







Call for Applications: Guidance Notes Epidemic Science
Leadership &
Innovation Networks
(EPSILON) Initiative

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Background

Science for Africa Foundation (SFA Foundation) serves the African research ecosystem by designing, funding and managing programmes that support excellent science and innovation, and that build and reinforce environments that are conducive for scientists to thrive and produce quality research that impacts development.

The Pandemic Sciences Institute at the University of Oxford (PSI), which is collaborating with SFA Foundation to release this call, draws upon experiences and lessons learnt from the COVID-19 pandemic to identify and counter future pandemic

threats. In partnership with academia, industry and public health organisations across the world PSI creates science-led innovations to accelerate understanding and develop new diagnostics, treatments, vaccines and digital disease control tools, with a focus on equitable access of benefits for all

PSI and SFA Foundation, in partnership with the Mastercard Foundation, are collaborating to invite applications for innovative research initiatives in epidemic and pandemic research, preparedness and response.

Definitions

Term	Definition
Consortium	A group of between three and six institutions collaborating to respond to this grant call.
Lead institution	Institution that is leading and coordinating the application and where the lead applicant is based. Funds will be granted to this institution.
Lead applicant	Principal Investigator who is based at the lead institution.
Co-applicant	Named individuals who represent institutional partners
Partner institution	An institution that will carry out a well-defined element of work and which will receive a budget from the lead institution.
Collaborating institution	Institution that supports delivery of the research objectives, but which will not receive any budget.

Epidemic Science Leadership & Innovation Networks

Introduction

At any one time, the African continent experiences 100 or more ongoing disease outbreaks. As Africa undergoes rapid demographic growth, as the continent becomes increasingly connected, and as environmental degradation persists, the risks of outbreaks and novel disease emergence will likely intensify. Much can be learnt to mitigate, prepare for and prevent these occurrences from the scientific innovations developed in Africa, and from her resilience during both the COVID-19 pandemic and previous major infectious disease outbreaks.

Vision and Mission



Vision

Investment in African epidemic and pandemic sciences research and preparedness will protect and enhance national and regional healthcare systems and help to safeguard African economic stability by mitigating adverse socio-economic impacts.

Developing a thriving epidemic and pandemic sciences sector across academia, industry, government and policy organisations, and preparing and retaining an emerging generation of high-calibre scientists, policymakers, and health care leaders in Africa will enhance health security and economic prosperity on the continent and leverage African expertise to influence research, preparedness and response priorities at a global level.



Mission

This call will foster a vibrant ecosystem of **Epidemic Science Leadership and Innovation Networks (EPSILONs)** across Africa. Each EPSILON will comprise between three and six organisations in a 'hub and spoke' consortium, and will develop into an established network of research excellence in a thematic area relevant to epidemic and pandemic sciences research, preparedness and response.

These networks will nurture and promote world-class epidemic and pandemic sciences research and innovation in Africa, developing a critical mass of experts on the continent across all health-related sectors - including One Health - to address ongoing health challenges while strengthening capabilities to respond to future infectious diseases and health threats. They will contribute to developing communities of practice that may be leveraged for long-term collaboration and during future outbreaks to respond to urgent research and policy needs.

Call for Applications

Science for Africa Foundation invites applications for innovative research initiatives in epidemic and pandemic research, preparedness and response. Applications should take into consideration pressing local, national and regional research priorities, resources, current environments, and existing capacity and preparedness levels. Initiatives should be broadly associated to one of the thematic research areas detailed below, but transdisciplinary research is encouraged, and applicants should outline how they might draw upon a broad range of expertise within their proposed programme.

We emphasise that we are looking for visionary consortia which will develop their own programmes of relevant research work. The proposed activities can be along the continuum of basic-translational-clinical-applied-implementation-operational research and policy engagement.

Key areas



Vaccinology / early-stage vaccine research for epidemic- and pandemic-prone infections

Increasing African independent capability in vaccine research and development is a critical priority given the limited development of vaccines for neglected diseases and populations, and the failure of equity in global access to vaccines. This research theme in academic vaccinology could complement other emerging initiatives in vaccine development and production within Africa by undertaking early-stage R&D on vaccine candidates for African population needs and building the academic workforce.



