

- numerical models that predict the trend of cardiovascular parameters, starting from parameters measured in a "non-invasive" way
- numerical models for the analysis of the proliferation of mesenchymal stem cells used for the regeneration of infarcted cardiac tissue
- patient simulators for training (also at a distance) of bioengineering, clinical engineering, medicine students and for medical and paramedical personnel.

EPIDEMIOLOGY AND RESEARCH ON HEALTH SERVICES

- management and analysis of clinical studies of hematology and nephrology, in collaboration with the IFC branch of Reggio Calabria
- development and analysis of diabetic disease models for early identification and prediction of complications
- analysis on the stereotypes that guide gender relations, in collaboration with the CNR Unique Guarantee Committee
- identification of useful socio-health indicators, as part of the new city social plan of Roma Capitale.

LECCE

c/o CAMPUS UNIVESITARIO ECOTEKNE, ed. A7, via Provinciale Lecce-Monteroni, 73100 Lecce

- 4 Research Macro-Areas: Cardiovascular biomarkers, Technological solutions for Health, Nano-imaging and nutrigenomics
- promotion of Scientific and Technological Research in Southern Italy, together with other research institutes, Public Agencies (local authorities, Regions, etc.) and the industrial and entrepreneurial sector.

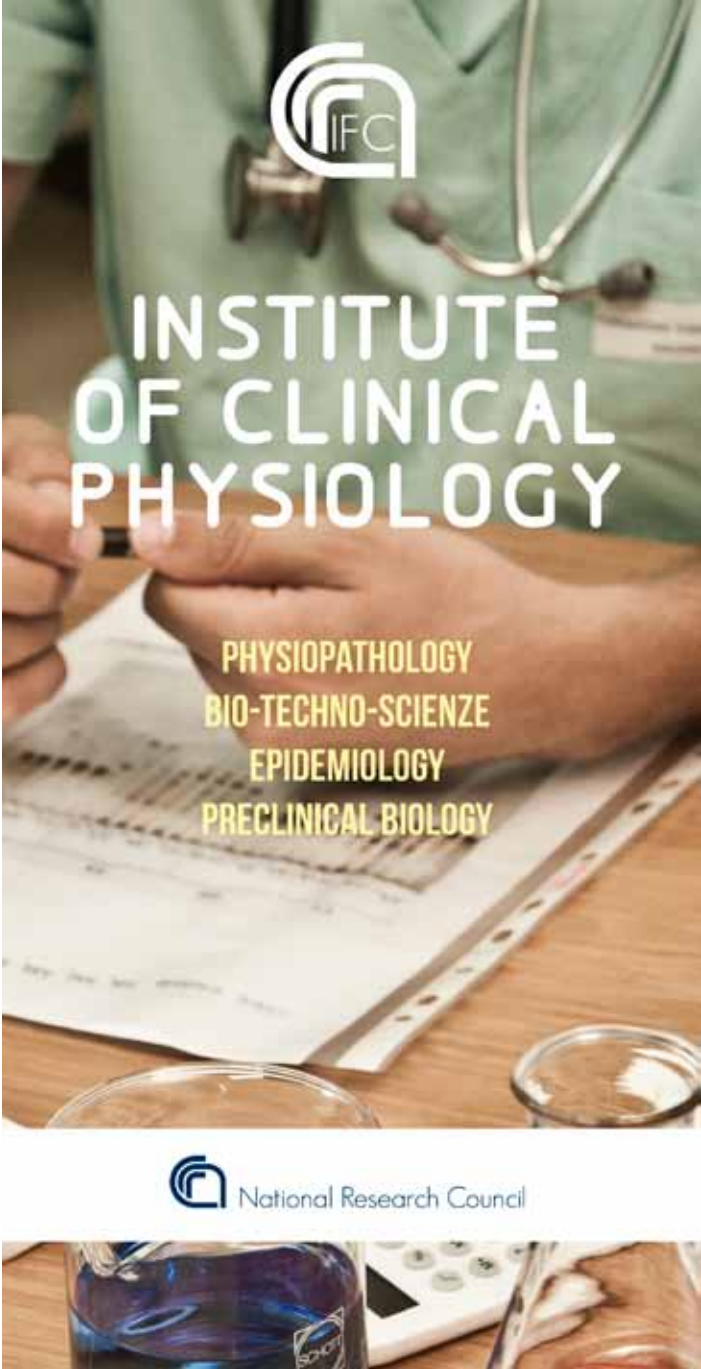
REGGIO CALABRIA

c/o Ospedali Riuniti - Azienda Ospedaliera "Bianchi-Melacrino-Morelli", Via Vallone Petrarra, 89124 Reggio Calabria

