Swiss Re Institute

Research Fund

Joint Risk Resilience Partnership

AXA Research Fund / Swiss Re Institute – Joint Risk Resilience Partnership

2025 Call for Proposals

Theme: Behavioral Shifts for Longevity: Matching Individuals to Scalable Metabolic Health Interventions

2025 Call Information

Theme

Behavioral Shifts for Longevity: Matching Individuals to Scalable Metabolic Health Interventions

Context and Challenge

Human longevity has dramatically improved over the past century, with life expectancy rising from 65 years in 1950 to over 81 years today across OECD countries. However, since 2010, mortality improvements have plateaued in many advanced economies – primarily due to stagnation in cardiovascular mortality reduction.

This slowdown coincides with a surge in lifestyle-driven chronic conditions. Obesity, diabetes, and insulin resistance are now endemic, with over 1 billion people living with obesity globally as of 2022 – a milestone previously forecasted for 2030. These conditions are not isolated; they are deeply interconnected through poor metabolic health, which underpins 80% of non-communicable diseases (NCDs) and contributes to over 74% of global deaths.

Scientific Foundation

Metabolic health is shaped by a constellation of factors – nutrition, sleep, stress, physical activity, and genetics. Chronically elevated insulin levels, driven by high carbohydrate intake and poor dietary habits, lead to insulin resistance. This condition affects every tissue in the body and is implicated in a wide range of diseases, including cardiovascular disease, Alzheimer's, fatty liver disease, PCOS-related infertility, and certain cancers.

Low-carbohydrate diets have emerged as a powerful tool to reverse insulin resistance and improve metabolic outcomes.

Strategic Opportunity

While high-touch programs – such as those involving CGMs, virtual coaching, and personalized nutrition – have shown remarkable success, they are costly and often reserved for high-risk individuals e.g. people with obesity, or type 2 diabetes. Conversely, low-cost interventions may lack the intensity needed to drive meaningful change for most people.

The challenge is not just to scale interventions, but to match individuals to the right level of support at the right time—balancing cost-effectiveness with clinical impact.

Proposal Objective

We propose research to develop a predictive framework that guides individuals to the most appropriate carbohydrate-intake-focused metabolic health program based on their unique needs, risk profile, and behavioral readiness.

This framework would:

- Identify key predictors (e.g., biomarkers, behavioral traits, health history) that correlate with success in different program types.

- Consider dependencies on broader systemic factors, e.g. do individuals already have a good education on nutrition and general health topics
- Include the role of Bariatric Surgery and GLP-1 drug use or history and how this might alter the success of different programs
- Use desktop analysis, interviews of clinicians or coaches already doing this kind of work, and surveys to validate predictive markers.
- Enable insurers to offer tiered interventions—ranging from educational apps to intensive coaching—based on individual profiles.

Program Typology

The research will evaluate and categorize program types, including:

- Information-based tools: Educational apps and content.
- Community or group support
- Biomarker-integrated apps: CGMs and ketone meters for real-time feedback.
- Virtual health coaching
- Virtual specialist coaching: Nutritionists, psychologists, and behavioral specialists.
- Virtual physician support
- Addiction support: Programs addressing food addiction and emotional eating.

Projects with an integrative scientific component are particularly encouraged.

Implementation and Impact

This framework aims at achieving a triple win: benefiting individuals, public healthcare systems, and private insurance models. It will empower insurers to:

- Improve health outcomes for policyholders.
- Avoid over- or under-investing in interventions.
- Reduce claims and strengthen the sustainability of private insurance models.
- Contribute to public health by scaling effective solutions.

Why Now?

Slowing mortality improvements, worsening trends of obesity, diabetes and other NCDs, and an increase in early onset cancers, are putting pressure on payers and health systems around the world. Recent pilots and internal research (e.g., Swiss Re's UK income protection claims analysis) show that obesity and metabolic ill health are under-recognized drivers of long-term chronic disease and disability. GLP-1 drugs offer promise but require lifestyle change to sustain benefits. Personalized *correct* nutrition and behavioral support are essential to long-term success.

