



Research Fund

Supporting Science to Protect What Matters

The AXA Research Fund

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Foreword



Marie Bogataj
Head of the AXA
Research Fund and
Group Foresight

Insurance and science are both inherently based on a long-term vision and a future looking approach. As a business based on future events and long-term assets, the insurance industry relies on the understanding and modelling of potential events yet to come. Academic research provides us with the capacity for anticipation, adaptation, innovation, and solution building. To navigate increasingly complex and inter-twined environments and novel risks requires the development and support of the best scientific knowledge and its dissemination towards informing decision-making and the public debate.

The AXA Research Fund was launched to this end, 15 years ago as a scientific philanthropy initiative aimed at better understanding major risks through science and informing decision-making. Over the years, the Fund has grown into one of the largest corporate initiatives to support science independently, with 250M€ committed to its philanthropic mission of supporting research in the areas of health, climate change, the environment, and socio-economic issues. More than 660 innovative and transformational projects led by top-tier researchers have been developed with our support and strong partnerships with academic institutions. Our work is based on values of transparency, excellence, relevance, diversity, and the support of a community of researchers that is committed to building solutions towards the best possible future.

€ **250**M Committed

+670 Research projects supported

43% Women-led research projects

+320 Leading academic institutions partners

Key areas Health
Climate & environment
Socio-economics & new tech

About the AXA Research Fund

The AXA Research Fund was launched in 2008 to address the most important issues facing our planet. It supports scientific progress by funding research in keys areas related to risk and helping inform public and private decision-making based on science.

AXA has committed 250M€ to its global scientific philanthropy since 2008. The AXA Research Fund is a unique initiative in the financial sector, both through its mission and the magnitude of its level of support to science.

Purpose

Accelerating excellent science to protect what matters

The AXA Research Fund seeks to support scientists of the highest caliber and potential whose research projects are innovative and transformative. The Fund also strives to catalyze a step-change in the career of its supported researchers through funding, public engagement and increased collaboration.

Disseminating knowledge and informing decision-making

The AXA Research Fund works to accelerate scientific dissemination and support the promotion of its grantees' expertise and research outcomes. In addition to financial support, the Fund assists researchers outreach efforts through the engagement of the community of grantees with nonscientific audiences and media partnerships. Ultimately, our goal is the dissemination of scientific knowledge towards better informing decision-making.

Values

Excellence

With an aim to accelerate each research field, the AXA Research Fund supports scientists with the highest potential, whose research projects are innovative and transformative. Coming from top-tier institutions from all over the world, these researchers are selected by a Scientific Board composed of internationally renowned scientists.



“AXA funding is very special since it allows for an undisturbed study that leads to great results in the field.”

Dagmar Haase

AXA Awardee, Professor of Landscape Ecology at the Humboldt Universität zu Berlin, Germany

Diversity

The AXA Research Fund strives to uphold a high standard of diversity in its selection process. The Fund strongly supports women in their academic endeavors and their contribution to the scientific world, with 265 projects led by women, representing 43% of our project portfolio¹, compared to 30% of women in the global scientific community.²

Given the global nature of research, geographic diversity of selected researchers and institutions is also encouraged. The Fund has established partnerships with 321 universities in 38 countries, supporting researchers from 58 nationalities.

Independence

Full research independence is ensured to the AXA Research Fund's grantees. The application assessment and selection process are equally independent and supervised by the external Scientific Board.

Promoting Open Science

The Fund is a strong supporter of Open Access Principles and believes that providing free and unrestricted access to the scientific outputs of its supported research projects is a fundamental part of its mission. Since July 1st, 2016, an Open Access policy is in effect for all new agreements and granted funding, closely following the guidelines instituted and recently updated by the European Research Council.

1. As of April 2021

2. United Nations Educational, Scientific and Cultural Organization, “Cracking the code: girls’ and women’s education in science, technology, engineering and mathematics (STEM)”, 2017

Governance

To ensure relevance, excellence, and independence of its projects, the AXA Research Fund team is advised by three boards of experts with dedicated missions.

