

The Giovanni Lorenzini Medical Foundation

Past, Present, and Future

FONDAZIONE
GIOVANNI LORENZINI
MILAN, ITALY



GIOVANNI LORENZINI
MEDICAL FOUNDATION
HOUSTON, TX, USA

FONDAZIONE GIOVANNI LORENZINI MEDICAL SCIENCE FOUNDATION

The Foundation has been recognized by Decree of the President of the Republic n. 243 on 30 March 1976 and is now operating according to the new bylaws approved by D.M. MURST (Italian Ministry of University, Scientific Research, and Education) on 19 January 1993.

ORGANIZATION:

BOARD OF GOVERNORS

It includes representatives of the:

Italian Ministry of University, Scientific Research, and Education

Italian Research Council

University of Milan

BOARD OF AUDITORS

It includes representatives of the:

Italian Ministry of Treasury

Italian Ministry of University, Scientific Research, and Education

EXECUTIVE COMMITTEE

President

Vice President

Secretary General

SCHOLARSHIPS AND AWARDS COMMITTEE

The Fondazione Giovanni Lorenzini awards scholarships to Italian investigators and post-graduate fellows active in Italian universities and abroad. Since 1972, more than 290 scholarships have been awarded.

HEADQUARTERS AND OFFICES

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THE GIOVANNI LORENZINI MEDICAL FOUNDATION, HOUSTON, TEXAS, USA

The Giovanni Lorenzini Medical Foundation was incorporated as a not-for-profit organization in the State of Texas in 1984. The aims of the US Foundation correspond to those of its sister organization in Milan, Italy, the Giovanni Lorenzini Medical Science Foundation.

ORGANIZATION:

BOARD OF TRUSTEES (up to 3 Members):

President

Vice President and Treasurer

Executive Vice President

Secretary

Scientific Advisory Board

HEADQUARTERS AND OFFICES

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President's Address

The Fondazione Giovanni Lorenzini Medical Science Foundation consists of two not-for-profit scientific organizations, one based in Milan, Italy (established in 1969) and the second in Houston, Texas, USA (established in 1984). Following amendments to the bylaws between 1971 and 1975, the Association originally organised in 1969 became a Foundation. On the 30th March 1976, the Foundation was incorporated as a not-for-profit scientific organization under a decree of the President of the Republic of Italy. In 1984, the Giovanni Lorenzini Medical Foundation, a legal corporation independent of the original parent Foundation, was incorporated in Houston, Texas, as a non-profit organisation.

Mission

The mission of the Lorenzini Foundation is to transfer the most recent developments and results in experimental science to clinical and applied research, to be used for both the individual patient and for the community at large to improve both patient care and health systems.

Objectives

The objectives of the Foundation today are: disseminating the results of advanced scientific and clinical research; fostering interest in the world of science; collaborating with medical centres of excellence and academia to ensure constant updating of physicians and basic scientists; and bridging science and health policy in disease management.

Main interests

The Foundation focuses on those scientific areas in which an improvement in the diagnosis, prevention, and treatment of diseases has an increased positive impact on morbidity and mortality and on the economic burden on the community, such as but not limited to:

- **atherosclerosis**, and related pathophysiological areas including but not limited to: **inflammation and thrombosis; multiple risk factor management in cardiovascular disease; pharmacological control of plasma dyslipidemia;**
- **non-communicable diseases**, such as **diabetes, obesity, metabolic diseases**, and the associated diagnostic and clinical approaches as well as avenues to prevention;
- **inflammation, chemokines and prostaglandins** whose extremely differentiated activities affect the cells, organs, and systems of the human body;
- **integration of biochemical and bioimaging markers** to improve the evaluation of diseases, support clinical decision-making, and reduce the costs of clinical trials devoted to the evaluation of drug safety and efficacy;
- **women's health and menopause** and the many issues related to this phase of a woman's life;
- **gender-related differences** in health and disease management;
- **infections** and related prevention approaches;
- **health policy and health organization.**

The Lorenzini Foundation has been actively involved and has long-standing experience in developing and implementing:

- **congresses and meetings**, workshops, **courses;**
- **educational campaigns on public health** both at national and international levels;
- **publication** of proceedings, highlights, CD-ROMs and **slide libraries;**

