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2015 was a year of transitions at Swiss TPH. Thanks to strategic foresight, detailed planning and effective execution – along with a spirit of team work and support at all levels – the changes went smoothly. All efforts necessary will be made so that harmonious transitions will continue to guide further developments at Swiss TPH.

Those who were with us on the “MS Christoph Merian”, cruising along the Rhine River on that beautiful day on 30 June 2015, will remember the handing over ceremonies followed by our summer party at the Wenkenpark in Riehen. Unforgettable moments for both of us; we were deeply moved to find ourselves “sitting all in the same boat” and “under the same roof” both literally and figuratively. We are very grateful to all those who made this memorable event possible. It was a sign of the vivid and stimulating institutional life at Swiss TPH.

Coinciding with the change of director and following an international call and rigorous selection process, Professor Kaspar Wyss took over as head of the Swiss Centre for International Health at Swiss TPH on 1 July. He succeeds Dr. Nicolaus Lorenz, who successfully developed and expanded this department over the past 20 years. We sincerely thank Nick for all he has done for our institute and we wish him and his wife the very best.

Changes in the Board of Governors and the Departments

Among the important transitions in 2015, on 31 December, Professor Felix Gutzwiller stepped down from the board of governors after serving as chair for 16 years. He is succeeded by Dr. Andreas Burckhardt, who served as vice-chair for the past two years. We warmly thank both colleagues for their fine commitment and leadership. On 1 January 2016, Professor Nicole Probst-Hensch took over from Professor Nino Künzli as head of the Department of Epidemiology and Public Health. At the same time, Professor Sébastien Gagneux replaced Professor Gerd Pluschke as head of the Department of Medical Parasitology and Infection Biology. Gerd Pluschke will continue his research with us as head of unit.

The Department of Education and Training, headed by Nino Künzli, became effective on 1 January 2016. Thus, Swiss TPH consists now of two research departments, three service departments and a distinct teaching and training department. Efforts are also underway to bring our medical services, clinical research, diagnostics and medicines research activities closer together.

Swiss TPH’s mandate remains unchanged: we contribute to improving the health of populations locally, nationally and internationally through excellence in research, services, teaching and training.

Strategy Period 2017–2020

In view of the new strategic phase 2017-2020 and associated submissions to federal and local governments, we reviewed and sharpened our strategic goals. They go hand-in-hand with our vision and modus operandi of working along the value chain from innovation to validation to application. Our strategy, endorsed by the board, builds on the previous strategic phase 2010-2016 and allows us to meet new challenges in global and public health. Consequently, we will turn our attention to three new key areas of activity, including emerging and re-emerging pathogens, with a special focus on virology; moving from personalised medicine to personalised health; and population growth, dynamics and mobility.

We remain deeply rooted in partnerships with health research and development centres worldwide, coupled with strategic alliances in Basel, elsewhere in Switzerland and abroad. These partnerships are of pivotal importance to reaching jointly defined goals and to working towards our shared aspirations of contributing to better health globally. In this spirit, the 9th European Congress on Tropical Medicine and International Health (ECTMIH) was hosted by Swiss TPH in the Congress Centre Basel from 6–10 September 2015. This event was the largest ECTMIH to date, with 2,000 delegates from 102 countries coming to the Congress Centre in Basel. They presented cutting-edge science and discussed and debated global health issues in more than 100 sessions.
State Treaty Ensures Bi-cantonal Support

Most importantly, the state treaty ensuring bi-cantonal support for Swiss TPH was approved unanimously by the parliaments of Basel-Landschaft and Basel-Stadt. We take this as a sign of trust, for which we are immensely grateful. This unconditional support reinvigorates us to pursue our goals. The collective support from the two cantons, the University of Basel and from the Federal Government is central to the institute’s long-term sustainability and to our move to the new building next to the Schweizer Innovationspark Region Nordwestschweiz in Allschwil in 2019/20.

None of the work highlighted here would have been possible without the dedication of each and every member of Swiss TPH’s staff – be they academic, administrative, research, service, technical or part of our large student body – and of all our collaborators, donors and funders mentioned throughout. We are indebted to all of them and look forward to deepening and expanding our collaboration and partnership.

We hope that you find the current annual report a refreshing read and we look forward to continued exchange. Together, we can make a difference to the health and well-being of populations in the region, in Switzerland and around the world.

Prof. Jürg Utzinger
Director Swiss TPH
(1 July 2015 onwards)

Prof. Marcel Tanner
Director Swiss TPH
(1997 to 30 June 2015)
2015 – The Year in Retrospect
Nino Künzli elected as Dean SSPH+

Nino Künzli, head of the Department of Epidemiology and Public Health (until 31.12.2015) and new head of the Department of Education and Training, was appointed Dean of the Swiss School of Public Health (SSPH+), effective 1 January 2015. SSPH+, a foundation with the eight participating Universities of Basel, Bern, Geneva, Lausanne, Lucerne, Neuchâtel, Svizzera Italiana and Zurich promotes and coordinates academic education and research on all aspects of public health on a national level in Switzerland. The position is funded by the University of Basel.

January 2015

Valérie d’Acremont receives the Pfizer Research Prize

Clinical epidemiologist, Valérie d’Acremont, won the prestigious Pfizer Research Prize 2015. She showed that 70% of all febrile illnesses in pre-school children in Tanzania are caused by viruses. Treatment with antibiotics or antimalarials is not required.

February 2015

Symposium: Films for Health

Mitchell Weiss, pioneer in cultural epidemiology, organised a symposium on the role of movies in health promotion and education. It attracted many scientists and friends from Basel and from India. The symposium marked the end of Mitchell Weiss’ academic career, following his retirement in 2011.

March 2015

Members of the Swiss Parliament visit Swiss TPH projects in Tanzania

Swiss TPH and the Swiss Malaria Group, led by Marcel Tanner, organised an official visit to Tanzania with nine Swiss members of parliament. Apart from visiting the Ifakara Health Institute and a project of the Swiss Agency for Development and Cooperation (SDC) in Dodoma, the delegation held official exchanges with the Tanzanian Minister of Health, Hon. Dr. Seif Rashidi; the Swiss ambassador to Tanzania, Olivier Chave; and representatives of SDC.

April 2015
Spring Symposium: Community Participation in Public Health
The symposium provided a platform to reflect on the added value of community participatory approaches in public health. Speakers from all over the world presented ways of and reasons for involving community members in clinical and social science research and project implementation. The feasibility, sustainability and equity of these approaches were also discussed.

April 2015

Marcel Tanner receives the Ordre du Mérite Ivoirien
Marcel Tanner was awarded the Ordre du Mérite Ivoirien at the Université Félix Houphouët-Boigny in Abidjan, Côte d’Ivoire. This prestigious decoration, offered in the name of the country’s president, rewards distinguished merits acquired in public, civil, military or private function.

June 2015

First joint Swiss–South Africa research chair on Global Environmental Health
A new research chair was created in Cape Town to focus on topics such as the effects of pesticides on child health and the impact of poor water quality and soil pollution on health. The chair is a joint initiative between the University of Basel, Swiss TPH and the University of Cape Town. It is supported by Switzerland and South Africa as part of the bilateral programme in science and technology.

June 2015

SSPH+ awards Philipp Bless and Claudia Schmutz
Philipp Bless and Claudia Schmutz were presented with the Swiss School of Public Health (SSPH+) award for the best published PhD article in public health. Their paper, published in the European Journal of Epidemiology, proved that consuming meat fondue with chicken is one of the primary risk factors for Campylobacter infection in Switzerland.

July 2015
**Novartis “Next Generation Scientists” visit Swiss TPH**

Swiss TPH opened its doors to a group of junior scientists from the “Novartis Next Generation Scientists”-programme. On their tour through the institute, the young academics were informed about Swiss TPH’s activities in the area of research and development of new drugs and vaccines and gained new insights into the multiple pathways of disease transmission.

*August 2015*

**ECTMIH 2015: 2,000 global health experts gather in Basel**

The 9th European Congress on Tropical Medicine and International Health (ECTMIH) attracted some 2,000 congress participants from over 100 countries to discuss the most pressing global health problems. Through plenaries, symposia and parallel scientific sessions, the conference reflected on global health challenges, neglected diseases and neglected populations, clinical issues, the sustainable development goals and the world’s revived collective ambition to achieve universal health care. Apart from the rich congress programme, ECTMIH provided a good opportunity for participants to discover Basel’s rich cultural heritage. The congress was organised by Christian Lengeler, Christoph Hatz and Marcel Tanner.

*September 2015*

**National Institute of Parasitic Diseases in China honours Swiss TPH**

The Chinese National Institute of Parasitic Diseases (NIPD) recognised Swiss TPH as a long-standing partner. As a sign of friendship and cooperation and on behalf of China’s Ministry of Science and Technology, NIPD-director Prof. Xiao-Nong Zhou presented an official plate to Swiss TPH.

*September 2015*
Federal President Simonetta Sommaruga visits Swiss TPH projects in Ethiopia

On an official journey to Ethiopia, a Swiss delegation, led by Federal President Simonetta Sommaruga, also visited Swiss TPH health projects. Of special interest was the “Jigjiga One Health Initiative”, which aims to strengthen research capacities at the University of Jigjiga and to improve the health of mobile pastoralists in the Somali Regional State. The project is financed by the Swiss Agency for Development and Cooperation (SDC) and implemented by Swiss TPH.

September 2015

Marcel Tanner honoured with td-net Lifetime Achievement Award

The Network for Transdisciplinary Research honoured Marcel Tanner for his efforts to introduce cutting-edge disciplinary research to transdisciplinary projects, promote a culture of interdisciplinarity at Swiss TPH and initiate new research projects in close contact with local populations throughout the world.

September 2015

Eckenstein-Geigy Foundation sponsors a new professorship at Swiss TPH with CHF 14 million

With an amount totalling 14 million Swiss francs over ten years, the Eckenstein-Geigy Foundation will sponsor a new professorship in Epidemiology and Household Economy. The professorship, conceptualised by Marcel Tanner, will be based at Swiss TPH. The new professor in Epidemiology and Household Economy will combine epidemiology with economics and social sciences, with the aim of strengthening healthcare systems. The focus will be both on weaker healthcare systems in the south and on highly developed healthcare systems in countries such as Switzerland. A new research programme on “Health economics and human behaviour” will be launched in Basel, together with the professorship.

November 2015
Chinese Ambassador honours Swiss TPH

The Chinese Ambassador in Switzerland, Ambassador Xu Jinghu, visited Swiss TPH with an official delegation. Her visit focussed on Swiss TPH’s malaria activities and Swiss TPH’s long-term relations with the People’s Republic of China. This visit was prompted by the awarding of the 2015 Nobel Prize to researchers working on poverty related diseases such as malaria and helminth infections.

November 2015

Public health specialist, Regula Rapp, gets Lifetime Achievement Award

The Swiss Aerosol Society honoured environmental epidemiologist, Regula Rapp, for her lifetime commitment to better air quality in Switzerland. In the context of LUDOK, the documentation database on air pollution and health research, Regula Rapp collected, evaluated and documented all international scientific publications on air pollution and health. The results were made available to cantonal and national government bodies in Switzerland, decision-makers, media and an interested public. LUDOK is a mandate of the Federal Office for the Environment.

November 2015

Experiencing Swiss TPH

Swiss TPH presented its various activities to an interested public from Basel and the surrounding region. For instance, members of the Freiwillige Akademische Gesellschaft discovered the mysterious world of parasites and neglected diseases. The University of Basel visited Swiss TPH in the context of the Uni-Einblicke and, at the national Zukunftstag, around 20 pupils playfully learned about the causes of disease outbreaks and the many steps needed to develop a new therapy.

November 2015

Winter symposium: “Drug resistance: From mechanism to management”

Drug resistance is one of the most pressing global health challenges we face. At the Swiss TPH winter symposium, more than 140 participants shared their insights into drug resistance, from the level of single pathogens to implementing control measures in affected countries.

December 2015
Joint Sponsorship by Basel-Stadt and Basel-Landschaft

2015 was a game-changing year for Swiss TPH, with the governments of Basel-Stadt and Basel-Landschaft agreeing in April on the joint support of the institute in the form of a state treaty. After intense political debate, the two cantonal parliaments unanimously approved this proposal. For Swiss TPH, the institutional security provided by the state treaty is of vital importance, and the prerequisite for the construction of new premises in Allschwil.

With more than 600 employees and postgraduate and undergraduate students, space is now at a premium at Socinstrasse. The laboratories, offices, training rooms and lecture halls are bursting at the seams. The institute is spread over a total of eight properties between Socinstrasse and Missionsstrasse – not a situation conducive to sustainable future development.

In view of this situation, back in 2008 the directorate began – not least with a view to the integration of the institute of Social and Preventive Medicine – to evaluate the possibility of extending its premises. The focus at the time was initially on the neighbouring property at Socinstrasse 55, which belongs to the Bürgerspital. The Sonnenrain nursing home at this address already had plans to relocate to a new building at the edge of the city.

