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American College of Clinical Pharmacy

Michael S. Maddux, Pharm.D., FCCP; Executive Director

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Frontiers Fund Receives a Special Gift from Dr. Fred Eshelman

He Issues Challenge for Matching Funds: "Movement Attracts Fire"

The Research Institute wishes to thank Fred Eshelman, Pharm.D., for honoring the organization's research efforts by contributing more than $240,000 to the Frontiers Fund. The gift was received by Susan Fagan, 2008 Chair of the ACCP Research Institute Board of Trustees, and Jacqueline Marinac, ACCP Director of Research, at the PPD National Headquarters in Wilmington, North Carolina, on February 4, 2008. Dr. Eshelman served on the ACCP Research Institute Board of Trustees from 2005 to 2007.

Dr. Eshelman is the founder and chief executive officer of PPD, the company he established as a one-person consulting firm in 1985. Today, PPD is a leading global contract research organization (CRO) providing discovery, development, and post-approval services as well as compound partnering programs. Fred told Drs. Fagan and Marinac that the driving force to start his company came after the birth of his daughter, Kimberly, who is currently attending the University of North Carolina at Wilmington. He said that the birth of a child changes everything. "I now had to plan for her future," he said. "I had a good job in industry, a new family, and a mortgage. I had a good job with a solid future, but I wanted something more," he explained. His career has included positions as Senior Vice President of Development and Vice President of Clinical Operations for the former Glaxo, Inc., as well as various roles in drug development with other pharmaceutical companies.

PPD employs more than 10,000 professionals in 69 offices and 30 countries around the world. When asked what PPD has to offer young clinical pharmacists, he stated, "We don't offer $90,000 to start and stay in the same job doing the same thing for 20 years, but we do offer the chance to start at an entry level, and we have opportunities for upward promotional advancement to positions of significant authority and prominence. We often recruit talented individuals from our own fellowship programs, where we can see how well they perform within our organization. Most come to us directly from Pharm.D. programs," he added. He suggested that ACCP engage the biotechnology industry in programs, dialogue, and education, "because the role of pharmacists will be significantly changed in the near future and they are going to be the only professionals capable of providing individualized biopharmaceutical care."

Above: Jacque Marinac, Fred Eshelman, and Susan Fagan

Dr. Eshelman received his doctor of pharmacy degree from the University of Cincinnati and his bachelor's degree in pharmacy from the University of North Carolina at Chapel Hill. He is also a graduate of the Owner President Management (OPM) program at Harvard Business School. "As a native of North Carolina and a graduate as well as long-time supporter of the University of North Carolina at Chapel Hill, Fred has demonstrated a significant history of philanthropy and dedication to the pharmacy profession that is exemplary," Marinac said. When asked how he would like to be acknowledged for his contribution to the Research Institute, he replied, "Quietly."

When the Research Institute informed him of its shift in priorities away from administering grants only and shared with him the new programs and services being offered by the Research Institute in 2008, including the Focused Investigator Training (FIT) and Research and Scholarship Development Academy Programs, his comment was, "Movement attracts fire," referring to the important change in direction taking place within the Research Institute. He then issued a direct challenge to his industry and to former colleagues to match his donation. Upon hearing the offer to have a Research Institute award or program named in his honor, he quickly replied, "Get someone to match my donation and name it after him or her." Any takers?

Spring Forum Offers Fun in the Sun in Phoenix, Arizona

It's not too late to plan your Spring break! Join friends and colleagues April 5–9, 2008, in sunny Phoenix, Arizona. The 2008 ACCP Spring Practice and Research Forum and acclaimed Updates in Therapeutics: The Pharmacotherapy Preparatory Course will be held in the heart of downtown Phoenix this spring. Late registration ends March 21. Visit the ACCP Web site at http://www.accp.com/meetings/sf08/ to start planning your meeting itinerary today.

While in Phoenix, plan to get out and explore the "valley of the sun." April affords comfortable temperatures, and outdoor activities are in abundance this time of year. From golfing to hot air balloon rides, relaxing this Spring break has never been easier. Extend your stay in Arizona and take a scenic drive to one of the many surrounding resort areas. Not looking to lounge? Book a rock climbing adventure or hike the local trails. There are numerous scenic drives and trails available in this mountainous region, each providing breathtaking scenes in all directions.

Only coming to town for the meeting? There is plenty to do after hours in downtown Phoenix. After a day of learning at the ACCP meeting, get out and taste some of this thriving city's top-rated restaurants and entertainment venues. Home to nearly 3 million people, the Phoenix metropolitan area has experienced tremendous growth during the past several years. Take advantage of downtown renovations and mingle with the locals in one of Phoenix's newest hot spots. All ACCP meeting attendees will receive a special local restaurant listing in their meeting guides. Many venues are within walking distance of the convention center and hotel.

For more information on Phoenix activities, visit http://www.visitphoenix.com/. Start planning your spring getaway today. Late registration for the meeting ends March 21—visit the ACCP Web site http://www.accp.com/meetings/sf08/ to register online and take advantage of these reduced rates. See you in sunny Phoenix!

ACCP Introduces Online Student Membership Directory

ACCP is pleased to announce the availability of a new online Student Membership Directory. Student members participating in StuNet focus groups and the StuNet Advisory Committee identified the need for a separate, searchable directory that could provide student-specific information, including educational institution and graduation year.

