ETHICS & KNOWLEDGE

COMMITMENT TO SCIENTIFIC RESEARCH AND INTERNATIONAL COOPERATION
Mission
To improve the health and alleviate the suffering of patients affected by respiratory and neonatal diseases.

Values
• Sense of responsibility towards the environment and the society
• Transfer, with no boundaries or limits, of science and knowledge
  • Fight against suffering and inequality

Programs

SCIENTIFIC RESEARCH AND DISSEMINATION OF KNOWLEDGE
Better understanding the patients’ needs and improvement of their management, through the study of physio-pathological mechanisms and the analysis of socio-economic factors affecting the diseases

EDUCATION
Supporting the scientific activities of young researchers to develop their medical-scientific skills

INTERNATIONAL COOPERATION
Contributing to the sustainable development of low and middle-income countries by providing technical means and scientific knowledge

Governance

BOARD OF DIRECTORS
Paolo Chiesi, Alberto Chiesi, Maria Paola Chiesi, Carlo Ghisoni, Mauro Massa, Stefano Petruzzelli

PRESIDENT
Paolo Chiesi

COORDINATOR
Maria Paola Chiesi

SCIENTIFIC COMMITTEE
Andrea Bizzi, Gabriele Nicolini, Stefano Petruzzelli (Pulmonology)
Alessio Amadasi, Federico Bianco, Mario Scuri, Linda Storari (Neonatology)

BOARD OF AUDITORS
Giuliano Ferrari, Alberto Guiotto, Giuseppe Piroli
The Chiesi Foundation is a non-profit organization, expression of Chiesi Farmaceutici’s social responsibility. It was founded in 2005 to pursue those Values that have always distinguished the Company’s way of doing business. In the Foundation, ethics and knowledge merge with the aim to improve health and alleviate the suffering of patients affected by respiratory and neonatal diseases.

We started from what we knew best and from the legacy of our Founder: the science and the network.

Since the first years of activity, we support scientific research projects of particular scientific and social relevance, in the fields of pulmonology and neonatology. Other important instruments to accomplish our mission are the dissemination of the scientific knowledge and the education of healthcare providers, the public, the institutions, the patients and their caregivers.

The Chiesi Foundation mission, though, is not only about science, but also about solidarity. The fight against suffering and inequality is one of our founding Values, which we enact by serving the underprivileged populations. In 2010 the Foundation started its first international cooperation project in Burkina Faso, in collaboration with the neonatal care unit of the Saint Camille Hospital in Ouagadougou. This first intervention was followed by other projects in Benin (2012) and in Burundi (2014).

The experiences of the first years, the successes and the failures, led us to profoundly review our strategy by transforming our role from the one of the typical donor to a new more proactive one. A crucial step in this evolution was the development of a new program: the NEST Project - Neonatal Essential Survival Technology. The NEST Project objective is to reduce the neonatal mortality rate in countries and hospitals with limited resources, offering expertise and means to enhance the Neonatal Care.

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**FINANCIALS 2016**

<table>
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<tr>
<th>Values in €</th>
<th>2016</th>
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<tbody>
<tr>
<td>Scientific research and dissemination of knowledge</td>
<td>284,573</td>
</tr>
<tr>
<td>Education</td>
<td>83,743</td>
</tr>
<tr>
<td>International Cooperation</td>
<td>198,698</td>
</tr>
<tr>
<td>Other initiatives</td>
<td>11,873</td>
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<tr>
<td><strong>Total amount released for INSTITUTIONAL ACTIVITIES</strong></td>
<td><strong>578,887</strong></td>
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<tr>
<td>Personnel costs</td>
<td>43,338</td>
</tr>
<tr>
<td>Administrative costs</td>
<td>22,031</td>
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<tr>
<td><strong>Total OUTFLOWS</strong></td>
<td><strong>644,256</strong></td>
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<tr>
<th>Values in €</th>
<th>2016</th>
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<tr>
<td>Chiesi Farmaceutici</td>
<td>601,092</td>
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<tr>
<td>Valline</td>
<td>100,000</td>
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<tr>
<td>Other donations</td>
<td>25,529</td>
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<tr>
<td><strong>Total DONATIONS</strong></td>
<td><strong>726,621</strong></td>
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<tr>
<td>5xmille (2014)</td>
<td>27,432</td>
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<tr>
<td>Income from financial management</td>
<td>3,572</td>
</tr>
<tr>
<td>Financial income</td>
<td>85</td>
</tr>
<tr>
<td><strong>Total INFLOWS</strong></td>
<td><strong>757,710</strong></td>
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As far as **Scientific Research program** is concerned, since 2014 the Chiesi Foundation publishes two annual Calls for Scientific Research Proposals, which define the specific areas of scientific interest of the Foundation, pulmonology and neonatology, and the strategic objectives we aim to achieve in each field. The research studies, to be financed with unrestricted grants, are scrutinised and selected by two dedicated Scientific Committees.

