Priorities and activities

JPMA’s Contribution to Global Health

JPMA is actively engaged in the various global health issues indicated below.

Subject
- Innovation
- Intellectual Property (IP)
- Three Major Infectious Diseases and Neglected Tropical Diseases (NTDs)
- Non-Communicable Diseases (NCDs)
- Counter Measures against Counterfeit Medicines
- Capacity Building
- Trust and Ethics
Innovation

Cutting-edge science and technology to drive drug discovery innovation and accelerating partnerships to address global health challenges

As indicated by the continued lengthening in average life expectancy, the status of health around the world has improved considerably over time. The role of new drugs in driving that change cannot be overstated.1

By supplying pharmaceuticals and vaccines that take full advantage of cutting-edge science and technology, JPMA and its member companies have contributed to the improvement of health and welfare for people around the world over the years. These contributions have gone past the treatment and prevention of illnesses to include lowering the youth mortality rate, improving the quality of life for patients, circumventing excessive hospitalization fees, and helping patients to make their return as functioning members of society.

Looking to the future, we are working to realize further breakthroughs and the application of new technologies—such as in the areas of individualized health care, regenerative medicine and other life science areas of growing health need in recent years.

In the vaccine area, in addition to vaccines for the prevention of disease, there have been exciting discoveries of next-generation vaccines that utilize the immune system to treat diseases. As illustrated by joint industry-academia research, there is growing expectations related to vaccines and adjuvants and their application in the prevention and treatment of a greater number of illnesses.

The discovery of revolutionary drugs is an extremely difficult endeavor, and has an extraordinarily low rate of success. Citable factors for this low success rate are the drug discovery methods applied to date could not yield sufficiently effective medicines for the target diseases, the increasing complexity of technologies and regulations related to the research and development of new drugs, and the extreme amount of time and money
necessary to successfully bring new drugs to market. Despite this severe operating environment for pharmaceutical companies active in drug discovery in Japan, the number of newly-discovered drugs at Japanese pharmaceutical companies ranks third worldwide (See Figure 1). In so saying, there has not been sufficient progress made in the development of new drugs for illnesses prevalent among the poverty-stricken population in developing countries. Our view is that in order to tackle these challenges, in addition to time and cost issues, activities such as developing an environment for accelerating new drug discovery and joining partnerships for developing new drugs are also necessary. The Japanese based public-private partnership, GHIT Fund, is one example of the type of partnership possible.

1 It is estimated that the average annual increase in life expectancy of the entire population has extended 1.96 years resulting from new drug launches from 1987 to 2012. (Source: International Journal of Healthcare Finance and Economics 5: 47-73, 2005)

Figure 1: Top 100 drugs sold in 2010
(Source: Pharmaprojects, IMS World Review, IMS LifeCycle, ©2013 IMS Health reproduction is strictly prohibited, all rights reserved)
Office of Pharmaceutical Industry Research’s analysis based on IMS data
Access to new medicines is made possible through their discovery, research and development supported by intellectual property rights in each country.

1) IP and the development of new medicines

All JPMA member companies work day-in and day-out to research and develop new medicines that will benefit patients around the world. In order for this R&D process to be sustainable, and to ensure access over time to innovative new treatments for patients, there is a need for a system in which patent rights, trademark rights, and other intellectual property such as clinical data are appropriately protected. This protection of intellectual property enables R&D to deliver the next new medicines and further enhances the social infrastructure and economy of each country.

2) IP and access to medicines in developing countries

JPMA and its member companies recognize the importance of delivering medicines for NTDs, as well as for infectious diseases such as HIV, tuberculosis, malaria, to patients in developing countries. While working within a framework that protects the results of research through intellectual property rights, we are keen to cooperate with other stakeholders in order to develop medicines for the diseases of the developing world and improve access to medicine, including where appropriate through public-private partnership. While intellectual property rights are essential, in order to improve access to medicines in developing countries and hence contribute to global health, JPMA and its members will implement the patent system in a flexible manner, considering non-application of these rights in certain countries and flexibility of the associated conditions in others.