The ACCP Student Membership Directory is housed on a secure site and may be accessed by any student from the StuNet homepage of the ACCP Web site at www.accp.com/stunet. After entering their log-in and password, students can search the directory using any of these search parameters:

- First or last name
- State
- College of pharmacy
- Graduation year
- Interest areas
- PRN memberships

This tool is designed to enhance the ability of student members to network with one another nationwide. The directory will also provide ACCP College of Pharmacy Student Liaisons (COPSLs) the ability to contact student members at any school or college of pharmacy or in specific geographic areas that may be involved in particular student-related programs or initiatives. All students and COPSLs are encouraged to give the directory a "test drive."

Research Institute Applications Now Being Accepted

F.I.T. Program
Investigator Development Grants
Infectious Diseases Fellowship
Mini-sabbaticals
Heart Failure Traineeship

Focused Investigator Training (F.I.T.) Program
The Focused Investigator Training (F.I.T.) Program will be held July 12–18, 2008, in Salt Lake City, Utah. The career development program is to provide up to 25 experienced investigators with the knowledge and skills needed to prepare proposals suitable for major extramural funding. The tuition is $2750. Online applications close April 1, 2008. Visit the F.I.T. Web site for details and an application at http://www.accp.com/ri/fit/index.php.

Research Institute Research Awards
Frontiers Career Development Research Awards—It is anticipated that up to $60,000 of support will be awarded in 2008. *Eligibility*: Active Full Members or Associate Members are encouraged to apply. *Application Deadline*: The deadline for submission of applications is Tuesday, April 15, 2008, at 5:00 p.m. Central Daylight Time (CDT). For more information, go to http://www.accp.com/frontiers/research.php.

ACCP Pharmacotherapy Investigator Development Research Awards—It is anticipated that up to $40,000 of support will be awarded in 2008. *Eligibility*: Active Full Members, Associate Members who qualify as new investigators (i.e., 10 or fewer years since completion of their formal training or first academic appointment). *Application Deadline*: The deadline for submission of applications is Thursday, May 15, 2008, at 5:00 p.m. CDT. For more information, go to http://www.accp.com/frontiers/research.php.

ACCP Infectious Diseases Research Fellowship
This fellowship, supported by a grant from PriCara, Ortho-McNeil Janssen Scientific Affairs, LLC, supports the development of clinical scientists in infectious diseases, including postgraduate fellows as well as graduate students who have at least completed their qualifying examinations. The deadline for submission of applications is Monday, March 24, 2008, at 5:00 p.m. CDT.

Mini-sabbaticals
This exclusive opportunity is open to PRN members who wish to gain or expand their skills in practice and/or research under the guidance of experts in a particular therapeutic area. The mini-sabbaticals to be offered to PRN members in 2008 are as follows:

- Hematology/Oncology PRN Mini-sabbatical
- Pain and Palliative Care PRN Mini-sabbatical
- Infectious Diseases PRN Mini-sabbatical

The deadline for mini-sabbatical applications is June 2, 2008. Additional information is available at http://www.accp.com/frontiers/research.php#cardmini.

Heart Failure Traineeships
Applications are now being accepted for the ACCP Heart Failure Training Program. Consider how these intensive traineeships offered through the ACCP Research Institute could benefit you or your colleagues, fellows, residents, and students. Applications close on Thursday, May 1, 2008. The Heart Failure Training Program, funded by an educational grant from Scios, Inc., is a 2- to 4-week experience at one of six available sites. This experience is available to residents, fellows, and clinical pharmacy practitioners. For more information, visit http://www.accp.com/frontiers/research.php or contact Sheila Carter at the ACCP Research Institute (scarter@accp.com).

President's Column

Gary R. Matzke, Pharm.D., FCCP

Ethical Dilemmas in Clinical Research and Quality Improvement

New challenges have emerged during the past decade that will require heightened vigilance by clinical, translational, and health services researchers if they are to maintain the trust of the scientific community and the public. In the excellent white paper that was recently prepared by the 2005–2006 ACCP Publications Committee, the authors identified several emerging threats to scientific integrity and provided investigators with guidance to minimize the risk for impropriety.[1] Although many of the issues discussed in the white paper are relevant to all health care professionals, the committee highlighted the significance of a few specific quandaries as they pertain specifically to pharmacy researchers.

The 21st-century investigator must be well versed in the regulations that govern the protection of human subjects who participate in research and the privacy of their protected personal health information. The integrity of the research process is a critical concern, and the security of the data systems, particularly those that contain genomic data, must be ensured. The improper use of research funds, as well as the conduction of unfunded research that uses the resources of an institution or health care insurer, is an additional example of research misconduct. Finally, conflicts of interest, be they financial or of conscience or commitment/effort, have arisen as key factors that must now not only be disclosed but also, in this era, managed to preclude their influence on the scientific process.

