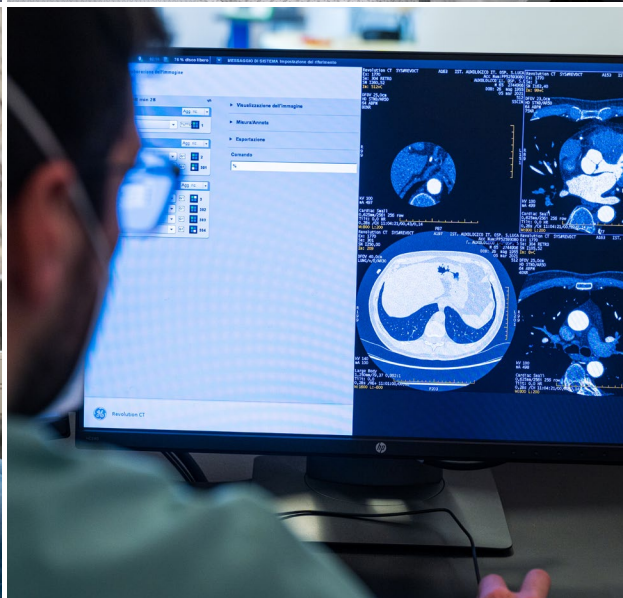


Auxologico

IRCCS

**Research and care
for your health**

**Scientific
Profile**





Neurological examination

Frome bench to bedside

The scientific history of Auxologico dates back to 1958 in Piedmont with the “Centro Auxologico di Piancavallo”, the first facility in Italy dedicated to anomalies in the growth of children (“Auxology”, hence the name Auxologico). The constant combination of excellence in care with the most advanced scientific research, in collaboration with several affiliated Universities, allowed Auxologico to obtain and maintain, since 1972, the recognition of Scientific Institute for Research, Hospitalization and Healthcare (Istituto di Ricovero e Cura a Carattere Scientifico - IRCCS).

Since the 1990s, Auxologico’s scientific activities have expanded into other disciplinary sectors, including cardiovascular, cerebrovascular, neurodegenerative, immunological, and aging-related diseases, with active participation in national and international research networks. This expansion has been accompanied by an increase in Auxologico’s presence in Milan, marked by the opening of San Luca Hospital and the Center for Research and Biomedical Technologies in Cusano. As a result, innovative technologies for genetic and molecular investigations have been developed, patient care has advanced, research project volumes have increased, and activities in the cardiovascular, neurological, and auxoendocrine-metabolic fields have expanded with active participation in national and international research networks.

Auxologico’s research primarily focuses on the prevention, diagnosis, treatment, and rehabilitation of the most prevalent pathological conditions that affect our society. Auxologico conducts studies on the genetic and molecular mechanisms of neurodegenerative, endocrinological, and cardiovascular diseases with a translational perspective, facilitating the transfer of data from the laboratory bench to the patient’s bedside and vice versa.

The research in Auxologico also plays a leading role in the study of the biological effects of environmental factors, including the effects of exposure to hypobaric hypoxia at high altitude, and in the use of advanced technologies, including immersive virtual reality and robotic techniques. Another area of excellence of Auxologico is integrated cardiovascular imaging which offers an advanced approach to diagnosis of cardiovascular diseases through combination of last generation cardiac ultrasound testing, cardiac CT and cardiac magnetic resonance imaging. All these research activities are favoured by Auxologico’s participation in numerous experimental, pharmacological, and technological trials.

Attention to highly specialized rehabilitation techniques, as an integral part of a model of care aimed at reaffirming the centrality of human beings, plays a leading role in multidisciplinary research and intervention programs aimed at the full recovery of the patient’s psycho-physical conditions.

The integrated “biomedical-clinical-rehabilitation” approach of Auxologico is supported by a unique organization through a wide territorial network in Italy and Romania consisting of large hospital centers connected to peripheral structures allowing a capillary distribution of high quality care according to a “hub and spoke” model.

Over 60 years of research and clinical care

1958
In Piancavallo, in Piedmont, the first hospital in Italy dedicated to pituitary dwarfs and growth anomalies of children opens.

