

HISTORY OF PHARMACY SIG NEWSLETTER

Pharmacy Chronicles: Past, Present, and Future

WELCOME MESSAGE FROM THE CHAIR, HISTORY OF PHARMACY SPECIAL INTEREST GROUP

Our Heroes “Avengers” in Pharmacy

Recently I have been reading the series of articles published in the *Journal of the American Pharmacists Association (JAPhA)* on the heroes in pharmacy. The on-line Merriam-Webster Dictionary provides many definitions of *hero*, to include “a mythological or legendary figure often of divine descent endowed with great strength or ability”.¹ As a Marvel comics fan, the mighty *Thor* easily fits this description of a hero. Another definition describes a hero as “a person admired for their achievements and noble qualities”.¹ While *Iron Man’s* ultimate sacrifice in the *Avengers End-Game* movie is fitting, the heroes of pharmacy are a better more relevant example for us. Individuals like Donald C. Brodie, Paul

F. Parker, William Proctor, Jr., Gloria Niemeyer Francke, Joseph P. Remington, and Harvey A.K. Whitney are just a small sample of the pharmacy heroes who made significant note-worthy contributions to the practice of pharmacy so nicely depicted in the JAPhA series. Their efforts came from a desire to strengthen the profession and advance pharmacists’ ability to take care of those who look to them for care. For us these are our *Captain American Pharmacists*.

One of the criteria for inclusion in the heroes of pharmacy series was the individuals had to be deceased. But what of the heroes who are still with us today, practicing and continuing to advance the pharmacy profession. The likes of Bill Zellmer, Joseph DiPiro, Lucinda

Maine, Paul Abramowitz, and Greg Higby. We know of the contributions each have made to our profession and those they have influenced (myself included). Like the heroes of the past, much will be written about these heroes’ achievements for future pharmacists to read and learn about. They are the pharmacy *Avengers*.

In January the SIG sponsored webinar titled *From Desegregation to Diversity & Inclusion* many of us heard William Wicker, Mona B. Reddick, and James E. Barnes in their own recorded voices talk about the challenges they had in becoming and being early black students at the Univ. of North Carolina School of Pharmacy. Their achievements and noble qualities paved the way for increased diversity and inclusion for people of color to become pharmacists. They too are our heroes of pharmacy. Many thanks to Ben Urick, Christian Brown, and Greg Bond for their research and providing us this presentation.

The heroes of pharmacy whether deceased or currently alive are those whose names we widely recognize. Although for each of us

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Meet the Editors

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Thank you ...

The Editors would like to thank the volunteers who performed the peer reviews and editing for this issue.

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Paul Jungnickel
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Message from the Editor

Welcome

We are pleased to present the 14th issue of the History of Pharmacy SIG Newsletter *Pharmacy Chronicles: Past, Present, and Future*. Thank you to those who have contributed articles or provided peer reviews over the past several years. You have made this newsletter possible.

We do want to let you know of a change in Editorship of the newsletter. There is a saying that all

good things must come to an end and at this point, it is time for me to hang up my editorial hat and allow for new blood! This will be the last edition with me as Editor. I want to personally thank my co-Editor, Bernie who has been outstanding to work with. I have truly enjoyed working on this newsletter taking it from an idea in 2014 to the successful biannual peer reviewed publication it has become.

Please consider volunteering to be a co-editor. I am happy to help with the transition! As always; to volunteer, contribute as author or peer reviewer or if you just have a question, please feel free to contact either Cathy Taglieri or Bernie Olin. We are always happy to hear from you.

—*Cathy Taglieri, PharmD.,
Retired MCPHS—Boston*



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SIG OFFICERS

ANNOUNCEMENTS

WELCOME MESSAGE,

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there are heroes whose names are not so well known. They are men and women who have had a personal connection with each of us. They may have been a parent, professor, preceptor, manager, local leader who we admire for their own professional achievements and noble qualities. For me it includes names such as Don Schneider, Ernie Hintz, Ken Maertens, Rob Mains, and Sue Bruce. These are my personal pharmacy heroes who influenced my development- the *Guardians* of my *Galaxy*. Who are your guardians?

In closing I encourage each of us to consider how we can best portray to students the heroes of pharmacy and the contributions each has made to practice and the profession. Consider the transformation of pharmacy from the early colonial apothecary being a merchant, tradesman, or dispenser of medicine to today's pharmacist as a medication expert, clinician, or health care provider. This evolution should guide us to the quest of highlighting to others the achievements and notable qualities of our pharmacy heroes.

*Sincerely,
Scott Wisneski, SIG Chair*

References:

1. hero. *Merriam-Webster.com*. Retrieved February 5, 2023, from <https://www.merriam-webster.com/dictionary/hero>

RECOGNIZE YOUR STUDENTS FOR THEIR ACTIVITIES RELATING TO THE HISTORY OF PHARMACY!

The American Institute of the History of Pharmacy offers certificates to students to recognize their achievements in the area of History of Pharmacy. Nominate deserving students at the link below. The certificates could be sent directly to the students or to the schools for presentation at an awards ceremony.

Link: [#AIHP/ Student recognition certificate](#)

WE ARE LOOKING FOR YOUR HELP TO IDENTIFY PHARMACY STUDENTS OR PHARMACISTS WHO DIED ON ACTIVE DUTY DURING WWII...

The background. In 1999 Dennis Worthen started working on the history of pharmacy in WWII. He also started building a list of names of those who served during the war. There had never been an official census. To date, he has almost 12,000 names of those who served and/or entered pharmacy school post-war on the GI Bill. Part of this name gathering included developing a list of names of those who died on active duty. Part of the process of collecting included the scanning of all of the national, state, and regional journals as well as reaching out to each of the colleges that had pharmacy programs at that time. The responses were sketchy, due more to the passage of time than to the lack of interest.

Believing that he had a complete list, he compiled 165 names, their backgrounds, service, and death data. John Grabenstein helped format the material for an Amazon publication. It is there now (We Remember them: Pharmacy's Fallen) as hard copy and Kindle. Dennis' goal was to make the information public, not to sell copies. John then worked with AIHP to have the document openly available to all without charge. <https://aihp.org/wp-content/uploads/2022/11/Worthen-Pharmacy-Fallen-2022-1026-jdg-002.pdf>

Once the information was out there, several people have contacted Dennis with information on men that were missed. Now the total is 171 pharmacists/students who died on active duty during WWII. But, are there others who are still to be identified? **This is where you come in.**

Could you check the archives of your colleges to see if other names might be discovered? Please check the link to the current version at AIHP for them to see the names already published. If you learn of any other names, please forward the information to Dennis Worthen at: dbworthen36@gmail.com. He hopes to have an updated version in early 2024.

Thank you so much for helping to identify and honor those that died during WWII!



AMERICAN INSTITUTE OF THE HISTORY OF PHARMACY UPDATE

It has been a busy winter and spring at the American Institute of the History of Pharmacy. Here is a brief update on our work and activities.

AIHP Accepting Nominations for the George Urdang Medal: AIHP is currently accepting nominations for the 2023 [George Urdang Medal](#). AIHP awards the Urdang Medal biennially to recognize the lifetime achievements of a person who has made important scholarly contributions to the field of the history of pharmacy and pharmaceuticals. A panel of historians will evaluate nominations on the basis of the nature and significance of the nominee's scholarly contributions to the field of the history of pharmacy and pharmaceuticals, and the span of time over which those contributions were made. The deadline for receipt of nominations is June 1, 2023. [Click here](#) for more information.