<table>
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<tr>
<th>Objective Scientific Research</th>
<th>Pulmonology</th>
<th>Neonatology</th>
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<tr>
<td>To enlarge the knowledge in the medical community and in healthcare providers on the interaction between environmental and socio-economic factors and the whole respiratory tract and to foster the communication of scientific messages to the medical community and the general population</td>
<td>To improve the knowledge of factors affecting neonatal disease progression and to identify strategies to prevent or minimize long-term consequences, thus ensuring better quality of life for these babies and their families</td>
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Not only we are committed to the generation of new scientific knowledge, but Chiesi Foundation is also engaged in its diffusion among the scientific community, the public and the institutions. For over 10 years, the Foundation has been granting its patronage to the **Respiration Day**, a high-profile international event that offers clinicians and researchers the opportunity to discuss and exchange ideas and experiences on the latest developments in the field of pulmonology. Scientific research is also promoted through the support of young researchers and PhD projects as part of our Education Program. A key part of this program is the **Course on “Essential Newborn Care in low-resources countries”**, organized by the Task Force Neonatology and Development, within the Italian Society of Neonatology (SIN). The course is designed to train healthcare professionals (doctors, nurses, midwives, neonatologists, etc.) willing to serve as volunteers in developing countries.

### Scientific research projects supported in 2016

- **Clinical, functional and inflammatory characterization of a cohort of asthmatic patients: identification of phenotypes for a personalised pharmacological approach**, M. Contoli – CEMICEF Ferrara
- **Genetic diagnosis of pulmonary diseases in newborns and infants: a genomic approach through Next Generation Sequencing**, R. Cutrera e O. Danhaive – Pediatric Hospital Bambin Gesù Roma
- **Growth speed during the first year of life and wheezing up to 3 years: nature or nurture?**, S. Brescianini – Istituto Superiore di Sanità Roma
- **The mechanism of mirror neurons in the social cognition: an encephalographic study at high density**, V. Gallese – University of Parma
- **Neonatal physiological and neural correlates of early neurodevelopment in preterm children**, J. Rose, Stanford University
- **Outdoor passive smoking and vehicular traffic effect on small airway function and inflammation**, O. Usmani - Imperial College London
- **AsthmaZoé: nanostructured materials for the detection of markers of asthma and other correlated inflammatory diseases**, L. Gentilucci – University of Bologna
- **Validation of Particle in Exhaled Air (Pex) as a Novel Matrix for Non Invasive Detection of Small Airways Disease in Asthma**, S. Siddiqui – University of Leicester
- **Improving prediction of Bronchopulmonary Dysplasia by Exhaled Breath Analysis in Preterm Infants**, W. Onland – Emma Children’s Hospital Amsterdam

### PhD projects supported in 2016

- **Restoring mutant CFTR with Nanobodies**, Cedric Govaerts - Université Libre de Bruxelles
- **Planning, synthesis and biological evaluation of new broad-spectrum antiviral for the treatment of infections due to enterovirus and rhinovirus**, Marco Radi - University of Parma
- **Micro-particles and receptors PPAR-gamma: new possible therapeutic targets in bronchial asthma and COPD**, Sandra Brunelleschi - University of Eastern Piedmont
On the side of International Cooperation, in recent years the Chiesi Foundation has decided to take on a more active role in designing and developing its projects and activities, rather than limiting itself to the provision of funding. We focus only on the fields of neonatology and pulmonology where we have specific expertise.

