



ANNUAL REPORT

2017

**AMSTERDAM INSTITUTE
FOR GLOBAL HEALTH
AND DEVELOPMENT**

30 November 2018





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Management Board's report

Introduction

The Amsterdam Institute for Global Health and Development (AIGHD) is an international research institute that works to develop sustainable solutions to major health problems. By taking a problem-oriented approach, AIGHD transcends the boundaries of traditional academic disciplines and integrates three fundamental activities into one institute: global health and development research, education, and policy advice.

AIGHD was initiated as a partnership between the Academic Medical Center (AMC), the University of Amsterdam (UvA) and the Vrije Universiteit Amsterdam (VU). Today, it is a dynamic research and education institute that thrives on intense collaboration among experts from multiple disciplines including biomedicine, economics, and social and behavioral sciences. With its interdisciplinary and translational approach, AIGHD addresses the most critical medical, social, economic and political challenges in global health and development that cut across national and political borders.

To realize access to high quality health care for all, AIGHD collaborates closely with implementing partners and organizations from both the public and private sectors around the globe. AIGHD works by linking expertise, resources and programs from organizations involved in health-related research, education, capacity building and policy-making, bringing a 'delivery perspective' to health research and a 'quality aspect' to health care services.

Together with its global network, AIGHD is pioneering innovative approaches to the delivery, financing and improvement of health care, particularly in resource-limited settings.

Vision

We envision a world in which every person can achieve a life of good health, well-being and dignity.

Mission

We address challenges in global health and development by conducting collaborative interdisciplinary research, generating insights and solutions, and developing the next generation of global health and development leaders.

Focus

Our organization transcends the boundaries of traditional academic disciplines and integrates three fundamental activities into one institute: research, education and policy advice.

Governance Structure

AIGHD is governed by its Supervisory Board, an Executive Board and Operational Management Team. Each group's function and members are detailed below.

Supervisory Board

- Overall responsibility for governance
- Defines the strategic direction
- Appoints and supervises the Executive Board
- Holds, at minimum, bi-annual meetings with:
 - Chair Tom van der Poll
 - Member Hans Brug
 - Member Hans Romijn
 - Member Willem Verschoor

Executive Board

- Executes strategy, scientific direction and policies
- Manages the organization
- Holds, at minimum, bi-annual meetings with:
 - Chair Frank Cobelens
 - Member Chris Elbers
 - Member Anita Hardon
 - Member Michiel Heidenrijk
 - Member Constance Schultsz

Operational Management Team

- Runs day-to-day operations, including finance and controls
- Carries out internal and external reporting
- Monitors progress of projects and programs
- Holds weekly meetings with
 - Chair, Executive Board Frank Cobelens
 - General Manager Friso Janssen
 - Member, Executive Board Constance Schultsz

Executive Board's Report

Successes and contributions

In 2017 the Amsterdam Institute for Global Health and Development contributed to research, education and policy advice in global health and development.

AIGHD has been increasingly successful in shaping and executing interdisciplinary research projects in which we combine biomedical, sociobehavioral and economics perspectives on issues of global relevance within six thematic domains: antimicrobial resistance, disease elimination, urbanization and health, chronic care, health markets, and human development.

The scientific output of AIGHD researchers in 2017 included 143 papers in peer-reviewed journals and 10 PhD degrees, including the first Joint Doctorate degree awarded in the Erasmus Mundus Trans Global Health Program (a collaborative PhD project between AIGHD/Academic Medical Center, the Institute of Tropical Medicine Antwerp, and the ISGlobal/University of Barcelona). At the close of 2017, AIGHD researchers played a supervisory role – as a promoter or co-promoter – in 52 ongoing PhD projects.

AIGHD, through its academic constituents, took part in two research evaluations: the six-yearly external research evaluation of the Academic Medical Center, and the five-yearly external evaluation of the University of Amsterdam Research Priority Area (RPA, “Zwaartepunt”) Global Health. The AMC Evaluation Report describes the achievements of its Department of Global Health as follows: “*The scientific output is very high, in terms of both quality and quantity. Based upon the Societal Impact scores of the PIs, the scientific work of the department is also of high societal value.*” The RPA evaluation, while seeing room for improvement, concludes: “*This initiative has shown excellent performance over the last five years, with an excellent track record of early and mid-career scholars.*”

In 2017 AIGHD, together with Virology Education, organized the 11th annual INTEREST Workshop. This four-day conference took place in Lilongwe, Malawi, and offered a broad program of globally recognized speakers on the diagnosis, treatment and prevention of HIV and HIV-related co-infections to an audience of primarily African health workers and scientists. INTEREST serves an important role in building research capacity for HIV on the African continent.

AIGHD’s other educational achievements included the ongoing Master’s course in Global Health Research with VU University’s Athena Institute, numerous bachelor and master thesis supervisions, and three symposia around global health topics. AIGHD staff were involved in the development of various global health components of the new medical Bachelor’s curriculum at the University of Amsterdam, including a session on ethics in humanitarian health crises and a Global Health Elective Track that will begin in 2018.

In the area of policy development, AIGHD organized a meeting in July on HIV drug resistance attended by officials from the Dutch Ministries of Health and Foreign Affairs and the World Health Organization. AIGHD researchers engaged in several national and global guideline and expert group meetings, including on HIV, antimicrobial resistance, tuberculosis and laboratory strengthening, as well as in various advisory boards of research projects and networks. Of special mention is the appointment of AIGHD’s Dr. Cate Hankins as Chair of the Scientific Advisory Board of the European and Developing Countries Clinical Trials Platform EDCTP. AIGHD staff was also involved in the “Noordwijk meetings” on HIV elimination organized by the Joep Lange Institute.

The basis for these wide-ranging achievements is AIGHD’s commitment to working in collaboration with other groups and organizations. At home we have continued working intensively with various research groups within the Academic Medical Center, the Amsterdam Institute for Social Science Research and the VU School of Business Administration and Economics, as well as others like: The Joep Lange Institute (JLI); PharmAccess International (PAI); The Amsterdam Health Technology Institute (AHTI); VU’s Athena Institute; KNCV Tuberculosis Foundation; and Health[e]Foundation. Internationally we have expanded our global network of collaborating universities and research institutes on all continents. In 2017, special attention was paid to strengthening collaborations with: HIV-NAT/Thai Red Cross and Chulalongkorn University (Bangkok, Thailand); Chongqing Medical University, School of Public Health and Management (Chongqing, China), Duke University Global Health Institute (Durham, NC, USA), ISGlobal (Barcelona, Spain), University of Ruhuna (Galle, Sri Lanka) and the Manhica Center for Health Research (Manhica, Mozambique).

Our work has been supported by funding from a wide variety of sources. In addition to support from the Academic Medical Center and the University of Amsterdam we received project support from, amongst others, The Netherlands Government, the European Union, philanthropic organizations (including the Bill and Melinda Gates Foundation), product development partnerships, and industry sponsors.

Challenges and external conditions

Funding for AIGHD’s activities and essential support functions remains a challenge, due to the continued narrow thematic focus of Netherlands Government funding (NWO-WOTRO) for global health and the thematic nature of many of the health-related calls within the EU’s Horizon 2020 Societal Challenges

Program. Additionally, funding for interdisciplinary research is not easily obtained because review panels for grant applications are often structured along disciplinary lines. Achieving true interdisciplinarity in research is not without challenges: disciplinary approaches and languages differ, as do their means of disseminating results.

On the other hand, the topic of Global Health continues to receive increased interest and support from AIGHD's parent institutes. Based on its very positive evaluation, the University of Amsterdam will continue the RPA Global Health program, which allows AIGHD to provide part-time support for several biomedical and social science researchers to collaborate on new areas of work and grant applications. As of 2018 the AMC will provide part-time funding for a Global Health education coordinator that will strengthen the AIGHD's educational activities, especially within the medical curriculum. In addition, AIGHD is receiving more direct support from its parent institutes for grant acquisition and other resource mobilization.

AIGHD initiated several interdisciplinary discussions along thematic lines in 2017, with the one on antimicrobial resistance proving to be the most fruitful. It has resulted in a modeling project where two postdoc researchers (a mathematical modeler and a microbiologist) will collaborate, as well as prompting the initiation of a Public-Private Partnership on global antimicrobial resistance and responding to opportunities with the Dutch Topsector Life Sciences and Health. We also strengthened and initiated regular methodology sessions in which different disciplinary approaches to, for example, statistical analyses are compared and discussed.

AIGHD has also actively tried to improve the funding landscape for Global Health. It contributed to the Clingendael Global Health Initiative and to the policy report, *Why The Netherlands should step up its ambitions on global health*. Issued by the Netherlands Institute for International Relations Clingendael, this report makes the case for broadening the scope of the Dutch Government's funding in this area. Additionally, AIGHD sought collaborations with like-minded Global Health institutes that are linked to universities within the League of European Research Universities (LERU; of which the University of Amsterdam is a member) with the aim of helping shape the Global Health research agenda for the European Commission's next scientific framework program. Past experience has also taught us this approach is also useful for developing new collaborative funding proposals.