- **promoting and coordinating interdisciplinary panels** to deal with critical areas in medical and scientific debates, and in publishing comprehensive documents such as position papers or guidelines, e.g. the joint monograph entitled “International Position Paper on “Women’s Health and Menopause: a Comprehensive Approach” published with the National Heart, Lung and Blood Institute/NIH and the NIH Office of Research on Women’s Health (Bethesda, USA); and the international guidelines entitled “Harmonized Clinical Guidelines on Prevention of Atherosclerotic Vascular Disease” developed in collaboration with the International Atherosclerosis Society and its Constituent Member Societies;
- **websites**, as permanent sources of information dedicated to metabolic diseases and atherosclerosis, in collaboration with the International Atherosclerosis Society (www.athero.org), and the Italian Heart Foundation (www.fondazionecuore.it and www.cardiometabolica.org). Others areas are also covered by the websites run by the Lorenzini Foundation (www.lorenzinifoundation.org), nutrition (www.foodprofile.org); gender (www.gendermedicine.org), health policy (www.healtheurope.org), women’s health (www.reddressitalia.it).
- The Lorenzini Foundation also coordinates the activities of the **International Society of Atherosclerosis**, a Federation of 62 national societies with more than 16.000 members.



Prof. Rodolfo Paoletti
President

Scenario

The rapid decline in mortality rates in early periods of life, the strong commitment to the prevention of communicable diseases, and the overall improvement in health care are among the least recognized advances of the second half of the 20th century in many affluent countries. However, major non-communicable diseases (NCD), primarily cardiovascular diseases (CVD), cancer, chronic obstructive pulmonary disease, diabetes, and obesity, are responsible of 85% of deaths and 70% of burden of disease worldwide. In addition to human suffering, the costs of managing the clinical sequelae of these diseases create an enormous economic burden for many countries. In many developed or first world countries, life expectancy largely increased in the past 50 years and new cohorts of elderly people are demanding more health services. In the other half of the world, communicable diseases and the suffering due to malnutrition and lack of clean water have not decreased and the so-called Western diseases (such as CVD, obesity, and diabetes) have increased both disability and mortality. Comparison among high-income countries and middle-to-low income countries shows that inequality in income is one of the reasons for a commensurate inequality in health. The explosive increase of knowledge in biology and medicine in the last century has not always resulted in effective daily management of health. The need to better bridge science and health policies in disease management is found in all countries, whether affluent or not. Effective policies can greatly reduce mortality, as can the dissemination of knowledge concerning the best intervention (*medical, pharmaceutical, lifestyle, economic, and/or political*) and methods of delivery. In fact, dissemination of such information and the willingness and ability of the country (*specifically physicians, patients, and healthcare organizations*) to act on the information, governs the pace of improvement in the health of the population much more than income levels. In the second half of last century the medical culture and health needs have faced a dramatic change worldwide. The globalization of the medical culture on the one hand and the globalization of health needs, on the other hand, have been important incentives to increase basic research, resulting in better patient care. At the same time, the financial world (both public and private) has become even more interested in viewing the healthcare industry as an area with potentially great returns on investments, especially in the technology arena. Four pressing social forces have dominated health care: the patient need for an immediate cure; the needs of the medical doctor for updated skills and knowledge; the needs and the pressure of innovation in medical technology and process; and the political and economic needs at the national level to govern the sustainability and the equality of healthcare delivery. Despite, or perhaps due to, competing and conflicting interests, the development and evolution of medical knowledge have increased tremendously in terms of quality and quantity over the past forty years. Within this ever-changing context, the Giovanni Lorenzini Foundation has developed its mission. Translational medicine provided the avenue along which the Lorenzini Foundation has accomplished its goals since its inception more than forty years ago.

Mission

The mission of the Lorenzini Foundation focuses on communications between basic and clinical science so that more therapeutic insights may be derived from new scientific ideas and vice versa. Translational research goes from bench to bedside, where theories emerging from preclinical experimentation are tested on disease-affected human subjects, and from bedside to bench, where information obtained from preliminary human experimentation can be used to refine the understanding of the biological principles underpinning the heterogeneity of human disease and polymorphism. The bench-to-bedside direction has received much attention from scientific and industrial stakeholders, usually through exploratory phase I clinical trials. The reverse direction, however, is still open to improvement. Nevertheless, the society requires a strong commitment from policy decision makers, to examine the issues from *both* directions. A correct analysis and assessment of the critical issues based on independent and impartial scientific evaluation is mandatory for decision makers. The Lorenzini Foundation therefore has focussed its resources in this direction.

