

foundation
BOTNAR

Annual Report

2019



2019 at a glance

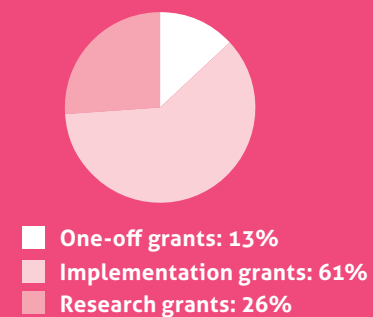
Total funding awarded

CHF
42.29_m

Grants awarded

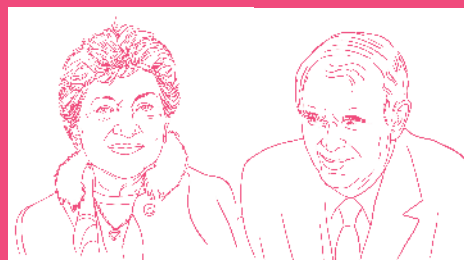
51

Funding according to grant type



Fondation Botnar

Fondation Botnar is a Swiss foundation based in Basel and established in 2003 to continue the philanthropic legacy of Marcela and Octav Botnar. The core purpose of the foundation is to improve the health and wellbeing of children and young people in fast-growing urban environments around the world. Fondation Botnar acts as a catalyst, connecting diverse partners and investing in scalable artificial intelligence (AI) and digital innovations.



Marcela and Octav Botnar

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Fostering the best possible future for young people



Thomas A. Gutzwiller

I am a firm believer in the combined potential of digital solutions and thriving local ecosystems to foster the best possible future for young people around the world. It has therefore been an honour to be appointed the Chair of the Fondation Botnar Board as of September 2019. On behalf of Fondation Botnar and its partners, I would like to thank Dr Peter Lenz for his 16 years of Board leadership, which culminated in the completion of our organisational setup at the end of 2019.

I have long been motivated by the ways in which philanthropy can lead and contribute to the transformation of local and global systems. In my first few months on the Fondation Botnar Board and working with the Management Office, I have been energised by the vision and dedication of the people who have worked to establish our organisation, bringing external experts on board, strengthening our governance and transparency, and taking a focused, sustainable approach to the investments we make and the partnerships we build.

Among the key developments for Fondation Botnar in 2019 were the appointment to the Board of Florian Schweitzer, a widely respected figure in tech finance and a champion of young tech entrepreneurs, and the establishment of an Expert Advisory Group consisting of members of our Board, Management Office, and experts from academia, business, and NGOs with expertise in our focus areas. This group, which replaces Fondation Botnar's former Scientific Commission, has provided substantial support in examining and advising us on funding applications to ensure we make high-impact investments to improve young people's health.

In addition, this past year saw the Management Office fully staffed by experienced team players with the networks and know-how that Fondation Botnar needs to implement its strategy in the areas of city engagement, AI and digital innovation, and meaningful youth participation.

I look forward to presiding over Fondation Botnar's next phase of development as it works to make the world's growing cities into healthier, more liveable places for young people to thrive in.

Thomas A. Gutzwiller
Fondation Botnar
Chair of the Board

Our milestones

Fondation Botnar reached important milestones in 2019, entered into new partnerships, and participated in key events.



New Board member
Florian Schweitzer joins the Board of Fondation Botnar as a business specialist focused on startups.



Partnership with Unisanté
Fondation Botnar announces a partnership with Unisanté to support the implementation of clinical algorithms to improve the health of febrile children and reduce unnecessary antibiotic prescriptions in Tanzania.



International Youth Day 2019
To learn more about what today's young people think about the intersection of technology with global health, Devex, working with Fondation Botnar and others, asks more than 1,500 young people for their views.



New Board Chair
Thomas A. Gutzwiller assumes office as Chair of Fondation Botnar. He succeeds Dr Peter Lenz who had helped establish and definitively shape Fondation Botnar since 2003.



Dialogue around health data governance
Fondation Botnar hosts sessions on health data governance at the Intelligent Health Summit in Basel and at the World Health Summit in Berlin.



Ada Health App in Swahili and Romanian
Ada Health, a free health guidance app, launches in Swahili, a language spoken by more than 100 million people across East Africa. The implementation of the app in Swahili is funded by Fondation Botnar, along with the Romanian version.



Specialists for Expert Commission
Fondation Botnar appoints five external specialists to its Expert Commission: Ramesh Raskar (AI & Digital Health), Max Price (Global Research and Solutions), Kelechi Vera Olawoyin (Changemakers & Capacity Building), Alice Gugelev (Entrepreneurship & Innovative Financing), and Michele Acuto (Cities).



Dialogue on AI in low- and middle-income countries
Together with partners, Fondation Botnar cohosts a dialogue event on Next-generation public health: AI and big data. More than 80 practitioners, academics, and policy-makers contribute to the insightful discussion in London.



Ramesh Raskar
Alice Gugelev
Max Price
Michele Acuto
Kelechi Vera Olawoyin
(left to right and top-down)

Partnership with Women Deliver
Fondation Botnar announces a partnership with Women Deliver, a global advocacy organisation that champions the health and rights of girls and women, to promote meaningful youth participation. At the Women Deliver Conference 2019 in Vancouver, Fondation Botnar organises sessions and workshops on youth leadership to harness digital innovation for universal health coverage by 2030.



Afya-Tek announced
Fondation Botnar, Apotheker Consultancy, D-tree International, and partners set up "Afya-Tek", a proof of concept for the integration of digital technologies into a new responsive, people-centred health initiative in the Kibaha district in Tanzania.



Briefing during UNGA
Fondation Botnar organises a high-level briefing during UNGA, New York, on the upcoming joint The Lancet & Financial Times Commission "Governing Health Futures 2030". The briefing is cohosted with the permanent missions to the United Nations of Switzerland, Germany, and India.



Healthy Cities for Adolescents program
Fondation Botnar announces its "Healthy Cities for Adolescents" program, an initiative to foster multi-stakeholder, community-led consortia to address the health and wellbeing of young people in cities around the world.

Dialogue on mental health
Fondation Botnar, Vitol Foundation, and the Belgian Embassy host a dialogue event in London, bringing global innovators together to share experiences of digital solutions to improve adolescent mental health.





