THE JOURNAL OF COLLEGIUM AESCULAPIUM

FALL 2007

EDITOR'S NOTE

Global Medicine for a Global Church

Since Collegium Aesculapium was organized, a major part of its mission has been to assist in providing educational and humanitarian projects that will increase the health and well-being of the Lord's children here on earth. Certainly, Collegium does not have the resources to accomplish this mission on a global basis, but hopefully can become a repository of multiple organizations that provide international humanitarian services.

A strong, vibrant membership has provided resources for Collegium's educational efforts in Chiquimula, Guatemala and for donations to the Church Perpetual Education Fund to be used for the education of returned missionary health professionals within their own international residence. One resource is the *Journal of Collegium Aesculapium* and its content.

This issue of the *Journal of Collegium Aesculapium* provides us with important and relevant information on a number of issues relating to international health and service.

The lead article is about Rida Sagih, an LDS convert who lives in Borneo. Rida was born with severely deformed limbs. However, his spirit is dynamic and strong and he seeks to serve the Lord and to be active in His work.

Lyman Moody's report of his two missions as an Area Medical Advisor in Europe can't help but stir the desire to provide health advisory services to our wonderful missionaries serving all over the world. As Dr. Moody discusses his first mission in Madrid, we gain an appreciation of missionary service as a health professional. His account of his second mission helps us understand how the role of spouse can be fulfilling as well as furthering the Lord's work.

Dr. Val Hemming's article on the nine things that every LDS physician should know about tuberculosis raises an awareness of the spread and problematic nature of this changing and still-devastating disease.

The story of the conversion of Dr. Benjamín Pérez and his wife Dr. Arlete Remis to the gospel of Jesus Christ is heartwarming. These two successful physicians, practicing in rural Guatemala, are making a profound contribution to the lives of the people they serve. They are great friends and members of Collegium.

Allen C. Christensen, director of BYU's Ezra Taft Benson Institute, is a valued ally of Collegium in international service. A noted historian, he explains the westward trek of pioneer saints of Scandinavian heritage. Many of the posterity of these great pioneers have and continue to make important contributions to the health and growth of many of our associates and friends. Dr. Christensen discusses the hardships and sacrifices these people made to assure their posterity of success and happiness.

This is an important issue of the *Journal*. There is much we can all learn and do in the effort to overcome disease and bring happiness to some of our Father in Heaven's children. Hopefully, we can each be of assistance in achieving these international humanitarian goals.

Bruce H. Woolley, Pharm.D.
EXECUTIVE VICE PRESIDENT AND EDITOR

About Collegium Aesculapium

In a troubled world, physicians and healthcare professionals who are members of the Church of Jesus Christ of Latter-day Saints have the benefit of spiritual insights as well as the art and science of medicine.

Collegium Aesculapium addresses the ethical and spiritual as well as the physical aspects of medicine. Thus, we invite qualified professionals to embrace the Collegium and take advantage of insightful meetings and seminars, newsletters, service opportunities, and the *Journal of Collegium Aesculapium*, all of which include this important expanded dimension, as well as the constantly changing body of scientific information available to us.

For more information, see http://www.collegiumaesculapium.org.

How to join Collegium Aesculapium

Collegium Aesculapium encourages physicians, podiatrists, and doctors of pharmacy to become active Members of the organization ($200 per year). Special rates are available for retired health professionals ($100) and professionals in their first two years of practice ($50). Nurses, physical therapists, pharmacists and others interested in Collegium are invited to join as Associate Members ($100 per year). Residents ($35) as well as medical students and upper-class premedical students ($10) are also invited join the Collegium.

To join, send name, address, and membership fees to:

Collegium Aesculapium Foundation, Inc.
493 S. Orem Blvd.
Orem, UT 84058

Collegium Aesculapium Board and Past Presidents

PAST PRESIDENTS

1982	Robert H. Hales (*deceased)*
1983	Richard A. Call II
1984	John C. Nelson
1985	N. Lee Smith
1986	Robert D. Jones
1987	Roger L. Hiatt Sr.
1988	Joseph G. Cramer
1989	Lattimer H. Ford (*deceased)*
1990	Homer S. Ellsworth
1991	Larry Noble
1992	G. Michael Vincent
1993	Sydney A. Horrocks (*deceased)*
1994	Blayne Hirsche (*deceased)*
1995	Richard B. Sampson
1996	Marian M. Brubaker
1997/8	James M. Clayton
1999	Joseph P. Hardy
2000	Thomas N. Spackman
2001	Lloyd Call
2002	George Van Komen
2003	Swen Swensen
2004	Marv Orrock
2005	James L. Parkin
2006	James H. Pingree

Cover: Bruges bell tower and The Rozenhoedkaai in Belgium (Martin Child/Getty Images)

THE JOURNAL OF
COLLEGIUM AESCULAPIUM
FALL 2007

Manuscripts considered for publication in the *Journal of Collegium Aesculapium* must be clinically appropriate and spiritually consistant with the principles and doctrines of The Church of Jesus Christ of Latter-day Saints. All manuscripts must be clearly written and submitted in a double-spaced 12-point font in a Microsoft Word or WordPerfect e-mail attachment. A manuscript that meets these standards is peer reviewed by several members of the editorial board and is evaluated with the reviews by the editorial staff. After suggested content adjustments are made, an article may be accepted, edited to our standards of style and readable writing, and published in the *Journal*.

Manuscript submissions should be emailed to:
bruce@collegiumaesculapium.org

The Journal of Collegium Aesculapium is a peer-reviewed journal published by the Collegium Aesculapium Foundation, Inc. Articles published in the *Journal* are the sole responsibility of their respective authors, and do not necessarily reflect the opinion of the organization or any sponsoring or affiliated institutions.

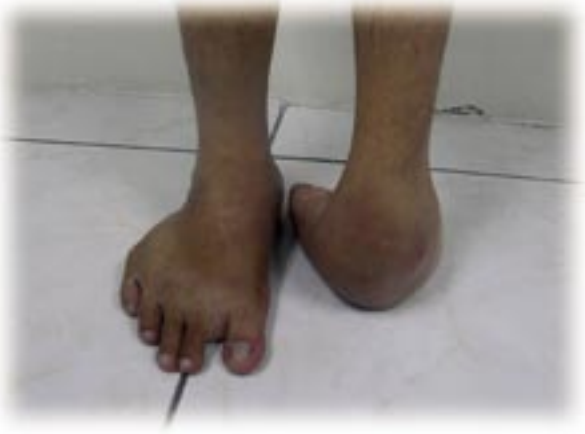
The Journal of Collegium Aesculapium

FALL 2007

The Little Man *from* Borneo

by Glen C. Griffin, M.D.

IMAGINE BEING BORN with both of your hands turned at the wrists at right angles. And what if your left foot were so deformed it was going backward instead of forward? This is how Rida Sagih was born. I met this little man from Borneo in 2001 at a Church social in Kuching, East Malaysia, on our medical mission in Asia. He was barefoot because even if he could have afforded shoes, the left one wouldn't fit on a foot going the wrong way. But Rida never complained. He wore a big smile, along with his tattered shirt and sagging pants.



A new world had opened up for Rida when he learned about Jesus Christ and His gospel from the LDS missionaries. Rida was so thrilled that he was teaching others about what he had learned. He was happy even though his brothers and others were angry at him for his new religion.

As I talked with him, I learned that he made envelopes. Can you imagine being able to run an envelope machine, folding 1,000 envelopes a day with his severely deformed hands? I didn't know until much later the many other things Rida does in spite of his deformities. He takes care of himself and helps others in a group home. He can get his clothes on and off quickly. He writes. He draws. He prepares food. He cooks. He sings. He swims. And he cuts hair! He says that it takes him 30 or 40 minutes to give someone a haircut, but he does a good job of this and anything he is asked to do. And even with his left foot going backwards, Rida walks quickly, keeping up with others. He can even run. Rida is also creative and very bright. When given a pair of sandal shoes, Rida went to work redesigning, modifying, and reconstructing the left one so it would work on his backwards left foot.

That night at the church social, I didn't talk with him about his birth defects or about the possibility that surgery might correct them. However, I did visit the nearby government hospital with its rows of beds in big wards. It reminded me of pictures I'd seen of a civil war hospital—not an inspiring sight. The private hospital in Kuching is very nice but the excellent orthopedic surgeon there had no experience in

correcting deformities like Rida's and was not enthusiastic about trying. Besides, the costs there would have been very high. A miracle that could correct Rida's deformities seemed a long way away.

Returning to Singapore from Sarawak, I told my friend Jim Ellis about Rida. Jim, a problem solver and high priest group leader of the Singapore 1st Ward, brought his friend Zelma Lazurus to our apartment for a visit. Mrs. Lazarus had created India's magic hospital train on which surgical miracles were performed, including those with terrible deformities. Telling her about Rida, she said if we could get him to India, they would take care of him. Being careful to ensure Rida understood that we couldn't promise anything, with the help of Jacob Kong, X-rays and consultations were obtained in Kuching which we sent to India. Jacob even helped Rida get a passport while Jim Ellis raised money for Rida's flight to India. After initial encouragement, things changed. A new chief surgeon at the magic train thought Rida's problems were too extensive—ending that possibility. Trying to regroup, we thought maybe Rida could have the surgery somewhere else—perhaps at the world-class Bumrungrad Hospital in Bangkok, or perhaps at a major medical center in the United States. But one discouraging thing happened after another. First, all of Rida's original X-rays were lost—somewhere in India. All we had were photos I had taken of the films with my digital camera. Then 9/11 happened. As the whole world was turned upside down, our travel was greatly limited. Besides the great disappointment of not getting surgical help in India for Rida, our medical mission in Asia came to an end without us ever getting to see Rida again.

Jim Ellis and I kept in touch, trying to come up with a way to arrange for surgical reconstruction of Rida's hands and foot. Various contacts were made with those we thought could help—but the next few years went by with absolutely no success. One doesn't easily forget someone like Rida, especially when his faith remained strong even with one disappointment after another. Besides making envelopes, he does everything he is asked to do in the church. He pays his tithing regularly on his salary which is now the equivalent of $59 per month. Worthy for temple ordinances and blessings, friends helped Rida with funds to travel to the Philippines where he obtained them in the Manila Temple. Then in 2006 a person posing as a plastic surgeon from Denmark promised Rida he would arrange for reconstructive surgery and care in Europe. But the man disappeared after skimming some of the money set aside for Rida—as we learned he had done to others in Holland and other countries. The resulting heartache, disappointment, and spiritual disillusionment were almost too much for even the strong faith of the little man from Borneo.

Then in the summer of 2007, while cleaning things up around the house, Jim Ellis's son, Nick, found the pictures of Rida and his X-rays showing Rida's deformed hands and foot. He brought them to his father. With a strong feeling that he had to do something now, Jim took the photos to the Singapore General Hospital. The surgeon was too busy to talk with him directly, but relayed through a nurse that he thought the defects were operable. After more prayer and pondering about what to do, Jim decided to go to the National University Hospital in Singapore. Not surprisingly, he was told he would need an appointment

One doesn't easily forget someone like Rida, especially when his faith remained strong even with one disappointment after another.

and would have to pay a consultation fee to talk with one of the orthopedic surgeons about Rida. But the next day when Jim returned to the hospital, he just sat down and waited outside the office of Dr. Aymeric Lim, who Jim had learned was one of Asia's leading hand surgeons. Even though Jim didn't have an appointment, Dr. Lim invited Jim into his office. As Jim started explaining about Rida, a little man from Borneo with severe deformities of his hands and foot, Dr. Lim asked if Rida belonged to the "Iban" tribe in the Sandakan region. Astonished that the doctor had identified Rida's origin without having been given a clue, Jim asked, "How did you know?" It was quickly apparent that there was much more going on than coincidence. Dr. Lim explained that he was born in Sandakan of a Chinese father and a French mother, but that they had moved to Singapore when he was two years old. Looking at the photographs of Rida's hands and feet, along with the digital X-rays, Dr. Lim asked if this was a "missionary or church situation," quickly offering to perform the surgery on Rida's hands without charge, adding that he would instruct the hospital billing office to reduce all the other hospital charges.

