

→Chiesi

Patients at a glance

AFTER **TREATMENT DIAGNOSIS** AND ACCESS AT RISK UNDER **TREATMENT**

Gender Diversity in clinical trials

R&D Investments

€ 720.7M total expenses 23.8% of sales reinvested internally

Positive global impact through efforts

Patient Journey air applied across our business areas





Global R&D 757 scientists

Further develop our Patient Tourney framework throughout the organization

Patient-centric approach

At the core of our mission is our commitment to develop and bring to market innovative **pharmaceutical** solutions¹⁰ that improve the quality of people's lives. Innovation has always been a key driver and part of Chiesi's culture. Only by working closely with patients and understanding their needs, are we able to provide new, tailored therapeutic options and improve global health and well-being.

Chiesi recognizes each **patient as a unique individual**, not just a recipient of care. We view patients as integral members of a broader community, sharing the same environment as Chiesi. Our belief is that patient care must go beyond drug development and consider the entire healthcare journey of each individual.

To ensure that our solutions meet the people's needs, we actively partner with the patient community, including patient organizations and caregivers, and also with healthcare professionals and other stakeholders.

In addition, we are working with national healthcare systems to develop environmentally friendly models of care and raise awareness about the **link between climate** and human health. For further details, please refer to the Climate Change chapter.

The Patient Journey

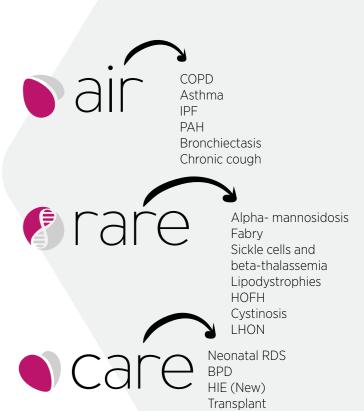
A "Patient Journey" encompasses the sequence of events that a patient experiences throughout the course of a specific disease. This journey includes risk assessment to diagnosis, access to treatment, and aftercare, among other stages. At Chiesi, starting from 2023, the patient journey framework has increasingly become an integral part of our main processes and projects across the organization to ensure that patients' needs are at the forefront of decision making.

Patient Journey Driven Innovation

Chiesi's systematic approach of gathering insights and needs along the care process from patients, caregivers, providers, payers, key opinion leaders, andother stakeholders enables us to identify gaps and opportunities for the development of possible solutions, both existing and new.

This approach requires consistency across therapeutic areas, functions, and affiliates. Without this, we may miss the opportunity to compare and address the diverse needs of patients effectively. It is a collaborative effort with input from various groups within our organization, with the goal of unifying our approach as One Chiesi.

Patient Journeys developed at global level











Application and Impact Measurement

In practice, to capture the patient's experience, we organize focus groups, advocacy programs, patient forums, surveys, and we include patient reported outcome measures in our clinical trials. We also partner with international organization such as EUPATI and PFMD to bring collective patient engagement to the next level.

Chiesi is committed to deepening our understanding of the impact we have on patients' lives. In 2022, we established more than 25 metrics to predict our impact throughout their journey, including a focus on key indicators for our health equity priorities. We are continuously refining our metrics to strengthen their applicability across relevant company processes and increase the quality of the data we collect.



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Our HOPE Project fosters patient engagement across teams using a recognized methodology (Human Factors science). By gathering patient feedback, analyzing results, and making documented design decisions, we enhance the development of solutions. This collaborative approach ensures insights are applied effectively and documented throughout the company's processes.



In 2023, Chiesi became a sustaining partner of the European Patients' Academy on Therapeutic Innovation (EUPATI), a non-profit organization that focuses on educating patients and their representatives about drug development process, access to healthcare and disease awareness. As part of the EUPATI Sustaining Partners Assembly, Chiesi is an active collaborator on patient education projects and engages with a network of patient advocates and experts.

Patient Focused Medicine Development

Since 2022, Chiesi is an associate member of Patient Focused Medicine Development (PFMD), a global collaborative and non-competitive coalition to improve global health by co-designing the future of healthcare for patients with patients. Its mission is to bring together initiatives and best practices that integrate the voice of the patient into drug development. Chiesi actively supports two work streams: Merging Patient Experience Data & Patient Engagement and Improving the Clinical Trials Ecosystem.

