommended collaboration with community-based providers, including the development of PBRNs

A career development program for University of Toronto physician clinical scientist faculty has been described.¹⁵ The program included both research (i.e., clinician-investigators, clinician-scientists) faculty as well as faculty focused in clinical practice and teaching. Participants demonstrated similar rate of increased academic rank, improving in all areas of achievement, including research.¹⁵

A description of pulmonary and critical care medicine fellows' career development needs centered upon need for financial support for junior investigators¹⁶ A survey of junior faculty and physician fellows in pulmonary/critical care medicine and critical care in the US and Canada demonstrated a desire for formal assistance in career development, mentoring, and a more formal curriculum.¹⁷

A description of best practices and innovations in colleges of dentistry recognized the need to create attainable promotion goals, suggested embracing a broader definition of scholarship, and recommended opportunities for multiple parallel-track career pathways.¹⁸ It also recommended creation of appropriate resources and mentoring and development of mission statements which reflect dentistry as a scientific and academic profession. It did not describe a specific career development program or focus specifically upon clinical scientists.¹⁸

Faculty Development Non-Research (Teaching/Patient-Care Centered) Faculty: While there are no current school of pharmacy publications related to this topic, literature from medicine and nursing outlines the challenges for clinical faculty members. Requirements for promotion in most academic centers often includes a focus upon scholarly activity. However, scholarship is a particular challenge for clinical faculty with substantial practice or teaching commitments limiting the time allocated to scholarly activity. One medical school study concluded that the odds of holding a higher academic rank were 85% lower for clinical faculty and 69% lower for teaching faculty when compared to research faculty.¹⁹ Clinical educator faculty may be promoted at a slower rate than their research faculty counterparts (42% versus 62% at six years, respectively).²⁰

Clinical educators must keep current with knowledge in their respective disciplines, further decreasing time needed for scholarly work.²¹ These faculty members additionally devote substantial time to university and public service. While the quality and quantity of these activities might be of high quality, it may not carry equal weight as, for example, peer-reviewed publications in promotion decisions.²¹ The nursing literature provides guidelines for clinical scholarship incorporating quality (i.e., expertise as clinician),

governance (i.e., ownership of practice), leadership (i.e., mentoring and development of standards of practice), and knowledge development (research).²²

Some academic medical centers have proposed separate promotion criteria for clinical and research faculty. Fleming *et al.* proposed to incorporate documentation of teaching, mentoring and supervision, educational administration and service, and scholarship of teaching into promotion requirements for clinical educators.²³ The University of California employees a 5-track system that differentiates medical research faculty from clinical faculty.²⁴ The tracks vary with respect to salary sources, tenure eligibility, expectations for clinical service and membership in the Academic Senate. Regular merit reviews occur for each track as the faculty member progresses toward promotion. The “salaried clinical” track requires faculty to participate in teaching and clinical research, but does not include a publication requirement. Improved success with clinical faculty promotion was observed using this system.

Faculty development aimed at clinical educators is described in the medical literature.²⁵ Clinical educators must first advance their skills as an educator, skills often overlooked in development programs for clinicians. While this goal can be take place on through formal education or institutional-based faculty development courses, peer-review of teaching, publications, presentations and other faculty activities can also promote the educational skills in clinical faculty.²⁵ Mentoring is a key component for faculty development, particularly when the mentor is selected by the individual faculty member, rather than being “assigned” by the department chair.²⁶

Faculty Development Women Faculty: Across 1,445 US institutions, including doctoral universities, master’s institutions, baccalaureate colleges, and two year colleges, only 31% of tenured positions and 24% of full professorships are held by women.²⁷ Women in medicine comprise 19% of tenured faculty, 17% of full professors, and 12% of medical school department chairs.²⁸ According to the AACP 2008-09 profile of pharmacy faculty, women represent 44% of full time faculty, primarily at the assistant professor rank (54%).²⁸ Although tenure status was included in the report, it was not broken down by gender.