The Fund is accountable to internal Advisory and Strategic Boards.

The Advisory and Strategic Boards

The Advisory Board, composed of C-suite AXA Group business leaders, provides input on research fields to be developed through transdisciplinary call for projects, as they relate to AXA's understanding of risk. The Strategic Board approves the overall budget and broad strategic developments.

The Scientific Board

Composed of top-tier scientists from a variety of research fields, the Scientific Board ensures the selection of research projects, following a rigorous process of academic pre-screening and peer-review. In line with the Fund's philosophy, every board member provides their expertise and experience to select some of the best researchers with high transformative potential, from top academic institutions.

The Scientific Board is responsible for the transparency and the integrity of the selection process. With the support of strictly independent external reviewers, the Board commits to ensuring a fair selection, based on excellence.



Tom Kirkwood

President of the AXA Research Fund Scientific Board

“It has been my pleasure and privilege to be President of the Scientific Board. At the heart of everything we attempt to do is a combination of three things: excellence, relevance and integrity.”

The AXA Research Fund team

The team is responsible for the definition and implementation of the Fund's strategy, including grant set-up, eligibility criteria and definition of topics for the calls for projects, as well as the operational aspects of application assessment and selection. Moreover, the team ensures the development of strong partner relationships with the community of AXA-supported researchers and their academic institutions and develops communication and dissemination initiatives.

Accelerating research around risks

Funding research on key societal challenges

In line with AXA's purpose to act for human progress by protecting what matters, the AXA Research Fund's support is directed towards major risks our society is facing in the areas of health, climate & environment, and socioeconomics. Scope of projects is also aligned with the United Nation's Sustainable Development Goals.



The AXA Research Fund's areas of intervention are aligned with the priority risks analyzed in the [AXA Future Risk Report](#), based on a survey of both experts and the public about what they consider to be the main emerging risks. For the 2021 edition, 3,500 experts in 60 countries responded to the online survey, and 19,000 interviews were conducted online in 15 countries to canvass the general population.

Health

267 projects

As part of its societal mission of protecting people, contributing to good health conditions and access to healthcare for all is a natural role for the insurance industry. This is why since 2008, through 267 projects, the AXA Research Fund has been supporting scientific research to **reduce health risks (physical as mental), prevent and mitigate pandemics, detect and treat chronic diseases and promote healthy ageing**. Most recently, two specific funds have been launched to provide multidisciplinary insights and solutions to key issues related to women's health and mental health.

Project spotlight



Longevity

Longevity: do you have the genes for it?

Peter Joshi
 AXA Post-Doctoral Fellow, University of Edinburgh, Scotland

To shed light on the underlying mechanisms of healthy ageing, Dr. Joshi has led an ambitious large-scale study to better understand **how longevity is genetically determined**. « About a quarter of the variability in lifespan is estimated to be due to genetics », confirms Dr. Peter Joshi. Among the novel insights brought by this project, the research team has **identified twelve DNA regions (including five new ones) that impact longevity** and increase the risks of Alzheimer's disease, tobacco-related cancer and cardiovascular disease.



Chronic Diseases

Revolutionizing diabetes' prediction and prevention, through use of health data

Helen Colhoun
 AXA Chair in Medical informatics and Lifecourse Epidemiology, University of Edinburgh, Scotland

Prof. Helen Colhoun focuses on diabetes' prediction and prevention using health data. Among her recent research outcomes is **the development of an interactive screening tool** with the National Diabetic Retinopathy Screening Service. Using one of the largest electronic healthcare diabetes record systems, Prof. Colhoun **has built powerful and accurate prediction models**. Her team's research has successfully contributed to stimulating advances in predictive and personalized medicine.



Mental Health

Supporting young people's mental health during the transition to work

Jasmin Wertz

AXA Post-Doctoral Fellow, Duke University, US

Dr. Jasmin Wertz aims to understand how young people's personal characteristics, upbringing and work experiences shape their mental health when transitioning to work, in order to inform interventions ranging from employer initiatives to public policymaking for the improvement of youth's mental health. Recent insights from her research work reveal that those with mental-health problems have greater risk of chronic diseases and early death, and faster aging.



