

PROFILE

HUMAN TECHNOPOLE FOUNDATION

Human Technopole (HT) is the **research institute for life sciences**, located in the heart of Milan's new district dedicated to innovation, known as MIND -Milano Innovation District. The area is known for hosting the Universal Exhibition in 2015, and **the iconic Palazzo Italia** is now the headquarters for Human Technopole.

The Human Technopole Foundation, established by the 2017 Budget Law and **overseen by three founding ministries**, the Ministry of Economy and Finance, the Ministry of University and Research and the Ministry of Health, started its activities in January 2019.

As of today, Human Technopole has a staff of 400, **including 300 researchers and technical-scientific support staff**, professionals of **36 different nationalities**, with an average age of 37. **36% of the research staff come from abroad**, including **some 86 Italians**, among them Foundation Director Prof. Marino Zerial, most of whom are working for the first time in their home country.

Human Technopole researchers have published **334 articles** and reviews in international *peer-reviewed* journals, including the prestigious scientific journals *Nature*, *Cell* and *Science*, and have appeared five times on the covers of these journals. **320** publications are the result of **collaborations with other institutes** and **105** describe **new experimental methods, instruments, software and protocols** developed by the institute's researchers.

To date, Human Technopole has received **EUR 19.8 million in external funding** awarded to the institute's researchers through grants and scholarships from European and international bodies.

After intense refunctionalisation work, the Human Technopole headquarters and laboratories now occupy an area of more than **20,000 square metres**, consisting of three pre-existing buildings (**Palazzo Italia, North Pavilion, South Pavilion**), the **Incubator labs** and a newly constructed building (**South Building**) scheduled for completion in 2028.



The Human Technopole campus with Palazzo Italia and incubator labs (Sept. 2020)

THE MISSION

Human Technopole's research **contributes to the improvement of people's health and well-being** by studying the fundamental mechanisms of biological systems relevant to human diseases, using a multidisciplinary approach in the areas of medicine, genomics, nutrition and data science.

To this end, the institute:

- promotes **research focusing on fundamental mechanisms of human biology** with relevance to people's health and well-being;
- supports research by providing **technologies** to the Italian scientific community through **shared research infrastructures**: the National Facilities;
- offers **advanced scientific training** to the next generation of Italian scientists and researchers;
- exploits the results of research and technological innovation through **technology transfer**.

RESEARCH CENTRES AND FLAGSHIP RESEARCH PROGRAMMES

Human Technopole researchers take a **global and interdisciplinary approach to the study of human biology**, aimed at understanding the basic mechanisms that regulate physiology and disease.

The institute's activities are divided into several **research areas** that allow it to pursue a unique mix of experimental and computational research: **genomics, neurogenomics, structural biology, computational biology, health data science, molecular cell biology and biophysical modelling and simulation**.

Within these areas of interest, researchers pursue interdisciplinary research programmes - **Flagship Research Programmes** - aimed at elucidating the fundamental molecular mechanisms underlying various biological processes in health and disease. The Flagship Research Programmes thus utilise the expertise and cutting-edge work of Human Technopole researchers and focus on the study and understanding of five therapeutic areas: **cardiometabolic diseases, metabolic diseases, immunogenomics, cancer and infections, neurodevelopmental and neuropsychiatric conditions and ciliopathies**.

NATIONAL FACILITIES

Following an agreement signed between Human Technopole and the Ministries of Economy and Finance, Health and University and Research in December 2020, the institute has been equipped with **five National Facilities**, high-technology impact infrastructures open to researchers from the national community. The identification of the National Facilities was the result of a two-level public consultation involving over **1,600 representatives of the national scientific community** in order to identify the areas of greatest interest to the community.

In June 2024, the National Facilities for **genomics, genome engineering and disease modelling, structural biology, light imaging and data handling and analysis** were activated. Researchers from all over Italy can now apply via open calls for applications to access the available technologies and thus advance their own research projects.

In line with its mission, Human Technopole is also committed to **training** the next generation of scientists by providing **high-quality training** to its own researchers and the Italian research community, including through the technologies available in the National Facilities.

GOVERNANCE

The Ministry of Economy and Finance (MEF), the Ministry of Health and the Ministry of Education, University and Research (MIUR) are the founders of the Foundation. The Foundation has a dual structure that guarantees the operational autonomy of its bodies: the Supervisory Board performs the function of policy-making and control, while the Management Committee deals with scientific and administrative management.

President

The **president** of the Foundation legally represents the Foundation, chairs the Supervisory Board, has strategic policy-making powers, handles the Foundation's institutional and public relations and promotes training and dissemination activities on the economic and social impact of the scientific research carried out by the Foundation. The chairman of the Human Technopole Foundation is **Gianmario Verona**.

