CEPI | BioPREVAIL

CALL FOR APPLICATIONS

BioPREVAIL × CEPI

Biosecurity Innovation Challenge

Biosecurity and the 100 Days Mission

TEAMS	SEED FUNDING	ACCELERATOR	APPLICATIONS CLOSE
At least three	USD 50,000	6 months	31 Oct 2026

01 About the Biosecurity Innovation Challenge

The BioPREVAIL × CEPI Biosecurity Innovation Challenge will identify and incubate solutions that create and maintain strong biosafety and biosecurity practices when research, manufacturing and deployment must move at speed, the conditions of the 100 Days Mission, and these practices must continue to hold once a design/build/test surge has passed. The Challenge is delivered by the Global Health Security Fund (GHSF) through its BioPREVAIL initiative, in partnership with the Coalition for Epidemic Preparedness Innovations (CEPI). It will culminate in a public showcase of incubated solutions in Geneva, Switzerland in May 2027.

This is an accelerator, not a grant program.

GHSF and BioPREVAIL are not a pass-through for funding where an award is handed over and outcomes are measured at some later date. Selected teams will join a high-touch, six-month incubation in which BioPREVAIL co-develops the solution with them, including through introductions across our partner network, structured mentorship from members of the Innovation Challenge Advisory Council and the wider BioPREVAIL community, help positioning the work for follow-on funding, and a place on the stage during World Health Assembly. We expect the value of participation to exceed the monetary award by a considerable margin, and we would rather receive an early-stage idea that is transformative than a polished one that is less impactful.

02 What we mean by biosecurity

For the purposes of this Challenge, "biosecurity" is shorthand for physical and laboratory biosafety and biosecurity together: the practices that protect people, communities and the environment from accidental harm, and those that prevent and/or mitigate unauthorized access, loss, theft, misuse and the dual-use potential of biological work. We are interested in both accidental and deliberate failure modes, and in the many controls that serve both.

We take a One Health view. In practice this means that a solution developed for a human health laboratory, a veterinary or agricultural facility, a food-safety or environmental laboratory, or for the points at which those settings meet, is equally welcome, and that we expect to learn from the veterinary and agricultural biosecurity traditions, where containment, movement controls and chain-of-custody have long operational histories.

WHAT THE CHALLENGE IS FOR

We are looking for solutions that improve biosafety and biosecurity in the setting of rapid detection of, and response to, the emergence of especially dangerous pathogens, in the context of the 100 Days Mission. That includes innovative biosafety work related to the rapid development and manufacture of biologics; work that strengthens security around vaccine research, development and manufacturing; and work that closes deliberate-misuse or accidental-release gaps in laboratory, clinical, field, digital and manufacturing settings. A proposal qualifies if it addresses a clear biosecurity or biosafety gap in this rapid- response context.

WHAT IS OUT OF SCOPE

Two things sit outside this call. First, we are narrowing biosecurity to preventing deliberate and accidental risks, which is one piece of the broader "health security" equation. We are therefore not funding disease surveillance systems, general global development financing (as distinct from the biosecurity-specific financing described above), non-pharmaceutical public health interventions, or the build-out of regional manufacturing capacity as a health security aim. Biosecurity innovations applied to vaccine manufacturing processes, including rapid-response platforms and decentralized or regional facilities, remain very much in scope. Second, we are not seeking proposals whose only contribution is the procurement of standard personal protective equipment or standard laboratory systems, or general laboratory safety with no link either to a security dimension or to the rapid development and manufacture of biologics. Novel approaches to protective equipment or to laboratory safety practice are welcome where they close a gap that current practice does not, and otherwise meets the eligibility requirements.

03 The accelerator

A minimum of three teams will be selected. The accelerator runs for six months and culminates in an in-person Innovation Showcase on the margins of World Health Assembly 2027 in Geneva, Switzerland. Travel and accommodation for selected teams will be provided. The funding ceiling and accelerator duration are fixed.

- **Non-dilutive seed funding.** Available to each team is a maximum of USD 50,000, contingent on approval of the project narrative, project budget and budget narrative. No equity is taken. Teams retain full ownership of their intellectual property, but must adhere to open access principles where applicable in line with CEPI's Equitable Access Policy.

- **A dedicated lead mentor and an on-call expert bench.** Each team is paired with a lead mentor who serves as its primary technical and strategic point of contact for the full program. Teams can also draw on BioPREVAIL's extensive network of experts in biocontainment engineering, biosafety, regulatory affairs, fabrication, intellectual property and technology commercialization.