From cell and molecular biology to molecular medicine and human disease in the diagnosis, prevention, and treatment, atherosclerosis is considered the most impactful pathology in term of mortality and economic burdens. The Foundation has developed and organized several specific series of meetings and panel discussions which have focussed on the development and progression of atherosclerosis towards cardiovascular disease; identification, assessment, and management of related risk factors; and pharmacological modification of the evolution of atherosclerosis and related diseases with an emphasis on lipid lowering drugs as a highly effective intervention in terms of improvement of mortality and morbidity. Prevention of atherosclerosis and its events through the use of medication and life style modification, such as smoking cessation, improved nutrition, physical activity, stress management, and more effective worksite policies, are the focus of meetings, debates, publications, and campaigns promoted by the Lorenzini Foundation. The links between *nutrition* and *atherosclerosis*, diabetes, and obesity are also the focus of Foundation projects on food profiling, developed in conjunction with the European Commission and other European Groups to develop a European common approach to the evaluation of food profiling and labelling. In this field the Foundation is supporting debates and documents to better understand and use tools to support healthy food choices.

The educational activities of the Foundation in this field have covered the following topics: Cell Biology, Vascular Biology, Endothelial Functions, Platelets, Cytokines, Cholesterol, Lipoproteins, Triglycerides and Metabolic Syndrome, Fatty Acids, Bioimaging and Biochemical Markers (alone and integrated), Multiple Risk Factors Management, Diabetes Interactions, Hypertension, Obesity, Nutrition and Food Profiles, Physical Exercise, Tobacco, Alcohol, Aging, Population Risk Stratification, Acute Coronary Syndrome, Heart Failure, Transient Ischemic Attack and Stroke, Critical Leg Ischemia, Survival, Coagulation, Thrombosis and Antithrombosis, Fibrinolysis, Drugs Affecting Lipid Metabolism, Coronary Surgery, Stents, Apheresis, Biotechnology, Radioimmunoassay, and Health Organization.

Educational Series:

Typing of Human Hyperlipoproteinemias (3 Courses)

DALM (Drugs Affecting Lipid Metabolism) (17 International Symposia)

Triglycerides and HDL, Role in Cardiovascular Disease and Metabolic Syndrome (6 International Meetings)

Lipoprotein Club (4 European Meetings)

Atherosclerosis and Complications (2 Workshops)

US-Italy Joint Symposia (9 Symposia in collaboration with the National Institute of Health, USA)

Integrated Bioimaging and Biochemical Markers (5 Symposia)

Biochemical Markers (3 Courses)

Multiple Risk Factors in Cardiovascular Diseases (7 International Symposia)

Global Cardiovascular Risk (4 National Campaigns in Italy)

Alcohol and Cardiovascular Diseases (1 National Campaign in Italy)

World Heart Day (9 National Campaigns in Italy)

Websites: www.athero.org; www.cardiometabolica.org; www.fondazionecuore.it; www.foodprofile.org; www.lorenzinifoundation.org; www.gendermedicine.org; www.healtheurope.org; www.reddressitalia.it.
Slide libraries from some of the above-mentioned events.

Metabolic Diseases

The pandemic increase of diabetes and obesity mandates attention from many countries worldwide. Overweight and obesity are now at an alarming level and have resulted in public health problems throughout the world. It is well known that the increasing prevalence of overweight and obesity is linked to an epidemic increase in type 2 diabetes mellitus and its cardiovascular complications. The source of the problem may well be that childhood overweight and obesity has dramatically increased worldwide in recent decades. In particular it is important to focus on obesity, because an obese child has great potential to become an obese adult. Adverse health effects of obesity both in children and adults justify the need to look for efficient and effective treatments, among them dietary treatment and

physical exercise. In fact, the main risk factors for simple obesity in children aged 3-15 years are familial and environmental conditions. Obesity and diabetes (including metabolic syndrome) represent a constellation of metabolic disorders that pave the way to cardiovascular events and are included among the multiple risk factors of CVD. *Diabesity (obesity-related type 2 diabetes)*, includes the metabolic syndrome and presents endothelial dysfunction, insulin resistance, and low grade inflammation that might contribute to premature *atherosclerosis* in a multi-factorial and complex way. Incretions such as glucose-dependent insulin tropic polypeptide (GIP) and glucagon-like peptide 1 (GLP-1) are intestinal hormones that are released in response to ingestion of food, mainly carbohydrates. Results from many studies support the hypothesis that the bypass of duodenum and jejunum can directly control type 2 diabetes and not only weight loss or treatment of obesity. These findings suggest a potential role of the proximal gut in the pathogenesis of the disease and the possibility of alternative therapeutic approaches for the management of type 2 diabetes. Gastrointestinal surgery may provide new tools and opportunities in the fight against diabetes. This approach represents a new challenge for the medical world. The Lorenzini Foundation recently decided to devote attention and resources to this area.

