

Society

Taking responsibility toward society is an integral part of our entrepreneurial approach. We are convinced that we can make an important contribution to society through our knowledge, our skills and our products.



Managing our social engagement

Merck sees itself as part of the community, not only at its individual locations, but also at a global level. Within the scope of our business activities, we play an important role in the vicinity of our sites. We create jobs and invest in the training and welfare of our employees. We source goods and services from many local companies. On top of this, we also support charitable initiatives, often doing so in partnership with our employees.

Our social responsibility activities are primarily focused on areas in which we have specific expertise stemming from our businesses. We therefore engage in health promotion projects and environmental protection, while also fostering cultural activities and education initiatives. We provide disaster relief in emergency situations, especially in those regions in which we operate.

To increase the effectiveness and impact of our projects, we focus our resources on three global projects:

- In the Merck Praziquantel Donation Program, we are partnering with the World Health Organization (WHO) to combat the worm disease schistosomiasis in African school children.
- The Global Pharma Health Fund is a charitable initiative funded by Merck to fight counterfeit medicines in developing and emerging countries.
- The Deutsche Philharmonie Merck is the musical ambassador of our company.

Our subsidiaries are also engaged in local projects and invest in the communities in which we operate, which also serves to secure our future. When it comes to choosing projects, we have defined criteria that are used by our local subsidiaries to decide which initiatives to pursue. The Public Affairs & Corporate Responsibility Group function coordinates and implements global projects and regularly provides progress reports to the Executive Board.

We conduct annual global surveys to ascertain the regional scope of our social engagement, to determine our goals and focus, and to track our progress. In 2014, Merck spent a total of € 50.8 million on its social engagement activities, with € 46.2 million in 2013. Of the

total monetary and non-monetary donations made by our subsidiaries in 2014, 61% (2013: 63%) went to Emerging Markets (Latin America and Asia, excluding Japan), 37% (2013: 36%) to Europe, and 2% (2013: 1%) to North America and the Rest of World region.

These figures do not include activities that primarily serve to market our products.

Fighting schistosomiasis

Over 232 million people in Africa suffer from schistosomiasis, a tropical worm disease. It is estimated that more than 200,000 people die each year as a result of this chronic parasitic condition, which makes schistosomiasis one of the most devastating neglected tropical diseases (NTD) in terms of public health burden and economic impact. Schistosomiasis is prevalent primarily in the tropical and subtropical areas of sub-Saharan Africa, and is considered to be the third highest burden among Neglected Tropical Diseases. In these regions, the vast majority of the population has no access to clean water and sanitary installations, which also contributes to the spread of the disease.

Schistosomiasis is caused by flatworms and is spread through stagnant water. People become infected by the worm larvae in the water while bathing, fishing, playing, washing their clothes, or working on agricultural land. These larvae penetrate human skin and enter the blood vessels, where they grow into adult worms. The female's eggs infest inner organs such as the intestines, bladder, spleen, or liver and often cause severe inflammation. Symptoms include severe abdominal pain, diarrhea and bloody urine or stool. The infection rate is especially high among children, and the chronic symptoms that result are particularly serious. For example, schistosomiasis stunts growth and contributes to malnutrition, causing learning disabilities and anemia in children.

Praziquantel, which was developed by Merck in the 1970s as part of a research collaboration, is the only active ingredient to treat all forms of schistosomiasis and is a well-tolerated drug. Since 1983, it has been on the Model List of Essential medicines published by the World Health Organization (WHO).

Managing and monitoring

In 2007, we launched the Merck Praziquantel Donation Program (MPDP) in partnership with WHO. This project was originally intended to run for a period of 10 years, but Merck has decided to continue the fight until the parasitic disease schistosomiasis has been eliminated in Africa. In order to reach this goal, we pledged in 2012 to significantly expand our donation by a tenfold increase of up to 250 million praziquantel tablets per year. Our efforts to fight schistosomiasis reflect the United Nations Millennium Development Goals as well as the WHO strategic NTD roadmap; they are also part of the London Declaration, an initiative to fight neglected tropical diseases launched by the Bill & Melinda Gates Foundation in 2012.