Dr. Lim arranged for evaluations and consultations for the next Monday and he cleared his schedule of everything else for the following day so he and his surgical team could perform reconstructive surgery on Rida's right hand the very next day. This was unbelievable—especially for a problem that had been going on for 52 years. After all the disappointments that had occurred for Rida, and for those of us trying to get surgical care for him, all of a sudden, the door had been opened to a great reconstructive surgeon

who also just happened to be a compassionate and loving humanitarian with a strong Christian faith. Jim Ellis was seeing miracles unfold. Jim was an important part of these miracles. He thought and thought, and prayed and prayed, and then followed the directions of the Spirit. Phone calls and e-mails to Sarawak and to Utah followed.

Without hesitation, Jim arranged for Rida to fly to Singapore from Kuching, Sarawak in East Malaysia, with his friend and church leader, Jacob Kong, who bridged the language barrier from Malay to English. On a beautiful August day, a very humble Rida arrived in Singapore at the National University Hospital where he was treated like royalty. X-rays and lab tests were performed. A surgical team, led by Dr. Lim, evaluated him thoroughly. Innovative surgical strategies were formulated. And incredibly, as promised, the very next morning, Dr. Lim and his team operated on Rida's right hand, putting in a steel plate to support the structures which had been 90 degrees out of alignment for all those years. A molded splint was put on to keep the hand alignment in place. Two days later when the splint was removed, Rida couldn't believe what he was seeing—his right hand, wrist, and forearm were now straight, like other people's. Tears rolled down his cheeks as he explained what it meant for his dream coming true that his hands and wrists could become straight.

There is some concern that after all these years, the reconstruction of Rida's hand with his soft bones and unused muscles may not be able to support much weight. But even in the worst case scenario, his rebuilt right hand will be much more functional than it has ever been before. Rida tearfully expressed gratitude to the Lord to all of us who helped make this possible.

What next? Rida wouldn't be making envelopes for the next few weeks, as healing and strength occurred following the surgery. A protective plastic splint was molded to provide support, day and night. Then the splint came off at night, while it continued to be used in the day for the next few months. Hopefully soon, Rida will return to Singapore for Dr. Lim to reconstruct his left hand. Since Rida is left-handed, this will be a very important next step.

What about Rida's reversed left foot? Someone in Kuching frightened him saying that if it were operated on, he may lose his foot or leg in the process, so Rida has not consented yet to have foot surgery. And so far we haven't found an orthopedic surgeon with experience in repairing a reversed foot deformity like Rida's. If you or an orthopedist you know does, please contact us (information below). Someone may even want to travel to Singapore or East Malaysia to be involved in the surgery—or perhaps arrange for Rida to have the needed surgery somewhere in the United States. After his other hand has been reconstructed, hopefully Rida's backward foot can be reconstructed.

I continue to pray for our friend Rida, the little man from Borneo. I've never met anyone with so many needs who expected so little. In fact, he doesn't ask for or expect anything. But now as he looks at his right hand, wrist, and arm that are straight, he is very, very grateful. We are blessed with the generosity of Dr. Lim, a true disciple of Christ, for waiving all his fees for reconstructing Rida's hands. The surgeons assisting Dr. Lim also waived their fees. However, the hospital and ancillary costs, to say nothing of flights back and forth from Borneo, are costly.

Obviously it isn't possible for you, or me, to solve everyone's problems. But, looking back, I wish I had been more generous than I've been at times, such as for those poor souls we saw crawling on the streets in Cambodia whose arms and legs had been blown off by land mines set years ago by the evil Khmer Rouge. I felt bad for them, and should have given them something—but I didn't. I'd like to go back to Phnom Penh and give each one some money. I can't. But I can help Rida, and perhaps you can too.

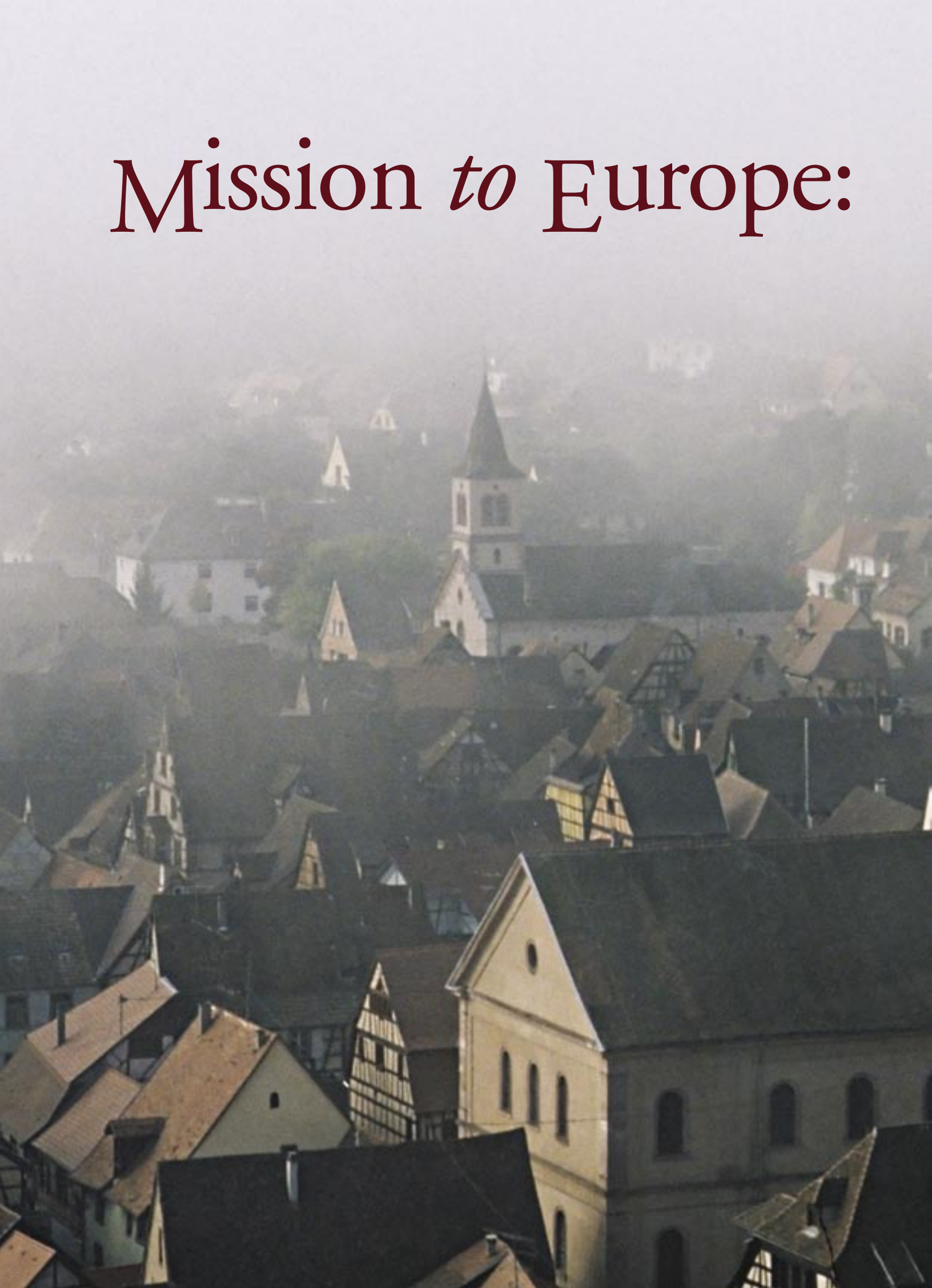
Rida reminds me of the story of the starfish who would die on the beach from the heat of the morning sun. The boy was picking up starfish and throwing them out to sea. A man laughed at him saying that there were thousands of starfish on the beach—and he couldn't save them all. The boy picked up another starfish and as he tossed it back into the water, said "Well, it will sure make a difference to this one." And fixing Rida's very deformed hands, and hopefully his foot, will sure make a difference to Rida.

If you haven't already planned on serving a medical mission for the Church with your spouse, I hope you will start planning. My wife and I wanted to be senior missionaries "some day," but we kept putting it off. And as an over-the-hill pediatrician, I was reluctant to serve a medical mission. But going on this mission turned out to be one inspiring experience after another. We worked with mission presidents, their wives, and missionaries in 10 missions and traveled in 12 countries. When I didn't know what to do, answers came by inspiration and from the missionary medical committee and expert consultants. And besides the medical part of our mission, we had the opportunity to teach several the gospel of Jesus Christ, and to perform baptisms, making friends who have become just like family. But these are stories for another day and perhaps another article.

Glen C. Griffin, M.D. is a retired pediatrician and former editor-in-chief of PostGraduate Medicine *and the* Journal of Collegium Aesculapium. *He served as regional medical advisor in Singapore and then as Asia area medical advisor in 2001-2002.*

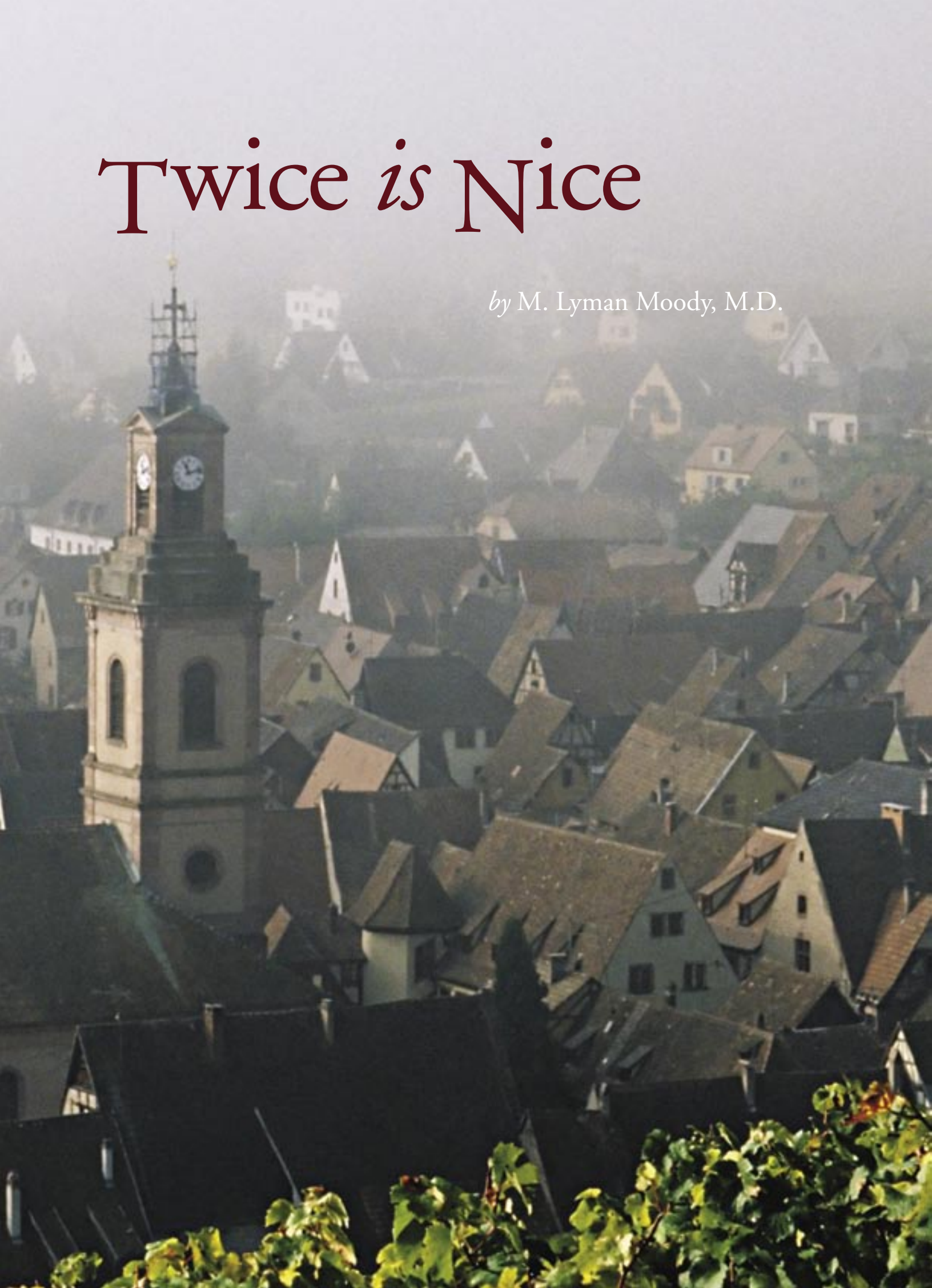
Those wishing to help Rida should contact Dr. Griffin at 801-491-9772 or glencgriffin@mac.com.