The educational activities of the Foundation in this field have covered the following topics: Epidemiology, Medical and Economic Scenarios' Analysis, Metabolic Pathways, Insulin Resistance, Endothelium Function, Inflammation, Fat Distribution and Function, Intestinal Hormones, Biomarkers, Drug Development, Athero-Thrombosis, Definitions, Diagnosis, Clinical Approach, Prevention of Diabetes and Obesity, Nutrition, Physical Activities, Food Profiling, Metabolic Surgery.

Websites: www.lorenzinifoundation.org; www.fondazionecuore.it; www.athero.org; www.cardiometabolica.org; www.foodprofile.org; www.gendermedicine.org; www.healtheurope.org; www.reddressitalia.it

Slide libraries from some of the above-mentioned events.

Women's Health

The Lorenzini Foundation has extensive experience in the field of women's health, especially transferring the results of both basic and clinical research into organized communication tools to update and train physicians, as well as increase awareness of the need for prevention in the world of women's health. The misunderstanding that hormonal protection would counteract the main risk factors of cardiovascular diseases in women has been prevalent for decades. That is not entirely true during the reproductive years, and it is clearly not true later in life as that protective activity decreases. The cardiovascular mortality in the post-reproductive age is higher than in the men, and the prevalence of obesity, hypercholesterolemia, and diabetes is higher in women at both stages of life. Furthermore the results of the clinical trials for cardiovascular drugs are biased because only a small percentage of the study population has been women.

The Lorenzini Foundation has focussed on women's health for many years with a series of Congresses and publications, several of which were co-sponsored by the National Heart, Lung, and Blood Institute (NHLBI) and the Office of Research on Women's Health (ORWH) of the National Institutes of Health (NIH, Bethesda, MD, USA). A joint monograph developed by an International Panel of 80 experts and titled *International Position Paper on "WOMEN'S HEALTH AND MENOPAUSE: A COMPREHENSIVE APPROACH* was published in July 2002 together with the NIH. From 1995 to 1998 the Lorenzini Foundation promoted and organized a very successful Educational Campaign to inform and educate both the physicians and the women on the pathologies related to menopause. This campaign was under the auspices of several scientific societies and government bodies. In 2007 a new campaign on *women's heart health* was launched. The campaign, under the name RED DRESS ITALY, is aimed at increasing awareness in women, the medical world, and authorities of the health needs of women, especially in the area of cardiovascular diseases. Actions against this pathology are planned to sustain basic and clinical research and protocols to better protect the heart's health in women throughout all stages of their lives, not just after menopause. A large collaboration with health authorities, centres for medical excellence, and the media is the basis of the campaign. Support by the women's fashion and beauty industry is helping to reach these ambitious goals. A multidisciplinary approach and alliances several medical specialities are the key factors for success.

The educational activities of the Foundation in this field have covered the following topics: Women's Global Health, Menopause, Cardiovascular Diseases, Cancer, Hormone Replacement Therapy, Osteoporosis, Drugs for Women, Inflammation and Rheumatic Diseases, Neurological Disorders, Pain Management, and Health Organizations.

Educational Series:

Women's Health and Menopause (5 International Symposia)
Women's Health and Menopause (4 Year Italian National Campaign)
Gynaecological Diseases (2 Conferences)
Red Dress Italia Campaign (on going)

Websites: www.athero.org; www.cardiometabolica.org; www.fondazionecuore.it;
www.lorenzinifoundation.org; www.gendermedicine.org; www.healtheurope.org; www.reddressitalia.it

Gender Health and Medicine

Gender Medicine focuses on the impact of gender on human physiology, pathophysiology, and clinical features of diseases. The concept of **Gender** refers to a complex interrelationship and integration of sex (as a biological and functional marker of the human body) and psychological and cultural behaviour (due to ethnic, social, and religious background). Human health is strictly correlated to these two fundamental constituents of gender. Because of social and biological differences, women and men face different health risks, present symptoms differently, experience different responses to and from health systems, as well as treatment programs, and their health-seeking behaviour and health outcomes differ as well. Precise explanations of the gender differences in life expectancy still elude scientists because of the apparent complex interplay of biological, social, and behavioural conditions. In order to win this exciting new battle for better health, the scientific community needs to develop a **multidisciplinary** approach integrating different competences and players such as physicians, researchers, and experts in economics, clinical governance, communications, regulatory issues, health organization, education and training, and many sectors of industry. In response to this challenge the Lorenzini Foundation was a founder (2007) of the **European Society of Gender Health and Medicine** and of the **Italian Society of Gender Health and Medicine**.

