Search for a Spanish Partner for a Bilateral R&D Project (this document will be shared with potential Spanish companies)

Organization	
Date of Request:	March 10, 2022
Company name:	Qatar Biobank (QBB)
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SECTION 1: Your Company Profile	
(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.)	
Business Sector	Biobanking / Precision Medicine
Company mission or core functions	Qatar Biobank (QBB), member of Qatar Research, Development, and Innovation (QRDI) at Qatar Foundation, is the first biorepository in Qatar and in the Gulf region. QBB is Qatar's National Repository Centre providing adequate health information and biological samples to enable evidence-based research towards the discovery and development of novel healthcare interventions, particularly in the field of precision medicine. It is the biggest Arab cohort-enrolled population, worldwide, and at present counts more than 40K participants in the different studies such as the QBB population-based cohort study, the COVID-19 biorepository, Stroke biorepository and Qatar Birth Cohort study. QBB research database contains deeply phenotypic, genomic, proteomic, transcriptomic and metabolomic characterization of the population. It is regularly improved with additional data and is accessible to approved researchers, worldwide. QBB is performing multidisciplinary activities. QBB collaborates closely with Qatar's healthcare system and other governmental authorities providing evidence-based health screening approaches to be utilized for

	developing Policies, Regulations & Guidelines for the protection of public health and the environment in Qatar.
Date of establishment	2012
Ownership (if public and traded, add stock exchange and ticker symbol)	Qatar Foundation
Total number of employees	85
Number of employees in R&D	60
Key products sold or services provided	<u>Services</u>: Providing Data, Specimen, Specimen processing, analysis, and storage, etc. (please, visit https://connect.qrdi.org.qa/infrastructure/p/search?type=3&term=Qatar%20Biobank https://connect.qrdi.org.qa/infrastructure/p/search?type=2&entity=1012&page=2), <u>Research</u>: Epidemiological studies, Data analysis etc. <u>Products</u>: Software solutions for data capturing and Laboratory management system (LIMs).
Company core technical competences	Qatar Biobank is based on a 600m2 building. The facilities at QBB provide technical and instrumental support enabling to completing proposed research objectives. The laboratories with approximately 300m2 area and standard resources such as office space, and modern communication systems including internet conferencing will be available to the project. Desktop workstations and parallel computers are also available. Major equipment can be found in the following link:https://connect.qrdi.org.qa/entities/p/1012 Qatar Biobank follows national and international best practices Biobanking along with Quality Management ISO 9001 and Information Security Management System ISO 27001 certification and CAP accreditation. ▪ ▪ Biobanking: QBB has a large collection of human biological materials linked to relevant personal and health information, which include health records, family history, lifestyle and Omic data (genomics, transcriptomics, proteomics, metabolomic, microbiome etc.) stored for use in research. ▪ Clinical assessment: QBB building includes 2 full set of clinics including rooms for anthropometric measurement (Height, weight, waist circumference, grip strength, bioimpedance), Blood Pressure, ECG, Arterial stiffness, Spirometry, Retina scan, Fitness test, iDexa, Carotid Ultrasound, Fetal

	Ultrasound, Corneal Confocal Microscopy, CANTAB cognitive function battery, MRI. ▪ Laboratories: High throughput automated systems for sample processing and storing; QChip microarrays (QBB Lab is CAP accredited) ▪ IT Infrastructure: a competent IT department with a flexible and scalable IT system i.e., CIS and LIMS. ▪ Scientific Department: Scientists, epidemiologists supporting research activities.
Key R&D programs and activities	Qatar Biobank population-based cohort study COVID-19 Biorepository Qatar Birth Cohort (QBiC) Study Stroke biorepository
Examples of accomplishments	▪ QBB is certified for the two International Organization for Standardization (ISO), ISO 9001 & ISO 27001, as well as CAP accredited. ▪ In the area of Precision Medicine QBB with collaborators (QGP, WCMC-Q, SIDRA) developed a customized genetic screening microarray tailored to the Qatari population that is currently used for the screening of variants of medical relevance, promoting precision medicine in Qatar's health care system. ▪ QBB supports, more than 300 research projects submitted through the Research portal. ▪ QBB data has been used in more than 60 peer reviewed publications. ▪ QBB also supports PhD, MSc and Undergraduate students by providing data and specimens. ▪ A total of 22,000 whole genomes are sequenced, forming an important statistical sample for research
Company strategic orientation	Research: Precision Medicine

SECTION 2: Partner of Interest	
(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	Potential suitable partners (i.e., research institutes, companies, universities, pharmaceutical companies etc.), with proven expertise in Data Science, GIS technologies, e-Health, Artificial Intelligence (AI), environmental research, Biobanking, epidemiological

	studies and precision medicine.
Core technological competencies and expertise	▪ Data Science ▪ Exposome research ▪ Epidemiological cohorts ▪ GIS ▪ e-Health ▪ AI ▪ Diagnostics
Other essential qualifications (e.g.: ownership, track records etc.)	N/A
If you have a list of companies with whom you are in contact or interested in contacting, please provide contact details	▪ Barcelona Institute for Global Health, ISGlobal ▪ Spanish National Bioinformatics Institute ▪ BioCores ▪ Ateknea Solutions ▪ Centre for Genomic Regulation (CRG) ▪ Institute for Bioengineering of Catalonia (IBEC) ▪ Institute of Photonic Sciences (ICFO) ▪ Institute of Chemical Research of Catalonia (ICIQ) ▪ Catalan Institute of Nanoscience and Nanotechnology (ICN2) ▪ Institute for High Energy Physics (IFAE) ▪ Institute for Research in Biomedicine (IRB Barcelona) ▪ Universities
If you are interested in collaboration: please specify details and other important information you want to share with a potential company	QBB is interested to work on projects related to the following: ▪ AI solutions related to the development of a deterministic model for human exposure and risk assessment based on the concept of the, specific external and internal, exposome and on metabolic profiles of the population ▪ Development of GIS based sensors for measuring environmental multiple stressors i.e., air, noise, radiation etc. ▪ Novel analytical tools, equipment and/or devices for the collection,

	- processing, tracking and storage of biological samples - Diagnostic tools, microarrays, multiplex, etc. - Apps for disease prevention participant follow up etc. - Imaging analysis tools/apps - Data harmonization - Prognostic disease models associated to the digital profile of the participants (deep phenotypic data, omic profile) - Tools for data collection for epidemiological studies - Tools for data sharing i.e., research portals
Interested areas of collaboration	- Data Science - Infectious diseases (i.e., COVID-19) - Non-communicable diseases - Environment
Specific R&D contribution you are seeking/offering	- Data Science - AI - Epidemiological studies - Environmental epidemiology - Knowledge transfer by trainings, workshops, exchange of staff

Dr Nahla Afifi

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Signature
Name: Dr Nahla Afifi
Date: 30/03/2022