

Coalition for Epidemic Preparedness Innovations (CEPI)

Call for proposals (CfP-2) Step 2 Topic: Platform technologies to enable rapid vaccine development for epidemic prone infections

Reference number: CEPI-CfP-002-Step2

Given a successful review of preliminary proposals in Step 1 of the CEPI Call for proposals for Vaccine platform technologies, CEPI hereby invites shortlisted applicants to submit a full proposal for funding. This document describes the scope, requirements and processes for proposal submission, review, and selection for funding. Further details can be found at <http://cepi.net/calls>.

In this step, applicants are requested to submit a full proposal along with a series of relevant templates and further information on experts and partners in order to fully detail the proposed platform and process. All continued applications will be expected to build on the feedback provided at the completion of Step 1 and to continue under the previously established criteria for eligibility.

The deadline for submission of step 2 proposals is **3 p.m. Central European Time, 27 February 2018**

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Introduction

On 1 September, CEPI launched its Second Call for Proposals (CfP) on Vaccine platform technologies to promote the objectives of working towards development of real time response capabilities to novel emerging threats and to immunize at-risk populations against emerging infectious diseases, with the potential of great public health impact through rapidly limiting or ending outbreaks. Following an initial round of preliminary proposal review (Step 1), the CEPI Secretariat hereby invites selected applicants to submit a full proposal for a second stage (Step 2) of competitive review for funding consideration.

Who can apply?

This Step of this Call for Proposals (CfP-2) on Vaccine platform technology is limited to shortlisted invitees from Step 1 that was launched in September 2017. Only invitees who have received a formal invitation to the Step 2 process are eligible to submit a full proposal.

Applicant guidelines

All communication of information and documents related to this call must be conducted in English. No costs incurred by the applicants will be covered for the development and submission of proposals, or for contractual negotiations if applicants are selected for funding.

CEPI uses the online application system of the Research Council of Norway (RCN) for the submission of proposals under this call for proposals. Application must be made through this portal with each form submitted as per the instructions provided below. In addition to the submission of the proposal via the RCN system templates, will be required to be submitted by email to cfp@cepi.net as detailed below.

In case of questions in relation to the electronic submission system, access to proposal form templates, or any other issue related to this call for proposals, please contact cfp@cepi.net. The CEPI secretariat will address your questions within the shortest possible timeframe. Any questions submitted, along with answers, may be made public. [Instructions for applicants](#) as well as a summary of [frequently asked questions and answers](#) (FAQs) will be uploaded to the CEPI website.

Submission overview

For the submissions to be accepted as registered, applications must fulfil the following norms:

- Online submission must be completed before **3 p.m. Central European Time, 27 February 2018**
- Applications must consist of **only the requested documents**
- All documents must be submitted following the provided instructions
- The project proposal document cannot exceed the maximum **page limit of 30 pages**

Any submission not fulfilling the above norms will not be considered for further review. Applications that fulfil these norms will be registered by the RCN and screened for eligibility.

Proposals must supply essential evidence as laid out in the templates and the proposal document, must meet the presented timeline requirements for completion, must contain sufficient detail and clarity for review of the proposed process' and any claims made within the proposal must be supported by presented evidence.

All proposals must remain consistent with the eligibility requirements as laid out in the [call text for Step 1](#).

Proposal and templates

Entities that want to respond to this call for proposals must submit their Step 2 proposal to CEPI via the [online application system](#) of the Research Council of Norway before **3 p.m. CET¹ on 27 February 2018**. All documents must be uploaded as pdf files.