Mission *to* Europe:



Twice *is* Nice

by M. Lyman Moody, M.D.



RETIRING AT AGE 65 AND GOING ON A MISSION SOUNDED GOOD TO BOTH ME AND MY WIFE. Dr. Quinton Harris had been talking to me for several years, motivating me to serve a mission as an area medical advisor. Having felt some concern about my medical practice during our absence, I learned of an internist who wanted to come to Provo and join my partner. He wanted to come the year before I turned 65, and it seemed advisable for this new doctor to be added to the practice. Things were running a little slow for him since he was new in town, so we decided to submit our mission papers 6 months earlier than planned and leave him to take over for me. His appearance was a testimony of how the Lord opens the way for us to serve Him.

When we submitted our missionary papers at the end of October 2001, I mentioned that I would really like to go to Germany since I had served there as a young missionary and had made an effort to keep up my language skills. Our anticipation mounted with each day that passed as we waited for our assignment. On December 9, we finally had the treasured envelope in our hands and we opened it at an excited gathering of our children and grandchildren. The letter read that we were called to serve as medical advisors in the Europe Central Area working out of Frankfurt, Germany. We were to report to the Missionary Training Center in March 2002.

The preparations were on. Besides the usual preparations, purchases, and packing, there were decisions to be made:

1. What to do with our home?
2. Who would handle our affairs locally while we were gone?
3. How would we arrange and handle our banking and financial matters while we were away?
4. What were to be the arrangements for the practice and my returning to it?

In January, two months before entering the MTC, the telephone rang, and I found myself speaking with Elder Jeffrey R. Holland, who had been a patient of mine while he lived in Provo. He indicated that he needed to visit with me and my wife, and since he was coming to Provo for business in three days, we arranged to meet at the MTC. My wife and I both felt that he would notify us of a change in our mission call. I was having thoughts of Africa, Latin America, or other places very foreign to me. Neither of us slept well the ensuing three nights.

Sunday morning we met with Elder Holland at the MTC. After exchanging pleasantries, he got down to the matter at hand. They had been advised that two doctors were needed in the Europe Central area but on closer evaluation, they concluded that there was a much greater need for a medical advisor in Madrid, Spain, to serve the continental Europe West Missions as well as take care of the medical needs at the Spain Madrid MTC. My wife speaks French and Portuguese, and was excited for this change. And although my dream mission to Germany was put off, I have always believed in "going where you want me to go." We felt peace in agreeing to the change.

So we shifted gears, applied for a Spanish visa and got Spanish tutoring at the MTC. All of my German things went back on the shelf. Our MTC entry date remained the same, and we were soon on our way to Madrid. The previous medical advisor there had returned a few weeks early because of an urgent medical need of his own, so we were able to visit with him and his wife before we left Provo.

We were welcomed at the airport by the Madrid MTC president and the Madrid mission president, who took us to our apartment located a block from Temple Square in Madrid. The Square included the temple, the stake center, and the MTC building. The MTC was comprised of housing for the missionaries and the MTC president, apartments for the temple president and the temple missionaries, rooms for the temple patrons, and a Church distribution center. We were warmly welcomed with a meal in the MTC cafeteria and the next day the Madrid mission office couple took us shopping.

Medically my assignment was not difficult, but very rewarding. I had a cellular phone, a standard phone, and a fax line in our apartment as well as phone and fax lines for my use in the MTC. It was phone medicine like I had frequently done in a busy office practice, but the ratios were reversed. At home it had been 90-95% hands-on practice in the hospital and the office and 5-10% telephone medicine. As a medical advisor it was 90-95% telephone and 5-10 % hands-on serving the missionaries in the MTC and the Madrid mission.

The history and physical exam were basic for our treatment. Under my direction the physical exam would be done by the missionary, and it was surprising how well the missionaries could do this (though it sometimes took a lot of time and patience). Most of the health problems were self limited but if there was a question, I would always call back to watch the progression of the problem. Each mission also had lists of doctors which we used if we felt the missionary needed hands-on care.

The promptings of the Spirit would frequently clarify the problem and the approach to the solution. This was particularly so in a specific case of carbon monoxide [CO] poisoning. As I talked to the missionaries who had first called the mission president's wife, it came clearly to

MISSION 1: SPAIN

my mind. Both had headaches and one was starting to become confused. I argued with myself about making that diagnosis but when the impression didn't go away, I told the elders to take a taxi to the emergency room and tell the doctor that they had CO poisoning. I then called the mission president's wife and told her to make sure the missionaries got out of the apartment. She had to call a member of the branch to go over and take them to the ER. After waiting for two to three hours in the ER, their carboxy-hemaglobin levels were between 25 and 30. Thanks to the whisperings of the Spirit, these elders recovered well.

Our major challenges included adjusting to the culture, unfamiliar food, the foreign language, and the difference between our expectations and the realities. For Evelyn, my wife, it was more challenging. She came with an undefined role for her mission and had to look for something to do. Within a few months, we were singing in the choir at Temple Square. She was teaching Relief Society and I was teaching Priesthood in the International Branch. We attended the temple twice each week in addition to our duties as medical advisors. Soon we had additional callings, I as a counselor in the MTC presidency and Evelyn as a counselor to the MTC president's wife in the MTC Relief Society. Our time was valuably used in making presentations on disease prevention at the MTC as well as traveling to make presentations to the missionaries in their Zone Conferences in the missions of Spain, Portugal, France, Switzerland, Italy, and Cape Verde.

Talking regularly with the mission presidents, their wives, and the missionaries, the most common medical problems became apparent. These included:

1. Stress-related issues with companionship relations, unmet expectations, family and home problems that resulted in anxiety and depression. Headaches, abdominal pain, and fatigue, were also common manifestations of stress.

2. Infectious diseases including infections of the respiratory, GI, integumentary systems. Injuries also resulted in secondary infections. (There was a lot of allergic rhinitis that was in the differential diagnosis with respiratory illnesses.)

3. Abdominal pain from constipation and IBS, much of which was related to inadequate fiber and liquid intake as well as stress.

4. Skin rashes, most of which were due to atopic dermatitis, and dry skin syndrome. Viral exanthums were also quite common. (Most of these were thought by the missionaries to be allergic but went away in 7 to 10 days.)

5. Injuries in regular missionary activities as well as the multiple injuries that occur on preparation day. The latter were very common and were more frequent in the most competitive missionaries and were associated with a history of recurrent sport injuries.

We tailored our presentations in zone conferences to instruct the missionaries in a preventive way to reduce many of these medical problems.

If a missionary called with an unusual problem for which I had no immediate answer, I called doctors at home or those posted to help in the medical office of the Missionary Department. Using the cellular phone when we were traveling allowed me to always be available in all of the European Union countries. When we traveled to Cape Verde, I made arrangements for the doctor in England or Germany to cover for me if I could not be reached.

Our original call was for 18 months, but we were able to extend to 23 months, which proved to be a great blessing to us. We arrived home in February of 2004.

After returning home, I returned to my practice for one day per week and spent another day or two each week with helping with the MTC in Provo and the Missionary Department's medical office in Salt Lake City. Evelyn enjoyed being a grandmother—we had 4 new grandchildren born while we were in Spain. We moved into a smaller home with a smaller yard to simplify things and prepare for a second mission.

We put in our papers again in December of 2004. In January we received our call to serve as area medical advisors, again in the Central Europe Area, Frankfurt, Germany. We reported to the MTC in May 2005. This time, there was no mission change.

Arriving in Frankfurt, we were met at the airport by the departing medical advisor and his wife. They had been living in Bad Vilbel, about 20 minutes from the area office building. We were given the opportunity to accept a two-bedroom apartment conveniently located about 60 yards from the area office building and not live in the established housing with a commute. In our apartment there were two telephone lines and a high speed wireless Internet line. We had a spacious office in the area office building with two desks and two computers.

The Frankfurt mission president asked us to attend the Hoechst Ward, which is in a suburb of Frankfurt and the home of Hoechst Chemicals and Pharmaceuticals. I was called as an assistant in the high priests group and Evelyn was called as the music director and choir leader. A large percentage of the people in Germany speak English and an even larger percentage of the Church members speak English. Once a week we attended the temple in Friedrichsdorf, a 20 to 30 minute drive from our apartment.

The adjustment to our new mission and surroundings was quite natural for me. I simply returned to the medical business. The problems of the missionaries were about the same as in our mission in Europe West. Evelyn, however, found a more difficult transition in Frankfurt without an MTC and temple close by. She had to exercise faith and prayer on a daily basis to discover what her German mission was to entail. The spouse of the physician usually has the more difficult transition. Evelyn found her mission in doing family history research—mostly on the Internet—with great success, and in writing histories. She also blessed the lives of the rather large group of sisters also serving missions, and enjoyed helping with ward music activities.

Europe Central was a much different experience than our first mission. The area consisted of the more Westernized countries of Germany, Denmark, Norway, Sweden, Finland, Austria, Greece, Cyprus and Slovenia as well as the former Soviet block nations of Poland, Czech Republic, Slovak Republic, Albania, Hungary, Romania, Croatia, and Serbia. The senior missionaries serving in the Middle East and Egypt were also under our care. Several of the missions are composed of two or three countries each with different languages. There were 28 languages spoken in the area.

MISSION 2: GERMANY

For our visits to the zone conferences in the various missions, we further refined the teaching program we had used in Europe West. We instructed the missionaries from the scriptures in stress management and preventive medicine. The mission presidents gave us information on what they felt was most necessary in their missions. After instructing the missionaries in a mission, we found that calls from that mission would decrease.

During our two missions we were able to help the missionaries with their medical problems, their stress, and their fears. We also were able to help significantly lower medical costs in the area by reducing the need for missionaries to visit local doctors.

We were also blessed to observe many miracles of healing as the missionaries used their priesthood. The Lord protected the missionaries and protected us as we served. These missions have been highlights in our lives. It was an inspiration as well as a privilege to work with the area presidencies, the mission presidents, their wives, the young missionaries, the senior missionaries, and the members of the Church in Spain and Germany and all over Europe. We look forward to being able to spend more time in service in the Lord's kingdom.

M. Lyman Moody, M.D., is a retired internal medicine physician. He served as the area medical advisor for both the Europe West and the Europe Central Areas.

Tuberculosis:
9 Things
Every LDS Physician Should Know

by Val G. Hemming, M.D.