Making cities more liveable

In 2050 nearly 70 per cent of the world's population will be urban dwellers. Amongst young people the share will be even higher. For them especially, Fondation Botnar aims to make cities more liveable and lovable places to grow and flourish in. We promote the wellbeing of young people by championing the use of artificial intelligence and digital technologies.

Expanding partnerships and programs

2019 saw Fondation Botnar step up its support of interdisciplinary collaboration and youth-centred design.



Dr Stefan German

Fondation Botnar promotes the wellbeing of young people by championing the use of artificial intelligence (AI) and digital technologies to make cities more liveable, lovable places for them to grow up and flourish in. Of the nearly 70 per cent of the world's people – and the even larger share of young people – whom the United Nations predicts will be urban dwellers in 2050, most will live in so-called "secondary", intermediate cities. We aim to maximise our impact by targeting these cities, which, by virtue of their smaller size, faster growth, leaner structures, and fewer stakeholders, are more amenable than metropolises to systemic, transformative change.

Emphasis on young people

In 2019 we strengthened our focus on adolescents and young adults, who often fall between the cracks of existing programs. We believe that AI and digital technologies have tremendous potential to transform their wellbeing for the better, for instance by

easing access to health education, diagnosis, and treatment, as well as for the worse, by contributing to such ills as cyberbullying, social isolation, and erosion of privacy. As digital natives, these young people are ideally suited to cocreating solutions that will effectively tap into the opportunities and address the risks that such technologies present. Their readiness to do so was on impressive display at several youth-centred events we supported in 2019, including workshops at the Africa Health Agenda International Conference Youth Pre-conference in Rwanda and the Women Deliver Conference in Vancouver, where their input and perspectives guided our youth engagement efforts on the role of digital technologies to advance universal health coverage (UHC).

Organisational setup complete

By the yearend, our organisational setup was complete, and our investments and partnerships were aligned with the new strategic direction that Fondation Botnar embarked upon after the establishment of our Management Office in 2017. Highlights included the welcoming of the new Chair of the Board, the inauguration of a new Expert Commission of external leading experts in our five core areas of interest – AI & Digital Health, Global Research & Solutions, Changemaker & Capacity Building, Entrepreneurship & Innovative Financing, and Cities – and the completion of our staff hiring, which has strengthened our policy expertise in data governance.

We have increased our commitment to international, interdisciplinary joint action on topics that impact on young people's wellbeing. In this vein I would highlight Fondation Botnar's support of two ventures that began operations in 2019. One is a



Fondation Botnar brings together diverse partners to leverage collective efforts. From left to right during the joint Lancet and FT Commission Governing Health Futures 2030: Prof. Ilona Kickbusch, Co-Chair of the commission (left), and Dr Stefan German (third from left) meeting Swiss delegates.

joint The Lancet & Financial Times Commission to discover ways in which digital health, AI, and other frontier technologies can benefit the health of young people. The other – the Botnar Research Centre for Child Health (BRCH) – aspires to be the leading institution in research on digital and next-generation solutions that show potential to improve the health and wellbeing of children and adolescents worldwide. Its four inaugural research projects were selected in 2019, with implementation to start in 2020.

technologies that improve global public health, and to formulate Fondation Botnar's position on data governance with a focus on young people's interests.

Another key milestone was the further development of activities in our first two selected cities – Tanga, Tanzania, and Cluj-Napoca, Romania – to cocreate the Fondation Botnar "OurCity" initiative, in which selected cities around the world implement coordinated, technology-supported city-wide programs that improve young people's lives. This gave us a prime opportunity to apply AI technology in the conceptualisation and planning of our own projects. Our team used an AI-enabled tool created by The Stakeholder Company to conduct stakeholder mapping and management in Cluj-Napoca. We also continued to digitise Fondation Botnar's office processes, for instance, by adopting tools to manage all contracting electronically, and began exploring the possibility of using AI to increase the efficiency and effectiveness of some core activities as well.

Key elements now in place

Fondation Botnar's day-to-day operations began with my appointment as CEO in early 2017. Three years on, we have grown into a 17-strong team of professionals committed to building partnerships and programs that put frontier technologies like AI to work for the young people at the heart of our mission. I am proud of our progress so far and excited about the opportunities ahead.

I am proud of our progress so far and excited about the opportunities ahead.

Fondation Botnar sees multilateral institutions such as the UN and WHO as best placed and equipped both to facilitate the scaleup of promising approaches that emerge from such work and to lead the development of a global framework for health data governance that takes account of ethical and human rights concerns. For this reason, in 2019 we began to support the WHO's new Department of Digital Health and Innovation, which aims to help countries accelerate the expansion of health coverage by leveraging

Transforming cities from within

In 2019 Fondation Botnar began putting its ideas to the test with the launch of five “Healthy Cities for Adolescents” projects and by selecting the first two cities to be part of the “OurCity” initiative.

Numbering 1.8 billion today, young people aged from 10 to 24 account for about one-quarter of the world’s population and a growing share of city inhabitants. Moreover, nearly all the projected growth in urban populations – set to reach 6.4 billion people by 2050 – will occur in cities in low- and middle-income countries. While cities present young people with tremendous economic, social, and educational opportunities, rapid urbanisation often brings with it unsafe infrastructure, inadequate services, and a higher risk of violence and injury, threatening their wellbeing and even their survival.

How can urban planning and development support the needs of the young people who will shape the future of their cities? How can these young city dwellers contribute to creating environments where they will thrive? What tools do we need to get there faster – and with a scalable impact?

Cities where young people matter

For Fondation Botnar, the place to look for answers to these questions is where innovation, collaboration, and digital technology meet. To provide healthy, safe, and dynamic environments for future generations, we unite key players with young people, working collaboratively with them on policies and initiatives that transform fast-growing cities, and investing in the skills development of urban youth.

Our “Healthy Cities for Adolescents” program, a multi-year initiative developed with the International Society for Urban Health, takes just such a multipronged approach. In 2019 we chose five projects that aim to work hands-on alongside local partners to identify obstacles to the health, safety, and overall wellbeing of adolescents in the respective cities and to devise ways to address them. The projects employ different designs and tackle different issues – from sexual and reproductive health to road safety – but they all provide space for young people to participate, integrate technology where appropriate, leverage formal and informal partnerships, and have committed to monitoring and evaluating results.



The “Healthy Cities for Adolescents” program strives to transform cities into healthy, liveable, and sustainable places where adolescents are empowered to contribute as thriving citizens. Initial projects include interventions in Cali, Colombia.