- A completed **Project description** template (**max. 30 pages**)
- A **detailed Gantt chart** of the project (.pdf or .mpp format), at the level of detail of:
 - o *FSI-LSO-TLR-CSR² for clinical studies*
 - o *CMC USP, DSP, Analytical, Formulation and Stability plans*
 - o *Study protocol, Start and Study report approved for preclinical studies*
- **Budget templates and narratives:**
 - o **1 budget template and narrative** for the overall project
 - o **3 budget templates and narratives; 1 set for each** of the **3** target pathogen work streams
 - o **1 budget template and narrative** for **each** sub-awardee
- 1 completed **Milestone** template
- 1 completed **CMC specification** template
- 1 completed **Evidence** template
- 1 completed **Assessment of Immune Mechanisms** template
- 1 completed **NC3R Animal welfare checklist**
- A maximum of 10 **CVs or bio sketches** that have not been submitted previously (*max. 2 pages per CV/bio sketch*) for *Applicants, Partners and Key Experts*
- Signed **letters of support** for **all partners** confirming their agreement to participate in the proposed projects and agreeing with the content of the proposals.

Templates and guidelines for the required attachments are accessible via [the CEPI](#) and [RCN website](#). Submissions that exceed the page limits given above will be excluded from consideration. No additional documents should be submitted.

In addition to submission of your application via the myRCN portal, all requested templates must be sent by email to cfp@cepi.net immediately after submitting your application online.

Template	Instructions
Milestone	<ul style="list-style-type: none">▫ <i>Show the key activities and events on a relevant timescale for each target pathogen</i>▫ <i>Please provide details for all proposed key events, and other events as relevant to your platform</i>▫ <i>Also detail clearly who is responsible for each activity and whether this is a formalized agreement of an identified partner</i>

¹ Please note that the given deadline is absolute. Potential applicants are recommended to complete and submit the proposal well ahead of the deadline. Please refer to the "Check-Page" function frequently during creation of the electronic application.

² **FSI** - First Subject In, **LSO** -Last Subject Out, **TLR** - Top Line Results, **CSR** - Clinical Study Report, **CMC** - Chemistry, Manufacturing, and Controls, **USP** - Upstream Process, **DSP** - Downstream Process

	<ul style="list-style-type: none"> ▫ Provide information on the various timelines and the state of any work being conducted (particularly where this has already been started or even already concluded) ▫ If a proposed milestone is not appropriate for the application please provide clear information as to why this is not relevant ▫ If any timelines are unusual or out of the ordinary please explain why (especially where these are significantly shorter or longer than would be normal)
Budget template	<ul style="list-style-type: none"> ▫ Provide a detailed breakdown of the budget requirements for the proposal ▫ Separate budget plans are required for each sub-awardee ▫ This should clearly include all activities to be funded under the proposal and all sub-awardees to be funded
Budget narrative	<ul style="list-style-type: none"> ▫ Please explain any and all relevant details not captured in the budget template ▫ Explain any methods used to handle or break down budgets (such as how cross cutting costs are presented in the per pathogen break down) ▫ Justify cost elements and identify their needs in this form
Standard questions for non-human primates, cats, dogs, pigs, equines and rodents	<ul style="list-style-type: none"> ▫ Provide feedback to the questions for all relevant animal models being used in the proposed preclinical studies and consult the guidelines to ensure appropriate care is taken and that all studies are appropriately conducted ▫ Include information on whether the facilities and cages are the same for inoculation and challenge, or whether the animal will be moved ▫ Complete the checklist for the rodents in use as part of the proposal, as per the previous template ▫ Tick boxes in both the first column for inoculation and the second column for challenges where appropriate, if no challenge mark the box as n/a
Evidence	<ul style="list-style-type: none"> ▫ This template is specifically intended to identify data already produced on pathogens not being targeted within the proposal ▫ Provide detailed evidence on any pathogens from the WHO priority or Well Characterised pathogen lists, for which this platform has already produced data ▫ Detailed data (up to 1 side on each) should be provided (as per the instructions in the template) on the most advanced WHO priority and 2 most advanced Well Characterized pathogens if the applicant has these ▫ Provide a simple overview of what studies the proposed technology has been used in to date (for all pathogens) ▫ Please name the animal model used in preclinical studies, the country/ countries used in clinical studies and the regulatory authority for any licensure
CMC Specification	<ul style="list-style-type: none"> ▫ Overview the current manufacturing capacities and proven outputs to date at all stages of the process
Assessment of Immune Mechanisms	<ul style="list-style-type: none"> ▫ Detail the proposed Immunological investigations for the platform and how the proposal aims to characterize the immune response ▫ With a focus on standardisable and comparable tests, where available