Virology – genotype to phenotype

Whilst the COVID-19 pandemic has resulted in many initiatives to increase and scale genomic pathogen surveillance and identify new 'variants' as they emerge, it remains challenging to understand how a particular genetic code translates into the behaviour (the phenotype) of a virus. In many countries, research capabilities to 'phenotype' viruses are limited. A programme of research in this area could seek to provide new insights into genetic determinants of viral behaviour and catalyse development of viral phenotyping capabilities on the African continent.



Clinical research and clinical trials on epidemic and pandemic prone infections

High-quality clinical trials are the cornerstone of evidence-based medicine. However, most trials are led by and conducted in high-income countries. Many clinical trials are poorly designed and fail to generate actionable evidence. Innovations during the COVID-19 pandemic demonstrated that streamlined 'point-of-care' trials can produce reliable results that change practice at lower costs. This research theme could seek to answer an important question about clinical care for an infectious disease whilst simultaneously strengthening the ecosystem for the design and conduct of high-quality, streamlined, and regulatorily compliant Africa-led clinical trials.

Call for Applications

Key areas



Epidemic and pandemic public health policy research

Vaccines only became available around one year into the COVID-19 pandemic, and in some areas were never accessible at scale. In future epidemics and pandemics, vaccines may be more difficult (or even impossible) to develop. Although certain public health measures – such as test, trace and isolate, social distancing, and lockdowns – were instrumental during the pandemic, their implementation was informed by a weak evidence base. These interventions may have had a profound and long-lasting negative social and economic impact across Africa. This research theme could, for example, assess the effectiveness, acceptability and affordability of public health measures for epidemic or pandemic control on the African continent, evaluate policy making processes, or explore more 'intelligent' application of layered public health interventions that strengthen systems for readiness, recovery and resilience.



Climate change, biodiversity and pandemic prevention

Seventy five percent of all emerging infectious diseases that affect humans originate from animals. It is widely accepted - and evidence shows - that the rate of infectious disease emergence is increasing because of the intersection of significant changes in multiple drivers such as human population density and connectivity, ecological disruption, habitat encroachment, and climate change. This thematic area may draw upon 'One Health' and/or climate science approaches to provide new insights into an existing or emergent zoonotic threat to human health and its mitigation, whilst simultaneously strengthening relevant African research capabilities.



Advanced data assembly and analytics for threat assessment and mitigation

Understanding and reducing uncertainty, a defining characteristic of the early stages of all epidemics and pandemics, is key to guiding critical policy decisions. There are numerous data and information domains where data capture, processing and analytics, data integration, and data presentation can be improved. Evolving tools such as machine learning, artificial intelligence, and advanced statistical and mathematical modelling offer opportunities to significantly improve signal detection, situational awareness, and epidemic dynamic analysis to provide improved intelligence for decision-making. This research theme could seek to develop, evaluate, and apply cutting-edge data methods and tools to increase the quality and speed of epidemic threat assessments and the provision of evidence for mitigation, whilst increasing African capabilities in this rapidly evolving field.



Social and behavioural sciences

Epidemics and pandemics start and finish in communities. The COVID-19 pandemic was, and continues to be, a 'case study' in the vital importance of understanding and addressing different perspectives and of involving communities in co-developing solutions. Social and behavioural sciences have, however, been a relatively neglected area of research to date. This research theme could, for example, advance understanding of the social and behavioural dynamics affecting, and affected by, epidemics and pandemics, aiming to define best practices and collective actions for engaging with and involving the public and communities in preparedness and response.

About EPSILON initiatives

The primary location of proposed EPSILON initiatives must be in Africa, and preliminary applications are invited from universities and research institutions based across the continent. Institutions outside Africa are invited to collaborate on applications led by an African institution. Applications are particularly encouraged from consortia whose component institutions:

- · Strongly support and commit to safeguarding
- Foster diverse workplaces and environments
- Balance scientific excellence with equity (disciplines, sectors, regions, institutional capacity) when selecting partner and collaborating institutions and in their recruitment of staff and students
- Demonstrate policies to achieve value for money, manage risk, and build strong research cultures and environments.



How to apply

Applicants should prepare a core budget over five to six years for up to USD \$4 million, plus specific additional elements detailed in the Budget Guidance. It is also anticipated that successful consortia will attract additional funding from other sources over the duration of the programme. More information can be found in the budget guidelines.

Applications must be submitted online via the SFA Foundation Grants Agaseke Management System (Agaseke GMS) at

toundation/Login.aspx.