- **A structured curriculum: the BioPREVAIL Academy.** A series of working sessions are delivered across the incubation period covering customer discovery, user-centered design, intellectual property and regulatory considerations, brand and communications, fundraising (grants, non-dilutive capital, venture and accelerator pathways) and pitch development.

- **Regular office hours and milestone reviews.** Bi-weekly check-ins with the BioPREVAIL program team plus structured mid-term and end-of-phase reviews against each team's Performance Measurement Framework.

- **Senior student associate support.** Each team will be paired with a graduate student from The University of Texas at Austin College of Pharmacy and Dr. Janet Walkow's Innovating for Health Lesters Scholars Program. Student associates are available for projects including competitive landscape analysis, unique differentiation development, investor deck revision, marketing and advertising strategy, or a company-defined project.

- **A cohort and an alumni network.** Teams work alongside a peer cohort of innovators tackling adjacent problems, with structured opportunities for cross-team learning, and join the growing BioPREVAIL community of alumni, mentors, advisors and institutional partners across multiple continents.

- **Demo day on a global stage.** A place at the public showcase on the margins of World Health Assembly 2027 in Geneva, Switzerland, presenting to funders, policymakers, technical experts and potential partners, with recordings and materials distributed across BioPREVAIL's networks afterwards. Travel and accommodation are provided.

- **Investor and funder access.** Warm introductions across the GHSF, CEPI and partner networks, and active, one-to-one support in identifying co-funding, procurement channels and follow-on pathways after the program ends.

- **Visibility and credibility.** Profiling through BioPREVAIL's communications channels and press outreach, and the signal that comes with selection by an independent international judging panel.

- **A formal biosecurity review as a value-add.** Under GHSF's commitments as a signatory to the CEPI–NTI BioFunders Compact, each team's work receives a structured biosecurity review. We intend this as a service to the team as much as a safeguard: it gives teams a documented, credible assessment they can present to regulators, procurers and funders.

04 Areas of interest

The council has identified the following areas where sustainable biosafety and biosecurity most needs innovation under the conditions of the 100 Days Mission. They are guiding, not prescriptive. We list them so that applicants can see the kind of problem we mean, and we accompany each with examples drawn from the council's own thinking.

> **We will consider proposals outside these areas provided they fit the scope in Section 2, and we would be delighted to be surprised by something we did not think could be done in six months for USD 50,000.**

A Sharing data instead of samples: data security, sovereignty and inactivation

Approaches that let institutions share and use information about dangerous pathogens without moving the pathogens themselves, and that keep the resulting data secure and under local ownership. Examples: federated learning and other distributed analysis approaches that maintain data sovereignty and security while sharing across a network; reference panels and sequence libraries that reduce the need to move dangerous material; and validated inactivation mechanisms and protocols that make a sample safe to characterize, store or ship when material genuinely must move. The wider institutional problem here is large; we are looking for the tractable component, and for tools a laboratory could adopt without renegotiating its national framework first.

B Chain-of-custody and tamper-evidence

Provable integrity of high-consequence specimen logistics, inside the laboratory and beyond it. Digital chain-of-custody and certificates of access and analysis that cannot be silently edited; multi-point tamper evidence covering the life-limited parts of vaccine work, from the clinical sample in the field to seed stocks to the aliquot that left the freezer at 03:12.

C Diversion, misuse and the insider threat

Detecting theft, diversion and misuse by people with legitimate access- covering both physical samples and the data, sequences and digital assets that increasingly stand in for them, and understanding the conditions under which colleagues raise a concern. Examples: anomaly detection on inventory and access records; short, embedded reinforcement training in place of annual sessions; empirical work on what makes reporting easier; and empirical approaches to measuring personnel reliability and resistance to coercion. This field is short of data, so studies as well as tools are welcome. We are also interested in systems built to monitor for and deter misuse of AI-enabled tools across multiple models and providers, and to create appropriate transparency around it (mindful of information hazards). Because a live misuse incident may well not occur during the incubation, we are looking for the creation and validation of such monitoring and prevention systems rather than for demonstrated detection of a real event.

D Confirming and attributing the signal

Rapid confirmation of a specific pathogen, and the ability to attribute, or begin to attribute with higher confidence, whether a pathogen was released deliberately or accidentally, on the argument that where an incident is deliberate, apprehension is prevention. Given that well-funded programs have worked on attribution for years, we are not expecting a novel attribution science breakthrough. What we are looking for here is reduction to practice in resource-constrained settings: taking approaches already developed elsewhere and making them usable, affordable and field-ready where they are not available today, including connectors between existing genomic and laboratory-signature databases and miniaturized or lab-on-a-chip approaches tuned to the pathogens of concern.