In close collaboration, WHO and Merck each provide their respective expertise to the MPDP. Merck donates Cesol® 600mg praziquantel tablets to WHO. We produce quality-assured praziquantel and ship the tablets to the respective countries, where WHO in turn manages, monitors, and documents the local distribution of the tablets and works with local authorities to administer the treatment at schools. WHO is also responsible for supplying local data on morbidity rates and treatment frequency in the countries in which the MPDP has been rolled out. The data for each country can be found in the WHO PCT databank which is the global repository of preventive chemotherapy treatments. A steering committee consisting of representatives from WHO and Merck convenes twice a year in order to review the program's progress and decide on its future course. This committee also advises on the allocation of tablets for each country.

Since the start of the program, Merck has donated over 200 million tablets. To date, more than 54 million people have been treated, mainly school-aged children. In 2013, Merck donated around 50 million tablets for twelve African countries. We produced around 75 million tablets in 2014, more than 72 million of which were supplied to 20 African countries by the year's end, a collaborative effort with the World Health Organization.

Research

Within the scope of a public-private partnership (PPP), Merck is researching a formulation of praziquantel for small children. Praziquantel tablets in their current form are suitable for adults and children over the age of six; for children younger than six, it is currently not possible to properly treat the disease.

As part of the donation program expansion, Merck is also working to optimize the formulation of the drug. For instance, our researchers are also working on a film coating to make praziquantel tablets easier to swallow as well as more resistant to long transport times.

Educating people

Merck supports an awareness program at schools in Africa that uses comic booklets and posters to explain the causes of schistosomiasis, teaching pupils how to prevent the disease. Following the success of the pilot projects, the program was extended in 2013 to Senegal and Malawi. In addition to 75,000 informational posters on schistosomiasis, we provided one million educational booklets in total; 250,000 of these went to Malawi and the rest to Senegal. In collaboration with WHO, we are funding the translation of the booklets that are already available in English and French into Swahili, Arabic and Portuguese.

During the 2013-2014 period, Merck also helped the Uraha Foundation Germany set up a local radio station in the north of Malawi. Radio Dinosaur has been broadcasting since the end of 2014; it provides information on politics, environmental issues, history, culture, and health, doing so in the local languages of KyaNgonde and ChiTumbuka. Among other activities, Merck is funding the production of broadcasts that educate people about schistosomiasis.

Fighting schistosomiasis worldwide

In May 2014, Merck called for different NTD constituencies to form the Global Schistosomiasis Alliance (GSA). This initiative focuses and coordinates efforts to address remaining gaps and challenges in order to meet the schistosomiasis elimination target worldwide. In December 2014, Merck organized the first meeting of the GSA at the UN Conference Centre in Addis Ababa, Ethiopia. During this roundtable, the key founding

partners of the GSA introduced themselves to an expert audience from all over the world. Besides Merck, these founding partners include, among others, the Bill and Melinda

Gates Foundation, the Schistosomiasis Control Initiative, the United States Agency for International Development, and World Vision International.

Goals: Fighting schistosomiasis with praziquantel

Goal	Action	By?	Status in 2013 and 2014	Status
Eliminate schistosomiasis in African school children	Provide tablets containing praziquantel free of charge to treat school children in Africa	Ongoing	Since 2007, more than 50 million patients have been treated, primarily school-aged children.	—
	Incrementally increase annual tablet donation by a factor of ten, to up to 250 million	End of 2016	In 2014, we produced around 75 million tablets, of which more than 72 million were supplied to 20 African countries by the year's end, a collaborative effort with the World Health Organization.	—
	Optimize the praziquantel formulation	End of 2014	We have finished developing the formulation. The dossier has to be submitted to the regulatory authorities for marketing authorization.	—
	Research a new praziquantel formulation for children under 6 years old.	End of 2014	The Phase 1 clinical trial was conducted in South Africa.	—