1972
Auxologico obtains the recognition of IRCCS (Istituto di Ricovero e Cura a Carattere Scientifico - Scientific Institute for Research, Hospitalization and Healthcare)

1976
The first Milanese center opens in Via Ariosto

1991
The San Luca Hospital opens in Milan

2003
The Centro Ricerche e Tecnologie Biomediche (Research and Biomedical technology Center) opens in Cusano Milanino

2007
The Centro di Ricerca e Cura dell'Invecchiamento (Center for Research and Care of Aging) opens in Via Mosè Bianchi

2011
Opening of the Rehabilitative Surgical Center in Capitanio

2018
Auxologico Procaccini is opened, the International Specialist Outpatient Clinic

2000 - 2020
Opening of Villa Caramora, Bollate, Meda, Pier Lombardo, Pioltello

2021 - 2023
Acquisition of the centers in Rome (Buon Pastore) and Romania (Cardiorec in Bucharest and President in Oradea), opening of Meda Rehabilitation, Città Studi Icans and Como

Italy

Milan
Ariosto
via Ariosto 9-13
Capitanio
via Mercalli 28-30
Città Studi Icans
via Botticelli 21
Mosè Bianchi
via Mosè Bianchi 90
Pier Lombardo
via Pier Lombardo 22
Procaccini
via Niccolini 39
Residenza Anziani
via Mosè Bianchi 90
San Luca
piazzale Brescia 20

Lombardy
Bollate
largo Fellini 3 / Stazione Bollate
Centro Ricerche Biomediche
via Zucchi 18, Cusano M.no
Como
via Pasquale Paoli 6 / Esselunga Ca' Merlata
Cusano M.no
via Zucchi 18
Meda
via Pace 18
Meda Riabilitazione
corso della Resistenza 23
Pioltello
via San Francesco 16

Piedmont
Piancavallo
via Cadorna 90, Oggebbio (Vb)
Villa Caramora
corso Mameli 199, Verbania

Rome
Roma Buon Pastore
via Di Vallelunga 8

Romania

CardioRec
Bucarest - Corbeanca
President
Oradea - Băile Felix

Care numbers in 2023

2,450
1,059
253,322
over 1,400,000
4,000,000

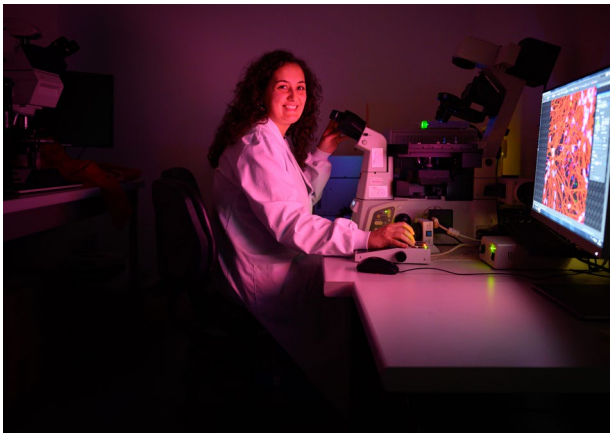
doctors and health care operators
beds
hospital days
patients treated each year
outpatient services each year

Areas of clinical-scientific excellence

- Cardiovascular diseases**
Heart attack, stroke, arrhythmias, hypertension, atherosclerosis, peripheral arteriopathies, electrophysiology, genetically based cardiomyopathies, cardiovascular imaging, telemedicine and digital technologies in cardiology, cardiorespiratory disturbances during sleep, genetic cardiac arrhythmias, syncope and falls, heart failure, pulmonary hypertension, primary and secondary cardiovascular prevention, blood pressure measurement techniques, high altitude medicine
- Neurological diseases**
Amyotrophic Lateral Sclerosis, Parkinson disease, Alzheimer disease, Multiple Sclerosis, Dementia, stroke, cerebrovascular diseases
- Endocrine-metabolic diseases**
Diabetes, severe obesity, pituitary and adrenal diseases, thyroid diseases, growth disturbances, anorexia, bulimia, osteoporosis
- Autoimmune diseases**
Lupus, rheumatoid arthritis, Phospholipid antibody syndrome, Systemic Sclerosis
- Genetic Diseases**
Mental disorders, syndromic diseases, alterations in bone metabolism, retinal alterations, oncological diseases
- Aging diseases**
Atherothrombotic, neurodegenerative, immunological, pneumological, urological, osteoarticular diseases, diabetes and complications, fragile elderly syndrome
- Rehabilitation**
Rehabilitation of patients with neurological, cardiovascular, orthopedic, nutritional and respiratory diseases. Development and testing of new technological solutions, including virtual reality approaches