Applications submitted through email or via any other means shall be deemed ineligible. Application forms, guidance notes and links to other relevant documents are available online at https://scienceforafrica.foundation/funding.

Applications must be prepared and submitted in English.



Research alignment to country and regional needs

Applicants will be required to demonstrate that their proposed research is aligned to country and/or regional needs and priorities. This is because successful consortia will be expected to deliver a mix of discovery, translational and applied research (including policy engagement). Applicants should demonstrate that they are meeting a need identified through wider stakeholder and community engagement. At the full application stage applicants will be required to solicit strong letters of support from beyond the applicant institutions e.g. from Ministries of Health, policy think tanks, or scientific, economic and social commissions with advisory roles to governments.



Key dates

Applications must be received for the preliminary and full application stages by 17h00 (5:00PM) EAT on the stated dates. The preliminary application may be submitted by anyone who meets the criteria outlined above. The opportunity to submit a full application will be limited to those who are invited to do so based on the competitiveness of the preliminary application. Among those submitting full applications, a limited number will be invited to interview.

Supporting an emerging generation of scientists

Applicants should outline how they intend to foster a working environment that cultivates the skills, knowledge and networks to nurture and retain young professionals to help safeguard a sustainable African workforce in epidemic and pandemic research. This may include mentorship programmes or other initiatives.

Timelines

- November 2023 31 January 2024 Preliminary application window
- April June 2024 Full application window
- October 2024 Interviews and announcement of conditional awards

Outcomes and impact

 Applications should indicate how the proposed programme of research would align with the indicative EPSILON Theory of Change

Review and Selection

The review criteria for submitted applications will include but will not be limited to the following:

Preliminary Review

- Bold, compelling research proposal
- Potential of the consortium to establish a sustainable and impactful research network

Full application review

- Leadership strategy that strengthens the capacity of partner institutions to undertake high-quality research and to develop career pathways
- Rationale of proposed research, including alignment with and relevance to national, regional and international strategic objectives
- Quality and innovation in research objectives
- Strength of investigators' track record and their expertise in the relevant field(s)
- Suitability of the research environment
- Mainstreaming of gender, equity, diversity and inclusion
- Strategies for balancing excellence with equity in recruitment and selection of partners and staff
- Strategies for identifying and documenting impact
- Strategies for data-sharing both within and beyond the consortium
- Strategies for rapid response to emerging research needs during outbreaks

Consortia formation and management



Balancing excellence with equity

- Single institution applications will NOT be accepted. To achieve a measure of equity and to improve capacity in the relevant field, without compromising scientific excellence, research institutions that are generally recognised to be strong or high-performing will be required to pair with institutions across countries and regions where there is a clear need for research capacity-strengthening.
- Each consortium must include no fewer than three African institutions and no more than six (6) institutions overall (one lead institution and at most five (5) partner institutions).
- Partner institutions may be from within or beyond Africa, including international institutions.
 Applicants may include a maximum of three partner institutions from outside Africa. The total funds to be allocated to institutions outside Africa cannot exceed 10% of the total application budget.
- Applicants are advised to carefully consider the number of partner institutions and collaborating
 institutions to build manageable consortia in proportion to the work plan and budget. There will be
 no limits on the number of collaborating institutions, but applications should indicate how many are
 included, where they are based, and their specific and sectoral knowledge contribution.
- Given the need to strengthen pathways to, and evaluate, impacts it is strongly recommended that applicants identify at least one knowledge broker/partner, think tank, or a consortium advisory board whose membership includes policy specialists and thought leaders, community stakeholders etc. These individuals will provide important guidance to the consortium on knowledge translation, linkages with governments and communities, and will help bridge gaps among research, policy and practice.



Diversity and inclusion

Whilst the quality of proposed research will be the most important selection criterion, leadership by women and young researchers is particularly encouraged, in both lead and co-applicant roles. Applicants should be clear how they would identify and address local and systemic barriers faced by female researchers when building scientific careers beyond being placed in leadership roles, training in new skills, and developing leadership styles. This may involve addressing subtle biases in practices and policies that influence womens motivation to lead and intervention that challenge traditional metrics of leadership.

Upon award, recruitment of staff and students will also be monitored to seek gender parity and equity (individuals and research topics). Applicants MUST select partner / collaborating institutions and plan to recruit staff / students from diverse cultural backgrounds across the African continent, considering variation in geography, regional spread and economic status.