Another external condition that AIGHD needed to respond to in 2017 concerned the changing nature of partnerships with, and expectations of, collaborating institutes in low- and middle-income countries (LMIC). Initiatives such as European and Developing Countries Clinical Trials Platform EDCTP have been successful in building local research capacity, which results in a reduced demand for services such as clinical monitoring and data management, that AIGHD offered through its Uganda and Thailand offices. This prompted AIGHD to close its office in Thailand and, by the end of the year, complete the integration of its Clinical Operations Unit in Uganda into the Clinical Trials Unit of Makerere University College of Health Sciences. Meanwhile, in Amsterdam, AIGHD shifted its focus away from clinical operations and data management services for low and middle-income countries as an income-generating activity. Similarly, improved local research capacity in LMIC institutions implies that collaborations are increasingly based on the added value that AIGHD brings, for example, in terms of scientific expertise or education. This urges us to better define and capitalize on that added value in the coming years.

Organizational developments

The most important organizational development in 2017 was AIGHD's move to its new offices in the Amsterdam Health Technology Center. This brings added benefits like: sharing a floor with our collaborating partners (JLI, PAI and AHTI), being physically located closer to the AMC facilities, offering more meeting space, and operating as a platform for Global Health researchers. Another highlight was the launch of AIGHD's new website: www.aighd.org.

At the end of 2017, AIGHD employees numbered 44 FTE in total. AIGHD also employed staff in its branch offices in Kampala, Uganda and Bangkok, Thailand, but both offices were effectively closed by the end of the year. The integration into AIGHD of the Amsterdam Institute for International Development was

formally agreed per 1 January and completed by 18 December. AIGHD's Executive Board (EB) remained unchanged, as did its Supervisory Board. The EB meets monthly, with day-to-day management delegated to an Operational Management Team. The Management Team's terms of reference were revised to become AIGHD's Advisory Team. The Advisory Team is tasked with providing both solicited and unsolicited advice concerning organizational matters. The introduction of formal academic titles for research and education staff, within each respective faculties, along with salary scales and annual work plans was completed. A system of AIGHD staff affiliations was also introduced. Staff members were formally appointed as AIGHD Academic Staff if they have made a substantive contribution to AIGHD's cause and activities, and were granted an academic affiliation (paid or unpaid) with one of the parent institutes (i.e., University of Amsterdam's Faculty of Medicine/AMC, and Faculty of Social and Behavioral Sciences, and VU University's School of Business Administration and Economics). These Academic Staff positions are meant to clarify the role of academics within AIGHD, strengthen their contribution to its organizational goals, and provide input on AIGHD's directions and strategy. A second layer of AIGHD Affiliates (temporary appointments with less intensive links with the organization) will be formally introduced in early 2018. The completion of AIGHD's forthcoming Strategic Plan 2019-2024 is also foreseen in 2018.

2017 was also the year that two Joep Lange Chair Holders – Prof. Dan Ariely (Duke University, Durham NC, USA) and Dr. Mark Dybul (Georgetown University, Washington DC, USA) were appointed to join the Joep Lange Chair and Fellowship Program, which is endowed by the Netherlands Ministry of Foreign Affairs and the Joep Lange Institute. Prof. Anna Vassall, a health economist at the London School of Hygiene and Tropical Medicine (UK), will begin her fellowship appointment in early 2018. AIGHD's expertise was further strengthened by the appointment of Dr. Frank van Leth to Associate Professor (AMC; applied methodology in global health).

The year ahead

In 2018 AIGHD will continue working on current projects and start several new ones. Already awarded in 2017 but starting in 2018 are: the European and Developing Countries Clinical Trials Platform EDCTP-funded PAVIA project to strengthen pharmacovigilance in four African countries (coordinated by AIGHD); the EDCTP-funded CAPRISA 018 clinical trial of an antiretroviral combination implant for HIV prevention in women (coordinated by the Centre for the AIDS Programme of Research in South Africa CAPRISA); and a Netherlands Organisation for Health Research and Development ZonMw-funded project on protection of drugs from resistance in treatment of multidrug resistant tuberculosis (coordinated by the Netherlands Institute for Public Health and The Environment RIVM). AIGHD will further develop and strengthen its interdisciplinarity by: actively engaging more researchers from its parent institutes; developing new interdisciplinary areas of work where we are successfully building critical mass in our research; and boosting activities in order to attract more funds for interdisciplinary research in each of our thematic priority areas. AIGHD will help expand education in Global Health within the AMC's new Bachelor's curriculum, including a four-week elective carried out in Sri Lanka in collaboration with Duke University Global Health Institute. Furthermore, AIGHD will strive to increase its visibility, with, among others, the University of Amsterdam, and capitalize on the opportunity to be active at the 2018 International AIDS Society's conference held in July in Amsterdam. Throughout the coming year AIGHD will strengthen its engagement with partner institutes domestically and abroad, as we seek to combine research and education in a reciprocal manner. Finally, AIGHD will make efforts to improve the funding landscape for global health and development at both the Dutch and European levels.

Project Highlights

Projects Completed in 2017

COBRA: COmorBidity in Relation to AIDS

The COBRA (Co-morbidity in Relation to AIDS) was an EU FP7-funded project that ran from March 2013 to February 2017 and implemented by a consortium of scientists from 12 institutions in six European countries. The Amsterdam portion was conducted as a nested substudy of the AGEHIV Cohort Study. This project assessed whether HIV, in people living with a treated HIV infection, contributes to the development of age-associated non-communicable co-morbidity (AANCC), possibly by promoting an acceleration of the process of ageing, and whether this is due solely to HIV, or whether other factors may contribute. The study compared a group of HIV-positive people to a group of HIV-negative people with similar demographic characteristics and lifestyles. All HIV-positive participants were on effective antiretroviral therapy (ART) and had an undetectable viral load. COBRA also studied mice with a humanized immune system that allowed the investigators to separate the effects of HIV from those of ART on markers of co-morbidity and ageing to study the impact of starting ART earlier or later.

The COBRA results show that, although those with HIV demonstrated evidence of being biologically older than their actual age compared to the group without HIV, this difference did not appear to grow in patients receiving effective treatment. These results are reassuring for people living with treated HIV infections, as no evidence was found that treated HIV is associated with accelerated ageing. In other words, the group with treated HIV did not age any faster than those without HIV over the two years studied. Limitations existed concerning: the inclusion of only a small number of women and that only a few non-white people without HIV were recruited for the study. The completion of COBRA was celebrated during a one-day symposium held in January 2017. The results from COBRA were also recently highlighted as a success story by the European Commission (<http://fp7-cobra.eu/>).

TECoARTE: Epidemiology and control of tuberculosis in the antiretroviral therapy era: towards a mathematical model for Cape Town, South Africa

Despite the increasing implementation of comprehensive control strategies, the tuberculosis (TB) epidemic in sub-Saharan Africa has continued to expand in the last 20 years. This project, completed in March 2017, adds to the body of knowledge that seeks to understand the reasons underlying such failures to control TB and to develop innovative public health approaches in response to TB. Postdoctoral researcher Sabine Hermans spent two years at the Desmond Tutu HIV Centre at the University of Cape Town in South Africa, and one year at AIGHD. Her work found that the trajectory of TB incidence in Cape Town over the last 100 years was very different when compared to that of London and New York. The introduction of chemotherapy did not reduce the TB epidemic in Cape Town, and even before the advent of the HIV epidemic, TB rates were already at the same level as were at the beginning of the century. Following the arrival of the HIV epidemic, the lifetime incidence of TB among the population has risen from 25% before the HIV epidemic to even higher.

The most important finding from TECoARTE was that the burden of recurrent TB in Cape Town is very high, with over 30% of TB patients developing one or more additional episodes over a period of 12 years. The risk of another episode of TB increased greatly with every subsequent episode. Analyses of the data from the last 13 years show a reduction in TB rates over the last five years, which may be due to the roll-out of antiretroviral therapies. However, it is important to note that the ecological study design did not allow for attribution of causality. An alternative or complementary explanation may involve a decline in empirical treatment rates, which we identified in an evaluation of the impact of the roll-out of a new rapid molecular diagnostic test. An age-stratified mathematical model of TB in Cape Town confirmed that the TB burden is determined by the underlying age structure, but that a protective effect of latent infection by previous TB strains, as well as rates of progression to active TB disease after a prior episode of TB, also play an important role.

OMRON Pilot Evaluation

OMRON Healthcare Europe approached AIGHD to collaborate on developing, implementing and evaluating an innovative pharmacy-based hypertension care delivery model for sub-Saharan Africa. In this jointly-developed program, patients with hypertension used community pharmacies, instead of normal health facilities, as their main point of care. Pharmacies were used for taking blood pressure measurements, offering lifestyle advice as well as acting as drug dispensaries. The monitoring of patients and drug prescriptions was conducted remotely by a doctor via a digital data transfer tool, an e-monitoring application. The care model was piloted in Lagos, Nigeria, for six months. We assessed the feasibility of the care model's pilot by analyzing patient retention, changes in blood pressure, and the quality and satisfaction of participants.