During initial discussions, the Bürgerspital brought another option to the table: a piece of land on the 75,000 square metres Bachgraben development site in the municipality of Allschwil. This gave the institute the opportunity to design a building with offices, laboratories and teaching rooms from scratch based on modern and sustainable principles. Following informal contact between the then Director Marcel Tanner and the two cantons, the idea of locating the institute on Allschwil land opened up the possibility of bringing the canton of Basel-Landschaft on board as a joint sponsor.

In 2013, with a view to assessing the implementation and cost of this new building, the directorate then commissioned the architecture firm Burckhardt + Partner AG to carry out a feasibility study. This study, financed by the R. Geigy Foundation, calculated a sum of approximately 90 million Swiss francs and an area of 10,500 square metres for the construction project.

Joint Sponsorship by Both Cantons

Building on these ideas and preparatory work, the cantonal council of Basel-Stadt proposed to the canton of Basel-Landschaft the concept of joint sponsorship within the framework of partnership negotiations. This would enable Swiss TPH to receive newly built premises on Basel-Landschaft land, while also benefiting from moderate possibilities for future development. The canton of Basel-Landschaft, for its part, agreed to become a sponsor of the institute.

This idea was presented to the federal government in November 2014 and received broad support. The State Secretariat for Education, Research and Innovation, the cantons of Basel-Stadt and Basel-Landschaft as well as the University of Basel decided on a joint approach. According to this agreement, the two half-cantons would become joint sponsors of the institute in a state treaty drafted along the lines of the model of the university treaty. The two sponsors would become the institute’s owners, each with equal rights of co-determination.

The two governments went on to draft a state treaty, which they jointly approved in June 2015 and passed on for consultation. According to the state treaty, the two cantons will contribute around 3.6 million Swiss francs each per year to the operating costs of the institute’s teaching and research activities for the period from 2017 to 2020.

“It was not easy for the government of Basel-Stadt to agree to the proposal of moving the institute to Basel-Landschaft after 70 years in the city,” said Basel-Stadt Director of Education Christoph Eymann to SRF Regionaljournal Basel in April 2015. “We tried to do something to solve the space problem for the longer term.
while also securing more funding for the institute.” The government of Basel-Stadt also commented to the media that the joint Swiss TPH sponsorship was a milestone in the university policy of the two cantons.

Broad Political Support for the State Treaty

The government of Basel-Landschaft was delighted with the idea of Swiss TPH relocating to the canton: “Swiss TPH is an outstanding reference for Basel-Landschaft as a business and science location,” said Urs Wüthrich-Pelloli, Director of Education. As an anchor institution of the Switzerland Innovation Park Basel Area, which has since been planned for the Bachgraben site, Swiss TPH may well attract more partners from business and science to this location.

The political debate surrounding the threatened termination of the university treaty in autumn 2015 also had an impact on the discussion concerning the joint sponsorship of Swiss TPH. Following intense discussions at all levels, the submission for 18.2 million Swiss francs in December was ultimately unanimously approved by the cantonal parliament.

“Basel-Landschaft can consider itself fortunate that a major institute of the University of Basel will now be located within the canton,” said SVP spokesperson Caroline Mall in the cantonal parliament. The cantonal parliament of Basel-Stadt voted in February 2016, and was equally unanimous in its support of the joint sponsorship concept. The directorate and all members of Swiss TPH were glad to hear from this commitment in times of economic difficulties.

Planning and Architecture Competition for New Premises in Allschwil

The joint sponsorship means that the legal foundation for the new premises in Allschwil has been laid. A two-stage architecture competition will be held in 2016, with the winning project to be announced by the end of the year. Once the planning and construction process is complete, the institute plans to move by 2020. Travel medicine services, however, will continue to be provided from Socinstrasse in Basel.
Transitions
A Tireless Leader

Fifteen times around the world in two years, 213 e-mails responded on a single day – Marcel Tanner is one of the world’s most sought-after health experts. On 30 June 2015, he formally handed over the reins of Swiss TPH to Jürg Utzinger. During his 18 years in office, the institute evolved to become one of the leading points of contact for global health issues.

Marcel Tanner draws circles on a blank piece of paper: a round centre and oval petals. “A successful institute develops like a flower,” states the epidemiologist with a love of metaphor. He says that a well-developed centre and strong roots are important. In a demanding scientific environment certain projects may wither, but the plant must always be able to produce new buds.

Rapid Growth since 1997

Marcel Tanner knows what he is talking about. During his time in office, Swiss TPH, which is associated with the University of Basel, developed into an institution of world renown, with more than 700 employees from all over the world working to improve and maintain good health through teaching, research and health services. Some 500 publications can be attributed to Swiss TPH experts on an annual basis and more than 60 postgraduate students earn their PhD at the institute every year. Many return to their country of origin and continue the fight against diseases of poverty such as malaria, tuberculosis and African sleeping sickness. But this is not enough. Functioning health systems are also required, as they are the only way to enable these “magic bullets” to reach the people who need them. And this is why Marcel Tanner, who continues to work at full throttle on developing a malaria vaccine, encouraged a transdisciplinary approach at Swiss TPH. Today, it is common practice for experts from a wide range of disciplines to work and develop ideas together.

Global Partnerships

His recipe for success? Perhaps it is the urge to really make a difference. No doubt it is his ability to bring on board different people with highly diverging interests, his aversion to the mechanics of bureaucracy and his tireless dedication. “We are all in the same boat,” he likes to emphasise. And this is no empty rhetoric. Thanks to him, Swiss TPH is now represented in leading consortia for global health such as the Roll Back Malaria Partnership, the Medicines for Malaria Venture (MMV), the Drugs for Neglected Diseases initiative (DNDi) and the Bill & Melinda Gates Foundation. Marcel Tanner was a key figure in the establishment of scientific institutions in Africa, with the Ifakara Health Institute (IHI) in Tanzania and the Centre Suisse de Recherches Scientifiques (CSRS) in Côte d’Ivoire in particular having evolved into scientific hot spots in Africa under his leadership. Marcel Tanner believes that in order to secure a sustainable future, the countries of sub-Saharan Africa need not only development funding but strong scientific institutions.

Parasites, People and Health Systems

New drugs, vaccines and diagnostics: all possible means will have to be mobilised in the fight against diseases of poverty such as malaria, tuberculosis and African sleeping sickness. But this is not enough. Functioning health systems are also required, as they are the only way to enable these “magic bullets” to reach the people who need them. And this is why Marcel Tanner, who continues to work at full throttle on developing a malaria vaccine, encouraged a transdisciplinary approach at Swiss TPH. Today, it is common practice for experts from a wide range of disciplines to work and develop ideas together.

Marcel Tanner handed over the reins of Swiss TPH to Jürg Utzinger on 30 June 2015 and refers to himself as “retired, but not tired”. We are grateful to see him continue to travel the world in the fight against global epidemics and weak health systems.
Marcel Tanner was born in Basel in 1952. He studied Medical Zoology at the University of Basel, and earned his PhD in 1980 with a thesis on the cultivation of Trypanosoma, the protozoan parasites that cause African sleeping sickness. From 1981 to 1984, he successfully led the Swiss Tropical Institute Field Laboratory in Tanzania. He completed a Masters in Public Health in London before becoming head of the Public Health and Epidemiology department at the Swiss Tropical Institute and was appointed extraordinary Professor at the University of Basel in 1993. Four years later, he became Professor and Chair of Medical Parasitology and Epidemiology at the Faculty of Science of the University of Basel and professor at the Medical Faculty of the University of Basel. He was also Dean of the Faculty of Science between 2002 and 2004. Marcel Tanner is the author of over 600 original papers and has been awarded an honorary doctorate by the University of Neuchâtel. For 10 years, he has been chair of the board of governors of DNDi. In 2016 he was elected President of the Swiss Academy of Sciences (SCNAT).
In Appreciation of Marcel Tanner

Expressing our appreciation of Marcel Tanner in just a few lines is an impossible task. After all, the list of his achievements is almost endless. Today, thanks to Marcel Tanner, Swiss TPH is a renowned partner worldwide in the search for solutions to urgent health problems. During his time in office, the institute’s budget increased fourfold; the number of PhD students – in particular from Africa and Asia – and the workforce as a whole increased significantly. At the same time, the number of academic publications in renowned specialist periodicals also rose considerably. Swiss TPH is represented by innovative research and service projects in over 80 countries on all continents.

Alongside his dedication to fighting diseases of poverty and improving health care in many countries of Africa and Asia, Marcel Tanner also focused on local and national health issues. He maintained excellent relationships with the University of Basel, the governments of the cantons of Basel-Landschaft and Basel-Stadt, the federal government and many private foundations. This approach enabled him to lay the foundation for the future of Swiss TPH in a new location at the Switzerland Innovation Park Basel Area in Allschwil.

Not only are his achievements impressive – but how he did it is also worthy of recognition. Marcel Tanner is a tireless professional. For him, the concept of work-life balance is most certainly not a priority. There is no country in Africa (and there are only a few worldwide) he has not visited. He responds to e-mails at all times of the day and night.

Marcel Tanner has a flair for motivating and inspiring people. He treats everyone as equals, regardless of whether the person concerned is a farmer from the Kilombero District in Tanzania, a student or Bill Gates. “We are all in the same boat,” he says. And this is an image that will undoubtedly continue to guide us!

Thank you, Marcel Tanner, for everything!

Professor Felix Gutzwiller,
President of the Board of Governors from 1999 to 2015

On the shores of the Kilombero River in Tanzania, in the class room in Basel and with UN Secretary-General Kofi Annan receiving a honorary doctorate from the University of Neuchâtel.
Nicolaus Lorenz: Dedicated to Improving People’s Health

Under the leadership of Nicolaus Lorenz, the Swiss Centre for International Health grew enormously. He had always one goal in mind: to improve the health conditions of the poorest of the poor.

As a trained physician, Nicolaus Lorenz started his professional career in global health back in the 1980s in Burkina Faso, where he was a district medical officer. Subsequently, he consolidated his expertise and experience through formal MPH and MBA studies in London. In 1990, he joined the former Swiss Tropical Institute (STI) to develop and oversee project implementation activities in the field of urban health, mainly in Africa. From 1997 onwards, he very successfully built-up and shaped the Swiss Centre for International Health (SCIH) as a new department at Swiss TPH. Under his leadership, the department grew to some 200 collaborators in more than 30 countries. SCIH developed a broad range of activities in areas such as sexual and reproductive health, primary health care, health information systems and programmatic and financial programme monitoring.

As head of department, Nicolaus Lorenz pursued manifold activities. He taught master and post-graduate students in topics such as urban health. He served as expert advisor to the German and Swiss Development Agencies, as well as to the World Health Organization. He directed major international mandates; the most recent example being the investment framework for malaria eradication 2016–2030 (Action and Investment for Malaria Eradication – AIM) that was successfully launched in autumn 2015 and complements WHO’s Global Technical Strategy. He also served on the Board of Trustees of the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) in Dhaka, Bangladesh for more than six years, including three years as its Chair. For many years, he was the Chair of the Executive Board of the Medicus Mundi International Network.

Nicolaus Lorenz

Nicolaus Lorenz served as the head of the Swiss Centre for International Health at Swiss TPH from 1997 to 2015 and as Deputy Director of the institute from 2009 to 2015. Following a sudden medical incident while on a mission to Mozambique, he had to step down from his positions just a few months before his planned retirement.
Nicolaus Lorenz dedicated his professional life to improving people’s health by advancing health services in low- and middle-income countries. He particularly cared for the poorest segments of the population. Nicolaus Lorenz strongly felt that population health could only be improved by working together in partnership, with the shared aim of building-up and fostering strong health systems. Swiss TPH and everybody who has worked with Nicolaus Lorenz over the last three decades have great respect for all of his achievements towards improving the health of populations and towards creating a strong and internationally recognized service department at Swiss TPH.

We are deeply thankful for his extensive contributions to the development of Swiss TPH and to improving health in so many parts of our world. He has left a profound and lasting mark on our institute and we truly wish him all the best in the years to come.

Professor Kaspar Wyss
New head of the Swiss Centre for International Health and successor of Nicolaus Lorenz

Kaspar Wyss studied at the University of Basel and obtained a PhD and a Master in Public Health at Harvard University. As a public health specialist he is interested in questions of health systems strengthening, HR development and increasing access to health care delivery. Kaspar Wyss has extensive international experience in developing and implementing health strategies especially in countries in Africa, Eastern Europe and Central Asia. He has been working for Swiss TPH in several functions since 1990. Before his election as new head of the Swiss Centre for International Health, he led the “Health Systems Support Unit” and acted as deputy head of department. Wyss carries out several international mandates for WHO, the World Bank, SDC or the GIZ. In Switzerland, he was responsible for several mandates like the BAG in the area of non-communicable diseases. Wyss teaches several courses within the MSc in Epidemiology at the University of Basel as well as in postgraduate studies in the field of public health and supervises Master and PhD students.
All on the Same Boat

Over 500 guests and official representatives from government and academia celebrated the handing over of Swiss TPH leadership from Marcel Tanner to Jürg Utzinger on the Rhine.