AIHP Awards \$2,000 PhD Research Support Grant: AIHP has awarded a \$2,000 PhD Research Support Grant to Maggie Mang, a doctoral candidate in the Science and Technology Studies program at Rensselaer Polytechnic Institute. The grant will support Ms. Mang's research for her dissertation, currently titled "Between Farm and Pharma: Agricultural Experimental Labs and Histories of Animal Drugs." The [AIHP PhD Research Support Grant program](#) is designed to provide financial support for doctoral students pursuing academic research related to the broadly defined field of the history of pharmacy and pharmaceuticals. The program offers grants up to \$2,000 to cover research expenses not normally covered by the student's university. [Click here](#) for more information about Ms. Mang's dissertation research.

New Appointment to AIHP's Board of Directors: AIHP's Board of Directors in January appointed Jeffrey L. Sturchio, PhD, to a three-year term on the Board. Dr.

Sturchio is an accomplished historian of the history of medicine and science and an experienced executive in the healthcare, pharmaceutical, and nonprofit sectors. He has been a member of AIHP since 1989. AIHP's members elect most of the directors on the Institute's Board, but the organization's bylaws allow for the appointment of up to three directors "who have expertise that will help the Institute fulfill its objectives." Dr. Sturchio succeeds Gary W. Kadlec, who retired from the Board in December. [Click here](#) for more information about Dr. Sturchio's appointment.

History of Pharmacy SIG Newsletter Historical Articles Being Featured in e-Scripts: AIHP has started the practice of featuring in each issue of its quarterly newsletter, *e-Scripts*, an historical article previously published in the *History of Pharmacy SIG Newsletter*. Republication will allow the Institute to highlight to a broader audience the excellent pharmacy history articles featured in the SIG's newsletter. Click [here](#) and [here](#) to see the articles featured in the past two issues of *e-Scripts*.

AIHP to Announce Leadership Changes Shortly: As reported in the last issue of this newsletter, AIHP Executive Director Dennis Birke has announced his intention to retire later this year. For the past several months, AIHP's Board of Directors has been working on a leadership plan for the future. The Board expects to announce these plans within the next month. Stay tuned!



MASSACHUSETTS COLLEGE OF PHARMACY AND HEALTH SCIENCES CELEBRATES BICENTENNIAL

BY ROBERT DICENZO



MASSACHUSETTS
COLLEGE of PHARMACY
and HEALTH SCIENCES

The founders of the Massachusetts College of Pharmacy were apothecaries who dreamed of a better future for patients. Concerned about the quality of medicines being dispensed to the public, they gathered at the Marlborough Hotel in Boston in 1823 to discuss and address a pressing problem. At the time, there was little industry oversight.

Fueled by a deep commitment to professional ethics, they unanimously agreed to form an association of apothecaries to regulate the education of apprentices, encourage the use of superior quality drugs, and improve and advance the profession. After several meetings that December, the Constitution of the Massachusetts College of Pharmacy was adopted, and Ephraim Eliot, MD, was elected president. From these early beginnings, Massachusetts College of Pharmacy became the nation's second school of pharmacy and the oldest institution of higher education in Boston.

Throughout the 19th century, Massachusetts College of Pharmacy worked to systematize and standardize the practice of pharmacy. By embracing the role of change agents willing to challenge norms to shape a

better future, our founders created a blueprint for success.

As the 20th century dawned, research and advances – such as the discovery of modern antibiotics – began to set the stage for a major disruption in healthcare. Scientists started to unravel the mysteries of the body, and outdated ideas about disease were replaced by a better understanding of how people could be treated. The more scientists learned, the more knowledge the College was able to pass on to students.

The pace of innovation increased exponentially in the second half of the century, beginning with key breakthroughs such as the discovery of DNA and the first organ transplant in the 1950s. As a result, healthcare grew increasingly complex and a wide range of new specialties

emerged, creating a need for more training and collaboration.

In response, the College embraced sustainable expansion and diversification of people, programs, and opportunities within the health- and life-sciences fields. In 1979, the name of our institution was changed to Massachusetts College of Pharmacy and Allied Health Sciences, and we were awarded additional degree-granting authority. The shape of things to come took on a new level of meaning when our flagship campus in Boston became residential in the mid-1990s.

Inspired by former President Charles Monahan's mantra, "You have to grow," the University's expansion accelerated, coinciding with another name change to Massachusetts College of Pharmacy and Health Sciences (MCPHS) in 1999. A period of breathtaking growth followed, transforming MCPHS into one of the most comprehensive independent health- and life-sciences universities in the world.

As we added programs in fields ranging from dental hygiene to optometry to acupuncture, we were also able to create unique interprofessional practice



*Students work in a microbiology lab at
Massachusetts College of Pharmacy in 1948*

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THE PHARMACIST

BY KENNETH A. SKAU

As one of the oldest professions, pharmacy has always been associated with learned individuals. This learning involves not just pharmacy-related knowledge, but a broader knowledge of scientific and non-scientific disciplines. In our modern curricula, the 6 or more years of higher education required of pharmacists includes, not only instruction in the pharmaceutical sciences, but education in humanities and social sciences. Amongst these disciplines can be an appreciation of the visual arts. Pharmacies and pharmacists have often been the subject of paintings. One example is the painting variously titled *The Pharmacist*, *The Apothecary*, and *The Apothecary Shop*, painted by Pietro Longhi in 1752.

Longhi was from Venice and painted many scenes of everyday life in that city. In addition to the aesthetic aspects, this picture is of important historical value. Cameras and photography had not been invented in the mid-18th century, so this picture gives us a view of what an apothecary shop was like at that time. This picture shows the pharmacist attempting to treat a somewhat reluctant patient. The shop has shelves containing porcelain jars of drugs, glass beakers with colored solutions, and other glass preparatory containers. The plant on the floor appears to be an aloe, which was, and still is, an important plant for treating skin conditions. The young assistant at the lower left is stoking a fire, probably used in the extraction and preparation of medicinals from



plants and minerals. In Italy, pharmacists and physicians belonged to the same guild, which promoted cooperation amongst these healers. The individual at the far right may have been the physician who prescribed the medicinal treatment. The original painting is in the Galleria dell'Accademia, Venice.

—*Kenneth A. Skau, PhD.,*

*Emeriti Professor of Pharmacology
James L. Winkle College of Pharmacy
University of Cincinnati*



MCPHS Celebrates Bicentennial...

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and education (IPE) experiences for students. Team-based care was becoming industry best practice, and we were on the forefront of preparing healthcare professionals to thrive in a collaborative environment.

MCPHS has completed the transformation from a regional pharmacy college into a nationally ranked, world-class university with three campuses (in Boston, Worcester, and Manchester, NH), a robust online portfolio, and more than 100 degree and certificate programs in the health and life sciences. Our online offerings expand our reach, bringing virtual training to individuals living around the country and the world.

We recently launched a Leadership in Pharmacy Education (LiPhE) Institute to help School of Pharmacy

students in Boston and Worcester/Manchester develop their professional identity and increase their awareness of the traditional and nontraditional pharmacy career paths available to them.