Adverse Reactions

Chiesi employs a proactive global pharmacovigilance approach to monitor the performance and safety of our therapies once they are on the market. This involves collecting adverse patient experiences, analyzing the data, and reporting to regulatory authorities as required. This ensures a continuous assessment of the risk-benefit profile of all our medicines and allows us to take prompt action if necessary.



Progress in 2023

In 2023, Chiesi joined forces with strategic partners in the patient community and key stakeholders to implement initiatives that raise awareness and promote patient engagement across our therapeutic areas.



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- Through the **International Respiratory Coalition** (IRC), established in September 2021 with Chiesi as a founding industry partner, we advanced our efforts in 2023 to provide countries with vital resources to implement a **national respiratory** strategy. Our current focus is primarily on Europe, where we achieved significant milestones by establishing or strengthening local projects in 12 countries.
- At the **European Respiratory Society** (ERS) Congress in 2023, Chiesi held a symposium titled "Improving respiratory care by listening to patients' needs", which directly involved patients. This gave patients the opportunity to share their lived experience with an audience that is traditionally largely scientific and where patients' voices are not necessarily included.
- Chiesi supported the "About Asthma" awareness campaign promoted by the European Federation of Allergy and the Airways Diseases Patient Organisation. Asthma control is still lacking worldwide, and many patients do not have access to reliable educational resources. People with asthma and COPD may feel excluded from treatment decisions and/or lack personalized self-management tools. About Asthma aims to empower these people by providing knowledge.



- Today, many people are still unaware of what rare diseases are. To raise awareness and advocate for healthcare equity. Rare Disease Day has been celebrated since 2008. In 2023. Chiesi Global Rare Diseases promoted the **#PlayTheRareGame** campaign in collaboration with Parma Zebre Rugby Club and Make-A-Wish International. People globally could join the campaign by virtually throwing a rugby ball to help fulfill the wishes of children with rare diseases.
- In 2023, Chiesi Global Rare Diseases published "Rare Disease Burden of Care and the Economic **Impact on Citizens**", a report on the escalating care challenges and economic impact on Europeans living with rare diseases. The report aims to ensure that the socioeconomic impact on treated and untreated patients is given due attention. Covering 23 diseases in five therapeutic areas, it shows how treatments can ease the financial burden on families and the healthcare system, and highlights the need for greater access to therapies. Access the full report here.
- To support the mental health of people with Fabry disease and their caregivers, Chiesi co-founded the "Mindfully Rare" project with the Fabry Support & Information Group, the National Fabry Disease Foundation, the National Alliance on Mental Illness, and key opinion leaders. Being diagnosed with Fabry disease and navigating life after diagnosis can be difficult and complicated, often leading to feelings of loneliness or stress for those living with this rare disease. At Chiesi, we recognize these challenges and strive to raise awareness.
- At the European Congress of Paediatric Neurologists (EPNS), Chiesi screened "Rare Land", a film about a child with alpha-mannosidosis. offering a poignant look into his and his family's emotional journey from symptoms to diagnosis. The film was also showcased at the Cannes Film Festival and the Greek Film Centre Pavillon.



- The Patient Diary project in the transplant field promoted by the European Society for Organ Transplantation and the European Transplant Patient Organizations (ESOT-ETPO) and realized together with Chiesi, aims to empower the transplant community through an educational tool. This diary. developed with input from healthcare professionals and transplant recipients, offers insights and reliable information to guide individuals and their families through their transplant journey.
- With European Standards of Care for Newborn Health, Chiesi started a collaboration to support a global information platform for parents of preterm babies. The platform is promoted by the European Foundation for the Care of Newborn Infants (EFCNI) and was developed together with four European patient organizations and nine patient experts. After applying the patient journey framework, Chiesi discovered a support gap for these parents. The project was one of the solutions found to address this gap.

Ambitions for 2024 and beyond

Impacted by the Sustainability Strategic Plan and our achievements so far, Chiesi aims to increase the focus on the patient journey, ensuring its application as a standardized approach throughout the organization. 2024 will also be the year to apply the **patient's impact metrics** in practice and refine them to best fulfill our needs.

A focus will also be placed on the **social determinants of health**, which are the social and economic factors affecting well-being and health outcomes. Through these efforts Chiesi aims to address topics like promoting diversity, equity and inclusion in clinical trials and raising awareness about undeserved population disparities in the diagnosis and treatment of diseases of Chiesi's therapeutical areas.