The 30th of June 2015 was a festive day: Marcel Tanner and Jürg Utzinger received over 500 guests at the Schifflände in Basel, including friends and official representatives from government, academia and partner institutions from Africa and Asia. During the cruise on the “MS Christoph Merian”, Rector of the University of Basel Professor Antonio Loprieno, Vice-chair of the Board of Governors of Swiss TPH, Dr. Andreas Burckhardt, Ambassador of the State Secretariat for Education, Research and Innovation, Mauro Moruzzi and Councillor Urs Wüthrich-Pelloli all underscored Marcel Tanner’s many achievements as director of Swiss TPH. They stressed Tanners’ unbridled creative urge and honoured his efforts to devote research, implementation and teaching and training to the improvement of health of populations all over the world. In a solemn act, Marcel Tanner presented a baton to Jürg Utzinger to symbolise the handing over of the directorate – the same baton he received from his predecessor Antoine Degrémont back in 1997. During the apéro, following the official ceremony, the guests congratulated the new director and wished him all the best for the future.
The blue sky contributes to the high spirits on the MS Christoph Merian.

Andreas Burckhardt; Ambassador Mauro Moruzzi from the State Secretariat for Education, Research and Innovation; Rector of the University of Basel, Antonio Loprieno; as well as Councillor Urs Wüthrich-Pelloli honour Marcel Tanner’s term as Swiss TPH director.
"We Want to Be Among the Three Leading Institutions"

Since July 2015, Jürg Utzinger has been the new director of Swiss TPH. During the interview he stresses four areas he wants to emphasize for the future: structural development, the mandate, research partnerships and the upcoming challenges in global health.

What are the structural developments facing the institute?
Here, the motto “Never change a winning horse” is important. This means that we will be continuing to pursue our strategy in a consistent manner, and within the existing structures. Any planned changes will be tackled in a cautious and harmonious way. The change of director has been accompanied by a generational shift in the leadership of the departments. The two research departments are now being led by Nicole Probst-Hensch and Sébastien Gagneux, and Kaspar Wyss now heads the Swiss Centre for International Health, our biggest service department. With these changes in department leadership, the institution leadership conference has also evolved. The directorate now meets every week and is taking on more managerial responsibility within the institute, helping to distribute the burden more widely.

Ever since it was founded, Swiss TPH’s mandate has been to make a contribution to health improvement. What are your focal points here?
Naturally, we will be focusing on continuing this mandate in a consistent approach. As the institute has done ever since it was founded, we will make our contribution to improving public health on a local, national and international level. Here, we base our approach on the three pillars of research, service and education. In 2016, however, we intend to improve the structure of our service offerings in the medical sector. The two existing departments Medical Services and Diagnostics and Medicines Research will be merged to create a single department and should enable us to reinforce the connection between clinical and pharmaceutical research and medical services. This will in turn create synergies with the education and research departments.

You mentioned partnerships. What is their significance?
They are absolutely essential at all levels, and we will continue to nurture them with care. At the local level, the focus is on our role as an associate institute of the University of Basel. Also important, however, are strategic alliances at the national level, such as with EPFL, the Federal Office of Public Health and the Federal Office for the Environment. Internationally, of course, with our longstanding partners – the Centre Suisse de Recherches Scientifiques in Côte d’Ivoire and the Ifakara Health Institute in Tanzania – and elsewhere in Africa and Asia, where we also have local offices at selected locations. In addition, we also work together with organisations such as the Bill & Melinda Gates Foundation and the Drugs for Neglected Diseases initiative. Partnerships are vital to the institute’s work – without them, Swiss TPH would never have been able to develop into what it is today.

You referred to the challenges of global health as the last area. What exactly do you mean by this?
We are seeing a strong shift in the burden of health problems from infectious diseases to chronic and non-communicable lifestyle diseases, even in the low-income countries of Africa and Asia. This is a huge global challenge. And it is precisely in these areas that we have an excellent position. We can really make a difference here with our expertise and research work, through activities ranging from providing education to implementing services. Our institute has the critical mass and the necessary expertise to tackle these global health problems in an effective way.

Jürg Utzinger, we have spoken about areas of focus. How will the institute develop under your leadership?
I see our institute continuing to function on three levels: research and services with two departments each, and one department for education and training. This will be our approach to fulfilling our mandate.

On top of this will of course come our relocation from Basel to Allschwil, which will enable the institute to create a new legal, financial and ultimately also physical foundation. Thanks to the state treaty and the joint financing from the cantons of Basel-Stadt and Basel-Landschaft,
Jürg Utzinger was born in Zurich in 1968 and grew up in Erlenbach (canton Zurich). He graduated in Environmental Sciences from the Swiss Federal Institute of Technology Zurich (ETHZ) in 1993 and, two years later, he completed a postgraduate course at the Center for Development and Cooperation also at ETHZ. In 1999, Jürg Utzinger gained a PhD in Epidemiology at what was then known as the Swiss Tropical Institute (today Swiss TPH), an associated institute of the University of Basel, following extensive research work at the Centre Suisse de Recherches Scientifiques (CSRS) in Côte d’Ivoire. After spending several years as a Visiting Research Fellow at Princeton University in the US, in 2004, he was awarded a Swiss National Science Foundation (SNSF) professorship at Swiss TPH and the University of Basel. As Professor in Epidemiology at the University of Basel, Jürg Utzinger was head of the Ecosystem Health Sciences unit at Swiss TPH until his appointment as Director.

Jürg Utzinger is an internationally renowned expert in epidemiology and integrated control of parasitic diseases, with an emphasis on schistosomiasis and other worm infections. Further areas of focus in his research and teaching include spatio-temporal predictions of neglected tropical diseases and health impact assessments of large development projects (e.g. dams). Jürg Utzinger is a member of various national and international committees, editorial boards of scientific journals and consortia in the areas of health and development cooperation. He is married to Jennifer Keiser, with whom he has two sons (13 and 15 years).
Insights
African Sleeping Sickness – Putting an End to the Fatal Disease

African sleeping sickness can only be tackled in a combined effort – an example of the innovative power of Swiss TPH, from the search for new pharmaceutical compounds to economic analysis.

Fexinidazole – a Compound on the Home Straight

A drug “made for Africa”: this is the hope after 15 years of development work. Fexinidazole and the oxaborole SCYX-7158 are two promising compounds in the fight against sleeping sickness currently in the late stages of clinical testing. This means that, thanks to combined know-how of Swiss TPH and the Drugs for Neglected Diseases initiative (DNDi), the treatment of the fatal disease may dramatically improve.

A new therapy against sleeping sickness is within our grasp: fexinidazole, which is available in tablet form, must be taken for ten days, is well tolerated and has also been shown to act against the later, cerebral form of the disease. This represents significant progress in comparison with the decades-old therapies administered intravenously by specialists, which can have severe adverse events. There are several clinical trials of fexinidazole currently on the home straight.

“Fexinidazole would finally provide us with an effective, safe and easy-to-use weapon in the fight against sleeping sickness,” says Professor Christian Burri, head of the Medicines Research department. His team is currently carrying out clinical trials at seven centres in the Democratic Republic of the Congo and one hospital in the Central African Republic on behalf of the Drugs for Neglected Diseases initiative (DNDi).

African Sleeping Sickness – Decades of Research at the Swiss TPH

Pharmacologist Christian Burri at Swiss TPH is one of the pioneers in the development of a treatment for sleeping sickness. In Côte d’Ivoire in the mid-eighties, even before gaining his PhD, he was studying the efficacy profile of melarsoprol, the only drug available at the time. The treatment time was reduced considerably thanks to these studies, but the treatment remained risky. Five per cent of those treated experienced extremely severe adverse events, often with fatal consequences.

In the 1980s and 1990s, the outlook for the treatment of sleeping sickness was bleak. Developing new drugs was too risky and insufficiently lucrative for the pharmaceutical industry, while the university research institutes lacked the money and expertise. The establishment of the DNDi in 2003 – a process in which Swiss TPH also played a leading role under Marcel Tanner – breathed new life into the search.

Thanks to a joint international effort, the number of globally reported sleeping sickness cases fell under 6,000 per year.
Drug Development Thanks to Partnership

The DNDi can be viewed as a virtual non-profit pharmaceutical company with technical and financial support from a range of partners in industry, universities, foundations and the public sector – a format known as a public-private partnership. In this way, the DNDi combines all of the competencies required in drug development in a decentralised approach.

In 2006, the DNDi launched a screening programme for new compounds against sleeping sickness and other neglected diseases. The laboratory of Professor Reto Brun and Professor Pascal Mäser at Swiss TPH identified several dozen highly active compounds from the compound libraries of large companies such as Sanofi and Roche. This was no coincidence, as the team at Swiss TPH had spent the previous decades developing unique methods aimed at studying the effect of compounds on the fatal parasites directly. “Our testing systems against the parasites that cause sleeping sickness have proven to be extremely useful and informative,” says Pascal Mäser.

Fexinidazole was highly effective in the laboratory against the parasites that cause sleeping sickness, and continued to perform well as the first drug that could be administered orally over a treatment period of ten days. The oxaborole SCYX-7158 is another compound in the DNDi development pipeline whose efficacy has been demonstrated at Swiss TPH. Oxaborole SCYX-7158 promises to treat patients after one single administration and is also set to undergo clinical testing on patients in the near future.

Innovation Chain – From the Laboratory to Patient Testing

While new compounds are being sought in the laboratories of Swiss TPH, Christian Burri and his team often find themselves dealing with the realities of everyday life in the bush: arduous journeys to remote locations in the Democratic Republic of the Congo, extremely limited medical care and logistical difficulties on site. Despite all of these challenges, a clinical trial must meet the highest possible standards in terms of patient safety, ethics and data quality. And this is precisely where Christian Burri and his team come in, with long-standing expertise, knowledge of local conditions and a healthy dose of tenacity and idealism helping them to achieve their goal. “When you find yourself together with patients in need, all of the difficulties fade away.” says Christian Burri.

With fexinidazole and the oxaborole SCYX-7158, the DNDi hopes to see the launch of two new exclusive drugs to treat sleeping sickness by 2018 – thanks in no small part to Swiss TPH expertise.

The Feasibility and Cost of Eradicating West African Sleeping Sickness

The strategy for halting the spread of West African sleeping sickness by 2020 is still open. Under the leadership of Fabrizio Tediosi, Swiss TPH has evaluated and modelled various scenarios for the Bill & Melinda Gates Foundation. The models show that, in addition to the introduction of new drugs, tsetse fly populations should be destroyed in a targeted manner, diagnosis improved and the active monitoring of disease outbreaks reinforced. According to the new models, efforts such as these cost between approximately USD 15 million and USD 53 million, or the equivalent of USD 3 to USD 10 for each person at risk.

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Sonja Bernhard is training a local team in the Democratic Republic of the Congo.
Sleeping Sickness – A Swiss TPH Success Story

West African sleeping sickness is a prime example of a neglected disease. It occurs only in the most remote regions of sub-Saharan Africa, and primarily affects the poorest in society. The protozoan parasite *Trypanosoma brucei gambiense* that causes the disease is transferred to humans via the tsetse fly. Following the initial stage of the disease with non-specific pain, fever, skin rashes and swelling, the parasite passes through the blood-brain barrier and attacks the brain. Severe psychiatric disorders, sleeplessness and impaired speech, body coordination and food intake ultimately result in death. The WHO has set a target of putting an end to the transmission of the disease by 2020.

Swiss TPH has been researching sleeping sickness ever since its foundation and Rudolf Geigy was the first to succeed in breeding tsetse flies under laboratory conditions. Later, Leo Jenni managed to develop culture systems for insects and pathogens, thereby laying the foundations for the compound screening developed with great success by Reto Brun. Today, the screening laboratory is run by Pascal Mäser.

Compounds Against Sleeping Sickness in the Pipeline

In the laboratory, the Trypanosoma specialists at Swiss TPH are constantly discovering new compounds that are highly active against the sleeping sickness parasite, some with completely new properties.

Mobile Phone Radiation Affects the Brains of Adolescents

Two PhD students, Katharina Roser and Anna Schöni, studied the health impacts of mobile phone use on adolescents. In this HERMES study, they discovered negative effects on spatial memory.

Phone calls, WhatsApp or Facebook – today, 98% of adolescents in Switzerland own a mobile phone. While the large number of apps available allows for unlimited possibilities for communication and gaming, there is continued uncertainty as to the health impact of extensive mobile phone use.

