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SHANGHAI, CHINA:

“Nontraditional” Traditional Chinese Medicine

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STUDENT AUTHOR BIO SKETCH

Joshua Martin is a second-year PharmD student in the Purdue University College of Pharmacy. Within the College of Pharmacy, he is the president-elect of the Industry Pharmacist Organization (IPhO), is on the Orientation Steering Committee for newly admitted PharmD students, and preforms nanoparticle research within the Industrial and Physical Pharmacy sector of the College. He hopes to pursue a career in the pharmaceutical industry where he can positively impact patients on a global scale. Josh comes from a family of Boilermakers and avidly supports the Black and Gold. In this article, he describes his experience studying at Shanghai University of Traditional Chinese Medicine and how this experience will further his direct patient care as a pharmacist.

INTRODUCTION

Traditional Chinese medicine (TCM) continues to be one of the most popular forms of therapy for millions of patients around the world. As health care professionals, it is our duty to be conscientious of these practices and provide support and education to patients who choose to utilize some form of TCM or complementary therapy. In U.S. health care education, we are biased toward Western Medicine, although TCM has been in practice for over 2,500 years. The Purdue University College of Pharmacy Study Abroad Program partnership with Shanghai University of Traditional Chinese Medicine provides students with insight into TCM therapies.

During spring break, a group of 10–12 students traveled to Shanghai, China, to participate in a lecture and interactive-based course designed to introduce the science, diagnostic methods, manufacturing, and application of TCM. I had the opportunity to travel to Shanghai the last two spring breaks, as one week was not enough time to fully absorb the vast complexity of TCM and satisfy my

curiosity. Although I am passionate and committed to Western Medicine, I am a firm believer that TCM could and should have a place in therapy.

WHAT MAKES TRADITIONAL CHINESE MEDICINE “TRADITIONAL” TO CHINESE PEOPLE?

TCM history dates back thousands of years, using trial and error. The origin comes from the “Legend of Shen Nong,” which states that Chinese medicinals and foods are derived from nature. The legend states that gods would have a disease, experiment with a random medicinal, and, depending how the medicine made them feel, the gods might remember it as a therapeutic agent. Traditional Chinese medicine is based on three forms of medicine: herbs, minerals, and animals. Herbs are by far the most common agents used, whereas the use of animal agents in practice is declining for ethical reasons. The numbers of herbs exponentially increased from 365 agents discovered by Shen Nong to more than 12,000 herbs currently in TCM use today. This provides hope, not only for ill patients who strictly believe in TCM, but also for others who have tried all Western medicine options and are searching for alternative therapy.

Figure 1 (banner image, above). Joshua Martin during the Pharmacy Study Abroad Program. (Courtesy of Ginny Hyland.)

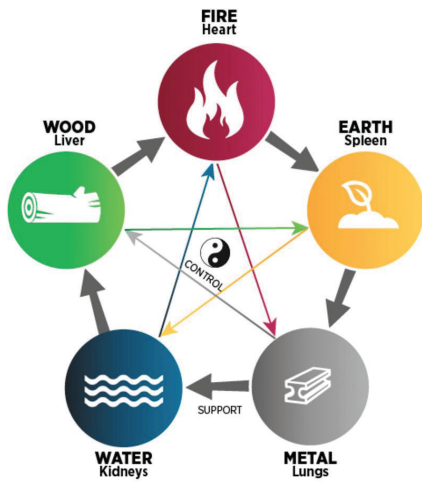


Figure 2. The connection and interaction of “The Five Element Theory” (*The EpochTimes*).

If I could summarize Traditional Chinese medicine in one word, I would select “balance.” The theories of qi, yin-yang, and the five-elements balance holistically in the body to keep the “Zang,” “Fu,” and “Extraordinary Organs” in an equilibrium. The body’s organs are all interconnected to form one major organ system. Qi is an intangible energy that flows throughout the body and helps form the unity between the human being and the universe. A TCM doctor can diagnose various qi imbalances through inspection, listening, smelling, inquiry, pulse evaluation, and palpation. The major components of the diagnostic TCM exam include pulse evaluation and tongue examination. From the information gathered from these methods, TCM specialists, for example, can diagnose a “liver qi deficiency” and prescribe an herb for the gall bladder that will help to balance out the deficiency.

We were taught that TCM is based on clinical experience, dynamic patterns, and dialectical ingenuity for a holistic approach to prevention and treatment. Many doctors told me that TCM works best when used as a preventive care measure. It doesn’t work to prevent any particular disease, but rather works as holistic body therapy. The Chinese believe TCM can prevent disease from conquering the body with the proper diagnosis and therapy, if the patient can elicit a state of balance.

Element	Zang Organ (Yin)	Fu Organ (Yang)
Fire (火)	Heart	Small Intestine
Earth (土)	Spleen	Stomach
Metal (金)	Lung	Large Intestine
Water (水)	Kidney	Bladder
Wood (木)	Liver	Gall Bladder

Figure 3. TCM theory of the interconnectedness between the organs and the elements.

