



BIOFEM PHARMACEUTICALS LTD



BIOFEM Pharmaceuticals Ltd is one of the largest distributors of high quality pharmaceutical products in Nigeria. Located in Ikeja, Capital of Lagos State, BIOFEM imports and distributes over 20 name brand and generic drugs, including Glucophage (metformin), a top selling anti-diabetes drug manufactured by Merck Santé s.a.s. in France.

As a strategic partner and sole agent in Nigeria for the German multinational pharmaceutical company Merck KGaA, BIOFEM strives to uphold Merck's mission to produce meaningful benefits for consumers, partners, and the community. Delivering genuine Glucophage medicine packs to pharmacies and consumers is one of the ways BIOFEM implements this mission and improves the quality of life for people in Nigeria.

Glucophage, BIOFEM's flagship product in Nigeria, is a vitally important pharmaceutical used to improve glycemic control in adults and children with Type 2 Diabetes. In 2009, BIOFEM determined that counterfeit operations had penetrated their supply chain, unlawfully manufacturing and distributing fake Glucophage medicine packs in Nigeria. Despite an overall increase in market share, sales through BIOFEM were falling. Illegal operations were leveraging BIOFEM's brand name and reputation. Globally, Glucophage sales had fallen 75% since 2008, "more or less the main reason being counterfeit drugs," according to Merck spokesperson Gangolf Schrimpf. As important, counterfeiters were compromising the health of millions of patients who rely on daily therapeutic doses of Glucophage as part of a prescribed treatment plan.

The problem of counterfeit medication is not unique to Merck and BIOFEM. According to the World Health Organization (WHO), counterfeit drug prevalence rates are between 10% and 30% in the developing world. Legitimate manufacturers lose close to \$500 billion due to counterfeit products - \$75 billion of that loss is caused by fake drugs.



Source: MeTA

"From organised crime to street hoodlums, there are thousands of Nigerians making big money selling counterfeit drugs," according to BIOFEM. "Unfortunately, whether directly from the crooks, or from bona fide warehouses which have obtained drugs from illegal sources, counterfeit drugs find their way to even friendly pharmacies, and then to unsuspecting patients."

BIOFEM was committed to finding a solution that would protect consumers and guard the integrity of BIOFEM's products and reputation.

THE SPROXIL SOLUTION

After a comprehensive search for a solution to its counterfeiting challenges, BIOFEM partnered with US-based, Sproxil, Inc. According to Femi Soremekun, BIOFEM's Managing Director, "Sproxil's state of the art, Mobile Product Authentication™ (MPA) solution had all of the components we were looking for. In less than three months, we implemented Sproxil's solution on over a million sachets, reaching 25 million buyers".

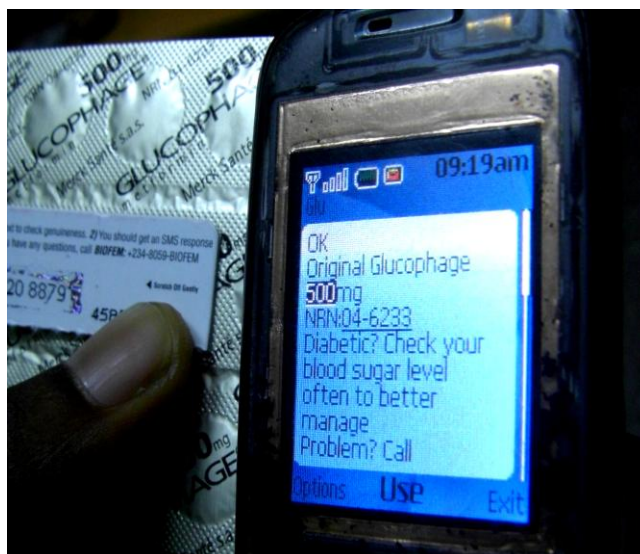


Sproxil's innovative approach is *consumer oriented* and based on proven scratch-off technology similar to mobile phone recharge cards and lottery tickets. Using any mobile phone, consumers simply text a unique short code from their medicine pack to Sproxil's proprietary Mobile Authentication System™ (MAS). Anyone with access to a cell phone can know immediately if they have a genuine or counterfeit product. Nigeria is Africa's largest mobile phone market with over 80 million users.

