

HISTORY OF PHARMACY SIG NEWSLETTER

Pharmacy Chronicles: Past, Present, and Future

Welcome Message from the Chair, History of Pharmacy Special Interest Group

Welcome to the third issue of the History of Pharmacy Special Interest Group (SIG) newsletter: *Pharmacy Chronicles: Past, Present, and Future*. For three years now, this newsletter has served as a medium for SIG members to share their interests and keep the history of pharmacy alive. Thank you to all who have contributed! Also, a special thanks to our colleagues, Ettie Rosenberg and Cathy Taglieri, for their work as editors of this and prior issues. The History of Pharmacy SIG continues alive and quite active!

This year the SIG membership was asked to submit special project ideas via the email listserv and in fact, several proposals were received. Based on positive feedback from AACP, the SIG will engage in a special project entitled “*Oral Histories: Preserving the Present for Future Members of the Academy*” a proposal submitted by Immediate Past Chair, James Culhane. This project, modeled after the concept in the Storycorps initiative (<https://storycorps.org>), will collect the stories of current Academy members during the AACP Annual meeting. These stories will offer a valuable perspective about the current status of pharmacy education. The collected recordings will also serve as an audio-based time capsule for the Academy. **Details regarding how your story can be included are below.**

Do not forget to look for our **SIG’s Oral History table at the annual meeting**. The table will be located in the registration hall. Please consider sharing your pharmacy story with us to create and pre-

serve history for future members of our Academy. **You don’t have a story in mind to share? No worries – We will have a list of questions prepared as well.**

Just a reminder to our members to checkout the resources available on the SIG website at: (<http://www.aacp.org/governance/SIGS/history/Pages/default.aspx>). There you will find a collection of history of pharmacy course syllabi that may prove helpful for those developing or revising courses, and past editions of the SIG’s newsletter are also readily accessible. Please contact a member of the SIG leadership if you have a course syllabus you would like to share, or if you have any other ideas for future additions to the website.

Exciting things are planned for the AACP 2016 Annual Meeting in Anaheim, CA. **Our SIG’s programming, entitled “Pharmacy Education: A Changing Curriculum with Changing Times” is scheduled for Monday, July 25th from 1:30 to 3:00 pm.**

As pharmacy curricula change in response to the new Accreditation Council for Pharmaceutical Education (ACPE) 2016 Standards, this timely session explores three significant milestones that shaped pharmacy education in the United States over the past century. While earning continuing education credit, attendees will learn how The Pharmaceutical Syllabus (1910), The Pharmaceutical Survey of 1946-1948, and the Millis Commission Report (1975) ensured pharmacists were equipped with the knowledge and skills needed to meet the public’s continuously evolving needs.

The SIG business meeting is scheduled for Monday, July 25th from 5:15 to 6:15 pm. Please consider attending to welcome our newly elected officers and help decide future directions for the SIG. I look forward to seeing everyone in Anaheim! If you are unable to attend the annual meeting, feel free to email me any items you would like us to discuss at the business meeting. Sincerely,

-Michael Hegener, SIG Chair

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Meet the Editors

Ettie Rosenberg, PharmD, JD

Founding Editor

Assistant Professor of Pharmacy
Practice
West Coast University School of
Pharmacy
590 N. Vermont Avenue
Los Angeles, California 90004
Tel. 323.454.5024

Email: erosenberg@westcoastuniversity.edu**Catherine A Taglieri, PharmD.**

Associate Editor

Assistant Professor of Pharmacy
Practice
MCPHS University School of
Pharmacy
179 Longwood Avenue,
Boston, Massachusetts 02115
Tel. 617.732.2835

E-mail: catherine.taglieri@mcphs.edu

Message from the Editor

Welcome: As history teaches us - the past, the present and the future - are all connected, though at times one may need to search for those commonalities which may or may not be self-evident. Since the outset, this newsletter's goal has been to reflect the evolution of our profession from its past, into its present, and as the profession continues to evolve with the times and needs of our society, to build on those to also anticipate its future. This Spring 2016 issue of *Pharmacy Chronicles: Past, Present, and Future* continues on that theme..

Students: We view pharmacy student input as vital to continuity of our profession, and highly value, encourage, and solicit pharmacy student contributions or collaborations. This issue proudly features student/faculty collaborations contributed by three institutional members of the Academy:

- MCPHS University, School of Pharmacy
- Western New England University, College of Pharmacy
- Wingate University, School of Pharmacy

Faculty: Tremendous resources for history of pharmacy topics continue to be available to pharmacy faculty through the American Institute of the History of Pharmacy (AIHP). For more information email: Teaching@AIHP.ORG.

Reflections: We commemorate the lifetime contributions of Frances Oldham Kelsey (1914- 2015), and the story of a heroine credited with averting a national public health disaster in the 1960's. While working for the FDA, as bona fide activist for medication

safety, Dr. Kelsey refused to allow the drug thalidomide into the US – sparing thousands of yet unborn children from a tragedy of a thalidomide-specific congenital birth defect. Read more on this remarkable woman and her legacy on page 6.

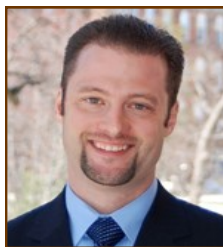
Annual Meeting: Join us at the AACP Annual Meeting in Anaheim, California, Monday, July 25th, 1:30- 3:30pm for a Continuing Education session: *Pharmacy Education: A Changing Curriculum with Changing Times*. See you soon!