3) Compulsory license

According to the agreement on trade-related aspects of intellectual property rights (TRIPS) issued by the World Trade Organization (WTO) in 1995, member states can invoke the right to grant a compulsory license for a technology in which a patent right is protected without obtaining prior authorization from the patent holder, under certain conditions. Based on the particular circumstance of a given country, a compulsory license as an emergency measure may be issued in order to protect peoples’ lives in not
only developing but also developed countries. However, the issuing of compulsory licenses cannot in itself solve the issue of access to medicines. Where compulsory licenses are issued without rational justification or sufficient transparency, this will only serve to deter investment in the researching and developing of new medicines. JPMA and its members believe that constructive dialogue between government and the pharmaceutical industry is the most fruitful approach for improving sustainable access to medicines.

**Initiative by member companies**

| Participation in WIPO research consortium (WIPO Re:Search) | Eisai Co., Ltd. has joined the “WIPO Re:Search” consortium, an international initiative to develop drugs for treating NTDs, TB and malaria, hosted by the World Intellectual Property Organization (WIPO). Each member organization provides for free intellectual property and R&D know-how for drugs and candidate compounds that may help treat these diseases, sharing this knowledge with researchers and research institutes interested in developing new medicines. |
Three Major Infectious Diseases and Neglected Tropical Diseases (NTDs)

Efforts to improve the healthy lives of over one billion patients in 149 countries and territories worldwide through new partnerships to break the vicious cycle that binds poverty and communicable diseases.

The majority of patients suffering from HIV/AIDS, tuberculosis, malaria, and NTDs\(^1\) (Neglected Tropical Diseases) are concentrated in developing countries or among the poverty class. According to WHO, it is estimated that these diseases are prevalent in 149 countries/territories and more than one billion people are affected worldwide. In particular, as communicable diseases (CDs) continue to spread among the poverty class, the diseases themselves are doubling as a cause of poverty in numerous countries and territories. Breaking this vicious circle that binds poverty and CDs is imperative in order to ensure both economic growth in developing countries and human security for all. To overcome this global health issue, a number of various countermeasures are required, including reinforcing public health care systems, health insurance systems and other components of healthcare infrastructure in developing countries; establishing distribution systems to ensure that medicines and vaccines reach patients; and developing an environment for accelerating the development of new drugs and vaccines for patients suffering from CDs. In turn, to promote those countermeasures, it is essential to realize flexible partnerships between the public sector and private sector—including participation by the pharmaceutical industry—as well as other forms of cooperation within the various stakeholders involved in improving public healthcare across the world.

In Japan, public-private partnerships have gradually been established to take the initiative in resolving CDs issues being faced by developing countries. In the past, national governments, UN organizations, charity organizations and other similar entities were the key providers of funding for research and development in the global health sector. Currently, however, the Global Health Innovation Technology Fund (“GHIT Fund”)\(^2\), Japan’s first global health focused public-private partnership, is taking the initiative in providing such funding with a number of private enterprises as its founding
members. Comprising a portion of those private enterprises are Japanese pharmaceutical companies, who participate in the GHIT Fund in the capacity of fund-contribution partners. (As of December 2013, the following five Japanese enterprises had joined the GHIT Fund: Astellas Pharma Inc., Eisai Co., Ltd., Shionogi & Co., Ltd., Daiichi Sankyo Co., Ltd. and Takeda Pharmaceutical Co., Ltd.)

1 NTDs: (Neglected Tropical Diseases)
NTDs are infections caused by parasites, bacteria and viruses that are mainly endemic in tropical areas of developing countries. It is estimated that over 1 billion people are affected worldwide with the 17 NTDs that WHO is currently focusing on.

17 focus diseases in the NTDs area
The WHO is currently focused on treatments for the following NTDs Buruli ulcer, Chagas disease (American trypanosomiasis), cysticercosis, dengue/severe dengue, dracunculiasis (guinea-worm disease), echinococcosis, foodborne trematode infections, human African trypanosomiasis, leishmaniasis, leprosy, lymphatic filariasis, onchocerciasis, rabies, schistosomiasis, soil transmitted helminthiasis, trachoma, and endemic treponematoses (including yaws)

2 The GHIT Fund is Japan’s first public-public partnership focused on global health issues and was founded to promote the creation of new drugs for infections in developing countries. GHIT aims to serve as a bridge linking basic research and clinical development and promote the development of new drugs through facilitating partnerships between research institutions within and outside Japan and disbursing grants for promising research that is consistent with the objectives of the fund.
GHIT Fund: http://ghitfund.org/

