

Hope for Africa

by Robert L. Watt



Bob received his BS and PharmD from the Philadelphia College of Pharmacy & Science, and completed a Residency in Hospital Pharmacy at the Hospital of the University of Pennsylvania. After completion of the residency, he and his wife, Gloria, left for Nyankunde, Zaire (now the Democratic Republic of the Congo) where he became the Director of Pharmacy Services at the Evangelical Medical Center. Over the next 20 years Bob and his staff managed the essential drug manufacturing facility and the central pharmacy distribution network for a 250-bed teaching hospital. They also served satellite hospitals and health centers, founded the second school for training pharmacy assistants, collaborated with the Ministry of Health and education officials on a revised National Curriculum for pharmacy assistants, and guaranteed that nursing and pharmacy students received formal and informal instruction in pharmacy. Due to political unrest, Bob and his family returned to the United States in 1991.

After returning, Bob spent 5 years as an international pharmacy consultant for various projects in developing African countries, including 10 trips to Nyankunde to teach and encourage church leaders. He then spent 13 years in pharmaceutical research and development, manufacturing clinical supplies in the new field of nanotechnology. Presently, Bob maintains contacts in Africa through his involvement with the CPFI-Congo organization and their Hope Pharmacy Project, a church-based community health ministry. He also works with Plesion International, an organization that promotes self-help pure water and nutrition projects. Bob is a teaching elder and administrator at Malvern Bible Chapel in Malvern, PA. He served on the Board of Directors of CPFI from 2011-2013 and was the 2001 recipient of the CPFI Warren Weaver Service Award.

Background

Though over two decades have passed since living and working in the Democratic Republic of Congo (DRC), the country and its people have left indelible personal and professional marks on my life. I was privileged to work with several remarkable Christian pharmacy colleagues, including 2 who are prominent in this report. The first is Pascal Gisenya Bagire, who was led to the Lord as a student while doing a hospital pharmacy rotation at our mission hospital, the Evangelical Medical Center at Nyankunde. He later worked as a pharmacist with me.

Pascal stayed in the position after we evacuated the country in 1991, until he also had to flee in 1992. The second is Paul Kabanga Kapuya, the government pharmacist who joined us to start a school for training assistant pharmacists. He carried on this work faithfully at Nyankunde and elsewhere after our departure. Paul was instrumental in beginning the CPFI chapter in the DRC, which continues to this day under his leadership. For his many years of faithful ministry, Paul was the 2011 recipient of CPFI's Warren Weaver Service Award.

For 13 years after leaving Africa I worked in R&D with NanoSystems, which became a part of Elan Corporation, in their clinical supplies manufacturing department, and was involved with their cutting-edge nanotechnology. In 2009 the department was reorganized and my job was abruptly terminated. This change gave time for increased responsibilities with my local church, to serve on the CPFI Board of Directors, and to stay in contact with colleagues from Africa.

During that time Pascal asked me to help him and a known traditional herbalist, Cyrille Ngongo, in the DRC with a project to develop a more suitable pharmaceutical dosage form for traditionally prepared *Aloe vera*. He had been using this product very successfully in the treatment of AIDS patients. I decided to join him despite my skepticism that it would work.

Plans were formulated in 2010 and a small amount of start-up capital was loaned by friends and relatives to manufacture the first lot of 1,000 bottles of "Boost Immunity" (Aloe Vera Capsules, 250mg) by a Christian contract nutraceutical company. These were shipped to DRC in early 2011 and first tested in 55 AIDS patients. This pilot study yielded good results with no side effects as a "proof of concept," but much more research was needed. Later additional patients were also given the product with similar results. One of the big issues was the development of protein hunger in the AIDS patients, once their immune systems were boosted to the point where they could defend themselves against the AIDS virus.

Consultations were initiated with Plesion International Incorporated, a Christian NGO with self-help projects in a number of countries. Part of these discussions included the supply of powdered whey protein supplements for malnourished children. Their "Taste-n-See" product seemed ideal to be used in combination with the Aloe Vera Capsules. A second lot of "Boost Immunity" was produced and shipped to DRC in early 2012, along with sufficient "Taste-n-See" to evaluate the inclusion of protein

in a larger study in a different part of DRC. From the beginning this second phase of the Aloe Vera Project was fraught with difficulties: the truck delivering the supplies to the clinical testing site was stuck in a huge mud-hole for a month, Pascal who was overseeing the study, became sick during the process and had to return to his home in Canada before the trial was completed, those trained to gather the scientific data did not cooperate as we expected, laboratory equipment broke down, and a war broke out.

Despite these obstacles, a total of 153 patients were enrolled in the clinical investigation, primarily from two cities in the DRC, Goma and Bukavu. Additional patients were also given the product in

Rwanda, Burundi, and Ethiopia when they heard of the investigation by word of mouth. Inclusion criteria were an initial CD4 test done as a baseline (i.e., a CD4 count of <200 cells/mm³ was considered a diagnostic for AIDS and initiation of treatment; baseline range: 2-720 cells/mm³; normal: 500-1000 cells/mm³). Some were treated previously with traditional anti-retroviral (ARV) drugs for AIDS, but because of side effects or unavailability of drugs they chose to only take Aloe Vera Capsules for the duration of the 3 months of the study. A follow up CD4 count was done at the end of the study.