In 2019 we were pleased to announce the kickoff of five of these projects: one each in Ghana and Senegal, and three in Colombia. Since then, the teams have begun adapting their activities in light of on-the-ground realities, as well as feedback from their partners and communities – including adolescents themselves. In some cases, this has led them to expand partnerships to strengthen core areas. In others, it has spurred them to sharpen their focus to increase impact.

Prioritising the risks adolescents face

Managed by Nutrition International, “Fort pour le futur” is a multistakeholder model for supporting adolescent nutrition, and sexual and reproductive health empowerment in Thiès, Senegal. It plans to build the capacity of local civil society actors to advocate and participate in the design of interventions and policies and to hold people of influence accountable for results. Taking a more targeted approach, “Innovative Adolescent Health Interventions” is identifying gaps and collaborating in the provision of sexual reproductive health services for adolescents and young people in Tamale, Ghana. Led by the Regional Institute of Population Studies at the University of Ghana, the project aims to influence municipal health planning.

The three “Healthy Cities for Adolescents” projects in Colombia are also diverse. Impact Hub’s “Gambetiando” initiative engages young people in disadvantaged neighbourhoods of Medellín in football activities whilst also fostering their socioemotional skills development, values formation, and entrepreneurialism through activities at the Impact Hub. The local organisation Coschool in Cali, in contrast, launched the “Comvos” project to improve adolescents’ wellbeing by creating, executing, and scaling up a model that equips them to tell the story of their own experiences of living in the city, for instance by making a short film about how they get to school. Coschool will scale the initiative by training city officials and school leaders to replicate the methodology through an e-learning platform and local networks.

Finally, Fundacion Despacio’s “Vivo Mi Calle” project sees the roadways in Cali not only as a potential threat to young people’s safety due to the risk of traffic accidents, but also as an opportunity to promote healthy behaviours such as walking and biking. It plans to design safe intersections, increase road safety, and strengthen municipal mobility initiatives, as well as increasing knowledge and data collection around safe, sustainable mobility in Cali.



Numbering 1.8 billion today, young people aged from 10 to 24 account for about one-quarter of the world’s population.

In 2020 all five projects will continue with their implementation and be joined by two more in India and Vietnam, respectively. Consistent with Fondation Botnar's commitment to enabling and promoting collaborative learning, a knowledge management platform will be established to deepen learning and best-practice sharing among all the partners as the consortium develops.

As part of our global city engagement strategy, Fondation Botnar plans to establish several cities under the "OurCity" initiative to help cities around the world implement coordinated programs and leverage AI and digital technologies to transform themselves into places where young people's voices and needs are heard and prioritised. A defining characteristic is the involvement of multiple stakeholders, including young people, local authorities, businesses, and civil society organisations.

After selecting Tanga in Tanzania as the first "OurCity" city, in 2019 we continued to work together with the local authorities to create the enabling environment for implementation in 2020. In 2019 we also selected our second city, Cluj-Napoca (Romania), where implementation will begin in 2020, with hands-on involvement from the Fondation Botnar team in designing a city-wide systemic approach. Over the next 10 years we plan to support the establishment of around six to seven cities around the world as part of the "OurCity" initiative.



Jhoiner Andrés Quiñones, age 10, participant in "Healthy Cities for Adolescents" initiative "Vivo Mi Calle" in Cali, Colombia

"What I like most about Cali is the green areas, like the parks and the football field. I feel unsafe when cars go too fast or when motorcycles use the pavements and could run us over."

Fondation Botnar's "Healthy Cities for Adolescents" initiative started supporting projects in Ghana, Senegal, and Colombia in 2019. One of the projects in Colombia is based in Medellín (pictured to the right).



Making AI and digital work for the public good

Aligning healthcare capacity with need requires dramatic, scalable change that Fondation Botnar believes can be achieved only by integrating artificial intelligence and digital technology into health and wellbeing at every level.

The third Sustainable Development Goal (SDG) for 2030 is to ensure healthy lives and to promote wellbeing for people of all ages. Fondation Botnar wants to help realise this goal by supporting efforts to hold the global community to its promise of bringing quality healthcare to the billions who still lack it. With the global population set to reach 8.5 billion by 2030, tackling the shortage of health workers who can provide that care – a gap expected to grow to 18 million, with the proportionally largest shortfalls in Africa and Asia – will be especially daunting.



Prof. Ilona Kickbusch, Co-Chair of The Lancet & FT Commission: Governing Health Futures 2030

"When creating innovative solutions to health problems, we must make sure the benefits can be experienced by everyone. Meaningful youth engagement must therefore be integrated into long-term strategies."

Opening doors with digital

Artificial intelligence (AI) and digital technology can help fill that void and make healthcare more predictive of, and responsive to, young people's specific needs by harnessing big data and clearing barriers to equitable access. Data-informed insights can guide the efforts of governments, local authorities, and healthcare providers to adapt to changing demographics and health needs, from predicting diseases and outbreaks to improving overall quality of life. For the good of individuals as well as societies, data collection and use must be approached with caution and sensitivity to the concerns of digital natives and older generations alike.

Research activities in Tanzania and Switzerland

Digital technology harbours great potential too as a means of democratising access to health-related knowledge and advice. In 2019 Fondation Botnar began supporting researchers from Unisanté, the newly created Swiss-based University Centre for Primary Care and Public Health, along with the Swiss Tropical and Public Health Institute, and two research institutes in Tanzania: Ifakara Health Institute (IHI) and the National Institute for Medical Research (NIMR), who have developed mobile-based algorithms that connect to dynamic clinical and point-of-care tests to guide and train health workers in the management of sick children and adolescents. The project could avoid millions of clinical failures and tens of millions of unnecessary prescriptions of antibiotics every year. To be deployed over five years in 70 health facilities across Tanzania,



Human-centred, integrated technology services that are both sustainable and scalable can benefit young people world-wide.

the team's DYNAMIC platform presents an opportunity to validate new diagnostics from other initiatives, which could strengthen the uptake and integration of future digital tools in Africa and beyond.

Integrating digital technologies into a new health initiative

In another Tanzania-focused initiative, we and our partners began setting up "Afya-Tek", a demonstration project that aims to integrate digital technologies into a new health initiative in Kibaha, capital of the Pwani region. "Afya-Tek" works to link community health workers, health facilities, and private drug dispensaries to improve decision-making and quality of care along the continuum of care, helping to ensure prompt access and reduce unnecessary referrals. The initiative is the first of its kind to use emerging digital tools to better connect health system actors, including predictive analytics and biometric identification. It will also assess the feasibility of integrating AI-enabled health tools.

