



MINISTRY OF DEFENCE

CENTRE FOR  
DEFENCE ENTERPRISE



## Innovative Approaches for the Detection of Biological Agents

*Call for Research Proposals on innovative science & technology to improve the environmental and/or diagnostic detection of the presence of biological agents.*

**Call Closes: 20<sup>th</sup> December 2010 (at 1200 noon)**

*Although there is no event dedicated to this call, a supporting presentation will be made at the General CDE Event in London on 23 November (see [www.science.mod.uk](http://www.science.mod.uk)).*



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Proposals should be submitted using the Centre for Defence Enterprise Portal ([www.science.mod.uk/enterprise](http://www.science.mod.uk/enterprise)) by **1200 (noon) on Monday 20<sup>th</sup> December 2010** (note that the CDE office does not operate at weekends, therefore please do not leave issues, queries or submission until the last minute). All proposals should be clearly marked “**Bio detection**” as a prefix in the title.

Queries relating to the call (including how to use the CDE Portal) should be addressed directly to the CDE at [science-enterprise@mod.uk](mailto:science-enterprise@mod.uk) or by phone on 01235 438445.

[www.science.mod.uk](http://www.science.mod.uk)  
[www.dstl.gov.uk](http://www.dstl.gov.uk)

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Ideas from business.  
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# Innovative Approaches for the Detection of Biological Agents

## Introduction and Context

This call is for proposals that provide the basis of an approach for environmental and/or diagnostic detection of the presence of biological agents (viruses, bacteria and toxins). The intention is to fund a number of proposals to investigate innovative approaches to addressing this problem. Successful bidders will be supported by Dstl technical experts to assess the potential and exploitability of the technology. The successful outcome of the initial phase will be identification of technologies for further development during FY 11/12.

Mitigating the threat from Chemical Biological and Radiological weapons is one of the UK Government's highest security priorities. The National Security Strategy<sup>1</sup> recognises that in the rapidly changing security environment, biological warfare is no longer just a military threat, it is now a potential terrorist hazard. Developing fieldable technology solutions for these security needs has never been more important. Thus the increasing and changing profile of biological threat requires a correspondingly capable and cost-effective response.

Traditional methods for detection and identification of microorganisms and/or their products can lack both speed and have inappropriately high limits of detection. Furthermore, the need for specific detection often requires the use of antibody based detection technologies which introduce added cost and logistic complexity. Thus there is a need to provide the warfighter and civilian responders with smaller, easier to use high confidence instruments for detecting, monitoring and identifying biological hazards.

## What We Want

This call seeks innovative solutions to a number of technical that, if resolved, would lead to an enhanced biological detection capability that can address a wide range of operational scenarios. The information provided is intended to stimulate thought and should not be interpreted as a full statement of requirement, or a rigid constraint on any proposed solution.

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<sup>1</sup> A Strong Britain in an Age of Uncertainty: The National Security Strategy. See <http://www.official-documents.gov.uk>

## UNCLASSIFIED – FOR PUBLIC RELEASE

Proposals are sought for innovative approaches to single or combined technical challenges which address one or more of the following areas:

- The ability to collect and process targets quickly (within a few hours).
- The reduction of the logistic burden - specifically size, weight, ease of use, all aspects of cost (purchase, maintenance and consumables).
- The detection of one specific target simultaneously across a range of potential targets.
- Compatibility with multiple target strains and be resistant to cross-reacting with similar but non-target biological and interferent material.
- Integration of component parts into a complete system

Whilst it is unlikely that any single technology will achieve all of the goals, we would be particularly interested in assessing and developing technologies that may contribute to a successful system.

### Getting Involved

Proposals and expressions of interest in '**Innovative approaches for the detection of biological agents.**' are invited from industry and academia.

Proposals for work should be submitted via the CDE process. The programme will consist of a short phase 1 (proof of principle), of about three months duration and of total value of up to £250k. There is no cap on the value of proposals, but the expectation would be to fund a number of proposals in the £15k - £50k region. Deliverables from phase 1 studies and proposals for further work are to be submitted at the end of phase 1 work and the most promising strands of work may then be taken forward with follow-on contracts.

Assessment of the proposals will be conducted using the PAF (Performance Assessment Framework) but successful proposals chosen to be funded must display the following:

- 1) A high likelihood of progressing towards an operationally viable approach.
- 2) A statement of the current TRL along with a description of what needs to be done to progress the TRL during the initial or follow-on project.

Any proposed trials involving people must consider the need for ethical approval and factor this into their work plan.

## UNCLASSIFIED – FOR PUBLIC RELEASE

It is important for suppliers to understand that the **Innovative approaches for the detection of biological agents** programme is focussed on looking at High Risk, Quick Win solutions, and suppliers are urged to submit their best ideas, regardless of how unusual or novel they may at first appear.

### Submission Process

Proposals for funding should be submitted by 1200 (noon) on the 20<sup>th</sup> December 2010 using the Centre for Defence Enterprise (CDE) portal ([www.science.mod.uk/enterprise](http://www.science.mod.uk/enterprise)) and clearly marked 'Bio Detection' as a prefix in the title.

Please plan the timeline for submitting your proposal carefully. If you have not used the CDE Portal before you will need to open an account and become familiar with the CDE Portal manuals, starting with the Quick Start Guide (Version 2.1), before initiating your proposal. The manuals and guides are available on the website.

Do not leave it until the very last moment as past experience has shown that in the pressure to meet the deadline mistakes can be made that end up in proposals not being submitted or accepted. In particular:

- Ensure that you have submitted your proposals (this is not the same as 'published').
- Note that the standard terms and conditions of the CDE must be unequivocally accepted in order for a proposal to be considered.
- Please be aware that the CDE Portal system can become very busy close to the deadline as many people submit in the last day – this can significantly slow the performance of the system.

**Please note that this call closes on MONDAY 20 December. The CDE office does not operate at weekends, therefore please do not leave issues, queries or submission until the last minute.** Proposals that are submitted after the deadline will not be included in the call, but will be submitted into the CDE monthly open call process.

The timeline for CDE proposals is as follows:

- 15 Nov      Call document published
- 23 Nov      *Supporting Presentation at CDE Event in London*
- 20 Dec      CALL CLOSE DATE

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