With HERMES, Professor Martin Röösli and his team found a link between mobile phone use and cognitive memory tests for the first time. The researchers had access to detailed mobile phone usage data over a period of one year for 439 adolescents in school grades 7 and 8 (aged 13 to 15 years): connection times, quality and type of connection (spoken, SMS or data). In addition, high-frequency radiation was measured with dosimeters for a number of study participants.

“Thanks to the data from providers, we were able to objectively calculate the individual radiation dose for each study participant,” says project leader Martin Röösli. The radiation dose to which both the brain and the body as a whole are exposed was estimated on the basis of sophisticated models. For the first time anywhere in the world, the study was thus able to estimate cumulative radiation exposure on brain and body over the course of a year.

Phone Calls Have the Greatest Impact on the Adolescent Brain

The analysis revealed that three quarters of the brain’s exposure to radiation are attributable to phone calls, with just one quarter being made up by other sources such as data traffic via WLAN and the mobile network. When it comes to whole-body exposure, however, notebooks and tablets play a more central role with around 35%. Mobile phone towers and radio and television aerials contribute just around 6% to the brain dose and 10% to the whole-body dose.

“The large majority of radiation exposure is down to the device itself,” says Martin Röösli. In contrast to the widely held belief, mobile phone towers appear to play a minor role in general.

Night-time Text Messaging Is Detrimental to Health

At the beginning of the HERMES study and then 12 months later, the adolescents completed various cognitive tests on their ability to concentrate and their linguistic and figurative memory. Using standardised questionnaires, the researchers also recorded health symptoms such as headaches, tiredness and physical well-being.

This revealed an interesting picture: night-time mobile phone disruptions actually do lead to health impairments such as tiredness, more rapid exhaustion, headaches and uneasiness in adolescents. It was not possible, however, to establish a link with the radiation sources – the cause was much more likely to be the disrupted sleep itself.

Mobile Phone Radiation Affects Memory Performance

On the other hand, the researchers did demonstrate a link between radiation dose and memory performance. The adolescent test subjects
were asked to memorize various word groups or figures in a standardised test aimed at studying figurative and linguistic memory. The test was repeated after a year, and compared with individual radiation doses over the previous 12 months.

Adolescents with higher radiation doses did not perform as well in the figurative memory test as those with low doses, while in the verbal memory test this correlation was not apparent.

“This is extremely interesting because figurative memory is located in the right brain, while the verbal centre is in the left,” says Martin Röösli. In the study, 81% of participants said they tended to hold the phone to their right ear when making a call. And in adolescents who use the phone on the left, it was their verbal memory – which is located on the left – that suffered more.

Martin Röösli therefore assumes that different parts of the brain are exposed to radiation depending on whether an individual holds their phone to the left or the right, and that different effects can occur as a result. The impairment of figurative memory is directly attributable to exposure of the right brain to radiation due to the phone being held to the right while making a phone call. The verbal centre in the left brain remains relatively unaffected.

“On the basis of our data, we conclude that high-frequency electromagnetic radiation can indeed have an impact on memory performance when the mobile phone is frequently held directly to the ear,” says Martin Röösli.

The epidemiologist plans to study these findings further in the next phase of the project.


Health Insurance for Rural Tanzania

Basic healthcare in Tanzania, supported by general health insurance – this is the objective of a joint project with the Swiss Agency for Development and Cooperation (SDC). The system, which is based on smartphone technology, promises improved security of supply and will allow for more efficient health care services in local health centres. The project also forms the basis of a national Tanzanian health insurance model.

A boy plays with a car made of plastic bottles. An elderly woman balances a water container on her head. These are typical scenes in rural Africa. At the same time, however, technology is making its way into everyday village life. A representative of the community health fund takes a picture of a young father with his smartphone. Forms are exchanged and the premium for the first year is paid. Now, the proud village resident is a member of “CHF Iliyoboreshwa” – the improved community health fund. The freshly laminated insurance card with its QR-code will now enable him and his family to benefit from free medical services at the health centres and hospitals in the region. For the equivalent of five Swiss francs per year, the insurance policy guarantees basic health care and hospital access for six members of one household – a first for rural Tanzania.

Most Rural Residents Are Not Insured

In Tanzania, a national health insurance is available. “But it is a privilege for state employees and other wage earners”, says Manfred Stoermer, project leader from Swiss TPH. Most people in the rural regions of Tanzania, however, are not on any payroll. They offer their goods for sale at markets, or keep their heads above water by doing various jobs. The health community fund (CHF) is intended precisely for these people. Since its launch in 1996, however, confidence in the CHF has suffered. Corruption, a lack of medication, insufficient treatment and access to health centres only: people were reluctant to join. Today, just 2% to 3% of the population are members of the CHF.
A Health Insurance Fund for the Informal Sector

The health insurance fund model developed by Swiss TPH for rural districts is called CHF Iliyoboreshwa or improved health fund. The model is based on an IT system that facilitates rapid registration in the villages, electronic exchange and the storage of health data. Mobile technology is helping to significantly improve the work of health care staff and reliability for patients.

For treatment in hospitals or health centres, all the patient has to do is show their insurance card with its QR-code. When the card is scanned using the doctor’s smartphone, a photo of the member of CHF Iliyoboreshwa, their insurance policy and their health data appear on the screen. After the treatment, an electronic invoice is issued to the insurance fund, and the hospital receives payment for the treatment provided and any medication supplied. New medication is ordered directly from the supplier.

“The system is relatively corruption-proof,” says Manfred Stoermer, “as every patient and every transaction leaves an electronic trail.”

Member data are stored in encrypted form on a central server belonging to the Tanzanian government in Dodoma. 23 districts with about 850 health centres are connected to the server. The level of trust appears to be improving. In Dodoma alone, the number of members has increased from 4% to 10% since the project was launched in 2011.

Health Insurance for All?

Tanzania has made important steps towards reducing child mortality or containing the spread of infectious diseases such as malaria. Nevertheless, it needs further efforts to strengthen health systems – in the periphery as well as on a national level. The HPSS project and the CHF Iliyoboreshwa are important milestones on the way to achieve this aim.

The Tanzanian government is considering making the CHF Iliyoboreshwa the national health insurance fund. This is a long way off, however. Integration will, for example, also call for a solution for the absolute poorest in society, as one-sixth of the Tanzanian population is unable to afford health insurance. “My vision is for the Tanzanian state to support the poorest from tax revenue,” says Manfred Stoermer.

One thing is clear: as long as their health risks remain uninsured, a health insurance for all will remain nothing but a dream.
2015 – In Brief

International Projects

77%

National Projects

23
Creating, Sharing and Applying Knowledge

Swiss TPH groups its activities into currently 13 key areas of activities. All activities share the following objective: improving health, in particular among disadvantaged populations.

Research into poverty-related diseases such as malaria, sleeping sickness or tuberculosis has been part of Swiss TPH’s role since the organisation was founded. New knowledge flows into the development of diagnostics, compounds and vaccines and into prevention. Other key issues are the monitoring and modelling of communicable and non-communicable diseases, the assessment of the impact of environmental pollution or measures to strengthen health systems.

Swiss TPH as Innovation Pioneer

The institute follows the strategic development path that leads from the idea and results in the laboratory through validation in the field to widespread application and implementation among the population. Implementation specialists working together with local partners in health programmes can introduce promising, scientifically proven approaches. From a diverse range of disciplines, our specialists combine their knowledge and expertise in designing innovative solutions to the world’s most pressing health problems. Among the most important clients are the Swiss Agency for Development and Cooperation (SDC), the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the Bill & Melinda Gates Foundation.

New knowledge is also shared with students and professionals through further-education programmes and training or through on-the-spot teaching.

Interdisciplinary Partnerships

Fields of operations evolve dynamically in line with global health problems. New fields of operations are currently developing in the areas of newly emerging infectious diseases, migration medicine and personalised health care.

Key Areas of Activities 2015

- Basic Research and Infection Biology
- Preclinical Research and Development
- Clinical Research and Development
- Malaria
- Molecular and Genetic Epidemiology
- Statistical and Mathematical Modelling
- Chronic Diseases and Environmental Epidemiology
- Health in Social-Ecological Systems
- Society, Culture and Health
- Sexual and Reproductive Health and Gender
- eHealth
- Health Systems and Policy
- Travel and Tropical Medicine

< A volunteer receives a dose of the experimental vaccine “cAd3-EOZ Lau” at the University Hospital in Lausanne (CHUV), 2014.>
New Method for Differentiating Immune Cells

Dept: Medical Parasitology and Infection Biology

The human immune response depends on a complex interplay between many different cell types. A novel method allows scientists to differentiate different sub-sets of human immune cells based on their specific activation status. This promises new insights into the role of different immune cells in health and disease.


Co-Evolution: Tuberculosis-Bacteria and Immune Systems

Dept: Medical Parasitology and Infection Biology

Swiss TPH studies the co-evolution of tuberculosis (TB) and the human immune system. Studies show that the TB-antigens recognised by the immune system exhibit similar genetic traits between different strains. This near lack of antigenic variation creates an advantage for the TB-bacteria. During a TB-infection, these highly conserved antigens provoke a severe immune response. This enables the bacteria to enter the lungs from where they are easily transmitted from human to human by coughing.


Research of Poverty-related Diseases

Research on parasites and disease transmission has been a central field of activity at Swiss TPH since its foundation. Of special interest are poverty-related diseases such as malaria, African sleeping sickness, helminth infections or tuberculosis. Newly gained knowledge is used to develop new drugs and vaccines.

Basic Research

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<th>Number of projects</th>
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<td><strong>33</strong></td>
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Research projects 100%

Implementation projects 0%

Trypanosoma brucei, pathogen causing African sleeping sickness.

Repurposing Drugs: Options for Treating Neglected Diseases

Dept: Medical Parasitology and Infection Biology

Registered drugs approved for treating one disease can also be effective against others. In one screening programme, researchers assembled and tested a set of 100 registered drugs against trypanosomes, the parasites causing Human African trypanosomiasis (sleeping sickness). Several drugs showed *in vitro* activity in screening assays, supporting their potential use – or "repurposing" – for controlling neglected diseases, for which few treatment options exist.

Preclinical Research and Development of Drugs, Vaccines and Diagnostics

Swiss TPH is among the world’s leading institutes in testing new drugs, therapies or vaccines against infectious diseases such as African sleeping sickness, malaria or various helminth infections. Also in collaboration with external partners, Swiss TPH contributed to the development of many promising therapies (see for instance the article about sleeping sickness, pp. 25–27).

Preclinical Research

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<td>Implementation projects</td>
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Clinical Research

Thermotherapy Against Buruli Ulcer

Dept: Medical Parasitology and Infection Biology

A phase II trial, in collaboration with the University of Heidelberg, showed that increasing the temperature of the skin with a heat pad can stop infections caused by the Mycobacterium ulcerans and heal Buruli ulcer lesions. The study demonstrates that thermotherapy with heat pads against Buruli ulcer is safe, effective and inexpensive.


Malaria Cases in Africa Halved since 2000

Dept: Epidemiology and Public Health

Insecticide treated nets, new drugs and insecticides have had positive impacts on malaria morbidity in Africa. The Malaria Atlas Project, in collaboration with Swiss TPH, found that malaria cases in Africa have fallen 50% since the year 2000. It is, however, too early to rest on one’s laurels warn the researchers. There are still millions of people at risk of the disease.


The number of malaria cases in Africa has fallen 50% since the year 2000.

Deworming Therapy from Veterinary Medicine

Dept: Medical Parasitology and Infection Biology

A clinical trial successfully demonstrated that a drug used in veterinary medicine, in combination with traditional deworming therapies, significantly improved efficacy compared to the standard therapy. The finding could lead to improved health for millions of children suffering from a helminth infection in sub-Saharan Africa.

Areas of Activities 2015

Tuberculosis Increases the Risk of Diabetes

Dept: Epidemiology and Public Health, Medical Services and Diagnostics

The first long-term study on diabetes in patients suffering from tuberculosis (TB) in Africa showed increased blood glucose levels in infected patients. Treatment with antibiotics led to a normalisation of blood sugar levels. The study suggests routine blood glucose control of TB-patients and argues for postponing a diabetes diagnosis until after completion of TB-treatment.


First Resistance to a New Generation of Tuberculosis Drugs

Dept: Medical Parasitology and Infection Biology

For the first time, scientists from Swiss TPH and the University of Zurich detected resistance against two new tuberculosis drugs bedaquiline and delamanid. Treating multidrug-resistant tuberculosis is becoming a huge challenge, warn the researchers in the renowned New England Journal of Medicine.


Successful Phase I Ebola Vaccine Trial

Dept: Epidemiology and Public Health, Medicines Research

A new Ebola vaccine candidate is safe and induces the anticipated immune response, according to a phase I trial among 120 volunteers at the University Hospital in Lausanne. The vaccine candidate was developed by GlaxoSmithKline (GSK) and the National Institutes of Health (NIH). Swiss TPH was responsible for monitoring and assuring quality of this clinical trial in Lausanne, as well as of another vaccine candidate at the University Hospital Geneva.