— Ettie Rosenberg, PharmD, JD,
Founding Editor, West Coast
University School of Pharmacy

SIG OFFICERS



Mike Hegener
(hegenma@ucmail.uc.edu),
Chair



James Culhane
(jculhane@ndm.edu),
Immediate Past Chair



David Baker
(dmbaker@wne.edu),
Chair Elect



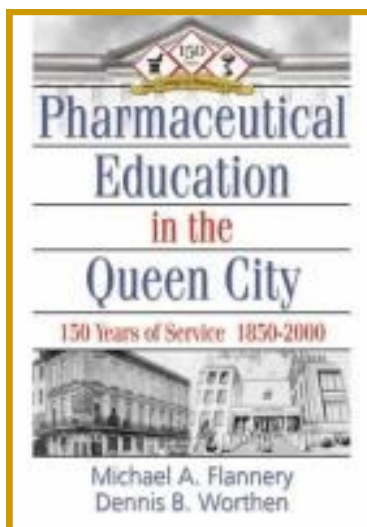
Cathy Taglieri
(Catherine.taglieri@mcphs.edu),
Secretary

NEWS: Digital Resources Announced

Pharmaceutical Education In the Queen City : 150 Years of Service, 1850-2000 —by Michael A. Flannery and Dennis B. Worthen was originally published in 2001. The book documented those who either attended or taught at three institutions from 1850 through 2000:

- ♦ Cincinnati College of Pharmacy,
- ♦ Queen City College of Pharmacy,
- ♦ University of Cincinnati College of Pharmacy

We are excited to announce that student and faculty lists are now available in the UC Digital Resource Commons (DRC).



Most notably, Dennis Worthen's level of dedication to both the history of pharmacy and to pharmacy education is certainly documented through this project. We are thankful for the opportunity to provide ready access to resources in this field to students and scholars alike.

<http://libapps.libraries.uc.edu/liblog/2016/02/rare-cincinnati-pharmacy-college-resources-now-available-in-ucs-digital-resource-commons/>

—*Veronica Buchanan, Archivist
Henry R. Winkler Center for the History of the Health Professions, University of Cincinnati Libraries*

German Museum Review

History in Heidelberg:

The German Pharmacy Museum

On a recent trip to Germany for the *International Pharmaceutical Federation (FIP) World Congress*, my wife and I had the chance to stop at the Deutsches Apotheken Museum, or German Pharmacy Museum.

The museum is housed inside the magnificent Heidelberg Castle and features three pharmacies from the 17th and 18th centuries, a thorough display of materia medica and enlightening reproductions of storage and laboratory areas. Most displays are in German and English and provide an excellent overview of past and present pharmacy practice in Germany. Heidelberg's beautiful Rhine River valley scenery makes it a popular tourist stop and the city is also home to a college of pharmacy. If you're ever in western Germany I strongly encourage you to visit the German Pharmacy Museum.

In the meantime, check out the website at <http://www.deutsches-apotheken-museum.de/englisch/index-en.php> and see some of the accompanying pictures my wife and I took at the museum.

—*Ben Urick, PharmD
UI Presidential Fellow and PhD
Student in Pharmaceutical Socioeconomics, University of Iowa
College of Pharmacy*



The Events Upon Which U.S. Pharmacy Schools Established Their Founding Dates

Background: For several years, the authors have been researching the founding, merger and/or closing dates of U.S. pharmacy schools. The intent of this research has been two-fold: (1) To determine the founding dates of all U.S. pharmacy schools; and (2) To compile the history of each school, and all schools, in regard to mergers, acquisitions, and closures, in chronological order. In the midst of that research, it became of interest what pharmacy schools were basing their founding dates upon, i.e., upon what historical event did each school base the date it considered its date of origin.

That curiosity resulted in the development of this tangential research study to determine if the historical events upon which founding dates were based showed any significant patterns or trends. Thus, the intent of this tangential research was three-fold.

Initially, the study would research the event associated with each individual school's established founding date. Next, after collection of that data, the authors would analyze whether certain founding events were common among different schools. Finally, review of the founding event data would be performed to deduce whether pharmacy schools' founding events demonstrated any trends or patterns over time.

Methods: To accomplish the needed data collection, the au-

thors decided that a survey instrument would probably be the most effective methodology. In preparation for the research, an online survey consisting of 11 questions was designed that covered several topics, including: the institution's current full name; the official founding date; the triggering event for establishment of the founding date; any prior merger, acquisition or closure; year of conversion to PharmD curriculum; and other demographic data (e.g., public versus private, and annual class size).

Of particular note, one question asked which of the following events led to the establishment of the founding date: (1) the School or College was legally formed or incorporated; (2) a predecessor School or College was founded; (3) the first dean of the School of College was hired; (4) the first full-time faculty member was appointed; (5) the first class(es) was (were) offered; (6) the date that students first attended classes; (7) the date the first class of students graduated; or (8) other (with explanation requested).

Email delivery of the online survey was selected as the method of delivery. Accordingly, an email was sent to all Deans of U.S. pharmacy schools, or Dean-suggested alternates, beginning January 2013. The email included a link to the online survey and instructions on how to complete the survey. Second and third

emails were sent every two weeks to any non-respondent schools. The goal of the survey was a response rate of approximately 75-80%. If any schools remained non-responsive after three successive email requests, the intent of the researchers would be to research independently regarding the school (s) using available public resources.

Via these email requests, Deans, or Dean-selected alternates, were informed of the voluntary nature of the study. At any point, if a participant wished to be excluded, they could withdraw by either not following the link to complete the online survey or contacting the researchers to be removed from future email requests. Again, if a school remained non-responsive or requested exclusion from the survey requests, the authors intended to research the school's information independently using available public resources. The design of the project was granted exempt status by the Western New England University Institutional Review Board.

Subsequent to the data collection, the survey results and any independent research would be analyzed. First, the founding date, as well for each U.S. pharmacy school. Second, the way in which each as the specific event upon which the founding date was adopted, would be determined school was created would be investigated; *(continued next column)*

concluding whether it was a new start, from a predecessor school, or the culmination of a merger, acquisition, or closure.

Finally, charting and analysis of the collected data would be done to document whether there were any significant trends regarding the founding events and the demographics of the institutions.

Results: The online survey and independent research was conducted from December 2012 through August 2013. One hundred and one (101) of the 128 U.S. pharmacy schools (existing at time of the survey) completed the survey; yielding a response rate of 78.9% to our online survey.

