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# THE ITALIAN TRANSLATIONAL LIFESCIENCE ENGINE

## **Ri.MED FOUNDATION** DELIVERING NEXT GENERATION PATIENTS' SOLUTIONS

## **Ri.MED TRANSLATIONAL RESEARCH ENGINE**



del Conseglio dei Ministra



University of Pittsburgh **Consiglio Nazionale** delle Ricerche

UPMC CHANGING

Presidency of the Italian Council of Ministers; University of Pittsburgh; University of Pittsburgh Medical Center (UPMC); Italian National Research Council (CNR); Region of Sicily.

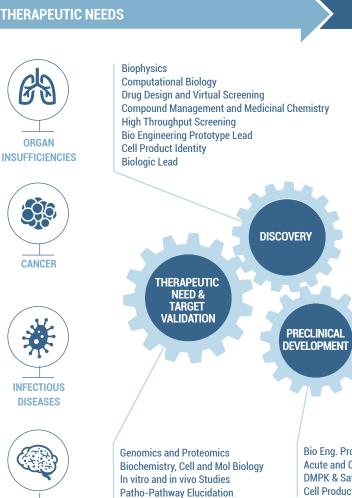
## ISMETT Istituto di Ricovero e Cura a Carattere Scientifico

PARTNERSHIPS

The Ri.MED Foundation has established a strategic partnership with the Palermo-based hospital IRCCS ISMETT, Istituto Mediterraneo per i Trapianti e Terapie ad Alta Specializzazione. This initiative delivers truly translational research: discovery, preclinical development, clinical research and practice.Our joint effort is delivering a balanced project pipeline in the field of regenerative medicine and cellular therapies including a GMP cell factory to support clinical trials.

- Nurturing and mentoring new talents
- Enhancing scientific knowledge
- Generating socio-economic impact for Sicily and Southern Italy
- Promote, support, and conduct biotech and biomedical research projects to rapidly transfer innovative discoveries into clinical practice

- Promote ntrapreneurship and business
- Support start-up companies.
- Attract public and private investors.
- Scouting and propelling innovation.
- ETE-based or fee-for-service scientific research.



Chemical and Biological Tool Molecules

Artificial Intelligence for Medicine

Cell Product Potency

**NEURODEGENERATIVE** DISEASES

Bio Eng. Prototype Dev. Acute and Chronic in vivo PoC DMPK & Safety Cell Product Safety and Efficacy

## MISSION

### **OPPORTUNITIES**



## PRODUCTS





#### PRECISION MEDICINE





Intellectual Property

Partnering

**Business Development** 

Diagnostics **GPM** Facility **Clinical Trials** Cell Therapy Organ Transplant





### Advanced Therapy Medicinal Products



## **Ri.MED RESEARCH CENTER**

### **A SCIENTIFIC DISTRICT IN THE HEART OF THE MEDITERRANEAN**

The Biomedical Research and Biotechnology Center will allow Sicily to take a leading position in the development of next generation therapeutics, engineered tissues and medical devices, contributing to Italy's leading role in the international scientific community.

A leading R&D biotech center, attracting the best researchers from all over the world and retaining in Italy our best physicians and scientists.

25,000 sqm of laboratory facilities, some 600 people and about just as many jobs will be created in the allied industries.

Translating research into products means social benefit for the public health and economic benefit in terms of private investment for creation of innovative SME's, employment and allied activities.

### LABORATORIES AND FACILITIES

- Integrated Discovery Laboratory
- Regenerative Medicine Laboratories
- Biomedical Engineering Research Laboratories
- Vaccine Development Laboratories
- Molecular Imaging Laboratory
- Neuroscience Laboratory
- In Vivo Model Facility
- Spin-off Enterprise





## **Ri.MED NETWORK**

## **TRAINING**

Ri.MED promotes PhD. postdoctoral fellowships and training programs within it's scientific network at regional, national and international level. Training programs helded by Ri.MED contribute to the enrichment of the overall potential offer of Sicily in the biomedical and health care technology sector.

### **NETWORKING**

Ri.MED is developing an increasingly extended network of scientific collaborations: several agreements are already in place, sharing laboratories and resources with organizations across the globe, to promote research activity and develop technological innovation. A special focus is on issues related to scientific dissemination, sharing research outcomes, organizing meetings and workshops.