Legend: — Achieved — In progress — Not achieved + New goal

Detecting counterfeit pharmaceuticals

Substandard medicines and counterfeits pose a deadly hazard. Interpol estimates that up to 30% of all medicines in developing nations are either illegal, counterfeit or of inferior quality. The Global Pharma Health Fund (GPHF), a non-profit initiative funded by Merck, has therefore taken up the fight against counterfeit medicines. With the Minilab developed by the GPHF, counterfeit medicines can be detected quickly, easily and cheaply. Two suitcases each weighing around 30 kilograms contain a large number of test methods that state healthcare workers in developing countries can use to inspect pharmaceuticals. Reference samples are used to test the identity and concentration of 75 active ingredients in total, including anti-malarials, antibiotics, analgesics, and antipyretics.

The GPHF has specifically developed the Minilab for use in regions with a simple infrastructure. The rapid analyses can be performed even without lab equipment using normal drinking water. There is currently no other product like it. The majority of the countries where Minilabs are used are located in Africa and Asia. Since 1998, the GPHF

has supplied 685 Minilabs to 90 countries at cost. In 2013 and 2014, they donated 113 Minilabs in total. These compact labs are utilized by national health agencies, often in collaboration with governmental drug safety laboratories. They are also frequently a key component of multilateral health projects in partnership with organizations such as UNICEF or the Global Fund. In addition to selling them at cost, which is handled by a distribution agent, the GPHF and Merck will also sometimes donate the test kits. In the 2013-2014 period, 25 Minilabs were donated by the GPHF and 13 by Merck.

We participate in external research with the aim of increasing the number of medicines that can be tested. In 2013 and 2014, the GPHF developed testing methods for 12 additional pharmaceuticals and updated the user manual accordingly. The GPHF offers training courses in order to familiarize local users with the testing procedures and ensure that the Minilabs are utilized in a professional manner. In 2013, four courses were offered in Germany, Kenya, Mozambique, and Myanmar, which were attended by 70 participants in total. In 2014, the GPHF trained 60 participants total in Ethiopia, Germany, Kenya, and Nigeria.

In 2013, the GPHF and the Center for Pharmaceutical Advancement and Training (CePAT) in Ghana – established by the U.S. Pharmacopeial Convention – formed a strategic alliance to combat counterfeit pharmaceuticals. This alliance aims to expand local capacities so that they

can identify substandard and counterfeit medicines. Since 2014, the GPHF has furthermore been partnering with the IFPMA FightTheFakes campaign, which uses social media to increase awareness of counterfeit medicines.

Goals: Combating counterfeit medicines with the Minilab

Goal	Action	By?	Status in 2013 and 2014	Status
Fight counterfeit medicines by providing and enhancing the GPHF Minilab™	Develop new test methods for five active ingredients and expand manuals to describe the new testing methods	End of 2014	Develop five new testing methods and update the manuals	—
	Develop new test methods for five active ingredients and expand manuals to describe the new testing methods	End of 2015		+
	Conduct 4 training seminars on the use of the GPHF Minilab™; sell 50 Minilabs	End of 2014	Four training seminars on the use of the GPHF Minilab™ have been conducted, and 37 Minilabs have been sold.	—
	Conduct 3 training seminars on the use of the GPHF Minilab™; sell 25 Minilabs	End of 2015		+

Legend: — Achieved — In progress — Not achieved + New goal

Deutsche Philharmonie Merck

Merck has a long tradition of cultural commitment. We consider classical music in particular to be the universal language that brings people together; as such, it is an important part of our culture that is represented by the Deutsche Philharmonie Merck, our musical ambassador. The concerts of this professional ensemble are highly popular, with more than 26,000 people attending them per year. They represent an integral part of the cultural life in the vicinity of our Global headquarters in Darmstadt, Germany. Special events for children and adolescents as well as partnerships with schools are intended to encourage young people to develop a taste for classical music. In both 2013 and 2014, around 50 children participated in our annual orchestra workshop, rehearsing and performing with the philharmonic members. Furthermore, the Deutsche Philharmonie Merck gave four "cushion concerts", thereby reaching around 800 children.