In 1882 Robert Koch, an obscure German physician, reported his discovery of the microorganism that caused tuberculosis.[1] Now 125 years later, untreated tuberculosis, phthisis or consumption remains an unforgiving pathogen for millions of humans, especially the poor, the very young, the elderly and the immune compromised.

The long association of mycobacterial species, *Mycobacterium tuberculosis* (MTB) and its cousins *Mycobacterium bovis* and *Mycobacterium africanus*, with humans and livestock has been extremely successful from the evolutionary perspective of these organisms. Tuberculosis is an ancient human affliction with evidence of disease found in Egyptian mummies and portrayed in Egyptian tomb paintings.[2]

The organisms survive because most infections in humans and animals are chronic, persisting for months or years and often for the lifetime of the host. Only about 10 percent of humans who become infected experience chronic infections in organs that permit transmission of bacteria to others. Among the 10 percent, only a small proportion, usually children, develop serious disease following the primary infection. The remaining infections represent reactivation disease following primary infection. These infections are responsible for the spread of tuberculosis to susceptible persons who are exposed to host pulmonary or other infected body secretions. The other ninety percent who acquire MTB will live the remainder of their lives unaware of their infection.

During the past sixty years physicians and scientists have discovered much new information about the epidemiology and biology of these organisms. Effective antimicrobial drugs permitting treatment and cure were developed. Improved diagnostic tools became available. Recently the genome of *M. tuberculosis* was sequenced. To many lay people and health professionals it seems that tuberculosis has been conquered. Unfortunately, such is not the case. Though tuberculosis is no longer common in North America and Western Europe, it remains endemic and a common cause of serious disability and death in much of the rest of the world. Indeed, the World Health Organization estimates that nearly a third of the world's population has been or is presently infected. They estimate that more than two million persons die each year from complications of tuberculosis.

In 2007 very few realize the huge impact of MTB on our nineteenth century Latter-day Saint forbearers. The disease was endemic in nineteenth-century northern Europe and United States. Lucy Mack Smith sadly recounted the death from consumption of her sister Lovina when Lucy was only 13.[3] Several prominent early LDS leaders succumbed to consumption including Frederick G. Williams, Peter Whitmer, Jr., Don Carlos Smith, and Oliver Cowdery. Brigham Young's mother Abigail died of tuberculosis at age 49 when Brigham was 14, a great tragedy for the Young family and particularly traumatic for teenaged Brigham. Brigham's father found it difficult to keep his large family together after his wife died. Brigham, born in 1801, was sent off to support himself at age 16. He married Miriam Angeline Works in 1824. By 1830 she was seriously ill with consumption and unable to care for her husband and small family. She died in 1834 leaving Brigham with two young daughters. By age 33 Brigham had lost the two most important women in his life to tuberculosis. Some 106 years later, 8-year-old Dallin H. Oaks lost his father to still-untreatable tuberculosis in 1940.

Before anti-tuberculous therapy became generally available about 1950, a diagnosis of pulmonary tuberculosis was tantamount to a death sentence. Charles Dickens in Nicholas Nickleby, describing the prevailing view of tuberculosis before the availability of treatment wrote:

> "There is a dread disease which so prepares its victim, as it were for death…a dread disease in which the struggle between soul and body is so gradual, quiet, and solemn, and the result so sure, that day by day, and grain by grain, the mortal part wastes and withers away, so that the spirit grows light and sanguine with its lightening load, and, feeling immortality at hand, deems it but a new term of mortal life; a disease in which death and life are so strangely blended, that death takes the glow and hue of life, and life the gaunt and grisly form of death; a disease medicine never cured, wealth never warded off, or poverty could boast exemption from; which sometimes moves in giant strides, and sometimes at a tardy sluggish pace, but, slow or quick, is ever sure and certain." [4]

Church growth since the end of World War II has permitted export of the gospel to the earth's four corners. Missionaries from North America have ventured into communities where tuberculosis is highly prevalent including Central and South America, Asia, Eastern Europe and islands of the Pacific. Recently, the Church's missionary committees have recognized the serious tuberculosis risks experienced by the missionaries sent to these areas and expect that some missionaries called to serve from these areas may have latent or even active tuberculosis.

Recognizing these risks, the Utah Department of Public Health issued a policy statement in 2004 titled "Management of Tuberculosis for LDS Missionaries". Procedures were put in place to identify all prospective missionaries with active or latent MTB infection before they enter the missionary training center; to identify all returning missionaries whose tuberculosis has activated, or who have acquired tuberculosis during their missionary service.[5]

While this policy improves surveillance and increases protection for the citizens of the state of Utah from persons with active pulmonary tuberculosis, there are thousands of missionaries who enter and leave missionary service without ever coming to the Missionary Training Center in

Photo by Grey Villet, Time & Life Pictures/Getty Images. Previous page: Malcolm Linton, Getty Images News.

Patients are treated in a tuberculosis hospital in Worcester, Cape Province, South Africa in 1963. More than 40 years later, the disease still plagues the African continent and other areas of the world.

Provo, Utah. Presently, there are 16 additional missionary training centers located in 16 countries around the world. Many missionaries enter these training centers from parts of the world where tuberculosis is endemic. And, many who attend these training centers are sent to proselyte in areas of the world where tuberculosis is common. While few missionaries presently labor in India and China, two areas with high MTB prevalence, many more will serve in these areas in the future. Substantial numbers of native missionaries, supplemented by men and women from North America, labor in Mexico, Central America, South America, the Philippines, Indonesia and countries of Africa and Eastern Europe. Many of these missionaries live among and work with the poor and poorly housed in the impoverished towns and villages of these countries, places where MTB and HIV are prevalent.

Following are nine issues regarding tuberculosis that I believe every LDS physician or healthcare provider should understand and consider when dealing with departing or returning missionaries or with emigrant members from these areas of the world:

1 Though tuberculosis is uncommon in North America, large numbers of immigrants from areas of the world where MTB is endemic find their way to the United States and Canada.

Many immigrants bring their active or latent MTB infection with them. Further, children living in immigrant households are at high risk for MTB exposure. While the United States experienced record low numbers of new cases of tuberculosis in 2004, the incidence of tuberculosis among non-United States born was almost nine times higher than among those born in the United States.[6]

2 Healthy humans are relatively resistant to tuberculosis infection.

When tubercule bacteria are inhaled—or ingested—the body's immune system usually controls the infection by forming encased areas of inflammatory cells in the lung or adjacent lymph nodes. The encased areas, or granulomas, often contain quiescent but viable tubercle bacilli. Ninety percent of people infected with MTB fully control the infection. They will be unaware of the infection, and will never experience active tuberculosis. A small percentage—estimated to be less than five percent—with primary infection, particularly infants and young children, will develop serious primary tuberculous disease. About ten percent of people who control their primary infection—defined as latent tuberculosis—will at some time in life experience reactivation of their infection and proceed to complicated and often fatal tuberculosis if untreated. When identified these people require preventive therapy.

3 Many physicians and other health practitioners don't understand the important differences in the natural history of tuberculosis in infants, young children and adults.

The differences must be understood to properly counsel people at risk, to develop preventive strategies, and to identify, diagnose and treat infants, children and adults with latent or active tuberculosis. Tuberculosis-infected children under age four are far more likely to develop serious disease during primary infection. Paradoxically, they are less likely to develop latent or reactivation disease during adulthood.[7-8-9]

4 Missionaries from countries where MTB is endemic are sometimes brought to the United States for missionary service or for missionary training.

Proper programs must be in place to identify those at risk, to accurately diagnose and properly treat these persons with latent or active disease to preserve their health and to prevent them from infecting other persons.

5 The incidence of bacterial resistance to anti-tuberculous drugs has gradually increased over the past 50 years.

Resistance to streptomycin and isoniazid appeared early in strains of *M. tuberculosis* but remained relatively uncommon until later in the century. Soon after their introduction for treatment of tuberculosis, bacterial strains resistant to the rifamycins were also observed. Resistance to more than one first-line treatment drug, isoniazid and rifampin, is now defined as multiply resistant tuberculosis (MDR tuberculosis). A recent report from the World Health Organization (WHO) parenthesizes the magnitude of the MTB drug resistance problem. As many as half a million MDR cases occurred in the world in 2004. More than half of these cases occurred in China, India and the Russian Federation.[10] Complicating matters is the increased incidence of extensively drug resistant tuberculosis (XDR) which is now defined as resistance to at least isoniazid and rifampin among first-line anti-TB drugs, resistance to any fluoroquinolone, and resistance to at least one second-line injectable drug (amikacin, capreomycin or kanamycin). XDR was relatively rare until 2006 when several reports appeared. The most sobering was a report from South Africa that XDR had killed 52 of 53 HIV-infected persons in the eastern KwaZulu-Natal region of the country.[11-12] XDR has been recovered in many other parts of the world including the United States.

6 As the HIV-1 epidemic has spread throughout the world over the past 30 years, it also appeared in many human populations where MTB is endemic.

When persons with symptomatic HIV disease become infected with MTB, or persons with latent MTB infection become HIV-infected, without timely and aggressive chemotherapy, these people experience very high mortality rates. Throughout the world tuberculosis has become a common cause of death among HIV-infected people.

7 The medical research community and the international pharmaceutical research communities have neglected tuberculosis over the past years.

Few new antimicrobial drugs have been developed, tested and approved for treatment of tuberculosis in the past 25 years. The appearance of XDR has made urgent the need for additional efficacious drugs. Yet, few new drugs are presently being tested.

8 Bacille Calmette-Guerin (BCG) vaccine—an attenuated strain of *M. bovis*—was introduced in France in 1921 and is still the only vaccine available.

It is striking that after more than 80 years of MTB vaccine development, there is still no alternative. Unfortunately, people who have had tuberculosis, and were successfully treated, remain susceptible to re-infection. Any preventive vaccine must protect better than natural infection, a daunting challenge for vaccine makers.

BCG remains the standard against which new vaccines must be evaluated and compared. All agree that BCG immunization—with a proper BCG strain—reduces disease severity and reduces mortality from tubercu-

losis in children. It does not prevent infection. For most areas throughout the world where TB is endemic, BCG immunization of infants remains the standard of preventive care.

A serious problem for vaccine development is the very complex nature of human clinical trials necessary to determine vaccine efficacy. Very large populations living in MTB endemic areas would be required and studies would have to be conducted over extremely long time periods. Studies will be difficult to conduct and very expensive. The commonly utilized small animal models, guinea pigs, mice and rabbits, each have problems that make results of vaccine trials predictive of what might happen in humans. Non-human primates are likely the best models but studies are expensive and the numbers of animals required made these models prohibitive. The author and colleagues have been working on an additional rodent model which shows great promise.[13] The cotton rat is permissive of MTB infection and develops typical pulmonary granulomas. The animal, like humans, controls the infection over time clearing its lungs. However, suppression of the immune system in convalescent cotton rats causes reactivation of pulmonary disease, simulating, we believe, latency in humans. We will soon be conducting vaccine trials in these animals.

9 Co-incident with the endemic human tuberculosis, the world continues to struggle with endemic bovine tuberculosis in many animal populations throughout the world.

Beef and milk cow herds in many countries, including the United States, still harbor *M. bovis*. It occurs in a number of wild animal species—badgers in the United Kingdom, opossum in New Zealand, deer, elk, bison, and South African water buffalo. Controlling animal tuberculosis in the wild and preventing reintroduction into cattle and dairy herds is perhaps even more challenging than controlling human tuberculosis. Complicating the bovine tuberculosis story is a form of animal scrofula caused by *M. avium spp. paratuberculosis* which also afflicts domestic cattle and dairy herds.[14] The worldwide incidence of humans acquiring *M. bovis* and *M. avium intracellulare* infections is unknown, but infections are not rare.