Through leveraging the advantages of new drug development based on our advanced science and technology to discover new drugs for infections in developing countries, we seek to strengthen Japan’s international contributions to global health.
## Initiative by member companies

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<tr>
<th>Provision of medicine to treat lymphatic filariasis free of charge</th>
<th>In November 2010, Eisai agreed to provide 2.2 billion tablets of diethylcarbamazine (DEC), a medicine for treating lymphatic filariasis, to the World Health Organization (WHO) at no cost until the year 2020. Based on that agreement, Eisai used its company-owned factory in India to manufacture DEC tablets, and began providing them to countries where lymphatic filariasis is prevalent in October 2013. Going forward, the company will supply DEC tablets to such countries over a seven-year period in accordance with group medication programs of the WHO.</th>
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<tr>
<td>Development of medicine for treating HIV infections</td>
<td>Over time, Shionogi and ViiV Healthcare Ltd. (“ViiV”) have engaged in the joint research and development of Dolutegravir, a new HIV integrase inhibitor. Starting in December 2012, ViiV applied to screening agencies in the United States, Europe, Japan and other regions to have Dolutegravir approved as a new drug. Having already been approved in the United States and Canada, the drug has been made available for sale there under the product name “Tivicay®.”</td>
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<td>Development of medicine for treating tuberculosis</td>
<td>For more than 30 years, Otsuka Pharmaceutical has engaged in the research and development of treatment drugs aimed at eliminating tuberculosis. Based on the results of Phase II clinical testing for delamanid, a new anti-tuberculosis drug for multiple</td>
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drug-resistant tuberculosis, the company applied to have the sale of the drug approved in Europe. In November 2013, Otsuka Pharmaceutical received the recommendation of the CHMP to have the drug approved for sale in Europe. The company then applied to have the sale of the drug approved in Japan in March 2013. The company presently continues to engage in international Phase III testing. In 2013, the registration of clinical testing for multiple drug-resistant tuberculosis in small children also commenced.

### Development of medicine for treating dengue fever

Takeda Pharmaceutical is engaged in the development of vaccines for dengue fever. “DENVax” a tetravalent vaccine that covers all four virus forms causing dengue fever, is currently undergoing Phase II testing.

### Development of medicine for treating Chagas disease

Alongside the Drugs for Neglected Diseases initiative (“DNDi”), an international independent non-profit group, Eisai is currently conducting Phase II clinical testing for E1224, a new drug candidate compound for Chagas disease pathogens. In terms of the division of roles in this endeavor, Eisai provides the information on E1224 needed in clinical development as well as the drug formulation needed in clinical testing, and DNDi conducts clinical development in territories where Chagas disease is prevalent.

### Development of medicine for treating malaria

Takeda Pharmaceutical engages in joint research and development with the Medicines for Malaria Venture (MMV)
for the development of the antimalarial drug DSM265 and the formulation of ELQ-300.
DSM265 currently exhibits a favorable safety profile in Phase I clinical testing. Expectations are being placed on ELQ-300 as a next-generation drug that will enable the prevention and treatment of malaria in small doses. The drug is currently in the clinical testing phase.