Our search failed to yield results specific to advancing women pharmacy faculty. The nursing literature did reveal articles pertaining to female faculty but these were descriptive in nature. Most information pertaining to advancement of women faculty originates from medicine and centers more upon the development of leaders than enhancing faculty development.

Formal leadership programs designed specifically for women include those from the AAMC and the Institute for Women’s Health and Leadership at Drexel University College of Medicine.^{29,30} AAMC offers professional development seminars for junior and senior women faculty to address the shortage of women leaders.²⁹ The seminars stimulate growth in support and information networks for women and assist in skill building. Skills taught include negotiation for resources, managing finances, promoting self, building informal networks, writing for professional journals, procuring grants,

building a research program, managing conflicts, managing time, and balancing career and family among others. Longitudinal studies of effectiveness, however, are lacking.

The Executive Leadership in Academic Medicine (ELAM) is a core program of the Institute for Women's Health and Leadership at Drexel University College of Medicine. It provides executive leadership skill development for women faculty at the associate or full professor level at schools of medicine, dentistry, and public health (www.drexelmed.edu/ELAM). Participants meet for three 1-week residential sessions and complete individual and group assignments throughout the program year. Leadership accomplishments (attainment of administrative leadership positions and full professor rank) of women who participated in ELAM were compared against women who did not participate.⁵ Nearly two-thirds (63.5%) of the ELAM participants reported holding an administrative title of chair or greater compared to 24.6% of non-ELAM participants. Although ELAM fellows reported an increase in attaining the rank of full professor, from 26 (44.8%) to 37 (69.8%), it was not significantly different than the Non-ELAM group.³¹

The effect of participating in ELAM was also assessed in a survey of US and Canadian medical school deans to assess perceptions in organizational climate and the impact of the ELAM on women advancing into leadership roles.³² A seven-point Likert scale (i.e., 1 = strongly disagree, 7 = strongly agree) was used to record the dean's perceptions of the ability of ELAM fellows to be promoted. Individual means exceeded 5.5/7.0 for perceived advancement for informal (e.g. chair of leadership committee or task force) and formal (promotion to a position in the dean's office or department chair) leadership positions.³²

Fried *et al.* studied multiple interventions to overcome career obstacles for women.³³ The article describes the identification of gender-related career obstacles, interventions implemented to correct obstacles, and the results of the first 5 years of the interventions. Primary outcome measures included promotion rates, career experiences, and presence of gender-related career obstacles for women. Interventions targeted areas of leadership, gender discrimination education, isolation, faculty development and mentoring, academic rewards, institutional obstacles, and evaluation. Overall, faculty reported positive changes in many of the areas targeted for intervention. An increase in the proportion of women associate professors increased from 9% to 41% after five years. Although multiple interventions were made, the substantial increase in female faculty promotions were considered to be primarily due to promotion committee monitoring of career progress, improved mentoring, and institution of a career development program.³³

Mentoring is frequently cited as a model to facilitate the advancement of women. A small pilot program utilized a "facilitated mentoring model" to address the unique needs of women.³⁴ A facilitated mentoring model involved senior women serving as mentors to a group of mentees. The mentees, in turn, acted as peer mentors to each another. The pilot program was divided into 3 phases; skills acquisition and enhancement, skills application, and group research project development. The outcome measures relevant to faculty advancement included published papers and promotion. Three of the four mentees co-

authored 3 peer-reviewed manuscripts accepted for publication and all achieved promotion in academic rank from instructor to assistant professor.³⁴

Faculty Development of Underrepresented Minorities: Health Resources and Services Administration (HRSA) defines underrepresented minorities (URMs) as African and Hispanic Americans, Native Americans, Alaskans, Pacific Islanders (Hawaiians and others), and certain Asians (Hmong, Vietnamese, and Cambodians).

Although other faculty development programs have been described in the pharmacy literature, none have focused specifically on the development of URMs. However, the academic medicine literature has examples of such programs.