With Fondation Botnar's support, in 2019 Ada Health – an AI-based app that gives users health information and advice based on an assessment of their symptoms – was made available in Swahili, and adapted to the linguistic, cultural, and medical context in the East Africa region. The app is now thus accessible to about 100 million Swahili speakers, helping to significantly improve access to quality health information and advice, particularly for young people and families. Fondation Botnar also funded the app's adaptation to Romania and is supporting its validation.

Tapping into opportunities with a close eye on risks

While digital technologies are already changing how we approach health promotion and the design of health systems, governance models have not kept pace with this stream of innovation. Fondation Botnar is concerned that the lack of clarity and guidance around data

ownership and privacy limit the potential of innovative technologies to support progress towards achieving the SDGs, particularly quality healthcare for all by 2030. We also aim to ensure that digital technologies aid rather than hinder health equity, accelerating access to health promotion and democratising care and coverage.

In response to these challenges, Fondation Botnar is supporting a joint The Lancet & Financial Times Commission called "Governing Health Futures 2030: Growing up in a digital world", which will examine the convergence of digital health, AI, and other frontier technologies with a focus on how they can benefit the health of children and young people.

Recognising the urgency of catalysing cross-sector action around the shared goal of leveraging digital technology, in 2019 we also convened a new "Digital Transformation for Universal Health Coverage 2030" coalition, with partners including Partnership for Maternal, Newborn & Child Health (PMNCH), PATH, and Women Deliver, that will cocreate a series of campaigns and advocacy initiatives for implementation by 2030.

Dialogue event on adolescent mental health

In October 2019, Fondation Botnar hosted an event in London that brought together leading figures who run digital health programs addressing the relationship between digital technologies and adolescent mental health. Many of the 10 to 20 per cent of young people experiencing mental health conditions today remain untreated, a gap that is particularly large in low- and middle-income countries. The diverse panellists shared insights into the potential for digital innovation to achieve equitable progress, from peer- and community-led support forums to digitised cognitive behavioural therapy, as well as the challenges it presents.

Engaging young people for positive change

In 2019, Fondation Botnar started teaming up with experienced changemakers not only to create spaces in which young people can express their needs and ideas but also to get the world to listen.

By 2030 there will be 2 billion young people in the world, making up an increasingly large proportion of the global population. With only 1.9 per cent of legislators aged below 30 and less than 2 per cent of global health funding allocated to their specific health issues however, young people continue to lack a voice and representation in policymaking and programs.

Adolescents are vulnerable

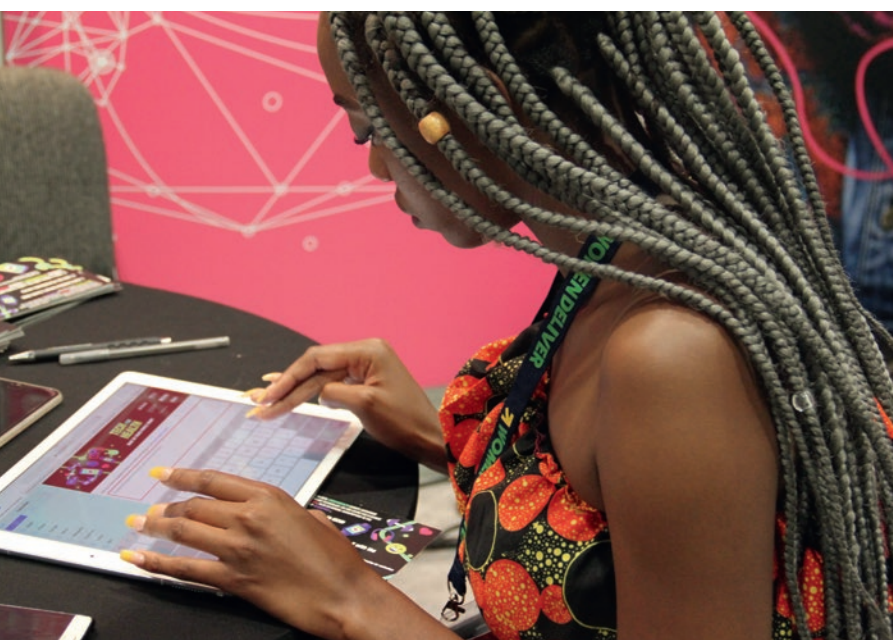
Though usually seen as a healthy period of life, adolescence sets the stage for health risks in the long term. Relative to young children, adolescents are more likely

to try harmful substances, to be exposed to violence, to be involved in road traffic accidents, to experience anxiety, eating disorders and addictions, or to develop sexual and reproductive health issues. Their degree of vulnerability depends strongly on where they grow up. Those in sub-Saharan Africa, for example, account for about 37 per cent of all new global HIV infections, and 23 million teenage girls in emerging economies lack access to modern contraception.

Without proper support, these issues are likely to lead to lasting health problems and disadvantages in life. Engaging with today's young people to address them is critical, as they are well placed not only to understand their own needs but, as digital natives, also to use AI and digital technologies to take health improvement efforts into their own hands. Technology can and does empower them – whether it be to educate themselves about sexual health, to increase their physical fitness, or to access mental health support. Although there are challenges that warrant attention, such as inclusion and data privacy concerns, we must recognise the benefits of investing in such innovations and platforms.

Encouraging youth participation

Encouraging youth participation requires the right listening and feedback tools. At Fondation Botnar we are strongly committed to tackling the prevailing underinvestment in youth participation through our partnerships. One effort to promote meaningful youth engagement in gender equality efforts and initiatives that we launched in 2019 is a partnership with Women Deliver, a global advocacy organisation that champions the health and rights of girls and women. Our



Youth consultation on technology for health at Women Deliver 2019.



Fondation Botnar, PATH, Women Deliver, and the Partnership for Maternal and Child Health, brought together young people at the 2019 Women Deliver Conference to discuss the opportunities and challenges of technology for health.

support will fund the expansion of the Women Deliver Young Leaders Program, which equips outstanding young changemakers with the knowledge, skills, and resources to amplify their influence on a global scale. Women Deliver boasts 700 Young Leaders and alumni from 138 countries who are advancing gender equality in their communities, in their countries, and around the globe.