Programme strategy and management

In addition to the relevant strategic area(s), successful consortia must have a defined scientific research strategy that is relevant to national and/or regional health and/or non-health research, socio-economic, environmental and sustainable development priorities. Consortia should capitalise on the existing strengths of institutional partners to collectively and synergistically strengthen Africa's research ecosystems.

Successful consortia will need to implement robust internal programme governance and management and should consider long-term sustainability. Lead applicants will need to undertake programme and partner risk assessments and must demonstrate management processes and systems, strong financial governance and controls, documented standard operating protocols, and programme monitoring, evaluation and learning frameworks. Equally important will be strategies for monitoring, documenting and reporting short- term, medium-term and long-term impact stories arising from priority research being undertaken by the consortium, and the ability to leverage these for advocacy and policy change objectives.

Consortia formation and management



Letters of support

Where indicated in the application form at preliminary and full application stages, applications must be accompanied by letters of support from senior institutional leadership (e.g. Vice-Chancellors, Deputy Vice-Chancellors, Directors of Research) at all lead and partner institutions. At preliminary application stage, only a letter of institutional support from the lead institution will be required.



Compliance with Good Financial Grant Practice (GFGP)

Lead institutions will be responsible for overall funds management, accountability and reporting on behalf of the consortium. They will be supported and funded to achieve compliance to the internationally-recognised GFGP standard at Gold or Platinum level, if not already certified.

Partner institutions will be required to undergo assessment as to compliance with GFGP and should be willing to work towards compliance during the programme. GFGP compliance will not be required for collaborating institutions.



Monitoring, evaluation, accountability and learning (MEAL)

MEAL processes will support learning and development and provide accountability to stakeholders, including funders. Appropriate activities and resources – including dedicated staff - should be included in all applications.

Consortia will be required to develop MEAL plans and to integrate their findings into improved practice. They will also be required to participate in a global MEAL plan that will evaluate the performance and impact of the EPSILON network research and activities at strategic level to demonstrate impact.



Across-EPSILON opportunities

There will be additional funding and opportunities for individuals based at each EPSILON to access a substantial programme of research capacity-strengthening and policy activities, to include:

- · Leadership training in pandemic research, preparedness, and response
- International and cross-disciplinary exchanges and fellowships
- Policy exchanges and engagement
- Catalyst funding
- Professional development for research management and finance staff

Consortia formation and management



Catalyst grants

Each successful EPSILON will receive additional funding for catalyst grants to support innovative initiatives with the potential to achieve transformative changes in epidemic and pandemic sciences. These awards will aim to accelerate the development and implementation of ground-breaking ideas, projects, or initiatives. They should encourage collaboration between researchers, organisations, and/or industry partners to foster cross-disciplinary approaches.

Catalyst activities may take place within a single institution or between different organisations. Awards could supplement an existing grant to fund an emerging idea or may support a standalone project. It is expected that a report or paper will be submitted for each award. Authors will be encouraged to use the Open Research Africa publishing platform.

In addition to the core budget of up to USD \$4 million applicants should budget at least 25 catalyst awards, ringfenced at \$10,000 - \$15,000 each. In the full application applicants should outline their approach for establishing a catalyst fund, their selection criteria, and a communications strategy.



Research and innovation fellowships

Each successful EPSILON will receive additional funding for competitive research and innovation fellowships. These would support extended research-focussed placements within a leading academic or commercial entity to undertake work that contributes to new skills development and scientific innovation.

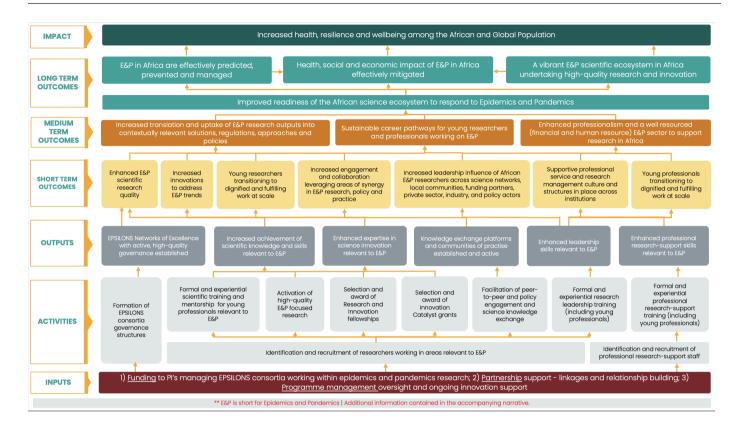
In addition to the core budget of up to USD \$4 million applicants should budget for at least 15 fellowship awards, ringfenced at approximately \$40,000 each to cover travel and subsistence costs, bench fees, and open access publishing fees. In the full application applicants should outline their approach for establishing a fellowship fund, their selection criteria, and a basic communications strategy.