Currently we are engaged in two main programs of intervention:

- The GASP Project – Global Access to Spirometry Project;
- The NEST Project – Neonatal Essential Survival Technology.

1. GASP Project – Global Access to Spirometry Project

Since 2014, the Chiesi Foundation supports the project Partners in Care “Optimizing Asthma & COPD Diagnosis and Chronic Disease Management in Guyana”, a medical training project in the field of pulmonology, coordinated by professor Robert Levy of the British Columbia University in collaboration with British Columbia Lung Association. The project focuses on the development of specific clinical skills for the diagnosis and management of chronic respiratory diseases, like asthma and chronic obstructive pulmonary disease (COPD), through the use of spirometry. The pilot project started in Guyana (South America) by creating a specialized center within the main hospital of the country, the Georgetown Public Hospital Corporation (GPHC). Together with the training the healthcare staff, the activities also involved education for patients and families. Successfully concluded the pilot phase, the objective the second step is to test the model and to spread it to other Guyana healthcare facilities. In addition, in 2016, the Chiesi Foundation enlarged the collaboration for the spreading of the intervention model called GASP, Global Access and Spirometry Project, as a concrete guide to effectively implement the diagnosis and the management of chronic respiratory diseases in other hospitals and centers limited resources countries.

2. NEST Project – Neonatal Essential Survival Technology

The NEST Project – Neonatal Essential Survival Technology was conceived by the Chiesi Foundation reflecting on the inequalities of access to neonatal care in different parts of the world. Our aim is to reduce neonatal mortality by improving the quality of neonatal care in low and middle-income countries with specific attention to premature, sick, unwell and low-weight babies.

To achieve this goal, the NEST Project intervenes on three main fronts:

1. training programs on essential newborn care for local healthcare providers, with particular attention to the role of Neonatal Nurses;
2. setting up of neonatal units, with appropriate means and medical equipment adequate to the local contexts;
3. guidelines and protocols on essential care, in accordance with national and international standards.

In 2016, after the first years of design of the project, planning and research of partners with specific expertise, the NEST Project entered into an operative phase. A key partnership with the English charity Birthlink allowed us to create a basic training package, conceived and developed for the professional figure of the neonatal nurse working in limited resources contexts.

In the framework of the NEST Project, the Chiesi Foundation is carrying out long-term interventions in three African hospitals: the Saint Camille Hospital of Ouagadougou in Burkina Faso, the Saint Jean de Dieu Hospital of Tanjout in Benin and the Hospital of Ngozi in Burundi.
Saint Camille Hospital, Ouagadougou, Burkina Faso
Since 2010 the Chiesi Foundation collaborates with the Saint Camille Hospital in Ouagadougou, managed by the Camillian Fathers. Here, the Foundation supports the neonatal care unit with the transfer of means and knowledge, in order to enhance the quality of care of premature and sick newborns. Recently, we collaborated to and we financed the refurbishment and the expansion of the Neonatal Care Unit. The new building was inaugurated at the beginning of 2017 and now fully equipped and operational. The project aims at offering high level specialized care to all newborns who need it.

Further information about HOSCO at: www.saintcamillebf.org

Saint Jean de Dieu Hospital, Tanguietá, Benin
Since 2011 the Chiesi Foundation has been collaborating with the Fatebenefratelli Congregation, which runs the Saint Jean de Dieu Hospital in Tanguietá. Here a new neonatal care unit was inaugurated in 2012. The collaboration has fundamentally two scopes: on one side, through scholarships, we aim to increase the retention rate of key medical staff. On the other side, we provide adequate equipment for the neonatal unit in order to complete the unit set-up.