The educational activities of the Foundation in this field have covered the following topics: Cell Biology, Proliferation and Apoptosis; DNA Telomeres; Epidemiology; Life Natural History; Populations Settings; Physiology and Pathology of: cardiovascular system, (carbohydrates, lipids, and proteins) metabolic processes, hormones, bone and joints system, and aging; Inflammation, Infections, and Vaccinations; Cancer; Drugs for Women: Hormone Replacement Therapy; Neurological Disorders; Psychiatric Disorders.

Educational Series:

Italian Society of Gender Health and Medicine Congresses (2)

Scientific Session on:

“Integration of Gender Medicine in the Clinical Practice”

This session was held during the IV Congress International Society of Gender Medicine, Sex and Gender in Medicine, (Berlin German, November 6-8, 2009).

Websites: www.gendermedicine.org (and the slide library linked to it); www.athero.org;
www.cardiometabolica.org; www.reddressitalia.it; www.lorenzinifoundation.org; www.healtheurope.org

Central Nervous System, Molecular Neurobiology, Psychoneuroendocrinology, and Molecular Neuromedicine

As our society ages, neurodegenerative diseases will become increasingly common. Worldwide, the population of people 60 years and older is expected to double in the next 50 years. For the first time in history, the elderly will outnumber children. Researchers have begun to discover a commonality among neurodegenerative diseases – a finding that holds profound implications for treatment. Many prevalent neurodegenerative diseases, among them Alzheimer's and Parkinson's, are now thought to be disorders of protein shape (or conformation) involving genomics, proteomics, and metabolomics. Although the protein involved in each disease varies, common mechanisms, such as their formation, could hold the key to unlocking the causes – and the cures – of many such ailments. Molecular neurobiology is clearly opening the way to a large and comprehensive approach to molecular neuromedicine. The focus on gender medicine could open new ways to better understand the natural history of Alzheimer's and Parkinson's diseases and of depression disorders.

The educational activities of the Foundation in this field have covered the following topics: Neurobiology, Genetics, Cytogenetics, Transdermal Communication, Pain, Neurochemical Transmitter, Hypoxia, Monoaminergic System, Endorphins, Multiple Sclerosis, Aging, Panic Disorders, Gender Differences, Drug Development.

Educational Series:

Panic Disorders (3 International Symposia)

Obsessive Compulsive Disorder (1 International Symposium)

National Congress on Gender Medicine (2 Congresses)

Websites: www.athero.org; www.lorenzinifoundation.org; www.healtheurope.org;
www.gendermedicine.org

Slide libraries from some of the above-mentioned events.

Inflammation, Immunology, and the Acute, Slow and Chronic Active and Reactive Substances

From the time of Rudolf Virchow (1858) inflammation has always correctly kept its original definition as the reaction of the immune system to infection or irritation. Inflammation plays a role in all physiopathological patterns, which has been largely confirmed from molecular studies. From the easy clinically evident quintet: *rubor, calor, tumor, dolor, atque functio laesa*, cell-cell interactions, the biological control system, and the inflammatory- and immunology-related biologically active substances are now even more the focus of research. Over time several of the Lorenzini Foundation's activities were designed to better understand the complex constellations of inflammatory markers. Under the chairmanship of the Nobel laureate Bengt Samuelsson a series of educational activities have been developed in the area of prostaglandins.

More recently the Lorenzini Foundation is strongly committed to contributing to the understanding of the mechanism of inflammation in explaining links between infections (viral) and cardiovascular diseases and cancer. There is in fact increasing evidence of the direct relationship between the *influenza virus* and cardiovascular complications: both in the direct action by the virus on the atherosclerotic plaque and in the activation by acute infection of mechanisms responsible of the cardiac events. The stronger links between *human papillomavirus (HPV)* and uterine cervix cancer focus the attention on the effectiveness of the vaccination in young people. The Lorenzini Foundation is committed in contributing to increase awareness of, and support to, decision makers in developing policies in favour of eradication of *HPV*.

The educational activities of the Foundation in this field have covered the following topics: Eicosanoids, Prostaglandins, Leukotrienes, Cyclooxygenases, Interleukines, Cytokines, Cytoprotection, Cell Receptors, Cell Membrane, Cell Biology, Phagocytes, Biomarkers for Drug Development, HPV and Vaccination, Influenza Virus and Cardiovascular Complications, Health Policy and Organization, Pharmacological Inhibition and Modulation, Cancer, Gastroenterology.