The text is free and the connection is secure. MAS is based on *asymmetric encryption*, the same technology that powers trillions of dollars in bank transfers and e-commerce worldwide. Within seconds, consumers know if what they are buying is legitimate or fake.

Customers now have a practical and reliable method of determining the authenticity of their purchases. "By using the Sproxil solution to verify the authenticity of drugs, those at the bottom of the pyramid can fight back at those that would take advantage of them, and assure themselves safer medicines and better health," said Derek Kerton, principal analyst at the San Jose, California-based wireless consultancy firm the Kerton Group.

Existing technologies, such as holograms, bar coding, and RFID, address pieces of the counterfeiting



problem; however, they often require costly investments of new equipment and training. Technologies that require sophisticated readers are especially impractical due to Nigeria's irregular power supply. Sproxil had the only solution that allowed Merck KGaA to use existing product manufacturing processes and equipment, reducing time to market and implementation costs.

RESULTS

In less than three months after implementing MPA, Glucophage sales have increased more than 10% in Nigeria and BIOFEM has seen a return on investment of over 1000%. Mr. Augustine Usifo, BIOFEM's product manager for Glucophage, attributes much of that growth to the recovery of lost market share at local pharmacies as customers have begun to ask specifically for sachets with Sproxil authentication labels.

Even high level government officials are changing their buying behavior. According to Mr. Usifo, a prominent member of the Nigerian Government Reform Committee and Presidential Think Tank was unwilling to purchase his Glucophage prescription without the Sproxil label. "Glucophage is a high risk medication so our customers are enthusiastic about having a no-cost, easy-to-use authentication process which ensures they are getting the life saving medicine they need."



BIOFEM is also pleased with Sproxil's sophisticated back-end analytics which they are using to collect valuable information they hope will further interrupt counterfeit sales and increase market share of genuine Glucophage products. For example, with MPA, BIOFEM can track the specific mobile network associated with an incoming text message. With this information, BIOFEM can begin to identify areas of the country with possible counterfeit activity. In Nigeria, mobile network carriers are stronger in different regions, so a large number of inauthentic SMS text messages from a particular region are a strong indicator of counterfeit activity.

In addition, BIOFEM intends to use information collected with MPA for sales forecasting, targeted marketing promotions, and customer education. At the point of purchase and authentication, BIOFEM can offer product discounts, distribute timely product updates, and communicate virtually any other information the customer may need to know.

According to Partnership for Safe Medicines' Vice President Bryan Liang, MD, PhD, JD, "SMS is a wonderful example of how technology can be used to protect patients and thwart illicit drug channels....SMS is one of the recommendations we relayed to the U.S. FDA last month - it's also an excellent method by which to reach healthcare providers and affected patients about drug recalls and counterfeit warnings."

BIOFEM's use of Sproxil technology is endorsed by the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC) – Nigeria's drug regulatory agency. "NAFDAC can't have 60-70 million inspectors," said Momodu-Segiru Momodu, the agency's director of ports inspection, referring to the number of cell phone users in Nigeria. "Authentication is now in the hands of the consumer. Instead of waiting long periods for authentication results from lab testing, we can get results on the spot."

Since 2008, Glucophage sales had fallen by 75%, "more or less the main reason being counterfeit drugs," according to **Merck spokesperson Gangolf Schrimpf**. After just 100 days of using Sproxil's solution, Glucophage sales in Nigeria increased by over 10%.

BIOFEM knows they will always have to stay one step ahead of the counterfeiters. By partnering with Sproxil though, BIOFEM is sending a strong message that they intend to vigorously protect the integrity of their products as well as the safety of their customers. It's a win-win situation for BIOFEM and consumers.

About Sproxil

Sproxil, Inc., a privately backed organization, provides world-class brand protection for emerging markets through software and services that work anywhere there are mobile phones. Simple, easy to use and with no consumer capital investment, Sproxil offers a comprehensive anti-counterfeiting strategy for cash-based societies. Delivering automatic protection, simple labels and robust back-end analytics with its Mobile Product Authentication™ (MPA) solution, Sproxil enables consumers to text message an item-unique code for a rapid response that confirms a brand's genuineness. Our solution also helps companies connect directly to their consumers through customized text message responses - such as health management tips - and ads that specifically target those demographics with known buying behaviors. Learn more at www.sproxil.com