These behaviors or issues are now believed to be within the realm of the "responsible conduct of research" and clearly extend beyond the foundational concerns that have historically characterized "research misconduct," which is classically defined as follows: the fabrication or falsification of data, plagiarism, or other practices that seriously deviate from those that are accepted within the scientific community

1. Klepser ME, Matzke GR, Vivian E, et al. American College of Clinical Pharmacy white paper. Ethical issues related to clinical, translational, and health system research. Pharmacotherapy 2007; in press. Prepublication draft released September 2007. Available at http://www.accp.com/position/RschEthicsWP4-07approved_nd_revised.pdf. Accessed March 4, 2008.
2. Department of Health and Human Services, Public Health Service. Responsibilities of awardee and applicant institution for dealing with reporting possible misconduct in science. Fed Regist 54:32446–32451, August 8, 1989.
3. Martinson BC, Anderson MS, de Vries R. Scientists behaving badly. Nature 2005;435:737–8.

for proposing, conducting, or reporting research.[2] Although this triad of behaviors was codified almost 20 years ago, research misconduct has unfortunately not disappeared from within the scientific community. In fact, an anonymous survey of NIH-funded researchers published in 2005 showed that almost 33% of the mid- to senior-level investigators admitted having committed an act of misconduct in the previous 3 years. These transgressions ranged from making unreported changes in study design or results (16%) to fabricating or falsifying data or plagiarizing the work of others (1.5%).[3]

In this brief commentary, the importance of two emerging research issues that have attracted national attention is reviewed, and approaches to minimize adverse outcomes for patients and investigators and the health care organizations at which they work, as well as society-at-large, are discussed.

The first of these is the bioethical quagmire that can be encountered by those conducting health care quality improvement initiatives that "border on research" or that are, in the eyes of some, considered "research." The classic quality improvement process involves (1) the development or adoption of a "best practice," (2) the implementation of this practice such that it becomes a standard of care, and (3) an assessment of the outcomes of the initiative. In many settings, the outcomes of this type of initiative are subsequently presented to those within the institution and, on occasion, to a regional or national audience. The improvement in care, once disseminated, could thus ultimately enhance the quality of care in other institutions and communities. The recent experience of a group of investigators from Johns Hopkins may, however, cause those in the quality improvement field to reconsider how they approach their mission. This Johns Hopkins quality improvement project is described in detail in the investigators' original publication[4] and is summarized in a recent perspective article[5] in the *New England Journal of Medicine*. In essence, after the original "research" article was published in 2006, the Office for Human Research Protections (OHRP) responded to a written complaint and investigated the actions of the Johns Hopkins institutional review board (IRB). The IRB had judged in 2003 that this project was exempt from human subject research regulations; thus, the investigators stated in their article that informed consent was not sought from the individual subjects.

The heart of this issue lies not in whether this project should have been carried out, but rather, in the finding that the grounds on which the IRB acted were incorrect. The provision on which the John Hopkins IRB based its decision was clearly not met; this project was not exempt because it prospectively implemented a collection of infection-control interventions and tested hypotheses regarding their effectiveness.[5] If the investigators had requested an expedited or full review by the IRB and received approval to proceed, then the IRB would have been empowered to make an independent determination regarding whether the project satisfied any one of the four conditions for waiving informed consent as outlined by Miller and Emanuel.[5] This example is particularly disconcerting, because an IRB at a world-renowned institution interpreted the relevant regulations in a manner so different from the OHRP. Quoting Baily: "You know you are in the presence of dysfunctional regulations when people can't easily tell what they are supposed to do."[6]

The troubling implications of this case are encapsulated in the following statement taken directly from the OHRP Web site:

> The regulations do not apply when institutions are only implementing practices to improve the quality of care. At the same time, if institutions are planning research activities examining the effectiveness of interventions to improve the quality of care, then the regulatory protections are important to protect the rights and welfare of human research subjects…. OHRP will not stand in the way of practitioners who are only carrying out the important task of providing the highest quality of care.[7]

This interpretation of the role of quality improvement initiatives will likely complicate the considerations of many institutions and clinical practices in the future. The lack of clarity in the OHRP guidance prior to this case, however, should now be very much in focus. If a contribution is being planned to advance the "best practices" of the profession or a health care system with multiple institutions, it will likely be in the best interest of all parties to seek assurance that the local IRB is fully cognizant of this case and thus conducts the most appropriate review so that potential complications, bad publicity, and severe sanctions can be avoided.

The second issue is the entangled web of interrelationships between the sponsor of a study, the investigator, and the institution in which they practice and their respective responsibilities to the research subjects or patients who participate in a clinical intervention trial. The clinical trial agreement links the sponsor of the study with the institution and the investigator and details the responsibilities of each party to the other. The clinical protocol may be referred to in the clinical trial agreement, and if so, it may provide a detailed definition of the scope of work to which the parties have agreed. The employment contract between the institution and the investigator sets forth the institution's expectations of the investigator and, in some situations, may formalize the degree of control that the institution will have over the investigator's research program. Finally, the informed consent document and the verbal commitments made during the consent process establish the relationship between the research subjects and the institution and the investigator. The legal precedence in the case of *Abney v. Amgen*, decided in 2006, focused attention on the interplay of the several legal as well as ethical issues that emanate from the contractual web described above. I anticipate that you will find, as I did, these to be extremely relevant and compelling issues of which academic medical centers and investigators involved in the conduction of industry-sponsored research must be cognizant.[8]

In this case, Abney and his seven co-plaintiffs put forth three legal arguments to substantiate their case that Amgen had not upheld its commitment to provide post-trial access to the investigational drug (glial cell line–derived neurotrophic factor [GDNF]).[9] The court ruled that there was no contract between the research subjects and Amgen. Rather, the contract (i.e., through the consent form) was between the academic health center and its investigators and the research subjects, not the sponsor. Furthermore, the court stated that the consent form wording regarding the extended availability of GDNF came from the investigators who had no authority to speak for Amgen, the study sponsor. Finally, the court held