In total, 336 adults with uncomplicated hypertension participated in the pilot. Whilst patients self-reported more visits than were recorded by the e-monitoring data, pharmacists mentioned reasons for this underreporting in the app, including the use of paper records, understaffing, the app not being user-friendly, and patients' unwillingness to pay for the pilot. During the pilot, mean systolic blood pressure decreased 9.9 mmHg, and blood pressure control doubled. However, this was not associated with retention in the e-monitoring data. Patients reported satisfaction with the pilot because of accessibility, attention, adherence and the provisioning of information. In addition, pharmacists and cardiologists valued the pilot because task-shifting reduces the burden on public healthcare facilities, involvement of cardiologists safeguards the quality of care, and there is good monitoring of patient's adherence. A wider implementation of the care model should consider the usability of the e-monitoring app, pharmacy characteristics and responsibilities, increased visibility of the cardiologists for patients, and the business model.

Evaluation ORIO South Africa

This project evaluated the impact of a water and sanitation program in eThekweni municipality, part of the Durban metropolis in South Africa. This project involved the conversion of shipping containers into sanitary facilities (e.g., showers, toilets and wash basins) in informal settlements throughout the municipality. This program is partially funded through the ORIO fund, which is implemented by the Netherlands Enterprise Agency (RVO). Two partners participated in this evaluation: PwC The Netherlands and Progressus Research and Development in Johannesburg.

The evaluation found that the sanitary facilities were popular and generally satisfactory: more than half of the beneficiaries used them at least once a day. However, cleanliness and defects were a challenge, especially in the older facilities. The quantitative analysis failed to connect the facilities to better health outcomes, but case studies suggest they did make a difference to the health, hygiene and cleanliness of the surrounding area. This report helped RVO to account for the effects of its investment in these water and sanitation facilities to the Ministry of Foreign Affairs and the Dutch general public.

Fee waiver versus social health insurance scheme (Compare 2 Care): Comparing the impact and cost effectiveness of two social protection interventions in Kenya

This project was part of a broader research agenda on inclusive development and social protection implemented by NWO-WOTRO and the INCLUDE platform. The team, led by Prof. Chris Elbers, investigated the impact and cost-effectiveness of two social protection interventions for the provisioning of basic health care in Kenya, namely: the state program on free maternal and primary care and the TCHP health insurance program implemented by PharmAccess Foundation. The study analyzed impact in terms of reaching the poor and specific sub-groups, quality of care, health service utilization, and out-of-pocket expenditures. The study also focused on the associations between social protection interventions and inclusive economic growth. The research was carried out together with the African Population and Health Research Center (APHRC), Health Policy Plus in Nairobi, and PharmAccess Foundation in Amsterdam.

The research indicates that there have been absolute improvements in many aspects of health in Kenya, like the use of antenatal care and skilled delivery, in the last decade. However, health inequalities have increased, given that wealthier people, residents of urban areas, and more highly educated mothers tend to benefit more. Targeted programs are essential to meet the needs of disadvantaged groups. The

outputs of the research include a number of policy briefs and several academic papers, which are currently under submission and review. All findings were discussed with Kenyan stakeholders such as the Ministry of Health in Nairobi between June and July 2017.

Project Highlights

New in 2017

RISE Indonesia: Evaluating how teacher reforms in decentralised Indonesia can promote learning gains

This project focuses on two issues. First, how can policy reform in the areas of teacher distribution, recruitment, training, and rewards improve student learning? And second, what reforms do innovative districts implement, how effective are these reforms in improving learning outcomes, and do they spread to other districts or the national level? The researchers involved examine how national and district governments in Indonesia support and learn from each other in the implementation of policy towards teachers and national exams in order to improve students' education levels. Indonesia offers an ideal laboratory to explore these issues because local districts have significant autonomy in terms of teacher management, distribution, and training. The research project will also analyse nationwide reforms that aim to raise teacher quality in the hope of enhancing students' learning. The project was launched in Jakarta on September 26, 2017 with officials from the Indonesian Ministry of Education in attendance.

Next to AIGHD, the project consortium consists of the SMERU Institute based in Jakarta, the Mathematica Policy Research of Washington D.C., Prof. Menno Pradhan of AIGHD as Lead Researcher, and further participation by Prof. Hessel Oosterbeek from UvA's School of Economics. The project is part of a broader program for Research on Improving Systems of Education (RISE), funded by the United Kingdom's Department for International Development (DFID) and Australia's Department of Foreign Affairs and Trade (DFAT). AIGHD is involved in further RISE research in Tanzania through Dr. Youdi Schipper's participation in the project *Big Results Now! Research on education systems reform in Tanzania*.

HECTOR: The impact of host restriction of *E. coli* on transmission dynamics and spread of anti-microbial resistance

The prevalence of anti-microbial resistance (AMR) is increasing rapidly globally, including bacteria colonizing healthy human and animal populations. The recent reports of plasmid mediated colistin resistance, potentially associated with colistin usage in agriculture, further raise fears of infections that are untreatable due to AMR. The commensal flora of humans and animals is a reservoir of AMR-encoding genes, and *E. coli* (*Escherichia coli*) in particular can carry multiple AMR determinants. AMR transmission within *E. coli* appears dominated by certain lineages. To what extent these are restricted to certain host species is unknown. Such host restriction may be an important determinant of the likelihood of transmission of resistant *E. coli* between different reservoirs (e.g., between animal and human hosts). Identifying determinants that allow disentanglement of the different modes of resistance transmission is crucial for a more targeted design of interventions to prevent and reduce the transmission of resistance.

This research aims to identify determinants of host restriction of *E. coli* and their potential association with AMR transmission and prevalence. We apply a One Health approach¹ using mixed methods, including whole genome sequencing of a large collection of *E. coli* isolates from human, animal and environmental sources across Europe and in Vietnam. Other methods include the use of experimental models to study the role of host restriction determinants in transmission and bacterial fitness, and mathematical modelling.

¹ One Health: a multidisciplinary scientific approach that takes into account the health of people, animals and the environment.

The research will result in a risk-assessment that estimates the contribution of different transmission routes and predicts the effect of interventions on a single route on the overall prevalence in different compartments. The consortium, that includes various European universities (Friedrich-Loeffler-Institut, University of Surrey, Universidad Complutense de Madrid, University of Oxford, Freie Universität Berlin and University of Utrecht), is uniquely placed to perform this research as it consists of experts in the field of AMR, who work in human and animal health domains, and represent highly complementary disciplines.

PIGs - Program for Innovative Global Prevention of *Streptococcus suis*

Streptococcus suis is an endemic porcine disease causing significant economic losses to producers of pork meat. In some countries *S. suis* is the primary cause of mortality and morbidity in young pigs, and the most frequent reason to prescribe antibiotics of the amino-penicillin group as a preventative measure. *S. suis* is also a zoonotic pathogen for humans. Human infection can be severe, causing meningitis, septicaemia and endocarditis, and infections reported worldwide have increased significantly in recent years. Within *S. suis* many different subtypes exist, causing problems in the development of control strategies that target all subtypes. Asymptomatic carriage in adult pigs is common, and combined with a lack of knowledge on the host-pathogen-environment interactions, is the main reason for failure to control the endemic nature of this pathogen.

The project aims to understand host-pathogen-environment interactions of *S. suis* infections through the genome sequencing of *S. suis* isolates from representative areas of major pork producing countries, and by performing genome-wide association (GWA) studies with invasive disease and asymptomatic carriage. New diagnostic methods will be developed for the global monitoring of infection risk and tested on case farms. Epidemiology studies will determine risk factors for invasive *S. suis* disease, including the role of co-infections, and for the first time, will properly assess the dynamics of the disease on a representative farm. The project outputs will strengthen the evidence base for prevention and control strategies through the testing of novel conserved vaccine antigens in pigs and prevention strategies based on manipulation of the microbiota. The consortium includes, in addition to AIGHD and AMC, Wageningen University and Wageningen Research Foundation, University of Cambridge, Ceva Santé Animale SA, L'Institut de Recerca i Tecnologia Agroalimentàries, Danmarks Tekniske Universitet, Tierärztliche Hochschule Hannover and Chr. Hansen A/S.

Shinyanga

In 2017, an operational research program about the implementation of an HIV Test & Treat approach in Shinyanga and Simiyu Regions in Tanzania commenced. This project was initiated by late Prof. Joep Lange and is carried out through the Diocese of Shinyanga, with an Italian NGO (CUAMM) acting as the implementing partner. AIGHD is responsible for the research component, which is being led by Dr. Anton Pozniak and Dr. Bernard Desderius.

AIGHD's research covers clinical and biomedical elements, such as HIV drug resistance testing along with socio-anthropological research on the challenges of identifying new HIV patients in a situation of substantial ART coverage. AIGHD also looks into challenges related to retention in care and task shifting. Finally, economic research is planned in relation to costing for implementation. The economic research is strengthened by an Erasmus Mundus bursary, while an additional TB outreach activity is funded through complementary TB-REACH subsidies. Further research expansion is expected, based on collaborations with the national AIDS and TB control programs in Tanzania.

Improving TB case detection in rural populations by linkage to HIV Test and Treat Programs

Tuberculosis (TB) is one of the leading causes of death globally, with only approximately 63% of people with active TB currently being diagnosed and treated. Missed or delayed diagnosis and treatment is responsible for significant morbidity and mortality. Since 2015, the World Health Organization (WHO) recommends a Universal Test & Treat (UTT) approach for HIV/AIDS, so all individuals testing positive for

HIV start antiretroviral treatment (ART) immediately. Tanzania adopted this in 2016. As the barriers to seeking TB diagnosis and care coincide with those for testing for and enrolling into HIV care, the aim of this project is to investigate the feasibility and effectiveness of incorporating TB screening into the UTT model of care in rural Tanzania. The project will integrate TB screening into the community-based HIV testing as part of general roll-out of UTT in rural Shinyanga, Tanzania. It will also pilot a mHealth methodology to improve linkage to care and to facilitate the testing of household members of those who are found to have TB.

