

## REQUEST RFP\_2019\_0083

# Joint Research Partner for Providing Evidence on Association between Heavy Metals and Disease Onset

**RESPONSE DUE DATE:** June 10, 2019

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### Opportunity

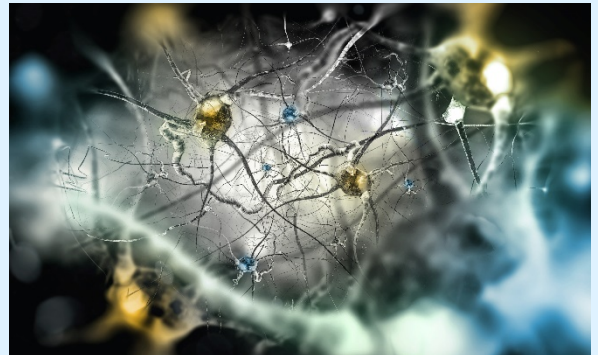
- Joint research
  - Joint research results are recommended to be actively presented in academic papers, conferences, etc. The Client will provide the support required for this.

### Timeline

Academic presentation of joint research results: Within 3 years.

### Financials

Details open to discussion based on proposals



### DESCRIPTION

NineSigma, representing a major global manufacturer of laboratory testing equipment/reagents, seeks **joint research partners for providing evidence on association between heavy metals present in trace amounts in the body and the development of dementia / neurodevelopmental syndromes.**

Heavy metals present in the environment, especially mercury and lead, are ingested daily through food, etc. and accumulated in the body. Although it has been suggested that excessive accumulation may cause damage to the cardiovascular and cerebral nervous systems, the mechanism of disease onset has not been elucidated.

The Client wants to establish mercury and lead in the body as new parameters for evaluating risks of dementia and neurodevelopmental syndromes. The see the first target is to build clinical evidence on the development of dementia and neurodevelopmental disorders due to low concentrations of heavy metals and elucidate the molecular mechanism through collaboration with scientists and clinical physicians.

\* Association between exposure to high concentrations of heavy metals and diseases, such as acute toxicity, is excluded from the scope of this joint research.

### Prerequisites

- Target heavy metals: Mercury(Hg), Lead(Pb)
- Target diseases: Dementia, neurodevelopmental disorder, autism spectrum disorders, learning disorder, attention-deficit hyperactivity disorder

If the evidence of the association of other diseases with heavy metals has a major clinical impact, although it has not been presented, such diseases are of interest.

### PARTNERS OF INTEREST AND SUPPORT FROM CLIENT

The Client seeks joint research with scientists or clinical physicians of universities and research institutes conducting both or one of the following research projects:

1. Research aiming to build clinical evidence

2. Research aiming to elucidate molecular mechanisms

The requirements for participating investigators are as follows:

1. Elucidation of clinical evidence

- Those with the knowledge of association between diseases and heavy metals.
  - Preferably, those already conducting research on humans.
  - Those conducting research using model animals at this point, and have the will to carry out human studies through joint cooperation with the Client.
- Has access to clinical specimens.
- Capable also of joint proposals with multiple organizations.

2. Elucidation of molecular mechanisms

- Those conducting research on the molecular mechanisms of concerned diseases.
  - Preferably, those conducting research *in vivo* and *in vitro*, and have the will to conduct studies on humans or human tissues through joint cooperation with the Client.
- Capable also of joint proposals with multiple organizations.

The Client will provide the following support to the above partners:

- Materials and financial support required for joint research.
- Technical support in the measurement of heavy metals.
- Support in the preparation of papers for the academic presentation of research results.

#### APPROACHES NOT OF INTEREST

The following approaches are not of interest:

- Proposals on research for indicating association between acute toxicity and disease onset.

#### ITEMS TO BE SUBMITTED

Please include the following items in your proposal:

- Target diseases
- Heavy metals for which association with the development of listed diseases has been

suggested, and ideas / experiment data serving as the grounds.

- What are expected from the Client.
- Outline of current challenges and joint research plans.
- Requests regarding rights (please also describe past patents, etc.)
- Past results (additional information indicating R&D capabilities such as research papers and patents)
- Outline of organization

Please submit your proposal via [NineSights](#), the platform of NineSigma's Open Innovation community, which allows you to manage all your proposals. Please contact the Solution Provider Help Desk [phd2@ninesigma.com](mailto:phd2@ninesigma.com) for assistance about registration and proposal submission.

#### 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:

- Outline of the proposed plan
- Grounds for the proposed plan
- Economic potential of the proposed plan
- Realism of the proposed plan (action items, timeline, roles, deliverables, cost estimation)
- Respondents' capability including related experiences and records

#### 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.