Our Bicentennial season gives us a chance to reflect on our collective achievements as we look to the future. We are planning a number of festive events for Community members throughout the year, including an all class, all school Reunion and Bicentennial Celebration in October at the Fairmont Copley Hotel in Boston.

—*Robert DiCenzo, PharmD.,
BCPS, FCCP, FAPhA,
Dean, MCPHS University,
School of Pharmacy – Boston*

BOOK REVIEW:

DOCTORS AND DISTILLERS: THE REMARKABLE MEDICINAL HISTORY OF BEER, WINE, SPIRITS, AND COCKTAILS

From tree bark for treating malaria, to rum cocktails for scurvy, “Doctors and Distillers” reviews the long medicinal history of alcohol (and other compounds) in a fun and interesting way. This book contains a thorough description of the history of alcohol, tonics, herbs, and plants used as medicine. The author describes the origins of various alcoholic beverages, as well as how they have been used to treat diseases throughout human history, and explains which cocktails originated from blending medicinal herbs and plants with alcohol.

The beginning chapters are each a discussion on specific alcohols and liqueurs such as chartreuse, beer, or wine. Alcoholic beverages were

often the drink of choice because water in ancient (and not-so-ancient) times was often contaminated, whereas alcohol could kill microorganisms, and was therefore safer. Throughout time, alcoholic drinks have been used to treat conditions ranging from worms or malaria to the plague. Learn how wine was used as a dewormer, and tree bark was used to treat malaria. “Fever Tree” is the term used for cinchona trees of Peru, of which the bark was used to treat malaria since it contains quinine. And don’t forget the initial drive through alcohol dispensers, the “wine windows”, of Italy which opened during the plague of the 1600s and were repurposed during the beginning of the COVID-19 pandemic.

If you’re also interested in the history of opium and cocaine as medicine, you’ll enjoy some of the later chapters in this book that go into detail about the creation of Coca-Cola, and cough syrups made with opium that were recommended not only for adults, but children and babies. In addition, if you’re looking for a review of the Pure Food and Drug Act of 1906, this is also your book. Some of the later chapters discuss

the events leading to the PFDA, including a description of pure vs adulterated whiskeys. I recommend this book for anyone who enjoys the history of medicine and a witty viewpoint. I listened to this as an audiobook and really enjoyed the narrator’s reading style. She really exemplified the tongue-and-cheekiness of the writing. I wouldn’t recommend the audiobook, however, if you are interested in the many recipes for cocktails that the author describes. They would be better understood with the written version.

—Reviewed by: *Madeline King, PharmD., Assistant Professor Cooper Medical School at Rowan University*

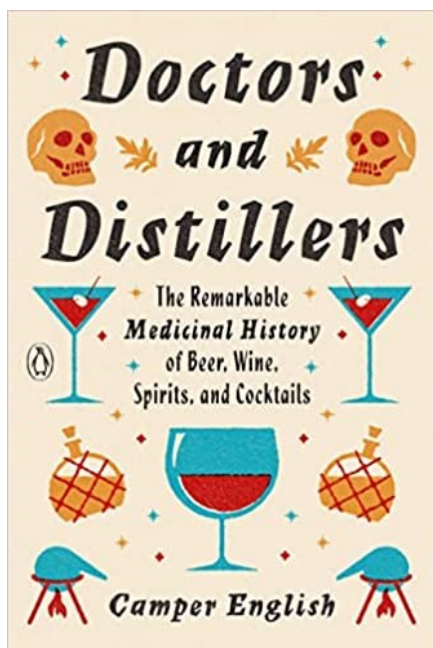
Title: Doctors and Distillers: The remarkable medicinal history of beer, wine, spirits, and cocktails

Author: Camper English

ISBN: 9780143134923, 9780593557907

Publication Year: 2022

Format: paperback, ebook, and audiobook

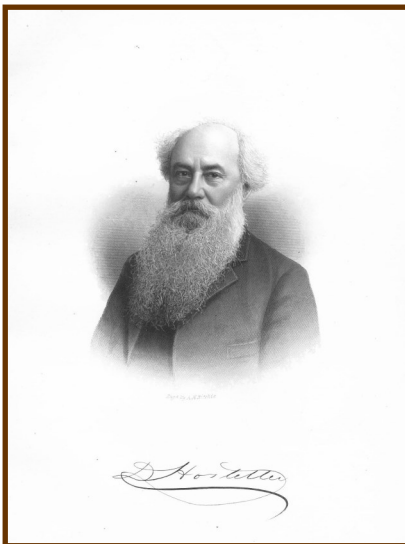


ARTICLE REVIEW:

“DR” DAVID HOSTETTER: PITTSBURGH’S TITAN OF THE PATENT MEDICINE INDUSTRY

I was asked to write a short book review style summary of an article that I wrote for the *Western Pennsylvania History Magazine* about David Hostetter and his celebrated stomach bitters. This article is the most comprehensive review of David Hostetter and his bitters company. The article has many photographs, and spends a good deal of time discussing the bitters product, its changes, and labeling.

David Hostetter was driven to be financially successful. He left his family farm near Lancaster Pennsylvania to enter the dry goods business at a young age. When gold was dis-



covered in California, he left for San Francisco by boat to Panama, then crossed the isthmus on burro, foot, and canoe, and then took a Pacific steamer ship to California. During his tumultuous time in California, he was inspired to create a patent medicine as he saw the tremendous interest in such products at the time. He moved back to Pennsylvania and settled in Pittsburgh where he eventually created a stomach bitters product that he attributed to his physician father’s recipe. The article describes many of the major landmarks and controversies in the Hostetter’s Bitter’s century of existence. Hostetter’s Bitters enjoyed worldwide distribution thanks to masterful marketing, which included fake newspaper testimonials and a yearly almanac.

Hostetter became one of the richest men in the United States. Much of his wealth came from his shrewd business acumen and diversification into other businesses, which included banking, natural gas, oil, and railroads. His leadership in these industries made him a very important man in Pittsburgh, which was undergoing an industrial boom at the time. His heirs enjoyed privilege and wealth

long after the product left the shelves.

Copies of the article can be ordered through the Heinz History Museum website (<https://www.heinzhistorycenter.org/research/publications/>)

—Reviewed by: *Douglas Slain, Pharm.D., BCPS.*
Professor and Chairman of Clinical Pharmacy, West Virginia University School of Pharmacy

Title: “Dr.” David Hostetter: Pittsburgh’s titan of the patent medicine industry

Author: Douglas Slain, Pharm.D.

Publication Year: 2022

Format: Magazine article – in *Western Pennsylvania History Magazine* (Summer 2022)



PHARMACY THROUGH THE LENS OF HOLLYWOOD VI: “THAT ‘70S PHARMACY - MODERN PHARMACY”

By David M. Baker and Jean
Emmanuel Durace



The student intern consulting the qualified pharmacist regarding a patient prescription in a community pharmacy. In the background are shelves with mass-manufactured medications in various forms and packaging. Adjacent to the medication are shelves with prescription paper files— typical of the 1970s.¹

The sixth in our leading-role pharmacist character movie articles is quite different from the prior films we have described, since “That ‘70s Pharmacy - Modern Pharmacy” is a profession-promotional film or documentary.² This change in what is reviewed occurred as no other 1970s movie could be found that had a pharmacist character in the leading role, a clear reflection of “Hollywood’s” view, or neglect, of pharmacists at that time.