During the 177th Semi-annual General Conference in October 2007, Church members were reminded of the international nature of the Church. LDS congregations exist in more than 176 countries and territories. Church members commonly travel throughout the world on church-related business. Church members travel across international borders to participate in temple ordinances and services. Missionaries contact and teach in most of these countries. LDS physicians cannot be sanguine about the challenges to the health of Church members and other world human and animal populations posed by mycobacterial species. We cannot ignore the more than two million people who will die this year from MTB infections. Neither can we ignore the challenging dilemma facing many human populations, such those in west and east Africa, facing coincident HIV and MTB epidemics.

Many of the readers of *The Journal of Collegium Aesculapium* will at some time perform humanitarian service in countries outside of North America. Others will supervise the health of missionaries traveling to or coming from areas of the world where MTB is a serious public health problem. It is imperative that these health care providers understand the epidemiology, natural history and pathogenesis of human and animal tuberculosis so as to provide informed and timely information, diagnostic and treatment services. Being informed is our most important tool in the long battle against MTB infections in the people we serve.

Val G. Hemming, M.D., is a professor emeritus of pediatrics and dean emeritus of the F. Edward Hebert School of Medicine at the Armed Services University.

REFERENCES

1. Koch R. Die Aetiologie der Tuberculose. *Berliner klinische Wochenschrift*. 1882. 19:221.
2, Dormandy, Thomas. *The White Death: A History of Tuberculosis*. 2000. New York, pp 1-2.
3. Proctor SF and Proctor MJ, eds. *The Revised and Enhanced History of Joseph Smith by his Mother*. 1996. Salt Lake City, p 20.
4. Dickins, Charles. *The Life and Adventures of Nicholas Nickleby*. Oxford University Press, Oxford and New York. 1982. pp 637-638.
5. Management of Tuberculosis for LDS Missionaries: http://health.utah.gov/cdc/tbrefugee/resources.htm dated October 20, 2004.
6. MMWR. Trends in Tuberculosis – United States, 2004. 2005(10):245-249.
7. Starke JR. Tuberculosis in children. 2004. *Semin Resp Crit Care Med* 25:353-364.
8. Marais BJ, Gie RP, Schaaf HS, Hesseling AC, Obihara CC, Starke JR, Enarson DA, Donald PR, Beyers N. The natural history of childhood intra-thoracic tuberculosis: a critical review of literature from the pre-chemotherapy era. 2004; *Int J Tuberc Lung Dis* 8:392-402.
9. Nelson LJ, Wells CD, Moore M. Epidemiology of Childhood tuberculosis in the United States, 1993-2001; 2006, *Pediatrics* 333-342.
10. Zignol M, Hosseini S, Wright A, Lambregts-van Weezenbeek C, Nunn P, Watt CJ, Williams BG, Dye C. Global Incidence of Multidrug-resistant Tuberculosis. 2006. *JID* 194:479-485.
11. McGregor S. WHO urges South Africa to curb TB killer. Reuters. Sept. 7, 2006
12. Lawn DL. Extensively drug resistant tuberculosis. 2006; *BMJ*. 333:559-560.
13. Elwood RL, Wilson S, Blanco JCG, Yim K, Pletneva L, Nikonenko B, Samala R, Joshi S, Hemming VG, Trucksis M. The American cotton rat: a novel model for pulmonary tuberculosis. 2006. *Tuberculosis* 87:145-154.
14. The author participated in a symposium titled: *Many Hosts of Mycobacteria: A Comparative Symposium*, Sept. 25-26, 2007 at the National Animal Diseases Center, in Ames, Iowa, sponsored by the U.S. Department of Agriculture, The Howard Hughes Medical Institute and The Albert Einstein College of Medicine.

Collegium, Colleagues, *and* Conversion

BY BENJAMÍN PÉREZ, M.D.
English translation by Cleria Espinoza

How a successful Guatemalan surgeon and academic director crossed paths with Collegium Aesculapium and found friends in helping others — and a whole lot more.

TODAY I AM A HAPPY MAN, FULL OF peace and joy with a great desire to do good, to fight against so much injustice, hunger, illness and social inequality in the world. It has not always been that way. This is my story of how a loving Father in Heaven influenced my life and allowed me to become what I am today.

I am a surgical physician specializing in general surgery. I also have a masters in public administration. Six years ago, life gave me the opportunity to be the founder of the Medicine Major at the Eastern University Center (Centro Universitario de Oriente), a branch of the San Carlos Guatemala University, in Chiquimula.

I have a beautiful family with my wife Arlet Remis de Pérez. I feel that I am not worthy enough to deserve her love. I also have two daughters, Arlet Dinora and Alejandra Marisol. They are an inexhaustible spring full of purity, kindness and love to nurture my existence day by day, and I feel an indescribable love for them.

I can say that for many years my Father in Heaven has been providing me with many blessings. He gave me many talents, as the parable says, but, maybe because of my selfishness, I never felt I had any responsibility or was grateful to Him. I was simply happy with what I had, but always trying to reach higher goals to better myself to climb to a higher position in society. I do not think it is wrong to have goals and ambitions, but there are more important things in life that without a doubt will give us much joy—for example, trying to be better each day in our inner self. I am now facing one of the biggest challenges in my life, to overcome haughtiness, pride, and human defects to deserve the highest prize that a human being can receive, grace from our Lord and Savior.

When writing about my conversion, I do not really know where to begin, because I am convinced that my Father has been preparing me my whole life. He has molded this imperfect human being with wisdom, patience, and love. With much effort, I think He has been transforming me to a better person. However, to share this testimony with you I will concentrate on the events that in the past years have been marking my life to lead me to The Church of Jesus Christ of Latter-day Saints.

Before I became a surgeon specialist, around 1999, I lived in Guatemala City, a very large city. About that time, I felt in my heart the fervent desire to move to a small town where I could find peace. I thought I could have better quality of life, not surrounded by noisy people and a lot of traffic, and where my activities would not be focused entirely on gaining a higher social position. This challenge has been with me throughout my life. It was expected of me. It seems to me I was a born leader with all the loneliness that comes with it. This may sound like a contradiction, but leaders who read this will know what I am talking about.

However, when I moved to Chiquimula, a more country town located in the eastern side of my beautiful country, I realized that the reasons for my departure from Guatemala City would not be fulfilled simply by putting down roots somewhere else. It was not the place that would determine my worries, it was my spirit, always full of dreams, projects, and the desire to build a better place wherever I go. As this realization settled in, I also learned why I was there.

After about six months of living in that beautiful place, I received a phone call that I considered the greatest challenge of my life. I was assigned to organize the Physicians and Surgeons Major at the Eastern Center University. I did not know how to possibly do it, nor even where to begin. I realize now that the decision to accept that assignment came from my heart, not from my mind. At present, this is one of the best organized projects in the region. I mention this not because it is the central theme I wish to share, but because it is a very important part of my life, and because it was through these means that the Lord showed me the way to His restored Church.

The medicine major project began in 2001, and in 2002 through the President of the Eastern Center University (Centro Universitario de Oriente), Mr. Mario Díaz, I met a member of the Brigham Young University Benson Institute by the name of Luis V. Espinoza who for many years had been participating in agricultural projects in Guatemala. We became great friends. I saw in him a vivacious person, full of nobility who radiated peace and kindness. I remember that we only talked a few times, but our conversations were very profound.

I told him what we were doing in our medicine project and my dreams of serving the people of this area. I believe that somehow he was interested in what I said. Through him I had the opportunity to meet another person from BYU, Dr. Bruce Woolley; he also impressed me for his simpleness, kindness, and his sincere friendship. At this point I thought, now I know two people coming from Utah with the same characteristics. He shared his knowledge with me; he presented lectures to students, faculty, and us. The final day of his stay we visited an archeological site along with Luis and some medical students. There, I had the opportunity to observe, apart from what I already knew, that they had healthy lives, without drinking alcohol or smoking, and always drinking water instead of drinks with stimulants. This situation was new and surprising; because of my position, I was constantly fulfilling inter-institutional assignments where there was never a lack of liquor. Now, I was sharing with sound individuals who considered their bodies temples to keep the spirit their

God had given them as a gift of life. Before they departed, I knew this was the beginning of a great friendship.

I was observant of those Mormons, and I felt happy, but I was not interested in taking any part of that. I knew it would demand a big change in my life, and I was not ready to do it. I never had any vices that I could not control; however, in the many meetings I attended where liquor and other strong drinks were present, I considered that I would be a bad host if I did not participate.

I know now that when we please the Lord and fulfill His ordinances we do not need allies such as liquor and cigarettes to please our guests. That is because we have the true Ally who does not allow resistance, who projects love without comparison and a conviction without precedent. He is our Lord Jesus Christ.

Later on in 2004, I met another LDS man, Dr. Allen C. Christensen, a very tall man with a calm face and a kind look who instilled trust. At that time he was coming to evaluate the work of the Benson Institute and we really did not share much time together; however, I was impressed when he talked about Chiquimula and his love and desire to continue working to benefit the needy population.

Time went by and I developed a great friendship with all these people. We called each other and I began to receive medical textbooks from the Collegium Aesculapium. I continued observing from afar the characteristics of my new friends from Utah.

It was near the end of 2005 when Luis V. Espinoza and Dr. Christensen traveled to Chiquimula to share their knowledge with the Medical School. At this time, I had the opportunity to invite them to my home, together with my family. As a gesture of courtesy, they came and together we dined on food my wife had prepared for the occasion. Soon after, I asked a few questions about the Church and how it was a guide in their lives. They talked to me with such conviction that I couldn't help but feel the Spirit. Once we finished our dinner, they requested from me two things. First was that I receive the missionaries when they visited my home. I accepted because this was a request from my friends. Second, they asked me if they might offer a prayer on behalf of my family. I accepted immediately. Dr. Christensen offered the prayer that night, and Luis translated as usual. My wife and I were very pleased with such a beautiful visit, full of spirituality. I believe they felt the same.

My wife and I commented later to each other on what a blessing it had been to receive these people and how much they had the Lord in their hearts. We felt very happy to have such special friends.

Some time later, the missionaries came to our home and as we promised our friends, we listened to their message; however, to be honest, I believe those elders were a little surprised with our questions about the Church and Joseph Smith. They answered those questions very well, but when we asked about the organization and government of the Church, the female participation in the Church and how the apostles and seventies were called, they did not know how to give us all the answers. I believe they left very dismayed and they never returned to our home, which made us very sad. I recognize that we showed no mercy with the questions we asked. My wife, who is also a physician, does not accept messages without processing some logical reasoning, but she was kinder to them that night.

Soon after, Dr. Carolyn Monahan visited our university to share with us her knowledge in pediatrics. Here was another wonderful person. Seeing her love and dedication while she was there, and knowing she was a member of Collegium Aesculapium, I thought to myself, "It really is true that all the Mormons are excellent individuals. They practice their beliefs and with that, they are an example of life."

Over time my desire to visit Utah and see these people and their social environment had been increasing, but I did not know how or when such a visit could take place. However, my desire was granted soon thereafter.

My wife and I were invited to attend a meeting of the Collegium Aesculapium in Salt Lake City, Utah, in March 2006. This was the first time we had visited the United States; we stopped in Houston and had some difficulties with the language and we were ready to return to our country. I understand now that those difficulties were merely obstacles in the way of reaching the place that would change my life. With the delays, we arrived in Salt Lake City four hours late at 1:00 in the morning, but our friends were waiting for us.

The following day Dr. Christensen and Luis took us to visit the Humanitarian Services. Brother and Sister Love gave us a tour and we witnessed all the efforts the Church dedicates to serve the needy throughout the world. My wife and I were very impressed with the kindness LDS people showed and their efforts to serve the world. At the time I thought, "Finally, I found a place where people do not fight to be served, but instead are willing to serve, where hate and desire to have power do not exist, but only love. There is kindness and desire to make this world a better place, where human beings of this world feel the caress of a friendly hand that says, 'Do not suffer; I am here fighting for you so you can receive what you do not have,' thus fulfilling the words of our Lord Jesus Christ to 'cover the naked and feed the hungry.'" At that time, I felt a fire burning in my heart, and I felt full of hope to see a better world.