Women's Health

A portable device against cervical cancer

Serap Aksu

AXA Post-Doctoral Fellow, Koç University, Turkey

Dr. Aksu is developing an innovative, easy-to-use, portable device that detects HPV types 16 and 18, causing 70% of cervical cancers and precancerous cervical lesions. The project is to provide a method to enhance the reliability and accuracy of oncogenic virus detection and increase its accessibility and cost-effectiveness. Aiming to develop the 1st hand-held cancer screening system, this highly innovative project could be used for test kits for many other viruses, like the Human Immunodeficiency Virus (HIV).



Pandemic and infectious diseases

Modelling the spatial spread of infectious diseases

Simon Cauchemez

AXA Awardee, Institut Pasteur, France

Dr. Simon Cauchemez' group at the Institut Pasteur develops advanced epidemic-study tools to help reveal risk factors, transmission dynamics and drivers, to develop better prevention actions and robust predictions. While such models are often used for forecasting, their focus is also "now-casting": analyzing data from ongoing epidemics—be it influenza, Ebola, Zika, or others such as the SARS-CoV-2 more recently—in order to identify key prevention mechanisms.

The Fund's action in the face of the COVID-19 crisis

The AXA Research Fund committed €5M to help tackle the COVID-19 crisis and provide emergency support to groundbreaking initiatives around the world.

In early March 2020, the AXA Research Fund was the first funder of the Pasteur Institute COVID-19 Task Force, dedicated to understanding the virus and its pathogenesis, developing new diagnostic tools, vaccine candidates and therapeutic solutions, modeling epidemiology and drafting outbreak control strategies.

The AXA Research Fund also supported the Open COVID-19 initiative by JOGL (Just One Giant Lab), an open-source platform created by former AXA Fellow Thomas Landrain. More than 4,000 contributors including engineers, researchers and computer scientists have joined the program from all continents and worked in open-source mode to develop solutions in diagnostics, therapy and treatment, with a focus on low-cost solutions to respond to the crisis, including masks, ventilators and diagnosis tests.

The Fund also provided support to other initiatives such as the Joint European Disruptive Initiative, the Red Cross Foundation, Assistance Publique Hopitaux de Paris — (APHP) and the Fondation de Recherche Médicale.

An exceptional call for projects was also launched early in the crisis for research related to the effects of COVID. The 10 selected projects explore the impact of lockdowns on mental health and vulnerable populations and innovative approaches to COVID-19 management such as early prognostic using machine learning and alternative disease monitoring through wastewaters.

Project spotlight



Better targeted COVID-19 disease management through wastewater monitoring

Mari Winkler

AXA Awardee, University of Washington, US

Dr. Mari Winkler is undertaking to detect COVID-19 in communities ahead of individual testing by monitoring wastewater pumping stations. Testing the prevalence of the virus at different sampling levels, Dr. Winkler seeks to improve community mapping to detect populations more likely to be infected. This enables comparing neighborhoods with varying demographics and access to testing. This method also offers the dual advantage of being both cheaper than individual testing and anonymous.

Climate & Environment

231 projects

AXA is a leader in corporate climate change and biodiversity commitments with a comprehensive strategy that leverages business expertise to find solutions to climate change adaptation and biodiversity loss mitigation. These actions include the development of divestment policies from coal as early as 2015, green (and brown) investment funds, as well as innovative insurance products and financial instruments to promote low carbon solutions. AXA has made climate and the environment a priority for its scientific philanthropy initiative, with over 230 projects supported by the AXA Research Fund focusing on this area. These projects encompass topics such as biodiversity — including marine biodiversity — resilience policies, climate change, energy transition, natural catastrophes, and pollution.

Project spotlight



Climate change

AXA Chair in African climate risks

Mark New

AXA Chairholder, University of Cape Town, South Africa

Prof. Mark New focuses on understanding and quantifying climate change risks on water and food security in Southern Africa. To do so, Prof. New uses a multidisciplinary approach bringing together expertise in climate and weather risk attribution, statistical sciences, hydrological and agricultural sciences, and economics.