Call to Action

We invite proposals that explore:

- Predictive markers for program matching: In addition to traditional biomarkers, consider incorporating multi-omics approaches (genomics, metabolomics, lipidomics) to better understand individual metabolic profiles.

This could enhance the predictive accuracy for program matching and identify novel biomarkers associated with responsiveness to specific interventions.

- Cost-effectiveness across intervention tiers: For individuals with significant insulin resistance or obesity, consider integrating bariatric surgery or emerging pharmacologic agents (e.g., SGLT2 inhibitors, GLP-1 receptor agonists) earlier in the intervention pathway, especially in cases where lifestyle modifications alone have limited efficacy. The framework should evaluate the timing, cost-effectiveness and combination of these therapies.
- Behavioral science insights for sustained change: Leverage behavioral science to tailor interventions not only based on biological markers but also on psychological and social factors such as motivation, health literacy, emotional eating patterns, and environmental influences, can provide real-time insights into behavioral triggers.

Integration of digital health tools and coaching: Utilize digital twin technology to simulate individual responses to various interventions over time. This can help refine personalized plans and improve long-term adherence by visualizing potential outcomes and risks.

Some additional ideas

- **Role of Gut Microbiome**: Emerging evidence suggests the gut microbiome plays a significant role in metabolic health. Including microbiome profiling could help identify individuals who may benefit more from specific dietary interventions, probiotics, or prebiotics, thus personalizing treatment further.
- **Longitudinal Monitoring and Feedback Loops**: Develop protocols for continuous monitoring of metabolic health markers, behavioral adherence, and psychosocial factors. Use machine learning algorithms to adapt interventions dynamically based on ongoing data, ensuring sustained engagement and effectiveness.

Program efficacy in Diverse Populations: Ensure that predictive models and intervention strategies are validated across diverse demographic groups, including different ages, ethnicities, and socioeconomic backgrounds, to avoid disparities in care and improve generalizability.

Funding Guidelines

The AXA Research Fund / Swiss Re Institute – Risk Resilience Partnership, hereafter referred to as "the Partnership", aims to support top-tier research on systemic risks. Research project proposals should demonstrate their scientific originality and innovative nature and have the potential to contribute to a step change in the Call specified areas.

The proposals are expected be:

- Scientifically outstanding
- Create results applicable for risk identification and risk assessment by corporates, and
- Able to inform governments and/or private sector on how to build resilience against systemic risks in the specific Call themes

Target Beneficiaries and Institutional Eligibility

The grant aims at supporting promising researchers or research groups. Funding recipients need to be academic institutions which can either apply as 1) a **Sole Applicant** (one academic institution) or 2) **Consortium Applicant**, (collaboration amongst two or more academic institutions). Project Proposals must always be led by ONE Principal Investigator who is nominated by the institution leading the application process.

Application from academic institutions across the globe are accepted. Academic institutions are the only eligible direct beneficiaries which may receive funding under this call. Private companies, NGOs, governmental bodies, foundations, independent research centers, cultural institutions (such as museums), and hospitals are not eligible as direct beneficiaries. However, due to the applied nature of the funding, it is possible for academic institutions to collaborate and partner with other organizations from public and private sectors. The non-academic institutions can be listed as **associated partners and** may receive part of the funding from the institution, agreed upon within each proposal's own set-ups. **Each Applicant can hand in only ONE PROJECT PROPOSAL. In case of several applications submitted, all applications would be disqualified. No change of host institution will be possible after submission of the application.**

Requirements Applicant:

As Sole Applicant: The Principal Investigator (PI), nominated by an institution, should be of the highest caliber and have demonstrated outstanding research achievements, as evidenced by the usual indicators for assessing academic excellence such as research outputs (e.g., publications, citations), research activities (e.g., organizing networks, being involved in communities) and research impact (e.g., policy reports, specific recognition through awards, etc.). The PI needs to be affiliated with an academic institution that has nominated him to be the Principal Investigator of the Project. It is required that the PI brings together a strong team demonstrating expertise and ability to complete the tasks of the proposed project with the best quality. Ideally, the team shall be composed of promising early career researchers, as well as reflects the principle of diversity (gender and geography).