"Chiesi allocated 23.8% of our revenues to R&D to build innovative treatments that meet the most important needs of patients. The entire organization implemented the **Patient Journey framework** which requires greater engagement to embed the patient voice in our programs to ensure we are providing value in our holistic approach to supporting patients, their families, and caregivers. We implemented key projects such as **About Asthma, Mindfully Rare**, and other integrated initiatives that raised awareness and engaged patients across our therapeutic areas."

Stuart Siedman

Franchise RARE, Global Head, Patient Advocacy CHIESI IMPACT COMMITTEE MEMBER



Prosperity

Health Equity

Chiesi's Health Equity strategy aims to eliminate healthcare barriers and reduce inequities, ensuring everyone can lead a healthy life. This aligns with Agenda 2030 and our mission to improve human life quality.

To identify inequities, we focus on understanding the patient journey within our patient-centric framework. Addressing health equity is complex due to the diverse and intricate global healthcare systems. Consequently, our strategy is continuously evolving, with a significant global review planned for 2024.

As defined by the World Health Organization (WHO): "Equity is the absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions of inequality (e.g. sex, gender, ethnicity, disability, or sexual orientation). Health is a fundamental human right. Health equity is achieved when everyone can attain their full potential for health and well-being."

To date, the key elements of the strategy are as follows:

- Determinants of Health Social determinants are non-medical factors affecting health outcomes, including the conditions in which people are born, grow, work, live, and age, and the broader forces shaping daily life. Environmental factors, such as living in polluted areas, also impact health and can create inequalities, leading to underserved vulnerable populations. Chiesi's goal is to establish a structured methodology to understand and map these determinants in our operational areas. We aim to enhance current prevention projects by integrating the concept of health determinants.
- Access to Healthcare Access means individuals can receive appropriate health services
 and medicines promptly and sustainably, according to their needs. Our goal is to ensure
 global access to care and treatment, enhancing healthcare system capacity. We focus
 both on low- and middle-income countries and underserved populations in high-income
 countries. Our efforts include working with distributors through our International Markets
 Development Division and establishing a dedicated Global Health function to accelerate
 access to our solutions in these regions, particularly in Africa.
- Measurement and Stakeholder Engagement Achieving significant impact in an
 interdependent environment is challenging for all actors trying to contribute to health equity.
 Key to this effort is stakeholder engagement and forming partnerships to develop projects.
 We aim to include a multi-stakeholder perspective in our strategy and have established
 mechanisms to incorporate their input into health equity projects. Measuring impact is another
 challenge. We developed impact metrics to measure our health equity commitment; however,
 being effective and avoiding proxies to calculate this impact is tough. We collaborate with the
 industry in the discussion around impact measurement for the pharmaceutical sector, as we
 believe a common effort may lead to a common measurement framework.



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Global Health

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Our dedicated **Global Health** team focuses on increasing access to **quality treatment** for small and sick newborns and their families in **Sub-Saharan African countries**.

Aware of the huge inequalities in access to appropriate care in resource-constrained settings, Chiesi wants to be part of the change in bridging gaps to reduce the burden of neonatal mortality.

We aim to achieve this by establishing a sustainable business model that ensures the long-term accessibility and availability of life-saving neonatal medications. This innovative model reinvests in capacity-building programs, including training and education, to strengthen the local healthcare system.

To ensure equitable access and generate a broader impact, multi-stakeholder partnerships are essential. We focus on collaborating with various stakeholders, including local governments, clinical communities, parent associations, multilateral organizations, nongovernmental organizations, and international donors.

We strongly believe that every newborn counts, everywhere, and together we can make a difference.

Chiesi Foundation

The Chiesi Foundation, established in 2005 as the independent philanthropic arm of the Chiesi Group, is dedicated to advancing healthcare in low- and middle-income countries by supporting scientific research and international cooperation in neonatology and pneumology. Through initiatives like the NEST (Neonatal Essential Survival Technology) and GASP (Global Access to Spirometry Project) models, it focuses on reducing neonatal mortality rates and improving respiratory disease diagnosis and management.



Additionally, it funds the IMPULSE (IMProving qUaLity and uSE of newborn indicators) study to enhance newborn care indicators in African countries like Benin, Burkina Faso, Burundi, Togo, Central African Republic, Ethiopia, Tanzania, and Uganda.

Find out more on the Chiesi Foundation website.