Based on this high survey response rate, the researchers decided to only use independent research to complete inadequate and/or to corroborate questionable survey responses. Of the 101 schools that responded, 50 were private institutions and 51 were public institutions, very close to the current 69 private – 66 public mix of pharmacy schools.¹

In addition, the ratio of small- (53.5%) to medium- (39.6%) to large-sized (6.9%) school respondents closely matched the actual mix of school class sizes among U.S. pharmacy schools in 2014: small (52.3%), medium (43.1%), and large (4.6%).²

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The Events Upon Which U.S. Pharmacy... (continued from page 4)

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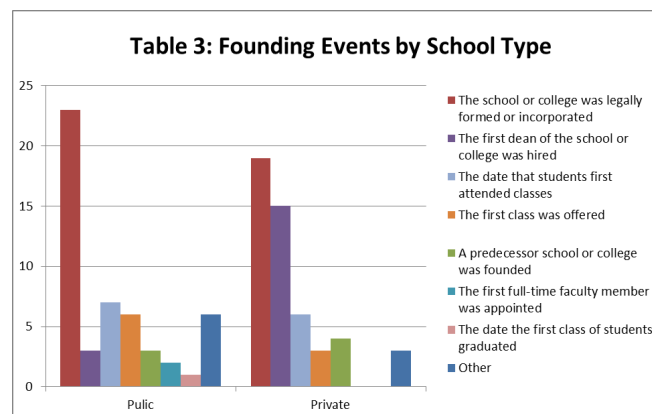
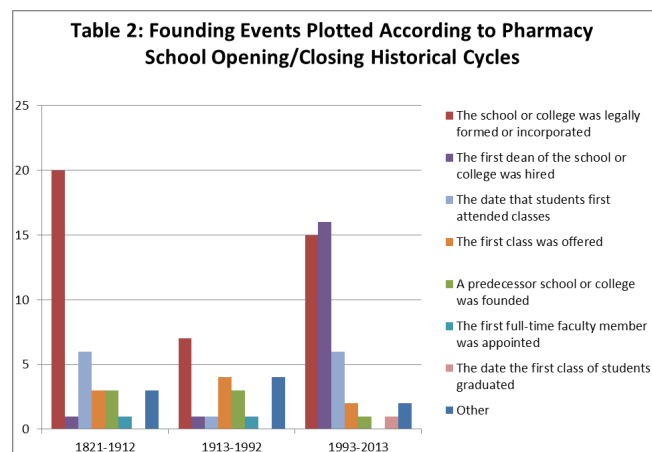
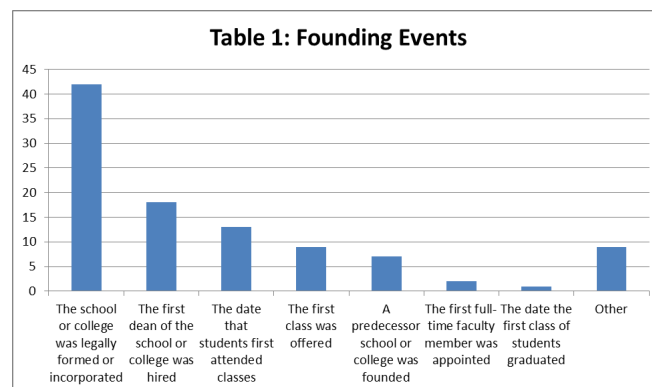
Review of the study results showed various patterns immediately (see Table 1). Overall, the most common historical event, cited by 41.6% of the respondents, as what their institution's founding date was based upon was: the date the school was legally formed or incorporated. The distant second and third founding events were the date the first dean was hired, reported by 17.8% of the respondents, and the date that students first attended classes, reported by 12.9% of respondents. Thus, the top three events upon which pharmacy schools based their founding date accounted for 72.3% of all respondent schools.

Based on the results from a prior study of the historical cycles of the openings and closings of U.S. pharmacy schools, three time periods were utilized that coincide with these previously identified historical cycles: 1821-1912, 1913-1992, and 1993-2013.³ By then placing the type of founding event within the respective period in which the respective school's founding date occurred, other patterns were noted (see Table 2).

Essentially, reviewing the three historical cycles, the pattern of founding events remained similar during the first two cycles, but dramatically changed during the third cycle (1993-2013). During the first two historical cycle periods, the

most common founding event (54% and 33.3%, respectively) was: the date the school was legally formed or incorporated. In addition, the second most common founding event did not change drastically during the first two historical periods: the date that students first attended classes during the 1821-1912 period, and the date that classes were first offered during the 1913-1992 period. During the 1993-2013 period the pattern clearly changed, with the date the first dean was hired moving into the first place position (37.2% of respondents), pushing the date the school was legally formed or incorporated into second place (34.9% of respondents).

When reviewing the founding event data in comparison to the type of school, a similar pattern change was noticed (see Table 3). Public schools' top founding events were the same as those noted during the first two historical cycles, i.e., the date the school was legally formed or incorporated was first, and was followed by the date that students first attended classes and the date that classes were first offered. In contrast, among private schools the date that the first dean was hired (at 30% of respondents) was a close second to the date the school was legally formed or incorporated (38% of respondents).



The final school demographic used to compare the founding event frequencies against was school size (see Table 4). Overall, school size did not have any effect on the most frequent founding event of: the date when the school was legally formed or incorporated. The major difference noted with

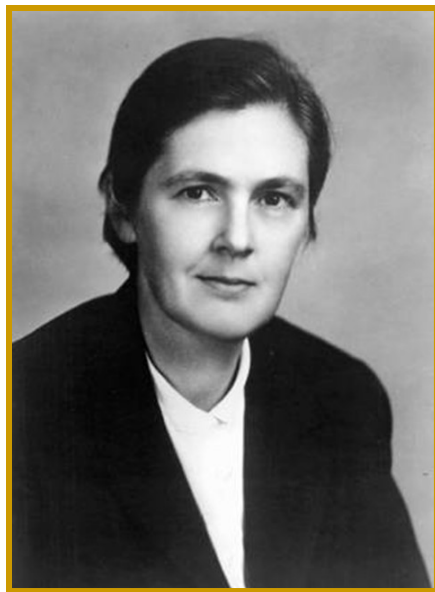
school size was which founding event was the second most common. For small schools (100 students or less/year) the second most common founding event was: the first dean of the school was hired.