Hospital of Ngozi, Burundi
Over the course of 2014, the Chiesi Foundation began a multi-year joint initiative with Pro-Africa Foundation, concerning a training-assistance project in favor of the neonatal unit to be set up within the new Ngozi Hospital Maternal and Child Center, built in 2013. We participate economically and technically in the reorganization of the neonatal care and the start-up of the neonatal unit with adequate medical equipment and training activities of the local staff.

School of Neonatology in Azerbaijan, Mongolia and Ukraine
From 2014, the Chiesi Foundation supports the project “School of Neonatology”, initially started in Azerbaijan and then implemented also in Mongolia and Ukraine. The project aims at offering high level specialized training in neonatal intensive care to medical doctors and nurses. Trainers are world renowned national and international Neonatologists.
NEST Project Africa
THEORY OF CHANGE

In 2016, we applied the well known methodology of Theory of Change to the NEST Project, in order to further focus and complete the description of the essential elements and specific activities needed for accomplishing the mission of the project itself and achieving the full design of the Model of Neonatal Care Unit (NCU) that we intend to propose and implement in limited resources contexts.

IMPACT

The NEST project seeks to reduce neonatal mortality (0-28 days), in particular of sick, premature or low birth weight babies (LBW) in Burkina Faso, Benin, Burundi and other Sub-Saharan African countries.

OUTCOME 1
Existence of Neonatal Care Units (NCUs) endowed with appropriate equipment, medicines and dedicated and competent staff. NCUs are able to receive and manage neonatal emergencies and to provide adequate care to all newborns who need it.

Output 1.1
A proven, effective and sustainable model of NCU is available for essential newborn care which has been implemented in at least 1 hospital in the area of intervention

Output 1.1.1
NCUs are economically sustainable
Output 1.1.2
The length of stay in hospital is adequate

Output 1.2
In the NCUs, healthcare providers are dedicated to newborn care, trained and motivated and effective treatment protocols are implemented.

Output 1.2.1
In the NCU there is a good work organization and a clear division of roles and responsibilities

Output 1.3
The Neonatal Nurse is recognized as a professional figure at national level

OUTCOME 2
Referred babies (infants who were born outside the hospital, at home or in birth centres) arrive at the NCUs’ admission in less critical conditions.

Output 2.1
There is a communication network between the birth centers and the NCUs and an adequate referral protocol and transport system for the rapid and safe transfer of the infants

Output 2.2
In the birth centers of the network there are healthcare providers able to stabilize newborns and to ensure a prompt referral of the babies at the NCUs

Output 2.3
Parents know where to bring their babies and succeed in transferring them to the NCUs quickly and safely, if necessary

OUTCOME 3
Families are engaged in the care of the baby, they are trained and motivated and positively contribute to the newborn’s care.

Output 3.1
Families receive adequate information and psychological support during the admission to the NCU

Output 3.2
The mothers and other family members practice the method of Kangaroo Mother Care

Output 3.3
Breastfeeding is the nutritional behavior of choice in most cases presented at the first follow-up visit and it is promoted by the practice of Kangaroo Mother Care

OUTCOME 4
During follow up visits babies’ conditions are good.

Output 4.1
Follow-up visits follow standard procedures and are planned after discharge in order to monitor baby’s health condition and growth over time

Output 4.2
Families are trained in post-discharge care and they carry out prescriptions at home

Output 4.3
Breastfeeding is the nutritional behavior of choice in most cases presented at the first follow-up visit and it is promoted by the practice of Kangaroo Mother Care

With the scientific contribution of the Lang Studies Center on Strategic Philanthropy
CHIESI FOUNDATION AT A GLANCE

In the last 10 years, more than 1.5 million € assigned as unrestricted research grants to scientific research projects. Over 284,000 € in 2016.

More than 500,000 € invested in international cooperation projects in the last 10 years:
- Over 182,000 € for the NEST Project in 2016
- Over 16,000 € for the GASP project in 2016