The Deutsche Philharmonie Merck regularly invites international ensembles to Darmstadt while itself also touring internationally. In July 2013, the philharmonic orchestra gave a concert at the International Jazz Festival

in Istanbul. In 2014, the orchestra gave a charity concert in the United Arab Emirates (Dubai) to benefit patients with multiple sclerosis.

Community engagement at our sites across the globe

Health, environment and culture are key focal areas of our social engagement at both the global and local level. In accordance with the Merck Values, all subsidiaries of the Merck Group assume responsibility for their local communities. They foster an open dialogue with their neighbors and other community representatives and therefore know where Merck can make the most valuable contributions. Sustainable engagement means that projects have a long-term scope, and that we generally oversee and support them over a period of multiple years.

Our subsidiaries were involved in 136 projects in 2014 (2013: 125). Take for example the Erbitux® China Patients Aid Program (ECPAP) launched in 2012. In this program, we work with the Beijing Red Cross Foundation to provide Erbitux® free-of-charge to low-income patients with colorectal cancer. Over 3,100 patients have participated in the program to date. Other examples include running

a hospital on the island of Baba Bhit in Pakistan and a wellness center in Jharkhand. Merck employees also support and institute numerous initiatives. For instance, in the School Water Project in China, our Merck Millipore employees taught elementary school pupils about environmental issues and clean water.

Merck grants and promotes four literary prizes worldwide. Since 1964, we have been sponsoring the renowned Johann Heinrich Merck Award for Literary Critique and Essay, which is presented by the German Academy for Language and Poetry at its annual autumn conference. The award, which comes with a € 20,000 prize, went to publicist Carolin Emcke in 2014. For 12 years, Merck has been sponsoring the Premio Letterario Merck in Italy. This award is worth € 10,000 and recognizes authors who build bridges between literature and science, thereby making them accessible to a wide audience. In 2014, the award went to Carlo Rovelli, an Italian physicist, and to Francisco Gonzales-Crussi, a Mexican physician and writer. In India, Merck collaborates with the Goethe-Institut Calcutta to present the Merck Tagore Award, which is worth 500,000 Indian rupees (around € 7,200); this literary prize is granted every two years to authors who have made a distinctive contribution to the cultural exchange between Germany and India. In April 2014, the award went to Professor Pramod Talgeri, Vice Chancellor of the India International Multiversity. In October 2014, Merck and the Goethe Institut Tokyo presented the first-ever Merck Kakehashi Literature Prize. Worth a total of € 20,000, this award is granted to contemporary works by German authors that are made accessible to a wider readership in Japan. The prize went to German author Arno Schmidt for his book "Seelandschaft mit Pocahontas" (Lake Scenery with Pocahontas) and to the book's Japanese translator, Jun Wada.

In Brazil, we sponsored projects to help integrate disadvantaged children and adolescents, enabling them to learn skills such as playing a musical instrument.

In the 2013-2014 period, we extensively revised our processes for and approach to strategic disaster relief. The Public Affairs & Corporate Responsibility Group function partners with representatives from our businesses and subsidiaries to steer our efforts to help disaster victims. In October 2014, Merck donated € 250,000 to the Deutsche

Rote Kreuz (DRK) to help combat ebola. At the end of 2014, Merck collaborated with UNESCO (the United Nations Educational, Scientific and Cultural Organization) to launch a joint initiative that is working to advance medical education and capacity in the fight against ebola. At universities in Sierra Leone, Liberia and Guinea, the first set of seminars were held for aspiring doctors and pharmacists, part of the Merck Capacity Advancement program. In addition to this, Merck also provided disaster aid for the victims of Typhoon Yolanda in the Philippines, the earthquake in Ludian, China, and the flooding in Pakistan.

More examples of Merck's engagement at our sites across the globe can be found on our website.