



SCSD_2020 / X-TechLab CALL FOR PROJECTS

Single Crystals Structures Determination

Submission deadline: September 1 to 30, 2020 on www.xtechlab.co

Implementation Period: November 16 to 27, 2020

1. Context and justification

Several African laboratories are involved in the development of cures for the emerging diseases. Indeed, bioactive substances from medicinal plants with tested therapeutic activities, deserve to be exploited for the purposes of developing new molecules with interesting properties. Most research has been limited to the extraction of active constituents and a few efficacy tests of synthetic products without the crystal structures of the compounds being determined. Well beyond the tested properties, several others may be hidden and even more interesting by modifying the structure of the molecules.

X-rays are used to determine the structure of pure compounds in crystalline form (single crystal or powder). Solving the crystal structure allow to understand its properties for further investigations of its applications. Based on the structure, molecular dynamics models help to assess the chemical reactivity of a molecule or of its substitution derivatives. The development of new materials or natural substances for drugstore are some of the areas where X-ray diffraction is a benchmark structural analytical method.

This call is launched by X-TechLab for all laboratories and research centers in Benin and Africa. It aims to select and characterize by X-ray diffraction, five (5) potentially "new" molecules. The determination of their structures is the starting point of scientific explorations, specifically oriented for major impacts in the field of health.

2. Submission of projects

The applicants should:

1. have pure single crystals compounds to be characterized by X-ray diffraction technique
2. complete the application form via the link: <https://urlz.fr/dl7N>
3. submit your project by sending the duly completed form to: contact@xtechlab.co

NB: Each applicant can submit more than one project



3. Selection of projects

After reviewing the submitted projects, the five best projects for the structural characterization of compounds will be selected. The holders of the selected projects will be contacted on October 05, 2020 for the diligence to implement characterizations in the laboratory. Characterization projects concerning compounds that have previously been subjected to tests of various properties (biological, antibacterial activity, etc.) with convincing results will be prioritized.

The deadline for the reception of samples for selected projects at X-TechLab is November 02, 2020

NB: the relevant *projects that are not selected among the top five will be considered for follow-up until their completion*

4. Promotion of projects results

The molecules identified as new (those not found in international databases) at the end of the characterizations will be valued by scientific publications within the framework of a signed agreement between X-TechLab and the laboratories involved in the project.

Chargé de Recherches / X-TechLab

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