Clinical Research and Development of Drugs, Vaccines and Diagnostics

Experts at Swiss TPH contribute to the clinical development and validation of new drugs, vaccines and diagnostics against poverty-related diseases such as African sleeping sickness, malaria, tuberculosis, helminth infections or Buruli ulcer. The institute’s experience in planning, implementing and monitoring clinical trials especially in low-income countries differentiates Swiss TPH from other institutes. Strict ethical standards and professional regulations are followed to guarantee the highest levels of patient protection and data integrity.

Clinical Research

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Project leader Blaise Genton informs about the outcomes of the first phase I Ebola vaccine trial in Lausanne.
Defining Molecular Markers for the Prediction and Control of Communicable and Non-Communicable Diseases

Research on risk factors and pathophysiological mechanisms of communicable and non-communicable diseases contributes to the development of new therapies and the detection of early signs of disease. The genetic analysis of pathogens and hosts in large field studies has brought among others important insights into the emergence of drug resistances.

Molecular Epidemiology

Number of projects

17

Research projects 100%
Implementation projects 0%

Malaria Diagnostic Assay Improved Tenfold

Dept: Medical Parasitology and Infection Biology

A new diagnostic assay detects even the lowest malaria parasite levels in human blood. The blood test recognizes a highly repetitive DNA-sequence in the genome of the malaria parasite and is therefore 10 times more sensitive than current molecular assays. The new test might be an important tool in the campaign to eliminate malaria.


Molecular Epidemiology

Malaria Vaccine RTS,S Could Save the Lives of Thousands of Children in Africa

Dept: Epidemiology and Public Health

When used together with other malaria control strategies, the malaria vaccine RTS,S/AS01 has the potential to avert more than 116,000 cases of clinical malaria and almost 500 deaths for every 100,000 children vaccinated in Africa, over a period of 10 years. These are the results of a study on the long-term public health impact of the vaccine undertaken by different modeling groups, including Swiss TPH. RTS,S is the first malaria vaccine to be tested in a phase III trial in Africa. The European Medical Agency has adopted a positive scientific opinion about the vaccine and the WHO is assessing the practical suitability of RTS,S, which requires four doses to achieve its protective effect.


Malaria – Research and Elimination

Swiss TPH is one of the most respected institutions in malaria research and elimination worldwide. Around 200 experts are currently involved in malaria-related activities at the Institute. Their activities cover the whole range – from understanding infection and parasite biology to developing new vaccines and diagnostics, predicting risk factors or implementing control strategies in endemic regions.

Number of projects

72

Research projects 68%
Implementation projects 32%

Non-Adherence to ART a Predictor of Mortality

Dept: Epidemiology and Public Health

For HIV-positive patients, adhering to treatment with antiretroviral therapy (ART) is the single most important factor affecting the success of therapy. An analysis of the Swiss HIV Cohort Study showed that the risk of treatment failure among patients who missed two or more doses of ART was five times higher than those who strictly adhered to treatment; the risk of death was twice as high.


Clinical trial centre for phase I trials at the Ifakara Health Institute in Bagamoyo, Tanzania.
Modelling Spatial Distribution of Disease

Dept: Epidemiology and Public Health

Based on epidemiological survey data on helminth infections, the Swiss TPH modelling group produced high-resolution risk estimates for sub-Saharan Africa. These outline maps provide useful tools and information for guiding disease control and interventions.


Modelling the Spatial and Geographical Distribution of Disease Risks

The analysis of big data and risk predictions are fundamental to epidemiology and public health research. Mathematical and statistical models help to better understand disease transmission dynamics as well as to predict the emergence and distribution of communicable and non-communicable diseases. This allows for instance to estimate the long-term public health impact of health interventions such as new drugs or vaccines. Research results are provided to international donors, policy-makers or the local authorities and serve as a basis for better allocating scarce resources.

### Statistical Analysis and Modelling

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Noise Increases the Risk for Cardiovascular Diseases

Dept: Epidemiology and Public Health

Noise can be unhealthy with heavy costs to the Swiss national economy, a study showed analysing the health (and economic) impact of road, rail and air traffic in Switzerland in 2010. Exposure to noise increased the risk for cardiovascular diseases with an estimated 22,500 hospital days. Furthermore, the external costs of noise exposure were estimated to be almost equivalent to that of air pollution at about 1.8 billion Swiss Francs. Noise costs are mainly due to reduced rent and purchase prices of apartments and houses in noise-affected regions.


Air Pollution and Inflammatory Reaction

Dept: Epidemiology and Public Health

A study based on the Swiss SAPALDIA cohort found biological evidence of sub-clinical inflammatory reactions in people exposed to increased levels of ultra-fine dust particles. These findings could help to improve preventive measures.

Environmental Factors, Genes, and Human Health

Air pollution, electromagnetic fields or noise influence human health. They might cause chronic diseases such as cancer or diabetes. Recent research projects scrutinise the impact of pesticides on the hormone activity of children living in South Africa, the level of air pollution in the Iranian capital Tehran or the impact of the smoking ban on the health of employees working in the Swiss hospitality sector. Swiss TPH develops and operates large bio-banks. Thanks to the anonymised specimens and data, the impact of genetic, environmental or epigenetic factors on human health can be assessed over decades.

Number of projects

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<td>Research projects</td>
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Health Risks of Human Activities

Risk of Water Pollution in Uganda

Dept: Epidemiology and Public Health

An examination of water, sediment and soil samples in Kampala, Uganda, revealed alarming levels of contamination with heavy metals such as cadmium, lead and chrome. Furthermore, high numbers of worm eggs and intestinal bacteria were found in the samples. The authors warn that farmers and consumers of locally produced vegetables are exposed to increased health risks.


European Course in Tropical Epidemiology at Swiss TPH

Dept: Epidemiology and Public Health, Education and Training

Swiss TPH organised the European Course in Tropical Epidemiology (ECTE) under the umbrella of tropED. The course offers epidemiological and statistical know-how for health specialists from low-income countries. ECTE is offered in rotation by several European research institutes.

Slum dwellers in Kampala, Uganda, are constantly exposed to contaminated water bodies.
Areas of Activities 2015

Health Risks of Human Activities

Health specialists have a comprehensive understanding of health. Human and animal health is closely intertwined and related to environmental and social realities. Deploying a systemic approach, Swiss TPH scrutinises health from the level of the single molecule to the humans in their social and natural environments. They conduct health impact assessments of large infrastructure projects such as mines or effective strategies against helminth infections in Asia and Africa. Research results are provided to governments, health authorities, and the people in affected countries.

Number of projects

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Reduction of Rabies: Successful Vaccination Campaign in N’Djamena

**Dept: Epidemiology and Public Health**

In two mass vaccination campaigns in 2013 and 2014 in N’Djamena, Chad, experts worked with local veterinarians to vaccinate more than 40,000 dogs against rabies. This corresponds to 70% of all animals living in the capital city. Such high vaccination coverage was only achievable through close collaboration with local decision-makers as well as through a comprehensive information campaign targeting dog owners. As a result, rabies cases in dogs decreased by 90% within a year. Following the campaigns, experts are confident that rabies elimination in Africa is possible with high animal vaccination rates and a thorough understanding of different socio-cultural contexts. Rabies kills about 60,000 people every year and more than 90% of human rabies cases are caused by the bite of an infected domestic dog.


Unreliable Health Care Provision for Tanzanian Elderly

**Dept: Epidemiology and Public Health**

More and more elderly people are living in African megacities. As one project showed, older people in urban areas in Tanzania cannot rely on government aid in case of infirmity if their children do not care for them. Good health care provision is a privilege accessible only to those who can afford private institutions or who can rely on a vast network of close relatives extending all the way to the USA or to the Arabian Peninsula. These individuals profit from familial financial aid or from care stays abroad.

Level of Education and Social Status Affect Vaccination Rates

Dept: Epidemiology und Public Health

Low education levels as well as the social status of women in many countries account for low vaccination rates among children. In order to improve the situation, better information campaigns should coincide with serious efforts to minimise social, gender and educational inequalities.


Swiss Mothers Comply With National Recommendations for Infant Diet

Dept: Epidemiology and Public Health

A majority of Swiss mothers follow the national recommendations for breastfeeding and infant diet. Following birth, 95% of all mothers breast-feed their children according to the latest results of the Swiss Infant Feeding Study (SWIFS). Swiss TPH conducted the study on behalf of the Federal Food Safety and Veterinary Office. It will be repeated every ten years.


Teenage Pregnancies in Ghana: Strengthening Skills

Dept: Epidemiology and Public Health

A survey study in Accra, Ghana, showed that many girls who became pregnant at a young age were able to develop skills to cope with the situation. Considering their competencies, the study suggests that these girls should not merely be viewed as weak and vulnerable. Instead of focusing only on strategies to prevent teenage pregnancies, it may be more effective to further strengthen the skills of young mothers.


Health and Disease in Cultural Contexts

Economic situation, personal values or social status: they all influence human health. That is why social scientist analyse health and disease in different cultural contexts. The health of adolescent and elderly people are especially focused on. How do teenagers in Ghana prevent or cope with pregnancies? What kind of medical services do poor women in the Democratic Republic of the Congo request if they dispose of additional money? What is the quality of life of elderly people in African and Asian countries?

<table>
<thead>
<tr>
<th>Number of projects</th>
<th>Research projects</th>
<th>Implementation projects</th>
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<tbody>
<tr>
<td>23</td>
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Call for a New Financing Model for Developing Drugs and Vaccines

Dept: Epidemiology and Public Health

Global health experts, including Marcel Tanner, propose the establishment of a new research and development fund and mechanism to accelerate the development of new drugs and vaccines against poverty-related diseases. In their essay published in PLoS Medicine, they argue that the current market-led research and development system has failed to react quickly to global health challenges such as the Ebola outbreak.


Registering Births and Deaths via SMS

Dept: Epidemiology and Public Health

Reliable data about birth, deaths and the causes of death facilitate government health planning. Relying on smartphone technology, experts help to improve the quality of vital statistics and civil registration in African countries. In a pilot study in Tanzania, health centres in remote areas sent an SMS for every new birth or death event to a central database linked to the district’s civil registry. The number of registered births doubled during periods with SMS reporting compared to periods without, while the number of registered deaths quadrupled.


Evaluation of Adolescent and Youth Programmes

Dept: Swiss Centre for International Health

The United Nations Population Fund (UNFPA) commissioned Swiss TPH to evaluate its adolescent and youth programmes globally, on behalf of the Executive Board. Results of this evaluation will inform the mid-term strategic review of the current strategic plan and the development of the forthcoming UNFPA strategic plan beyond 2017. UNFPA adolescent and youth programmes operate in over 120 countries around the world, emphasising youth-friendly health services, comprehensive sex education and suitable policy and programming to meet the needs of the most marginalised and vulnerable young people. Improving the health and well-being of adolescent girls is of particular concern.

Expert Report: Global Burden of Disease

Dept: Epidemiology and Public Health

Swiss TPH experts contributed to the “Global Burden of Disease Report 2013”, which measures the health and disease burden globally. The report is an important basis to prioritise health interventions.

A new project seeks to understand how best to improve health systems governance in Tanzania and Ghana so that the poorest segments of the population can have access to health services without incurring financial hardship. The project is part of the Swiss Programme for Research on Global Issues for Development (r4D), financed by the Swiss National Science Foundation (SNSF) and the Swiss Agency for Development and Cooperation (SDC).

Swiss TPH supports countries with unstable health care provision across the globe. Health specialists develop insurance schemes for the rural Tanzanian population; they design IT-solutions for hospitals and health centres; they train health personnel in Eastern Europe, evaluate development projects or monitor the allocation of funds provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria in many countries in Africa and Asia.
Areas of Activities 2015

Ukraine Summer School: Healthcare System Transformation in Eastern Europe

Dept: Swiss Centre for International Health, Education and Training

The new Summer School on “Healthcare System Transformation in Eastern Europe” attracted more than 60 participants from Eastern Europe and Central Asia. Improving healthcare provision and catalysing the process of health system transformation in Eastern Europe was the major theme. The summer school was supported by Swiss TPH, UNICEF, the World Bank, WHO, and the International Renaissance Foundation.

Life expectancy in the Ukraine is 66 years for men and 78 years for women.

Sexual Behaviour and the Risk of HIV/AIDS in Soweto

Dept: Epidemiology and Public Health

Women’s social environments may affect their risk of contracting an HIV/AIDS infection. A study conducted in Soweto, a township of Johannesburg, South Africa, revealed that some women expect that pregnancy and starting a family would strengthen their relationship with their partners. As a result, they risk HIV/AIDS infection. Often they do not know if their partner maintains other sexual relations or if he is HIV positive or not. Such surveys serve as a basis for developing more effective preventive measures.

Only half of all HIV infected people know their status.