Later, we visited Deseret Industries where we witnessed the work and solidarity of projects by the members of the Church. I learned how this help was so dignifying

through the work, where people with some limitations were accepted, making them feel useful to society. They explained to me how the organization worked in wards, stakes, and other organizations. I thought this was fabulous.

I remember that after visiting many places and knowing that in Chiquimula, the area where I was coming from, the Church has grown very slowly, I asked Dr. Christensen, "How is it that this marvelous Church has not grown, as it is supposed to be?" He answered, "Well, I am asking myself the same question." With this short answer full of meaning, that day was ending, but I did not understand why my heart was overwhelmed with happiness.

That night we attended the Collegium Aesculapium dinner. It was apparent that my new Collegium colleagues had spoken about our work in Chiquimula because many people seemed to know my wife and me. Everybody was very cordial and I was surprised to find out how so many people were willing to help my country in different ways. Even more, knowing that they were doing this only from a desire to serve was marvelous to me.

Luis asked me if I would like to attend a religious service program on Sunday. I accepted the invitation. That morning, my wife and I got ready to attend what we thought would be a regular service at the church where our friends attend. I did not have the slightest idea about the nature of this special invitation from my friend. He even told me that President Gordon B. Hinckley would be there, and I naively replied, "I hope I have the opportunity to talk to him." Luis politely responded, "I believe it is going to be very difficult, but you will be very close to him."

When we arrived at the conference and I saw so many people from so many places hoping to get a ticket to get in, I thought, "This is not an ordinary day." When we entered the building, we were not too far from the pulpit. I realized that it really was an honor to be there at the invitation of our friend. The environment in the Conference Center was impressive. The discourses began, but soon the prophet was standing there. At this point, I realized who he was and how impertinent I was to think that I could have an interview with him.

From the moment he began to speak, my heart rejoiced and I realized the deep spirituality of such a man. In simple words he expressed his feelings and gratitude for a lifetime of wonderful experiences in the Church, and urged all of us to cultivate our spirit to reach grace in the eyes of our God. I rejoiced, and from that moment, I decided to investigate the Church upon my return.

That is what I did. When I returned I began to attend church meetings and receive visits from the missionaries at my home. I remember most of their names: Elder Lair, who with his example and kindness had a great influence in my desire to become a member of the Church; also, Elders Peralta, Ruiz, Acevedo, and Harris. We shared precious moments at home every Wednesday. We asked all kind of questions about the Church, its organization, etc. They continued to tell us that we should be baptized, but we didn't feel ready yet. Why? I knew that this would mean a great change in my life, and I was not sure I could do it. I did not want to make the decision and later fail my friends. I wanted to do it by conviction and not just to please somebody special.

About three months went by. The elders, church members, and the bishop came to visit us, but I did not feel the sign showing me the road to follow. Maybe I was looking where I would not find it. Then one day I was reading the Book of Mormon, in 2 Nephi 9: 28-29 and I found what I was waiting for. I realized what I was doing was prideful; I was making my God wait for me. He was knocking at my door and I did not want to open it. This made a great impression on me, and I was afraid to think about what I had been doing. It was that night, as we had dinner with the elders, that I expressed to them my desire to be baptized. My nine-year-old daughter who was also receiving the lessons with us also decided to be baptized. My wife did not say anything, and I respected her decision.

The day we met with our bishop, we went with my wife. When she saw that my daughter and I had made the decision to be baptized, I believe that she understood that her spiritual path should be the same as the rest of the family. She was convinced that the Church had principles based on the family, and through a healthy spiritual growth she decided to be baptized with us. This was a happy moment for me.

Now, the three of us are baptized. We are attending church and slowly learning the teachings. We are trying to overcome our faults, and we try to be better people every day. The road is not easy; we have to overcome many temptations, sacrifice a few things, and change some priorities. However, I must testify that I am a happy man. My family is happy to see how God has blessed us and continues to bless us. My friends accept me now with the changes I have made in my life. I am serving in the Church, carrying out service projects with the desire to contribute in any way I can to help the Church grow. Above all, I can see that through example, we can testify and bring more people to find the peace that we have found.

Benjamín Pérez, M.D. is a general surgeon and director of the medical program at San Carlos Guatemala University's Eastern University Center in Chiquimula, Guatemala. He participates with BYU's Benson Institute of Agriculture and with Collegium Aesculapium on science and medicine related humanitarian projects in the region.

Westward from SCANDINAVIA — without a frontiersman among them

by Allen C. Christensen

It is perhaps important that I provide a frame of reference. Professionally, I am an agricultural scientist, an animal nutritionist to be precise. In fact, given the lack of food for the plains crossing, it was largely flour and the wild fruit they found and mixed with flour products on the trail west, coupled with the poor diet on board the ship *Westmoreland*, I thought of titling this article "Salt-spray and Sand, and No Hamburger Stands." Since 1972, I have focused heavily in international agricultural development and leadership development. Observing the process of economic development in the less-developed nations of the earth has been helpful in understanding some of the problems which pioneers must have encountered. I have been a student of Mormon and American history since I was eight. Except of a period in the 1970s and 1980s, when I focused heavily on North Africa and the Middle East with matters related to the founding of Israel and the continuing conflict among the great-grandsons of Abraham, the history of America's pioneer past has been my avocational passion. It is in that context that I have written the account of 7th Handcart Company, which is also known as the Christian Christiansen Company, an essentially all-Scandinavian outfit which came through Iowa in June 1857.

These were first-time pioneers. They came from the farms and shops. There were about a dozen tailors in the company. There was not a single frontiersman in the company as determined by American standards. That is hunting, fishing, pathfinding, gun-smithing skills, which were associated with the opening of the frontier, were largely missing. In Europe, hunting was sport for

the nobility and the landed gentry. In America's frontier states hunting was necessary to sustain life. Apparently firearms in the company were few. Christian Hansen had some hunting skills and a rifle, but his health failed him prior to reaching the Loup Fork. His wife tried to carry on and then her health failed. The Hansen family returned to Genoa, the way station the Mormons were building near the Loup. They came west by wagon in 1861.

There is a fact not well understood about the westward migration. Company membership was not static. Sometimes people had to remain behind, while others joined. At Florence, a number joined the company who had come on earlier ocean voyages. Twenty-one pioneers in the 7th Company had come on board the *John J. Boyd*'s December 12, 1855 to February 15, 1856 crossing of the Atlantic. One emigrant's description of the terrible headwinds faced on that winter voyage was "they would have loosened the hair on a dog." In the 7th Company were a butcher, a goldsmith, a blacksmith/wheelwright, an artist. That artist, C. C. A. Christensen, subsequently painted what has become the most famous Mormon painting of the handcart experience. The backdrop for that painting was Nebraska. "Emigrant Ship" is another of his paintings. There is evidence to suggest that it depicts the *Westmoreland*, the ship which carried most of the 7th Handcart Company members from Liverpool to Philadelphia.

While various journal reports indicate the plains were black with buffalo that season, company accounts were more concerned with the threat to their safety posed by these great beasts of the plains. Seemingly they were aware that a buffalo stampede had gone through the Willie or

4th Handcart Company in 1856. The loss of half of the Willie Company's oxen, which pulled the support wagons carrying the tents and heavy cooking equipment, slowed their progress. That delay would prove disastrous, when an early, bitterly cold winter struck on the high plains of present-day Wyoming. The 7th Company took detours in the march west to avoid the buffalo. They only harvested one buffalo, and that one lagged behind the herd. Three weeks west of Florence, the last of their dried meat was gone. The lack of meat in the diet added to the handcart test. Clearly, the buffalo worried them. Without hunters on horseback, who could take buffalo at a safe distance from the company, they must trust in a kindly Providence.

Most were common people although there were a few relatively prosperous landowners among them. There was one pioneer who had held a governmental post of some influence in Copenhagen. While those who had farmed in Scandinavia would carry a body of knowledge, agricultural technology was highly location specific, then and now. What they knew would have to be adapted to different conditions. They were going from rain-fed to irrigated agriculture, from a humid country of well-watered lands to a desert. Land would have to be cleared of sage and salt brush. They would be confronted with alkaline soils. Irrigation systems had to be developed. Yet, first to be faced were the challenges associated with getting there. Their leadership skills were largely related to ecclesiastical matters. These new Mormon converts had been called to serve as missionaries in Denmark, Norway and Sweden shortly after their conversion. Pioneering a new land would require a steep learning curve of a different kind.

The 1850s were a time of political and economic change. Denmark had suffered from being on the losing side during the Napoleonic Wars. While a number of years had been required to lift Denmark from the economic difficulties resulting from the war, the Danish economy was doing better. The new Danish Constitution of 1849 permitted freedom of religion and the press. Such freedoms were vital for the successful launching of a new religious faith. Even so, there was social resistance to change. A new faith can be disruptive, especially one which proclaimed that God had again spoken from the Heavens. There were those who strenuously objected. It was that way when Jesus walked the dusty pathways of Palestine. Why should it have been any different in Copenhagen and Oslo than it had been in Jerusalem and Nazareth?

One doctrine of the new faith, which had particular appeal, was the gathering of the faithful to Zion, to a new Jerusalem, in the tops of the mountains, as envisioned by the ancient prophet Isaiah. Personal improvement of one's economic circumstances was a motive for some. Yet, the ocean voyage and the long, demanding trek west along the Big Medicine Road through the heart of Sioux and Cheyenne country were not without serious risk. Furthermore, local opposition existed to the opportunities which beckoned from across the Atlantic. There remained in Scandinavia a fierce national pride, which pride resulted in viewing those who left for America as traitorous sons.

The Church sent four men to open the Scandinavian Mission. They were Erastus Snow of the Church's Quorum of the Twelve Apostles; George Parker Dykes and John Erik Forsgren, who had been a part of the Mormon Battalion and had marched from western Iowa to San Diego, California during the 1846-47 war with Mexico; and Peter Ole Hansen, a Danish convert, who, under assignment from Brigham Young, had commenced a translation of the Book of Mormon into Danish shortly after his arrival in Nauvoo, Illinois in 1844.

Erastus Snow described the Danes as a kind and hospitable people, who were given to a higher tone of morality than existed in the corresponding classes in England and America. He said the Lutheran clergy had superintendency for all primary schools and the public schools of the nation, except that certain privileges had been granted to the Jewish community, and to foreign mechanics who had been invited into Denmark. As an aside, the kindly treatment of Danish Jews was evident during World War II, and was in marked contrast to almost all of the rest of Europe. In 1943, when the Nazis moved to deport Danish Jews to death camps, word was leaked to the Danish resistance, which determined, in concert with the rest of the country, to save Denmark's Jews. At the end of the war, when Denmark's Jews returned from Sweden, most found their property intact.[1]

On April 18, 1857, a company of 544 Scandinavians on board the screw-steamer *L. N. Hvidt* sailed from Copenhagen for Grimsby, England. Not all leave taking was easy. Karen Marie Olsen had a serious suitor of whom she was deeply fond. He came to the docks with a bag of gold pieces and pled with her not to go. He pledged everything he owned to her if she would remain and marry him. He saw the venture as foolhardy and unnecessary. She was traveling with two of her sisters. Other family members had gone in earlier companies. Her sister, Mette, after arriving in America's Midwest, had died of cholera along with 200 other Scandinavians in the Christian J. Larsen Company of 1854. Karen Marie declined his proposal and sailed away forever. Interestingly, her sister Kirstina's great-grandson, Boyd K. Packer, presently serves as the Acting President of the Church's Quorum of the Twelve Apostles.