Of the 153 patients enrolled, only 84 had a second CD4 count done. No patients had to drop out of the study because of side effects. Because of the political war that broke out in the area where the study was conducted, a number of patients fled or were unable to get to a laboratory for

the second CD4 count. The average increase in the CD4 for these 84 patients was 366 cells/mm³ (range: 27-1539 cells/mm³). All patients were able to resume normal activities, and with the provision of the protein supplements weight gain was even more remarkable.

From being skeptical at the beginning, to being cautiously optimistic after seeing results in the initial 55 patients, I was now becoming excited at the possibility of seeing this project expanded even further into areas where there was less likelihood of war, and where the resources of the CPFI-DRC could be utilized to multiply this work. After reviewing these results at the end of 2012, the Board of Directors of Plesion International, Inc. gave approval to move forward with the support of this project to be carried out under their organization, while seeking private donations to fund expansion of the project. They also endorsed additional research into Aloe Vera Capsules for AIDS and the development of additional promising natural products for this and other indications.

Present Situation:

AIDS

In 2013 we are entering the next phase of this work, presently called the Hope Pharmacy Project. It is designed to give hope to the many who suffer and die from AIDS in Africa. More than 4% of the population of the DRC is infected with HIV. For an estimated population of more than 75 million, that means that more than 3 million people are infected, with a great number concentrated in the capital city of Kinshasa and its 9 million people. This is primarily a heterosexual problem with a break-

down of morality that is aggravated by poor sanitation, contaminated blood supplies and needles, and the many atrocities committed over the years during the numerous wars and ethnic conflicts. Unless you look at the world as God looks at it, the situation in the DRC is hopeless, and it has been this way for most of the time since becoming an independent country in 1960. The only real solution comes through lives transformed by Jesus Christ.

Poverty

Another huge problem that compounds every aspect of life for the majority of individuals suffering from AIDS is poverty. The DRC has an abundance of natural resources, including enormous amounts of copper, gold, uranium, diamonds, coltan and other rare minerals. Unfortunately, much of the fighting in the DRC is for control of this mining wealth. The average person in the DRC lives on less than \$1/day. As a result poverty, people often live in deplorable conditions and have little access to proper food and medical care. Government programs to provide better medical care, including a partnership with the Global Fund to provide “free” medicines for AIDS and tuberculosis, are often plagued by drug shortages that are compounded by corruption at all levels of society. Medicines for AIDS are not always available or accessible to the people who need them. With 80% of medications in the DRC being counterfeit or fraudulent, patients’ have poor therapeutic responses. Free AIDS medicines may be unavailable in the future, compounding an already dramatic situation. A new model is needed for sustainable health care under the auspices of the local church and Christian pharmacists in the DRC.

Chuck Swindoll has well said that “we are all faced with a series of great opportunities brilliantly disguised as impossible situations!”¹ In addition to the above impossible situations, what are some others that must be faced and overcome for the Hope Pharmacy Project to succeed? Here are a few:

Resolve legal issues. Plesion International, Inc. is a not-for-profit 501(c)(3) organization. It cannot deal directly with a for-profit organization. If it manufactures and distributes Aloe Vera Capsules, they must go to a church-based not-for-profit association project, such as the Hope Pharmacy Project. In turn this organization works in association with a local public health center and a CPFI-DRC pharmacy for the exclusive distribution of the product. The legal status of these entities must be formalized in the DRC.

Obtain land, build and equip necessary buildings, and hire personnel. The church must obtain proper facilities for a health center and pharmacy with Christian staff, including a pharmacist and physician approved by the DRC government for the treatment of AIDS patients. These personnel must be trained in the use of Aloe Vera Capsules and other products. Products must be provided at minimal cost to patients. The health center and pharmacy must be self-sufficient financially after one year of operation.

Acquire reliable and quality inventory. The church-based health center and pharmacy will also be eligible to purchase other quality tested essential generic medicines from a European Union funded distribution facility, in addition to the Aloe Vera

Capsules and other products supplied by Plesion.

Continue research. Each of the patients enrolled will automatically be part of additional data gathering and the on-going research into the effectiveness of the Aloe Vera Capsules. Before starting treatment, a baseline CD4 count will be obtained, with at least one additional CD4 after 3 months of treatment to monitor the results. The confidentiality of the data must be assured.

Provide training. The health care workers will all be trained in community health evangelism using effective evangelistic tools such as the Chronological Presentation of the Gospel. Church pastors will also be involved in the follow-up and discipleship of patients.