Review criteria

Step 2 proposals for funding that have passed the Step 1 application process and still meet the administrative and eligibility criteria required for that step will be assessed against the following criteria:

Criterion	Metric	Aspects to consider
Applicant competencies, experience & track-record	<i>Likelihood that the applicant is sufficiently competent to deliver on the proposed activities of the project</i>	<ul style="list-style-type: none"> ▫ Technical competency/expertise of project staff ▫ Experience in preclinical testing of vaccines ▫ Experience in conduct of clinical vaccine trials ▫ Experience in regulatory interactions with competent authorities and licensing of vaccines ▫ Experience in manufacturing vaccines
Feasibility	<i>Likelihood that the project plans and procedures in place are of sufficient quality to ensure that the validation of the candidate platform through phase I will be successful</i>	<ul style="list-style-type: none"> ▫ Current platform development status/technical readiness vis-à-vis 16-week timeframe ▫ Quality of the platform validation plan from current status through end phase I ▫ Soundness of the approach to clinical development and regulatory interactions, either in-house or via contract partners ▫ Soundness of the manufacturing approach, either in-house or via contract manufacturing partners
Proof of protection	<i>Likelihood that the platform will enable an immune response relevant to offering protection against each of the targeted demonstration pathogens</i>	<ul style="list-style-type: none"> ▫ Technical soundness of the platform concept ▫ Current evidence / soundness of rationale on platform's ability to induce robust immune responses, with or without adjuvant and with or without boost
Reliability of protection	<i>Likelihood that the platform is safe and induces consistent priming responses in vaccines</i>	<ul style="list-style-type: none"> ▫ Current evidence/ soundness of rationale that platform is safe ▫ Current evidence/ soundness of rationale that platform is able to induce consistent responses to different pathogen vaccine formulations
Manufacturing scalability & speed	<i>Likelihood that the platform will enable fast development and production, from design through clinical release of vaccine, in volumes to respond to outbreaks of each of the targeted demonstration pathogens</i>	<ul style="list-style-type: none"> ▫ Soundness/soundness of rationale on platform's manufacturing capacity and yield potential ▫ Time to manufacture, formulate, fill and finish a 10,000/100,000/500,000/1,000,000 dose equivalent of bulk and vaccine product for clinical testing in an emergency response ▫ Anticipated Cost of Goods in manufacturing of 10,000/100,000/500,000/1,000,000 dose equivalent of bulk and vaccine product for clinical testing in an emergency response
Operational suitability	<i>Likelihood that the platform will enable stable storage and uncomplicated delivery of vaccine product in an outbreak response under extreme conditions</i>	<ul style="list-style-type: none"> ▫ Current evidence/ soundness of rationale on platform's ability to deliver vaccine in minimal dosing schedules, in emergency situations ▫ Current evidence/ soundness of rationale on platform's ability to enable stability of bulk

		<p>and final vaccine product in timeframes and storage appropriate for conditions prevalent in likely affected countries under emergency situations</p> <ul style="list-style-type: none"> ▫ Current evidence/ soundness of rationale on platform’s ability to deliver vaccine through delivery routes and presentations appropriate for conditions prevalent in likely affected countries in emergency situations
Operational sustainability	<i>Likelihood that the candidate platform developed through this project will remain in use and available to respond to unexpected pathogen outbreaks</i>	<ul style="list-style-type: none"> ▫ Current evidence/ soundness of rationale on platform’s potential for routine on-going use for other pathogen vaccines ▫ Current evidence/ soundness of rationale on platform’s potential to remain in use, via viable in-house or contract manufacturing partner facility operations
Time-to-completion	<i>Likelihood that the proposed timelines for completion of the project are realistic</i>	<ul style="list-style-type: none"> ▫ Reasonableness of milestone and activity timelines for non-clinical development ▫ Reasonableness of milestone and activity timelines for clinical development through phase I and interim / full readiness for phase II trials
Cost	<i>Likelihood that the cost estimates for completing the project are realistic and transparent in their justification</i>	<ul style="list-style-type: none"> ▫ Reasonableness and fairness of cost estimates by milestone and activity for non-clinical development ▫ Reasonableness and fairness of cost estimates by milestone and activity for phase I development and readiness for phase II trials ▫ Reasonableness and fairness of cost estimates for platform routine use/ sustainment