One of the most popular herbals in TCM, Panax Ginseng, is referred to as a “cure all” in China. It provides a patient with energy (tonifies qi), generates fluid, and even boosts intelligence. In TCM, tonification refers to the replenishment of weaknesses in the body, including the blood and organs. Another type of medicinal I found astonishing was Human Placenta. When mothers give birth, they are asked if they want to keep this “delicacy.” If not, the hospital will bag it and sell it to somebody else for consumption. The placenta is known to tonify qi, essence, and blood, as well as to play an important role in kidney and immune function (Milner, 2017). After lecture, I was curious how a patient would consume this unusual product, and one TCM doctor told me that the Chinese sometimes cook and prepare it inside a dumpling for dinner.

Even though the basis of TCM is a medicinal approach, many therapies have alternative ways of curing imbalances in the body without systemic medications. Acupuncture—the use of needles on acupuncture “points” or “meridians” to relieve pain—is a commonly used practice in conjunction with other therapies.



Figure 4. Cupping being performed in a TCM hospital by a trained professional. (Courtesy of Varsha Kumar.)

Cupping, which I experienced, is a therapy using glass suction to treat pain and swelling. I didn’t have back pain before I had the eleven glass suction cups on my back, but my back felt more relaxed after the therapy session.

Moxibustion is another popular practice, which involves burning minerals or other substances into the skin. Chinese massage, or “Tui na,” was performed for us at a hospital and is a popular practice not only in China, but also in the United States. One of my personal favorite practices, tai chi, is a sport consisting of dancelike body movements, which TCM experts say yields many health benefits. Some research has suggested that tai chi may help to improve balance and stability in people with



Figure 5. Me at Shanghai University of TCM with my students and Dr. Kaakeh after they completed the TCM course and were awarded certificates.

Parkinson's disease, reduce pain associated with osteoarthritis and fibromyalgia, and promote quality of life and improve mood in people with heart failure (NCCIH, 2017). Shanghai University of Traditional Chinese Medicine has one of the top tai chi programs in China, and we had the opportunity to train with them one afternoon.

WHAT MAKES TRADITIONAL CHINESE MEDICINE SO “NONTRADITIONAL” TO THE REST OF THE WORLD?

Western society is quick to reject TCM therapies because Western medicine is based on scientific proof. TCM is not “measurable” because TCM theory comprehends and treats the body as an entire organ system. In contrast to Western medicine, TCM is primarily a preventative course therapy. The TCM doctors were truly passionate about using herbs to prevent, and even treat, chronic diseases like high blood pressure. Many are against the prescribing of a Western medication for life and thereby “supporting the financially driven pharmaceutical industry,” as many people say. TCM doctors claim they are 100% committed to the patient, with the end goal of treating the patient back to a healthy and balanced qi state. TCM doctors love to talk about the Chinese scientist, Dr. Tu Youyou, who discovered the extraction technique of *Artemisia annua*, a Chinese Herb that is an effective malaria treatment, saving millions of lives (Zhang et al., 2017). Tu Youyou was awarded the Nobel Prize for TCM discovery and is well regarded for her curiosity of knowledge itself, rather than her individual achievements or money.

Western medicine demands to know the exact identity of the medicine: its chemical structure, excipients, dosing,

and frequency. Many times, TCM physicians cannot extract or purify a particular herb because they do not know which component is producing the desired effects. TCM is based on trial and error, just as Western medicine, with the difference being that TCM has been tested for over 2,500 years versus Western medicine, which, on average, spans 10 years from clinical development to launch. TCM often has more investigative testing in humans. I found that its significance in health care could not be discarded, and I speculate that there may be a correlation between obesity, cancer, diabetes, and hypertension having less prevalence in those who practice TCM, but no evidence is found in the literature.

DESCRIPTION

Shanghai University of Traditional Chinese Medicine, ironically located in the heart of a modern, Western pharmaceutical company district of the city, produces many TCM medical doctors and pharmacists. Western medicine is not practiced or taught at the University; students are strictly educated on theory, diagnostics, and TCM treatments. The course taught to Purdue students was a weeklong, expedited class covering the basic concept of TCM. Lecturers and instructors reinforced that it takes their students many years of studying and experience to become experts in the material. I did not expect to become a “TCM master”; however, I believe the knowledge and concepts acquired from this course will provide options when treating my patients.

When traveling to Shanghai my second time, I was the teaching assistant for the TCM course and a guide for the Purdue students. Shanghai is about three times the size of New York City, so even though I have been in the city



Figure 6. A typical Chinese family style “Hot Pot” meal with chicken feet.

before, it was still foreign to me. After a 15-hour flight, I was relieved to finally walk again and reach Shanghai, the second largest city in the world by population and the financial capital of China. Our hotel was a scenic, 15-minute walk to the University. The course was organized in a lecture format with an active-learning exercise that correlated to the specific day’s material. The lecture sequence included Chinese culture and origin of Traditional Chinese medicine, TCM basics, plants and animals as medicines, understanding herbal medicine, face reading in TCM, and the four diagnostic methods. With each topic, the University had an expert in the field present the material, primarily consisting of trained TCM doctors. Having the opportunity to experience this material twice from various professors helped reinforce my introductory knowledge of TCM. This experience has enabled me to

share TCM concepts and has provided the opportunity for more advanced TCM training in the future.