Sexual and Reproductive Health and Gender

Detailed knowledge about sexually-transmitted diseases, secure pregnancies and safe deliveries worldwide and strengthening people’s autonomy in questions of sexuality and reproduction are key concerns. Together with organisations on the spot, health experts develop HIV/AIDS prevention campaigns for instance in the Great Lakes Region in Africa (Democratic Republic of the Congo, Rwanda, Burundi). They train physicians and nurses in Albania and therefore raise their awareness for the health situation of the marginalised Roma. In Switzerland, the project FamilyStart organises home visits of nurses immediately after discharge from hospital to guarantee optimal health care for the infants.

Sexual and Reproductive Health and Gender

Number of projects

28

Research projects 57%
Implementation projects 43%
Physician Emili Letang treats HIV-patients with opportunistic infections such as tuberculosis at the Chronic Disease Clinic in Ifakara.

**Improved Tuberculosis Treatment for HIV-Infected People in Ifakara**

**Dept: Medical Services and Diagnostics**

The integration of tuberculosis (TB) and HIV-treatment at the Chronic Disease Clinic in Ifakara, together with an improved PCR-based TB-diagnostic and the introduction of an electronic health record, has led to more frequent diagnoses of TB. This is an important step towards improving care for HIV-patients who also suffer from TB.


**Travel and Tropical Medicine**

Swiss TPH is among the leading centres of travel and tropical medicine in Switzerland. Over 10,000 patients a year seek travel advice, preventive measures or treatment against dangerous bacteria, viruses or parasites. Using state-of-the-art techniques, experts discover even the tiniest parasite. Due to Swiss TPH’s sound experience, samples originate from hospitals, clinics and laboratories in Switzerland and all over the world.

**Number of projects**

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Committees & Departments

At the back: Kaspar Wysa, Nino Künzi, Stefan Mörgei
In front: Christoph Hatz, Nicole Probst-Hensch, Jürg Utzinger, Sébastien Gagneux, Christian Burri
## Directorate and Board of Governors

### Directorate 2015

**Prof. Dr. Marcel Tanner**  
Director until 30.6.2015

**Prof. Dr. Jürg Utzinger**  
Director from 1.7.2015

**Stefan Mörgeli**  
Administrative Director

**Prof. Dr. Nino Künzli**  
Deputy Director

**Dr. Nicolas Lorenz**  
Deputy Director until 30.6.2015

Additional Members of the Institutleitungskonferenz

**Prof. Dr. Christian Burri**  
Prof. Dr. Christoph Hatz  
Prof. Dr. Gerd Pluschke  
until 31.12.2015

**Prof. Dr. Kaspar Wyss**  
from 1.7.2015

**Prof. Dr. Sébastien Gagneux**  
from 1.1.2016

**Prof. Dr. Nicole Probst-Hensch,**  
from 1.1.2016

### Board of Governors 2015

**Prof Dr. Felix Gutzwiller**  
Chair, until 31.12.2015  
Alt-Ständerat and Director Emeritus,  
Institute of Social and Preventive Medicine, University of Zurich

**Dr. Andreas Burckhardt**  
Vice-Chair, new Chair from 1.1.2016 onwards  
Chairman and Member of the Board of Governors, Bâloise Holding AG, Basel

**Prof. Dr. Philippe Burrin**  
Director Graduate Institute of International and Development Studies, Geneva

**Prof. Dr. Sabina De Geest**  
Director of the Institute of Nursing Science, University of Basel

**PD Dr. Monika Griti-Wenk**  
Janssen Vaccines AG, Bern

**Joakim Rüegger**  
Head of Higher Education, Cantonal Department of Education, Basel

**Prof. Dr. Didier Trono**  
Dean, School of Life Sciences, Swiss Federal Institute of Technology, Lausanne

**Christoph Tschumi**  
Administrative Director, University of Basel

**Prof. Dr. med. Werner Zimmerli**  
Member of the Board of Governors, Kantonsspital Basel-Landschaft

**Prof. Marcel Tanner**  
Director Swiss TPH, until 30.6.2015 (ex officio)

**Prof. Jürg Utzinger**  
Director Swiss TPH, from 1.7.2015 (ex officio)

**Stefan Mörgeli**  
Secretary to the Board, ex officio  
Administrative Director, Swiss TPH

**Dr. Guido Miescher**  
Observer, State Secretariat for Education, Research and Innovation, Bern

**Dr. Doris Fellenstein Wirth**  
Guest, Leiterin Stab Hochschulen des Kantons Basel-Landschaft, Liestal

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### R. Geigy Foundation, Foundation Board and Administration

**Prof. Dr. Marcel Tanner**  
President of the foundation board  
Director em. Swiss TPH, Member since 1993

**Jean-Marc Joerin**  
Vice-president of the foundation board, Advocate Joerin Advokatur, Member since 1988

**Ulrich Wasser**  
Administrator of the R. Geigy Foundation

**Beat Berger**  
Managing Director Berger Liegenschaften, Member since 2008

**Prof. Dr. Leo Jenni**  
Deputy Director em. Swiss TPH, Member since 1985

**Dr. Nicolas Lorenz**  
Former Head of the Swiss Centre for International Health, Member since 2012

**Jörg Schwarzenbach**  
Former Member of the Management Board, Credit Suisse, Member since 2003

**Jürg Toffol**  
Architect, Swiss Federal Institute of Technology, Member since 1998

**Prof. Dr. Jürg Utzinger**  
Director Swiss TPH, member from 1.1.2016
Committees & Departments

Organigram 2016

Board of Governors

10 Members from the Cantons of Basel-Stadt and Basel-Landschaft, the Swiss Federation, universities and the private sector.

Chairman
Andreas Burckhardt

Directorate

Director
Jürg Utzinger

Deputy Director and Department Head
Nino Künzli

Department Heads
Christian Burri, Christoph Hatz, Kaspar Wyss, Nicole Probst-Hensch, Sébastien Gagneux

Administrative Director
Stefan Mörgeli

Administration

Administration
Stefan Mörgeli

Controlling
Mathias Kronig

Human Resources
Tobias Schnell

Informatics
Alain Bertolotti

Finances
Martin Näf

Infrastructure
Paul Haas

Project and Grant Service
Michael Käser

Departments

Epidemiology and Public Health

Nicole Probst-Hensch
Deputy: Jakob Zinsstag

Biostatistics
Penelope Vounatsou

Chronic Disease Epidemiology
Nicole Probst-Hensch

Ecosystem Health Sciences
Guéladio Cissé

Environmental Exposures and Health
Martin Rössli

Health Interventions
Christian Lengeler

Health Systems Research and Dynamical Modelling
Thomas Smith

Human and Animal Health
Jakob Zinsstag

Society, Gender and Health
Elisabeth Zemp Stutz

Medical Parasitology and Infection Biology

Sébastien Gagneux

Clinical Immunology
Claudia Daubenberger

Gene Regulation
Till Voss

Helminth Drug Development
Jennifer Keiser

Molecular Immunology
Gerd Pluschke

Molecular Diagnostics
Ingrid Felger

Molecular Parasitology and Epidemiology
Hans-Peter Beck

Parasite Chemotherapy
Pascal Mäser

Tuberculosis Research
Sébastien Gagneux

Organigram valid 11.2016
Epidemiology and Public Health

The Department of Epidemiology and Public Health seeks new solutions to fight communicable and non-communicable diseases. Diseases of poverty such as tuberculosis and malaria remain a major burden in low-income countries. Globally, obesity, aging and environmental pollution are among the critical health determinants of chronic conditions such as diabetes and cardiovascular and respiratory diseases. The department increasingly addresses this dual-burden of disease, while continuing to cover public health issues in Switzerland and the northern hemisphere.

Environment and Health
The department transfers and applies in-depth knowledge from population-based cohort studies in Switzerland and Europe, such as SAPALDIA or Exposomics, to interventions in Côte d’Ivoire or South Africa, for example. At the same time, it studies and describes various environmental exposures and assesses man-made health risks such as those associated with the construction of new mines. Members of the department advise the Swiss national and cantonal governments as well as the WHO on environment and health issues.

Infectious Disease Transmission
Knowledge about infectious disease transmission is of paramount importance for disease prevention and elimination and vaccine development. Swiss TPH offers a broad range of expertise in vector control, new drug and vaccine development and elimination strategies based, for instance, on vaccine campaigns. Members of the institute actively participate in various WHO expert committees.

Society and Culture
Socio-cultural, economic and gender-specific factors play a central role in determining human health and wellbeing. For this reason, Swiss TPH emphasises social science studies and approaches to health and disease.

Modelling, Biostatistics and Simulation
Statistical analysis, spatial modelling or computer simulations are among the department’s key competencies. They form the backbone of collaboration between different units within and outside of the institute.

Understanding Health Systems
Several of the department’s working groups combine expertise in the area of health systems, health strategies and health economics. Research results inform policy recommendations on strategies, priorities and resource allocation for effective and equitable health development from the household to the national level.
Medical Parasitology and Infection Biology

The Department of Medical Parasitology and Infection Biology (MPI) conducts basic research on parasites and disease transmission. Researchers develop new diagnostics, drugs and vaccines against neglected tropical diseases and diseases of poverty such as malaria, Buruli ulcer, tuberculosis and sleeping sickness. In 2015, MPI’s activities ranged from conducting laboratory research to validating new therapies in clinical trials.

Funding
The department continues to be highly successful in securing third-party funding. Prof. Till Voss was awarded with a prestigious Consolidator Grant from the Swiss National Science Foundation to explore the detailed molecular mechanisms that steer different developmental stages of the malaria parasite during its life cycle. Jennifer Keiser, head of the Helminth Drug Development Unit, won two prestigious grants — one from the Bill & Melinda Gates Foundation and one from the National Institute of Health — to develop a new orally active single-dose drug against bilharzia and to design a surveillance system that globally monitors the spread of drug resistance in helminths.

Buruli Ulcer
Buruli ulcer is a terrible skin infection that mainly affects young children in tropical Africa. It is very difficult to treat. The Mycobacteria ulcerans pathogens destroy skin and fat tissue and leave patients with open sores. MPI studies disease transmission and develops new therapies and diagnostics against this bacterial infection.

Tuberculosis
With the spread of drug-resistance, tuberculosis (TB) has become a global threat. MPI studies the mechanisms of drug-resistance and the evolution of TB-bacteria over centuries. Moreover, it explores the role of TB in patients suffering from HIV/AIDS. The knowledge generated by these studies is used to develop new drugs and vaccines.

Malaria
Malaria is a disease of poverty. The department conducts basic research in parasite biology, develops new diagnostic tools and screens for new active components against the parasite.

African Trypanosomiasis
Research on African trypanosomiasis or sleeping sickness has been a central focus of Swiss TPH for decades. Today, drug-screening programmes to find new effective drugs against sleeping sickness are a special priority.
The Swiss Centre for International Health (SCIH) maintains a leading and highly respected position as a consulting agency in global health. SCIH supports health systems development in countries with fragile health systems, particularly those in Eastern Europe, Central Asia and Africa. Activities range from developing new information technology systems for hospitals and offering courses for health professionals, to advising government and international organisations on various health issues and improving health systems performance all over the world. The health of mothers and children is of special concern. As a Local Fund Agent (LFA), SCIH monitors the funds provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria in various countries in West Africa. Recently, the department has been assigned the LFA mandate for Liberia. In 2015, Kaspar Wyss took over from Nicolaus Lorenz as Head of Department.

Strategy 2020
The quality of services provided by SCIH is made possible by the technical and scientific expertise and long-term experience of its staff. The department’s quality management system ensures efficient processes compliant with the highest ethical standards. Strategy 2020 sets the path towards high quality services and health systems strengthening and prepares for new opportunities in an evolving global health landscape. Active knowledge management is one of the centre’s main concerns.

Action and Investment to Defeat Malaria 2016–2030
In 2015, Agenda 2030, with its 17 Sustainable Development Goals (SDGs), replaced the Millennium Development Goals (MDGs). Under the new framework, fighting poverty and disease is a high priority. In partnership with Deloitte Consulting, SCIH led a two-year process involving hundreds of experts worldwide to compile the new partnership document and roadmap for malaria control, “Action and Investment to Defeat Malaria 2016–2030 – (AIM) for a malaria-free world”. The seminal document defines new strategies for fighting the disease and fosters collaboration among governments, donors and academia. It has been presented at many high level forums, including the Third International Conference on Financing for Development in Addis Ababa, Ethiopia.

Key Clients
National and international organisations choose SCIH because of its distinguished expertise and long-term experience in the field of international health. Key clients include the World Health Organization, the World Bank, the Global Fund to Fight AIDS, Tuberculosis and Malaria and the State Secretariat for Economic Affairs. The department also implements many health programmes for the Swiss Agency for Development and Cooperation (SDC). In 2015, two new SDC mandates in Kosovo and Albania were assigned to the centre. Both mandates emphasise strengthening primary health care services and achieving viable health financing. The overall aim is to develop accessible health systems for everybody and to reduce today’s health inequalities.
As a contract research organisation, the Medicines Research Department (MedRes) implements and monitors clinical trials in low-income countries. Studies validating novel therapies against poverty-related diseases such as sleeping sickness take centre-stage. Due to MedRes’ long-term commitment in countries like the Democratic Republic of the Congo (DRC), for example, new sustainable research platforms have emerged and can serve as future clinical trial sites.