The **level** and **quality** of the information made available by applicants to CEPI against the above criteria will help determine the expected performance of their proposals for funding and will inform subsequent investment decisions by CEPI. Information requirements to address the above criteria are provided in the document ‘Project description’.

Review of applications

Confidentiality

All internal and external experts that participate in the review process will be evaluated for any potential conflicts of interest and are required to sign non-disclosure agreements.

Timeline evaluation exercise

As a part of the evaluation of the platforms for which an award is granted, a test program may be requested. For this program the applicant may be asked to demonstrate their speed of development against a designated pathogen.

When will applicants be notified of the award decision?

The CEPI Secretariat will publicly announce each award when the relevant negotiations are complete and a partnership agreement has been signed. Applicants whose proposals do not advance to negotiations will be notified confidentially of the outcome of the process in a timely fashion.

Award conditions from funders

The project activities and associated budgets should fall within the specified three-year time period. Funding must reflect the proposed activities and agreed conditions of the award decision made by the CEPI Investment group. CEPI reserves the right to terminate agreements according to mutually agreed “go/no-go” decision criteria.

CEPI will negotiate with each awardee to optimize and reach an agreement on the ownership and management of intellectual property. Optimal management will safeguard against the use of intellectual property in a manner that impedes equitable access to the vaccine.

More details on award conditions are available online in [CEPI policies](#) on:

- Equitable access policy, including data sharing
- Shared risks/shared benefits policy
- Management of intellectual property (IP)
- Clinical trial policy
- Cost guidance document

Animal Welfare and Well-being

The National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs) is collaborating with CEPI to embed the 3Rs into CEPI funded projects. The collaboration focuses on reviewing proposals to ensure that animal welfare standards are genuinely high and exceed the legal minima, local issues relating to poor practice are addressed, and overseas work is conducted to standards equivalent to those in the UK (<https://www.nc3rs.org.uk/integrating-3rs-publicly-funded-research>).

In CEPI’s call for vaccine platform technologies, the NC3Rs will evaluate **all proposals** submitted in Step 2 that include projects involving the use non-human primates (NHPs), dogs, cats, pigs and equines. Based on the review, the NC3Rs will provide recommendations to CEPI, including advice on opportunities to implement the 3Rs, raise specific animal welfare concerns, highlight where good practice is not being adopted, and monitor the implementation of specific policies and guidance. This advice will be used during decisions on funding and when drafting the terms and conditions of grant awards.

In order to prepare your proposal for this review process, please take into account the following guidelines:

- NC3Rs Guidelines: [Non-human primate accommodation, care and use](#)
- [Responsibility in the Use of Animals in Bioscience Research](#), which applies to use of any vertebrate species
- [ARRIVE Guidelines](#) on the reporting of *in vivo* studies

Implementation of the principles in the guidelines is a condition of receiving funds from CEPI.

Other information that will be taken into account during the review can be found on the NC3Rs website:

- [Directive 2010/63/EU](#)
- [Scientific literature](#) on applying the 3Rs in drug development
- [NC3Rs resources on best practice](#) – including those on improving non-human primate welfare (such as the Macaque Website)

In addition, the NC3Rs has produced a [PDF presentation](#) to remind applicants of the required animal welfare standards and to provide advice on choosing appropriate contractors. Applicants contracting out animal research or collaborating with other laboratories (regardless of species) are advised to view the presentation well in advance of submitting their application

Technical and administrative questions

Technical and administrative questions about this call should be directed to CEPI Secretariat (cfp@cepi.net). Questions will be answered and posted on CEPIs website.