Also boarding the *L. N. Hvidt* that April morning was the Niels Otto Mortensen family. Two daughters had gone in earlier companies. Not known to them that day was their nine-year-old daughter, Bodil, who had gone in 1856

as a member of the Willie Company, had perished in the bitter Wyoming cold and was buried in a common grave of 13 pioneers at Rock Creek Hollow. She had gone to find brush to kindle a fire. "Returning with brush under her arm, she reached her cart. There she froze to death. Starvation and cold had drained from her emaciated body the life she had fought for."[2] In the aftermath of the struggle to survive, her parents had not been notified.

It was a rough crossing of the North Sea. Twelve-year-old Niels Christensen asked his mother why the land in England rocked. The stay in Grimsby was short, one night. At 6:00 A.M. on April 22, the next day, they went onto Liverpool by train. The company spent one night in a low-cost Liverpool hotel. On April 23 they boarded the *Westmoreland*, an American sailing ship whose home port was Philadelphia. Liverpool was the headquarters city for the European operations of the Church. A maritime boom town, Liverpool had made a successful change from being the northern hub of the Liverpool Triangle, notorious for its role in the slave trade of the 18th century. Called a haven of churches, it was also home to houses of sin. Of it one visitor said, "In Liverpool, decent chaps owned ships, fairly decent chaps brokered cotton, almost decent chaps brokered corn–the rest didn't exist."

Charles Dickens has written some picturesque descriptions of this period in British history. For example, he described the impressment of sailors as follows:

> Down by the Docks they "board seamen" at the eating houses, the public houses, the slop-shops, the coffee shops, the tally-shops, all kind of shops mentionable and unmentionable–board them, in a piratical sense, making them bleed terribly, and giving no quarter. Down by the Docks, the seamen roam in mid-street and mid-day, their pockets inside out, and their heads no better.[3]

Polite society then seemingly looked away from such blatant abuse of human freedom, apparently accepting that such servitude took vagrants and other less desirables off the streets and made them contributing members of the country's economy. As an aside, slop-shops were not fast-food restaurants, they were shops where one bought ready-to-wear clothing, whereas ladies and gentlemen wore tailor made. Times change.

While many suffered from sea sickness, the days on the ocean were filled with beneficial activities. There were English-language classes and church services. Canvas had been purchased in England, it was much cheaper there, and time was spent sewing tents to be used during the handcart journey. There were strict rules of decorum and sanitation on board ships which carried Latter-day Saint companies. Strict attention to such matters paid. Only three of the *Westmoreland's* passenger complement died during the Atlantic crossing.

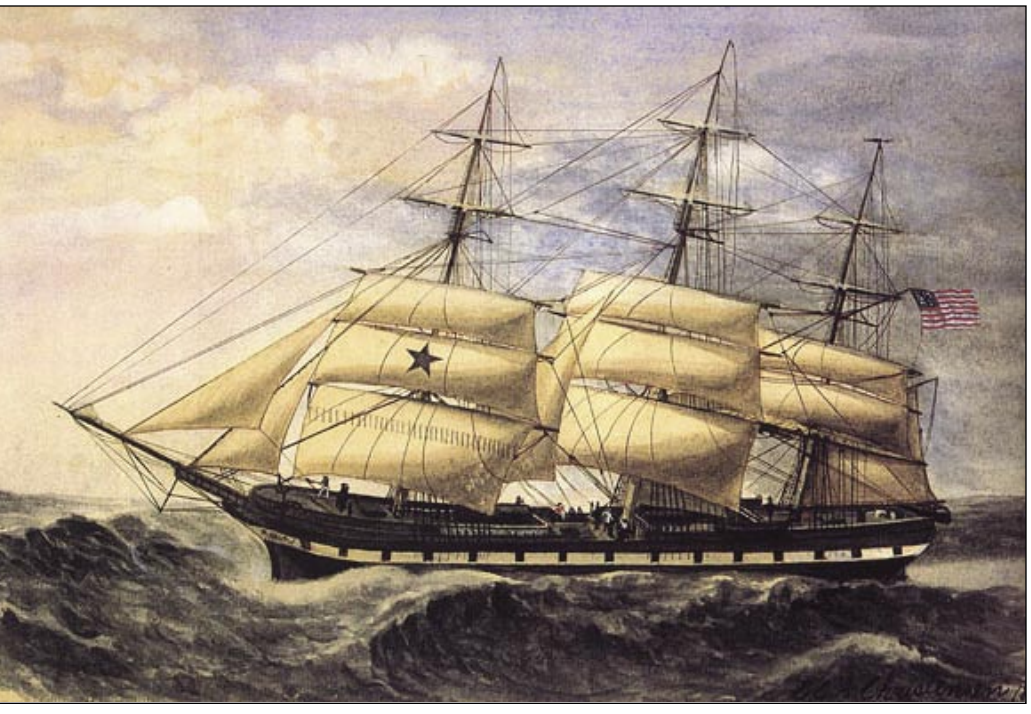
> These new Mormon converts had been called to serve as missionaries in Denmark, Norway and Sweden shortly after their conversion. Pioneering a new land would require a steep learning curve of a different kind.

Even so, death is a difficult test. On May 12, 1857, 14-month old, Karen Larsdatter, the daughter and Lars and Anna Pedersen died at 3:00 P.M. She was buried three hours later. The ship's position was given as 40° 59" north latitude, 45° 48" west longitude. Of all the scenes cast in bronze or captured on canvas, there is none more poignant than a sorrowing family at the grave of a child. Yet a grave on land has some identifying features, forever etched in memory. Perhaps it is a grove of trees, a hill, or a secluded spot along the bank near a bend in the river. Somehow on land there is always the faint possibility that one day you might return to the place of tender remembrance, made sacred by the tears of disappointment, where an added measure of solace might be found. Burial at sea must have been even more difficult. For a small moment the little body lies in the weighted canvas bag, the weeping mother whispers a tearful goodbye, the board is lifted, the body slides down into the watery deep, covered until the resurrection by the sameness of the sea. It is difficult to fathom the depth of the emotional wrenching. For some the mortal journey is very short. Other children and adults would yet give their lives in the quest for Zion.

In contrast with the *Westmoreland*, during an 1854-Atlantic crossing, the *James Nesmith* carried a passenger complement of 1,000 persons. These passengers were not Latter-day Saints. The ship's captain shared with Peter O. Hansen that no sooner had they put to sea than these people began to drink, play cards, quarrel and were filthy in their habits. Such behavior lowers resistance to disease and disease took hold of that company. Some 700 died and were buried at sea. With Latter-day Saint companies, the Book of Mormon voyage of Lehi's family served as the guide for their faith and behavior. Peter O. Hansen's LDS company sailed on very next voyage of the *James Nesmith*. Embarking from Liverpool January 7, 1855, it docked in New Orleans February 23, 1855. Eighteen souls had been lost from the passenger complement of 441.

Unquestionably, the ocean crossing posed significant risk. Amazingly, not a single ship crossing the Atlantic

with Mormon emigrants was lost. These were not, in many cases, the finest of the trans-Atlantic fleet. Cost of passage was a consideration. The people sailing on the *Westmoreland* were not beneficiaries of contributions from the Perpetual Emigration Fund. British historian, Philip Taylor, has written that block-booking saved the Mormons money on rail and ship passage and in the matter of exchanging money. On "approaching America, it was sometimes found that emigrants had concealed their poverty or miscalculated their future needs. Collections were then taken to keep such people with the company: $5,000 was raised on board the *Westmoreland* in 1857."[4] A number of families who had the means to go west by wagon, consecrated the difference between ox-team and handcart travel to a general fund to assist those who had little, and then pulled handcarts 1,300 miles. The Latter-day Saints and their agents sought the best deal. Winston Churchill in his *History of the English-Speaking Peoples* made mention of the Mormons' "shrewd economic sense."[5] Passenger accounts occasionally refer to some ships as "leaky buckets," although there are no such references to the *Westmoreland*, which was a quality ship, built in 1851 during the heyday of American clipper and packet ships. A number of those vessels which carried Mormon passengers to America went down during subsequent voyages, and one ship, the *Samuel Curling*, after transporting its second Mormon company to the United States, sank on its return voyage to England.



C.C.A. Christensen's painting "Emigrant Ship" most likely portrayed the *Westmoreland* on which he sailed to America.

From Philadelphia they traveled by train via Baltimore, Wheeling and Chicago to Iowa City. Long years later, Niels Christensen would tell his grandson, Clare, that it was wonderful riding in box cars with planks for seats. They had paid fares of $10.50 per adult, half that for children six to twelve. Children under six rode free. They usually rode on through the night, stopping periodically to get food and change trains sometimes in the darkness. One older man, Hans Hammer from Bornholm, was being assisted in such a transfer, when he fell dead at trackside. Three children died during the rail journey. I do not have their names or where they were buried. What is known is the way west was marked with graves known only to them and to God.

Anna Christine Jensen wrote the rail journey was not all that pleasant. One night they were turned out of the rail cars. She and her family sat in front of a large building whose doors were not opened. It was raining. Anna, her baby sister in her lap, were exposed to the rain and mud coming down the hill. As dawn broke, they appeared as though they had laid in a mud hole. With the coming of morning, a freight building was open to them. There was nothing but straw on which to place those who were ill. Most of the company went to a nearby eating house for breakfast. Food was carried to the sick. Once, with some of her family ill and using all the bench space and floor for beds, Anna stood all night leaning against a window. In the afternoon of June 9, they reached the rail terminus at Iowa City. They walked the three miles to Clear Creek. There among the hickory, beech and maple trees, the company made camp. They would be the last of the handcart companies to depart from Clear Creek. The 8th, 9th and 10th companies would all depart from Florence.

Iowa can be hot and humid in June, and that was the case in 1857. It followed on the heels of a terribly harsh winter and a poor corn harvest in 1856. The shortage of feed coupled with the severe winter resulted in the deaths of thousands of cattle and hogs. Supply costs were up sharply, their monetary resources meager. Each handcart was to carry 200 pounds of flour. Personal weight allowances were 15 pounds per individual. Generally five persons

were assigned per handcart. The smallest of the children rode on the handcarts. Wonderful treasures had to left at the Clear Creek campground. The Anders Christian Christensen family left two violins. Others abandoned their books. C. C. A. Christensen, the artist, sold his best pair of trousers for 25 cents. These pioneers had come expecting to build homes of refinement. Abandoning precious treasures was an unanticipated sacrifice.

Some *Westmoreland* passengers became part of the Matthias Cowley Wagon Company. Matthias Cowley had been the Latter-day Saint leader on board the *Westmoreland*. A son, Matthias F. Cowley, and grandson, Matthew Cowley, would serve as LDS Apostles. On a very different note, a grandson, Samuel Parkinson Cowley, an FBI agent, was mortally wounded in the apprehension of the notorious criminal, Baby-Face Nelson. J. Edgar Hoover called Sam Cowley "the bravest man he ever knew." Ambushed by Nelson, Cowley lay face down and bleeding profusely. The taunting Nelson came and rolled over the dying Cowley. Somehow, Agent Cowley managed to raise his submachine gun and put twenty shots into the arrogant criminal before he blacked out. No trial was needed for that most-wanted criminal. Henry Lunt had been Cowley's counselor. His great-grandson, Larry Lunt, has served as commanding general of the Utah Air Guard.

Some 330 *Westmoreland* passengers became handcart pioneers. Among them were a number, who in a spirit of Christian charity, had given the difference between wagon and handcart travel to enable other of their friends to go west in 1857. The family, who had abandoned their violins, was one of them. Had they gone by wagon, their violins would have gone also. Instead the instruments were set aside, so that precious people could be taken. There were a few who had come on other ships and had remained in the Midwest to get sufficient funds to complete the journey, who joined the handcart company at Iowa City. One was Ingeborg Paulsen. One of her great-grandsons, Dr. Russell M. Nelson, became a world-renown pioneer in open-heart surgery. Since April 1984, Dr. Nelson has served as a member of the LDS Quorum of Twelve Apostles.