E Compliance-to-action, and financing that sticks

Incentives and actions for turning audit and compliance findings into a facility and financing roadmap, then monitoring progress against it. Tools that link each identified gap to the standards, interventions and training that already exist, so both the facility and the program can evaluate the status quo. Tools, resources and systems for incentivizing the implementation, monitoring, accountability and routine financing of biosecurity actions in laboratory, private sector, digital and other relevant settings, including mechanisms that build biosafety and biosecurity requirements into technology design and procurement so that they are sustained rather than retrofitted.

F The digital–physical biological seam

Controls where instruction becomes physical, including safeguards on the digital systems now driving biological work, and interventions that make it harder for a physical agent to be produced from a digital system, or set of systems, without a human in the loop. Examples: four-eyes release and gated interfaces so automated unit operations accept only approved recipes; authentication of sequence files and of the constructs made from them; and safeguards for cloud laboratories, autonomous laboratories and laboratory robotics. We are equally interested in the intermediaries in this chain. We strongly encourage approaches that prevent the misuse of regional and online service providers (resellers, brokers and middlemen) and the routing services that sit between a user and a model or supplier as a route to dual-use materials such as synthetic DNA, or to dual-use AI capability. Applicants need not own or operate a cloud laboratory, foundry or robotic facility. Proposals that work with such facilities as partners or test sites, or that are designed to be adopted by them, are equally welcome; tell us in the application what access you have or intend to secure.

05 Other considerations

We will consider technologies, systems-based innovations, innovative training approaches, and empirical studies. The last of these deserves a word: some of the most valuable gaps in this field are evidentiary rather than technical. For example, we do not actually know the risk drivers in vaccine research, development and manufacturing facilities and laboratories in low- and middle-income settings, and a well-designed study that produced that evidence would be a legitimate use of an award. An innovative procedure or standard operating practice is eligible only when it demonstrably closes a gap that existing practice does not, in the spirit of a novel double-check enshrined in routine rather than a longer version of what is already on the wall. Of interest are SOPs and procedures that are not commonly found in similar settings, invented to address unmitigated risks in a facility or specifically adapted for local environments.

We are especially interested in solutions from other industries that can be applied to address the areas of interest above. Cross-industry collaborations or translational approaches where, for example, a best practice from the aviation industry (e.g. failsafe technologies, redundancy as a safeguard) is made applicable to the handling of dangerous pathogens will be viewed with great interest.

06 Eligibility

To be eligible, a proposal must meet all of the following. **These are gates, not scores.**

1. **Direct biosecurity enhancement.** The work must directly strengthen biosafety or biosecurity in the context of the 100 Days Mission vaccine goals as described in Section 2, in a way the applicant can articulate in one sentence.

2. **Substantial advancement within six months.** The proposal must identify what will be demonstrably true at the end of the incubation that is not true today, and that demonstration must be achievable with the funding available. Matching external funding, or existing company funding contributed to accelerate the solution, will be viewed favorably.

3. **Biosecurity risks of the work itself are mitigated.** All shortlisted proposals undergo formal biosecurity review by GHSF's Biosecurity Responsible Officer under the CEPI–NTI Biosecurity Funders Compact, with input from the judging panel. Proposals that create informational, civil-liberties or misuse hazards disproportionate to their benefit will not proceed. Applicants working in areas C, D and F should address this in their application.

4. **Readiness.** The core components of the proposed solution should already be validated at least at component or subsystem level. In practice, the level we are looking for is a prototype that has been demonstrated in, or in a close analogue of, the environment where the application is anticipated. We distinguish deliberately between the readiness of a component and the readiness of its application: a mature technology applied to a problem it has never been applied to is exactly the kind of proposal we want and will not be excluded on readiness grounds.

5. **Team.** Applications are open to companies, academic and research groups, national and reference laboratories, non-profit organizations and consortia from any country. Teams need not be located in the geographies of greatest applicability for the proposed solution, though see Section 7 on where solutions must ultimately work and on the composition of the cohort.

07 Where solutions need to work

The geographies of greatest interest to this Challenge are the low- and middle-income settings where vaccine research, clinical sampling and manufacturing for the 100 Days Mission increasingly take place, and where biosafety and biosecurity controls are hardest to fund and sustain. Applicability in those settings is not an eligibility gate, and a team based anywhere may apply. It is, however, the most heavily weighted consideration in assessment, alongside biosecurity impact.

We do not require a solution to be deployable in the most resource-constrained setting on day one. A solution that today works only in a higher-resource environment can still score well where the applicant sets out a credible path (technical, economic and operational) to use in lower-resource settings as connectivity, energy, computation and supply chains continue to develop. What we are assessing is the strength of that path, not the present-day answer alone. Proposals with no plausible route to applicability in lower-resource settings will score poorly on this criterion.