Educational Series:

Prostaglandins (3 International Conferences)

PPARs (3 International Symposia)

Integrated Bioimaging and Biochemical Markers (5 Symposia)

Websites: www.athero.org; www.lorenzinifoundation.org; www.healtheurope.org;
www.gendermedicine.org

Slide libraries from some of the above mentioned events.

Liver Diseases and Toxicology

Liver represents a mandatory milestone in the metabolic pathways and in the metabolism of drugs. An enormous amount of progress has been made in understanding the mechanisms of toxicity of some drugs, particularly those that induce liver injury in a predictable fashion. The majority of toxicities depend upon the bio-activation of the drug in the liver catalysed by the cytochromes P450 (CYP). Genetic and environmental influences on the expression of these enzymes are among the key factors that determine susceptibility to toxicity. The Lorenzini Foundation has devoted attention to the liver in many of the chosen activity paths and has dedicated one particularly to liver diseases.

The educational activities of the Foundation in this field have covered the following topics: Hepatic Damage, Children, Women, Chronic Hepatitis, Cholestasis, Viral Hepatitis, Ethanol, Drugs, Nutrition, Hepatic Failure, Transplantation, Liver Surgery, Prevention, Mushrooms, and Pesticides.

Educational Series:

Liver, Hepatology and Toxicology (3 International Symposia)

Congress of the European Society of Toxicology (1 International Congress)

Websites: www.lorenzinifoundation.org

Molecular Biology as Basis of Biotechnology and Diagnostic Approaches, Oncology, Carcinogenesis

The branch of biology that deals with the formation, structure, and function of macromolecules essential to life, such as nucleic acids and proteins, and especially with their role in cell replication and the transmission of genetic information is an important track for the Lorenzini Foundation. The development of proposals for diagnosis and treatment of an increasing number of diseases (from lymphoma, colon cancer, hepatoma to psoriasis, for instance) of re-engineered monoclonal antibodies (MAbs), recently introduced a new interest to the Foundation.

The educational activities of the Foundation in this field have covered the following topics: Monoclonal Antibodies, DNA Probes, Hormone Pharmacology, Endocrinology, Genetic Engineering, Clinical Medicine, Food, Agriculture, Growth Factors, Hematology, Cell Cultures.

Educational Series:

Cyclic Nucleotides (5 International Conferences)

Molecular Biology of Hormone Action in Endocrinology (3 Courses)

Biotech RIA (6 International Symposia)

The educational activities of the Foundation in this field have covered the following topics: Molecular Mechanisms, Carcinogenesis, Immunobiology, Therapy, Haematology, Leukaemia, Neuroncology.

Translational Pharmacology

In drug discovery and development, translational pharmacology typically refers to the “translation” of basic research into real therapies for real patients. The development of innovative, safe, and effective drugs for the individual patient can lead to personalized medicine. The demand for translational pharmacology is growing in importance in the healthcare industry and requires focussed scientific thought and medical training, from the bench to the bedside. The Lorenzini Foundation has devoted particular attention to this scientific track through the development, support, and organization of a series of congresses, courses, meetings, study and research proposals, and prizes to increase information, debate, and dialogue among academia, industry, scientific societies, and regulatory agencies. In modern health care, the needs of a more open, patient-driven research process, and the embrace of a more research-driven clinical practice of medicine are constantly increasing. Knowledge of the molecular mechanisms of diseases is confronted with the activity of candidate drugs and the global process of development, now driven by the patient environment. The development of a deep knowledge of molecular and cell biology and biochemistry has driven the development of drugs from toxicology evaluations through several development phases to regulatory approval, cost-effectiveness evaluation, and pharmaco-surveillance.

The educational activities of the Foundation in this field have covered the following topics: Cell Receptors, Cell Membrane, RNA Translation, Peroxisomes, Calcium Channels, Potassium Channels, Eicosanoids, Prostaglandins, Peroxisomal Proliferator Activated Receptors (PPARs), Steroid, Aminoglycosides, Fluorchinolones, Endocrinology, Calcium Modulators, Peptides, Calcium Antagonists, Interferon, Gene Therapy, Metal Toxicity, Muscular Drugs, Creatine, Cyclic Nucleotides, Insulin, Radioimmunoassay, Macromolecules, Surfactant, Toxicology, Purines, LH-RH, Clinical Trials, Pharmacogenetics, Drugs Development, Drugs Delivery, Analgesics, Anesthetics, Good Manufacturing Practices, Pharma-Technology, Medical Statistics, Medical Computing.