As Consortium Applicant: The requirement and recommended qualification of the Team Lead of the Project Coordinator (PC, the lead university) are identical to those of the Sole Applicant. In addition, the PC team needs to ensure that all partner academic institutions, are chosen based on the best possible match of required expertise, skills, availability, and cost-benefit analysis. The PC remains the main contact between the consortium and the contacts of the Partnership. The institution nominating the PC will represent the consortium as the signee of the contract and will receive the related founding.

Open-Data Framework, Reporting and Engagement

In principle awarded proposals are required to be proactive in engaging their projects and use an open-data framework when applicable.

Key reporting responsibilities for the funded project include:

1. A mid-term activity meeting halfway through the project duration. The meeting will be accompanied by a short mid-term activity report, if the project is > 12 months;

2. A final report (activity and finance), summarizing highlights of the research project, progress, achievements, and outputs versus objectives, impacts of the grant, and research related activities as well as an expenditure overview explaining how the grant has been allocated;
3. Short project result summary (in form of a green / white paper, as appropriate) to be published on the Partnership's websites of AXA Research Fund and Swiss Re Institute;
4. After project completion teams shall commit to sharing their project results and disseminating their research to a broader audience, including speaking engagements with Swiss Re Institute and the AXA Research Fund on the project.

Duration

Proposals with duration of **9 – 18 months** are considered eligible for this call.

Budget and Eligible Costs

A maximum of three projects will be chosen in this call. A single proposal may be rewarded a maximum amount of **150,000€ in total**. It is the applicant's responsibility to submit a carefully calibrated budget, appropriate for the ambition of the research program and justified in a detailed and coherent manner. The institution to which the PI or the team lead of the PC is associated, has the role of distributing the received funding based on internal agreements.

The eligible costs are:

- Salary of the researcher/s (based on institution internal policy)
- Cost inquired for the collaboration with associated partners
- Equipment/resources (databases, survey costs, consumables, etc.), academic activities (conferences, workshops, fieldwork, etc.)
- Outreach activities (beyond academic audiences).

Any other type of costs not listed above should be justified in the application template. **No overhead costs are eligible**. No additional budget will be granted. Budget reallocation during an ongoing project must be strongly justified.

Payment of the grant is contingent on the launch of the research project. The grant is paid in 2 installments, on the Institution's submission of the relevant call for funds. Calls for funds should be ideally sent 1 month before the schedule corresponding due date. On date T + 1 month (T corresponds to the date on which the project starts), payment of 50% of the grant agreement, at the end of the project, payment of last 50% subject to the receipt of the final report defined in the contract.

Ethics

The AXA Research Fund and Swiss Re Institute place extremely high importance on the ethics of the work it supports. Programs are required to comply fully with all relevant ethical review processes and for this compliance to be evidenced. Cases of scientific misconduct (such as fabrication, falsification, plagiarism or inappropriate behavior

towards staff or other parties) will be considered as breaches of the ethical principles[1] and will be excluded from funding.

Intellectual Property

The researcher and the host institution remain fully independent to conduct the research project. AXA or Swiss Re will not claim any right to the ownership or use of the results.

Timeline & Application process

The Risk and Resilience Partnership funding evaluation process has been designed to assess project excellence. The evaluations are monitored to ensure transparency, fairness and impartiality in the treatment of proposals.

The AXA Research Fund and Swiss Re Institute partner with independent external providers to carry out the peer review process in accordance with criteria defined by the AXA Research Fund and Swiss Re Institute, the results of which are submitted to the Evaluation Panel for final selection. Please note that:

- The complete application must be submitted in English, on time, and online. It must respect the template structure and the page limit.
- The research topic must fall within the scope of the eligible topic focus.

Timeline

Researcher and Research Institution	**Step 1 – Research proposal submission** *On the online project platform. On the ESF platform, our partner organization (online link to be provided on due time)*	**24 November 2025 – 30 January 2026** **12 PM Paris/Zurich time**
Evaluation Panel	**Step 2 – Selection Process** *An Evaluation Panel, specifically set up for the health theme is responsible for selecting projects to be funded. It will be composed of external scientific researchers and industry research experts.*	**2 February 2026 – 30 June 2026**
AXA Research Fund/ Swiss Re Institute	Results announcement by email to the candidates	**31 July 2026**

[1] AXA Group Compliance and Ethics Code, 2019: [Compliance and Ethics Code | AXA]

Projects selected for funding are expected to start between October 2026 and January 2027.