“That ‘70s Pharmacy - Modern Pharmacy” depicts the specialized training for pharmacists, and the role of the pharmacist in medicine, albeit in 1970s Canada. Through dramatization and narration, the functions and importance of pharmacists are demonstrated, debunking assumptions and long

-held beliefs concerning their role in disease treatment. In addition, the evolutionary shift of a pharmacist’s role from being reactive to proactive is shown, not only in the treatment, but also in the finding of cures for many diseases. The movie strives to prove that pharmacy is more than just running a store and counting pills; pharmacists provide “the means for us to get well,” highlighting their importance in the provision of health care.²

Released: 1974

Playing Time: 27 minutes, 29 seconds

Availability: Available for free viewing on various online streaming services, e.g., YouTube.

Production Company: Access TV North Production

Producer/Director: Richard Ewen

Narrator: Garry Gaudet

Writer: D. F. Biggs, Ph.D

Music composed and performed by: Moe Marshall

Cinematography: Doug Cole

Sound recordist: Randy Tomuik

Editor: David Banigan

Production assistants: Rick Chosholm, Pati Olson, Elaine Dronyk

Graphics: Gary Rosychukt

Contributors

The University of Alberta Faculty of Pharmacy and Pharmaceutical Sciences

The Edmonton General Hospital

The University of Alberta Hospital

The Royal Canadian Mounted Police

Harts Drug Store Ltd.

Lynnwood Drugs

The Alberta Pharmaceutical Association

The Edmonton Society of Pharmacists²

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ZIRL A. PALMER: PHARMACIST AND ADVOCATE IN THE AFRICAN AMERICAN COMMUNITY OF LEXINGTON, KENTUCKY

BY ERIC LEE WELCH

“Well, the only thing I can say, Labor Day, prior to the bombing, there was a shootout in Berea. This is what the FBI told me. I don’t know. Big man of the Klan in Lexington was killed there, so supposedly the Klan said, ‘We’re going to kill the biggest Black guy in Lexington.’”¹

The 1968 shootout was a 10-minute gun battle on the streets of Berea, KY following a rally of the anti-Catholic, anti-Semitic, anti-Black National States Rights Party that resulted in the death of two, wounded at least 5 more, and resulted in charges against 14 men.² Three days later, Phillip J. Campbell, a former Ku Klux Klan grand dragon, carried out a bombing against Zirl Palmer’s Lexington pharmacy in the West End Plaza, trapping Palmer, his wife, and daughter inside.³

The pharmacy would never reopen, but Zirl Palmer’s legacy as a community leader and civil rights activist was already firmly established. Palmer never set out to become the most prominent Black man in Lexington, but as the city’s lone Black pharmacist in the 1950s, he emerged as a central figure in Lexington’s African American community until his death in 1982.

Early life and Education

Zirl Augustus Palmer was born December 11, 1919, in Bluefield, WV as the oldest child of James and Lola Allen Palmer. After secondary school, Palmer worked as an inspector’s helper for Norfolk & Western Railroad

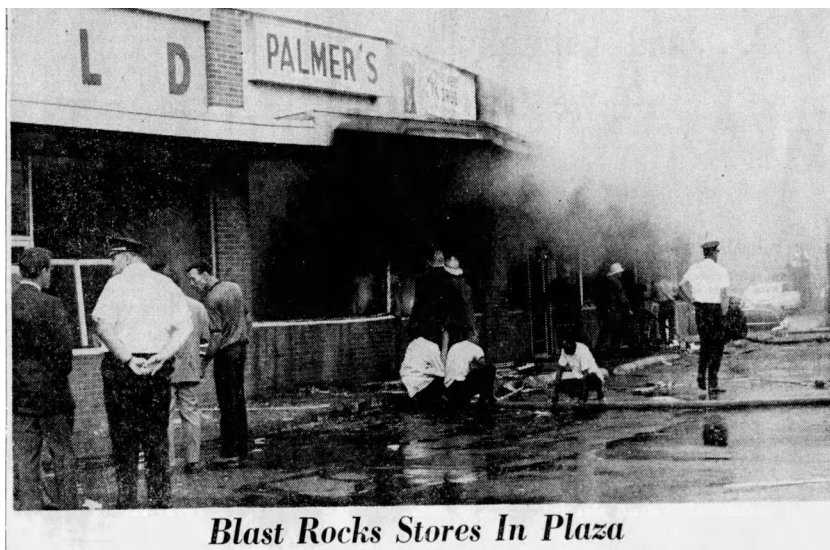


Photo showing the aftermath of the bombing of Palmer’s Pharmacy published in the Lexington Herald, 9/4/68

until the age of 21, when he entered the U.S. Army for three years during World War II (1943-46). Palmer attended Bluefield State College, a local historically black college, where he obtained a BS in Chemistry and Mathematics. He then spent a year at Howard University in the Graduate School of Chemistry completing courses in the pre-medicine curriculum.

Palmer finished his training in the College of Pharmacy at Xavier University in Louisiana in 1951. While at Xavier, Palmer was an active member of the student body. In addition to his work as a reporter for the university paper, *The Xavier Herald*, Palmer was instrumental in establishing a student branch of the American Pharmaceutical Association and served as the stu-

dent group’s inaugural president.⁴

Patience and Professionalism

Palmer came to Lexington upon graduation in 1951 and opened his pharmacy at the corner of 5th and Race Streets in Lexington’s thriving Black neighborhood of the East End. Prior to arriving, he knew the city had 9 Black doctors and 4 Black dentists, but no Black pharmacists at the time. His business plan was centered on being the lone Black pharmacist for Lexington’s African American community, and it worked—but not right away.

In Lexington, Palmer’s patience and commitment to professionalism were key. According to Palmer, many peo-

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NEW INSIGHTS INTO THE ORIGIN OF PHARMACY: A BIBLICAL PERSPECTIVE

BY SUSAN SMITH AND ANA BUT-GUSAIM

It would be an enormous understatement to say that pharmacotherapeutic options have advanced greatly through the centuries. Today, we can take a single pill and gain therapeutic benefits from a thousand plants. This practice of utilizing healing benefits from natural products is as old as Old Testament Biblical times. This paper takes a look at a few natural products mentioned in the Bible that continue to be studied for their beneficial properties (Table 1).

The Christian Bible is composed of an Old Testament made up of 39 books (from Creation until Jesus Christ’s birth, i.e. BC) and a New Testament composed of 27 books (after Jesus’s birth until the 1st century, i.e. AD). The Old Testament is also part of the Hebrew writings known as the Jewish Torah. Using the Christian Bible as historical evidence, the use of herbal medicines and the practice of pharmacy are intricately connected. The Bible reveals the benefits of spices, oils, ointments, and foods

that can be used for cleansing wounds, treating infections, and healing various skin conditions.¹⁻¹² The terms perfume maker, incense maker, and apothecary, are found in several commonly used Bible translations (versions), primarily in the Old Testament books of Exodus, Second Chronicles, Nehemiah, and Ecclesiastes (Table 2, on page 17). In these early periods of ancient history, the primary responsibility of the perfumer, incense maker, or apothecary was to prepare the holy anointing oil.¹⁻¹² Such work required the skills of a person specially trained to perform these tasks.