	Health Equity	Global Health	Chiesi Foundation
Therapeutic Focus	All Chiesi therapeutic areas	Neonatal and maternal health	Respiratory and neonatal health
Global Reach	High, mid, or low-income countries with Chiesi's presence or partnership	Low-income countries without Chiesi's presence	Mid or low-income countries
Management	Chiesi Group Chiesi Affiliates	Chiesi Group	Independent foundation
Underlying Concept	Shared Value	Global accessibility to Chiesi products	Strategic Philanthropy

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Progress in 2023

We are proud to report that in 2023, our products and therapies were registered in 130 countries, an increase of two countries from the previous year.

Health Equity Projects Globally

Beginning in 2023, we applied the patient journey framework to identify barriers to health equity, such as in specific geographic contexts. This approach provides valuable information about health equity needs that can then be addressed through specific initiatives.

All Chiesi affiliates have been involved in identifying barriers using the patient journey framework for at least one therapeutic area in which we are active. As a next step, we focused on designing local initiatives within our affiliates and with selected partners. As of now, there are 30 countries with active projects addressing the challenges of achieving health equity in neonatal health and respiratory care.

Advancing Global Health

In 2023, Chiesi began developing a comprehensive Global Healthcare strategy to guide our future initiatives and expand our impact worldwide.

Already in 2020, Chiesi launched the MAISHA project with the **aim of bringing caffeine citrate to Ethiopia, Uganda and Tanzania** at a low price. Caffeine citrate has been highly recommended by the World Health Organization for the care of preterm and low-birth-weight infants. Last year, we completed the regulatory dossier for caffeine citrate, an important step in our journey.

At the joint European Neonatal Societies (jENS) 2023 congress in Rome, the neonatal community launched the EMBRACE project, backed by Chiesi Group. **EMBRACE**, or Every Mother and Babies Right to Appropriate Care, serves as a unifying force within the neonatal community. Together, healthcare professionals, families, governments, and various organizations collaborate to form effective partnerships aimed at reducing neonatal mortality rates globally.

Caffeine citrate, approved in Europe, China, and Mexico, is used in hospitals to treat apnea of prematurity in premature babies. It stimulates brain centers controlling breathing, reducing episodes and the need for assistance, and lowering lung issue risks.

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Ambitions for 2024 and beyond

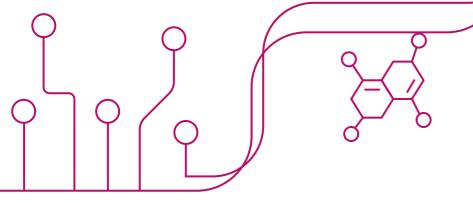
Aligned with the highest ESG standards, Chiesi is committed to refining our pricing methodology to ensure transparency and adherence to best practices, especially concerning health equity and public health.

We are reviewing our **Health Equity strategy** to develop an ambitious and comprehensive plan encompassing initiatives such as education and training campaigns, payment assistance programs, inclusive evidence generation, compassionate use policies, donations, digital platforms and patient support services. Our goal is to align our health equity ambitions with current societal demand and trends, **integrating these principles into our organizational decision-making and corporate processes**.

In our commitment to global health, we are focused on securing approval and executing the **Global Health strategy**. This involves navigating regulatory processes for drug approval in target countries such as Ethiopia, Uganda, and Tanzania. Chiesi is also preparing for commercial launches in these regions to ensure our solutions reach those who need them most.

Innovation & Technology

Chiesi's history is rooted in drug discovery and development aimed at creating sustainable therapeutic solutions that are widely accepted by patients, caregivers and healthcare systems. We pursue this through collaborations with academia and partner companies, leveraging cutting-edge expertise and a global presence in innovation hubs. Our innovation approach integrates digital technologies to improve Research and Development efficiency and competitiveness. In addition, we focus on emerging technologies and digital innovations, including artificial intelligence, to transform business.











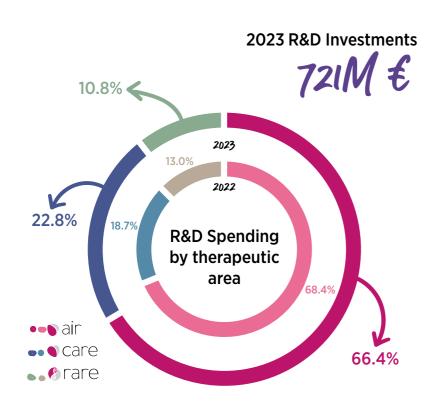


Research & Development

Our R&D headquarter is in Parma, Italy, with other major R&D centers in Paris (FRA), Chippenham (UK), Cary (USA), Lidingö (SWE), Shanghai (CIN), and Toronto (CAN). The R&D teams cover discovery and preclinical research, drug delivery, clinical development, regulatory affairs, pharmacovigilance, quality assurance, project management, and R&D portfolio management. R&D also supports post-market surveillance and life-cycle management programs.