<p>| Development of drug formulations for treating schistosomiasis in very young children | Astellas engages in the development of a pediatric formulation for the treatment of Schistosomiasis through an international public-private partnership (PPP) between TI Pharma, Merck KGaA, Astellas Pharma Inc. and the Swiss Tropical and Public Health Institute. |
| Joint research and development of medicine for treating and vaccines for malaria and NTDs | Eisai has entered a comprehensive joint research and development agreement with The Oswaldo Cruz Foundation in Brazil for medicine to treat and vaccines for malaria and NTDs. For their initial project, these two entities commenced joint research and development of “E6446,” an active TLR9 antagonist, and analogous compounds as forms of medicine for treating cerebral malaria. |
| Joint drug-discovery research and development for searching out anti-parasitic protozoa drugs (for Chagas disease, leishmaniasis and African sleeping sickness) and anti-dengue virus drugs | Astellas Pharma has established an industry-government-academic framework consisting of five Japanese research institutions; namely The University of Tokyo, the Tokyo Institute of Technology, Nagasaki University, the National Institute of Advanced Industrial Science and Technology (“AIST”) and the High Energy Acceleration Research Organization (“KEK”) as well as the |
| Participation in “WIPO Research Consortium” for developing medicine for treating tropical diseases | Having become a member of the “WIPO Research Consortium,” an international joint venture organized by the World Intellectual Property Organization (WIPO) for developing medicine for treating tropical diseases, Eisai supplies information on seven compounds to a publicly-available database. The intellectual property registered in this database is provided free of royalties for use in the development of medicine for treating tropical diseases as well as the eventual sale of products in developing countries that adopt those drugs at a later date. |
| Participation in global partnerships for developing tuberculosis drugs | Eisai has joined “Tuberculosis Drug Accelerator” (“TBDA”), a partnership that aims to conduct revolutionary drug discovery for tuberculosis. Jointly established by seven global pharmaceutical enterprises and six research institutions and endorsed by the Bill &amp; Melinda Gates Foundation, TBDA seeks to develop new medicine with the potential to fully treat tuberculosis with a one-month dose relative to the six months currently required by existing methods of treatment. |
| Joint research and development for | Eisai is engaged in joint research for the international NPO DNDi. Together, these entities apply advanced drug-discovery research approaches to revolutionary, open-innovation drug development efforts targeting anti-parasitic protozoa drugs (for Chagas disease, leishmaniasis and African sleeping sickness) and anti-dengue virus drugs. |</p>
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<tr>
<th>Developing new drugs for tuberculosis and NTDs</th>
<th>development of new drugs for Neglected Tropical Diseases (“NTDs”) and tuberculosis with the Broad Institute, a joint research facility under Harvard University and the Massachusetts Institute of Technology.</th>
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</table>
| Screening programs for containing infections in developing countries (GHIT Fund programs) | -Eisai is part of a GHIT Fund-sponsored program for searching out candidate drugs for treating malaria, leishmaniasis and Chagas disease.  
-Shionogi is part of a GHIT Fund-sponsored program for searching out drugs for treating tuberculosis.  
-Takeda Pharmaceuticals is part of a GHIT Fund-sponsored program for searching out candidate drugs for treating tuberculosis, malaria, leishmaniasis, Chagas disease and African sleeping sickness.  
-Daiichi Sankyo is part of a GHIT Fund-sponsored program for searching out candidate drugs for treating agent-resistant tuberculosis and malaria. |
| Participation in London Declaration on Neglected Tropical Diseases | Eisai has established international public-private partnerships with twelve major global pharmaceutical corporations, the Bill & Melinda Gates Foundation, the World Health Organization (WHO), the governments of the United States and the United Kingdom, the World Bank and governments of countries where NTDs are prevalent, and issued the joint “London Declaration” to collectively fight to contain ten NTDs by 2020. |
| Development of drug-discovery research database for Neglected | Together with the Tokyo Institute of Technology and the University of Tokyo, |
| Tropical Diseases | Astellas Pharma developed the world’s first drug-discovery research database for NTDs, called the “Integrated Neglected Tropical Disease Database,” or “iNTRODB.” This database makes full use of super computers and Web technology to integrate a plethora of information that includes that on parasitic protozoa genetics, biochemistry, drug discovery and illnesses. By virtue of being freely accessible by researchers around the world, the iNTRODB will go on to contribute to the acceleration of NTDs research across the globe. |
| Research and development for medicine for treating tuberculosis, etc. | Over time, Shionogi has focused on research and development for medicine for treating infections. In 2013, Shionogi established an Emerging Infections Group within its company-owned research institute, through which it is working to accelerate research activities for medicine to treat tuberculosis and other NTDs. |
Non-Communicable Diseases (NCDs)

To save patients from the world's #1 cause of death—NCDs, which includes cardiovascular disease, cancer, diabetes and chronic respiratory disease—requires systematic action focused on prevention and care for the disease.

NCDs are the number one cause of death worldwide, according to the WHO, with 36 million people dying due to NCDs in 2008—equivalent to 63% of the 57 million global death toll. The biggest burden of NCDs is in the low- and middle-income countries, where 80% of all NCD-related deaths were reported that year. 1

In May 2013, the UN and WHO announced the "Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020". The Global Action Plan focuses on four specific noncommunicable diseases (cardiovascular diseases, cancer, chronic respiratory diseases and diabetes), and on four shared behavioral risk factors

(tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol). To highlight the need for the “prevention and management of NCDs”, the Global Action Plan sets a goal of “25 by 25” (reducing the rate of premature mortality due to NCDs by 25% by the year 2025) through multisectoral collaboration and cooperation at national, regional and global levels, and proposes a menu of policy options under six interconnected and mutually reinforcing objectives:

IFPMA (International Federation of Pharmaceutical Manufacturers Associations) announced its “Framework for Action for the Prevention and Control of NCDs” in June 2011, and has made NCDs a top-level priority. As a first step of action, IFPMA has conducted a survey of access to treatment medicines for NCDs in developing countries. JPMA supports the IFPMA Framework and will seek possible cooperation with various stakeholders in order to help improve the prevention and control of NCDs.

