

The Nanoscience Cooperative Research Center, CIC nanoGUNE, located in Donostia / San Sebastian, Basque Country (Spain), is currently looking for a

MASTER STUDENT
to work on

Nanomedicine

Nanobioengineering Group CIC04

Nanomaterial-based biosensors

Contact information: Mariana Medina Sánchez (m.medina@nanogune.eu)

Motivation

History of Pandemics

Lack of Ultra-sensitive diagnosis]

Conventional

PCR

- Expensive
- Time consuming
- Trained user

Rapid tests

- Low accuracy
- Low sensitivity
- Only qualitative

Electrochemical Sensor

- Fast
- Cheap
- User-friendly
- High sensitivity
- High accuracy
- Quantitative

Goal

To develop a sensitive for the direct detection a mobile

Sensing devices

Influenza H1N1 DNA detection

Concept

Setup

H1N1 DNA detection

Ebola V40 protein detection

Sensor in a microchannel

VP40 Protein detection

Functionalization steps

(i) bare Au (ii) 11-MUA SAM (iii) antibody anti-VP 40 (iv) BSA (v) antigen VP 40

Nanomaterials

Nanowires

Nano-porous

Spectroscopy, spectroelectrochemistry [

Adsorbed biomolecules on gold

SEIRA SERS

Biosensor Platform for SARS-CoV-2 Detection

Fabrication, Integration and characterization of Sensor

I. Electrode arrays

II. Passivation

III. Edge-card connector

IV. Microfluidic channel

Multipurpose chip design

I. Parallel sample analysis

II. Multiplex sample analysis

III. Smartphone-based sample analysis

Sars-CoV-2 Detection by smartphone

Conclusion

Referen

Candidates should **apply** by completing the form below and attaching the following documents:

- a. A complete CV and academic records
- b. A motivation letter is also recommended

The **deadline** for applications is **29/02/2024**.

NOTES:

(i) All applicants will receive an answer after the end of the selection process; but please note that due to the large number of submissions that are expected, we cannot provide individual feedback.

(ii) Additional information about nanoGUNE's commitment towards [HR excellence in Research and Gender Equality](#) are available on our website.

(iii) We encourage you to subscribe to our [HR mailing list](#) to receive information related to nanoGUNE's open positions and open calls for different training and talent attraction programs.