

# Request for Proposal RFP\_2019\_0127: Technology to Collect or Detect Airborne Microorganisms

**RFP Title** Technology to Collect or Detect Airborne Microorganisms

**Due Date** 08/08/2019

**Opportunity**

**Timeline**

**Financials**

**RFP Description** NineSigma, representing **a global machinery manufacturer whose annual sales reach more than billions of dollars**, seeks **technology to collect or detect airborne microorganisms**. A wide range of proposals are welcome if you have any technology to collect or detect microorganisms, even though it has not been implemented for practical use.

**Background**

**Key Success Criteria**

## Prerequisites

- Target to be collected/detected: microorganisms (bacteria, fungi)
- Size of the target: 1-15  $\mu\text{m}$
- Environment: in the air
- Intended use: use in public facilities or ordinary households

## Requirements of the technology

The Client seeks any one or both of the following technologies, A and B:

### A. Technology to collect airborne microorganisms

- Volume of air collected: 1 m<sup>3</sup>
- Operating noise: keep it quiet so as to be 40 dB or lower
- Size of device: A side length of 10 cm or shorter is preferable toward practical use.
- Form of collection
- Preferably capable of collecting microorganisms alive
- Preferably capable of collecting microorganisms as a fluid sample

### B. Technology to detect collected microorganisms

- Measurement time: within 2 hours
- Detection in a short time is preferable
- Preferably capable of identifying microorganisms

The level of above technological requirements are high, and therefore all requirements may not be met at present.

Your proposal for technology A may be acceptable if the requirements are likely to be verified at a lab level through additional development by March 2020. As for technology B, if verification data have been or will be obtained, it does not matter which development stage you are in.

**Area of Interest**

Biochemistry  
Biology-General  
Chemistry-Analytical  
Engineering-Biomedical

Medical Analytical, Diagnostic and Therapeutic Techniques and Equipment

**Possible Approaches**

**Possible approaches**

The Client expects technologies such as the following approaches, but is open to others:

A. Technology to collect airborne microorganisms

- Filter method
- Impactor method
- Cyclone method
- Falling bacteria test

B. Technology to detect collected microorganisms

- Laser-induced fluorescence (LIF)
- Gas phase flow cytometry
- Melanoidin fluorescence assay

**Approaches not of Interest**

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The following approaches are not of interest:

- Measurements that require microbial culture in microbial detection technology

**Preferred Collaboration Types**

Contract Research  
Joint Development  
Supply Agreement  
Technology Licensing  
To Be Negotiated

**Items to be Submitted**

**Background**

The Client engages in the development of a device for detecting/identifying microorganisms, taking into account its mounting on devices available at public institutions or ordinary home. This development demands two technological criteria: capabilities to collect airborne microorganisms effectively and detect/identify the collected microorganisms with high accuracy in real time.

The Client has examined these two technological requirements but has not achieved the goal of required characteristics.

On the other hand, collection and detection technologies have been studied/developed in various fields, and prospective technologies to solve the challenges are considered present around the world. Therefore, the Client has decided to make this RFP to solve the technological challenges and put prospective technology into practical use in an early stage.

**Notes on Response**

Proposal shall have clear points and should not include confidential information. Supplemental files may be submitted in addition to the proposal.

**Response evaluation**

The client will evaluate all responses with the following criteria.

- Overall scientific and technical merit
- Approach to proof of concept or performance
- Economic potential of concept
- Realism of the proposed plan (action items, timeline, roles, deliverables, cost estimation)
- Potential for proprietary position
- Respondents' capability and related experiences

**Anticipated Project Process**



After the submission due date, the client will review all submitted proposals. NineSigma will send the review results to each proposer 6-8 weeks after the due date. The client possibly asks clarifying questions before selecting the most suitable candidates for collaboration. The client will select best candidates through

evaluations. During the selection process, the client may execute NDA with selected respondents, seek further information disclosure, and discuss specific development targets or potential opportunities.

The client will execute necessary agreements with the selected respondents and move to the advanced development phase. Specifics of any collaboration will be determined through consultation with the concerned parties.

**Award Amount**

**Attachments**

	Name	Creation Time	Size	Created By
	AdditionalInformationShee...	07/03/2019 11:02 PM	257.58 kB	Kimihiko Tanaka
	RFP_2019_0127_Collect or ...	07/03/2019 11:02 PM	167.03 kB	Kimihiko Tanaka

**Request Number** RFP\_2019\_0127

**Picture**