Over the years, JPMA member companies have researched and developed numerous leading medicines for the treatment of NCDs that are sold around the world today. JPMA member companies continue to make great efforts to research and develop innovative new medicines in the NCDs field, both in their own research facilities and in partnership with other stakeholders around the world. Furthermore, as JPMA member companies expand their presence globally, they continue to seek new ways to improve access to these new medicines not only in developed countries but in developing countries also.

* Menu of policy options under six interconnected and mutually reinforcing objectives

(i) international cooperation and advocacy: To raise the priority accorded to the prevention and control of NCDs in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy.

(ii) country-led multi-sectorial response: To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of NCDs.

(iii) risk factors and determinants: To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environments.

(iv) health systems and universal health coverage: To strengthen and orient health systems to address the prevention and control of NCDs and the underlying social
determinants through people-centred primary health care and universal health coverage.

(v) research, development and innovation: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.

(vi) surveillance and monitoring: To monitor the trends and determinants of NCDs and evaluate progress in their prevention and control.

Initiatives by member companies

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<tr>
<th>Dementia and depression measures program through public-private partnerships</th>
<th>Eisai, Apollo hospital, and together with HelpAge India, are working on the development of public-private partnership business model, which aims to improve access to medicines in India. The three parties will develop and execute a program to improve medical education, examination, diagnosis, treatment and medical compliance for patients with depression and Alzheimer's type dementia.</th>
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<tr>
<td>Eisai conducts Tiered Pricing in order to improve access to new anti-cancer agent (by income bracket pricing).</td>
<td>Eisai is attempting to set multiple prices based on the income level of the patient in India to allow access to innovative novel anti-cancer agents (Tiered Pricing).</td>
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<td>International Diabetes Education E-Learning Program (IDEEL)</td>
<td>Takeda Pharmaceutical Co., Ltd., in partnership with the international NGO “Project Hope”, has been supporting the expansion of an online diabetes educator course known as International Diabetes Educator E-Learning (IDEEL) from India. The IDEEL program is provided to medical professionals in developing countries.</td>
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Counter Measures against Counterfeit Medicines

Reports that 10%-30% of medicines (by volume) distributed in developing countries are counterfeit is a powerful call to action to save patients from harm.

The threat of counterfeit medicines is increasing worldwide, and the value of these products is said to have reached US$75 billion. In developing countries, it is reported that between 10% and 30% of distributed medicines are counterfeit, posing a serious threat to patient safety. Manufacturing and distributing counterfeit medicines while deliberately disguising them as genuine, authorized medicines results not only in patients being denied the desired treatment effect, but also risks causing physical disability or death due to unexpected effects. JPMA and its member companies will therefore make every effort to eradicate counterfeit medicines.

In July in 2012, JPMA published a joint statement with the other major pharmaceutical industry associations, IFPMA, PhRMA and EFPIA, to support and encourage the efforts by national and international government organizations to reduce the illegal sale of medicines by illegitimate online drug sellers that endanger public health.

Similarly, the Japanese Ministry of Health, Labor and Welfare has established the “Suspicious Drugs Reporting Network,” a website for edifying the general public on counterfeit medicines (provided in Japanese only). The Ministry has also announced that the government and enterprises will collectively address countermeasures for counterfeit medicines. JPMA welcomes and supports these efforts.

Although the aim of anti-counterfeiting efforts is to protect patient health, in practice, cracking down on the infringement of intellectual property rights and trademark rights in particular can be an effective tool as a countermeasure against counterfeit medicines.