Are cities properly preparing for climate change?

Marta Olazabal

AXA Post-Doctoral Fellow, Basque Center for Climate Change, Spain

Dr. Marta Olazabal conducts research on cities' preparedness for climate change, providing valuable knowledge on public investment policies' effectiveness in the context of urban climate resilience. By investigating public adaptation planning in 136 of the largest coastal port cities in 68 countries, she set out to create one of the most up-to-date databases of governmental and public-led adaptation.



Towards zero-energy cities: a numerical tool to optimize retrofitting of existing urban blocks

Modeste Kameni Nematchoua

AXA Post-Doctoral Fellow, Université de Liège, Belgium

Dr. Modeste Kameni Nematchoua works on the concept of zero-energy buildings – constructions consuming only as much as can be produced through renewable onsite resources – and applicable to entire urban blocks. His project is to develop, validate and apply a numerical tool for energy optimization buildings in two case studies, one in Belgium and the other in Madagascar. The study also considers the environmental impacts of these zero-energy solutions.



Natural resources and biodiversity risks

Building resilience to coastal hazards with natural defences

Michael Beck

AXA Chair in Coastal Resilience, UC Santa Cruz, USA

Over the past 10 years, Prof. M. Beck and his team have worked on demonstrating the social and economic value of coral reefs, marshes, and mangroves in reducing the risk of flooding from storms in over 100 countries. Their results showed that natural habitats reduce coastal communities' risk and that their value can be rigorously quantified from the local to the global scale. These results substantiate the value of investing in conserving and restoring these habitats, and the direct benefits they provide to society. This AXA Chair undertakes to determine how natural defenses can be incorporated in risk models, financial tools, benefit-cost analyses, and in national economic metrics.



Invasive species: raising awareness with scenarios for the future

Franck Courchamp

AXA Chair in Invasion Biology, Université Paris Sud, France

The project of the AXA Chair in Invasion Biology is based on 'big data' analyses and statistical models to provide biological invasion scenarios worldwide, akin to the climate change scenarios that have boosted climate change research, management and policy in the past decades. Prof. Courchamp's research team has estimated the cost to human society of invasive species to \$1.288 trillion in the period from 1970 to 2017.



Pollution

Air pollution and Health

Sverre Vedal

AXA Chair in Air Pollution and Health, CRAES, China

Prof. Sverre Vedal's AXA Chair undertakes to assess the effects of air pollution exposure on human health. He has conducted experimental and observational studies in China to understand how air pollution affects the human body and which pollutants are the most harmful, **providing a strong scientific basis for public health interventions**. With his team, he discovered that it is the volatile organic compound (VOC) component of the traffic air pollution mix that is responsible for lung inflammations, rather than particles and other gases like nitrogen dioxide or carbon monoxide, which has never been proven before. He also **developed advanced air pollution exposure prediction models for China**.



Microplastics: their role in the spread of antibiotic resistance

Maria Belén Sathicq

AXA Post-doctoral Fellow, Consiglio Nazionale delle Ricerche - Istituto di Ricerca sulle Acque (IRSA), Italy

Dr. Maria Belen Sathicq **investigates the underlying mechanisms shaping the spread of antibiotic resistance in coastal environments**, as well as the role of microplastic particles as substrate and carrier of antibiotic resistant bacteria and genes. Dr. Sathicq works on the association of microplastics and pathogenic bacteria — many of which carry the genes for antibiotic resistance — that seems to be responsible for the longevity of these bacteria, their reproduction, and their mobility.

Gender equality

The AXA Research Fund has devoted a particular attention to the **promotion of gender equality and the empowerment of women and girls**: first with a specific call for projects around Women's Health with the selection of 8 Fellows in this area. This was followed by the support of the AXA Women in Business Chair with Sciences Po, Paris and the launch of the AXA Lab on Gender Equality with the Bocconi University in Italy.