New opportunities to be heard

Together with several partners from the "Digital Transformation for Universal Health Coverage 2030" coalition (see page 15), Fondation Botnar conducted a global survey in 2019 that gives a snapshot of young people's perspectives on the role of technology in accelerating progress on their health. When it comes to integrating technology into health practices, respondents' key concerns included the high costs of care as a barrier to access, anxieties around personal data security, and a desire to be involved in key decision-making.

To address the lack of opportunities for young people to provide their insights on how we can ensure everyone has access to quality healthcare, we and our coalition partners are also setting up a youth council called "Young Experts: Tech 4 Health" to give young people a platform to shape the agenda around digital innovation for greater healthcare access. To be appointed from January 2020 until September 2021, the council will be comprised of twelve members representing each of the WHO's six regions and will be hosted by Plan International Canada.

In 2020 and beyond, Fondation Botnar looks forward to engaging young people more extensively in our discussions and the development of initiatives to promote their health and wellbeing across our areas of work.



Tanisha Chadha, Manager, at CREA and Women Deliver Young Leader

"Without technology, we cannot accelerate progress for the key health challenges young people face today, from sexual health issues to mental wellbeing. It has never been more important to find creative and dynamic ways to reach them. Meaningful youth engagement must also recognise and integrate vulnerable young people, including those living in poverty, with a disability, as well as gender and sexual minorities, among others – to ensure that no young people are left out of long-term strategies."

Harnessing benefits, heeding risks

Digitalisation offers enormous opportunities to improve the wellbeing of young people worldwide. However, at the same time, technologies like AI carry the risk of the misuse of personal data. Health data governance is therefore a key issue, says Ulla Jasper, Policy Officer at Fondation Botnar.

Fondation Botnar believes that data-driven digitalisation will be integral to transforming healthcare systems, health services, and medical practices for the good of young people everywhere. At the same time, we are keenly aware that artificial intelligence (AI) and other frontier technologies harbour potential to undermine privacy and autonomy and to introduce new forms of healthcare inequality and bias. In 2019 we began defining our views on how to ensure that digital health technologies evolve within a global governance framework guided by ethics and human rights – a prerequisite for AI and digital solutions to live up to their promise in every area of our work.

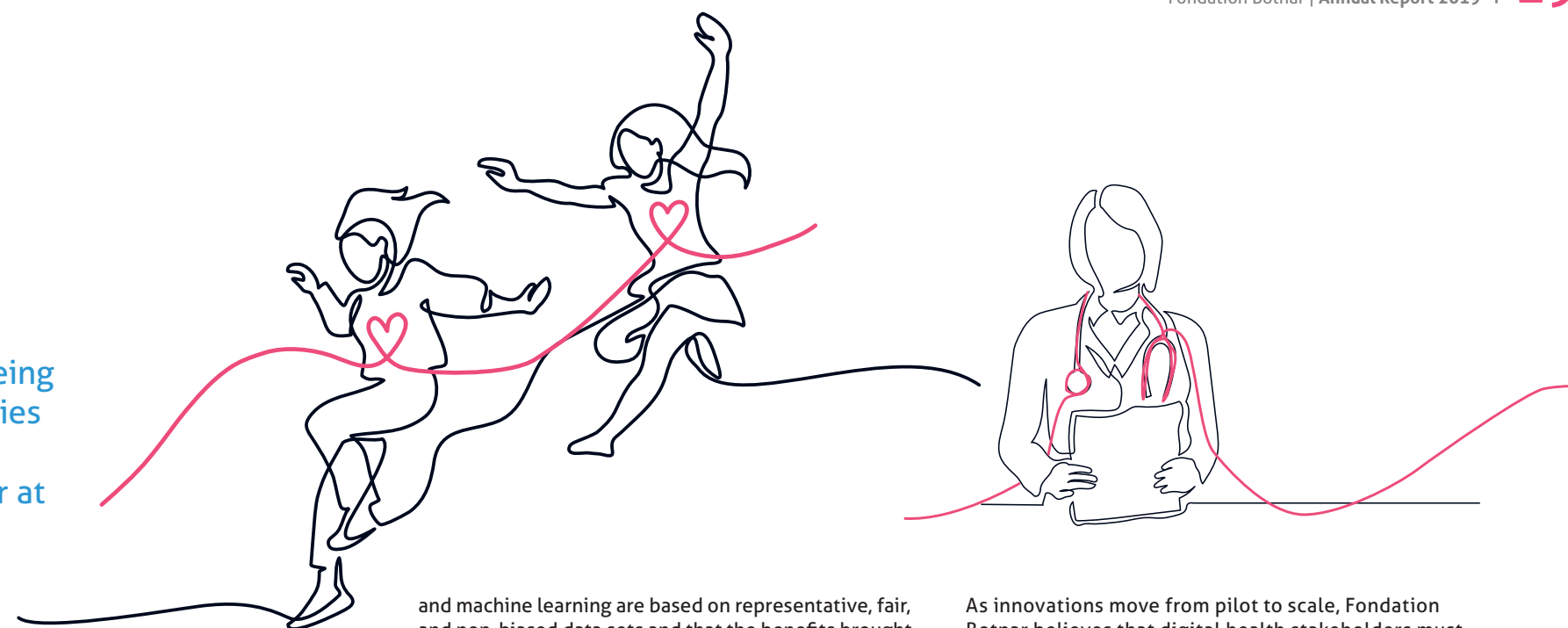
Not only have new possibilities for diagnostic, preventative treatment, and rehabilitation improved healthcare systems and services, but as internet-connected devices continue to surge and develop exponentially along with “big data”, they are becoming key drivers of innovation, research, and development. This revolution is well underway in high-income countries and is having a growing influence on healthcare provision in low- and middle-income countries, brightening the prospects for universal health coverage as well.

Yet a lack of comprehensive political, legal, and regulatory frameworks is leaving digital health research and development to unfold in a largely autonomous landscape where health data is almost continuously extracted and appropriated from individuals and even societies. The most vulnerable in society are increasingly subject to demands and forms of intrusion without accountability, with citizens’ information becoming ever more accessible to private companies and governments, while the benefits are rarely shared.

Preventing discrimination and bias

People may not know how their data is being collected, processed, or repurposed, or that the results could potentially discriminate against the individuals and communities concerned. A lack of transparency in the creation and deployment of algorithms can result in inbuilt discrimination and bias on the basis of characteristics such as gender, health, or economic status. In fact, bias may be introduced by the sheer fact that much data is generated in high-income settings, creating skewed or inadequate datasets. People also may not understand that technologies they rely on, even outside the medical realm, may be used to predict, detect, or influence health-relevant behaviours.