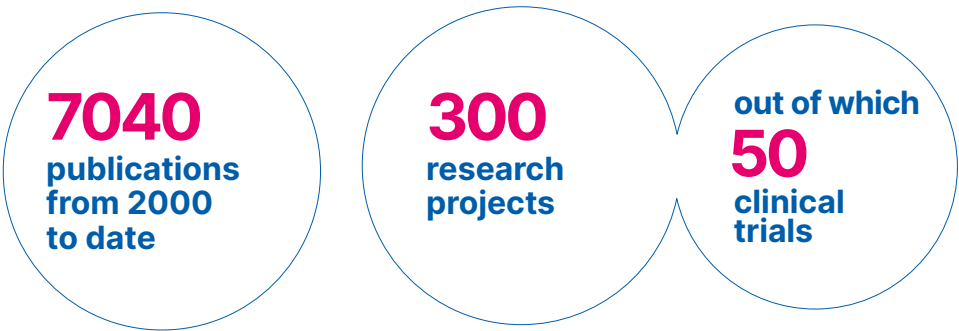


Haemodynamics Room, Auxologico San Luca



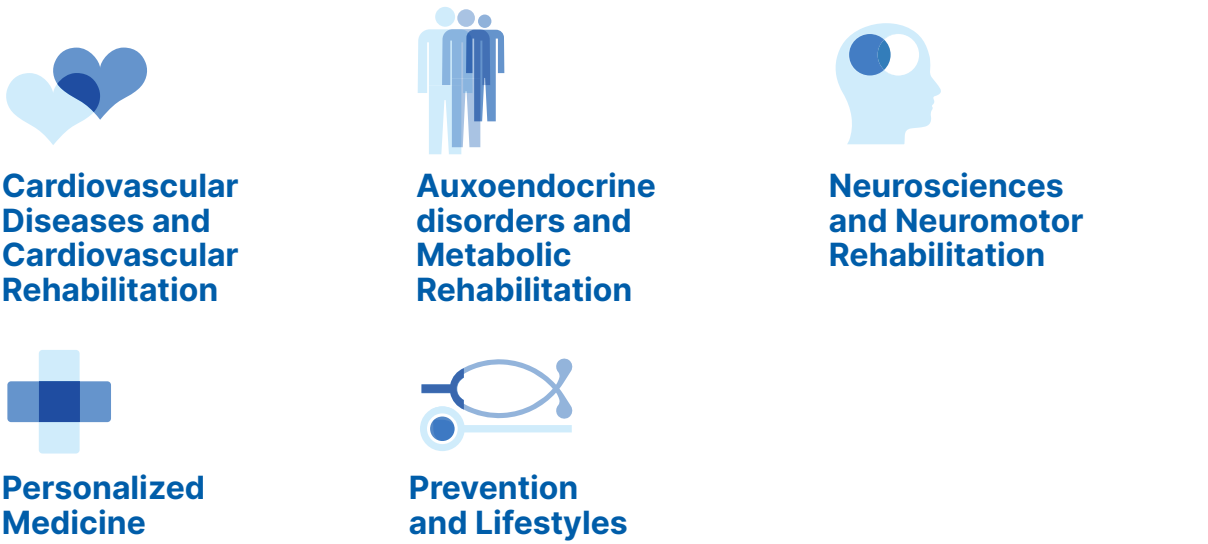
Experimental Research Laboratory

Scientific activity 2023: research figures



Researchers for H Index calculated from 2012 to 2021	h-index ≤ 9	227
	10 ≤ h-index ≤ 39	239
	40 ≤ h-index ≤ 69	25
	70 ≤ h-index ≤ 140	9

Main research areas



Facilities, equipment, services

- 7,000 square meters for research and training
- Hamilton Microlab Star for automated preparation of DNA libraries
- Illumina NextSeq 500 Next Generation Sequencer
- Illumina iScan for SNPs genotyping, methylation analysis and expression analysis
- State-of-the-art echocardiographs for Advanced and Three-Dimensional Echocardiography
- Quanterix SR SIMOA for ultra-sensitive protein determination
- Gait Analysis and Test Equipment
- Total Body Cryo Camera
- 2 Quarries for Immersive Virtual Reality
- 3 Tesla Magnetic Resonance for diagnostics and research
- GE “Revolution” CT scan supporting the evaluation of cardiac and coronary anomalies in a short time with significant reduction in the dose of ionizing radiation
- Da Vinci Robot for robotic surgery
- Biostatistics - Bioinformation technology and Genomics - Data Analysis - Bibliographic Services