EPSILON exchange awards

Each successful EPSILON will receive additional funding for short scientific exchanges between institutions within the EPSILON network. In addition to the core budget of up to USD \$4 million applicants should budget for at least 15 exchange awards at \$10,000 each. These awards would cover relevant costs for a single individual for up to six weeks. In the full application applicants should outline their approach for establishing an exchange fund, their selection criteria, and a basic communications strategy.

Indicative Theory of Change



Key principles

Successful EPSILON Initiatives will align their research to international principles for strengthening research capacity in low- and middle- income countries, as identified by ESSENCE on Health Research.* The principles are listed below, together with a description of how they should be applied across each consortium. Applicants may wish to refer to some or all of these principles when preparing submissions.

Key areas



Network, collaborate, communicate and share experiences

Efforts to strengthen and develop research capacity are part of wider networks of activity. Successful consortia should make efforts to link with other scientific and policy collaborations and initiatives, and to engage effectively with a range of relevant stakeholders.



Understand the local context and evaluate existing research capacity

Research priorities should be informed by local needs, which can be determined in consultation with researchers, communities and policymakers. Decisions on research activities should be informed by assessments of existing and planned resource capacity.



Ensure local ownership and active support

EPSILON Initiatives should be owned and led by African institutions with full institutional commitment. Government buy-in should be demonstrated by high-level support and active participation, management and leadership.



Build in monitoring, evaluation and learning from the start

Awarded programmes will be asked to develop and implement a monitoring, evaluation and learning plan, based on the overall monitoring, evaluation and learning framework, to capture individual programme learnings and strategy-wide metrics.



Establish robust research governance and support structures and promote effective leadership

Awarded programmes should ensure that appropriate mechanisms are used to support staff and researchers and to give programme management the mandate to lead and make decisions.



Embed strong support, supervision and mentorship structures

Awarded programmes will be asked to include strong supervisory and mentorship structures to ensure the success of individual students and to contribute to a strong research culture.



Think long-term, be flexible and plan for continuity

Awarded programmes will be encouraged to actively seek long-term sustainability through support from national governments and other funders.







Data information and sharing

Open Science and Open Publishing provide additional value-added opportunities for funded research. Applicants shall be required to demonstrate how their research will contribute to data information and sharing as a means of advancing scientific knowledge for Africa's development, and how they will comply with data protection measures. SFA Foundation shall hold these funds to be applied across all consortia for open research publications and data sharina.

EPSILONs shall be required to share research findings and data that are relevant to any epidemic or pandemic rapidly and openly to inform the public health response.

* ESSENCE on Health Research, 'Seven Principles for Strengthening Research Capacity in Low- and Middle- income Countries: Simple ideas in a complex world', ESSENCE Good practice document series. Available online at www.who.int/tdr/publications/seven-principles/en/.

Budget Guidelines

The EPSILON ecosystem will nurture and promote world-class epidemic and pandemic sciences research and innovation in Africa, building a critical mass of experts across the continent to address ongoing health challenges whilst strengthening capabilities to respond to future infectious diseases health threats. Activities will contribute to developing communities of practice across academia and industry that may be leveraged for long-term collaboration and during future outbreaks to respond to urgent research and policy needs.

Applicants must provide an outline budget for five to six years. The figures should reflect the costs being requested from SFA Foundation only and should not include contributions from other sources. The outline budget should include a core budget of up to USD \$4 million, plus specific additional elements.

Applicants should be aware that the SFA Foundation team will undertake a rigorous budget review when determining those to be invited to submit full applications. At the preliminary stage applicants should budget only in USD. At the full application stage applicants may be expected to show conversions from local currencies where appropriate.

The budget narrative should be clear and detailed enough to support the calculated costs by budget line.

The indicative budget lines, with guideline notes, are detailed below.

https://scienceforafrica.foundation/policies/costguidelines on allowable and disallowable costs.