While digital technology and big data are central to Fondation Botnar’s mission and activities, we realise that many of these problems are at their root socio-political. To keep health inequalities from growing even larger, technology developers need to guarantee that the algorithms embodying the core of AI



and machine learning are based on representative, fair, and non-biased data sets and that the benefits brought about by the new technologies are shared fairly. The vast divide in internet connectivity that still prevails in many resource-poor settings must also be closed.

Health data to serve the global public good

Fondation Botnar advocates the establishment of national and global governance mechanisms to balance ethical concerns and rights with the opportunities offered by big data in health. For example, as CEO Stefan Germann explained on the Power Stage at Women Deliver 2019, we want to see health data used to serve the global public good. This means that everyone can, and should, benefit from the promises of digitalisation and AI, without any infringement of human rights. We are also convinced that organisations such as the WHO, the UN with its High-level Panel on Digital Cooperation, and national governments must lead the development of policy and initiatives that help to balance healthcare digitalisation with key requirements such as accountability, quality, security, and access. Through our partnership with the International Digital Health & Artificial Intelligence Research Collaborative (I-DAIR), we are already supporting research to identify gaps in existing policy and to gather evidence that can inform the necessary adaptations and reforms (see box).

Reflecting our commitment to enable and promote collaborative learning about issues that impact young people’s lives, Fondation Botnar facilitates and contributes to discussions about the guidelines, regulations, and laws that may be needed to manage the risks of digitalisation and to ensure that the right stakeholders are at the table. In 2019, for example, we set up the youth council “Young Experts: Tech 4 Health” (see page 17), a platform where young people can contribute to public dialogue about topics including health data governance. We also advocate scaled-up, systemic approaches that are tailored to existing infrastructure and to the needs of local populations and healthcare workers, rather than more vertical, top-down projects and pilots.

As innovations move from pilot to scale, Fondation Botnar believes that digital health stakeholders must work to reduce the fragmentation of data, collaborate more to avoid the unnecessary duplication of technological capabilities, and improve the sharing of valuable, anonymised data that might benefit the public good. Here, as throughout our work, we urge giving a prominent role to the young people who, as the next generation of digital natives, have an unprecedented opportunity to participate in shaping a more equitable digital future.

International Digital Health & AI Research Collaborative (I-DAIR)

The International Digital Health & Artificial Intelligence Research Collaborative (I-DAIR) seeks to advance the UN’s High-level Panel on Digital Cooperation’s recommendations related to digital health, as well as targets set at the WHO on universal and quality health coverage. Its proposed pathway for effecting change is to cocreate with diverse stakeholders a neutral international platform that promotes responsible, inclusive AI research and digital technology development for health, for instance by moving towards health data as a global public good, addressing key governance, benchmarking, promoting responsible ecosystems, bridging different research and practice communities, building capacity, and addressing collaboration challenges such as data interoperability. The incubation effort based at the Graduate Institute of International and Development Studies, was initially convened by Fondation Botnar and is now also supported by Geneva Science & Diplomacy Anticipator Foundation (GESDA).

Governance

Fondation Botnar is a foundation established in Basel in 2003 to carry on the philanthropic work of the Botnar family. It is a member of SwissFoundations, an umbrella organisation of charitable foundations in Switzerland, and applies the guidelines and recommendations of the Swiss Foundation Code (2015). The Swiss Foundation Code originated from the foundation sector as a self-regulatory and application-oriented tool to provide a framework for good foundation governance. It defines the normative orientation for all foundation activity according to three principles.

- * The foundation shall implement its purpose in the most efficient, effective, and timely manner.
- * Through appropriate organisational measures, the foundation shall ensure a balance between leadership and control for all important decisions and processes.
- * The foundation shall maintain the greatest possible transparency in terms of its principles, goals, structures, and activities.

Foundation Board

The Board of Fondation Botnar comprises at least five members. Board members are elected for three-year terms and can be reelected (as of 2015) for a maximum of nine years' service on the Foundation Board.

Accounting

Accounting is based on the Swiss GAAP FER 21 standard for charitable social non-profit organisations in accordance with the provisions of Swiss law, in particular Articles 957 to 962 of the Swiss Code of Obligations on commercial bookkeeping and accounting. The annual financial statements of the foundation present a true and fair view of the foundation's assets, as well as its financial and earnings position.

Funds are recognised when the Foundation Board decides on the expenditure. In each case, the entire amount is recognised as an expense. Future payment obligations are recognised as current or non-current liabilities. Payments to funding recipients are recognised as a reduction in liabilities.

Audit and supervision

Wirtschafts-Treuhand AG, Arnold Böcklin-Strasse 25, 4051 Basel, Switzerland, is appointed as Fondation Botnar's statutory auditor. It conducted the audit of the foundation's 2019 annual financial statements and recommends their approval. The supervisory authority of Fondation Botnar is the Federal Department of Home Affairs, Foundation Supervision, Bern, Switzerland.

Asset management

The assets of Fondation Botnar are invested in accordance with the guidelines of sustainable institutional asset management. These are published on our website in the form of investment beliefs and principles. Fondation Botnar's asset management strategy was reviewed in 2018 by external specialists, who confirmed that the investment structure and risk profile of the investments were suitable for the goals of the foundation.

Foundation team

Board

Otto Bruderer, finance expert (since 2004)
Flavia Bustreo, children's health and rights expert (since 2018)
Thomas A. Gutzwiller, Chair (since 20 September 2019)
Martin Lenz, legal expert (since 2004)
Peter Lenz, Chair (until 19 September 2019). Honorary Founding President (since 19 September 2019)
Amalie Molhant Proost, Botnar family representative (since 2018)
Elsbeth Müller, child development expert (since 2015)
Florian Schweitzer, business and startup expert (since 22 February 2019)
Marcel Tanner, research expert (since 2018)