Supervisory Board

The **Supervisory Board** ensures the excellence of the Foundation and compliance with the rules on the appointment of the Foundation's bodies and verifies the use of resources. It performs general guidance and control activities over the Foundation. The **members** of the Supervisory Board include the President and are appointed by the Italian Government by decree of the President of the Council of Ministers.

Paola Bovolenta, Director Centro de Biología Molecular Severo Ochoa, Autonomous University of Madrid;

Maura Francese, Deputy Head of Economic Structure Service, Department of Economics and Statistics, Bank of Italy;

Giovanna Iannantuoni, Rector Milan Bicocca University;

Giuseppe Ippolito, Professor of Infectious Diseases, Unicammillus International University of Health Sciences;

Biagio Mazzotta, President Fincantieri;

Luisa Minghetti, Director Service Coordination and Research Support, Istituto Superiore Sanità;

Marcella Panucci, Head of Cabinet Minister for Universities and Research;

Francesca Pasinelli, Board Member, Telethon Foundation;

Maria Sibilìa, Professor of Cellular and Molecular Tumour Biology, Head of the Center for Cancer Research, Medical University of Vienna;

Serena Sileoni, Associate Professor in Constitutional Law at the Suor Orsola Benincasa University in Naples;

Gianluca Vago, President CNAO Foundation;

Alessandro Vespignani, Professor of Physics at Northeastern University and founding director of the Northeastern Network Science Institute in Boston.

Director

The **Director** of Human Technopole is responsible for implementing the multi-year strategic plan and chairs the Management Committee. The Director-designate of Human Technopole is **Marino Zerial**.

Management Committee

It manages all scientific and administrative activities necessary to achieve the Foundation's objectives and implements the strategic plan. The **members** of the Management Committee include the Director and are professionals with proven management skills in leading national institutions. They are appointed by the Supervisory Board:

Irene Bozzoni, full professor of molecular biology and director of the 'School of Advanced Studies' at La Sapienza University in Rome;

Nando Minnella, Director General of the Italian Institute of Nuclear Physics, former head of the technical secretariat of the Minister of Education, University and Research (MIUR);

Stefano Piccolo, professor of molecular biology at the University of Padua;

Fabio Terragni, Partner and Director Alchemia

Scientific Committee

The Scientific Committee is the advisory body of the Human Technopole Foundation. The Committee members, appointed by the Supervisory Board from among eminent scientists outside the Institute, are given an important advisory role by the Foundation's statutes: they are responsible for assessing the protocols of the scientific activities in terms of both quality and consistency with Human Technopole's multi-year plans. The current members, chosen from among top scientists in the field of life sciences, are:

Walter Ricciardi, Chairman of the Scientific Committee of the Human Technopole Foundation. Professor of Hygiene and Public Health, Università Cattolica del Sacro Cuore, Italy;

Geneviève Almouzni, Research Director, *Centre National de la Recherche Scientifique, Institut Curie*, France;

Andrea Ballabio, Director, Telethon Institute of Genetics and Medicine (TIGEM), Italy;

Pietro De Camilli, Director, *Program in Cellular Neuroscience, Neurodegeneration and Repair (CNNR), Yale School of Medicine, USA*;

Kristian Helin, CEO and President, *Institute of Cancer Research*, UK;

Alberto Mantovani, Scientific Director, Humanitas Clinical Institute, Italy;

Margaret McMahon, *Global Head Data Science, Roche Information Solutions Data & Analytics*, Switzerland;

Gennaro Melino, Professor of Biochemistry, Director *Torvergata Oncoscience Research (TOR) Centre*, University of Rome Tor Vergata, Italy;

Andrea Musacchio, Director of the Max-Planck Institute for Molecular Physiology, Department of Cellular Mechanics Biology, Germany.

Luca Pani, professor of clinical psychiatry, University of Miami and professor of pharmacology and clinical pharmacology, University of Modena and Reggio Emilia, Italy;

Alfio Quarteroni, Professor at the Milan Polytechnic and Professor Emeritus at EPFL Lausanne, Italy and Switzerland;

Nadia Rosenthal, Scientific Director, The Jackson Laboratory, USA;

Michael Snyder, Director, *Center for Genomics and Personalised Medicine, Stanford University School of Medicine*, USA;

Giulio Superti-Furga, Scientific Director, CeMM Research Centre for Molecular Medicine, Austria;

Fiona Watt, Director, *European Molecular Biology Organisation*, Germany.

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