The connection to pharmacy in the Bible is not, however, limited to the Old Testament writings. The Apostle Paul wrote a letter (in the Greek language) to the people of the region of Galatia (modern-day Turkey) that has become what we know today as the New Testament book of Galatians. In the Bible, the book of Galatians chapter 5 verse 20 (Galatians 5:20), Paul writes of harmful practices such as “...idolatry,

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Table 1. - Natural products and their past and present uses ¹				
Natural product	Bible reference ²	Use during Biblical times	Use during modern times	Pharmacology
Olive oil	Luke 10:34 (HCSB)	Applied to wounds	Prevention of cardiovascular disease and cancer	Oleocanthal provides anti-inflammatory effect
Figs	2 Kings 20 (NLT)	Applied as an ointment to skin boil	Treatment of chronic wounds to alleviate edema and pain, and promote healing	Fig species possess antibacterial and antifungal properties
Honey	1 Sam 14:27 (HCSB) Matthew 3:4 (ESV) Proverbs 16:24 (ESV) Proverbs 25:16 (HCSB)	Consumed as an energy source	Protection of cells from free radicals to avoid oxidative stress and maintain general health	Supersaturated sugars provide energy source as well as antibacterial, anti-oxidant, and anti-inflammatory properties
Balm of Gilead	Jeremiah 8:22 (ESV, NLT) Jeremiah 46:11 (ESV, NLT)	Relieved pain	Management of pain and inflammation	b-caryophyllene binds to cannabinoid receptor subtype 2
¹ This list includes natural products described in this paper; it is not inclusive of all Bible references, Biblical uses, or modern uses. (References 1-12). ² HCSB = Holman Christian Standard Bible; ESV = English Standard Version; NLT = New Living Translation; KJVAE = King James Version, American Edition.				

Pharmacy Through the Lens of Hollywood VI: “That ‘70s Pharmacy...

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Movie Summary

“Modern Pharmacy,” as the film was originally titled, begins with a depiction of various dosage forms, i.e., tablets, capsules, ointments, and liquids, being poured, manufactured, and packaged. Over the visuals of historical paintings and surgical suites, a narrator’s voice talks about humanity’s historical quest for medical knowledge in the treatment of diseases. Through a doctor-patient dramatization, the narrator explains the role of the doctor and the pharmacist in the treatment of a patient’s ailment. The doctor examines, diagnoses, and prescribes medication, but ultimately, it is the pharmacist who prepares and dispenses the medicine that treats the disease.²

The next scene shows the interior of a community pharmacy, with a pharmacist working at a counter surrounded by shelves of medications in different forms and packages. The narrator notes, “thousands upon thousands of different medications, in many different shapes, sizes, and colors.” It is stated that physicians have knowledge of therapeutics, but the pharmacist has a deeper drug knowledge, acquired through four intensive years, earning the Bachelor of Science in Pharmacy.²



A typical 1970s pharmacy with arrays of different medications, in different forms, shapes and sizes, stored on the shelving behind the pharmacist, who is busy preparing a prescription on the counter.¹

Dramatizations of the first year of pharmacy study, the “preparatory year,” depict students being addressed by a

professor, performing exacting laboratory experiments, observing chemical reactions, and extracting blood from a guinea pig. The narrator explains the first year is full of physical sciences, like organic chemistry, and the development of skills requiring exacting accuracy. In addition, students learn a new medical terminology, often using phrases or abbreviations derived from Latin. With this new language, a pharmacist deciphers prescriptions and deduces the disease(s) being treated. Overall, the first year of studies develops the basic concepts of “good pharmacy practice.”²



Students in a lab performing chemical experiments and writing down their research findings.¹

The film then depicts the second year of study, when “courses in dispensing teach them to make more exotic forms of medication.” In dramatizations a student is seen in a lab preparing suppositories, and other students are working with real prescriptions. This is followed by depictions of the study of anatomy, physiology, pathology, and pharmacology. In another scene, students are taught disease effects on various organ systems using a skeleton. The narration explains that students need to understand how normal body parts function in order to treat abnormalities, know the drugs they are using in terms of their composition and properties, and perform experiments to substantiate the theories learned in class.²

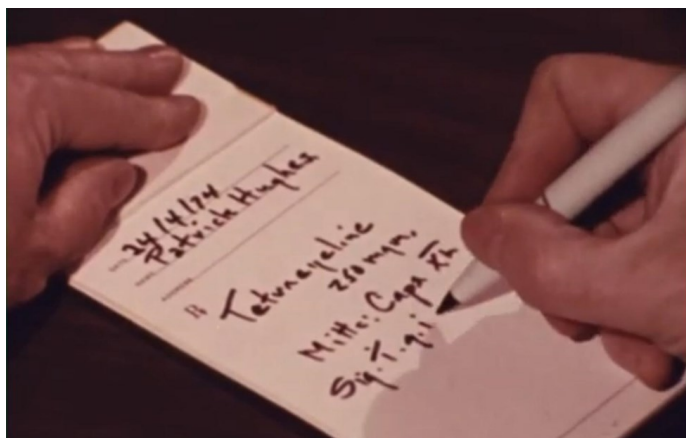
The third year of studies is shown with a student working with actual prescriptions and making a phone call to a doc-

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tor to confirm a prescription. The narration reveals the knowledge the student still needs to acquire, such as learning drug effects on different animals through the study of pharmacology, including administration of medicine, intravenously, to a guinea pig. The narration discusses the need for courses like biochemistry and microbiology, “so they can understand the effects of drugs on microorganisms,” as well as on the cells of the human body. Other subjects mentioned and shown in laboratory work scenarios are pharmacokinetics and quantitative analysis.²



The doctor completes a paper prescription for the patient, which the patient will take to the pharmacist, in order to get his medication.¹

According to the movie, the fourth year of pharmacy school involves intense study and patient care. The narration discusses the need for final year pharmacy students to not only take courses, but also to actually work in a pharmacy as an intern, interacting with the public and other health professionals. Contrasting depictions show students being taught in a classroom, and participating in a patient's bedside consultation. Then, pharmacists are shown in various settings: being consulted by a drug representative regarding a new drug; teaching a patient how to administer eye ointment; and consulting with a doctor regarding a patient's drugs.² The accompanying scenes show a pharmacy intern working alongside a 'certified' pharmacist, attending to a customer's inquiries, and filling prescriptions. According to the narration, this community practice experience is essential, especially since 85% of graduates will work in a community pharmacy.²

After that, the narrator discusses the many different careers open to a graduate pharmacist: community pharmacy, nuclear pharmacy, pharmaceutical research, hospital pharmacy, or forensic medicine. What courses fourth year students take depends on what they decide to pursue, giving diverse examples like management, accounting, veterinary medicine, or nuclear pharmacy. Further scenes show students practicing in different settings, like working in a radioactive laboratory, and preparing medications in a sterile environment. Regardless of the career path, the narrator emphasizes the need for pharmacists to continually update their knowledge and skills as “new drugs are introduced and newer techniques are being introduced in the arena.”²

The final scenes are a series of interactions involving two different patients and a pharmacist in the same community pharmacy where the intern had been. The first patient is new to Edmonton, and is filling a prescription at the pharmacy for the first time. The interaction results in depictions of family record cards, which can be used to check for drug allergies, drug interactions, and contraindications. In addition, after some questioning, another discussion about the downside of saving and using old drugs occurs, with the pharmacist encouraging the customer to dispose of old medicine by flushing it down the toilet. Finally, upon providing the medication to the patient, verbal counselling is provided regarding how to use it and what to avoid so as not to inactivate the drug.