External Experts on Expert Commission

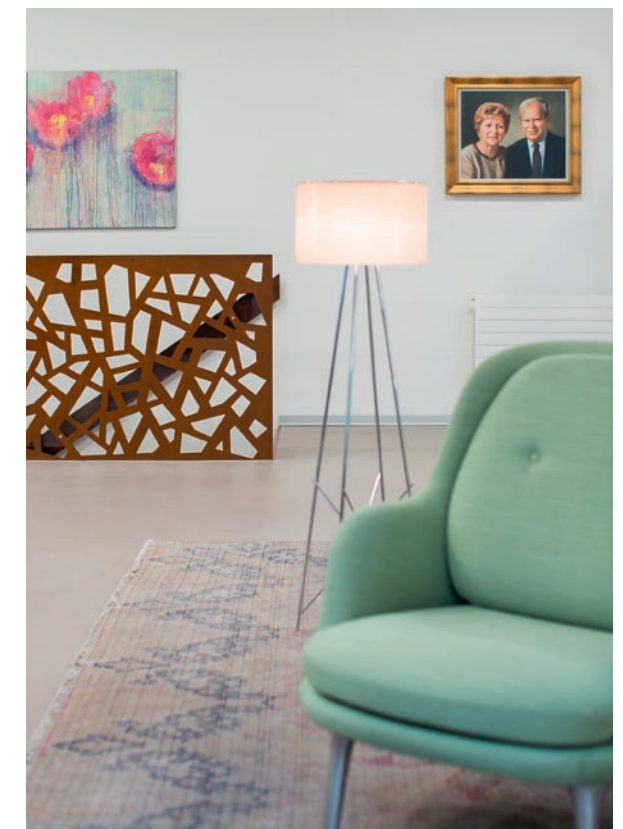
Michele Acuto, cities expert
Alice Gugelev, entrepreneurship & innovative financing expert
Kelechi Vera Olawoyin, changemakers & capacity building expert
Max Price, global research & solutions expert
Ramesh Raskar, AI & digital health expert

Investment Commission

Otto Bruderer, Chair
Urs Ernst
Susanne Haury von Siebenthal, Deputy Chair

Management Office

Heike Albrecht, Risk & Compliance Manager
Aline Cossy-Gantner, Chief Learning Officer
Stefan Germann, Chief Executive Officer
Susanna Hausmann-Muela, Chief Program Officer
Thuy Anh Huynh-Le, Grants Administrator
Ursula Jasper, Policy Officer
Siddhartha Jha, AI/Digital Program Manager
Kiara Marvuglio, Engagement & Communications Manager
Szandra McCrory, Executive Assistant
Eva Moldovanyi, Grant Manager
Zur Oren, Learning Hub & Partnerships Program Manager
Beatrice Schibler, Research Project Manager
Karin Schumacher, Chief Operating Officer
Sushant Sharma, Chief Investment Officer
David Suhr, Strategic Learning & Evaluation Manager
Antoine Veyrassat, Senior Portfolio Manager
Bea Weibel, Office Administrator



Financial statements 2019

BALANCE SHEET	31.12.19 mCHF	31.12.18 mCHF
ASSETS		
Current assets		
Cash	92.65	139.77
Other current receivables	15.08	16.62
Non-current assets		
Securities	3,678.62	3,179.97
Furniture, office equipment	0.37	0.46
Property	5.28	5.20
TOTAL ASSETS	3,792.00	3,342.02
LIABILITIES		
Current liabilities from grants	47.95	32.91
Other current liabilities	2.49	2.01
Non-current liabilities from grants	113.10	126.23
Foundation capital	3,628.47	3,180.87
TOTAL LIABILITIES	3,792.00	3,342.02

INCOME STATEMENT	1.1. - 31.12.19 mCHF	1.1. - 31.12.18 mCHF
Financial income		
Securities income incl. fees	498.89	-168.65
Other income	-	-0.18
NET INCOME	498.89	-168.83
Direct project costs according to the foundation's deed		
Grant contributions	-42.29	-157.48
GROSS PROFIT	456.60	-326.31
Operational expenses		
Personnel expenses incl. remuneration	-4.06	-2.83
Other operational expenses	-4.74	-4.59
Depreciation and amortisation	-0.21	-0.26
NET PROFIT/LOSS	447.59	-333.98

Grants awarded

In 2019, the Foundation Board approved the following projects and programs with a total funding amount of CHF 42.29m.

Implementation grants	Organisation	Countries	Amount	Timeline
Botnar Child Road Safety Challenge (BCRSC) – Phase 2	Global Road Safety Partnership (GRSP)	India, Romania, Tanzania, Vietnam, Mexico, South Africa, Tunisia	CHF 6,010,000	2019 - 2022
Community Health Academy (Health System Leaders Development)	Last Mile Health	Global / Liberia, United States of America	USD 4,000,000	2019 - 2022
Strategic partnership with WHO New Digital Health and Innovation & Data Analytics units	World Health Organization (WHO)	Global, Switzerland	USD 3,949,536	2019 - 2021
Supporting innovative and meaningful global youth leadership with the Women Deliver Young Leaders program	Women Deliver Inc.	Global	USD 2,500,000	2019 - 2022
The Lancet & FT Commission: Governing Health Futures 2030: growing up in a digital world	Graduate Institute of International and Development Studies	Global	CHF 2,001,880	2019 - 2021
Developing innovation and entrepreneurship ecosystems in Tanzania	Ifakara Health Institute (IHI)	Tanzania	USD 1,997,696	2019 - 2012
Career development fellowships EDCTP – Fondation Botnar	European & Developing Countries Clinical Trials Partnership (EDCTP)	Sub-Saharan Africa	EUR 1,615,000	2019 - 2024
Business for health solutions	Global Development Incubator, Inc.	Kenya, Tanzania	USD 1,500,000	2019 - 2022
Strategic partnership with UNICEF – designing an African youth digital innovation platform	United Nations Children's Fund (UNICEF)	Pan-Africa	USD 907,200	2019 - 2021
Strategic partnership with WHO New Digital Health & Data Analytics Units (initial funding)	World Health Organization (WHO)	Global, Switzerland	USD 300,000	2019 - 2020
Enabling environment for ECD investment	Interteam	Namibia	USD 300,000	2019
MagicHELP: the Cluj-Napoca helping network. Bringing communities together around children with serious conditions	MagiCAMP Association	Romania	CHF 299,000	2019 - 2021
EduAlert – preventing school dropout with artificial intelligence	Romanian Health Observatory	Romania	EUR 208,800	2019 - 2021
Wello.AI – School of Health for Cluj-Napoca	Wello Association	Romania	EUR 194,630	2019 - 2021