JPMA and its members recognize that substandard medicines, while differing from

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2 WHO discussed counterfeit medicines in IMPACT Meeting (Hammamet, Tunisia, 2008). In the meeting, the counterfeit medicine is defined as a medicine, which is deliberately and fraudulently mislabelled with respect to identity and/or source.
counterfeit medicines produced with criminal intent, are also an important issue. Substandard medicines, which are the result of unfulfilled quality standards despite the medicines being approved and legally manufactured, could pose a serious health risk to patients, and JPMA strongly supports the highest standards for all patients across the world. We will therefore make efforts to solve the problem of substandard medicines using various methods, including where appropriate public-private cooperation, working to raise technical ability in developing countries to international standards.

Some JPMA member companies have established internal global functions to deal with issues related to securing the safety of medicines, including countermeasures against counterfeit medicines, and are contributing funding to activities to eradicate the criminal trade in counterfeit medicines. The JPMA itself is also currently conducting a survey of its membership regarding counterfeit medicines. Based on the insight garnered from this survey, JPMA and its member companies will identify concrete implementation measures with a view to cooperating with various national governments, the police, tax authorities and other stakeholders, and will continue its efforts geared towards the eradication of counterfeit medicines.

Initiative by member companies

| Participation in activities to eradicate counterfeit medicines through cooperating with Interpol | The global pharmaceutical enterprises provide financial assistance to activities by Interpol to eradicate counterfeit medicines, and are also engaged in other endeavors such as enlightenment activities and capacity building for identifying such medicines. From JPMA members, Astellas, Chugai, Daiichi Sankyo, Sumitomo Dainippon, Eisai, Otsuka, Shionogi, and Takeda participate in the activities. |
Capacity Building

In order to improve access to medicines, it is important to not only provide practical guidance on local capacity building but also education and training.

In developing countries, access to medicines is obstructed by various factors, such as an inadequate public health insurance system and medical infrastructure, shortfalls in the human resources needed for the manufacture and quality management of medicines, the spread of counterfeit medicines and poverty.

**JPMA and its members believe that capacity building in developing countries – specifically know-how transfer and educational training – is an important part of improving access to medicines.**

1) Know-how transfer
JPMA and its member companies are providing technical assistance in cooperation with stakeholders on the manufacture and quality management of pharmaceuticals in order to improve access to medicine in developing countries.

2) Training
In developing countries, patients are not always able to receive appropriate medical care due to a lack of medical resources and a shortage of skilled healthcare professionals. JPMA and its member companies, in cooperation with developing country governments, are working to improve the ability of healthcare professionals involved in disease prevention, diagnosis, and treatment to improve healthcare in these countries.

3) Initiatives to improve access to healthcare
In developing countries, there are still many areas that suffer from insufficient medical access due to lack of social and medical infrastructure. Furthermore, in addition to a lack of healthcare knowledge, there continues to be areas that lack opportunities for people to learn about hygiene and disease prevention as well. JPMA and its member companies contribute to improve medical and health care via improving hygiene and awareness to medical care and access to healthcare for peoples living in local areas.
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<th>Initiatives by member companies</th>
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<td><strong>Financial assistance to cultivate and develop health workers</strong></td>
<td>Takeda Pharmaceutical Company Limited is implementing a donation program, the “Takeda Initiative”, to cultivate and develop health workers in Africa through the Global Fund to Fight AIDS, Tuberculosis and Malaria. A total of 1 billion yen (US$12 million) is planned to be donated over 10 years from 2010 to 2019.</td>
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<td><strong>Acceptance of fellows and provision of training in developing countries</strong></td>
<td>Astellas Pharma Inc. and Eisai Co., Ltd. have each accepted Fellows (trainees) from developing countries at their overseas offices through the WHO-TDR (WHO’s Special Programme for Research and Training in Tropical Diseases) Clinical Research Fellowships. Clinical researchers were provided with specialist training and hands-on experience, in order to build capacity in clinical development in the developing world. Astellas and Eisai accept fellows via WHO-TDR program (the neglected tropical disease medical special research and development program), and provide the opportunities of clinical research capacity building. Astellas accepted fellows from Botswana and Ethiopia in 2011 and 2013, respectively, at the US clinical research development. The program provided trainings regarding the international clinical development standard for the capacity building in developing countries. Eisai accepted fellows in Eisai Inc (NJ, USA), one from Nigeria in 2010, and the other from Columbia in 2011, providing trainings for management skills of clinical development and clinical studies. After going back to their countries, they have been playing leading roles in the diagnosis, and treatments of communicable diseases, also the development of</td>
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<tr>
<td>Improvement of diagnostic technology for dementia/provision of education on illnesses</td>
<td>In India, Eisai is currently lending its support to the opening of memory clinics across the country to facilitate the early detection and treatment of dementia, and is engaged in educational programs for doctors as well as education on illnesses.</td>
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<td>Technical cooperation for manufacturing of MR vaccine (mixed vaccine for measles and rubella)</td>
<td>Kitasato Daiichi Sankyo Vaccine, a subsidiary of Daiichi Sankyo, currently provides technical support for the domestic manufacture of the first mixed vaccine for measles and rubella in Vietnam.</td>
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<td>Mobile medical services to improve access to healthcare</td>
<td>Daiichi Sankyo is implementing a mobile medical service in doctorless villages in India, Tanzania and Cameroon. Since 2011, the company has cooperated with NGOs, local governments and communities to provide immunizations to infants and small children, medical examinations for pregnant and parturient women, and other medical care services using mobile medical services, and has cultivated public health clinics for providing support for local activities.</td>
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<td>Provision of education on diseases/patient education support programs using smartphones</td>
<td>Astellas provides illness awareness and patient education support programs regarding “overactive bladders” for smartphone users that can be accessed around the world. Understanding towards patients who suffer from overactive bladders continues to be insufficient. The intention of the aforementioned program is to have patients themselves deepen their understanding and work towards controlling their illness of their own accord through understanding regarding their illness and condition, physical activity instruction for improving symptoms, daily recordkeeping of symptoms, and so forth.</td>
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<td>Malaria Awareness Building</td>
<td>Sumitomo Dainippon Pharma supports Malaria No More Japan (MNMJ) activities via donation,</td>
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and also assists holding the event for Malaria enlightenment.