Research in Auxologico



**Research Management
Department Director
Dr. Luca Grappiolo**

**Technical Management
Research and Biomedical
technology Center Director
Dr. Anna Maria Di Blasio**

**Scientific Director
Prof. Gianfranco Parati**

Laboratories and Research Centers

Cardiological Research Prof. Gianfranco Parati

- Research Center on Integrated Multimodal Cardiovascular Imaging
Prof. Luigi Badano
- Research Center for Dyspnea and Pulmonary Hypertension
Prof. Sergio Caravita
- Research Center for Cardiomyopathies on a Genetic Basis
Prof. Lia Crotti
Prof. Franco Cecchi
- Research Center on Cardiac Insufficiency
Dr. Alessandra Villani
- Research Center on Syncope, Fainting and Falls
Dr.sa Antonella Groppelli
Dr. Michele Brignole
- Research Center on Cardiac Arrhythmias
Dr. Giovanni Perego
- Research Center on Valvopathies
Prof. Denisa Muraru
- Research Center on Ischemic Heart Disease
Dr. Davide Sala
Dr. Paolo Sganzerla
- Research Center on Arterial Hypertension and Cardiac Prevention
Prof. Grzegorz Bilo
- Research Center on the Property of Large Arteries and Arterial Stiffness
Prof. Paolo Salvi
- Sleep Medicine Research Center
Prof. Carolina Lombardi
- Center for Research in Cardiovascular Risk in Pediatric Age
Prof. Simonetta Genovesi
- Signal processing and data analysis Center
Ing. Andrea Faini

Research in Rehabilitation of the elderly and cerebrovascular medicine Dr. Marco Stramba-Badiale

Research in Applied technologies in neuropsychology - ATNP Lab Prof. Giuseppe Riva

Research in Geriatric and oncological neuroendocrinology Prof. Giovanni Vitale

Endocrinometabolic research Prof. Luca Persani

Research in Neuroscience Prof. Vincenzo Silani

Research in Neuromotor Rehabilitation Prof. Luigi Tesio

Research in Clinical neuropsychology Prof. Nadia Bolognini

Research in Bone metabolism Prof. Sabrina Corbetta

Research in Nutrition and obesity Prof. Simona Bertoli

Research in Molecular biology Dr. Anna Maria Di Blasio

Research in Medical cytogenetics and molecular genetics Dr. Silvia Russo

Research in Clinical immunology and rheumatology Prof. Pierluigi Meroni

Research in Genetic-based cardiac arrhythmia Prof. Peter Schwartz

Research in Physical exercise medicine Prof. Daniela Lucini

Auxoendocrinological research Dr. Alessandro Sartorio

Research in Metabolic diseases Dr. Massimo Scacchi

Research in Clinical neurobiology Prof. Alessandro Mauro

Research in Respiratory pathophysiology Dr. Paolo Fanari

Research in Rehabilitation, biomechanics, and ergonomics Prof. Paolo Capodaglio

Research in Clinical psychology Prof. Gianluca Castelnuovo

Research in Vascular surgery Dr. Renato Casana

Research in Urological diseases Dr. Andrea Cestari

Research in Orthopedic diseases Prof. Marco D'Imporzano

Research in Ophthalmological and neurophthalmological diseases Dr. Fulvio Bergamini

Research in Endocrine surgery Prof. Gianlorenzo Dionigi

Research in Organ damage biomarkers Prof. Massimiliano Corsi Romanelli

Research in Public health Prof. Lorenzo Mantovani

National and international networks

IRCCS Networks

- Cardiology Network - Associazione per lo Studio delle Malattie Cardiovascolari (Association for the Study of Cardiovascular Diseases)
- Italy Longeva, Rete Nazionale di Ricerca sull'Invecchiamento e la Longevità Attiva (National Research Network on Aging and Active Longevity)
- Rete delle Neuroscienze e della Neuroriabilitazione (Network of Neurosciences and Neurorehabilitation RIN)