Research grants	Organisation	Countries	Amount	Timeline
Addressing the wellbeing and security needs of urban children and adolescents in Indonesia in the digital era	Danish Institute against Torture (DIGNITY)	Indonesia	CHF 2,000,000	2019 - 2024
Empowering adolescents to lead change using health data	World Health Organization (WHO)	Ghana, India, Morocco, Jamaica	USD 1,730,000	2019 - 2024
Delivering an integrated decision analysis, monitoring & evaluation infrastructure to support more effective and responsive child and youth mental systems	Computer Simulation & Advanced Research Technologies (CSART)	Colombia	CHF 1,404,564	2019 - 2022
Nudging for good: real-time AI-driven diagnostics and behaviour change to improve adolescents' diets and nutrition	International Food Policy Research Institute (IFPRI)	Ghana, Vietnam	USD 1,125,950	2019 - 2021
Using technology to facilitate international research on diagnosis and treatment of borderline personality disorder in adolescence including low- and middle-income countries	Universitäre Psychiatrischen Kliniken (UPK) Basel	Tanzania, Chile, Kosovo, Switzerland	CHF 748,751	2019 - 2022
Interfacing technology & adolescent women nutrition: occupational determinants and local solutions	The New York Academy of Sciences	Colombia, Morocco, United States of America	USD 715,785	2019 - 2021
Stopping AIDS and HIV transmission in children and adolescents on ART in sub-Saharan Africa: a randomised trial using molecular diagnostics and eHealth (the GIVE – MOVE project)	University Hospital Basel	Tanzania, Lesotho, Switzerland, Tanzania	CHF 700,000	2019 - 2022
Effect of the natural sweeteners erythritol and xylitol on gut microbiota, glucose Metabolism and gastrointestinal symptoms	St. Claraspital Research Ltd (at St. Claraspital Basel)	Switzerland, Russia, Norway	CHF 527,065	2019 - 2022
PASSION Project: paediatrics in Africa – enabling wireless diagnosis for common skin diseases	University of Basel	Sierra Leone, Tanzania	CHF 523,000	2019 - 2022
RESort: Reliable Epileptic Seizure Monitoring in Real Time	École Polytechnique Fédérale de Lausanne (EPFL)	Switzerland, Iran	CHF 473,852	2019 - 2023
International Digital Health & AI Research Collaborative (I-DAIR)	Graduate Institute of International and Development Studies	Switzerland	CHF 335,000	2019 - 2020
Adolescent Violence and Injury Detection System (AVID)	Johns Hopkins Bloomberg School of Public Health	India, Vietnam	USD 300,000	2019 - 2021
Reaching adolescents with health services: a multi-country study of adolescent health checkups in low- and middle-income countries	World Health Organization (WHO)	Ghana, Tanzania, Zimbabwe	USD 299,770	2019 - 2020
Smartphone-based keratoconus screening	University of Zurich	Switzerland	CHF 238,200	2019 - 2024


One-off grants	Organisation	Countries	Amount	Timeline
Child social & financial education – innovative sustainable scaling	Aflatoun International	Global	EUR 266,800	2019 - 2021
Rehabilitation 2.0 - digital technologies serving quality, transition, and continuum of rehabilitation care, health, participation, and wellbeing of children with disabilities	Humanity & Inclusion / Handicap International	Vietnam	USD 300,031	2019 - 2022
Child-Adolescent Health PhD Fellowship program (CAH)	Swiss School of Public Health (SSPH+)	Nigeria, Peru, Sierra Leone, Somalia, Switzerland, Uganda	CHF 300,000	2019 - 2023
Let's recycle together (reciclamos juntos)	Julius Baer Foundation	Colombia	CHF 300,000	2019 - 2023
Makers and coders: public schools coding and making communities	Tanzania Bora Initiative	Tanzania	CHF 300,000	2019 - 2020
Digitising the Research Fairness Initiative (RFI)	COHRED	Brazil, South Africa, Switzerland	CHF 300,000	2019 - 2020
Samasource digital literacy and online work hubs – phase I	Samasource	Tanzania	USD 297,545	2019 - 2020
Analysing, mapping and engaging Swiss stakeholders of digital components in the Swiss Health Foreign Policy (GAP)	foraus – Swiss Forum on Foreign Policy	Switzerland	CHF 299,096	2019 - 2020
Cocreation of learning hub Cluj-Napoca to Improve wellbeing of young people and build local capabilities	SDG CoLab	Romania	CHF 298,200	2019 - 2021
Smartphone-based anthropometry technology	Wadhwani Institute for Artificial Intelligence	India	USD 292,215	2019 - 2021
DayOne acceleration program 2019/2020	BaselArea.swiss	Switzerland	CHF 290,000	2019 - 2020
Birth and health registration initiative	Plan International Switzerland	Senegal	CHF 280,000	2019 - 2022
Tanzanian-Swiss innovation and entrepreneurship initiative	EssentialMed Foundation	Tanzania	CHF 280,000	2019 - 2020
Focus group on artificial intelligence for health	International Telecommunication Union (ITU)	Global	CHF 274,125	2019 - 2021
Science Technology Engineering and Mathematics Park – STEM Park Tanga City	ProjeKt Inspire	Tanzania	CHF 257,455	2019 - 2021
Development of a snake bite app for the Indian subcontinent	Swiss Tropical and Public Health Institute (Swiss TPH)	India	CHF 218,000	2019 - 2021
Developmental science of adolescent growth and nutrition: a Lancet series	Murdoch Children's Research Institute (MCRI)	Global	EUR 187,000	2019 - 2021
Interdisciplinary study on young people's needs and opportunities assessment in Cluj-Napoca, Romania	Babes-Bolyai University	Romania	CHF 189,332	2019 - 2020
Protecting our future: promoting the health and wellbeing of adolescents in the Caribbean	Pan American Health Organization (PAHO)	Caribbean	USD 165,000	2019 - 2020
Lecturers without borders: distributed network of travelling scientists for free outreach lectures in low- and middle-income countries	Centre de Recherches Interdisciplinaires – CRI Paris	India, Indonesia, Senegal, Tanzania, France, Germany, Nepal	CHF 140,000	2019 - 2023
CAS global social entrepreneurship 2020/2021 – pioneer stipends	Center for Philanthropy Studies (CEPS)	Switzerland	CHF 60,000	2019 - 2021
Extension – research project "Mechanistic insight into the pathophysiological mechanisms of congenital myopathies"	University Hospital Basel	Switzerland	CHF 57,865	2019
Cycling for children	Committee for UNICEF Switzerland & Liechtenstein	Switzerland	CHF 16,000	2019


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