(continued on page 13)

In Memoriam – Frances Oldham Kelsey

The heroine who prevented a public health disaster from reaching the US in the 1960's

passes away at the age of 101



Frances Oldham Kelsey

Photograph obtained from: https://www.nlm.nih.gov/changingthefaceofmedicine/physicians/biography_182.html

Most, if not all, pharmacists have learned about the thalidomide tragedy of the 1960's. Thalidomide, a medication used as a sedative and to treat morning sickness in pregnancy, caused severe birth defects in thousands of newborns, most notably phocomelia (seal limbs). However, a significant piece of this story is often omitted, — the countries where the tragedy took place. The overwhelming majority of newborns exposed to thalidomide were in Europe, and not in the United States. The reason the drug never made it to pharmacies in the U.S. is a result of the efforts of Frances Oldham Kelsey.

She was born Francis Oldham, in Cobble Hill, British Columbia in 1914. After graduating high school at the age of 15, Dr. Kelsey ultimately went on to earn a Bachelor of Science degree, and later, a Master's degree in Pharmacology at McGill University. To further her education, she attended the University of Chicago where

she would earn her Ph.D. in 1938. During her time at the University of Chicago, Dr. Kelsey researched the sulfanilamide tragedy of 1937 and worked towards the development of anti-malarial agents. While researching anti-malarial agents, she partnered with an instructor named F. Ellis Kelsey, and the two would later marry. A lifelong learner, she went on to medical school in 1946 at the University of Chicago, during which time she had two children. ² After medical school, Dr. Kelsey served as an editor for the American Medical Association, taught at the University of South Dakota, and practiced medicine as a general practitioner. ¹

In 1960, Dr. Frances Kelsey began employment at an understaffed Food and Drug Administration (FDA). ¹ Soon thereafter, she was tasked with the duty of reviewing an application for thalidomide. Dr. Kelsey noted several deficiencies in the application and would not approve the medication. Reports of peripheral neuritis appeared in the medical literature, causing Dr. Kelsey to question the medication's safety.

Additionally, Dr. Kelsey and her colleagues became interested in the effects of medications in pregnancy, data the manufacturer did not provide. Nevertheless, the manufacturer expected their application to be approved, since it was already marketed in Europe, and pressured Dr. Kelsey and the FDA into approving their drug. Then, in 1961, reports linking thalidomide to severe birth defects began surfacing around the world. The manufacturer of thalidomide in the United States suspended all clinical trials and eventually withdrew their application. ²

Dr. Kelsey's actions resulted in national attention, appearing on the cover

of The Washington Post and receiving the President's Award for Distinguished Federal Civilian Service from John F. Kennedy. ³ In 1962, Congress, passed the Kefauver-Harris Amendment to the 1938 Food, Drug and Cosmetic Act. The amendment strengthened the approval process for medications, requiring drugs to be both safe *and* effective *and* for manufacturers to report adverse drug reactions. ⁴

Dr. Kelsey continued to work with investigational drugs through the 1990's and officially retired from the FDA in 2005, at the age of 90. During her career of servitude to the public, Dr. Kelsey was the recipient of numerous awards and honorary degrees. She was inducted into the National Women's Hall of Fame, named a Virtual Mentor for the American Medical Association, and named to the Order of Canada. ^{1,3} Dr. Frances Kelsey passed away on August 7th, 2015... a true heroine.

—*Geoffrey Mospan, PharmD. BCPS, Assistant Professor of Pharmacy, and Rebecca Shelton, PharmD Candidate, Wingate University School of Pharmacy, Hendersonville, NC*

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- 1.U.S. Food and Drug Administration. *Frances Oldham Kelsey: Medical reviewer famous for averting a public health tragedy*. <http://www.fda.gov/AboutFDA/WhatWeDo/History/ucm345094.htm>. Accessed 11 December 2015.
2. Kelsey FO. *Autobiographical Reflections*. www.fda.gov/downloads/AboutFDA/WhatWeDo/History/OralHistories/SelectedOralHistoryTranscripts/UCM406132.pdf. Accessed 11 December 2015.
- 3.National Library of Medicine. Dr. Frances Kathleen Oldham Kelsey, Biography. https://www.nlm.nih.gov/changingthefaceofmedicine/physicians/biography_182.html. Accessed 11 December 2015.
4. Clarke P. 50 Years Ago: How an FDA reviewer saved lives and spurred legislation. <http://www.fda.gov/Drugs/NewsEvents/ucm320924.htm>. Accessed 11 December 2015

ANNOUNCEMENTS



Call for Submissions: Glenn Sonnedecker Prize

The American Institute of the History of Pharmacy is pleased to announce a call for submissions for the 2016 Glenn Sonnedecker Prize. This prize honors the contributions of Glenn Sonnedecker to the field of the history of pharmacy and aims to encourage research in subjects central to his work. The Sonnedecker Prize will be awarded for the best original article published in 2015 on the history of some facet of pharmacy practice or pharmacy education in the United States (including the Colonial period). Submissions from multiple authors will be accepted.

The Glenn Sonnedecker Prize consists of a monetary cash prize of \$1,000 and commemorative plaque. If an awarded article has multiple authors, the monetary award will be divided among the authors.

Eligibility: Articles published in English in peer-reviewed journals and books between January 2015 and December 2015 will be eligible for consideration. Award winners will demonstrate originality of scholarship and clear contribution to the study of the history of pharmacy.

Submission of articles: Submit a PDF copy of the published article by June 30, 2016 to Gregory J. Higby, Executive Director, American Institute of the History of Pharmacy (Higby@aihp.org). Please write "Sonnedecker Prize" in the subject line of your email. Self-nominations are welcome.



Do You know of Any More Unlisted Pharmacy Museums or Collections Out There?

As some of you may know, David Baker and Lauren Tesh are engaged in the production of *The Online Guidebook to North American Pharmacy Museums and Collections*. Should you be aware of one that does not appear in the current issue: *The Guide to Pharmacy Museums and Historical Collections in the United States and Canada* (available at <https://pharmacy.wisc.edu/sites/default/files/content/american-institute-history-pharmacy/historical-sources-pharmacy-faq/museumguide.pdf>), please inform them via an email sent to pharmacy.history@wne.edu.

International Congress: Mark Your Calendars!

The 43rd International Congress for the History of Pharmacy will take place in Warsaw, Poland, 12-15 September 2017. The Congress website (<http://43ichpwarsaw.pl/>) is presently under construction. More information will be forthcoming in the months ahead. Also, please take note that the 44th International Congress is planned for the Washington, DC, area in September 2019. Those interested in volunteering for the program or organizing committees of the 2019 Congress should contact Greg Higby at Higby@aihp.org. Information for both congresses will appear in the future at www.aihp.org.