Butts GC, *et al.*³⁵ reported on a consortium of four medical schools who collaborated to form Centers of Excellence (COE) for recruitment and development of minority faculty. Albert Einstein School of Medicine (SOM) created four, 1-2 year fellowship opportunities for URMs. The focus varied from a developmental disabilities fellowship to successful recruitment and training of URM faculty. Notably, a Masters degree in clinical research originated from this effort. The University of Pennsylvania SOM developed a COE on Minority Health to focus upon mentoring URM faculty.³⁶ The development program focused upon the following: 1) Career development meetings in which senior faculty provided advice regarding resources, mentors and mentoring, publishing, teaching activities, committee memberships, etc.; 2) assistance in identifying mentors to provide general assistance with respect to external funding requests and manuscript preparation; and 3) assistance in developing research, scientific writing, and medical presentation skills. No outcomes of the program were reported, however, the authors theorized that it was beneficial to have a senior URM faculty director for the program, and that top level administration must fully support the program. It was also considered essential to have to a clinical *versus* tenure track program to address the differing needs of faculty in different tracks. Funding was identified as a significant barrier and the authors concluded the mentoring process was difficult to fully formalize.

The University of California San Diego SOM collaborated with the Hispanic COE to establish the National Center for Leadership in Academic Medicine (NCLAM) housed under the Office of Academic Affairs of the Vice Chancellor for Health Sciences.³⁷ The NCLAM designed a formal faculty development program geared to increase faculty retention and success. The program was open for campus-wide enrollment to URM and non-URM faculty. Faculty were required to attend the following: 1) 12 half-day workshops focused on goal setting, preparing a faculty portfolio, principles of teaching and learning, leadership styles, negotiation skills, stress management, internal academic resources, internal grant resources, grant writing, conflict resolution, curriculum development, performance evaluation, and presentation skills; 2) structured 7 month one-to-one mentoring program averaging 12 hours per month; 3) a two hour academic performance counseling session, and 4) a professional development project. While some pharmacy faculty participated in this project, it was not possible to identify the impact of the program upon this group. The retention for those URM remaining in academic medicine increased from 75% to 90%, similar to that of non-URM NCLAM participants.

The retention rate for those remaining in the SOM increased from 75% to 90%, similar to the overall NCLAM participant retention rate of 93%.

Morehouse University implemented a formalized faculty development program.^{38,39} The core structure included a weekly longitudinal program. This program was further divided into 1-2 six week modules annually as workload allowed. During the tenth year, an Executive Faculty Development Program was developed providing several 4 day intensive sessions. Programmatic support included five faculty and two support staff. The courses emphasized six areas: teaching, audiovisual skills, research/writing, cultural competency, computer skills and administrative skills. Over a ten year period, 120 persons enrolled with 113 completing the year-long program. An additional 128 persons attended one day workshops or completed at least one module. A post participation survey demonstrated 81% of program graduates were full-time or part-time teachers. Faculty reported an enhanced perceived competence after participation. Major programmatic strengths included: small group size including individualized instruction, interactive nature, integration of theory into practice, and relevant topics. Suggestions for improvement included increased opportunity to work on projects during the sessions, more discussions on cross-cultural issues, more preparatory reading, identifying blocks of time to focus on writing, and need for handouts. Despite the success of this program, the authors concluded that formal mentoring programs and dedicated research time were still needed. Furthermore, they felt advanced programs were needed to develop skills of more senior, advanced faculty.

Faculty Development of Volunteer/Adjunct Faculty: Despite the substantial reliance upon volunteer/adjunct faculty, there is little information regarding their faculty development. A PubMed search revealed no articles which specifically discuss the issue of advancement of volunteer or adjunct faculty members. Most published manuscripts have investigated incentives and rewards for recruitment and retention of volunteer faculty members. Others have focused upon the challenges of mentoring adjunct faculty members. The majority of the articles originated from medical schools with a few from nursing schools. No articles on this topic were identified from schools of pharmacy.