Partners of AIGHD in this project include the National Institute for Medical Research in Tanzania, Doctors with Africa CUAMM, Bugisi Health Centre, and the National TB and Leprosy Programme of Tanzania. Project screening activities are set to commence in April 2018. The objectives of this project are fourfold: to investigate the feasibility of this approach and its impact on TB case notification; to investigate the effectiveness of reporting TB screening results and household contact screening via an mHealth approach; to determine the most effective and cost-effective TB screening algorithm in the context of a HIV UTT program; and to determine the association between hemoglobin levels and TB disease and if this association can be used to simplify the TB screening algorithm.

Project Highlights Ongoing in 2017

Amsterdam MSM Hepatitis C Free (MC Free) Initiative

In the Netherlands, unlike many other countries, HIV-positive men who have sex with men (MSM) account for the majority of new Hepatitis C virus (HCV) infections. Due to increased efficacy and tolerability of new antiviral agents for the treatment of HCV, a cure is possible for the majority of patients. The November 2015 eligibility for interferon-free HCV treatment in The Netherlands was expanded for all chronic HCV patients regardless of the extent of liver fibrosis. The main objective of the MC Free initiative is to reduce the incidence of HCV infections among MSM in Amsterdam. The MC Free team combined expertise and knowledge from virologists, clinicians, public health specialists, and a non-governmental organization specialized in sexual health to develop an innovative, integrated strategy aimed at eliminating HCV among MSM in Amsterdam.

Online and offline interventions were developed to increase knowledge and awareness of HCV infection, to increase regular HCV testing and earlier diagnosis, and to stimulate risk reduction behavior. By the end of 2017, project outputs included a home-based HCV viral load testing intervention, and a toolbox with products to stimulate risk reduction strategies for MSM at risk for HCV (which are available on the website for our target population: www.nomorec.nl). We will also develop an e-learning module and provide face-to-face training for health professionals in primary, secondary and public health care about HCV sex- and drug-related risks, risk-reduction measures, strategies to prevent HCV re-infections, testing options, partner notification, and the benefits of a quick linkage to care.

AGEHIV Cohort Study: Comorbidity and Ageing with HIV

The AGEHIV Cohort Study compares the prevalence and incidence of a broad range of non-communicable co-morbidities and their risk factors between HIV-infected and uninfected individuals aged 45 and older. It primarily aims to determine the extent to which HIV may increase the risk of developing such co-morbidities, and to study potential underlying mechanisms, especially those that may affect aging as a result of infection and antiviral treatment. The study began recruitment in the Netherlands in November 2010, and within two years 598 HIV-infected and 550 uninfected individuals had enrolled and completed their baseline assessment. As this study continues, participants are followed up with every two years. Globally, this study is considered to be one of the most robust and extensive studies of co-morbidity and aging with HIV. Findings continue to be presented at major international conferences and published in peer-reviewed publications. Judith Schouten and Katherine Kooij were the first two PhD students who successfully defended their academic thesis in January 2017 based on this study's findings. A website dedicated to the study was launched in 2017 and can be viewed at: <https://agehiv.nl/en/>.

Rota-biome: The influences of the viral, fungal and bacterial microbiome on rotavirus vaccine immune responses in Ghana

Rotavirus is the leading cause of diarrhea-related death in children worldwide, with 95% of rotavirus deaths occurring in low-income countries in Africa and Asia. Rotavirus vaccines (RVV) have the potential to dramatically reduce the morbidity and mortality caused by rotavirus infection. However, rotavirus vaccines demonstrate significantly lower efficacy in low-income countries. Understanding the pathophysiology behind this diminished efficacy is critical, as even small improvements in efficacy could increase the number of children's lives saved by the vaccine by hundreds of thousands over the next 15 years.

One of several explanations for these differences in vaccine efficacy is that the infant intestinal microbiota may be modulating an infant's immune response to the enteric RVV. We hypothesized that the composition of the intestinal microbiota is influencing RVV response, that RV vaccine responders have different intestinal microbes as compared to non-responders, and that these dissimilarities contribute to the decreased efficacy of RVV found in Africa and Asia. Therefore, we conducted a case control study comparing the bacterial, viral, and fungal fecal microbiome composition between infants with and without a RVV response. Preliminary results indicate that increased bacteria from the Proteobacteria phylum at the first dose of vaccination, in combination with decreased bacteria from the Bacteroidetes phylum, correlate with increased vaccine response. In addition, several visual trends correlate viral composition as well as fungal abundance with RVV immunity. These analyses are ongoing.

H-TEAM: HIV Transmission Elimination Amsterdam Initiative

The H-TEAM initiative is a unique collaboration between all stakeholders involved in the prevention of HIV transmission and care of people living with HIV in Amsterdam, including key affected communities (Public Health Service of Amsterdam, HIV Patient Association, General Practitioners Amsterdam, Dutch Association of HIV Clinicians, National Institute for Public Health and the Environment, Soa Aids Netherlands, Stichting HIV Monitoring, the Amsterdam hospitals as well as Erasmus Medical Center and Maasstad Hospital Rotterdam, Leiden University Medical Center and Public Health Service of Rotterdam-Rijnmond).

The main objectives are to decrease the number of new HIV infections in people at risk of becoming HIV-infected, and to promote the health of HIV-infected individuals and reduce their risk of transmitting HIV to others. The H-TEAM initiative has developed and implements innovative strategies to expand testing and immediate treatment for HIV, as well as to prevent further transmission of the virus. For example, H-TEAM implemented strategies to enhance the awareness of acute and chronic HIV infection and the benefits of regular testing, early diagnosis and treatment among the key populations and their health care providers. They combined this with rapid testing procedures and the fast linkage to care and provisioning of immediate HIV treatment. H-TEAM also implemented a demonstration project that evaluates the uptake, acceptability, and usability of pre-exposure prophylaxis (PrEP) for MSM and transgender people with increased risk of acquiring HIV.

Education Report

"Developing and inspiring the next generation of global health leaders"

At the undergraduate level, AIGHD coordinates the Global Health elective course for second year Bachelor of Medicine students at the Academic Medical Center (AMC), the university hospital and Faculty of Medicine at the University of Amsterdam (UvA). In the academic year 2017-2018, AIGHD is offering two new elective tracks in Global Health for the renewed medical curriculum 'Epicurus'. This is being carried out in collaboration with multiple faculties and disciplines in the Netherlands and abroad, in order to increase competence in global health and promote interdisciplinary learning. In 2017, AIGHD supported eleven bachelor thesis projects.

In collaboration with the Vrije Universiteit Amsterdam (VU), AIGHD offers the two-year Research Master in Global Health at the VU. Since 2012, AIGHD has coordinated curriculum elements of this program and continues to be an active participant of the coordinating team. Scientific internships are hosted by AIGHD for Master's degree students, allowing students to gain 'hands-on', real-world skills in Global Health research. In 2017, AIGHD hosted nine such internships, many of which included international fieldwork and experiential collaboration with local communities, researchers, and institutions.

In 2017

- PhDs supervised: 51, including 10 PhD defenses
- Bachelor's theses supervised: 11
- Internships: 9

Note: Statistics for PhDs based on calendar year.
Statistics for Bachelor/Master based on the 2016-2017 academic year.

AIGHD's Lecturers and Curriculum Developers

Dr. Guus ten Asbroek, Daniella Brals, Prof. Frank Cobelens, Dr. Marleen Hendriks, Prof. Michael Boele van Hensbroek, Dr. Anja van 't Hoog, Dr. Frank van Leth and Prof. Constance Schultsz.

In 2017, AIGHD researchers supervised 51 PhD students, of which 10 completed their work with a public defense and received a diploma. PhD research work is supervised (or co-supervised) by one of AIGHD's research group leaders. These research group leaders provide supervision and mentorship throughout the duration of the PhD, including overseeing the quality and completeness of the research. PhD students are deeply embedded within active research teams at AIGHD in the Netherlands and abroad, in fields such as infectious diseases, chronic diseases, and health systems, collaboratively working with internal and external researchers and institutions.

Alongside its involvement in Global Health education at the VU and with AMC/UvA, AIGHD also contributes to Global Health courses at the Amsterdam University of Applied Sciences (HvA) and various professional organizations and NGOs locally and globally. In collaboration with partner institutions, AIGHD also conducted professional training in Nigeria and Uganda in Quantitative Research Methods and Good Clinical Practice.

Testimonial by two second year students: Jingyu Tong and Mengsi Jiang MSc. in Global Health, Duke Kunshan University Jiangsu, China, 24 January 2018

"As global health students, both of us are particularly interested in non-communicable diseases (NCDs) and implementation science. The process of translating research findings into policies, actions, as well as into individual behavioral change, is fascinating. This interest has brought us, last summer, to an internship with AIGHD. With the support from both AIGHD and Duke Kunshan University (DKU), we conducted two projects aimed at exploring perceptions of Dutch health professionals about ethnic disparities in hypertension control, as well as factors associated with the implementation of guideline recommendations of cardiovascular risk management of hypertension. We were actively involved in the project planning, organization and implementation, which was a valuable learning experience.