Investments

In 2023, we exceeded our original goal of allocating approximately 21% of our revenues to R&D by allocating 23.8% of our revenues to R&D.



Patents

Chiesi Farmaceutici S.p.A. was confirmed as the **first Italian pharmaceutical company** and the **fifth among all Italian companies for patents applications**, with a consolidated number of 43 first filings at the European Patent Office (EPO), according to the **publication of the patenting trends for 2023**. Globally, in 2023 the Chiesi Group portfolio achieved a milestone of 6,201 patents, including also those of the new affiliates.

Decentralized Clinical Trials

Traditionally, clinical trials require patients to travel to a central location for all trial-related services. The DANCE (Digital innovAtion for patieNt Centric hEalth) initiative was established to enhance the clinical trial journey for participants by merging the patient perspective with modern technology through direct collaboration with the patient community and the use of innovative digital health technologies (DHT) for **remote data collection**. Adoption of innovative DHTs creates novel endpoints that can objectively measure clinically meaningful aspects of health that are usually difficult or impossible to measure, for example, data can be collected in a continuous manner, as opposed to point-in-time assessments.

The implementation of decentralized elements has continued, with the approach being incorporated into the TANGO study targeting asthma patients. This aims to reach more participants through the use of digital tools. The study involves more than 170 clinical sites in 14 countries and started in 2023.

Carbon Minimal Inhaler

Chiesi has started a long-term phase III clinical safety trial for the new carbon minimal inhalers platform. These inhalers replace the hydrofluorocarbon propellant (HFC 134a) currently contained in

pressurized metered dose inhalers (pMDI) with a new, low global warming potential propellant (HFC 152a). Find out more in our chapter on **Climate Change**.

Sustainability Report 2023

Sustainable Patient Kit

In 2023, Chiesi R&D has started some improvements targeted to the reduction of the ${\rm CO_2}$ footprint in clinical trials supplies activities and processes. For further details, please refer to the **Product Sustainability chapter**.

Green Design

Chiesi's internal Green Design tool for aligning products with circular economy principles from the earliest design phases has also been applied to the assessment of all projects in the R&D pipeline that require it. The tool is being further improved and integrated into R&D workflows. Read more in the **Product Sustainability chapter**.



About this report Sustainability Report 2023

Innovation

At Chiesi, innovation includes the advancement of products and services through open innovation, crowdsourcing and new technologies. It also includes go-to-market strategies and measures to maintain competitive strength and increase market penetration.

Biotech Centre of Excellence

In 2021. Chiesi announced the creation of a Biotech Centre of Excellence in Parma, Italy, adjacent to our production plant. By the end of 2022, construction began on this new hub, representing a significant investment of 85 million euros.

The center will specialize in **developing and producing** biologic drugs like monoclonal antibodies, enzymes, and proteins. It will handle every step of the process, from cell cultivation to drug production and packaging for global markets, attracting talent critical for Italy's specialized expertise.

Chiesi's Biotech Centre responds to pandemic challenges, aiming to enhance healthcare system resilience and sustainability. Currently, only 22% of new global treatments originate from Europe¹¹, partly due to slower R&D growth. The first products from this plant are expected in 2025, marking a step toward addressing these challenges and advancing healthcare.

Center for Open Innovation & Competence

In 2023, Chiesi created a new company function, the Center for Open Innovation & Competence (COI&C). The purpose of COI&C is to promote innovation processes within Chiesi by leveraging and integrating the many initiatives already in place at global and country level.

Innovation is defined by COI&C as any process in the organization that supports and fully encourages the introduction of valuable, shareable, accessible and redistributable new ideas, new methods of workflow, new methods in technology, new processes, new business models, and/or new products or services that meet the needs of patients, the territory, the environment, society and the company in a distinctive, sustainable, inclusive, and effective way.

Activities will be particularly focused on creating an external innovative ecosystem as a source of ideas and opportunities and as a shared playground.