Kumar *et al.*⁴⁰ examined incentives and rewards offered to non-salaried clinical faculty teaching medical students in schools throughout the United States and Canada. Over 90% of these faculty were offered academic appointments. Common incentives included providing educational opportunities, special recognition events and appreciation letters, among others. The same investigators subsequently surveyed U.S. volunteer faculty to determine which incentives were most highly valued.⁴¹ Educational opportunities and reimbursement for travel and meeting registration were most commonly cited. Personal satisfaction was the most highly rated factor for those engaged in volunteer teaching. Parrott *et al.*⁴² discussed a number of issues related to use of adjunct faculty in gerontology programs. Of particular interest was the observation that many adjunct faculty are concerned about the lack of opportunity for professional advancement.

Mentorship programs for volunteer faculty have been described for medicine and nursing.^{43,44} Although similar programs are likely available in pharmacy schools, no articles describing such programs could be identified.

In summary, there is little if any published information pertaining to the advancement of volunteer/adjunct faculty in the health sciences. While schools of pharmacy likely have faculty development programs in place, these programs have yet to be published.

Conclusions of literature review: While the peer-reviewed literature offers descriptions of programs intended to enhance health care professions faculty development, relatively little is published specific to pharmacy. Furthermore, none of the health care professions have adequately evaluated the impact of various faculty development programs with associated outcomes (promotion/tenure). ACPE, AACP, and ACCP offer various white papers and general descriptors of appropriate faculty development programs, however the impact of these papers has not been evaluated, including specific faculty groups such as research-based basic science and clinical science faculty members, clinician-teachers, i.e., non-tenure track, volunteer faculty, and specific subgroups, including women and underrepresented minorities.

References:

1. AACP Position Statement, "Clinical Faculty Development," *Pharmacotherapy* 2009;29(1):124-126.
2. Governors, B.o. *Position Statement: Mentoring of Nurse Faculty*. [Position Statement] 2006 [cited 2009 August 10]; Available from: http://www.nln.org/aboutnln/PositionStatements/mentoring_3_21_06.pdf
3. Trotman, C.A., N.K. Haden, and W. Hendricson, *Does the dental school work environment promote successful academic careers? J Dent Educ* 2007. **71**(6): p. 713-25.
4. Boucher BA, Chyka PA, Fitzgerald WL, *et al.*, "A comprehensive approach to faculty development," *AJPE* 2006;70(2):Article 27.
5. Taylor CT, Berry TM, "A pharmacy faculty academy to foster professional growth and long-term retention of junior faculty members," *AJPE* 2008;70(2); Article 32.
6. Zeind CS, Zdanowicz M, MacDonald K, *et al.*, *AJPE* 2005;69(5):Article 100.
7. MacKinnon GE, "An investigation of pharmacy faculty attitudes toward faculty development," *AJPE* 2003;67(1):Article 11.
8. Robles JR, Youmans SL, Byrd DC, *et al.*, *AJPE* 2009;73(1):Article 17.
9. Blouin RA, Bergstrom RF, Ellingrod VL, *et al.* AACP Reports: report of the AACP educating clinical scientists task force. *AJPE* 2007;71(4):Article S05.
10. Carter BL, Blouin RA, Chewing BA, *et al.* AACP Reports: report of the AACP educating clinical scientists task force II. *AJPE* 2008;72(supp) Article S10.
11. Fagan SC, Touchette D, Smith JA, *et al.* The state of science and research in clinical pharmacy. *Pharmacotherapy* 2006;26(7):1027-40.
12. Dowling TC, Murphy JE, Kalus J, *et al.* Recommended education for pharmacists as competitive clinical scientists. *Pharmacotherapy* 2009;29(2):236-244.