AIHP's Historical Studies Committee Project

The Historical Studies Committee of the American Institute of the History of Pharmacy ("AIHP") researched how pharmacy schools and their respective pharmacy history faculty deliver that required content to their students, as well as whether any elective courses are offered. In addition, the Committee explored what those faculty believed might help them, if anything was perceived as needing, in educating pharmacy students regarding the history of their future profession. Hopefully, the results of this research will be the subject of a poster presentation at the 2016 AACP Annual Meeting.

The next step for the Committee, beyond publication of the research results, is two-fold: (1) to recommend to AIHP the minimum standards to meet the ACPE history of pharmacy education accreditation standard, and (2) to develop desired or needed history of pharmacy educational materials to assist history of pharmacy educators for both required and elective courses. If anyone has any comments or questions regarding the project, please feel free to contact either of the following SIG members (also members of the Committee): David Baker (dmbaker@wne.edu), or Gregory Higby (greg.higby@wisc.edu).



THE PHARMACIST WHO SWALLOWED STRYCHNINE

The early to mid-1800s was the golden age of “heroic” medicine. The theory at the time was to treat symptoms as aggressively as possible for immediate results. Bloodletting, purging, and catharsis were commonplace. Heroic treatments often caused more problems than they solved, and many antidotes were also poisons themselves. A universal and less toxic antidote was needed.

Enter Pierre-Fleurus Touéry:

The place is Paris, the year 1831. Touéry, a pharmacist from Montpellier, has been experimenting with the use of charcoal for the past two years. He has performed successful animal experiments and touted charcoal publicly as a cure-all for toxic ingestions. The French Academy of Medicine, unconvinced of Touéry’s claims, are demanding further research.

Touéry, frustrated at not being taken seriously, demonstrated the efficacy of his antidote by testing it on himself. After gathering a large audience, he swallowed 1 gram of the notorious neurotoxin strychnine – 10 times the lethal adult dose – followed by 15 grams of charcoal. The audience sat in amazement as Touéry went on to show no ill effects. This, it is said, was the beginning of activated charcoal as an antidote in humans.

Activated charcoal is used today as an adsorbent. The “activation” process greatly increases the surface area to approximately 500 m² per gram – giving each 50 g bottle on your pharmacy

shelf a carbon surface area of nearly 5 football fields. To be effective against poisoning, activated charcoal must be given soon after ingestion before drug absorption has taken place.

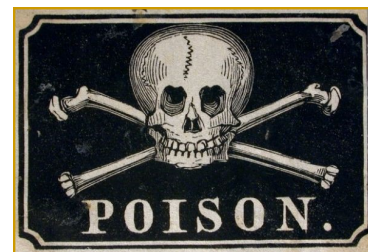
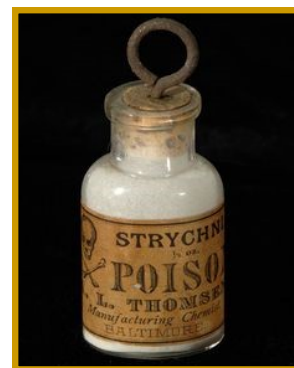
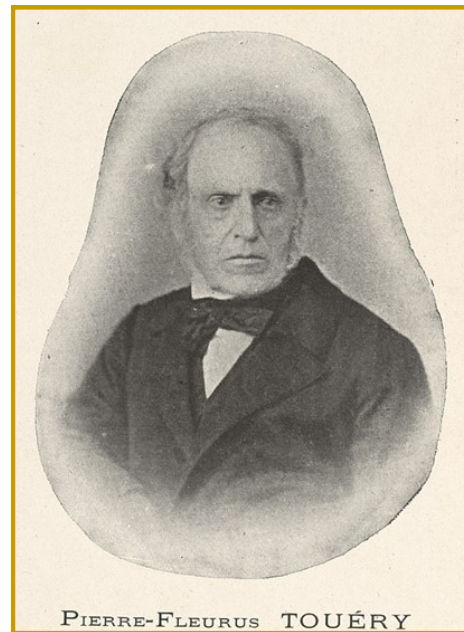
Charcoal is most effective against substances that weigh 100-1000 daltons and is contraindicated for ingestions of corrosives, alcohol, or petroleum products. Caution must be taken to avoid aspiration, so patients with altered mental status, seizures, or nausea and vomiting are often poor candidates. When in doubt, your local poison center is a great resource for advice regarding GI decontamination.

One thing is for sure. Testing activated charcoal (or any drug for that matter) on yourself is not recommended.

— *Dayne Laskey, PharmD*
University of Saint Joseph School of Pharmacy

Sources:

1. Altman LK. Who Goes First?, The Story of Self-experimentation in Medicine. Univ of California Press; 1987. p 96-97.
2. Buckingham J. Bitter Nemesis, The Intimate History of Strychnine. CRC Press; 2007. p 54.
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PHARMACY

Phi Delta Chi Fraternity History Revised

In February 2016, Phi Delta Chi Pharmacy Fraternity released its second edition of the text that chronicles its history. The 648-page text comprehensively reviews the 132-year history of America's first pharmacy fraternity, which now spans 99 collegiate chapters.

In describing the Fraternity's growth since 1883, considerable space is devoted to describing social transitions on college campuses across America, as they grappled with the Great Depression, World War II, the GI Bill, social turmoil in the 1960s, the advent of Title IX, then closing with the fraternity's modern focus on leader development.

The book starts with an executive summary, then proceeds to separate section covering each collegiate chapter, rosters and profiles of pharmacy leaders, reflections on social aspects of fraternity life, detailed facts and figures from the national and chapter levels, and a chronology of fraternity events. Leaders of the profession are profiled, including Prescott, Beal, Dunning, Kelly, Lyman, Spease, Bowles, Weaver, Johnson, Manasse, and many others. Statistical analysis of chapter and member growth is presented, consistent with the March 2016 review in AJPE on college growth over the same time frame.