4. Pronovost P, Needham D, Berenholts S, et al. An intervention to decrease catheter-related bloodstream infections in ICU. N Engl J Med 2006;355:2725–32.
5. Miller FG, Emanuel EJ. Quality-improvement research and informed consent. N Engl J Med 2008;358:765–7.
6. Baily MA. Harming through protection? N Engl J Med 2008;358:768–9.
7. Office of Human Research Protections, U.S. Department of Health and Human Services. OHRP statement regarding the *New York Times* op-ed entitled "A Lifesaving Checklist." Available at http://www.hhs.gov/ohrp/news/recentnews.html#20080115. Accessed March 5, 2008.
8. *Abney v. Amgen,* 443 F3d 540 (6th Cir 2006).
9. Mello MM, Joffe S. Compact versus contract—industry sponsors' obligations to their research subjects. N Engl J Med 2007;356:2737–43.

that the investigators and the institution, not Amgen, had a responsibility to the subjects to "ameliorate their pain and treat their illness with the best medicine available"[8] because the company's reasons for sponsoring the study were not primarily to benefit the subjects. The rulings of the court suggest that the investigators and the academic health center's IRB were, in fact, legally bound by the informed consent document and were thus potentially legally obligated to fulfill the promise that, in this case, included continuing to provide the treatment to the plaintiffs, a promise that they had no ability to keep.

The clear message from this case is that academic health centers and their investigators are liable if they fail to monitor the conflicts and contradictions within the clinical trial agreement, protocol, consent form, and investigator-institutional contracts that govern the research process and thereby make promises to subjects that they cannot keep. Mello and Joffe[9] proposed three recommendations to prospectively implement to avoid this quagmire of legal and ethical entanglements:

1. Any promise to subjects put forth in the consent process must be backed by the legal authority to bind the sponsor or by the institution's ability to independently fulfill the promise.
2. The investigator must clearly communicate any limits on promises to prospective research subjects.
3. Any aspect of the study design that is ethically necessary must be legally enforceable, which will likely require its incorporation into the clinical trial agreement.

In summary, clinicians engaged in clinical research and quality improvement projects must be vigilant in their pursuit of transparency of their interactions with study or project sponsors and the subjects who participate in these intellectual endeavors. What we learned during our days in the hallowed halls of academia may not be sufficient to prepare us to meet the challenges in the ever-shifting arena of health law, bioethics, and human rights.

ACCP Offers a Full Menu of Leadership and Management Educational Experiences

As a part of its ongoing efforts to promote educational opportunities for current or aspiring clinical pharmacist leaders, ACCP provides three very different, but complementary, programs:

The ACCP Academy Leadership and Management Certificate Program. Designed for those who may be in current leadership or management positions, or who plan to pursue a leadership career path, this 28-hour curriculum is delivered as live programming during ACCP's fall Annual Meeting and the Spring Forum. Candidates can complete the curriculum and program requirements in 2–3 years, depending on the frequency with which they attend ACCP meetings and participate in the Academy course offerings during those meetings. Other than the $100 application/portfolio maintenance fee, the program can be completed at no extra costs beyond those involved in registering for the ACCP Annual Meeting or Spring Forum. Complete information, including a program application form, is available at http://academy.accp.com/leader.asp.

The Latiolais Leadership Distance Learning Certificate Program: The Essence of Leadership. Offered by the Ohio

State University College of Pharmacy and the OSU Fisher College of Business, this program is a distance-learning certificate program for the aspiring pharmacy leader with little or no experience in an administrative role. Ideal for those whose schedules make it difficult to attend live programming, this six-course program is designed to be completed over 6 months. Students learn through a combination of self-assessment, self-study, recorded lectures with interactive discussions, and asynchronous discussion. Students complete assignments/projects and examinations to document their competence. The next program is scheduled to start on **July 1, 2008**, and will provide 60 contact hours of continuing education credit. ACCP members receive a 20% discount off program tuition. For complete program details, visit http://www.latiolais.org/ and click on "Essence of Leadership distance-learning program."

The ACCP Leadership Experience. Offered by LeaderPoint, in cooperation with ACCP, this comprehensive management and leadership development program is designed for those who currently have, or will be assuming, significant management responsibilities. Emphasizing real-world management principles, the program is delivered as a 3½-day hands-on seminar. The highly experienced LeaderPoint faculty relies on case studies, an extensive syllabus, and one-on-one and small group instruction to deliver a program designed to meet the unique needs of today's manager. The next Leadership Experience will be held **June 17–20, 2008**, in Kansas City and provides 30 contact hours of continuing education credit. ACCP members can enroll at a special, discounted rate. For detailed information about the Leadership Experience, visit http://www.leaderpoint.biz/accp.htm.

Research Institute Announces Anticoagulation and Heart Failure Traineeship Award Winners

The ACCP Research Institute is pleased to announce the winners of the 2008 Anticoagulation and Heart Failure Traineeship Awards.

Four members have been awarded Anticoagulation Traineeships with Preceptor Henry Bussey, Pharm.D., in San Antonio, Texas. The Anticoagulation Traineeships are offered throughout the year and provide 3–4 weeks of training for residents and practitioners. The awardees are Bradley Beck, Alison Rauch, Cheryl Lynch, and Jennifer Roby. The Research Institute thanks Sanofi-Aventis for its support of this year's Anticoagulation Traineeships.