Educational Series:

DALM (Drugs Affecting Lipid Metabolism) (17 International Symposia)
Prostaglandins (3 International Conferences)

Websites: www.gendermedicine.org; www.lorenzinifoundation.org

Medical Education and Communication

The translation of the medical developments, from basic research to the daily activity of the physician at the patient’s bedside, requires competencies and expertise in research, information and education. There is a need to foster and promote dialogue and cooperation among academia, scientists, clinicians, and government officials, which requires a specific professionalism in communications and the development and organization of the required communication tools. The Lorenzini Foundation has a series of activities devoted to the education, training of, and communication with physicians, and to the education of the larger population.

The educational activities of the Foundation in this field have covered the following topics: General Surgery, Neurosurgery, Teratology, Internal Medicine, Biotechnology, Imaging, Cardiovascular Diseases, Atherosclerosis, Medical Technologies, Biomarkers, Gender Health and Medicine, Health Policy and Organization, Science and Art.

Educational Series:

Surgery (6 Courses)
Conferences on Art (8 Conferences)

Websites: www.lorenzinifoundation.org; www.athero.org; www.healtheurope.org;
www.cardiometabolica.org; www.foodprofile.org; www.gendermedicine.org; www.fondazionecuore.it;
www.reddressitalia.it
Slide-libraries from some of the above-mentioned events.

Pietro Paoletti Lectures in Neurosurgery

The educational activities of the Foundation in this field have covered the following topics: Parkinson, Pain, Analgesia, Cerebral Ischemia, Tumors, Head Traumas, Psychiatric Disorders, Drugs, Genes, Inflammation.

Educational Series: 19 Annual Lectures from 1992.

Health Policy

European countries have made large investments in the development of health structures and have developed locally very impressive innovative organizations in treating CVD and cancer. However, deaths and disability due to CVD and cancer still exist and the economic burden in many European countries continues to increase. It is urgent that the European authorities debate and form a common and shared policy to reduce the barriers that lie between the evidence of the results shown in clinical studies and the application in specific local realities. The main goal for Europe is to contribute to help its citizens, physicians, and institutions in debating and making the commitment to finding the best ways to improve prevention of non-communicable diseases (NCD), based on the model of diseases such as cardiovascular disease, diabetes, obesity, tumours, and respiratory diseases. Continuous and effective action is demanded to decrease the burden in terms of life and costs of CVD to the European society. The Lorenzini Foundation decided to focus directly on health policy and organization in Europe, and to concentrate the efforts so far on several different activities. The project will be supported by different tools such as the organization of sessions, round tables, debates, meetings, publications, and websites, hosting *Hot Topics Discussion*, *Focus on Science*, and *Policy Spotlights*. The target audience consists of decision makers on health policy and organization, authorities, legislators, media, stakeholders, and citizens.

Websites: www.healtheurope.org; www.athero.org; www.cardiometabolica.org; www.fondazionecuore.it; www.lorenzinifoundation.org; www.gendermedicine.org
Slide-libraries from some of the above-mentioned events.

Scientific Session on:

- “Multiple Risk Management of Cardiovascular Disease in Diabetic Patients” during the 45th European Association for the Study of Diabetes (EASD) Annual Meeting (Vienna, September 29, 2009).
- “Bridging Science and Health Policy in CVD: focus on lipid management – the facts - the barriers – the policy” during the 7th International Symposium on “Multiple Risk Factors in Cardiovascular Diseases. Prevention and Intervention - Health Policy” (Venice, October 25, 2008).
- “Healthy Food and Healthy Choices: A New European Profile Approach” during the 7th International Symposium on “Multiple Risk Factors in Cardiovascular Diseases Prevention and Intervention - Health Policy” (Venice, October 24, 2008).