Contract Research
The clinical development of fexinidazole, a novel therapy against sleeping sickness, serves as one example of MedRes’ activities. Together with the Drugs for Neglected Diseases Initiative (DNDi), MedRes not only conducted the clinical studies in DRC necessary for registering the new drug (see article pp. 25–27), but also worked through its local office in Kinshasa to transform a number of hospitals into clinical trial centres and to train local staff to monitor the trials. These long-term investments will be called upon for up-coming studies testing novel therapies.

Currently, on behalf of Médecins sans Frontières (MSF), MedRes supports a study testing a combination therapy against multidrug-resistant tuberculosis in Uzbekistan. The study aims to find the most effective mix of existing standard therapies to improve tolerance and application. Building-up the required infrastructure, training local health personnel and introducing regulations to comply with international ethical standards are among the first priorities.

Ebola Vaccine Trials: Quality Assurance and Monitoring
The department also offers its services to clients in Switzerland. In 2015, for instance, it was responsible for conducting independent quality assurance and monitoring for two clinical phase I trials of new Ebola vaccine candidates at the university hospitals of Geneva (HUG) and Lausanne (CHUV).

Lean processes and fast decision paths were critical success factors. After successfully completing the clinical trials in spring 2015, the Ebola vaccines must undergo further clinical testing in the disease-affected countries before proceeding with registration.

Quality Management Services
In February 2015, Jennifer Kealy became head of the Quality Management Service Unit (QMS). As part of the MedRes team, QMS offers advice on quality management systems and provides various trainings and further education on clinical trials issues. It also conducts audits to ensure that clinical trial activities comply with official and ethical requirements. QMS is also responsible for aligning the department’s internal quality system with new international standards.
Medical Services and Diagnostics

The Department of Medical Services and Diagnostics is a centre of excellence for travel and tropical medicine and parasitological diagnostic services. It provides pre-travel advice and post-travel cure to travellers from Basel and the surrounding region. As the National Reference Centre for Imported Human Parasitic Diseases, it offers a variety of services to medical practitioners and hospitals all over Switzerland. In Tanzania, the Chronic Disease Clinic at the St. Francis Referral Hospital in Ifakara provides medical care to HIV/AIDS and TB patients and participates in a Swiss TPH cohort study that includes more than 6,000 HIV/AIDS and TB patients. The study offers important insights about the long-term success of antiretroviral therapy in sub-Saharan Africa.

Travel Clinic in Basel
11,000 clients visited Swiss TPH in 2015 for pre-travel advice, reflecting an increasing trend of Swiss citizens travelling to overseas destinations. Clients were given necessary vaccinations and informed about other preventive measures. The Ebola epidemic in West Africa dominated inquiries in 2015, with more than 25,000 telephone calls received from the general public and professionals in Switzerland and its neighbouring countries. The clinic was also an important source of information for the Swiss media.

Care for HIV/AIDS Patients in Tanzania
As an integral part of the St. Francis Referral Hospital (SFRH) in Ifakara, the Chronic Disease Clinic (CDCI) has operated without interruption since 2005. In 2015, more than 3,000 patients with HIV/AIDS were under continuous antiretroviral-treatment at the facility. The treatment of tuberculosis patients is now fully integrated into CDCI. Special efforts are now being made to detect and treat opportunistic infections common among HIV-patients such as the fungal disease cryptococcosis. Recent studies show that cryptococcosis is underestimated as a major cause of death among patients with weak immune systems.

The mother-child clinic has also been strengthened in the last two years. It now provides services for HIV-infected mothers, their newborn children and families. This one-stop clinic is a shining example of integrated care in rural Africa.

Clinical Tuberculosis Research
Today’s tuberculosis (TB) treatments are too long, complex and often toxic. Swiss TPH works together with international organisations to develop shorter, safer and affordable TB drug regimens at partner trial sites in Tanzania and Georgia. In addition, Swiss TPH has broadened its scientific spectrum to include lung-health research in Africa, with a focus on chronic obstructive lung disease and identifying pathogens causing lung infections in HIV-infected individuals.

Advanced Clinical Course in Laos
After 14 successful years offering a Medical Priorities & Clinical Tropical Medicine course in Tanzania, an entirely revised course was offered in September 2015 at the Mahosot Hospital in Vientiane, Lao PDR. Supported by staff from three local hospitals and facilitators from Laos, Thailand and Europe, 14 participants learned state-of-the-art knowledge about health problems affecting South Asia, including rickettsial infections, malaria, schistosomiasis, leptospirosis and non-communicable diseases.
Swiss TPH offers teaching and training opportunities on bachelor, master and PhD-level within three faculties of the University of Basel (Faculty of Science, Faculty of Medicine, Faculty of Humanities and Social Sciences). Moreover, over a dozen courses are offered on the postgraduate education level. Teaching and training at Swiss TPH maintains a strong foundation in practice and is therefore a favourite of students and health personnel around the world. As of 1 January 2016 all teaching and training activities are consolidated under the new department “Education and Training”.

20 Years of tropEd
Since its foundation, Swiss TPH has been a driving force behind tropEd – the Network for Education in International Health. 20 years ago, some dozen University institutes decided to jointly develop and offer a Masters programme in international health. Today, over 30 member institutions from Africa, Asia, Australia, Europa, and Latin America are part of the network. On the occasion of the 20-year-jubilee, Swiss TPH organised an official ceremony for the representatives of the member institutes after the general meeting in Basel.

Health under Extreme Conditions
With the new course “Health in Detention” Swiss TPH consolidated its collaboration with the International Committee of the Red Cross as well as other organisations involved. The course gives attention to the issue of the health conditions of prisoners and residents of refugee camps all over the world. The course participants discuss and seek solutions to improve the frequently reported deplorable state of affairs.

New Department “Education and Training”
As of 1 January 2016 all teaching and training activities are consolidated under the new department “Education and Training” headed by Prof. Nino Künzli (former head EPH).
Swiss TPH provides internal services through six administrative units: Finances, Infrastructure, Informatics, Project and Grant Service, Human Resources and Controlling. These vital services are continuously monitored for quality and improved as needed.

**Finances**
With a funding and sales volume of CHF 77 million, Swiss TPH only receives about 20% of its core budget from public authorities. The remaining 80% comes from competitively acquired third-party funds and from private and public client fees. Such a high level of self-financing requires active financial management. In order to meet third-party donors’ increasing demands for compliance and governance information, a project accounting group was established to ensure quality of third-party fund management, while a financial accounting group guarantees correct double-entry accounting practices. Despite the Swiss National Bank’s decision to discontinue the minimum exchange rate for the Swiss franc against the Euro, Swiss TPH was able to meet all financial obligations. This was thanks to rigorous liquidity management and to financial hedging of up to CHF 1.5 million provided by the canton of Basel-Stadt.

**Informatics**
Some 750 users demand IT-support services at Swiss TPH. In response to increasing needs for computing infrastructure, Swiss TPH obtained access to the University of Basel’s facility for scientific high-performance computing (sciCORE). A new intranet, a master data management system and a new IT-Portal improved the quality and management of internal information on people, projects and publications.

**Project & Grant Service**
The Project and Grant Service Unit (PGS) helps project leaders seeking new third-party funds and writing up project applications. It assures high quality of all processes during the project cycle, including project contract and data management. PGS also provides up-to-date travel safety regulations according to international standards to support staff travelling to high-risk areas.

**Human Resources**
In 2015, Human Resources adopted the “business partner model” of operation. Business partners advise line managers on HR-topics such as recruitment, personal planning and other employee matters. The team also revised compensation packages and clarified social security issues for staff working abroad.

**Controlling**
Refined and standardised reporting and analytical tools help line managers and the directorate to improve budgeting, planning and analysis. Thanks to the Smart Workflow Invoice Signature System (SWISS-project) contracts can now be saved and accounting vouchers can be registered, signed and filed electronically.
Key Numbers & Finances
Swiss TPH is a public organisation consisting of two research and three service departments. In 2016, a new department “Education and Training” was created. The institute currently receives 20% of its annual income of about 77 million Swiss francs from the cantons of Basel-Stadt and Basel-Landschaft, the Swiss Federal Government and the University of Basel. The remaining 80% are competitively obtained through funding agencies, foundations or clients. The institute with its head office at Socinstrasse is currently spread out across eight buildings in the neighbourhood. In 2015, 420 staff and 161 PhD students worked at Swiss TPH in Basel. Another 138 employees are located abroad in offices in over 20 different countries. Swiss TPH unites over 60 different nationalities under one roof.

Key Numbers & Finances

**Personnel**

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<td>2015</td>
<td>30</td>
<td>200</td>
<td>50</td>
<td>30</td>
</tr>
</tbody>
</table>

*Web of Science, 9 May 2016*
# Finances

## 2015

<table>
<thead>
<tr>
<th>Funding</th>
<th>Mio. CHF</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitively acquired funds</td>
<td>81.3</td>
<td>79.6%</td>
</tr>
<tr>
<td>Core contributions</td>
<td>15.7</td>
<td>20.4%</td>
</tr>
<tr>
<td>Total</td>
<td>77.0</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core contributions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Basel</td>
<td>6.9</td>
<td>9.0%</td>
</tr>
<tr>
<td>National government</td>
<td>6.8</td>
<td>8.8%</td>
</tr>
<tr>
<td>Local government</td>
<td>2.0</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competitively acquired</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandates</td>
<td>25.8</td>
<td>33.3%</td>
</tr>
<tr>
<td>Other combined grants</td>
<td>18.0</td>
<td>23.3%</td>
</tr>
<tr>
<td>SNSF + NCCR</td>
<td>4.0</td>
<td>5.3%</td>
</tr>
<tr>
<td>Medical Services &amp; Diagnostics</td>
<td>4.4</td>
<td>5.6%</td>
</tr>
<tr>
<td>European Commission</td>
<td>2.6</td>
<td>3.3%</td>
</tr>
<tr>
<td>Medicines Research</td>
<td>3.2</td>
<td>4.1%</td>
</tr>
<tr>
<td>Postgraduate Training</td>
<td>1.8</td>
<td>2.3%</td>
</tr>
<tr>
<td>R. Geigy Foundation</td>
<td>1.7</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

## 2014

<table>
<thead>
<tr>
<th>Funding</th>
<th>Mio. CHF</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitively acquired funds</td>
<td>58.2</td>
<td>80.5%</td>
</tr>
<tr>
<td>Core contributions</td>
<td>14.1</td>
<td>19.5%</td>
</tr>
<tr>
<td>Total</td>
<td>72.3</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core contributions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Basel</td>
<td>6.6</td>
<td>9.1%</td>
</tr>
<tr>
<td>National government</td>
<td>5.5</td>
<td>7.6%</td>
</tr>
<tr>
<td>Local government</td>
<td>2.0</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competitively acquired</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandates</td>
<td>22.8</td>
<td>31.5%</td>
</tr>
<tr>
<td>Other combined grants</td>
<td>17.9</td>
<td>24.8%</td>
</tr>
<tr>
<td>SNSF + NCCR</td>
<td>4.2</td>
<td>5.8%</td>
</tr>
<tr>
<td>Medical Services &amp; Diagnostics</td>
<td>4.2</td>
<td>5.9%</td>
</tr>
<tr>
<td>European Commission</td>
<td>3.0</td>
<td>4.1%</td>
</tr>
<tr>
<td>Medicines Research</td>
<td>2.6</td>
<td>3.6%</td>
</tr>
<tr>
<td>Postgraduate Training</td>
<td>1.9</td>
<td>2.6%</td>
</tr>
<tr>
<td>R. Geigy Foundation</td>
<td>1.8</td>
<td>2.2%</td>
</tr>
</tbody>
</table>
Funding 2015

Competitively acquired 79.6%

R. Geigy Foundation
Postgraduate Training
Medicines Research
European Commission
Medical Services & Diagnostics
SNSF + NCCR
Other combined grants

77.0 Mio. CHF

Core contributions 20.4%

Funding 2014

Competitively acquired 80.5%

R. Geigy Foundation
Postgraduate Training
Medicines Research
European Commission
Medical Services & Diagnostics
SNSF + NCCR
Other combined grants

72.3 Mio. CHF

Core contributions 19.5%
# Annual Accounts

## Income Statement

### Income

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-managed income</td>
<td>61,465</td>
<td>79.9%</td>
<td>54,084</td>
<td>74.8%</td>
</tr>
<tr>
<td>Core funding from national and local government</td>
<td>15,711</td>
<td>20.4%</td>
<td>14,089</td>
<td>19.5%</td>
</tr>
<tr>
<td>Other operating income</td>
<td>2,230</td>
<td>2.9%</td>
<td>2,055</td>
<td>2.8%</td>
</tr>
<tr>
<td>Change in unbilled services</td>
<td>-2,440</td>
<td>-3.2%</td>
<td>2,088</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>76,966</td>
<td>100.0%</td>
<td>72,316</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Expenditure