Heart Failure Traineeships are provided at six sites throughout the year and provide 2–4 weeks of training for residents or practitioners. The following sites will provide training opportunities for this year's awardees:

University of Illinois: Deborah Carabello, Andrea Dooley, and Kristen Charlson under the direction of Dr. Robert DiDomenico.
University of Michigan: Marcy Glisczinski and Lillian Kang, with Drs. Barry Bleske and Mike Dorsch serving as preceptors.
University of North Carolina: Emily Waters, Laura Bowers, Christy Weiland, and Amy Riley under the preceptorship of Drs. Herb Patterson and Jo Ellen Rodgers.
Ohio State University: Danielle Fennema and Mary Ann Tucker with Dr. Kerry Pickworth.
University of Southern California–Los Angeles: Jennifer Garner and Sherri Torrecer under the leadership of Drs. Tien Ng and Sheryl Chow.
University of Utah: Joel Marrs, Shaunta' Ray, and Christine Lee under the leadership of Dr. Mark Munger.

The Research Institute is pleased to recognize Scios, Inc., for its support of this year's Heart Failure Traineeships.

ACCP Launches New Online Series: Model Practices in Patient Care, Education, and Research

Thanks to the work of the 2006–2007 Public and Professional Relations Committee, the College is pleased to announce the debut of a new ACCP Web-based series, *ACCP Model Practices in Patient Care, Education, and Research*. The purpose of the series is to describe and disseminate model practices of ACCP members that have impacts on clinical care, education, and research while also stimulating innovation and advancement in these areas of clinical pharmacy.

The first model practice, "A Pharmacist-Staffed Inpatient Antithrombosis Service," authored by Dr. William Dager from the University of California Davis Medical Center, focuses on patient care. This model practice can be accessed on the ACCP Web site at http://www.accp.com/docs/modelpracticedager.pdf and is also available to all student members through the StuNet Web page. Subsequent *model practices* in clinical pharmacy education and research will be posted to the Web site in April and May, respectively.

The members of the 2006–2007 Public and Professional Relations Committee who developed this series were Judy Cheng (Committee Chair), William Dager, Lisa Davis, Jean-Francois Guevin, Michael Gulseth, Mary Hess, Michael Hooks, Dan Longyhore, Michele Splinter, and Kim Tallian. More information about the series, including how to submit new model practices for inclusion in this ongoing series, can be found at http://www.accp.com/modelpractices.php.

The Best "Performance Management" Tool: Feedback on Results

Editor's note: ACCP is collaborating with LeaderPoint to bring you a series of articles on popular topics in leadership and management. All content is copyrighted by LeaderPoint. For information on the upcoming Leadership Experience course, visit http://www.leaderpoint.biz/accp.htm. Registration for the June course is now open.

Which is a better way to improve worker performance: a) training on how to perform, b) recognition by supervisors, or c) feedback on the results of performing? Research on this topic should be of interest to managers. In last month's article, performance was defined as what people do while working. Although managers do not observe performance, they are clearly interested in having high-performing workers. Three tools that managers typically employ to improve performance are training, incentive plans and feedback. A 30-year-old study[1] provides insight into the relative effectiveness of each of these methods.

The study, conducted by psychology researchers, looked at a wholesale bakery where one plant had a poor safety record among its workers in the wrapping and make-up departments. Specifically, the injury frequency was well above industry average. The study sought to find out what impact a behavioral program (intervention) would have on worker safety performance.

The intervention had three components: training, feedback on results, and recognition by supervisors. The training component was a 30-minute visual presentation illustrating proper techniques for various job functions (e.g., how to climb over a conveyor belt properly). In addition, these techniques were posted throughout the work area.

Employees were given regular feedback on their safety behaviors, the second intervention component. Specifically, trained observers used a coding scheme to periodically (about four times a week) observe worker activity and record unsafe behaviors, posting the percentage of safe behaviors for the department. The third intervention component was that supervisors would see workers performing safe behaviors and verbally recognize the behavior.

The study took 25 weeks, going through three phases: a baseline, the intervention, and a reversal. The results: The findings from the study clearly showed that worker safety behaviors improved during the intervention period as the percentage of incidents performed safely increased from an average of about 70% to over 96%. As the figure below illustrates, the impact was immediate.

(Continued on page 7)

1. Komaki J, Barwick K, Lawrence R. A behavioral approach to occupational safety: pinpointing and reinforcing safe performance in a food manufacturing plant. J Appl Psychol 1978;63:434–45.

Of particular interest is the reversal phase, which is where the feedback (as posted in the plant) was discontinued. Workers still had the training information posted and available, observers were still present, but the results were simply not communicated to workers any more. As shown in the figure, results went back to baseline levels. Workers who had already been trained began performing more unsafe behaviors, just as they had before the intervention. Regarding the recognition component of the intervention, researchers found that supervisors did this infrequently, either forgetting to do so or simply not bothering; this led the researchers to conclude, with the recognition component of the intervention being a weak influence, that "the primary change agent was...feedback."

Importantly, the feedback mechanism used was simple and "not costly." In using the feedback postings, there were no contests or rewards for the winning departments (the study looked at two departments in the plant), but because the feedback was made public, "an informal competition arose," leading workers to modify their performance. As a postscript, the president made it permanent policy to provide the feedback, and the plant went from one with the poorest safety record to the highest. The investigators noted that "there were indications that employees were already aware of the proper safety rules so feedback alone may be effective in improving performance."

While training certainly has a place when know-how is lacking, this study argues that telling people how to perform (training) is not as effective as providing them frequent feedback on the results of their work. Managers are accountable for results; workers are responsible for performance. Creating feedback systems allows workers to take that responsibility; it is time well spent by managers.

Awards, Promotions, Grants, etc.