| Financial assistance to examine tuberculosis | Sumitomo Dainippon Pharma supports Future Code (NGO) which operates to improve medical examination for tuberculosis and capacity building for healthcare workers. |
| Support Health Improvement for Mothers and Children | Daiichi Sankyo launched an initiative through an international NGO, Plan Japan, in the rural areas of Yunnan Province, which has one of the highest stunting rates in China. Daiichi Sankyo provides support to help improve the health of mothers and children by developing medical professionals through additional training and promoting health education in the community. |
Trust and Ethics

We at JPMA follow our established Code of Practice.

The true nature of a medicine cannot be determined solely from its appearance. In order to understand both the effects and possible side effects of a medicine, provision of the correct information for use is required: without this the product cannot function effectively as a medicine. Provision of information which lacks appropriate balance of effects and side effects, or inappropriate sales activities, not only promotes the incorrect use of medicines and interferes with optimal treatments for patients, but may also cause harmful effects to patients' health. Therefore, pharmaceutical companies bear a solemn responsibility to provide accurate, fair, and scientifically grounded information for their products, so that the appropriate use of medicines can be facilitated. This responsibility is universal, and applies in both developed and developing countries.

In recent years, the demand for pharmaceutical companies regarding ethics and transparency from stakeholders has increased. R&D-based pharmaceutical companies need to show that they operate according to high ethical standards at all times, thereby earning a higher degree of trust from society for them to accomplish their mission. When engaging in promotional activities for pharmaceuticals or interacting with medical professionals, researchers, patient groups and other stakeholders, JPMA member companies adhere to the “JPMA Code of Practice”, which itself conforms to the “IFPMA Code of Practice” international standard. This is to ensure patients receive ethical, optimal treatment with their best interests in mind.

In addition, JPMA member companies develop their own guidelines in line with the following JPMA publications: “Transparency guidelines for relationships related to cooperate activities and medical institutions” and “Transparency guidelines for relationships related to cooperate activities and patient groups”. Over the two-year period 2013-2014, JPMA member companies introduced information disclosure practices which comply with these revised guidelines.

JPMA, as a member of the IFPMA Code Compliance Network, actively participates in promoting the further global diffusion of the IFPMA Code. JPMA also participated in development of the “Mexico City Principles”, a voluntary business code of ethics in the pharmaceutical industry approved at the APEC ministerial meeting in 2011. JPMA
works to promote ethical business practices for the promotion and sale of medicines based on these principles, into developed countries and developing countries, and into R&D-based pharmaceutical companies and other pharmaceutical companies, regardless of company size.

JPMA contributes to patient health through establishing high ethical standards in the pharmaceuticals industry and disseminating them on a global basis.