Application process

Step 1 – Registering & Research Proposal Submission
To apply for this call fund, Applicants need to register on via European Science Foundation (ESF)'s platform for application. The platform provides a dedicated proposal template that informs you about all the information required for submission. Generally applicants will have to fill out an online application from providing individual information and contact details (Name, Title, Affiliation) and submit a PDF application containing (the application form duly completed in English; a short CV (2 pages) of the prospective Principal Investigator / Project Coordinator including a link to a detailed CV; short CVs of potential project team members (2 paragraphs each), a list of the top 5 publications, a list of the most recent 5 projects in the relevant field.

After you complete your application, you will receive an email confirming that your Research Proposal has been submitted. If you don't receive the email, please check your spam folder, and, if needed, contact esf-panels@esf.org. You will be able to edit your Proposal if you have not clicked on "Submit". Once submitted, your Proposal can no longer be edited. Following your proposal will be reviewed.

You will be informed of the decision pertaining to your application by email. Applications received after the deadline, by email, or incomplete will not be considered.

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Step 2 – Proposal Evaluation
The evaluation of the scientific quality of research proposals is carried out in a fully independent manner by our Evaluation Panel. Each application is reviewed by two relevant experts who will assess the candidate's excellence and the research program's scientific quality.

Step 3 – Selection & Results Publication
The Evaluation Panel selects to fund applications based on strength of the scientific excellence, project impact, candidate profile, feasibility and outreach potential. The Swiss Re and AXA Research Fund informs the candidates of the decisions by email.

The Evaluation Panel's decision is final and cannot be appealed. It can neither be disputed nor subject to explanations or justifications, no feedback will be provided.

Participation in the call for applications implies acceptance of the above-mentioned rules.

Swiss Re Institute

Research Fund

Joint Risk Resilience Partnership

Overview of the Partnership and Its Key Theme:

Systemic Risks Systemic risks are associated with cascading impacts that spread within and across systems and sectors (e.g. health, infrastructure, food etc.) via the movements of people, goods, capital and information within and across boundaries (e.g. regions, countries and continents). The spread of these impacts can lead to potentially existential consequence. Increasing system interdependencies, highlight that there is a growing need to better understand cascading impacts, and the possible responses of systemic risks. This includes improving understanding of their root causes, both biophysical, socio-economic, and technical. Addressing systemic risks requires integrating different systems perspectives and fostering system thinking across disciplines and geographies, notably through collaboration and research.

The insurance industry stands at the forefront of protecting our world against adverse developments. Both, AXA and Swiss Re stand out due to their strong relationship to science and their support for risk research. Building on a strong track record of financing scientific and applied research, AXA and Swiss Re commit to establish a Partnership to jointly identify, incentivize and fund independent research and innovation projects with the highest potential to transform our industry and help our society become more resilient.

The aim of this partnership is to bring together scientifically engaged corporates in the insurance and finance industry to jointly fund top-tier risk research on systemic risks that will inform private and public decision-making to build societal resilience. More specifically, the Partnership aims to:

- Close shared knowledge gaps within the insurance industry on emerging and aggravating risks that pose serious threats to societal resilience
- Leverage research outcomes to develop business applications and inform public and private decision-making

AXA Research Fund

The AXA Research Fund is AXA Group’s global scientific philanthropy initiative, launched in 2008 to address the most important issues facing our planet. It supports human progress by funding research in key areas related to risk and helping inform public and private decision-making based on science.

Swiss Re Institute

Swiss Re Institute, founded in January 2017, is the thought leadership and R&D arm of one of the world's largest reinsurance companies, Swiss Re. We share our risk knowledge in re/insurance through our publications and data sets. We produce and support risk research across Swiss Re and partner organizations.

Appendix:

Overview of the Partnership and Its Key Theme: Systemic Risks

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