Jeffery Baldwin, Pharm.D., was recently elected President-Elect of the American Association of Colleges of Pharmacy (AACP)….**Thomas Dowling**, Pharm.D., Ph.D., has been awarded $81,763 by the National Institutes of Health for "Ribavirin Pharmacokinetics, Race, and HCV Treatment"….**Patricia Kroboth**, Ph.D., FCCP, was recently elected Chair-Elect of the AACP Council of Deans….**Eric Kutscher**, Pharm.D., BCPP, was recently promoted to Associate Professor of Pharmacy Practice at South Dakota State University College of Pharmacy.…**Raymond Love**, Pharm.D., BCPP, received the Maryland Pharmacists Association's 2007 Innovative Pharmacy Practice Award….**Gary Matzke**, Pharm.D., FCCP, was recently elected Chair-Elect of the AACP Council of Faculties….**Kelley Oehlke**, Pharm.D., has been promoted to Associate Professor of Pharmacy Practice at South Dakota State University College of Pharmacy.…**Megaly Rodriguez de Bittner**, Pharm.D., BCPS, CDE, has been elected Vice President of the Maryland Pharmacists Association….**Timothy Welty**, Pharm.D., FCCP, BCPS, was recently elected Chair-Elect of the AACP Section of Teachers of Pharmacy Practice.

New Members

Denise Adams
Violette Ajiboye
Samina Ali
Nicole Alvey
Heidi Anksorus
Holly Balcer
Kristen Bamberg
Samantha Barfield
Sarabeth Baxter
Robert Bayudan
Veronica Bedoya
Jesse Bierman
Thomas Blostica
Robert Boyle
Kerrie Boynton
Heather Bream-Rouwenhorst
Colleen Brinkman
Matthew Brown
Katie Burenheide
Charla Burgett
James Camamo
Gideon Cayanan
Phyllis Chow
Kristyn Churmusi
William Clark
Leah Crow
Robin Crow
Jill Cwik
Steffanie Danley
Emily Davis
Richard De Leon
Lauren DeBolt
Katelyn Dervay
Khoa Dinh
Norman Doctor
Andrea Donaldson
Darla Eastman
Lori Edell-Herman
Bryan Edwards
Michael Faithe
Patricia Jane Faris
Virginia Fedorchak
Susan Fernandes
Sarah Fichuk
Sara Fletcher
Jennifer Floyd
Glenn Fonte
Kerry Francis
A. Crystal Franco
Linda Freeman
Lara Frick
Lela Fung
Sarah Gelles
Mary Ghafoori
Alyson Gibson
Jennifer Gorski
Richard Grant
Sally Haack
Reed Hall
Hind Hamid
Stacy Hargrove
Anetta Harrell
Curt Harrigan
Audrey Haydu
Lori Hellums
James Hicks
Uyen Hoang
Michelle Horan
Jonathan Hunchuck
Erika Hunt
Glenda Hurford
Eric Huynh
Amy Hyduk
Diane Johnson
Jamie Joy
William Judd
Margaretta Kearson
Emily Kelley
William Kennon
Tsing-Yi Koh
Annette Kossifologos
Anne Ladisa
Co Lai
Sharan Lail
Holly Lasilla
Philip Le
Cindy Le
Vi (Vivian) Le
Marilyn Lee
Ruth-Ann Lee
Elizabeth Lipkin
Beth Loecker
David Lovell
Patrice Lucas
Carol Ludwig
Khiem Luu
Hong Ngoc Ly
Ketrin Lynch
Danielle MacDonald
Van Mai
Sam Marrnez
Jennifer Marsters
Kelly Martin
Jeffrey Mccarthy
Heather McElligott
Bryan McGee
John McGilvray
Ashley Mehaffie
Kari Mergenhagen
Janelle Meyer
Dondel Moorman
Steven Moser
Kathryn Mowery
Lisbeth Moyer
Sean Nguyen
Thuy Thu Nguyen
Jeffrey O'Connell
Jessica Odom
Neil Pan
Amanda Parker
Suzannah Patterson
Crystal Price
Barbara Pritchard
Lori Profit
Kayla Quick
Julie Rafferty

Apichaya Raktabutr
Melissa Ranney
Jeffrey Reist
Xin Ruppel
Ibrahim Sales
Anshu Sawhney
Rebecca Sawyer
Christine Schabacker
Amy Sekel
Jennifer Severing
Sareh Seyedkazemi
Neha Sheth
Emily Shunk
Julie Simcik
Kevin Smith
Steven Smith
Julie Snyder
Peter Stankiewicz
Kathryn Steffenhagen
Karyn Sullivan
Anneke Tavenner
Rema Thyagarajan
Uma Thyagarajan
Melissa Tiedeman
Patti Togioka
Allyson Triana
Joseph Truong
Yvonne Tsao
Elizabeth Underwood
Katherine Van Houten
Holly Vo
Leslie Ward
Brooke Werlein
Dominique Wesby
Jeremy Whalen
Madeline Willen
Tad Williams
Ariane Wilson
Scott Wirth
Christopher Wisniewski
Elizabeth Wren
Jean Xavier
Ermioni Xidas
Prissilla Xu
Sherry Yaft
Edward Yoo
Alice Yu
Keary Zhou
Robert Ziegenbein
Matthew Zimmerman

The following individuals recently advanced from Associate to Full Member:

Jennifer Belavic
Danielle Blais
Nicole Bohm
Jason Bryowsky
Rachel Chandra
Gary Cochran
Suzanne Jahng
Tracy Johns
Jacqueline Klee
Leah Lewis
Robert Maufroy
Sharon Mindel
Keri Roberts
Bridgette Sharif
Walter Soja
Troy Stubbings
Dorota Szarlej
Pamela Weislo