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel expenses</td>
<td>-51,398</td>
<td>67.0%</td>
<td>-50,072</td>
<td>68.6%</td>
</tr>
<tr>
<td>Material expenses</td>
<td>-4,479</td>
<td>5.8%</td>
<td>-4,223</td>
<td>5.8%</td>
</tr>
<tr>
<td>Depreciation of tangible assets</td>
<td>-1,018</td>
<td>1.3%</td>
<td>-898</td>
<td>1.1%</td>
</tr>
<tr>
<td>Amortisation of intangible assets</td>
<td>-50</td>
<td>0.1%</td>
<td>-36</td>
<td>0.1%</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>-3,706</td>
<td>4.8%</td>
<td>-3,303</td>
<td>4.5%</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>-16,119</td>
<td>21.0%</td>
<td>-14,499</td>
<td>19.9%</td>
</tr>
<tr>
<td><strong>Total expenditure</strong></td>
<td>-76,770</td>
<td>100.0%</td>
<td>-72,971</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Operating result**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>196</td>
<td>655</td>
</tr>
</tbody>
</table>

**Financial result**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>-84</td>
<td>326</td>
</tr>
</tbody>
</table>

**Ordinary result**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>-329</td>
</tr>
</tbody>
</table>

**Extraordinary result**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Overall results**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>-329</td>
</tr>
</tbody>
</table>

## Balance

### Assets

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>24,097</td>
<td>49.4%</td>
<td>17,507</td>
<td>44.5%</td>
</tr>
<tr>
<td>Receivables</td>
<td>11,066</td>
<td>22.7%</td>
<td>6,072</td>
<td>15.4%</td>
</tr>
<tr>
<td>Prepayments and accrued income</td>
<td>3,553</td>
<td>7.3%</td>
<td>5,885</td>
<td>15.1%</td>
</tr>
<tr>
<td>Inventories</td>
<td>132</td>
<td>0.2%</td>
<td>198</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>38,848</td>
<td>79.6%</td>
<td>29,742</td>
<td>75.5%</td>
</tr>
<tr>
<td>Non-current assets</td>
<td>9,968</td>
<td>20.4%</td>
<td>9,664</td>
<td>24.5%</td>
</tr>
<tr>
<td><strong>Total non-current assets</strong></td>
<td>9,968</td>
<td>20.4%</td>
<td>9,664</td>
<td>24.5%</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>48,816</td>
<td>100.0%</td>
<td>39,406</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Liabilities and equity

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term financial liabilities</td>
<td>2,000</td>
<td>4.1%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Payables from goods and services</td>
<td>1,988</td>
<td>4.0%</td>
<td>1,657</td>
<td>4.2%</td>
</tr>
<tr>
<td>Other payables</td>
<td>1,204</td>
<td>2.5%</td>
<td>1,195</td>
<td>3.1%</td>
</tr>
<tr>
<td>Accrued liabilities and deferred income</td>
<td>32,402</td>
<td>66.4%</td>
<td>23,574</td>
<td>59.3%</td>
</tr>
<tr>
<td>Short-term provisions</td>
<td>811</td>
<td>1.7%</td>
<td>909</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>38,405</td>
<td>78.7%</td>
<td>27,135</td>
<td>68.9%</td>
</tr>
<tr>
<td>Mortgages</td>
<td>2,400</td>
<td>4.9%</td>
<td>4,400</td>
<td>11.2%</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>329</td>
<td>0.7%</td>
<td>357</td>
<td>0.9%</td>
</tr>
<tr>
<td>Long-term provisions</td>
<td>1,230</td>
<td>2.5%</td>
<td>1,175</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>Total non-current liabilities</strong></td>
<td>3,959</td>
<td>8.1%</td>
<td>5,032</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

**Equity**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,452</td>
<td>13.2%</td>
</tr>
</tbody>
</table>

**Total liabilities**

<table>
<thead>
<tr>
<th>2015</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>48,816</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Financial statements established in accordance with Swiss GAAP FER*
### Income Statement by Activities 2015

<table>
<thead>
<tr>
<th>Activities</th>
<th>Income in 1,000 CHF</th>
<th>Total costs in 1,000 CHF</th>
<th>Balance in 1,000 CHF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Parasitology and Infection Biology</td>
<td>12,274</td>
<td>-12,261</td>
<td>13</td>
</tr>
<tr>
<td>Epidemiology and Public Health</td>
<td>20,317</td>
<td>-20,261</td>
<td>56</td>
</tr>
<tr>
<td>Institutional Projects</td>
<td>3,033</td>
<td>-3,806</td>
<td>-573</td>
</tr>
<tr>
<td><strong>Total research</strong></td>
<td><strong>35,624</strong></td>
<td><strong>-36,128</strong></td>
<td><strong>-504</strong></td>
</tr>
<tr>
<td><strong>Teaching and Training</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching and Training</td>
<td>3,111</td>
<td>-3,567</td>
<td>-456</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Services &amp; Diagnostics</td>
<td>5,264</td>
<td>-5,129</td>
<td>136</td>
</tr>
<tr>
<td>Medicines Research</td>
<td>3,269</td>
<td>-2,950</td>
<td>319</td>
</tr>
<tr>
<td>Swiss Centre for International Health</td>
<td>25,527</td>
<td>-24,910</td>
<td>617</td>
</tr>
<tr>
<td><strong>Total services</strong></td>
<td><strong>34,060</strong></td>
<td><strong>-32,988</strong></td>
<td><strong>1,072</strong></td>
</tr>
<tr>
<td><strong>Total activities</strong></td>
<td><strong>72,795</strong></td>
<td><strong>-72,683</strong></td>
<td><strong>112</strong></td>
</tr>
<tr>
<td>Management</td>
<td>4,171</td>
<td>-4,171</td>
<td>0</td>
</tr>
<tr>
<td><strong>Income statement</strong></td>
<td><strong>76,966</strong></td>
<td><strong>-76,854</strong></td>
<td><strong>112</strong></td>
</tr>
</tbody>
</table>

Management and infrastructure costs included in total activities: -6,368

### Income Statement by Activities 2014

<table>
<thead>
<tr>
<th>Activities</th>
<th>Income in 1,000 CHF</th>
<th>Total costs in 1,000 CHF</th>
<th>Balance in 1,000 CHF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Parasitology and Infection Biology</td>
<td>12,742</td>
<td>-12,987</td>
<td>-245</td>
</tr>
<tr>
<td>Epidemiology and Public Health</td>
<td>20,380</td>
<td>-20,350</td>
<td>30</td>
</tr>
<tr>
<td>Institutional Projects</td>
<td>2,983</td>
<td>-3,100</td>
<td>-117</td>
</tr>
<tr>
<td><strong>Total research</strong></td>
<td><strong>36,105</strong></td>
<td><strong>-36,437</strong></td>
<td><strong>-332</strong></td>
</tr>
<tr>
<td><strong>Teaching and Training</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching and Training</td>
<td>2,804</td>
<td>-3,856</td>
<td>-852</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Services &amp; Diagnostics</td>
<td>4,337</td>
<td>-4,140</td>
<td>197</td>
</tr>
<tr>
<td>Medicines Research</td>
<td>2,893</td>
<td>-2,498</td>
<td>195</td>
</tr>
<tr>
<td>Swiss Centre for International Health</td>
<td>22,979</td>
<td>-22,516</td>
<td>463</td>
</tr>
<tr>
<td><strong>Total services</strong></td>
<td><strong>30,009</strong></td>
<td><strong>-29,154</strong></td>
<td><strong>855</strong></td>
</tr>
<tr>
<td><strong>Total activities</strong></td>
<td><strong>68,918</strong></td>
<td><strong>-68,247</strong></td>
<td><strong>-329</strong></td>
</tr>
<tr>
<td>Management</td>
<td>3,398</td>
<td>-3,398</td>
<td>0</td>
</tr>
<tr>
<td><strong>Income statement</strong></td>
<td><strong>72,316</strong></td>
<td><strong>-72,645</strong></td>
<td><strong>-329</strong></td>
</tr>
</tbody>
</table>

Management and infrastructure costs included in total activities: -6,262
Funding Partners and Clients

Core Funding

Beitrag Kanton Basel-Stadt
Staatssekretariat für Bildung, Forschung und Innovation
Universität Basel (Kantone Basel-Stadt und Basel-Landschaft)

Research Funding

EU-Forschungsprogramme inkl. ERC, EU Kommission für Technologie und Innovation, CH Medical Research Council, UK National Institutes of Health, US NWO-WOTRO Science for Global Development, NL Schweizerischer Nationalfonds, CH Wellcome Trust, UK

Foundations

Bangerter-Rhyner-Stiftung, CH
Bill & Melinda Gates Foundation, US
Braun Stiftung, CH
Eckenstein-Geigy Stiftung, CH
Eremitage Foundation, LI
Ernst Göhner-Stiftung, CH
Forlen Stiftung, CH
Freiwillige Akademische Gesellschaft Basel, CH
Medicor Foundation, LI
Missionsprokura Schweizer Kapuziner, CH
Niklaus und Bertha Burckhardt-Bürgin Stiftung, CH
Novartis Foundation, CH
R. Geigy-Stiftung, CH
Stiftung Infektiologie beider Basel, CH
Stiftung pro REHAB Basel, CH
UBS Optimus Foundation, CH
United Nations Foundation, CH
Wolfermann-Nägeli-Stiftung, CH

Public Clients Switzerland

Amt für Ausbildungsbeiträge Basel-Stadt
Amt für Umwelt und Energie Basel-Stadt
Armasuisse
Bundesamt für Gesundheit
Bundesamt für Lebensmittelsicherheit
Bundesamt für Sport
Bundesamt für Umwelt
Direktion für Entwicklung und Zusammenarbeit DEZA
Staatssekretariat für Wirtschaft SECO

Public and Public-private Clients International

ANSES, FR
Center for Tropical and Travel Medicine, NL
Department for International Development, UK
Deutsche Gesellschaft für Internationale Zusammenarbeit, DE
Drugs for Neglected Diseases initiative, CH
FIND, CH
Fundacio Privada Institut de Salut, ES
GAVI the Vaccine Alliance, CH
Global Alliance for Livestock, UK
Global Alliance for TB Drug Development, UK
Global Fund to Fight AIDS, Tuberculosis and Malaria, CH
INDEPTH Network, GH
International Committee of the Red Cross, CH
International Livestock Research Institute, KE
KfW Bankengruppe, DE
Medicines for Malaria Venture, CH
Muhimbili National Hospital, TZ
National Centre for Malaria, CB
Netherlands Ministry of Foreign Affairs, NL
Norwegian Knowledge Centre Health Service, NO
PATH Malaria Vaccine Initiative, US
Rigshospitalet, DK
SANRU, CD
UNICEF, CH
Uniscienti, US
United Nations Population Fund, CH
Weltgesundheitsorganisation WHO, CH
World Bank, US
### Private Clients

- Ares Trading SA, CH
- BASF, DE
- Bayer CropScience, DE
- BEPHA, CM
- Berghofer Medical Research Institute, AU
- Bildungszentrum Gesundheit, CH
- Bionorica, DE
- Concern Worldwide, US.
- Crucell Switzerland AG, CH
- Equiterre, CH
- ETNA BIOTECH, ES
- FAIRMED, CH
- GlaxoSmithKline, US
- Global Development Network, IN
- GlycoVaxyn, CH
- I+Soluciones, NL
- International Initiative for Impact Evaluation, US
- Johnson & Johnson, US
- Lungenliga beider Basel, CH
- Médecins sans Frontières, UK
- Merck Serono S.A., CH
- Newfield Exploration Company, US
- Nora Therapeutics Inc., US
- Novartis Institute for Tropical Diseases, SG
- Novartis Vaccines Italia, IT
- Options Consultancy Services Limited, UK
- Pfizer, US
- Polaris Management Partners, US
- Sanaria, US
- Sanofi, FR
- Save the Children, UK
- Schweizerische Zahnärzteschaft, CH
- Schweizerisches Rotes Kreuz, CH
- SEEK Development, DE
- SHAPE Consulting Ltd., SA
- Structural Genomics Consortium SDDC, CA
- Swisscom, CH
- Takeda, CH
- The World Vegetable Center, AVRDC, CN
- Verein EviPrev, CH
- Verein zur Förderung der Weiterbildung, CH
- Vifor AG, CH
- Wiley John and Sons Ltd., UK

### Academic Partners

- Agroscope, CH
- Bernhard-Nocht-Institut für Tropenmedizin, DE
- Case Western Reserve University, US
- Center Recerca en Salut International, ES
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