UNITED NATIONS GLOBAL COMPACT
HEALTH CASE STUDY
Merck KGaA, Darmstadt, Germany

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COMPANY OVERVIEW

Merck KGaA, Darmstadt, Germany, is a leading science and technology company with about 52,000 employees, present in 66 countries. It comprises three main business sectors: Healthcare, Life Science and Performance Materials. The Healthcare team discovers unique ways to treat the most challenging diseases such as multiple sclerosis and cancer. Life Science empowers scientists by developing tools and solutions that help deliver breakthroughs more rapidly. Performance Materials develops science that sits inside technologies and changes the way we access and display information.

The company understands that human health is a key element of a healthy planet - environmental conditions can severely impact both individual and global health. This is demonstrated by the neglected tropical disease 'schistosomiasis,' caused through water contaminated by larvae from parasitic blood flukes. Establishing an integrated approach to health and environment is vital to fight this devastating disease and add value to society.

Merck KGaA, Darmstadt, Germany is engaging in a number of projects that consider the intricate relationship between health and the environment in schistosomiasis, including its Schistosomiasis Elimination Program, the Pediatric Praziquantel Consortium program, its partnership with the NALA Foundation and a new initiative for local water stations in Senegal.

Engagement in fighting schistosomiasis

The Merck KGaA, Darmstadt, Germany, is committed to improving the health of underserved populations by engaging in diseases that affect millions of people in LMICs (Low-Middle Income Countries). One prominent example is its engagement in the fight against schistosomiasis (also known as bilharzia) through the Schistosomiasis Elimination Program. In order to make significant progress on eliminating the disease, the fight
against schistosomiasis necessitates an integrated approach to the nexus of health and environment. Fighting schistosomiasis has been a long-standing commitment of the company, and various groups in its Global Health department are contributing to the overall control and elimination agenda.

Schistosomiasis is an infectious disease caused by parasitic blood fluke larvae called schistosomes. The parasites live within freshwater snails and infest humans by penetrating the skin. Transmission of the disease can occur anytime someone comes into contact with contaminated water. The symptoms of schistosomiasis are caused by the body’s reaction to schistosome eggs. They include abdominal pain, diarrhea, and blood in the stool. Infections can also cause severe chronic morbidities such as liver fibrosis, bladder cancer and genital lesions. Schistosomiasis occurs in tropical and subtropical areas. It is prevalent in communities without access to safe drinking water and poor sanitation. The disease affects 220 million people, an estimated 25 million of which are preschool-age children. Left untreated, this poverty-related disease can lead to anemia, stunted growth and impaired learning ability as well as chronic inflammation of organs which can be fatal in the most serious cases.

Under the leadership of the Merck KGaA, Darmstadt, Germany’s Global Health Institute, integrated research and development is undertaken to develop, through a consortium of partners, a new pediatric praziquantel formulation for very young children (pre-schoolers). The Global Health Institute is also working to develop better diagnostics and to find new ways of targeting the snail vector in the water.

The Institute was founded in 2017 with the mission to develop transformative health solutions that control and eliminate infectious diseases. It strives to contribute to the United Nations Sustainable Development Goals (e.g. Good Health & Well Being; Partnerships for the Goals) through its programs and initiatives and aims to reach its goals through:

- R&D for integrated and transformative health solutions
- Capacity building efforts to strengthen local health systems
- Innovative access paths for sustainable market availability and affordability

As one of the flagship programs led by Merck KGaA, Darmstadt, Germany, the Pediatric Praziquantel Consortium program aims to reduce the disease burden caused by schistosomiasis by specifically addressing the need for widespread treatment of pre-school age children. The mission of the Consortium is to develop, register and provide access to a suitable pediatric praziquantel formulation for treating schistosomiasis in preschool-age children, including infants and toddlers. Specifically, the Consortium combines some of the best science and most experienced public and private partners to develop a small, orally dispersible tablet with acceptable taste for very young children, that remains stable in the difficult tropical climate. The first patient trial took place in 2016 and the program is currently in Phase III. The formulation is planned to be available in the first endemic countries in Africa in 2022.

Since 2007, Merck KGaA, Darmstadt, Germany has donated nearly 1 billion praziquantel tablets to the World Health Organization (WHO) for treating schistosomiasis in school-age children in Africa. After the London Declaration in 2012, the company increased its commitment to donate up to 250 million tablets per year. Just recently, this longstanding engagement and collaboration of Merck KGaA, Darmstadt, Germany with WHO in the fight against schistosomiasis was renewed through the signature of a third Memorandum of Understanding (MoU).

However, providing treatment only is not enough. That is why Merck KGaA, Darmstadt, Germany has established partnerships to collaborate on preventive measures and implementing solutions on the ground. One example is the partnership with the NALA Foundation in Ethiopia that started in 2017. This project is a three-year pilot program that aims to provide educational and practical solutions for schistosomiasis-stricken communities. Targeting a population of approximately 266,000 children across Ethiopia, this initiative wants to raise awareness for the disease and create behavioural change in the young population towards potentially decreasing reinfection rates.
“Providing treatment is an important first step to reduce the intensity of infection. However, children currently need to be treated every year. Therefore, we need to look beyond donations and actively fight the high risk of reinfection.”

- Johannes Waltz, Head of Schistosomiasis Elimination Program

Eliminating the threat of schistosomiasis also involves addressing the environmental, societal and behavioural determinants of the disease. The common denominator for community exposure to the disease is lack of access to clean water, sanitation, and hygiene. Communities highly affected by schistosomiasis are forced to use contaminated water-bodies for washing, bathing, and drinking.

Therefore, additional efforts are now starting globally to include the WASH sector (water & sanitation, hygiene) in developing solutions for schistosomiasis.

Merck KGaA, Darmstadt, Germany is working on such preventive measures within the Global Schistosomiasis Alliance (GSA). The GSA aims to contribute to the elimination of schistosomiasis by leading advocacy on control and prevention of the disease through a coordinated multi-stakeholder platform of public and private sector partners. The Alliance works not only on the agenda for developing new treatments, but also on preventive global health measures.

“Successful elimination of schistosomiasis in the past was only possible when addressing the disease and the environmental conditions. Lack of sanitation and clean water together with missing hygiene are contributing to the vicious cycle of the disease.”

- Jutta Reinhard-Rupp, Head of Global Health Institute
In addition, to address the environmental determinants of schistosomiasis, the company is starting a collaborative project in Senegal to support local water stations that provide access to safe water in many rural areas. Those stations will contribute to reducing the risk of water-borne diseases and diminish children’s vulnerability to these diseases. The stations have the potential to create sustainable jobs; they will also improve the overall quality of life and reduce the environmental impact thanks to both recycled jerry cans and the use of solar energy.

Merck KGaA, Darmstadt, Germany, not only recognizes that human health outcomes are inextricably linked to the health of our environment, but also acts on it. In the case of schistosomiasis, the company is implementing treatments, preventative measure, and education in order to tackle the debilitating disease effectively.

“The nexus of health and environment in the case of schistosomiasis has been recognized by many stakeholders – in our company, we contribute to possible solutions with our know-how in Global Health and our science and technology innovations.”

- Manfred Klevesath, Head of Global Health