Congratulations to the following ACCP Members on achieving board certification in Nutrition Support

Nancy Williams
Mark Decerbo

New Member Recruiters

Many thanks to the following individuals for recruiting colleagues to join them as ACCP members:

Holly Balcer
Julie Bartell
Cinda Bates
Lisa Anne Boothby
Sara Brouse
Michael Chandler
Clarence Chant
Deidre Clark
Shelby Corman
Christopher Crank
Jim Curtis
George Davis
George Davis
Horatio Fung
Teresa Geide
Morton Goldman
Sara Griesbach
Andrew Grimone
John Gums
Sheryl Gutierres
Lisa Hall
Mary Hess
Uyen Hoang
Jeff Huffman
Lisa Inge
Jessica Kay
Roger Lander
Courtney Lang
Philip Le
Lesley Lim
Debra Lopez
Thuy Luu
Pamela Maxwell
Erin Megerle
Monica Mineo
Christopher Morrison
John Murphy
Lindsay Nissen
Christine Oramasionwu
Leslie Patatanian
John Prentice
Jennifer Retterer
Edward Sheridan
Jamie Swoboda
Hieu Tran
Lisa Wendler
Charles Wood

Assistant Dean for Clinical Programs
University of Southern Nevada College of Pharmacy
Henderson, Nevada/ South Jordan, Utah

The University of Southern Nevada College of Pharmacy (USNCOP) is a private, nonprofit, ACPE-accredited college with two campuses, located in Henderson, NV, and Salt Lake City, UT. Our 3-year program utilizes the block system of curricular design and delivery, and stresses deep learning and mastery of content, which enables graduates to make rational, appropriate therapeutic decisions that are evidence-based.

The Assistant Dean for Clinical Programs is responsible for planning, managing, and implementing all aspects of experiential education for both campuses. This individual will be responsible for identifying the needs of our current students, faculty, preceptors, and affiliated experiential sites and collaborating with these stakeholders to help achieve the goals of the experiential curriculum.

The successful candidate will work with the Introductory Experiential Coordinators and Advanced Experiential Coordinator and will report directly to the Dean. The candidate will also maintain a faculty appointment with the College of Pharmacy and will have the option of maintaining his/her office in either Nevada or Utah.

The successful candidate will possess excellent communication skills and leadership experience. The candidate must have a Pharm.D. degree or equivalent experience, be licensed or eligible for pharmacy licensure in the state of either Nevada or Utah, and have had experience precepting pharmacy students. A previous academic appointment and experience in experiential program planning and administration at a college of pharmacy are greatly desired.

Interested candidates are invited to submit a letter of interest, a curriculum vitae, an educational philosophies statement, and contact information for three references to:

Darla Zarley, Pharm.D.
Recruitment Committee Chair
The University of Southern Nevada College of Pharmacy
11 Sunset Way
Henderson, NV 89014
Telephone: (702) 968-2005
E-mail: dzarley@usn.edu

The University of Southern Nevada College of Pharmacy is an Equal Opportunity Institution and Employer.

Assistant/Associate Professor of Pharmacy Practice
University of Southern Nevada College of Pharmacy
South Jordan, Utah, Campus

The University of Southern Nevada College of Pharmacy (USNCOP) is a private, nonprofit, ACPE-accredited College located in the Salt Lake City area. Our 3-year program uses the block system of curricular design and delivery and stresses deep learning and mastery of content, which enables graduates to make rational, appropriate therapeutic decisions that are evidence-based.

The successful candidate will be expected to maintain a clinical practice involving drug therapy management and direct patient care. We are currently seeking individuals with expertise in the area of adult acute care, ambulatory care, infectious diseases or critical care. Other responsibilities include student precepting, didactic instruction, involvement in scholarly endeavors, and service to the college. The exact emphasis on responsibilities is flexible and will be tailored to meet the individual professional goals of the candidate. Participation in the development of a pharmacy residency program is also a potential opportunity.

Requirements include a Pharm.D. degree with residency and/or fellowship training or equivalent experience. The candidate must be licensed or eligible for licensure in the state of Utah. Salary and rank will be commensurate with qualifications and experience.

Interested candidates are invited to submit a letter of interest and curriculum vitae to:

Darla Zarley, Pharm.D.
Recruitment Committee Chair
The University of Southern Nevada College of Pharmacy
11 Sunset Way
Henderson, NV 89014
Telephone: (702) 968-2005
E-mail: dzarley@usn.edu

The University of Southern Nevada College of Pharmacy is an Equal Opportunity Institution and Employer.

Assistant/Associate Professor of Pharmacy Practice
Director of the Drug Information Resource Center
University of Southern Nevada College of Pharmacy
Henderson, Nevada

The University of Southern Nevada College of Pharmacy (USNCOP) is a private, nonprofit, ACPE-accredited college located in Henderson, NV. Our 3-year program uses the block system of curricular design and delivery and stresses deep learning and mastery of content, which enables graduates to make rational, appropriate therapeutic decisions that are evidence-based. Applications are currently being accepted for the positions listed below.