### **ITALY**

#### Roma

Università La Sapienza Università Roma Tre

#### Perugia Tes Pharma

Università di Perugia

#### Siena

Fondazione Toscana Life Sciences

#### Chianciano

UPMC Institute for Health Chianciano Terme Napoli

Seconda Università di Napoli

## **ITALY** (Sicily)

Palermo **IRCCS ISMETT** IBIM - CNR IBF - CNR CHAB ISZS 175 Università di Palermo Catania Università di Catania Messina Univerità di Messina

| PRODUCTS   | RESEARCH PROJECT   | THERAPEUTIC AREA                                   | PARTNERS  | PIPELINE         |                      |                                       |
|--|--|--|---|------------------|----------------------|---------------------------------------|
|  |  |  |   | CLINICAL<br>NEED | DISEASES<br>ANALYSIS | DISCOVERY                             |
|  |  |  |   | 0                | _0                   | Preclinical proo<br>concept Lead/Prot |
| ATMP<br>Advanced<br>Therapy<br>Medicinal<br>Products | NK Cell mediated therapy In cancer and chronic infection   | Organ Insufficiencies                              | IRCCS ISMETT - University of Pittsburgh           |                  |                      |                                       |
|  | Adoptive Transfer of virus-specific T cells  | Organ Insufficiencies                              | IRCCS - ISMETT                                    |                  |                      |                                       |
|  | MSC-based therapy for skin and liver diseases  | Organ Insufficiencies                              | IRCCS - ISMETT                                    |                  |                      |                                       |
|  | Placenta-derived MSC and Pancreatic Insulae isolation and characterization   | Organ Insufficiencies                              | IRCCS - ISMETT                                    |                  |                      |                                       |
| BIOLOGICS  | Bioengineering a kidney in secondary lymphoid organs   | Organ Insufficiencies                              | University of Pittsburgh                          |                  |                      |                                       |
|  | Immunotherapy against colonization by multidrug resistant bacteria   | Infectious diseases                                | IRCCS - ISMETT                                    |                  |                      |                                       |
|  | Probiotic yeasts as novel vaccination vectors  | Infectious diseases                                | IRCCS ISMETT - University of Pittsburgh           |                  |                      |                                       |
|  | MicroRNA-mRNA interaction network  | Cancer   | Univ. of Palermo - Univ. of Pittsburgh - IBIM CNR |                  |                      |                                       |
|  | Function of Olyhing in heart means and development   | O-ndiaaraa diaaraa                                 | University of Distributed                         |                  |                      |                                       |
| BIOMARKERS   | Function of Globins in heart regeneration and development<br>Prediction of Ischaemic Lesions associated with cardiovascular diseases | Cardiovascular diseases<br>Cardiovascular diseases | University of Pittsburgh                          |                  |                      |                                       |
|  |  |  | UCL - UCLH  |                  |                      |                                       |
|  | In-silico modeling for clinical risk stratification of cardiovascular pahtologies  | Cardiovascular diseases                            | IRCCS - ISMETT                                    |                  |                      |                                       |
| BIOMEDICAL<br>DEVICES                                | Development of a novel cardiovascular devices  | Cardiovascular diseases                            | UCL - Mayo Clinic - Barts Hospital                |                  |                      |                                       |
|  | Tissue engineered cardiac valve, patch and graft   | Cardiovascular diseases                            | University of Pittsburgh                          |                  |                      |                                       |
|  | Development of osteochondral bioreactors and scaffold matrices   | Inflammatory diseases                              | University of Pittsburgh                          |                  |                      |                                       |
| PRECISION<br>MEDICINE                                | MUC1 and its interactions in cancer and inflammation   | Cancer   | University of Pittsburgh                          |                  |                      |                                       |
|  | ADAMTS5 role in senescence induction in prostate cancer cells  | Cancer   | IOR SWITZERLAND                                   |                  |                      |                                       |
|  | Epigenetics in cancer  | Cancer   | University of Naples                              |                  |                      |                                       |
|  | Steroid-unresponsive inflammation in chronic obstructive pulmonary disease   | Inflammatory diseases                              | IBIM CNR  |                  |                      |                                       |
|  | Pharmacokinetics of nitro fatty acids (NO2-FA)   | Inflammatory diseases                              | University of Pittsburgh                          |                  |                      |                                       |
|  | Molecular mechanism of protein misfolding diseases   | Neurodegenerative diseases                         | University of Palermo - King's College London     |                  |                      |                                       |

### **TECHNOLOGY PLATFORMS**

DI MED DODTEOLIO

The engine of translational research of the Ri.MED Fondation is propelled by competences and echnological platforms to support discovery projects and preclinical development in order to xpedite translation of biomarkers, precision therapeutics for biomedical devices to patients.

BIOINFORMATICS BIOENGINEERING

STRUCTURAL BIOLOGY AND BIOPHYSICS