Besides class in the morning, the University planned afternoon activities such as visits to various TCM hospitals, herbal gardens, TCM museums, and TCM manufacturing facilities. In the evenings, we would explore downtown Shanghai as a group and enjoy local cuisine. When Dr. Li would take us out, we all knew we would be served traditional Chinese cuisine. Most of the time, this included delicious soups, dumplings, rice, and teas; however, Dr. Li would not take us to China without convincing us to eat and experience new foods. Many times, he would not reveal the food’s identity until after we consumed the mystery item, but he would always say, “it’s good, try it” or “it’s meat.” After stepping far out of my comfort zone, I decided to try (almost) everything that was in front of me. This included, but was not limited to, pig large intestine, duck tongue, duck blood, stinky tofu, fish eggs, and squid. Duck tongue was something I will probably never eat again, but it was a great experience. The organ is considered a delicacy in China; the tongue comes out to the table with the veins attached. To eat it, I bit down gently (because of the bone in the middle) and as I felt my teeth encounter the bone, I dragged my teeth along the bone to pull off the meat. It was delicious. One food I could not force myself to try was chicken feet, which are brought to the dinner table looking exactly like a cut-off, scaly chicken foot.

Downtown Shanghai on the “Bund” is my favorite spot in the city. The Bund is a famous tourist spot in Shanghai, directly on the Huangpu River, that overlooks the Shanghai Skyline. At night, I could feel the energy of the city in



Figure 7. Downtown at the Bund during the night.



Figure 8. A TCM pharmacy in Hangzhou, China.

the air with bright lights, illuminated screens, and buildings vanishing in the night sky. Additionally, during one weekend, we took a group trip to Hangzhou, a famous vacation destination about an hour southwest via the high-speed train. West Lake is considered one of the most famous, beautiful lakes in the world. Thousands of years of Chinese history have taken place and been told from this immense lake. Hangzhou is known for their silk and green tea (Longjing Tea). The city also holds a TCM pharmacy, which fills many scripts each day for a mix of herbal medications that patients commonly brew into a tea.

COMMUNITY IMPACT

This study abroad trip has existed for three years and has become more popular with Purdue students each year. Students learn TCM, but they also become more culturally aware within pharmacy and medical professions. Our hope is to bring these theories back to Purdue University and surrounding communities to not only intelligently implement these practices, but also to educate those who have misconceptions about or are unaware of the usefulness of TCM. By sharing our experiences, we will raise interest in this program, as well as in other health care therapies around the world. It only takes one Instagram post with a video of a person being cupped, or a group photo in front of the Bund or famous Shanghai Skyline to spark the thought, “What are they doing halfway across the world?” The importance of being aware of these practices cannot be mitigated; patients will use these practices. Knowing about TCM will allow us to become well-rounded practitioners and provide optimal health care advice to patients.

Many students will fear the language barrier that presents, as Shanghainese is the official language in Shanghai

and its surrounding areas. We are fortunate to have two ambassadors who travel with us throughout our time at the University who serve as translators, whether it be at the University, hospital, or when ordering bubble tea. Sometimes, situations present where you are absent from a translator and have trouble communicating or understanding a local. This is an aspect of the growth process from traveling abroad; one innovates and figures out how to communicate effectively, even without words.

STUDENT IMPACT

I always strive to be different. When my friends at Purdue talk about studying abroad, I listen in steadiness to destinations such as, France, Spain, and Italy. I feel China does not receive as much love from “study abroaders,” even though it is the most populated country in the world. China possesses a fascinating ancient history and is a safe country to visit. Traveling abroad for a semester would delay my graduation. I came across this opportunity at Shanghai University of TCM and believed it was the best of both worlds. I signed up on the last day, not knowing anyone else on the trip. It was an opportunity of a lifetime to explore a country where few students have traveled before or taken a course in TCM from a well-known TCM university in China. I witnessed patients walk out of an acupuncture room with a sigh of relief, and I listened to patients use TCM to lower their blood pressure; I am confident legitimacy exists with TCM therapies. Speaking intelligently from experience is invaluable.

CONCLUSION

I hope my readers will take advantage of opportunities to travel. Purdue has provided cultural opportunities that I could never imagine by traveling to China twice, as well as traveling on a medical mission trip to Nicaragua. By writing this article, I hope to inspire readers to turn non-traditional preconceptions and hesitations into traditional experiences and memories. Have you experienced cupping while in a TCM Hospital, traveled on the Huangpu River in downtown Shanghai, or eaten a duck’s tongue? You should!

ACKNOWLEDGMENTS

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