The second patient presents a different clinical opportunity to the pharmacist when he asks for a refill on his prescription sleeping tablets, of which he was out since he had shared them with his sister. Both the pharmacist, to the patient, and the narrator, to the movie audience, point out the risks of sharing one's prescribed medication with another. After discussion with the patient, the pharmacist calls the doctor to get a refill authorization.²

The narration continues, pointing out the oft-ignored role of the pharmacist in patients' health care, i.e., the modern pharmacist “knows far more about the medication he dispenses than the pharmacist of the past. He has more knowledge of doses, side effects and anticipated cure; his advice is authoritative.”² Brief flashes of past scenes add significance to the narration, e.g., the pharmacist pouring chemicals into a test tube in a laboratory, the doctor writing out a prescription while his patient puts on his shirt,

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and lots of medicine capsules being poured out on a table. The narration ends with: “whatever illness we may have can usually be cured or moderated with the help of our modern knowledge of pharmacy.”²

Pharmacy Depiction

“That ‘70s Pharmacy - Modern Pharmacy” is a documentary that portrays 1970s era pharmacy education and practice in Canada. The film focuses on the making of a pharmacist - beginning with a four-year Bachelor’s in Pharmacy program (standard in Canada until recently) and the different career paths pharmacists can pursue after graduation. It addresses various aspects of the study of pharmacy and what is to be expected during each of the four years of studies. The narration explains the journey one must take in order to become a pharmacist: didactic, laboratory, and theoretical studies followed by practical application.²

In the 1970s, most prescription medications were mass-produced, allowing doctors to write prescriptions for specific products.⁵ Thus, the role of the pharmacist in the 1970s was primarily involved with the dispensing of medications for the treatment of diseases. The community pharmacy depicted, with rows of manufactured drugs on shelves, demonstrated this. Thus, the pharmacy scene is an apt depiction of a 1970s community pharmacy.^{5,6}

The 1970s was when the profession’s emphasis began to shift toward patient

-centered care.⁴ As depicted, the 1970s pharmacy curriculum taught many pharmaceutical sciences, several of which are no longer standards in today’s curriculum. However, pharmacy students also required training in clinical pharmacy practice.⁴ As such, the film appropriately shows student interns consulting with doctors, interacting with patients, and screening for drug interactions and contraindications.²

Another significant depiction of 1970s pharmacy education is the transition from student to intern.⁵ The narrator points out that a pharmacist’s education is not complete until an internship is completed. It is through this practical experience that the student builds his/her confidence and competence. The internship teaches a student the responsibility of being a pharmacist: that “the customer or patient is the central figure; the man or woman who needs the services of a qualified pharmacist.”²

Being filmed in the 1970s in a Canadian school of pharmacy, this film is an excellent reference for 1970s era pharmacy education. Classrooms are shown with blackboards and speaking podiums, lacking the computers, cameras, projectors, and screens of today’s lecture halls. Several times the film shows laboratory teaching with an assortment of various laboratory, as well as medical technology equipment, rarely seen today. Students are shown performing analyses and experiments while wearing the classic white laboratory coat, the standard for the profession in the 1970s.³ Sterile compounding was becoming commonplace in hospital practice, and students are shown working in horizontal laminar air flow hoods

(LAFH). However, the work in the LAFH is being done without the classic gloves, mask, and gown that are standard today.²

Likewise, the community pharmacy that was filmed is also very representative of 1970s community pharmacies. The interior shows the classic high counter-based pharmacy dispensing area, with numerous items for sale on the countertop, and lots of drug bottles and prescription file boxes on numerous shelves behind the counter. The bottles and prescription containers are all either screw-tops or pop-top lids; child-resistant packaging is absent. The pharmacy equipment on display and in use is also classic for the 1970s: counting trays, spatulas, a dial telephone, a manual typewriter, paper prescriptions, and prescription file boxes. What is very obvious is the lack of any type of computer equipment or printer.²

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Advertisements through history



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ple in the African American community had not seen a Black pharmacist and certainly not one as young as Palmer. Despite his training, the community—including some of the local physicians—thought Palmer was too young.¹

Without the mentorship of a more senior pharmacist, Palmer maintained his studies, “staying in the books” for the first two years on the job. He abided by the wisdom of the Xavier University Dean of Pharmacy who told him, “Never dispense anything that you actually don’t know what it is yourself.” So he dedicated himself to study to avoid making any mistakes that would undermine his credibility with the local practitioners or his customers. Ultimately, his knowledge, professionalism, and reliable track record garnered the respect of his community, and his business began to prosper.

Innovator and Entrepreneur

While the absence of a designated pharmacist for the African American community drove business to Palmer, his entrepreneurial spirit kept his customers coming back. The pharmacy was a gathering place in the neighborhood and was one of the few places in Lexington where the African American community could sit and drink a soda. When Palmer first opened, he struggled to find a vendor to sell him ice-cream; however, the vendor who ultimately did, Harold Brookings from the Dixie Ice Cream Company, won every sales contest in the Lexington area because of his account with Palmer’s pharmacy. In the first year of business alone, Palmer sold over 5,000 gallons of ice cream. Unsurprisingly, the next year, the rest of the ice cream vendors in the city

were also interested in doing business with Palmer.

As a small independent pharmacy, Palmer understood that it was difficult for his store to compete with the major retail chains when it came to the margins on drugs. Instead, the profit was to be made on other items in the store. Ever the entrepreneur, Palmer found innovative ways to draw customers into the store beyond the ice-cream and soda that had people lined up out the door. For example, Palmer saw that there were no calendars depicting Black people, so he created his own Palmer’s Pharmacy branded calendars with photographs of the African American community in Lexington. The calendars were very popular, causing community members to approach Palmer as early as September to make sure they could secure next year’s calendar. When his customers looked at their calendar every day, not only did they see images that reflected their community, they also saw the name “Palmer’s.” Palmer understood that representation mattered to his community, a conviction that was evident in his service to the community separate from his business.

Palmer also recognized that no businesses in Lexington were processing utility bills like the pharmacies did in New Orleans where he had completed his pharmacy training. So, he began collecting payment for city utilities inside his pharmacy. All of these things brought customers into the pharmacy and established Palmer’s reputation as a pillar of the East End community.

Following the success of his first pharmacy, Palmer purchased property in 1959 at the intersection of 5th and Chestnut Street. On this location he built a new two-story building to house Palmer’s Pharmacy, Luncheonette, and Doctor’s Office, which opened its doors to the Lexington community in 1961. In this new location, Palmer again demonstrated his entrepreneurship and commitment to the community by combining essential community services in his pharmacy, which housed two physicians and a lawyer in the upstairs suites. Palmer’s Pharmacy, Luncheonette, and Doctor’s Office was the sole Black-owned pharmacy in Lexington at the time and was the first Rexall pharmacy in the United States owned by an African American.