Breaking down the barriers to women's leadership and entrepreneurship

Anne Boring

AXA Women in Business Chair, Sciences Po, France

This project aims at **guiding interventions to reduce discrimination, the impact of stereotypes and biases, as well as other barriers to women's leadership and entrepreneurship**. Its two over-arching objectives are to conduct a review of the main reasons why there are few women in entrepreneurship and leadership positions and to foster a better understanding of the skills necessary for women to acquire at the higher education level.



Promoting a more gender-equal society

Paola Profeta

AXA Research Lab on Gender Equality, Bocconi University, Italy

This Lab aims to **improve our understanding of gender gaps and how to reduce them** by examining the risks and opportunities for women in the economy. Three research streams are being developed: analyzing the under representation of women in STEM disciplines and related cultural factors, identifying the causal effects women can have on policy outcomes, and developing measures and policies to close the gender gap.

Socio-economics & new tech

178 projects

The Fund supports over 148 projects in socio-economic risks including projects in **the areas of inclusion and inequality, financial risks, and the geopolitics of conflicts**. The AXA Research Fund also works towards understanding the challenges and opportunities triggered by new technologies and has funded 30 projects in the areas of **data security, machine learning, and artificial intelligence**.

Project spotlight



Geopolitical instability

In a new age of risk, exploring the social side of uncertainty

J. Peter Burgess

AXA Chair in Geopolitics, Ecole Normale Supérieure, France

Philosopher and political scientist, Prof. J. Peter Burgess is leading a research program designed to reveal **how uncertainty impacts and politicizes life**. His project is based on the premise that traditional approaches to risk analysis overlook fundamental aspects of what it means to be human in the face of uncertainty. With this AXA Chair, Prof. Burgess looks at developing new methodologies for understanding and evaluating risk by combining analyses of religion, media and ethics with studies of human geography, international law and decision theory.



Macroeconomic risks

Transitory shocks, persistent effects: towards better suited recovery policies after a financial crisis

Federico Bassi

AXA Post-Doctoral Fellow, Université Paris 13 - Paris Nord, France

Transitory shocks and financial crisis can durably affect GDP and require appropriate recovery strategies. Bassi's research aims to **create a new method to measure the potential output of an economy**, and to design a theoretical model allowing him to test the impact of monetary, fiscal and financial market regulatory policies on economic stability when permanent potential output losses are explicitly taken into account.



Financial risks

Finance with a social twist: looking at impact beyond markets

Lily Fang

AXA Chair in Financial Market Risk, INSEAD, France

Prof. Fang is pursuing a research program that examines ESG (Environmental, Social and Governance) considerations and firm operations, supply chain management and ultimately financial performance while continuing work on "classic" Finance topics such as Market Risk. She is currently working on **issues related to gender, corruption, social impact of private equity, the influence of investors' preferences on companies, or the role of insurance on entrepreneurship**.



Cybersecurity risks

Cyber insurance risks: evaluating the cyber costs of cyber risks

Caroline Hillairet and Olivier Lopez

Academic Partners, Ensaè-ParisTech / Sorbonne Université, France

Combining both scientific and operational skill sets, the objective of this joint research initiative (JRI) is to **evaluate the consequences of cyber-attacks in order to lay the grounds for appropriate cyber risk insurance solutions**. Research outcome will help improve cyber risk management and reducing the eventuality of significant economic losses.



Financial inclusion

Understanding the Financial Lives of Low-Income Households in China

Xiugen Mo

Academic Partner, Institution Chinese Academy of Financial Inclusion (CAFI), China

Building on the first round of the rural Financial Diaries survey sponsored by the World Bank in 2019-2020 and adding a new sample in urban areas, this survey will narrow existing research gaps in the **understanding of financial lives of urban households vis-à-vis their rural counterparts**. It will also assess the medium-term impact of COVID-19 on financial behaviors and needs, and expand the analysis of low frequency risk and related insurance needs, with a particular focus on healthcare.