Personnel

This denotes personnel who **directly** support the research initiative. The level of effort (FTE) will be indicated as a percentage of actual salaries paid and applicable institutional benefits for the positions included in the budget request. **The personnel** budget is expected to include a minimum of a senior scientific investigator, two senior postdoctoral researchers, and two support staff, or at least 5.0 FTE in total.

Salaries

The Principal Investigator and co-applicants may request a salary. Salary recovery for staff at institutions in low- and middle-income countries can be considered. If no appropriate scale exists, the salary requested should be at a level commensurate with individuals of an equivalent status, employed locally or at other organisations in the relevant country.

Fringe benefits

Fringe benefits are allowable as a direct cost (if not included as an indirect cost) in proportion to the salary charged to the award. These benefits may include compensation for occupational injuries, life insurance, pension, health insurance, training, and staff development. They should be in line with the relevant applicant's institutional policy for renumeration and benefits, and with approved pay scales.

Materials and Consumables

These denote initiative-specific consumable items such as animals, lab supplies, clinical supplies, glassware, chemicals, reagents, etc.

https://scienceforafrica.foundation/policies/policy-on-materials-and-consumables

Equipment

This refers to items that have a useful life longer than one year. It includes the cost of purchasing equipment – including laptops and software – and related costs such as installation that are required to deliver the research. These items shall be charged at cost. Depreciation costs are not allowable.

https://scienceforafrica.foundation/policies/policyon-assets-and-equipment

Travel

Travel shall include a breakdown for accommodation, air travel, ground transfers, meals during travel, visas, and other travel-related expenses. Air travel shall be strictly budgeted in economy class, regardless of institutional guidelines or exceptions.

The budget should include planned meetings for the consortium, and/or travel to external conferences

and workshops. At this stage it is anticipated that travel costs for large annual meetings that bring together all EPSILONs are to be borne by SFA Foundation and PSI.

https://scienceforafrica.foundation/policies/ participant-travel-and-expense-policy

Communications

These are costs that will be incurred to meet the direct communication needs of the initiative as defined by the scope of the application. Applicants should refer to the communication guidance offered by SFA Foundation.

The communications budget should cover the cost of defining the programme's key messages and producing aligning collateral (banners, website, brochure/factsheet, programmatic slide deck); and documenting and showcasing impact (infographics, impact stories, media engagement and event mapping).

Office Support Costs

These are costs that will be required to ensure that the initiative runs smoothly. They should cover all direct administrative costs for managing the initiative within the consortium. Direct office support costs include, but are not limited to, monitoring and

evaluation costs, office supplies, stationery, direct utility bills, direct rental spaces, and audits.

Indirect costs

These denote costs incurred centrally for the benefit of common or joint objectives for an institution and which ultimately benefit all activities. They are not directly related to any single project or activity but are a necessary part of the associated costs. **These should not be included as part of office support costs.**

Applicants should budget for indirect costs at a maximum rate of 10% of all direct costs. Indirect costs cannot be charged on capital assets over USD \$1,000 per unit. Costs associated with procurement and maintenance of equipment during the initiative may be charged as direct costs.

The calculation for indirect costs should be supported by appropriate institutional evidence as a percentage or a breakdown of individual costs / activities. SFA Foundation shall review applicants' institutional policies for indirect costs.

Inflation

Applicants should include an inflation factor per year. The inflation rate should be supported and evidenced by Central Bank data.

Additional budget

Catalyst grants

Applicants should include a budget for at least 25 grants of between USD \$10,000 to USD \$15,000 each, as per the call guidelines, up to a total of USD \$375,000. These costs are **in addition to** the USD \$4 million core budget.

Research and Innovation Fellowships

Applicants should include a budget of at least 15 competitive research and innovation fellowships at approximately USD \$40,000 each, as per the call guidelines, to include travel, accommodation, subsistence and research costs up to a total of USD \$600,000. These costs are **in addition to** the USD \$4

million core budget.

EPSILON exchange awards

Applicants should include a budget for at least 15 exchange awards at approximately \$10,000 each, up to a total of USD \$150,000. These awards would cover relevant costs for a single individual for up to six weeks. These costs are **in addition to** the USD \$4 million core budget.

Indirect cost

An indirect cost of 10% of the total value of the additional budget applies.

Epidemic Science Leadership & Innovation Networks (EPSILON) Initiative