ERN Networks

- ERN EURO - NMD – Network Neuromuscular Diseases
- Endo - ERN - Network on Endocrine Conditions
- ERN GUARD - HEART - Network on Diseases of the Heart
- ERN EURACAN - Network Adult Cancer

ESADA Network

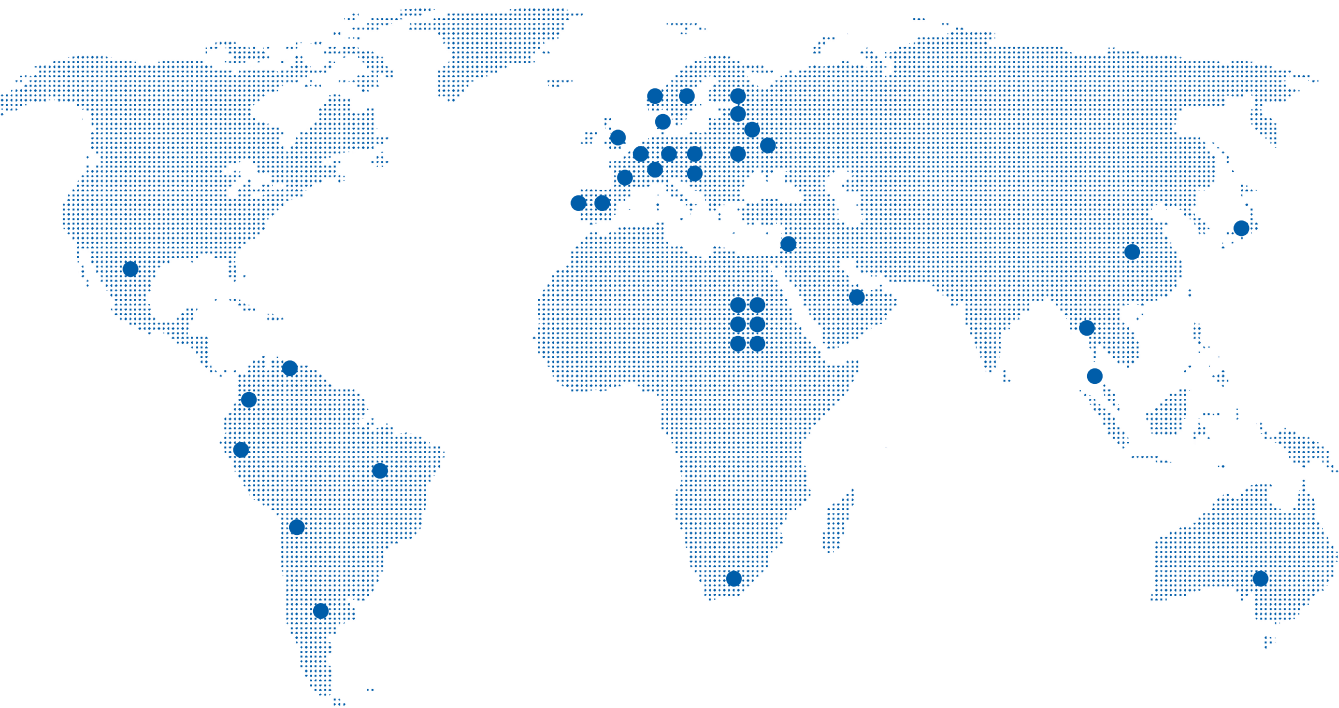
- The European Sleep Apnoea Database

International Collaboration Network including Low and Mid Income Countries

Partnership with World Hypertension League (WHL) and World Health Organization (WHO). Activities in Rwanda, Uganda, Congo, Zambia, Peru, Venezuela, Argentina, Chile, Colombia.

International activities

Auxologico participates in international activities with Research Institutes in all continents, involving about 70 countries.



Continuing education in medicine and scientific activities



Universities with specialization schools in Auxology

Università degli Studi Milano Bicocca

Università degli Studi di Torino

Università degli Studi del Piemonte Orientale

Università Cattolica del Sacro Cuore

Università degli Studi di Milano

University of Oradea, Romania



University education

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Support the research of Auxologico

Fully deductible donations

**5X1000 in the income
declaration by writing
the tax code of Auxologico
in the box dedicated to
the financing of health research:
02703120150**