Making a step change in the scientific community

Supporting researchers throughout their career

The AXA Research Fund supports exceptional researchers with transformative projects in their field. The aim is to provide **grants for all stages of a research career**. This is done by giving the opportunity to young researchers to pursue a career in academia through the AXA Research Fund Fellowships, rewarding rising academic profiles through the AXA awards and supporting the most innovative and promising research projects led by senior scientists through our Chair grant. Finally, Joint Research Initiative grants bring together academic and AXA practitioner teams in order to work on a project that will both support AXA's mission and contribute to advancing knowledge in a specific academic field.

Post-doctoral fellowships

AXA post-doctoral fellowships support young, promising researchers with a high potential for innovation on a topic aligned with AXA's priority risk areas. As of July 2021, 342 Post-Doctoral projects had been funded. By providing support at a crucial time in a researcher's life and at a defining moment in the pursuit of an academic career, Post-doctoral Fellowships are at the heart of the Fund's mission of supporting scientific research. It is indeed key to support a new generation of researchers seeking to impact the public debate, and more broadly, academia and society.

The AXA Research Fund **not only provides young researchers with the funding to help to carry out their projects but also supports them with media training and dissemination opportunities to share their results in the most impactful manner.**

Recent Fellowship Research Fields

These thematic calls for projects make it possible to accelerate the production of relevant research for the insurance industry and the sustainability areas AXA has committed to. This support has resulted in creating a network of connected scientists that collectively provide multidisciplinary insights on these key issues.



“With the AXA Chair, we have already largely impacted policymakers and made a step change in the ability to harness Scottish electronic-health record data to develop digital tools enabling decisions about preventing risks. The prestige of the AXA chair funding has been an important factor, well received and noted by the diabetes research community.”

Helen Colhoun

AXA Chair in Medical Informatics and Life Course Epidemiology, University of Edinburgh, Scotland

AXA Awards

This funding vehicle rewards mid-career rising academics with a proven track record of transformative research in their area. In total, the Fund has endorsed **34 such researchers**. Most recently, in response to the COVID-19 pandemic, the Fund launched an exceptional call for research projects. It selected **10 new Awards** in areas related to the pandemic: exploring the impact of lockdowns on mental health and vulnerable populations, and alternative prognostic and disease monitoring approaches. In 2021, 4 outstanding researchers working on climate extremes, climate variability, and climate justice received the **Awards for Climate Science**.

AXA Chairs

AXA Chairs are targeted at senior researchers of the highest caliber with significant experience in the relevant their field. As of June 2021, the AXA Research Fund had granted **59 AXA Chair Grants**.

Fostering transformational research

AXA Chairs aim at creating a dedicated full-time senior academic position in an institution and fostering a step-change in the career of the appointed AXA Professor, while supporting groundbreaking research to bring a significant acceleration in the development of a research field.

Impacting the scientific community and decision-making

With an access to a network of decision-makers and practitioners, a community of researchers, and with the development of dissemination efforts, the AXA Chair also provides a unique opportunity to gain visibility and extend access to public policy networks.



“I received intensive training as an AXA Research Fellow which led to my receiving the Pre-term Birth Prevention & Management (PRIME) Award. I hope to apply the skills acquired at the University of Cape Town, but also in my home country, Kenya.”

Nadia Chanzu-Ikumi

AXA Post-Doctoral Fellow, University of Cape town, South Africa

Joint Research Initiatives

AXA Joint Research Initiatives (JRIs) are projects developed jointly by senior researchers and AXA teams to study a specific area that is both relevant to AXA's activity and to the research field. Since their launch in 2013, over 30 JRIs have been launched.

Connecting researchers with AXA Experts to create two-way collaborations

The AXA Research Fund plays an important role in connecting endorsed grantees with AXA teams to better understand insurance-related issues that are also of academic interest. This is an opportunity for academics to establish new connections with the private sector. The projects operate on a joint funding principle between the Research Fund and the AXA Business teams with academic selection and coaching being ensured by the Fund. These projects allow for a two-way collaboration, benefiting both AXA entities and academic institutions. The results are non-proprietary to AXA and must lead to both business output and a research publication.



“In my career, the AXA Award has been a big step forward and it has strengthened my position as an international expert in urban socio-ecological research.”