—**John D. Grabenstein, RPh, PhD**
*Executive Director,
Global Health & Medical Affairs
Merck Vaccines*

Grabenstein JD, ed. *Phi Delta Chi: A Tradition of Leaders in Pharmacy*, 2nd edition Pinckney, MI, Dec 2015, 648 pages with 370 embedded images, plus > 1,600 images at web museum. To order, go to www.phideltachi.org.



Recounting the Birth of RHO PI PHI Fraternity

In November of 1918, the armistice was signed at Versailles, ending World War I. The armistice was a peace treaty which expressed a fervent hope that mankind could get along with each other in the spirit of brotherhood, kindness, and with due respect for the rights of each other.

In later years, that treaty of 1918 showed that it was only a piece of paper with meaningless words. In Boston, it also didn't take long to learn that the lessons which war and hopes of peace were supposed to teach us, were for naught. A few days after the armistice was signed in Europe, the fraternities at the College of Pharmacy in Boston signed another paper that was displayed for all to see. This notice announced that certain groups, because of their color or religion would be barred from joining any existing fraternities at the college.

College life at that time was confined to classes and study. Any social college activity was kept at a low level before 1918. This posted notice brought discrimination out into the open. Although there were earlier attempts before 1918 to do something about this discrimination, being we were just a small group of students, we were stymied in these efforts by a general *Paissez-faire* attitude among us — "Let's not do anything about it. If we don't make an issue of it, maybe it will blow over." — However, this time around, the posted notice served as the spark which united the group.

With Dean Theodore Bradley's approval, ten men and three women

FRATERNITY

formed Ram Bam Pharmaceutical Society. In 1919, the three women resigned as members, and the Society decided it would have greater success if it was changed to a fraternity.

Rho Pi Phi's thirteen founders and charter members were: Joseph Dunn, Samuel Greenberg, Robert Goodless, Samuel Nannis, Ralph Polian, Eli Rodman, Joseph Rosenberg, Max Stoller, Israel Stone, Louis Tankel, Isaac Weiser, Hyman Wolf and Irving Zolotow. These men had each felt the impact of segregation and agreed that their fraternity should be non-sectarian. The spirit, enthusiasm and comradery among these men continued throughout the years since.

If we can learn something from the examples set by our founders, especially from Isaac 'Bud' Weiser, and Max Stoller... In fact we find the reason for the continued existence of Rho Pi Phi since 1919. We find that they had great love for our fraternity, spared no energy to make our fraternity grow into greatness, worked diligently for our organization, sacrificing personal finances and even family life in order that you and I could become fraters and enjoy our fraternity life. Their spirit, love and energy has been transmitted to others who have joined our chapters all over the United States and Canada, to others who have now taken up the torch and become the guiding lights and leaders of our fraternity, working assiduously in the vineyards of **Rho Pi Phi**.

—**Robert Heyman, BS Pharm, University of Illinois, (1952)**

(Editor's note: Material for this contributed article was derived from information supplied by Fraters Maurice Goldsmith P.S.C., David Snider—Supreme Historian; Irving Stoller—Boston Alumni; "History of Rho Pi Phi Fraternity" a fraternity handbook written by Nathan Kansky, and articles written by I.I. Weiser and Max Stoller.)

Medicines of Native Americans and Explorers

2016 marks the 100th anniversary of the National Park Service in the United States. Pioneers like Merriweather Lewis and William Clark explored and cataloged some of the land and natural wonders that later became our national parks. What medicines and training did they take with them or encounter on their explorations?

A Bountiful Harvest: Stories from the Intersection of Native American and Western Medicine

Today, it's all too easy to look at the glistening glass of a hospital and think of medicine in terms of landmark trials or proprietary chemical structures. Just imagine the United States having benefited from medicine for only around 200 years! However, the reality is that North America was alive with medicine long before the first Europeans arrived; medicine that differs greatly from today's, but has contributed to knowledge of herbal medicine and holistic care.

Sweat: Spirit or Treatment?

Sweating seems to be far removed from medical treatment. Currently it is often regarded with suspicion as a sign of fever or just the malodorous result of exercise. At the time of the Lewis and Clark Expedition sweating was seen as a legitimate medical treatment that could help with an attack of rheumatism or malaise. The members of the party seemed eager to resort to it when their other methods failed. John Shields, a blacksmith from Kentucky, constructed an earthen hole, heated by fire, and covered by a tarp to sweat William Bratton, another blacksmith. They repeatedly plunged Bratton into cold water and returned him to this miniature sauna in the hopes of curing him. While not explicitly stated it is likely that Shields believed that sweating would help the body release an imbalance in the bodily humors. Surprisingly, the treatment seems to have been a total success and Bratton walked with little pain afterwards (Lewis).

Native Americans used treatments in a similar way, but also believed in a more spiritual rite of passage in the form of the sweat lodge. Sweat lodges were vaguely similar to the European sauna, but were a more strictly regimented place involving unique ceremonies, songs, and a desire to commune with nature. In these ceremonies different tribesmen were given positions such as Doorman, Fireman, or Water-Drummer (Ahnishinabeg 23). The desired outcome was to weaken the physical side, through a sustained sweating and fasting, which would allow the spiritual component of the body to become free and experience the life-giving sustenance that the world provides (Ahnishinabeg 12).

It is evident from the difference between Lewis and Clark and the sweat lodge ceremony that the distinction between their views of sweat as a medicine versus a spiritual enlightenment depended on the surrounding culture. While medicine seems mostly inflexible or solely rational, it is also subject to our world belief systems. When we don't pay attention to these beliefs it can result in some dangerous outcomes as evidenced by the deaths of three individuals in Sedona, Arizona in 2009 at a new age "sweat lodge" that operated unsafely (Dougherty).

Sweat lodges, like spas or saunas, expose people to physiologic stress, which can result in injury or death. These are major risks for those with any form of vascular disease (Livingston). The pundit that dangerously overcrowded his sweat lodge was later vitiated by local Native Americans for misappropriating their cultural heritage (Dougherty). While cultural exchange between Lewis and

Clark and Native Americans did happen, it was in a more respectful and bidirectional fashion as compared with this debacle.

