• Promote scientific research and technological development in Morocco.

• Translate research results to innovative products through technology transfer and creation of spin-offs and start-ups.

• Contribute to the emergence of a Moroccan knowledge economy.
The average workforce of MAScIR Foundation is around 200 people:

- Parity: 41% women and 59% men.
- Young population: majority 25-35 year.
- Employees representing all regions of Morocco.

Human capital made up of laureates from Moroccan universities and engineering schools as well as from the Moroccan diaspora living abroad.

A high standard technological platform

- **Materials and Nanomaterials** high-performance equipment (Liquids/Solids NMR spectrometer, SEM, X-ray Diffraction, chromatography, PVD, etc.)
- **Microelectronics** platform with 2 cleanrooms (Class 1000 and 10000) and an electronics laboratory.
- **Biotechnology** platform:
  - **Green**: Agriculture
  - **Medical**: Diagnostic tests & recombinant proteins development

A technological platform covering 1,750 m² and multi-technological capacities to solve industrial problems.
Framework for collaboration:

- Service contract/specific contracts.
- R&D contracts.
- Joint development.
- Technology transfer.
- National or international call for projects.
MAScIR medical diagnostic tests

- **RT-qPCR MASCIR TEST SARS-COV-2 KIT**
  - In the market

- **RT-PCR KITS: BREAST CANCER, HEPATITIS, LEUKEMIA**
  - Registered: In the market in 2023

- **MOBILE CARE FOR TUBERCULOSIS DIAGNOSIS AND SCREENING**
  - Under validation

- **MICROFLUIDIC CHIP**

- **RAPID TESTS**
MAScIR Business strategy: Diagnostic tests

- Patented Diagnostic tests
  - MAScIR Startups: Moldiag/Medevice
    - Manufacturing
  - Licensing to pharmaceutical partners
    - Royalties
Challenges – local manufacturing diagnostic tests in Africa

- Lack of investment/financing and enabling environment
- Difficulty to run clinical validation and registration of the tests
- Lack of political will and support to support to invest in tests manufacturing
- Difficulty to access to market
- Unclear regulations
- Preference to imported diagnostic tests
- Lack of innovative technology platforms (sequencing, RT-PCR, microfluidic...)
- Lack of technically skilled scientists/technicians/regulatory bodies
- Identifying integration partners
- LMIC Market is not attractive. Local manufacturers can’t compete with multinationals
- Sorcing of raw materials
Policy requirements – local manufacturing diagnostic tests in Africa

- Inclusion of local manufacturing in national government & trade priorities
- Facilitate importation of raw materials necessary for local production
- Funding R&D in diagnostics as an international/national/local policy priority
- Support of local entrepreneurial engagement
- Creation of Spin-offs/Spin-out
- Promotion of PPP (public private partnership) to fund infrastructure and address regulatory challenges as a collaborative ecosystem
- Appropriate & clear regulatory and ethics for animal/human experimentation
- Local regulatory bodies to develop and implement local regulatory policies
- Regulatory need to support local manufacturing to compete with imported products
- Local governments need to recognize the value of diagnostics at a strategic level
Resources & Enablers - local manufacturing diagnostic tests in Africa

- Governments to create pathway for access to market to purchase local products
- Attract scientists with expertises to develop & manufacture specific diagnostic tests
- Attract other funding VC...
- Political will to include local manufacturers in the national budget
- Country specific regulatory process with increase capacity for handling approvals
- Mandatory WHO prequalification of diagnostic tests for infectious diseases
- Raw material availability
- Training for health professional/ ISO certification
- Support of IP, tech transfert, licensing
- Creation of Start-up incubators
- Need of political and economic stability of the countries
Road of success for Local manufacturing diagnostic tests in Africa

We need to establish a roadmap to explore, manage and communicate the linkages between technology, research, and product development to commercial objectives and market opportunities through a structured visual framework.
Molecular diagnostic kits and medical devices centre
Pr Abdeladim Moumen

From the bench to the market
Molecular diagnostic kits and devices centre

From the bench to the market

Molecular diagnostic tests allow:

- Identification
- Quantification
- Monitoring
- Treatment orientation
Molecular diagnostic kits and devices centre

From the bench to the market

**PROBLEM**

All molecular tests are imported

Very expensive

**SOLUTION**

Development and production of 100% made in Morocco tests
We design, develop and clinically validate 100% Moroccan molecular diagnostic kits
Our developed, validated and authorised kits

- Chronic Myeloid Leukaemia Diagnostic Kit
- Her2 type breast cancer diagnostic kit
- Hepatitis C diagnostic kit
- Tuberculosis diagnostic kit
- SARS-COV2 Detection Kit V1.0
- SARS-COV2 Detection Kit V2.0
Molecular diagnostic kits and devices centre

From the bench to the market

Our main method

Real time RT-quantitative PCR

extraction  RT  qPCR

RNA  cDNA
Molecular diagnostic kits and devices centre

From the bench to the market

Our kits are

• Meeting international standards
• Specific
• Sensitive
• Efficient &
• Very cost-effective

Clinically validated and patented
Molecular diagnostic kits and devices centre

From the bench to the market

Our kits are Also ...

Open system
Molecular diagnostic kits and devices centre

From the bench to the market

4 millions test sold in Morocco and some African countries

Moldiag the MASCIR Spin-off
Molecular diagnostic kits and devices centre

From the bench to the market

Making access to diagnostic easy and cost-effective for Moroccan

Moldiag the MAsCIR Spin-off
Molecular diagnostic kits and devices centre

From the bench to the market

Molecular,
- Prostate Cancer.
- Hepatitis B
- Covid/influenza

Quick Tests,
- COVID19
- Hepatitis C
- HP
Molecular diagnostic kits and devices centre

From the bench to the market

Pipeline

Human health
- Screening
- Diagnostic
- Treatment follow-up
- Predisposition

Forensic Science
- Identification of material evidence

Animal Health
- Diagnosis of diseases with high zoonotic potential

Food industry
- Detection of pathogens upstream and downstream of the production chain

Phytopathologies
- Detection of plant diseases

Other fields

Human health
- Screening
- Diagnostic
- Treatment follow-up
- Predisposition

Forensic Science
- Identification of material evidence

Animal Health
- Diagnosis of diseases with high zoonotic potential

Food industry
- Detection of pathogens upstream and downstream of the production chain

Phytopathologies
- Detection of plant diseases
The team

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