Dagmar Haase

AXA Award, Professor of Landscape Ecology at the Humboldt Universität zu Berlin, Germany

In the course of her Award, Dr. Dagmar Haase participated hugely in public engagement efforts to promote the results of her research and to exchange with other academics, mainly from the US and Japan. She contributed to the conferences organized by European Geosciences Union (EGU), European Association for Landscape Ecology (IALE), Ecosystem Services Partnership (ESP) and the International Association for People- Environment Studies (IAPS).



“Thanks to the AXA Chair, people listened with more attention to our results. The government now seeks advice from me, and I am closer to the Chinese science community that I've ever been.”

Gabriel Ngar-cheung Lau

AXA Professorship, Director of the Institute of Environment, Energy and Sustainability, Chinese University of Hong-Kong

Fostering collaboration and transdisciplinary research

International collaboration and networking

The management of the community of AXA-supported scientists led by the AXA Research Fund team together with the interdisciplinary calls for projects result in collaborations that contribute making a step-change in research fields and disseminating of expert knowledge.

To further leverage this vibrant community, the AXA Research Fund developed a digital alumni platform open to current and former grantees in order to help them connect, share information, and collaborate while being kept abreast of expert events, training, and dissemination opportunities.

Promoting Open Science

The AXA Research Fund requires an Open Access policy within its funding agreements with supported researchers. Furthermore, the Fund has partnered with F1000, an open research gateway. This platform provides a space for the community to publish and promote a wide range of peer-reviewed article types including research articles, reviews study protocols, brief reports, and data notes in open access mode. The publication costs are covered through article processing charges (APCs), which are funded centrally by the AXA Research Fund.

JRI spotlight



Demographics

Magali Barbieri

University of California, Berkeley & French Institute for Demographic Studies (INED)



Marine Habart

AXA Group Life, Savings & Health Chief Risk Officer

Towards reliable mortality estimates in developing countries

Since 2018, Magali Barbieri has led a Joint Research Initiative together with operational experts from the AXA Group, including Marine Habart, to build reliable mortality estimates in developing countries. After 2 years of cooperation, the JRI allowed for the addition of Hong Kong to the Human Mortality Database—HMD, an open access database on mortality and population—and for the development of several alternative series of life tables for Mexico.

“ This project would simply not have seen the light of day without the financial support of AXA. It enabled us to hire a number of doctoral students and, very importantly, to add demographer Dr. Dana Gleit to our team. It also helped tremendously in widening my network of contacts, especially with actuaries, which played a crucial role in my research, because it has helped me better understand what my work is used for and what the concrete needs are. ”

Magali Barbieri

“ This Joint Research Initiative has a direct operational output. For countries with partial or unreliable datasets like Mexico, the work that Dr. Barbieri conducts, the modelling tools she uses to improve the accuracy of the estimations, allows for some level of exploitation by actuaries. ”

Marine Habart

Disseminating knowledge and informing decision-making



Sharing Knowledge

Disseminating scientific knowledge to support decision-making is at the core of the AXA Research Fund's purpose. This means making science more accessible through popularization and outreach. "Translating" and sharing science more broadly is part of the AXA Research Fund's promise to its community of scientists.

Science communication training

Communicating scientific content outside of the academic community requires specific training and practice. The AXA Research Fund provides **media-training sessions** to **Post-Doctoral Fellows** to help them develop or hone those skills. The training modules include writing and presenting research for a non-scientific audience, public speaking in an engaging, impactful, yet rigorous way, and leveraging the power of social media.

The training is provided by science communication experts and then put into practice by the Fellows during an AXA Meets Science Event that provides them with an audience of AXA practitioners who want to discover the scientific projects we support. The event allows our Fellows to **create synergies between AXA experts and science**.