Figure 1 Jingyu Tong (left) and Mengsi Jiang (right)

Our colleagues never hesitated to offer us help when needed, for example, with analyzing quantitative data or addressing visa and other logistics issues. Most importantly, the research team at AIGHD made us feel at home, and quickly guided us with rich insights necessary for carrying out our research. Thanks to the unwavering support from our AIGHD supervisor Dr. Lizzy Brewster, we tackled many unexpected obstacles during our research. As a result, we exceeded our previous goal by completing 13 interviews and 77 questionnaires.

Our internship at AIGHD was a rewarding experience. Not only did our internship fuel our research passion, it also helped us build strong connections with senior researchers at AIGHD. As we are currently working on our theses, which reminds us of the good memories we

had at AIGHD and the harmonious yet passionate working atmosphere they provided. We believe that whatever our future may entail, we will benefit from this unforgettable experience."



Policy and Communication

"Expert advice and knowledge sharing that makes a difference"

In 2017, AIGHD researchers made several contributions to public health policy, both globally and domestically. This included contributions to policy documents, as well as developing guidelines about disease control, treatment, and diagnostics.

One important policy area AIGHD contributed to in 2017 was resistance to antiretroviral drugs (ART), used in the treatment of HIV infection. Through its long-term research on HIV drug resistance in Africa, AIGHD has built a close working relationship with the World Health Organisation (WHO) on this topic. In 2017, AIGHD held regular exchanges of information and wrote joint articles with the WHO HIVResNet team. AIGHD researcher Tobias Rinke de Wit was invited to open the launch of the new WHO guidelines during the International AIDS Society (IAS) Conference in Paris, which included reports on worldwide HIV drug resistance. PhD student Seth Inzaule was offered a position at the WHO HIVResNet team, which he will begin in early 2018. In July, AIGHD hosted a meeting of the WHO HIVResNet team with Dutch stakeholders, including the Ministry of Foreign Affairs, the Ministry of Health, Welfare and Sports, and the National Institute of Public Health and The Environment. Here other types of antimicrobial resistance (such as common bacterial pathogens and tuberculosis) were highlighted as well.

A related policy area concerns control of antimicrobial resistance (AMR) in sub-Saharan Africa. AIGHD researcher Constance Schultsz advised the newly established Africa Centers for Disease Control (Africa CDC) on the development of their AMR Framework. The framework is designed to help prioritize action, and advise countries of the African Union on the development and implementation of their AMR action plan.

In the field of tuberculosis (TB), AIGHD researcher Frank Cobelens contributed to a WHO framework for the evaluation of improved tests for latent TB infection. AIGHD's Peter Reiss made important contributions in the field of global HIV elimination through his involvement in several high-level policy panels, namely, the European AIDS Clinical Society panel for HIV treatment and co-morbidities, the

UNAIDS Strategic and Technical Advisory Committee to the Executive Director, and the UNAIDS Scientific Expert Panel advising the Executive Director.

Domestically, Frank Cobelens co-initiated the Clingendael Global Health Initiative. This initiative brings together Dutch stakeholders in Global Health, including academia, ministries, industry and NGOs, to define the needs and role for The Netherlands in Global Health, and advocate for a broader strategic approach to Global Health by the Dutch Government. This culminated in the publication of the policy report *Why the Netherlands should step up its ambitions on global health*, issued by the Netherlands Institute for International Relations Clingendael.

Finally, various staff members contributed to research policy on Global Health. AIGHD's Cate Hankins started her term as Chair of the Scientific Advisory Board of the European-Developing Countries Clinical Trials Platform (EDCTP), a major EU funder for research on new drugs, vaccines and diagnostics for poverty-related diseases and neglected tropical diseases in sub-Saharan Africa. Frank Cobelens was appointed a member of the International Advisory Board of the Research Networks for Health Innovations in Sub-Saharan Africa, a flagship initiative by the German Government to fund and accelerate Global Health research.

INTEREST

Eleventh International Workshop on HIV Treatment, Pathogenesis and Prevention Research in Resource-Limited settings

Lilongwe, Malawi was the host city for the 11th International Workshop on HIV Treatment, Pathogenesis, and Prevention Research in Resource-Limited Settings (INTEREST), held May 16-19, 2017. The annual conference is jointly presented by AIGHD and Virology Education. As in the previous three years, the Workshop was dedicated to the memory of Professor Joep Lange and Jacqueline van Tongeren, who were pivotal in establishing the INTEREST meetings. They died tragically when their plane (flight MH17) was shot down over the Ukraine on July 17, 2014. This year's conference was opened by the Minister of Health for Malawi, the Honourable Dr. Peter Kumpalume, who welcomed all the delegates and called for everyone working in the field of HIV to focus on the most efficient use of human and financial resources in order to end the HIV epidemic. He said that his ambition was that people living with HIV should die *with* HIV and not *from* HIV.

Data was presented from several exciting projects that are taking place in Malawi, given its reputation as a center of excellence in HIV research. Among the 506 delegates attending the Workshop, there were 264 Malawian healthcare professionals, researchers, students and community members who actively participated in discussions, presented their own research, and interacted with HIV investigators from several African (178 delegates), European (48 delegates), India (three delegates), South American (two delegates), and North American (11 delegates) countries. Lively conversations took place during both the scientific sessions, which all took place in plenary, and during the cultural and social events. A spirited plenary debate addressed whether non-communicable diseases in people living with HIV are the next priority for HIV programs in sub-Saharan Africa. The 38 highest-scoring scientific abstracts were highlighted in oral, mini-oral and poster presentations. Duke University's Guido Ferrari and AIGHD's Cate Hankins, who is also INTEREST's Scientific Chair, successfully competed for an USA National Institutes of Health/Fogarty International Center grant that provided travel support for young scientists chosen for oral and mini-oral abstract presentations.

The 11th INTEREST Workshop maintained the tradition of holding the highly popular Joep Lange career guidance sessions for young and early career researchers that were introduced in 2015. Early morning sessions on acquiring research grants also attracted early career researchers, as did poster discussions led by members of the Workshop's organizing and scientific committees. Malawi's Augustine Choko won the Joep Lange INTEREST award for the highest scoring scientific abstract, presenting research entitled, *"One year outcomes following availability of HIV self-testing in Blantyre, Malawi,"* The Joep Lange

INTEREST award provides registration, accommodation, and travel to the next INTEREST Workshop. The 2018 INTEREST Workshop will be held in Kigali, Rwanda, 29 May- 1 June 2018.

Jacqueline van Tongeren's (together with Joep Lange AIGHD's founder of the Workshop) interest in the arts was reflected in an art installation by a local artist, Elson Kambalu, which was displayed during the Workshop, and in several demonstrations of Malawian dancing. The art installation, entitled 'Between humans and a goal post', called on all participants to 'play the ball' and to reflect on a single message about HIV that they could pass onto their communities. During an outreach event, the installation was displayed in a community in Lilongwe, where it generated much enthusiasm.

AIGHD Uganda Strengthening Clinical Research Capacity in sub-Saharan Africa

The ARISE (Africa Research Initiative and Support Network) consortium was founded in 2012 as a joint venture of the existing COMMAL (College of Medicine – Malawi Amsterdam Liverpool) and INTERACT (Infectious Diseases Network for Treatment and Research in Africa) programs. These programs were aimed at strengthening sub-Saharan African research and development capacity in the field of poverty-related diseases (e.g., HIV, TB, and malaria). The main objective of the ARISE consortium, which was successfully completed in June 2016, was to develop and consolidate a network of Research Support & Training Centers (RSTCs) in sub-Saharan Africa. These centers were to be embedded within local universities, and have ownership of the research conducted and operate according to ICH-GCP research standards.

Upon completion, the construction of the fourth Research Support & Training Center commenced at Makerere University, College of Health Sciences in Kampala, Uganda. While the frame is finished pending partitioning, the College is looking for funds to complete the building and construction is still underway. The current stage of the construction of the Research Support Center was funded by NACCAP II ARISE Network, with additional funds from Wellcome Trust and the United States National Institutes of Health (NIH).

Good Clinical Practice Training

AIGHD, in collaboration with the Clinical Trials Unit at the Makerere University College of Health Sciences, conducted Good Clinical Practice (GCP) trainings in Uganda between February and December 2017 with a total of 160 participants. The two-day certificate course is recognized by the Uganda National Council for Science and Technology. Course participants were drawn from various medical and organizational backgrounds, including physicians, medical officers, pharmacists, lab technologists, Independent Review Board members, IT and data professionals, and research assistants.

Reorganization of the administrative operations in Uganda

A re-structuring process of the administrative operations in Uganda culminated in the transitioning and embedding of the clinical trial monitoring and data management operations into the Clinical Trials Unit (CTU) at Makerere University under the School of Public Health, as originally planned within the ARISE framework.