An advertisement for his second store, Palmer’s Rexall, the first Rexall Pharmacy franchise owned by an African American. The Lexington Herald, 11/18/62

Growth and Loss

The success of the East End pharmacy ultimately led Palmer to open a second, concurrently operating location in the new West End Plaza Shopping Center on Georgetown Street. In the West End Plaza, Palmer’s second pharmacy was adjacent to other businesses, had plenty of parking, and was in a predominantly white neighborhood. In its first year of business, Palmer recalled that the location made three times the revenue his other pharmacy businesses had taken ten years to make. During this time, Palmer continued to be a resource in

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the Black community for matters of health. As Black doctors in the community passed away, customers would continue to come to Palmer seeking his expertise. He advised on matters where he could and made referrals to other doctors when he could not.

Palmer's prominence in the community did not go unnoticed. On September 4, 1968—just days after the racially charged gun battle in Berea that killed two men—a man entered Palmer's West End pharmacy carrying a brown leather briefcase. Palmer and a customer noticed the man and Palmer would later testify that he saw the man leave without the briefcase.⁶ The man was Phillip J. Campbell, a former KKK grand dragon, and the briefcase contained a bomb set on a timer made from a cheap alarm clock. When the bomb detonated around 11:20 a.m., Palmer's pharmacy was in ruins and ten people were left injured. Residents from the nearby Charlotte Court neighborhood rushed to pull survivors from the wreckage.⁷ Buried in the debris of overturned counters and showcases were Palmer's wife and daughter, who were narrowly saved from the burning building by the heroic men from Charlotte Court.³

Following the bombing, Palmer lived in fear for the safety of his family and made the decision not to reopen the pharmacy. Ultimately, he chose to retire as a business owner, selling the still-functioning East End store shortly thereafter. While no longer a business owner, Palmer continued to serve Lexington as a pharmacist in a local Walgreens and through his service on many state and local councils.

An Indestructible Legacy

Palmer made massive contributions to the health and wellness of the African American community of Lexington as a pharmacist, but his legacy of service to his community was perhaps even greater. Palmer always worked to support and advocate for the Black community as they pursued careers in pharmacy and medicine. He and his wife actively encouraged one of his employees to quit her job working the soda fountain to pursue training as a nurse. Viola Davis Brown would go on to be the first African American admitted to a nursing school in Lexington, and later, the first African American promoted to hospital supervisor at St. Joseph's Hospital in Lexington.⁸ In addition to creating jobs for clerks and delivery drivers, Palmer employed interns from the University of Kentucky College of Pharmacy and wrote recommendations for four of the five Black students he knew had enrolled in Kentucky's College of Pharmacy as of 1979.

In 1972 Palmer was appointed to a seat on the University of Kentucky Board of Trustees by Governor Wendell Ford and reappointed for a four-year term in 1975 by Governor Julian Carroll. Palmer was not reappointed in 1979 and protests erupted across the state and from the NAACP. As a response, Carroll planned to appoint Palmer to the state Council on Higher Education, a plan that was never completed after the incumbent decided against resigning his post.

Beyond his role as a businessman, Palmer was an active participant in the Lexington community. He played baseball for the Lexington Hustlers—the local professional Negro League team and the first integrated team in the south—and helped coach the University of Kentucky tennis team.

He was an active member of Main Street Baptist Church, running a health care program in cooperation with the church. He was active in local branches of Planned Parenthood, the NAACP, the Salvation Army, and the United Negro College Fund, and was the first African American member of the Optimist Club and Big Brothers. He served on the Chamber of Commerce, the Civic Center Board, the Fayette County Board of Health, the Fayette County Recreation Board, and was a member of the Kentucky Commission on Human Rights at the state and local level. Professionally, Palmer maintained his membership with the American Pharmaceutical Association as well as the National Association of Retail Druggists.⁹ Palmer's vast resume of local and state service underscores his commitment to advocacy and his conviction that African American representation mattered at every level, from city committees to state boards.



Conclusion

Reflecting on Palmer's business success and community legacy, Ron Griffin, president of the Lexington NAACP, remarked, "It just meant

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sorcery, enmity, strife, jealousy, fits of anger, rivalries, dissensions, divisions...".¹³ Sorcery was often connected to the use of drugs, sometimes for intentional poisonings.¹⁴ The original Greek word for sorcery in this verse is *pharmakeia* from which the word pharmacy is derived.¹⁵ Related words include *pharmakon* which is translated as a drug or potion associated with casting spells.¹⁵ A person who prepared such remedies was called a *pharmakeus*, also known as a poisoner, sorcerer, or maker of magical potions (Figure 1, page 18).¹⁵ In the ensuing centuries, the skills and functions of these specially trained people would change quite drastically as the *pharmakeus* of the early centuries metamorphosed into the pharmacist of the 21st century.

The word *pharmakon* is also at the root of the publication - and national organization - we know today as The United States Pharmacopeia (USP). Derived from *pharmakon* and *poios* (making), the Greek word *pharmakopoiia* is the art of making, or preparing, drugs. Translated into modern Latin, The United States Pharmacopeia (or *Pharmacopoeia*) was first established in the United States in 1820 to set quality and purity standards for drugs.¹⁶⁻¹⁷ The USP continues to provide safety standards related to compounding (USP 795 and 797 of nonsterile and sterile preparations, respectively), safe handling of hazardous drugs (USP 800), and medication labeling standards (USP 7). Preparations found in the 19th century editions of the USP included natural products such as honey and wines.¹⁸ The practice of regulating natural products continues to this day as the USP regulates not only medications but also botanical and non-botanical dietary supplements.

Table 2 - Bible verses for the words perfumer, incense maker, and apothecary			
Bible verse	Commonly used Bible versions ¹		
	ESV	NLT	KJVAE
Exodus 37:29	"He made the holy anointing oil also, and the pure fragrant incense, blended as by the <i>perfumer</i> ."	"Then he made the sacred anointing oil and the fragrant <i>incense</i> , using the techniques of a skilled <i>incense maker</i> ."	"And he made the holy anointing oil, and the pure incense of sweet spices, according to the work of the <i>apothecary</i> ."
2 Chronicles 16:14	"They buried him in the tomb that he had cut for himself in the city of David. They laid him on a bier that had been filled with various kinds of spices prepared by the <i>perfumer's</i> art..."	"He was buried in the tomb he had carved out for himself in the City of David. He was laid on a bed perfumed with sweet spices and fragrant ointments..."	"And they buried him in his own sepulchres, which he had made for himself in the city of David, and laid him in the bed which was filled with sweet odors and divers kinds of spices prepared by the <i>apothecaries'</i> art..."
Nehemiah 3:8	"Next to them Uzziel the son of Harhaiah, goldsmiths, repaired. Next to him Hananiah, one of the <i>perfumers</i> ..."	"Next was Uzziel son of Harhaiah, a goldsmith by trade, who also worked on the wall. Beyond him was Hananiah, a manufacturer of <i>perfumes</i> ."	"Next unto him repaired Uzziel the son of Harhaiah, of the goldsmiths. Next unto him also repaired Hanani'ah <i>the son of one of the apothecaries</i> ..."
Ecclesiastes 10:1	"Dead flies make the <i>perfumer's</i> ointment give off a stench..."	"As dead flies cause even a bottle of <i>perfume</i> to stink..."	"Dead flies cause the ointment of the <i>apothecary</i> to send forth a stinking savor..."
¹ ESV = English Standard Version; NLT = New Living Translation; KJVAE = King James Version, American Edition. References 1-12.			