90

post-doctoral fellows

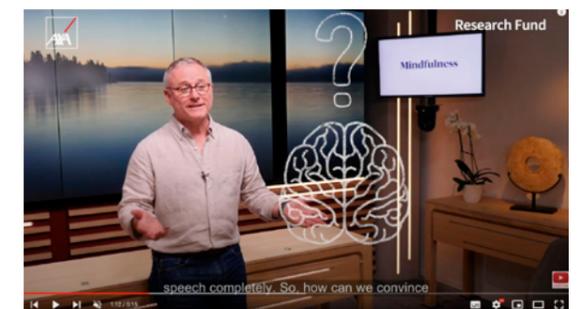
benefited from in-person science communication training

To accelerate scientific dissemination, the AXA Research Fund recently launched **online e-learning modules**.

These online training sessions are dedicated to AXA Researchers but are publicly accessible on the Fund's website.

They help scientists to make good use of social media to **disseminate science**, develop **broader public writing skills** and **deliver impactful presentations**.

Produced in collaboration with science dissemination experts, these modules provide concrete tips and guidance.



Accelerating outreach through media partnerships

The AXA Research Fund encourages its grantees to further share their knowledge outside of the scientific community by contributing articles to its partner **The Conversation**. This independent source of open-access news provides scientific perspectives and breakthrough updates from the research community directly to the public. Articles are often adopted by broader media, allowing for wide visibility to the researchers.

THE CONVERSATION

163 articles

Published by researchers from the AXA Research Fund in The Conversation

Over **3.8** million reads

In total, on both The Conversation website and other publishers (The Guardian, La Tribune, BBC & CNN, etc).

Covid-19 Expert Series

In April 2020, top tier scientists from our research community gathered to form the AXA Research Fund Covid-19 Task Force. They analyzed the crisis' fallouts in the areas of geopolitics, economics, health systems, mental health and highlight the link between biodiversity and epidemiology.

- “Covid-19: Economic and Geopolitical Fallout and Responses”
- “Climate Change, Loss of Biodiversity and Epidemics: Causal Effects and Lessons for the Next Global Crisis”
- “Covid-19 – Health Systems Response, Role of Data and AI and Mental Health Effects”

Thought leadership

By bringing together academics and experts from a variety of disciplines, the AXA Research Fund clarifies the stakes of complex, rapidly evolving key societal issues, and provides insights and perspectives to help set the foundations for science-based decision-making, for both private and public organizations. The AXA Research Fund shares learnings from scientists, relevant field specialists and insurance practitioners, through webinars and publications.

2021 Webinars

[AXA Germany Science Day on Extreme Weather](#)

[Gender Equality in Decision-Making Positions](#)

[Rational Policymaking in Times of Uncertainty](#)

[Building Coastal Resilience with Natural Defences](#)

Publications

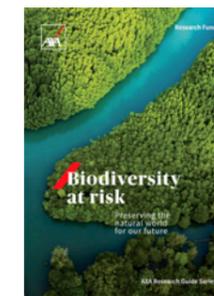


Building Cyber Resilience

Presents a collection of perspectives from AXA-supported researchers, AXA and external experts on the threats, enablers and possible future scenarios to build cyber resilience.

Confronting a Global Crisis

Based on interviews with scientists and experts, this publication explores the prospects for healthcare, the global economy and the environment, on the onset of the unprecedented crisis.



Biodiversity at Risk

Focuses on illustrating the interconnections between biodiversity and climate change, security and the economy, while providing an overview of AXA's commitments in the area of biodiversity loss mitigation and resilience strategies.

The people beyond the initiative

The Advisory Board

Ulrike Decoene, Group Chief Communication, Brand and Sustainability Officer
Georges Desvaux, Chief Strategy and Business Development Officer
Claudio Gienal, Chief Executive Officer of AXA UK & Ireland
Renaud Guidée, Group Chief Risk Officer
Gilles Moëc, Group Chief Economist
Alexander Vollert, Group Chief Operating Officer and Chief Executive Officer of AXA Group Operations

The Scientific Board

Thomas Kirkwood, President of the Scientific Board & Associate Dean for Ageing, Newcastle University
Nihat Berker, President of Sabanci University, Istanbul (TK) & Emeritus Professor of Physics, MIT
Olivier Boucher, CNRS Research Director, Laboratoire de météorologie dynamique
Carol Brayne, Professor of Public Health Medicine, University of Cambridge
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