Technical and Scientific Collaboration

AIGHD continues to have a strong scientific and technical collaboration with Makerere University, and the Memorandum of Understanding Makerere is currently undergoing a renewal process. AIGHD is being represented through a Director based within the Clinical Trials Unit. The Principal of the Makerere College of Health Sciences visited the AIGHD office in Amsterdam in May to explore further opportunities for strengthening the scientific cooperation between AIGHD and Makerere University.

Where we Work

Africa	Asia & Pacific	Europe	North & South America
Cameroon Gabon Ghana Kenya Malawi Nigeria Rwanda Senegal South Africa South Sudan Tanzania Uganda Zimbabwe	Australia Bangladesh China India Indonesia Myanmar Thailand Vietnam	Belgium France Germany Italy Netherlands Spain Sweden United Kingdom	Brazil USA

Financials

The total income in 2017 amounted to EUR 7.85 million (2016: EUR 11.09 million). AIGHD ends the financial year in 2017 with a deficit of EUR 357,506 (2016: surplus of EUR 473,902) from its operational activities. Once the negative result for the financial year 2017, a surplus of EUR 1,294,076 remains. This reserve will be used to secure the continuity of AIGHD and/or support its statutory goals.

In 2017 the Amsterdam Institute for International Development (AIID) has been incorporated within AIGHD. As a result the comparative figures of 2016 have been adjusted accordingly.

The financial statements have been prepared in accordance with the Guideline for Annual Reporting 640 'not-for-profit organizations' of the Dutch Accounting Standards Board. Contrary to these guidelines, the overall budget level has not been included, as budget control has been performed at project level.

AIGHD is currently in contact with the tax authority concerning the handling of VAT. The main point of discussion is the accuracy of VAT deductions in past declarations. We anticipate that the outcome of this discussion will take some time. AIGHD is currently in the process of consulting a tax consultant.

Managing Risk

Risk analysis and risk mitigation remain important for AIGHD. Discussions have been initiated between the Executive Board and the Supervisory Board about AIGHD's strategy for analyzing, weighing and mitigating risks. At the institutional level risk mitigation has improved by further strengthening the annual budget cycle, including a more detailed annual budget and more frequent monitoring of expenditures. The Executive Board is currently not aware of any significant changes in the organization's internal control that occurred during 2017 that has materially affected, or is reasonably likely to materially affect, the organization's internal control over its finances. The main risk identified is the limited lifetime of the existing project portfolio and the need for replenishment of that portfolio to remain financially sustainable. With a number of new projects starting in 2018 and implementation of various strategies for grant acquisition as well as for expanding available funding for Global Health in The Netherlands and the European Union we expect to sustain if not improve our project funding base. At the project level, processes for analysis and mitigation of risks related to (new) partner institutions are in development.

Stichting Amsterdam Institute for Global Health and Development
Amsterdam

Signing of the Management Board's Report

Amsterdam, 30 November 2018

Executive Board:

F.G.J. Cobelens
(Chair)

C.T.M. Elbers

A.P. Hardon

M. Heidenrijk

C. Schultsz

Supervisory Board:

T. van der Poll
(Chair)

J. Brug

J.A. Romijn

W.F.C. Verschoor

Financial statements

- Balance sheet
- Statement of income and expenditure
- Notes to the financial statements

Balance sheet as at 31 December 2017

(after appropriation of result)

	Note	31.12.2017 EUR	31.12.2016 EUR
Assets			
Fixed assets			
Tangible fixed assets	1	132,205	164
Current assets			
Receivables:			
Accounts receivable	2	1,638,575	1,558,951
VAT receivable	3	110,077	13,273
Other receivables and Pre-payments	4	<u>875,421</u>	<u>1,695,917</u>
		2,624,073	3,268,141
Cash and banks	5	<u>5,063,098</u>	<u>4,419,571</u>
		<u><u>7,819,376</u></u>	<u><u>7,687,876</u></u>

	Note	31.12.2017 EUR	31.12.2016 EUR
Equity and liabilities			
Continuity reserve	6	1,294,076	1,651,582
Current liabilities			
Accounts payable		703,616	1,149,067
Taxes and social security contributions	7	37,437	87,365
Deferred income	8	3,540,539	2,078,557
Other liabilities and accrued expenses	9	<u>2,243,708</u>	<u>2,721,305</u>
		6,525,300	6,036,294
		<u><u>7,819,376</u></u>	<u><u>7,687,876</u></u>

Statement of income and expenditure 2017

	Note	2017 EUR	2016 EUR
Income	10	7,850,422	11,090,947
Operating expenses:			
Direct project costs		3,441,035	6,349,157
Personnel expenses	11	2,793,863	3,124,020
General and administrative expenses	12	1,834,392	1,232,009
		<u>8,069,290</u>	<u>10,705,186</u>
		(218,868)	385,761
Financial income and expenses:			
Financial income	13	5,897	89,256
Financial expenses		<u>(144,535)</u>	<u>(1,115)</u>
Result		<u><u>(357,506)</u></u>	<u><u>473,902</u></u>
Appropriation of result:			
Deducted from / added to 'Equity - Continuity reserve'		(357,506)	473,902

Stichting Amsterdam Institute for Global Health and Development
Amsterdam

Notes to the financial statements

General

Foundation

The Amsterdam Institute for Global Health and Development (AIGHD) is a not-for-profit organization based in Amsterdam, and was established on 18 December 2006.

On 14 April 2011, the legal entity was changed from the AMC CPCD Foundation to the Amsterdam Institute for Global Health and Development Foundation.

The financial statements have been prepared in euros.

Objective

The mission of the foundation is to provide sustainable solutions to major health problems across our planet, by forging synergies between disciplines, health care delivery, research and education.

Accounting principles

General

The financial statements have been prepared in accordance with the *Guideline for annual reporting 640 "Not-for-profit organizations"* of the Dutch Accounting Standards Board ('Raad voor de Jaarverslaggeving').

The financial statements have been prepared using the historical cost convention and are based on going concern. Income and expenses are accounted for on an accrual basis. Profit is only included when realized on the balance sheet date. Liabilities and any losses originating before the end of the financial year are taken into account if they have become known before preparation of the financial statements.

If not indicated otherwise, the amounts of the accounts are stated at face value.

In 2017 the executive board and supervisory board of the Amsterdam Institute of Global Health and Development (AIGHD) agreed with the board of Stichting Amsterdam Institute for International Development (AIID) that AIID donates and AIGHD accepts all assets and liabilities of AIID. The pooling-of-interest accounting method is used for this legal merger. All assets and liabilities of AIID have been incorporated within AIGHD at book value as at January 1st 2017. The comparative financial statements and disclosures of AIGHD are modified as if the legal merger with AIID has taken place at the beginning of 2016. The ongoing activities of AIID will be continued within AIGHD. The liquidation process of the legal entity AIID is ongoing.

Tangible fixed assets

Tangible fixed assets are presented at cost less accumulated depreciation and, if applicable, less impairments. Depreciation is based on the expected future useful life and calculated as a fixed percentage of cost, taking into account any residual value. Depreciation is provided from the date an asset comes into use.

Costs for periodical major maintenance are charged to the result at the moment they arise.

Receivables

Upon initial recognition the receivables are valued at fair value and then valued at amortized cost. The fair value and amortized cost equal the face value. Provisions deemed necessary for possible bad debt losses are deducted. These provisions are determined by individual assessment of the receivables.

Cash

The cash is valued at face value. If cash equivalents are not freely disposable, then this has been taken into account upon valuation.

Provisions

Provisions for employee benefits

The AIGHD pension scheme for staff based in the Netherlands concerns a defined contribution scheme, which is accommodated at the insurance company Delta Lloyd. The contribution to be paid is recognized in the 'Statement of income and expenditure'.

Current liabilities

Deferred income

Deferred income consists of payments from donors related to projects to be carried out decreased by the realized revenue of these projects, taking into account foreseeable losses on projects.

Principles for the determination of the result

Statement of income and expenditure

Income and expenditure are recognized as they are earned or incurred and are recorded in the financial statements of the period to which they relate.

Income

In various projects AIGHD acts as a coordinator within a consortium of beneficiaries and AIGHD as coordinator and beneficiary. Within these contracts AIGHD is as a coordinator responsible for the coordination between the beneficiaries in the consortium and the Donor.

For a proper understanding of the activities of AIGHD it's important to be transparent in the volume of the projects AIGHD coordinates. Therefore the management departs from the normal generally accepted accounting principles for recognition of revenue, based on which only the grants received related to the coordination activities would be recognized as income. In these financial statements AIGHD recognizes project income for the grants received related to the coordination activities **and** for the grants received and transferred to the other beneficiaries within the consortiums. This method of revenue recognition provides insight in the gross size of the grant projects which are coordinated by AIGHD.

Stichting Amsterdam Institute for Global Health and Development
Amsterdam

Income from 'Realized income related to projects' is recognized in proportion to the completed project activities rendered on active projects, based on the cost incurred up to balance sheet date. The cost of these project activities is allocated to the same period.

Other income relates to other non-project related items.

Direct project costs

Direct project costs consist of expenses directly related to projects (out-of-pocket costs) excluding staff costs.

Recognition of transactions in foreign currency

Transactions in foreign currencies are recorded at the prevailing exchange rate on transaction date. At year-end, the assets and liabilities reading in foreign currencies are translated into euros at the rate of exchange as per that date.