13. Figg WD, Chau CH, Okita R, *et al.* Pharm.D. pathways to biomedical research: the National Institutes of Health special conference on pharmacy research. *Pharmacotherapy* 2008;28(7):821-33.
14. Promoting translational and clinical science: the critical role of medical schools and teaching hospitals. Report of the AAMC's Task Force II on clinical research. Available at <https://www.aamc.org/publications>. (accessed Aug 14, 2009)
15. O'Brodovich H, Beyene J, Tallett S, MacGregor D, Rosenblum ND. Performance of a career development and compensation program at an academic health science center. *Pediatrics* 2007;119(4):791-797.
16. Reynolds HY, Rothgeb A, Colombini-Hatch S, Gail DB, Kiley JP. The pipeline: preparing and training pulmonary scientists for research careers. *Lung* 2008;186:279-91.
17. Weinert CR, Billings J, Ryan R, Ingbar DH. Academic and career development of pulmonary and critical care physician-scientists. *Am J Respir Crit Care Med* 2006;173(1):23-31.
18. Tedesco L, Martin M, Banday N, *et al.* Scholarship and the university. *Eur J Dent Educ* 2002;6 (supp 3):86-96.
19. Thomas PA, Diener-West M, Canto MI, *et al.* Results of an academic promotion and career path survey of faculty at the Johns Hopkins University School of Medicine. *Acad Med* 2004;79(3):258-64.
20. Beasley BW, Wright SM, Cofrancesco J, *et al.* Promotion criteria for clinician-educators in the United States and Canada. *JAMA* 1997;278(9):723-8.
21. Levinson W, Rubenstein A. Integrating clinician-educators into academic medical centers: challenges and potential solutions. *Acad Med* 2000;75(9):906-12.
22. Fiandt K, Barr K, Hille G, *et al.* Identifying clinical scholarship guidelines for faculty practice. *J Prof Nurs* 2004;20(3):147-55.
23. Fleming VM, Schindler N, Martin GJ, DaRosa DA. Separate and equitable promotion tracks for clinician-educators. *JAMA* 2005;294(9):1101-4.
24. Howell LP, Bertakis KD. Clinical faculty tracks and academic success at the University of California medical schools. *Acad Med* 2004;79(3):250-7.
25. McLaughlin SA. Faculty development. *Acad Emerg Med* 2005;12(4):302e1-5.
26. Magnussen L. Ensuring success: the faculty development plan. *Nurse Educ* 1997;22(6): 30-33.
27. American Association of University Professors. AAUP Faculty Gender Equity Indicators 2006. Available at <http://www.aaup.org/AAUP/pubsres/research/geneq2006>. Accessed on August 20, 2009.
28. American Association of Colleges of Pharmacy. Profile of Pharmacy Faculty 2008-09. Available at http://www.aacp.org/career/salarydata/Documents/200809_PPF_tables.pdf. Accessed on August 20, 2009.
29. American Association of Medical Colleges. Women in U.S. Academic Medicine Statistics and Medical School Benchmarking, 2007-2008. Available at http://www.aamc.org/members/wim/statistics/stats08/stats_report.pdf. Accessed on August 20, 2009.