On June 12, the company moved west across Iowa's hills and dales, its rivers and streams. They had come to help build a Zion community, far away in the West. They had been on their way nearly two months. Inadequate diet, sea sickness and exertion would exact a deadly toll. They followed the "river-to-river" road as had other companies before them. Waterways tended to be crossed before their confluence as it made for easier fording. Handcarts were unloaded and the contents carried across the stream on heads and shoulders. The empty carts were pulled through and reloaded. Fires were built to warm the pioneers and dry their clothes. Perhaps they thought Isaiah could have been speaking of Iowa, when he wrote: "[a] land the rivers have spoiled" (see Isaiah 18:2).

There were serious challenges to be faced. These first-time pioneers were practicing on one another. Mistakes were made. One of the most serious was the pace that Captain James P. Park set for the company. He had been waiting for them for a month. Rested and eager to get home, he pushed too hard. He did not speak any of the languages. His Scottish-accented English would have been even more difficult for the interpreter to understand. On June 14, the company was divided into eight districts of nine handcarts each. The ability to organize a diverse group into a functioning-and-unified whole is a learned skill.

The frequent rain showers and humid heat of the day made for difficult pulling and pushing of the handcarts. Many were ill. The four support wagons were filled to capacity. People were accidentally left behind. One day an ailing mother, Bertha Marie Hansen, and other weary folks sat down by the roadside to wait for the support wagons. The wagon drivers passed them by. The people hurried to catch up. That night Bertha Marie was found missing. Her husband, Hans, and a mule team began the search. It was midnight before she was found. The road was rough and the ride back through the dark night equally so. At this point, a Brother Christenson brought oxen and wagon. Bertha Marie became a passenger in that wagon. This Hansen family remained in the Midwest.

The assignment of going back to find those who had fallen by the wayside was given to the young men of the company. If there were insufficient handcarts to carry those whose strength was gone, then one of the young men would carry them. One night, 20-year-old Anna Margreta Christensen, ill and suffering with fever was missing. Anna was found and carried to her family and the camp by her 18-year-old brother, Peter. This is the same Christensen family who had found strength to leave their violins at Clear Creek.

Growing people is difficult even under favorable circumstances. Years ago, I spent a morning watching one of America's premier thoroughbred horse trainers train horses and teach apprentice jockeys. He had saddled Swaps, the 1955 Kentucky Derby winner, and Candy Spots, the 1963 Preakness winner. After some three hours, I said to him: "Meshach, I have come to the conclusion that teaching the jockeys is more difficult than training the horses." He replied: "Allen, the horses are nothing!" Of course mistakes are made. That is a part of the human experience. The fashionable contemporary activity of historians to find fault with those who led, from the comfort of their air-conditioned office and easy chair, misses the point that the course of action to be taken on the field of

struggle is not always clear. Hence, Jesus' admonition to *love one another as I have loved you* becomes even more imperative in the quest to become like He is. (see John 13:34.) In mortality, we practice on one another.

On July 2, 1857, the pioneers approached Council Bluffs. The officers of the town, alleging the company was infected with smallpox, refused them entrance. Smallpox was a problem on some immigrant voyages. There was a smallpox concern for the passenger complement of the *William Tapscott* in June 1860, and the ship was held in quarantine at Castle Garden for six days until all the passengers were vaccinated. However, the *Westmoreland* had no such disease problem. They camped along the Missouri River. There was a steamboat landing south-southwest of town. Friday morning, July 3 they were ferried across the Missouri by steamboat and moved north to Florence. The had been 21 days crossing Iowa. It had been a hard push. Their exuberance for the cause had led them to attempt to go faster than their physical strength really allowed.

On July 4, a council meeting was held at Florence. The painful lessons learned from the Willie and Martin companies burned brightly. It was determined that the 7th Company should go on, except that those who were unable to walk should remain for another season, until they had gained their strength. The company leadership was also reorganized. Christian Christiansen was chosen to captain the company. James Park and Lorenzo Rudd became counselors. Sub-captains over 16 handcarts were named: C. C. A. Christensen, the Dorius brothers, Johan and Carl, and Ole Olsen.

Christiansen was the first convert to have been ordained a Mormon elder in Denmark. He had earlier emigrated to America and had been serving a mission in the Midwest to assist with the oncoming emigration. He had planned to go west by wagon, but now determined that he would walk the 1,031 miles west to better gauge the strength of his people. His sensitivity would long be remembered by company members.

Nineteen-year-old Kersten Erickson was urged to go west by Captain Christiansen, even though her parents and grandmother were not strong enough to go. Trusting in the counsel of her leader, she went west. Her shoes wore out. Moccasin-type shoes were made from the green hide of the carcass of an ox found dead along the way. As she waded through the streams, the green leather would stretch. When it dried, it would harden and crack her feet to the point they would bleed. At one point, the burden seemed too much to bear. She slipped away from the company and lay down on the prairie to die. Christiansen found her and saw that she had sufficient help the remainder of the trek. One of her descendants is Jacquelyn Smith Leavitt, who for nearly eleven years was the First Lady of Utah, when her husband, Michael O. Leavitt, was Governor of Utah. Michael Leavitt presently serves in the cabinet of President George W. Bush.

On July 7, the 7th Company pulled west from Florence. They reached the Loup Fork July 16. The Loup was Pawnee territory. It had been given its name by French/Canadians, who called the Pawnees *Les Loups*, French for wolves. The wolf was the Pawnee totem, and its sign was an imitation of a wolf's ear. The first two forefingers of the right hand were stuck up against the side of the head. The Pawnee assisted the crossing of the Loup, which was described as the most dangerous of the river crossings. Treacherous quicksand was found all across its bottom. Even with Pawnee help, the crossing was strenuous and difficult. Pregnant Karen Gottfredson went into labor and gave birth prematurely to a baby girl. The baby did not live long. She was buried along the river's bank. The family named her Platine. It was at the Loup that the Gottfredson and Christian Hansen families were sent to Genoa to recover their strength. They were not well enough to go on. The Gottfredson family came west in 1858 with a wagon company.

> A 60-year-old woman from Norway was blind. Another young woman walked the entire distance west on a wooden leg. They buried their dead in shallow, unmarked graves along the trail. There was no stopping.

Jens Peter, the oldest Gottfredson son, ultimately attained some prominence as an Indian fighter. He wrote a book entitled *Indian Depredations in Utah*. Peter's 11-year old grandson, Floyd, had an arm severely injured in a hunting accident. For several years, during which he underwent a number of surgeries, he could not play with his friends. He sold copies of his grandfather's book to finance art lessons. He never recovered the full use of his wrist and, in fact, learned to draw with a circular flair. In 1930, Floyd became an animator for a California movie studio. After Floyd had been on the job for two weeks, the artist who drew the studio's principal cartoon resigned. Floyd was asked to take the artist's position. He reluctantly agreed to do it, until they could find another artist. The studio did not hurry to find a replacement. For 45 years, Floyd drew and developed the character, Mickey

Mouse, for Walt Disney. His wrist gave Mickey Mouse the circular appearance known and loved by children the world over.

As they followed the Platte River system for 600 miles, the heat and humidity of Iowa gave way to the dust and heat of Nebraska and the high plains. Some 50,000 head of cattle were being trailed to California that season. The dust and dryness became so difficult that people had pieces of skin hanging from their faces and noses. One older man completely lost his sense of smell. He saw a small mammal that he thought might make good soup. He harvested it with his cane. His addition to the food supply was not welcomed. He had killed a skunk. This was a protein-hungry company. Their dried meat supplies had been exhausted three weeks after leaving Florence. The inadequate diet took its toll of human life, and was especially hard on the children.

At the Wood River, a happy event occurred. Anna Marie Sorensen, 31, the wife of Niels Sorensen, 33, gave birth to a baby girl, who was named Julia Marie. As the tents were being packed that morning, Anna Marie came holding something in her apron. It was her new born baby. She had walked the entire distance the day before, and had intended to walk again that day. Company leaders insisted that for several days she and her baby daughter ride in a support wagon. Both mother and daughter survived the journey and settled in Monroe, Utah. I suppose that the account recorded in the Gospel of Luke of another young mother, who gave birth to her baby in a Bethlehem stable, must have provided inspiration to Anna Marie.

A 60-year-old woman from Norway was blind. She made the journey to Utah by pushing on the back of her assigned handcart. Her daughter served as her eyes. Another young woman (or girl—I do not her age) walked the entire distance west on a wooden leg. People who died were buried along the trail in shallow, unmarked graves, fully cognizant in most cases that wolves would dig up and devour the mortal remains. Poul Christensen, my great grandfather's brother who turned 14 on the way west, took ill and nearly died. For three days his mother and another woman half carried him. There was no stopping. Mornings, smaller children were sent out on foot ahead of the company to minimize the breathing difficulties caused by the dust. It was risky to have them unguarded, but the circumstances left them without alternative. Toward the latter part of the journey the strength of the mules which pulled the support wagons, began to seriously fail. The weary men of the company would place ropes behind the thighs of the mules and help pull mules and push the wagons up the hills.

The feed for mules and horses, which require some grain for heavy work, was especially inadequate. English-woman, Mary C. Fish, an 1860 traveler, described the country west of South Pass as follows: "The face of the country today has been perfectly sterile, not a tree or a bush, nothing but the everlasting Sage brush & Greasewood & the grass so scattering that it needs a fife and drum to call it together."[6]

There was another worry which, in one instance, turned into a blessing. The advance elements of the US Army caught the handcart company. An ox from one of the Army's freight wagon had a crushed foot. The lame ox was given to the handcart company. This brief infusion of meat protein in the diet helped save their lives. Niels Christensen's account was they were supposed to get half the ox for dressing it. However, rains came in the night. The handcarts were pulled to the grassy side of the trail. In the darkness, Native Americans, either Cheyenne or Shoshone, ran off the stock of the army's lead element and carried the women and children over the stream. It was probably the Sweetwater River. The hungry pioneers ate the entire ox.

About noon on September 13, just as people were getting out of Church, the 7th Company came into Salt Lake City. A Danish flag was flying from the lead handcart, the C. C. A. Christensen cart. Niels Christensen and many others, I suppose, had walked the entire distance barefoot. His entire wardrobe clothing consisted of the ragged shirt and overalls that he wore. It was the most rapid crossing of any of the seven companies which had begun the trek from Iowa City. They had walked 1,300 miles. It was the happiest day of their lives.

Allen C. Christensen, PH.D. is director of the Ezra Taft Benson Institute at Brigham Young University.

This article, which was prepared for delivery June 23, 2007 at the Western Historic Trails Center of the Iowa State Historical Society in Council Bluffs, Iowa, is largely based on Allen C. Christensen's Before Zion: An Account of the 7th Handcart Company*, Council Press, Springville, Utah, 2004.*

REFERENCES

1. Telushkin, Rabbi Joseph, 1991. Jewish Literacy. William Murrow and Company, New York, pp.381-382.

2. Hinckley, Gordon B. "True to the Faith," The Ensign, The Church of Jesus Christ of Latter-day Saints, May 1997, p.66.

3. Dickens, Charles. The Uncommercial Traveller.

4. Taylor, P. A. M.., 1966. Expectations Westward: The Mormons and the Emigration of their British Converts in the Nineteenth Century. Cornell University Press, Ithaca, New York, p.131.

5. Churchill, Winston, 1958. A History of the English-Speaking Peoples–The Great Democracies. Dodd, Mead, and Company, New York, p.148.

6. Quoted by Franzwa, Gregory M., Maps of the California Trail, The Patrice Press, Tucson, Arizona, p.C 49.