Replicate the model. The exclusive distribution of high quality products by professionals, along with witnessing to the love of God, will provide a powerful and successful model to expand the Hope Pharmacy Project in the future, creating a chain of Christian health centers and CPFI-DRC pharmacies in Kinshasa, elsewhere in the DRC, and eventually in other parts of Africa. Paul Kabanga Kapuya in his capacity as head of the CPFI-DRC work and “Ambassador at Large” for CPFI in Africa will collaborate closely with Plesion International, Inc. to ensure an uninterrupted supply chain, and eventual expansion of the project.

Publish the data. The results of the experience of using Aloe Vera Capsules to boost the natural immunity of patients suffering from AIDS, will be published in peer-reviewed journals to encourage wider distribution,

particularly to the many Christian hospitals and ministries worldwide involved in treating AIDS.

Promote new research. Other effective and cost effective natural products for treatment of the most prevalent tropical diseases, especially in children, will be researched with the assistance of Pascal and Cyrille. Of particular interest is the dried powder from the whole *Artemisia annua* plant, used for malaria, certain cancers, AIDS, and a number of other tropical parasitic diseases.

What are some of the specific needs that you can be praying for?

Wisdom from the Lord in how to use the few meager resources we have and multiply them as the Lord did when he fed the multitudes, so that He gets all the glory.

Additional funds to be made available from interested Christians that are required to purchase, build or rehabilitate, and equip the first church-based health center and pharmacy, including laboratory equipment; to train the staff; to set up the logistical infrastructure for the Hope Pharmacy Project; and to manufacture and ship the next lot of Aloe Vera Capsules to the DRC.

Physical and spiritual help for the AIDS and other patients, so that they would be a light to their community of the transforming power of the Gospel and care administered in Christ’s love.

Future Hope:

We certainly believe that if the Hope Pharmacy Project is carried out according to the Lord’s will and for His ultimate glory, that success will be

forthcoming for the improved health and well-being of the AIDS patients now and ultimately for the advancement of His Kingdom on earth. In a country that has seen little hope except for that provided by the Gospel and the resulting transformed lives, this project will provide an additional glimmer of hope for many individual AIDS patients, as well as all those who do not have access to high quality medicines at affordable prices delivered with God's love.

In addition, the exclusive participation by the local church and active involvement of the CPFI-DRC pharmacists, will provide much needed encouragement to those who have

given themselves faithfully in service to the Lord, as well as advancing the pharmacy profession. As a result the credibility and professional stature of the CPFI-DRC pharmacists will be a visible testimony for all to see. Most people in the DRC have never seen a real health center and pharmacy, functioning as they are capable of doing. The "wow factor" will provide an excellent opportunity to explain the reason behind such services.

Personally I have been encouraged as well by the hope provided from these verses of Scripture:

"For I know the thoughts that I think toward you, say the Lord, thoughts of peace and not of evil,

to give you a future and a hope." (Jeremiah 29:11, NKJV)

"... The leaves of the tree were for the healing of the nations." (Revelation 22:2b, NKJV)

References

1. ThinkExist.com Quotations. "Charles R. Swindoll quotes". ThinkExist.com. http://en.thinkexist.com/quotes/charles_r._swindoll/Quotations. Accessed October 1, 2013 and November 8, 2013.

Acquisition of Medication

for Short-Term Medical Mission Trips by Christine Birnie, RPh, PhD

A cheerful heart is good medicine ... Proverbs 17:22(NIV)



Christine R. Birnie RPh PhD, is Associate Professor and Chair in the Department of Pharmaceutical Sciences at St. John Fisher College in Rochester, NY. Each year, Dr. Birnie organizes medical mission trips for pharmacy and other health profession students. She is a regular speaker on the topic at such conferences as the Global Missions Health Conference in Louisville, KY. Dr. Birnie is currently involved in mission projects in both El Salvador and India, but has led projects in seven countries over the last 15 years. She has served as a board member and on the leadership team for

the CPFI from 2003 – 2011, and was a 2008 recipient of the Warren Weaver Service Award. In 2013, she was awarded a Fulbright Scholar Fellowship Grant to India.

Each year, increasing numbers of pharmacists and pharmacy students participate in medical mission trips around the world. The Christian Pharmacist Fellowship International (CPFI) partners with Global Health Outreach (GHO) to ensure that one or two pharmacists are included on each of their multi-disciplinary medical

trips. Over the past years, the number of pharmacists participating

on these trips has increased from 20 pharmacists in 2002 to 78 pharmacists in 2012.¹ In recent years, pharmacy students have also become active team members, and several schools are now organizing medical mission projects directly from their institutions.

Although pharmacists and pharmacy students on these teams usually have the responsibility of dispensing medications and counseling patients or caregivers about treatments, many are also involved in preparing the formulary and acquiring the medications needed for the team's work. If the pharmacist is given these responsibilities for the trip, a drug formulary should first be prepared and the quantities of various medications needed should be determined. To ensure that all of the health needs of the desired specialties are met, these preparations should be done in collaboration with the other practitioners on the team. Older, relatively simple medications are preferred, because many developing nations do not have newer and more expensive medication readily available, nor are they often needed. For example, the same levels of antibiotic