> Contextual knowledge is important. As such, applicants based in high-income countries proposing solutions for low-and-middle countries are strongly encouraged to apply with a substantive partner in the geography of intended use, and to describe that partnership in the application.

08 How applications will be assessed

Eligible applications will be scored by an independent panel of judges and evaluators against the criteria below. Provisional weights are shown; a full rubric will be published with the final call.

CRITERION	WHAT WE ARE LOOKING FOR	WEIGHT
Biosecurity impact and theory of change	How does this change the biosecurity environment in the facility, the workflow, the region or the system in which it is used, whether or not that setting is a traditional laboratory? Does it act where the gaps are, before an incident exists to be logged? Why must your solution be developed, and what happens to the world if it is not? How does it apply to the rapid development, manufacture or deployment of vaccines and other biologics in support of the 100 Days Mission?	**25%**
Applicability under constraint	Does the solution work, or can it credibly be made to work, in low-resource settings? Where it is not yet usable in those settings, is there a convincing technical, economic and operational path to getting there, and is the applicant honest about what that path requires? A solution that is proven first in a higher-resource setting and then moved is acceptable; a solution with no route to those settings at all is not. Does the solution return value to the communities or geographies where it is operated, and does it contribute to accelerated response capabilities?	**25%**
Feasibility	Is the milestone plan honest? Is what will be demonstrated at month six clearly stated and worth demonstrating?	**20%**
Sustainability and value	Who will use it, and who will pay for it, after the incubation? Does it return value to the communities from which pathogens and data originate? Does it still hold on day 101?	**15%**
Team	Is the project team qualified to perform the work described? Is there a proven track record of success? Is the team coachable and available to participate fully in the accelerator?	**15%**

09 How to apply

The process is designed to be easy to enter and progressively more demanding. We would rather receive many short applications than a few exhaustive ones, and no team should be deterred by the first stage or asked to disclose proprietary detail before it is necessary.

STAGE 1

Expression of interest

A short online form, expected to take no more than two hours to complete, along with a pitch deck in PDF.

1. The problem, in one paragraph: which hole in the log are you addressing, and why does it matter under a 100-day clock?
2. The solution, in one paragraph, written so that a teenager or a grandparent would understand both the gap and the fix.
3. Which area(s) of interest it relates to, or why it sits outside them and still belongs in this call.
4. Current readiness: what exists today, what has been validated, and where.
5. What will be demonstrably true at month six that is not true today, and what USD 50,000 will be spent on to get there.
6. Where it will work: the settings in which the solution is applicable now, and the path to lower-resource settings if it is not yet applicable there.
7. If this award is not received, would your idea be funded from other sources? Why is this award best suited for your application, compared with other sources of funding?
8. If your solution works, who will use it and who do you expect to pay for it?
9. Dual-use and misuse: what hazards could your solution create, and how have you thought about them?
10. The team, in brief, and what you would want from BioPREVAIL's network beyond funding.

STAGE 2

Shortlist

Shortlisted teams will be asked for a small amount of additional information, which may include a short technical annex, a budget, letters from any partner institutions, and the material needed for formal biosecurity review.

STAGE 3

Interview

Teams that advance to this stage will be interviewed live, virtually, by the panel. We have found that a ten-minute pitch and twenty minutes of questions tells us more about the state of a technology than any form. Members of the Innovation Challenge Advisory Council may join interviews where their expertise is relevant.

STAGE 4

Selection and onboarding

Three teams will be selected and notified. Incubation begins with an onboarding session and a kick-off meeting with the BioPREVAIL team and mentors.

A note on the use of artificial intelligence

We recognize the widespread use of artificial intelligence (AI) tools and welcome their use when they help democratize communication and access to knowledge, skills, and resources. Information and materials submitted as part of this process may be developed with the support of AI, provided AI is not used as a substitute for the team's own work and judgment. Any use of AI must be disclosed, including a brief explanation of how it was used.

10 Indicative timeline

Call published	September 29, 2026
Virtual information sessions (two, in different time zones)	October 6, 2026 - 10am (CET); October 8, 2026 - 6pm (CET)
Applications close	**October 31, 2026**
Rolling evaluation and shortlisting	October 12, 2026 - November 3, 2026
Interviews	Week of November 9, 2026
Selection meeting and notification of teams	November 16, 2026
Deadline for teams to accept	November 23, 2026
Onboarding and kick-off; incubation begins	December 1, 2026
BioPREVAIL Academy sessions	Begin January 5, 2027
Pitching bootcamp	Week of May 3, 2027
Innovation Showcase, Geneva, Switzerland	24–27 May 2027

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