A remedy used in Biblical times for therapeutic effects that persists to this day is olive oil. In Luke 10:34, the Greek physician Luke described a man who was wounded and left for dead by a group of thieves. A Samaritan passed by and had compassion for the wounded man and "bound up his wounds, pouring olive oil and wine".¹⁹ This act of ministration demonstrates the healing status of olive oil in use during that time. Olive oil is derived from the olive tree that is native to the Mediterranean, African, and Asian regions.²⁰ Although today olive oil is more often used for cooking, it is also used in medicine.²⁰ Oleocanthal,

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a phenolic compound in olive oil, produces anti-inflammatory effects due to having a similar structure to non-steroidal anti-inflammatory drugs (NSAIDs).²⁰ Oleocanthal inhibits cyclooxygenase-1 (COX1) and -2 (COX2) which reduces inflammation. Although it also possesses wound healing effects, olive oil is more commonly recommended today for its potential beneficial effects in the prevention of cardiovascular disease and cancer.²¹⁻²²

Another recurring remedy that appears in the Bible is the topical use of figs for various skin diseases. In the Old Testament, King Hezekiah was on his death bed as a result of a skin infection. In Second Kings chapter 20, the prophet Isaiah tells Hezekiah to "...make an ointment from figs. So Hezekiah's servants spread the ointment over the boil, and Hezekiah recovered!"²³ Although King Hezekiah's skin infection was unspecified, modern researchers continue to remain interested in the healing properties of figs for the treatment of skin diseases.²⁴ Figs contain alkaloids, terpenoids, coumarin, and fatty acids.²⁴ Studies show that a petroleum ether extract of *Ficus racemosa* (*F. racemosa*), a species of figs, demonstrated antibacterial activity against bacteria such as *Pseudomonas aeruginosa*, *Bacillus pumilus*, *Escherichia coli* (*E. coli*), and *Staphylococcus aureus* (*S. aureus*).²⁴ This antibacterial efficacy is thought to be related to the effects of the terpenoids and alkaloids in *F. racemosa*.²⁴ Another species of figs, *Ficus hispida*, was found to be more sensitive to *S. aureus* and *E. coli* when compared to conventional antibiotics such as chloramphenicol and streptomycin.²⁴ In addition, *Ficus religiosa* was found to have antifungal activity against *Aspergillus niger* and *Penicillium notatum*.²⁴ Figs have been used in the treatment of chronic wounds to decrease edema and pain, as well as promote healing.²⁵ It is possible that these anti-infective attributes of figs were involved in healing King Hezekiah's infection. The use of figs for skin diseases in the modern world, however, requires further investigation.

Honey is a natural substance mentioned multiple times in the Bible.²⁶⁻²⁸ The book of First Samuel 14:27 states that "When he ate the honey, he had renewed energy", hinting at honey's restorative abilities.²⁶ Matthew 3:4 states that the only food sustaining John the Baptist in the wilderness of Judea was locusts and wild honey.²⁹ Additionally, Proverbs 16:24 says "Gracious words are like honeycomb, sweetness to the soul and health to the body."²⁷

Figure 1 - The origin of the word pharmacy
Image used with permission from <https://www.etymonline.com/word/pharmacy>



Of note, too much of a sweet thing can be problematic according to Proverbs 25:16 which says "If you find honey, eat only what you need; otherwise, you'll get sick from it and vomit".²⁸ Just as great value was placed on the use of honey in the Bible, the same is true in modern times as well. The apparent renewed energy due to honey can be linked

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to the supersaturated sugars such as fructose and glucose which raise energy levels.³⁰ One of the proposed metabolic effects of honey includes increasing satiety and potentially regulating blood glucose levels.³⁰ In addition to the supersaturated sugars, honey also contains fatty acids, proteins, amino acids, vitamins, and electrolytes which are essential for nourishment and survival.³⁰ Honey has been described as having antibacterial, anti-inflammatory, anti-oxidant, and wound-healing properties.³¹ These beneficial effects continue to be a source of ongoing study.

A medication mentioned in the book of Genesis with possible utility today includes the Balm of Gilead. In the book of Genesis, various commodities were traded among the ancient nations including balms, myrrh, oil, and honey.³²⁻³³ One balm in particular, the balm of Gilead, was known for its physical healing. The New Living Translation Version of Jeremiah 8:22 and Jeremiah 46:11 uses the word “medicine” in place of the word balm as found in the English Standard Version.³⁴⁻³⁷ Balm of Gilead was used to treat pain due to its soothing properties.³⁸ It has also come to represent the easing of spiritual pain according to the lyrics of the hymn “Balm of Gilead”.³⁹ Originally found in regions east of the Jordan River, Balm of Gilead (*Commiphora gileadensis*) contains a plant compound known as b-caryophyllene.⁴⁰⁻⁴¹ B-caryophyllene is a type of cannabinoid (CB), specifically a phytocannabinoid.⁴² As such, b-caryophyllene binds to cannabinoid receptors with selectivity at peripheral CB₂ receptors with little to no affinity at CB₁ receptors.⁴² CB receptor agonists appear to have analgesic properties; thus, b-caryophyllene may exert its analgesic properties at these endogenous receptors.⁴² Additionally, b-caryophyllene may have therapeutic potential in a variety of medical conditions due to its anti-inflammatory properties.⁴³ Studies are underway to investigate potential future uses of the main substance in Balm of Gilead.

Although the role of the pharmacist has changed significantly through the millennia, its beginnings can be traced back to Biblical times. Likewise, many of our modern pharmacotherapeutic options had humble beginnings as botanical substances. Technological advances and discov-

eries have drastically changed the landscape of medications and pharmacy. Despite these advances, we continue to explore the potential healing benefits of various natural medicines used thousands of years ago according to Biblical evidence as therapies for the ailments we face today.

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And

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Zirl A. Palmer: Pharmacist and Advocate ...

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something that a Black person in Lexington could do that. To me, he made a great impact. He's always been a mover in the community—many times behind the scenes.”¹⁰ Zirl A. Palmer came to a highly segregated Lexington and made a lasting impact in his communities. From benefitting the personal health of the East End customers that he served out of his pharmacies, to his advocacy for the rights and representation of the African American community, Palmer's legacy demonstrates the power of the retail druggist to be a *community* pharmacist in every aspect of the word.

—Eric Lee Welch, PhD.,

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Pharmacy Chronicles

About the History of Pharmacy SIG

American Association of
Colleges of Pharmacy **AACP**

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

The academic year (2022 – 2023) marks the fifteenth year since the History of Pharmacy Special Interest Group (SIG) was formalized as an AACP SIG.

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!!

Pharmacy Through the Lens of Hollywood VI: “That ‘70s Pharmacy...”

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Final Analysis

In conclusion, as one would expect of a period promotional film, “That ‘70s Pharmacy - Modern Pharmacy” accurately depicts the profession and practice of Canadian pharmacy in the 1970s. The use of patient storylines provided a realistic portrayal of the typical interaction between a doctor, the patient, and the pharmacist. It also created a feeling of authenticity, grounding formal theories with practical applications and experiential practices. It even illustrated the classic 1970s view by many that pharmacists were merely pill peddlers. So, if one wants to see 1970s pharmacy practice, albeit Canadian style, “That ‘70s Pharmacy - Modern Pharmacy” is an excellent film to watch.

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