30. Bickel J, Wara D, Atkinson BF, Cohen LS, Dunn M, Hostler S, Johnson TR, Morahan P, Rubenstein AH, Sheldon GF, Stokes E. Increasing women's leadership in academic medicine: report of the AAMC Project Implementation Committee. *Acad Med* 2002;Oct;77(10):1043-61.
31. Dannels SA, Yamagata H, McDade SA, Chuang YC, Gleason KA, McLaughlin JM, Richman RC, Morahan PS. Evaluating a leadership program: a comparative, longitudinal study to assess the impact of the Executive Leadership in Academic Medicine (ELAM) Program for Women. *Acad Med* 2008;May;83(5):488-95.
32. Dannels S, McLaughlin J, Gleason KA, McDade SA, Richman R, Morahan PS. Medical School Deans' Perceptions of Organizational Climate: Useful Indicators for Advancement of Women Faculty and Evaluation of a Leadership Program's Impact. *Acad Med* 2009; Jan;84(1):67-79.
33. Fried LP, Francomano CA, MacDonald SM, Wagner EM, Stokes EJ, Carbone KM, Bias WB, Newman MM, Stobo JD. Career development for women in academic medicine: multiple Interventions in a Department of Medicine. *JAMA* 1996;276(11):898-905.
34. Files J, Blair J, Mayer A, Ko, MG. Facilitated Peer Mentorship: A pilot program for academic advancement of female medical faculty. *J Women's Health* 2008;17(6):1009-15.
35. Butts GC, Johnson J, Strelnick AH, Soto-Greene ML, Williams B, and Lee-Rey E. Diversity in academic medicine no. 4 Northeast Consortium: innovation in minority faculty development. *Mt Sinai J Med* 2008;75(6):517-22.
36. Johnson JC, Williams B, Jayadevappa R. Mentoring program for minority faculty at the University of Pennsylvania School of Medicine. *Acad Med* 1999;74(4):376-9.
37. Daley S, Wingard DL, Reznik V. Improving the retention of underrepresented minority faculty in academic medicine. *J Natl Med Assoc* 2006;98(9):1435-40.
38. Rust G, Taylor V, Morrow R, Everett J. The Morehouse Faculty Development Program: methods and 3-year outcomes. *Fam Med* 1998;30(3):162-7.
39. Rust G, Taylor V, Herbert-Carter J, Smith QT, Earles K, Kondwani K. The Morehouse Faculty Development Program: evolving methods and 10-year outcomes. *Fam Med* 2006;38(1):43-9.
40. Kumar A, Loomba D, Rahangdale RY, Kallen DJ. Rewards and incentives for nonsalaried clinical faculty who teach medical students. *J Gen Intern Med* 1999; 14: 370-372.
41. Kumar A, Kallen DJ, Mathew T. Volunteer faculty: what rewards or incentives do they prefer? *Teach Learn Med* 2002; 14: 119-23.
42. Parrott TM, Grabinski CJ, Silverstein NM, et al. Part-time faculty and gerontology programs: dilemmas and solutions. *Gerontol Geriatr Educ* 2007; 27: 69-83.
43. Simpson D, Marcdante K, Morzinski J, et al. Fifteen years of aligning faculty development with primary care clinician-educator roles and academic advancement at the Medical College of Wisconsin. *Acad Med* 2006; 81: 945-53.
44. Peters MA, Bolyston M. Mentoring adjunct faculty: innovative solutions. *Nurse Educ* 2006; 31: 61-4.

2. Pilot survey of school of pharmacy faculty development programs:

In consultation with Council of Faculties Chair Dr. Matzke, the Committee surveyed a sampling of schools of pharmacy to assess the current state of faculty development. The results in this interim report represent faculty development in 12 schools of pharmacy. The intent of this sampling was to serve as a source for the creation of more refined questions that will be used in an audience response session at the 2010 AACP Annual Meeting. Summarizing the results of this survey:

1. *Does your campus or school have any formal (or informal) faculty development programs (including mentoring)?* A common theme reported by Committee members was that it was difficult to unequivocally confirm whether formal or informal programs existed. In most instances, information was either incomplete or unknown, even when solicited from department chairs or deans. This finding seems important and suggests that faculty development programs are not well-advertised or well-known on campus. Interviewees were less aware of campus-based programs as opposed to school-based programs. From a campus perspective, 11/12 schools offered some form of faculty development programs, however, some were limited to only a select group of faculty (e.g. solely research-based vs teaching-based or intended for a specific faculty group, e.g. women faculty). The existing faculty development programs varied from instructional design to research development. Most, but not all, have a mandatory campus-based new faculty orientation program. Most, but not all, have a campus-organized mentor program. Campus mentorship programs vary from a single mentor overseeing total faculty responsibilities to solely research-based mentorship. Some mentor programs are mandatory and others are “as needed”. In reviewing the availability of SOPs faculty development programs, 10/12 surveyed schools had a formal SOP-based mandatory mentor-mentee program which served as the primary mechanism for faculty development. In some instances, the junior faculty member is provided both a “research mentor” as well as a “teaching mentor”. It was stated by some interviewees that “SOP department chairs do extensive mentoring during the first year of a faculty appointment”. Some schools offer regular retreats centered upon research, teaching, and/or time/life management. One program stated that a Faculty Development Committee was recently started which is responsible for networking, providing workshops on teaching, and research. Another program previously incorporated 3 complementary programs (individual faculty development program, seed research grant program, technology support program), however, these programs are currently suspended due to budget issues.
 - a. *Are campus programs available to SOP faculty?* For those with faculty development programs, all (11/11) have campus programs which are available to SOP faculty.
 - b. *Please describe the available campus faculty development programs*
 - i. *Research-based faculty development programs:* 8/12 offer research-based faculty development programs, however, research-