Same Plant, Many Uses

Native American culture was fundamentally different from that of European settlers. Communal ownership and oneness, not ownership, with nature was regarded as the fabric of society. Given this deep respect for nature it is not surprising that much of their medicine revolved around using the revered plants surrounding them. Perhaps the most important difference in the Native American usage of medicinal plants was that they often treated patients in a homeopathic as opposed to allopathic manner (Moerman 15). That practice focuses on using small amounts of medicinal plants to induce the same symptoms the disease was creating. Sometimes their unusual mixture of the allopathic and homeopathic methods meant the same exact plant was used for a opposite purpose.

For Example, the Blackfoot Tribe encountered by Lewis and Clark used plants from the genus *Artemisia*, often commonly called wormwood, for stifling a cough, but the Tewa Tribe of the Southwest used this same genus as an expectorant for generating a hearty cough (Moerman 670). Interestingly, this phenomenon was not uncommon: The Iroquois used the cup-plant, *S. perfoliatum*, as an emetic, while other tribes used it for nausea caused by pregnancy (Moerman 17).

(continued on next page)

How is this possible? It's important to look at medical contradictions that have occurred within our own time such as the simultaneous use of insulin coma therapy to depress and electroshock therapy to excite in some schizophrenic patients in the 1950's. We often use drugs for unusual, even unexpected off-label uses. Not only does culture influence medical practice, our desire to share, personalize, and innovate can also result in bizarre outcomes. Certainly in the future, some will look back at our choices today and wonder similarly how we made such decisions.

—**Nathan Merrow, PharmD Candidate 2017, Catherine A. Taglieri, PharmD**
MCPHS University, School of Pharmacy, Boston

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The Medicines of the Lewis & Clark Expedition Online

About ten years ago, I was contacted by Joseph Mussulman, an engaging and enthusiastic fellow who headed a project to build a website about the Lewis and Clark Expedition. Today, anyone interested in this fascinating story of exploration can benefit from his comprehensive digital project available at www.lewis-clark.org.

My task was to describe the medicines that Meriwether Lewis had purchased in Philadelphia in 1803 and their possible use on the exploration. This part of the vast website can be accessed directly at <http://www.lewis-clark.org/channel/352>.

The *Discovering Lewis & Clark* website holds up well after a decade. And the section on the medicines, I believe, provides a nice glimpse into the state of practical pharmacy and therapeutics c. 1800. One needs to remember that these medicines were selected for the rigors Lewis expected to face on the frontier with their corps of young men, i.e., cuts, constipation, and the clap. Hence, remedies for the ailments of women or older people were not included. Students should be encouraged to read the section on Dr. Benjamin Rush, medical consultant to the expedition and founding father of the United States, in order to better understand therapeutic theories of the day.

— **Greg Higby, American Institute of History of Pharmacy, University of Wisconsin-Madison.**



TEACHING PEARLS

Incorporating Pharmacy History into Required Pharmacy Courses

Similar to other members of the Academy, I do not teach a stand-alone history of pharmacy course. However, I have a strong interest in keeping our profession's history alive among our students and inspiring an interest in pharmacy history in them. Below are examples of how I have incorporated mini historical lessons into the two required courses that I teach.

Pharmaceutical Calculations

In pharmaceutical calculations, I attempt to make assessments “real-life” by using pictures of stock bottles, written prescriptions, and actual recipes.

One recipe I have used on a homework set calls for a show globe colored liquid with the components made in parts. Although the primary intent is to assess a students' ability to perform parts calculations, I also ask students to describe what a show globe is and where one is located within our college. While this question is optional, a number of students research and answer the question. Even if students do not formally answer the question, I hope that the process at least sparks some intrigue.

In the next class period, I spend 5-10 minutes explaining the history of the show globe and its origins., which as an activity has stimulated student interest in pharmacy history and antique collecting. In fact, several students emailed me questions about pharmacy antiques and even send images via email of pharmacy items they have seen at antique stores and auctions. Recently, I donated an antique pharmacy balance to the College's annual faculty auction for students to bid on as a fundraiser and it was one of the best selling items during the entire event!

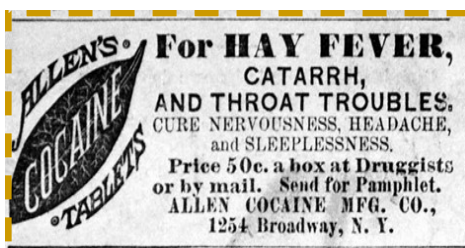
Pharmacy Jurisprudence

By its subject matter, pharmacy jurisprudence lends itself well to history of pharmacy discussions. By learning about the Pure Food and Drug Act of 1906 and the creation of the Federal Food, Drug, and

Cosmetic Act (FDCA) along with its subsequent amendments, students get a glimpse of how pharmacy was practiced during each time period. To reinforce what each of these laws regulated, I provide a homework set which shows previous drug advertisements. I then ask the students, based upon the advertisements, to determine if they were likely printed prior to the Pure Food and Drug Act of 1906, prior to the FDCA (1938) but after the Pure Food and Drug Act of 1906, or after the FDCA. An example advertisement is below. This application of actual advertisements stimulates vivid conversation.

I am interested in learning how others incorporate historical mini-lessons into their courses. Past editions of the newsletter have featured unique methods and I am sure there are many more to share. Please consider writing a brief description of your unique activities to share on the SIG's listserv (hist@lists.aacp.org) or for inclusion in the next edition of the newsletter.

—**Michael Hegener, PharmD, BCACP, University of Cincinnati**



What is it? Another “Idea” for Incorporating History of Pharmacy...

Connecting the past to the present and encouraging students to think “why” is the main goal of the “What is this?” activity in my *Introduction to Practice Management* course. The objectives of the course are to introduce students to the concepts of pharmaceutical care, professionalism and the role of the pharmacist in a variety of settings. To echo Greg Higby's comment to ACPE at the AACP 2014 Annual Meeting, “a profession without history is an occupation with pretenses” —we bring in historical

facts about evolution of the profession to help connect students to current practice. In this activity, I show my class the picture



to the left and ask them to answer: What is it? Generally, I will have a few students offer an idea and someone will come up with the correct response that it is a long spindle with filled prescriptions filed and stored on it. I then go on to ask if this is the current method of storing prescriptions. The entire class

generally responds; no it is an “old” way of storing prescriptions. I agree and let them know that this method was popular in the early 20th century. I then ask them to tell me why prescriptions are no longer stored in this manner. I generally have to prompt them at this part and suggest thinking in terms of clinical, legal and reimbursement issues that make this method impractical to store prescriptions in the current time. After some discussing and prompting, the class learns that when the spindle method of storing prescriptions was commonplace; most prescriptions were for acute issues and thus not refilled, there were many fewer federal and state laws governing medications and patients most commonly paid for the medication with cash or by bartering other goods. Currently, most prescriptions filled are for chronic medical conditions, most states have complex legal rules regarding dispensing medications and most prescriptions are paid for by third party companies that conduct audits making. This exercise ties in several influences on current pharmacy practice and attempt to engage students in critical thinking and problem solving. Additionally it demonstrates to young pharmacy students that pharmacy is an exacting science and activities and practices have a reason behind them.