Financial instruments

Financial instruments include both primary financial instruments, such as receivables and liabilities, and financial derivatives. Reference is made to the treatment per balance sheet item for the principles of primary financial instruments. AIGHD does not use derivatives and there are also no embedded derivatives. AIGHD does not apply hedge accounting.

Notes to the specific items of the balance sheet

1. Tangible fixed assets

	2017	2016
	EUR	EUR
Book value as at 1 January	164	295
Additions	141,502	0
Depreciation	(9,461)	(131)
Book value as at 31 December	<u>132,205</u>	<u>164</u>
Purchase value as at 31 December	156,150	14,647
Disposal of assets	(14,647)	0
Accumulated depreciation as at 31 December	<u>(9,298)</u>	<u>(14,483)</u>
Book value as at 31 December	<u>132,205</u>	<u>164</u>

The depreciation of the tangible fixed assets is calculated according to the straight-line method. The depreciation percentages are based on the economic life span. For computer equipment and office furniture a depreciation of 20% is used. For refurbishment a depreciation of 10% is used.

2. Accounts receivable

	<u>31.12.2017</u>	<u>31.12.2016</u>
	EUR	EUR
Accounts receivable	1,674,258	1,652,371
Deposits	27,007	0
Provision for doubtful debts	(62,690)	(93,420)
	<u>1,638,575</u>	<u>1,558,951</u>

3. VAT receivable

	<u>31.12.2017</u>	<u>31.12.2016</u>
	EUR	EUR
Value added tax receivable	<u>110,077</u>	<u>13,273</u>

4. Other receivables and prepayments

	<u>31.12.2017</u>	<u>31.12.2016</u>
	EUR	EUR
Advances projects	745,958	1,007,286
Accrued income	101,586	376,448
Prepaid expenses	16,838	44,329
Pension and other personnel insurances	10,367	3,556
Advances personnel	615	1,025
Other receivables *	57	263,273
	<u>875,421</u>	<u>1,695,917</u>

*) Other receivables

Other receivables before provision	217,057	263,273
Provision other receivables	(217,000)	0
	<u>57</u>	<u>263,273</u>

5. Cash and banks

	<u>31.12.2017</u>	<u>31.12.2016</u>
	EUR	EUR
ABN-AMRO MeesPierson - EUR	20,041	65,387
ABN-AMRO MeesPierson - Savings account	3,815,971	3,437,841
ABN-AMRO MeesPierson - USD	1,226,773	916,076
Cash	313	267
	<u>5,063,098</u>	<u>4,419,571</u>

Funds are available in line with the different program and foundation objectives.

6. Continuity reserve

	2017 EUR	2016 EUR
Balance as at 1 January	1,651,582	877,680
Financial resistance contribution	0	300,000
Result for the year	(357,506)	473,902
Balance as at 31 December	<u>1,294,076</u>	<u>1,651,582</u>

In 2017 the Amsterdam Institute for International Development (AIID) has been incorporated within AIGHD. As a result the comparative figures of 2016 have been adjusted accordingly. In 2016 the University of Amsterdam (UvA) and the Vrije Universiteit Amsterdam (VU Amsterdam) contributed EUR 150,000 each to strengthen the continuity reserve of AIID.

Result appropriation for the year

The negative result for the year EUR 357,506 is deducted from the continuity reserve.

The continuity reserve is available to use in line with the described objectives of the foundation as stated in article 3 of the Articles of Association.

7. Taxes and social security contributions

	31.12.2017 EUR	31.12.2016 EUR
Salary taxes payable	<u>37,437</u>	<u>87,365</u>

8. Deferred income

	31.12.2017 EUR	31.12.2016 EUR
Received and receivable from donors related to projects	26,917,657	27,401,479
Realized revenue on projects	(23,377,118)	(25,322,922)
	<u>3,540,539</u>	<u>2,078,557</u>

The deferred income reflects the balance of the 'work in progress' per year-end. The 'work in progress' (contract portfolio) contains an amount of EUR 1,059,606 for by donors pre-financed projects (credit) and an amount of EUR 4,600,145 for reimbursement projects (debit).

9. Other liabilities and accrued expenses

	31.12.2017	31.12.2016
	EUR	EUR
Accrued expenses	1,736,693	1,579,063
Holiday allowance and days	202,724	204,552
Liabilities projects	135,689	771,430
Salaries	2,044	4,738
Other liabilities	166,558	161,522
	<u>2,243,708</u>	<u>2,721,305</u>

AIGHD is in discussion with the tax authority concerning the handling of VAT. The main point of discussion is the correctness of VAT taken for deduction in past declarations. The outcome of this discussion will take time. Currently, AIGHD is in the process of consulting a tax consultant.

Contingent assets and liabilities

Regarding the current project portfolio, AIGHD received commitments from donors for grants of about EUR 37.5 million. Of this amount, EUR 26.9 million has been received. AIGHD has the obligation to use these funds in accordance with the contractual donor requirements.

Financial instruments

For the notes to financial instruments, reference is made to the specific item-by-item note. The main financial risks the foundation is exposed to are the currency risk, the liquidity risk and the credit risk. The foundation's financial policy is aimed at mitigating these risks.

Currency risk

The currency risk is mitigated by holding the received foreign currency pre-payments on ongoing foreign currency contracts as long as possible in the contracted foreign currency and only converting into the functional currency (EUR) based on commitments.

Liquidity risk

The liquidity risk is mitigated by monthly monitoring of the work in progress portfolio and closely monitoring and steering the deferred income position per contract.

Credit risk

The credit risk is limited as most of AIGHD's programs are prefunded. The credit risk is mitigated by banking at a governmental acquired bank (ABN-AMRO MeesPierson). For the local branch offices and partner organizations, the credit risk is mitigated by providing only a two-month rolling advance.

Notes to the specific items of the statement of income and expenditure

10. Income

	<u>2017</u>	<u>2016</u>
	EUR	EUR
Realized income related to projects	6,670,425	10,068,861
Other income	<u>1,179,997</u>	<u>1,022,086</u>
	<u>7,850,422</u>	<u>11,090,947</u>
<i>The main 'Realized income related to projects' consists of:</i>		
COBRA	1,659,427	1,975,800
H-TEAM	732,745	696,799
AGEhIV Cohort Study	703,700	697,346
HOOKVAC	334,945	2,213,789
Rotabiome	320,886	21,069
Shinyanga	280,178	0
JLI – HIF	272,366	220,384
MC FREE	233,935	275,075
Other	<u>2,132,243</u>	<u>3,968,597</u>
	<u>6,670,425</u>	<u>10,068,861</u>

Other income

The other income includes a total amount of EUR 329,000 from the University of Amsterdam (UvA) to facilitate UvA's Research Priority Area on Global Health and Development.

11. Personnel expenses

	2017	2016
	EUR	EUR
Salaries	2,060,529	2,327,105
Social security contributions	385,279	423,281
Pension costs	166,770	198,722
Other personnel expenses	181,285	174,912
	<u>2,793,863</u>	<u>3,124,020</u>

In order to provide an accurate overview of the personnel expenses, these expenses have not been allocated to “direct project costs”. The “pension costs” consist of a defined contribution per employee.

12. General and administrative expenses

The ‘general and administrative expenses’ of EUR 1,834,392 mainly consist of consultancy expenses ad. EUR 617,584 and the ICT costs of EUR 158,470.

13. Financial income

	2017	2016
	EUR	EUR
Financial income	5,897	89,256
Financial expenses	(144,535)	(1,115)
	<u>(138,638)</u>	<u>88,141</u>

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Other notes

Number of employees

The average number of full-time equivalents (FTE) during the financial year was 44 (2016: 51 of which 47 relate to AIGHD and 4 relate to AIID).

Remuneration of Board of Directors and Supervisory Board

In 2017 members of the Board of Directors and members of the Supervisory Board did not receive any remuneration.

Subsequent events

There are no subsequent events to report.

Stichting Amsterdam Institute for Global Health and Development
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Signing of the financial statements

Amsterdam, 30 November 2018

Executive Board:

F.G.J. Cobelens
(Chair)

C.T.M. Elbers

A.P. Hardon

M. Heidenrijk

C. Schultsz

Supervisory Board:

T. van der Poll
(Chair)

J. Brug

J.A. Romijn

W.F.C. Verschoor

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Other information

Independent auditor's report

The independent auditor's report is recorded on the next page.



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Independent auditor's report

To the Supervisory Board of Stichting Amsterdam Institute of Global Health and Development

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS 2017 INCLUDED IN THE ANNUAL REPORT

Our opinion

We have audited the accompanying financial statements 2017 of Stichting Amsterdam Institute of Global Health and Development, based in Amsterdam.

In our opinion the accompanying financial statements give a true and fair view of the financial position of Stichting Amsterdam Institute of Global Health and Development as at 31 December 2017, and of its result for 2017 in accordance with the Dutch Accounting Standard 640 "Not-for-profit organizations".

The financial statements comprise:

1. The balance sheet as at 31 December 2017.
2. The profit and loss account for 2017.
3. The notes comprising a summary of the accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the "Our responsibilities for the audit of the financial statements" section of our report.