- M. Calvin:** *Chemical Carcinogenesis.* 1976
- E. De Robertis:** *Molecular Biology of synaptic receptors.* 1977
- J. Axelrod:** *Catecholamine Neurotransmitters.* 1978
- R. Levi Montalcini:** *Trophic, tropic and differentiation action on the adrenergic neuron growth factor.* 1979
- R. Guillemin:** *Ubiquity of biologically active brain peptides.* 1980
- Ph. Meyer:** *Hypertension: gene-environmental interactions.* 1981
- H. W. Kosterlitz:** *Opioid peptides: biosynthesis, release, and receptors.* 1982
- B. Samuelsson:** *The leukotrienes: role in allergy and inflammation.* 1983
- L. Orci:** *Il pancreas endocrino: modello per lo studio delle interazioni cellulari e della secrezione di polipeptidi ormonali.* 1984
- R. C. Gallo:** *Tumor Viruses, oncogenes, and growth factors and the genesis of some human leukemias and lymphomas.* 1985
- T. E. Starzl:** *Advances in whole organ transplantation.* 1986
- E. Braunwald:** *Thrombolysis in acute myocardial infarction.* 1987
- E. R. Kandel:** *Molecular Biological Approaches to long-term memory.* 1988
- P. Chambon:** *Functional dissection of steroid and related receptors.* 1989
- L. L. Cavalli Sforza:** *Genetica, archeologia e linguistica.* 1990
- S. Moncada:** *The discovery and the biological relevance of l-arginine: nitric oxide pathway.* 1991
- G. Gabbiani:** *Heterogeneity of fibroblastic phenotypes in normal condition, wound healing, fibro-contractile diseases.* 1992
- C. T. Caskey:** *Unstable DNA sequences cause human disease.* 1993
- C. Fieschi:** *Acute ischemic stroke therapy.* 1994
- A. M. Gotto, Jr.:** *Drugs affecting lipid metabolism: effects on atherosclerosis progression and clinical events.* 1995
- D. Steinberg:** *Oxidized LDL in atherosclerosis.* 1996
- A. Ullrich:** *Molecular communication networks in life disease.* 1997
- V. Fuster:** *Atherogenesis, the role of a new imaging modalities and therapeutic stabilization.* 1998
- R. R. Ruffolo:** *New frontiers in the pharmacotherapy of congestive heart failure: the role of beta-blockers.* 1999
- S. Narumiya:** *Physiology and pathophysiology of prostanoids; lessons from receptor knock-out mice for clinical applications.* 2000
- J. A. Gustafsson:** *Estrogen signaling new paradigms.* 2001
- E.E. Baulieu:** *Endocrinology and Andropause.* 2001
- P. Libby:** *Novel inflammatory pathways in atherogenesis.* 2002
- J. C. Fruchart:** *PPAR-alpha: from transcriptional control to clinical implication.* 2003
- J. Collins:** *Menopause after WHI: and update.* 2004
- S. M. Grundy:** *Metabolic syndrome: epidemiological and genetic overview.* 2005
- H. Hobbs:** *Genetic protection from coronary atherosclerosis: from genes to public health.* 2006
- G. Assmann:** *Building on the past, securing the future: the PROCAM study researches 50.000 men and women.* 2007
- G. Mancina:** *Hypertension and stroke.* 2008

Numbers

Educational activities: 419

120	Atherosclerosis and Cardiac, Cerebral and Peripheral Vascular Diseases
18	Women's Health
37	Inflammation, Immunology, and the Acute, Slow, and Chronic Active and Reactive Substances
22	Central Nervous System, Molecular Neurobiology, Psychoneuroendocrinology and Molecular Neuromedicine
26	Liver Diseases and Toxicology
15	Molecular Biology as Basis of Biotechnology and Diagnostic Approaches
11	Oncology, Carcinogenesis
72	Translational Pharmacology
45	Medical Education, Formation, and Updating Communication
19	Pietro Paoletti Conferences
34	Giovanni Lorenzini Foundation Annual Lectures

Editorial Activities:

Publications: 217

Scholarships: 293

30	Medicine and Surgery
32	Pharmacy
27	Chemistry and Pharmaceutical Technology
10	Chemistry
40	Biological Science
4	Natural Science
2	Political Science
8	Antibiotics
5	Respiratory System
2	Urogenital System
17	Atherosclerosis and Cardiovascular Diseases
4	Molecular Biology
3	Biotechnology
9	Eicosanoids e Prostaglandins
3	Pharmacokinetics
5	Pharmacology
22	Lipids
3	Metalloenzymes
9	Oncology
4	Hormones
5	Liver Disease
7	Immune System
21	Nervous System
5	Epidemiology
14	Coagulation and Thrombosis
2	Toxicology

Our Websites: www.lorenzinifoundation.org; www.athero.org; www.cardiometabolica.org; www.fondazionecuore.it; www.foodprofile.org; www.gendermedicine.org; www.healtheurope.org; www.reddressitalia.it

**The Fondazione Giovanni Lorenzini
Medical Science Foundation**

has implemented and maintains a
Quality Management System

which fulfills the requirements of the following standard

UNI EN ISO 9001:2008

for the following activities:

*Design, development and provision of scientific and educational activities
aimed at the achievement of a wider and deeper professional and
educational understanding both nationally and internationally
in the field of basic research and medical and clinical sciences.*

FONDAZIONE
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