- epidemiology of cardiovascular risks connected to the kidney diseases and the arterial hypertension, study of the cardiovascular reflexes and of the sleep disorders in patients with chronic renal disease and in patients with transplanted kidney, molecular genetics of the renal disease and of the arterial hypertension, role of the adipose tissue in the systemic inflammation in patients with chronic renal disease, arterial hypertension, biostatistics of the risk, nutrition and hypertension, clinical epidemiology, pathophysiology of the progressive renal diseases; full member of the European Training Centers network, center of excellence in Europe for the training of researchers and clinicians in the area of renal disease and for the treatment of arterial hypertension.



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CNR Research Area
via G. Moruzzi, 1 - loc. San Cataldo
56124 Pisa

THE INSTITUTE

Founded in Pisa in 1968 for the study of the pathophysiology of the cardiovascular system and the related organs, IFC has pioneered the 'translation' process of physiological observations and measurements at the molecular and cellular level, towards knowledge, new therapies, guidelines, for the benefit of the clinical practice and the community health.

Throughout the study of the differences between the mechanisms which produce consequences on the population health at progressively lower levels of observation, IFC, widening its experience to a holistic point of view, sets the "personalized care" as a goal, to guarantee social health and optimal life quality.

The staff, as many as more than 500 employees, is a multidisciplinary team with different training and scientific culture: medicine, biology, physics, chemistry, engineering, computer science, psychology, statistical science, etc.

Although the Institute's activities cover areas such as Clinical pathophysiology and risk factors for health, Bio-tech science and modeling, Epidemiology and health promotion, Preclinical biology and mechanisms of disease, IFC keeps a strong involvement in the development of multidisciplinary projects, coworking with the most important world institutions, getting high levels of excellence, as coordinator as well as partner in many international projects and in synergic collaborations with industries, always keeping attention to all the involved stakeholders, from patients to health workers.

THE RESEARCH

PISA

PATHOPHYSIOLOGY AND HEALTH RISK FACTORS

Integration of the most relevant, potentially useful in the medical field, scientific results, evaluating their applicability, feasibility and clinical significance on patients.

BIOTECHNOSCIENCE AND "MODELING"

Development of innovative technologies and methodologies applied to the medical sciences for a model of "4P" (predictive, preventive, personalized and participatory) Medicine.

EPIDEMIOLOGY AND HEALTH PROMOTION

Study of diseases related to environmental and / or social factors, and of the complex relationships between causes and effects, using observational studies of population and experimental studies in the clinical field, through the application of advanced statistical methods.

PRECLINICAL BIOLOGY AND DISEASE MECHANISMS

Reply to scientific needs to translate rapid progresses in genomics and other omical, in a broader sense, technologies, to ensure a better comprehension of the molecular mechanisms of diseases, with particular attention to the implications in the clinical arena.

MASSA

c/o Stabilimento Ospedaliero di Massa, Ospedale del Cuore, via Aurelia Sud, 54100 Massa

- polymeric biomaterials and biomedical devices for the cardiovascular area, studies of congenital heart diseases and of leuco-platelet pathophysiology
- epidemiology and biostatistics oriented to the statistical analysis of health surveys on current information flows, clinical and observational studies.

MILAN

P.zza Ospedale Maggiore 3, 20162 Milano

- laboratories for the determination of homocysteine, cysteine, glutathione in plasma, urinary cysteine, B1 and B2 vitamins in blood, A, E, C vitamins, beta-carotene, B6 in serum, markers of inflammation or associated with the extracellular matrix or monocytes activation, determination of microRNA in plasma and tissue, clinical data collection and non-invasive cardiovascular evaluation of subjects enrolled in research protocols, MASH-groups to improve quality of life and appropriateness of diagnostic and therapeutic interventions.

SIENA

Strada del Petriccio e Belriguardo 35, 53100 Siena

- pre-clinical research focused on the development of innovative therapies for personalized medicine in the field of oncology, within Tuscany Life Sciences (TLS), at the Technological Pole of "Torre Fiorentina".

ROMA

Via Palestro 32, 00185 Roma

CARDIOVASCULAR ENGINEERING

- numerical and hybrid simulators of the cardiovascular and respiratory system: protocols for the management of devices for ventricular assistance (VADs) with pulsed and continuous flow, and for ventilatory mechanical assistance
- prevention of sudden cardiac death: wearable devices that can be connected to listening stations