We are independent of Stichting Amsterdam Institute of Global Health and Development in accordance with the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

REPORT ON THE OTHER INFORMATION INCLUDED IN THE ANNUAL REPORT

In addition to the financial statements and our auditor's report thereon, the annual report contains other information that consists of:

- Management Board's Report.
- Other Information as required by the Dutch Accounting Standard 640 "Not-for-profit organizations".

Deloitte Accountants B.V. is registered with the Trade Register of the Chamber of Commerce and Industry in Rotterdam number 24362853. Deloitte Accountants B.V. is a Netherlands affiliate of Deloitte NWE LLP, a member firm of Deloitte Touche Tohmatsu Limited.

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Based on the following procedures performed, we conclude that the other information:

- Is consistent with the financial statements and does not contain material misstatements.
- Contains the information as required by the Dutch Accounting Standard 640 "Not-for-profit organizations".

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of the Dutch Accounting Standard 640 "Not-for-profit organizations" and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

Management is responsible for the preparation of the other information, including the Management Board's Report in accordance with the Dutch Accounting Standard 640 "Not-for-profit organizations", and the other information as required by the Dutch Accounting Standard 640 "Not-for-profit organizations".

DESCRIPTION OF RESPONSIBILITIES REGARDING THE FINANCIAL STATEMENTS

Responsibilities of Management and the Supervisory Board for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the Dutch Accounting Standard 640 "Not-for-profit organizations". Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the entity's ability to continue as a going concern. Based on the financial reporting framework mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the entity's or to cease operations, or has no realistic alternative but to do so.

Management should disclose events and circumstances that may cast significant doubt on the entity's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the entity's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit assignment in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.



We have exercised professional judgement and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included e.g.:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the entity's to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identified during our audit.

Amsterdam, 14 December 2018

Deloitte Accountants B.V.

Signed on the original: J.S. Huizinga RA

Appendix 1:

Project title	Start date	End date	Project leader
Co-morbidity in relation to AIDS	01-03-2013	28-02-2017	Prof. P. Reiss
Epidemiology and control of tuberculosis in the antiretroviral therapy era: towards a mathematical model for Cape Town, South Africa	01-03-2014	28-02-2017	Dr. S. Hermans
Analysis on the concepts, relationships between, and causes of poverty, income inequality and economic growth	01-01-2016	30-04-2017	Prof. P.F. Lanjouw
Expanded use of ART for treatment and prevention in female sex workers in South Africa (TAPS project)	01-06-2014	30-06-2017	Dr. G. Gomez Guillen
Evaluation of the ORIO project ORIO09/SA/01 Sustainable Water and Sanitation Development Programme for Indigent Communities in eThekweni Municipality, South Africa	01-04-2016	30-06-2017	Prof. C.T.M. Elbers
Comparing the impact and cost effectiveness of two social protection interventions in Kenya: fee waiver versus social health insurance scheme	01-05-2015	31-07-2017	Prof. C.T.M. Elbers
OMRON Pilot Evaluation	01-08-2015	31-07-2017	Dr. A.H. van 't Hoog
Synthesis Evaluation of SRHR Subsidy Policy Frameworks 2011-2015	01-11-2016	31-07-2017	Prof. M. Temmerman
Big Results Now! Research on Education System Reform in Tanzania	01-11-2016	31-08-2017	Dr. Y. Schipper
Novel strategies and tools for antimicrobial resistance surveillance	01-10-2012	30-09-2017	Prof. M. de Jong
International Doctorate in Transdisciplinary Global Health Solutions	19-10-2012	19-10-2017	Prof. dr. F.G.J. Cobelens
Thematic coordination infectious disease and health; "Translating health research into health policy in Indonesia: barriers and solutions"	01-11-2012	31-10-2017	Prof. dr. M de Jong
EU-India research and innovation partnership on vaccine development for hookworm and other neglected tropical diseases	01-12-2014	30-11-2017	Dr. R. van Leeuwen

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The gut microbiome as a determinant of the diminished rotavirus and enteric vaccine immunogenicity seen in the developing world	01-01-2014	31-12-2017	V.C. Harris
Productive Employment in the Segmented Markets of Fresh Produce	01-09-2014	31-12-2017	Prof. dr. M.P. Pradhan
New challenge for HIV in Africa; exacerbated immune activation during antiretroviral treatment; biomarkers and health impact	01-01-2015	31-12-2017	Dr. R. Hamers
Rota-biome: the influence of the viral, fungal and bacterial microbiome on rotavirus vaccine immune responses. A retrospective study in Ghana.	01-10-2016	31-12-2017	V.C. Harris
NIH Fogarty Grant 2017	01-01-2017	31-12-2017	Dr. C. Hankins
Impact evaluation of Early Childhood Interventions	01-01-2017	31-12-2017	Prof. dr. M.P. Pradhan
11th INTEREST Workshop, Lilongwe, Malawi, 16-19 May 2017	01-01-2017	31-12-2017	Dr. C. Hankins
ITN Acquisition Grant	07-11-2017	31-12-2017	Dr. F. van Leth
Evaluation of the ORIO project 09/VN/04 Realisation of Two Water Supply Plants for Rural Areas in Ba Ria Vung Tau Province	01-10-2014	31-03-2018	Prof. dr. C.T.M. Elbers
Ethical Review Dilemma	19-09-2017	31-03-2018	Dr. A.H. van 't Hoog
Analyzing treatment effects in observational studies: comparison of methodologies	19-09-2017	31-03-2018	Dr. F. van Leth
Point-of-care diagnostics to Guide appropriate antimicrobial therapy of urinary tract infections in nursing homes	01-05-2017	30-04-2018	Dr. F. van Leth
SPARKS	01-07-2015	30-06-2018	Dr. C. Hankins
Principal Investigator - Quantitative Research KIAT Guru	10-11-2016	30-06-2018	Prof. dr. M.P. Pradhan
Improving TB case detection in a rural population by linkage to a HIV Test and Treat Programme	31-03-2017	30-06-2018	Dr. S. Hermans
Inequality in the Giants - Inequality in India: Dimensions and Trends	15-09-2017	30-11-2018	Prof. dr. P.F. Lanjouw

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HIV Transmission Elimination Amsterdam (H-TEAM) study	01-03-2014	31-12-2018	Prof. P. Reiss
Hepatitis C Bond: demonstrating feasibility of Hepatitis C treatment through a social impact bond structure in Cameroon	01-01-2016	31-12-2018	Dr. P. Ondoa
HealthTech Park	10-03-2016	09-03-2019	Mr. M. Heidenrijk
Developing and Testing a novel, low-cost, effective HOOKworm VACCine to Control Human Hookworm Infection in endemic countries	01-10-2013	31-03-2019	Dr. R. van Leeuwen
Women empowerment, social norms, and violence against women and girls	01-10-2016	31-03-2019	Dr. W. Janssens
South Sudan Nodding Syndrome Study programme: A study into the epidemiology, aetiology and outcome of nodding syndrome in South Sudan	01-01-2015	30-06-2019	Prof. dr. M. Boele van Hensbroek
ASPASIA premie - Dr. Constance Schultsz	01-08-2014	31-07-2019	Prof. dr. C. Schultsz
Amsterdam MSM Hepatitis C Free	01-12-2016	30-11-2019	Dr. M. van der Valk
Comorbidity and aging with HIV (AgeHIV Cohort Study)	01-01-2010	31-12-2019	Prof. dr. P. Reiss
1H4F – Integrated approach to prevention and control of Streptococcus suis infections in pig farming	01-01-2016	31-12-2019	Prof. dr. C. Schultsz
Transnational Research Projects on the Transmission Dynamics of Antibacterial Resistance	01-05-2017	30-04-2020	Prof. dr. C. Schultsz
Impact Evaluation of the MASSIF Investment in Business Partners International (BPI)	01-02-2014	31-05-2020	Prof. dr. C.T.M. Elbers
Trials of Excellence in Southern Africa II	01-09-2017	31-08-2020	Prof. dr. F.G.J. Cobelens
Eastern Africa Consortium for Clinical Research 2	01-09-2017	31-08-2020	Prof. dr. F.G.J. Cobelens
Sociology of Health and Aging	01-09-2012	30-09-2020	Prof. dr. C. Schultsz
European HIV Vaccine Alliance (EHVA): a EU platform for the discovery and evaluation of novel prophylactic and therapeutic vaccine candidates	01-01-2016	31-12-2020	Prof. dr. J.M. Prins

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Evaluation of the ORIO project ORIO09/GH/05 Ghana TB Case Detection	01-07-2016	31-12-2020	Dr. F. van Leth
Flexibele Oio - The impact of Host restriction of Escherichia coli on Transmission dynamics and spread of antimicrobial Resistance	01-09-2017	31-08-2021	Prof. dr. C. Schultsz
Program for Innovative Global Prevention of Streptococcus suis	01-06-2017	30-11-2021	Prof. dr. C. Schultsz
Evaluating How Teacher Reforms in Decentralised Indonesia can Promote Learning Gains	01-03-2017	28-02-2022	Prof. dr. M.P. Pradhan
Tanzania HIV Test & Treat in Shinyanga and Simiyu Regions	01-04-2017	31-03-2022	Prof. dr. T.F. Rinke de Wit
Impact Evaluation of the Facility for Sustainable Entrepreneurship and Food Security	29-11-2017	31-12-2023	Dr. Y. Schipper