Lab Innovation State of the Art

While partnerships between pharmaceutical companies and research institutions are common globally, international researchers often lack awareness of Chiesi's extensive R&D history when seeking to introduce their innovations.

In 2023, we focused on bridging this gap through our Lab Innovation project. Through 24 desk research projects, a benchmark analysis, participation in the Lab of the Future congress and over a dozen interviews, the Lab Innovation project identified nine opportunities for Chiesi from seven different actors at various stages of development. This initiative provided a clear method for mapping and scouting open innovation opportunities.

Strategic Innovation Unit in Global Rare Diseases

In 2023, Chiesi Rare Diseases established a Strategic Innovation Unit to identify and evaluate emerging therapeutic modalities from academic and research institutions, as well as start-ups and early-stage biotech organizations. This initiative aims to discover long-term solutions for patients with rare diseases.

Our Strategic Innovation Unit concentrates on three key areas: identifying the most valuable emerging therapeutic platforms for severe genetic rare diseases, determining their optimal therapeutic areas and indications, and developing the most effective short- and mid-term strategies for their advancement. We aim to be the partner of choice for advancing the development of innovative therapeutic modalities. By making substantial investments, we are addressing unmet patient needs and planning to expand disease indications and enhance access for rare disease patients in new regions.

The Pharmaceutical Industry in Figures (efpia.eu)

Technological Transformation

Digitalization is crucial throughout our organization. The Global Information and Communication Technology (GICT) department drives ongoing process innovation not only in R&D but also across all internal departments. In 2023, GICT outlined its three-year strategy, emphasizing enhanced processes, prioritizing risk management and cybersecurity, investing in people's skills in a rapidly evolving digital landscape, and bolstering our global information and communication technology architecture.

Chiesi Tech Radar

Considering the technological advances in recent years and their potential, GICT launched the Chiesi Tech Radar. This initiative, conducted in collaboration with representatives from all business functions, aims to continuously monitor and assess technological development and progress. The Chiesi Tech Radar identifies technologies with sufficient maturity and potential for value creation, leading to further study or experimentation.

In the short term, notable technologies under focus include digital twins for decision-making, artificial and virtual reality for supporting medical treatments, IoMT (Internet of Medical Things) applied to digital therapeutics, and simulation technologies.

Kepler Lab

Kepler Lab is the place at Chiesi where business functions can address their unmet needs through advanced technologies. It is a collaborative and open environment with an agile structure for experimenting with new ideas. The approach is to run experiments that explore advanced technologies and models to test whether an insight can make a profound difference or whether it should be abandoned to focus on other horizons.

Kepler Lab, built in collaboration with the Global Technical Development R&D department, is currently working with multiple departments on a range of unique challenges. From R&D to finance and HR, diverse needs have been identified, and innovative digital solutions are tested to address these challenges.

Artificial Intelligence (AI)

In 2023, Chiesi analyzed opportunities that could be enabled by Al technologies and identified which business processes should be explored as possible work streams from an open innovation perspective. Several business units were involved in this activity, with the aim of initially prioritizing their need at a qualitative, high-level and matching them with a suitable AI tool.

Ambitions for 2024 and beyond

In 2024, we aim to achieve My Green Lab certification a globally recognized gold standard for laboratory sustainability, for many Chiesi labs. This initiative aims in order to reduce resources consumption, enhance lab health, safety, and increase employee engagement to sustainability. We plan to have the first R&D labs certified in 2024. As of this report, our R&D Chippenham lab has already received the certification (Green level).



Through the People workstream of the sustainability strategy, Chiesi identified the need to focus stronger on creating an innovation culture within the organization, beyond traditional R&D focus. This refers to a culture that fosters innovation and creativity among employees by adopting different levers such as providing a psychologically safe environment, flexibility, D&I, and unconventional experiences. In 2024, this will be one of our objectives and in 2023 a first learning path has been launched.



"In 2023, we began our journey towards **My Green Lab** certification to raise awareness of our laboratories' environmental impact. This initiative embodies our commitment to the principle of "Do no harm." Starting with a pilot at our Chippenham R&D Lab in September 2023. we are progressively involving each R&D lab and plan to extend this to manufacturing sites' labs in the near future. The certification will mark the cultural shift towards sustainability within the Chiesi scientific community, a milestone we are proud to achieve."

Research & Development, Head of Project Management & Process Department CHIESI IMPACT COMMITTEE MEMBER