based faculty development programs were more likely to be offered to basic science faculty than to clinical scientists. The most oft-mentioned research-based programs were workshops regarding grant-writing, IRB compliance, responsible conduct of research. Some institutions have a campus-based Office of Research which provides grantwriting consultation, grant editing. Three institutions have clinical scientist-specific research development programs and these are generally associated with a CTSI.

- ii. *Teaching/Patient Care-based faculty programs, e.g., Teaching Academies:* All 12 institutions offer teaching-based faculty development programs. The programs vary from informal lectures to fully developed teaching academies or centers for education and instructional development.
 - iii. *Women:* 6/12 universities offer some form of faculty development programs for women. Three are formal programs, including a past funded Center of Excellence, while the scope for others is a faculty support group for women.
 - iv. *Underrepresented Minorities (URM):* While many SOPs state there are formal programs to *recruit* URM, none of the 12 schools have an active faculty development program for URM. One offers a campus-based office of multicultural affairs that deals with minority issues, but it is unclear whether or not this office involves faculty development.
 - v. *Volunteer, adjunct faculty:* All surveyed schools offer some form of *SOP-coordinated* faculty development programs, however, none offer *campus-wide* programs for volunteer faculty.
- c. *Is there any objective evidence the faculty development program(s) is (are) effective?* The answer to this question is identical for both campus-organized and school of pharmacy-organized faculty development. Answers to this question range from “not sure” to simply restating known *potential* indicators (grants, publications) that might be used as evidence of success of faculty development. We were unable to find truly objective evidence that these programs are “effective”.

Are faculty required to participate or made aware of AACP’s “Education Scholar” or ACCP “Teaching and Learning Certificate Program” or the Mentor Exchange program through ASHP? Most state that they are unsure whether faculty are even aware of any of these programs. Most state that some or all of these programs are made available to faculty, however, none require them as part of a faculty development program. Some specify one program over another, e.g. the ACCP FIT program.

3. Proposed AACP Session

At the 2010 Annual Meeting, the AACP Faculty Affairs Committee will characterize the current state of affairs of faculty development in colleges/schools of pharmacy. The objectives of the session will be to 1) Review peer-reviewed

literature regarding faculty development initiatives in colleges/schools of pharmacy and 2) Characterize faculty development initiatives in colleges/schools of pharmacy *via* audience response from AACP delegates. This interactive session will present the Committee's evidence-based literature review and survey and share real time data from AACP faculty delegates collected using an audience response system.

Recommendations:

1. Publish the results of the background report and audience response survey as a research report and/or White Paper in AJPE.
2. Forward the 2009-10 Faculty Affairs Committee findings to the 2010-11 Section of Teachers of Pharmacy Practice Faculty Development Committee.
3. Incorporate the findings of the 2009-10 Faculty Affairs Committee into the Section's Strategic Initiative 3: Development, i.e., "By 2010, make the Recruitment and Retention Task Force a standing Committee of the Section. The committee should focus on assisting colleges and schools to recruit pharmacy practice faculty and to provide these faculty with the resources and skills necessary to succeed in their academic career."