—**Catherine A. Taglieri, PharmD, MCPHS University, School of Pharmacy**

The Events Upon Which U.S. Pharmacy... (continued from page 5)

In contrast, for medium- (101-250 students/year) and large-sized (251 or more students/year) schools, the second most common founding event was: the date that students first attended classes.

Discussion: The establishment of U.S. pharmacy schools' founding dates remained relatively constant over the first 170 years, with nearly half of all schools, regardless of size or type, basing their founding date on when the school was legally formed or incorporated. The founding event paradigm has changed during the most recent surge in the creation of pharmacy schools. Since 1993, the new paradigm is for U.S. pharmacy schools, particularly
(continued next column...)

those that are private institutions or have small annual enrollments, to use the date when the first dean was hired as the basis for their founding date. Further study of this changing paradigm may be warranted to determine the cause of the shift. Whether this change is of concern to the profession or academia could be one area of future study. Another area of study could be whether changes within the profession, in the formation of U.S. pharmacy schools, in the recording of U.S. pharmacy history, or in North American academia are the cause or causes of the shift. Further review may also prove beneficial to new schools in establishing founding dates that
(continued next column...)

(continued)

...may be more consistent with the past history of the profession.

— **David M. Baker, BS PharmD, MBA, JD; and Uyen Nguyen, PharmD candidate 2016, Western New England University College of Pharmacy.**



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"The history of pharmacy... is a curious and interesting study, even to the non-professional inquirer..."

'The records of the past are full of teaching to those who consult them earnestly.'

— William Procter, Jr

"Father of American Pharmacy"

(quoted from AIHP website at: <http://pharmacy.wisc.edu/aihp/>)



Pharmacy Chronicles



HISTORY OF PHARMACY SIG NEWSLETTER

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**"THE HISTORY OF PHARMACY LIVES
HERE..."**

**...THE FUTURE OF PHARMACY BEGINS
HERE."**

—UNIVERSITY OF KANSAS, AT LAWRENCE, SCHOOL OF
PHARMACY MUSEUM

About the History of Pharmacy SIG

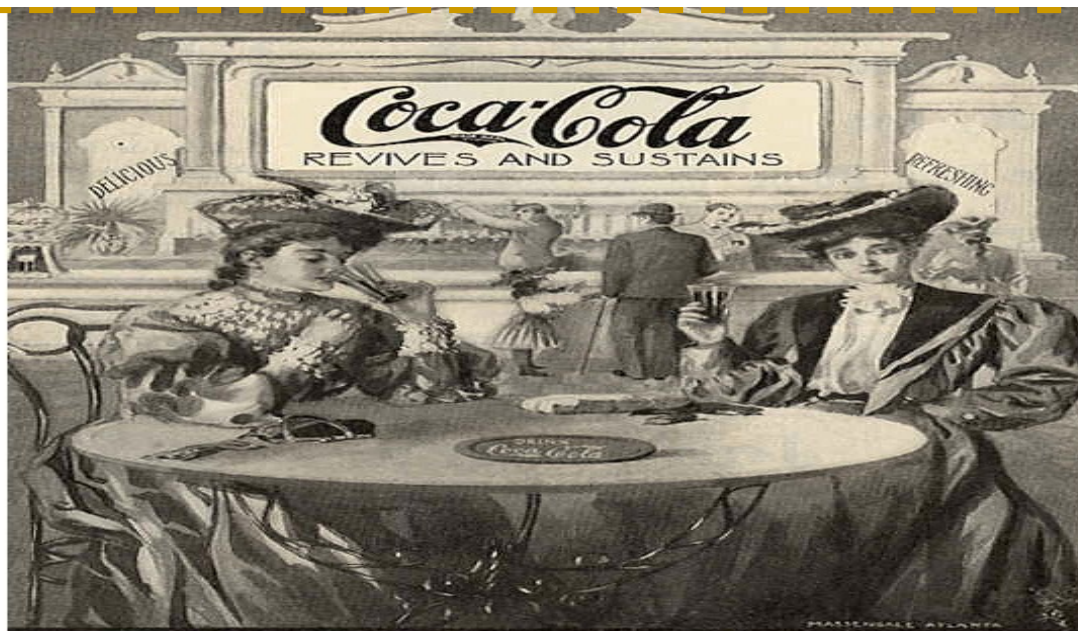
The upcoming academic year (2016 – 2017) marks the ninth year since the History of Pharmacy Special Interest Group (SIG) was formalized as an AACP SIG.

Founded in 2008, the History of Pharmacy SIG began with Bob Buerki and Greg Higby, as Chair and Vice-Chair, respectively, with a stated objective to provide meaningful programming related to the history of pharmacy.

As an open academic forum, the SIG strives to facilitate the exchange of ideas and innovation among pharmacy faculty across disciplines; to serve broadly as an accurate information resource for teaching, learning, and scholarship pertaining to the evolution and history of the pharmacy profession; to develop and maintain historical collections of artifacts and school or college museums; and to ensure the lessons, the message, and the legacy of the pharmacy profession is preserved to educate future generations of pharmacy students.

The SIG's mission rests on the premise that the history and legacy of the pharmacy profession will always be relevant to all pharmacy practice areas, including current and future scopes of practice. The History of Pharmacy SIG is relevant to you too! Join the History of Pharmacy SIG!!

Comical Anecdotes in Pharmacy History



R Take one glass of Coca Cola
when weary with shopping
It imparts energy and vigor

An Atlanta pharmacist John Pemberton developed Coca Cola® in 1885