Clinical Faculty Positions: The successful candidate will be expected to maintain a clinical practice involving drug therapy management and direct patient care. We are currently seeking individuals with expertise in the area of adult acute care, ambulatory care, cardiology, or critical care. Responsibilities include student precepting, didactic instruction, involvement in scholarly endeavors, and service to the college. The exact emphasis on responsibilities is flexible, and will be tailored to meet the individual professional goals of the candidate. Participation in the development of a pharmacy residency program is also a potential opportunity.

Requirements include a Pharm.D. degree with residency and/or fellowship training or equivalent experience. The candidate must be licensed or eligible for licensure in the state of Nevada. Salary and rank will be commensurate with qualifications and experience.

Director, Drug Information Resource Center: The successful candidate will be responsible for the advancement and oversight of the college's Drug Information Resource Center including the development of center policies and procedures, services, and assessment and quality assurance methods; identification of affiliates; and budget management. The director reports directly to the Dean and will work collaboratively with the college's Library Learning Resources Center. College responsibilities include didactic and experiential training of students and residents, scholarly endeavors, and service.

Requirements include a Pharm.D. degree with residency and/or fellowship training with a minimum of 2 years' practice or equivalent experience, excellent written and oral communication skills, and administrative experience. Ideally, the candidate should have experience in an academic drug information center or a hospital-based drug information service. The candidate must be licensed or eligible for licensure in the state of Nevada. Salary and rank will be commensurate with qualifications and experience.

Interested candidates are invited to submit a letter of interest and curriculum vitae to:

Darla Zarley, Pharm.D.
Recruitment Committee Chair
The University of Southern Nevada College of Pharmacy
11 Sunset Way
Henderson, NV 89014
Telephone: (702) 968-2005
E-mail: dzarley@usn.edu

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University of Pittsburgh

Clinical and Translational Scientist
Department of Pharmacy and Therapeutics
School of Pharmacy
University of Pittsburgh

The University of Pittsburgh School of Pharmacy invites applications for a tenure-track position at assistant, associate, or full professor rank in the field of clinical and translational science. Applicants should have a Ph.D., Pharm.D., M.D., or equivalent degree and relevant postdoctoral experience. Research areas of expertise include, but are not limited to, pharmacotherapy in transplantation, cardiology, diabetes, nephrology, and general internal medicine.

A successful applicant will be expected to actively participate in the Clinical Pharmaceutical Scientist Ph.D. Program within the School of Pharmacy. In addition, successful applicants will be expected to play an integral role in the multidisciplinary Clinical and Translational Science Institute within the University of Pittsburgh Schools of the Health Sciences.

Applicants are expected to establish an independent research program that will attract and maintain extramural support, achieve national recognition for their research, and participate in the teaching programs of the school.

Applicants should send a letter describing their interest in the position, a description of their research, a complete curriculum vitae, and the names of at least five individuals who will serve as references to:

Dr. James P. Tsikouris
Chair, Search Committee
School of Pharmacy
808 Salk Hall
University of Pittsburgh
Pittsburgh, PA 15261
E-mail: jpt16@pitt.edu

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Faculty
Purdue University School of Pharmacy and Pharmaceutical Sciences
in conjunction with
Regenstrief Institute Inc., Indiana University Center for Health Services and Outcomes Research, and the Veteran's Administration Health Services Research and Development Center on Implementing Evidence-based Practice

The Department of Pharmacy Practice, Purdue University School of Pharmacy and Pharmaceutical Sciences, in conjunction with Regenstrief Institute Inc., Indiana University Center for Health Services and Outcomes Research, and the Veteran's Administration Health Services Research and Development Center on Implementing Evidence-based Practice, is recruiting a tenure-track faculty member with research expertise in implementation science, pharmacoeconomics, pharmacoepidemiology, health informatics, and/or patient safety. Required qualifications include a Pharm.D., M.D., or bachelor's degree plus a graduate degree, with experience in health services research, operations research, medical informatics, or a related field. Rank and salary are commensurate with experience. The successful candidate will contribute to the learning, engagement, and discovery initiatives of the School of Pharmacy and Pharmaceutical Sciences, Indiana University Center for Health Services and Outcomes Research, Regenstrief Institute, and the VA Health Services Research & Development Center on Implementing Evidence-based Practice. The major emphasis of the position will be interdisciplinary collaboration in discovery, implementation, and system redesign. Review of applications will continue until the position is filled. Qualified candidates should forward a letter of intent, a current curriculum vitae, and three letters of reference to:

Karen S. Hudmon, Dr.P.H.
Search Committee Chair
Department of Pharmacy Practice
Purdue University School of Pharmacy and Pharmaceutical Sciences
W7555 Myers Building, Wishard Health Services
1001 West Tenth Street
Indianapolis, IN 46202-2879
Telephone: (317) 613-2315, ext. 311
E-mail: khudmon@purdue.edu

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Clinical Pharmacists

YOU have committed yourself to providing the best possible care to your patients. So has Exempla Healthcare. With three distinct facilities serving the Denver community, we have been ranked among the Solucient "100 Top Hospitals" more often than any other hospital system in Colorado for the past 10 years. You also place a high priority on your life away from work. Our Colorado locations will ensure that these priorities are met. Come join us.

Exempla is seeking clinical pharmacists at all of our facilities. A variety of shifts and schedules are available. Exempla Lutheran Medical Center has opportunities for clinical pharmacists with an oncology background as well.

Visit Colorado on us! We'll fly you out to Denver so you can experience firsthand the many amazing facets to our wonderful city. For details and to schedule your trip, contact Everett Costa at (303) 425-2526 or costae@exempla.org. Interested candidates should apply online at www.exemplajobs.org. *EOE*.