

## Search for a Spanish Partner for a Bilateral R&D Project

Organization	
Date of Request:	20/04/2023
Company name:	Department of Clinical Pathology, Noguchi Memorial Institute for Medical Research.
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### SECTION 1: Entity launching the partner search

*(Please give brief / to the point explanations. For more explanation on any point below, you may add a short paragraph as an annexure, with this document.)*

Sector	Health and Research
Entity mission or core functions	The Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana, was established in 1979 as a partnership between the government of Ghana and Japan. It is one of the most advanced biomedical research institutions in Africa. NMIMR has a mandate to conduct research into communicable and non-communicable diseases; provide training opportunities in biomedical research for undergraduate and postgraduate students and provide high end laboratory diagnostic, monitoring and surveillance services in support of national public health programs.
Date of establishment	1979
Ownership (if public and traded, add stock exchange and ticker symbol)	Public
Total number of employees	The Institute boasts of 50 research faculty in addition of postdocs, graduate students and other research staff, with a total staff strength close to 500.

Number of employees in R&D	350
Key products sold or services provided	<ul style="list-style-type: none"> <li>• Research into communicable and non-communicable diseases</li> <li>• Academic training at the professional and graduate levels (Masters/PhD)</li> <li>• Cutting-edge research and consultancy services</li> <li>• Knowledge transfer services (academic-industry linkages)</li> <li>• Evaluation of diagnostic tests</li> <li>• HPLC</li> <li>• Provision of diagnosis to general public</li> </ul>
Entity core technical competences	<ul style="list-style-type: none"> <li>• Conducting research into communicable and non-communicable diseases.</li> <li>• Providing training opportunities in biomedical research for undergraduate and postgraduate students.</li> <li>• Providing high-end laboratory diagnostic and monitoring and surveillance services in support of national public health</li> </ul> <p>There are two buildings at the NMIMR, the original facility established in 1979, and a more recent, state of the art, \$30 million-dollar 45,600 square feet Advanced Research Laboratories inaugurated in 2019 as a gift from the Japanese Government. The Institute boasts of state-of-the art equipment and facilities for research, including BSL3 laboratories, animal experimentation facility, a liquid nitrogen plant, a flow cytometry core, well-equipped cell and molecular biology laboratories, an electron microscopy and a clinical trial facility. The laboratories include all necessary equipment including freezers, ELISA and fluorescent readers and a Bio Rad luminescence reader, inverted microscopes, double door incubators, Glomax Multi Detection System (MDS), refrigerated micro centrifuges, refrigerated table top centrifuges, set of polyacrylamide gel electrophoresis apparatus, 2 Thermo</p>

Fisher microplate readers, 1 Thermo Fisher Nanodrop 2000C, automated cell counter, 2 genetic analyzer (16-capillary 3130xl), 2 Illumina Miseq, six ABI RTPCR machines each connected to a computer, 1 Ten-color Flowcytometer, 1 High-performance computing system for bioinformatics, 1 Confocal microscope system with live imaging capacity, 1 Electron Microscope, 1 8-color BD FACSCanto II, 1 BD FacCalibur, 1 10-color FACS machine, 1 Guava® easyCyte™ Flow, 3 HPLC machines, 1 spectrophotometer, 2 freeze dryers, 1 Lumex Mercury analyzer. There are also 2 BSL-3 laboratories.

The NMIMR, through its departments, also works with the University of Ghana Medical Centre (UGMC), which is Ghana's foremost state-of-the-art hospital and the only quaternary health facility in the country. It has the triple mandate of world-class patient care, training and research. The catchment area of the Center is the whole of the Accra Metropolis and surrounding areas with over 5 million people. In addition, cases are referred from across the country. At full capacity, the hospital has 750 beds. Daily outpatient, and emergency room attendance is expected to be 250 or more. The hospital has all the medical specialties including Infectious and Non-infectious Disease specialties. During the COVID-19 pandemic, the UGMC was the preferred destination for the very sick patients due to the presence of the most advanced ICU facilities and personnel. The hospital has seen and discharged severely sick COVID-19 patients than any other facility in the country. In addition, the UGMC has seconded its COVID-19 trained medical officers to the National COVID-19 treatment facilities to enhance care in those facilities. UGMC has a Clinical Laboratory and a Research Laboratory, which are well equipped. The UGMC Bank of Ghana Research Laboratory is a well-equipped molecular laboratory with two biosafety cabinets, a high throughput automated nucleic acid extractor, two qRT-PCR machines, a GeneXpert IV (4 modules)

	machine, PCR clean hoods, and refrigerators and freezers. The facility is also established to facilitate molecular research and training to complement UGMC's mandate of improving research and training.
Key R&D programs and activities	<ul style="list-style-type: none"> <li>• Development and evaluation of diagnostics</li> <li>• New borne screening programme</li> <li>• Drug discovery</li> <li>• Environmental toxicology</li> </ul>
Examples of accomplishments	<p>Over the years the Department of Clinical Pathology has screened more than 500,000 babies for sickle cell disease, working together with companies and institutions such as PerkinElmer and the American Society of Hematology.</p> <p>The institute also serves as a reference centre for many infections including Tuberculosis, Polio, Rotaviruses, Flu, etc...</p>
Company strategic orientation	The NMIMR is an Africa CDC research Centre of Excellence and the foremost biomedical research institution in Ghana.

## SECTION 2: Spanish Company Profile

*(Please provide a brief summary of the prospective partner company or organization. This summary may address some or all of the points below)*

Profile of ideal technology partner	The department of clinical pathology seeks partners in the field of diagnosis, who are seeking partners for the development evaluation of diagnostic tests.
Core technological competencies and expertise	The company should have competencies in designing and developing diagnostic tests for communicable and non-communicable diseases.
Other essential qualifications (e.g.: ownership, track records etc.)	-
If you have a list of companies with whom you are in contact or interested in contacting, please provide contact details	Not applicable
If you are interested in collaboration: please specify details and other	Being at the interface of all other departments, the department of Clinical

<p>important information you want to share with a potential company</p>	<p>Pathology is well positioned to conduct research on diagnostics and drug development, using all the facilities available at the NMIMR. The aim of this introduction is to present the institute and department of clinical pathology as one of the preferred options for collaboration in Africa, as we embark on our diagnostics and drug development activities in infectious and non-infectious diseases. The department has over the years provided specialized laboratory services in support of public health programmes, in addition to conducting research that contributes to intervention strategies and safeguards public health in Ghana. The department has over the years conducted research on anti-cancer, anti-malaria drug research, with potential compounds identified and ready to be moved through the drug development pipeline. There is also expertise for pharmacokinetic drug interactions studies. Faculty in the department have experience in diagnostic and drug development, their evaluation and access.</p>
<p>Interested areas of collaboration</p>	<p>Diagnosis Product development Drug discovery Other areas of interest in biomedical research</p>
<p>Specific R&amp;D contribution you are seeking/offering</p>	<p>Access to samples/patient populations Preclinical and Clinical trial facilities.</p>



**Signature**

**Name: Prof. Dzedzom K. de Souza**

**Date: April 20, 2023**