

2023 Corporate Responsibility Report

Action for a Healthier Future

IONIS[®]





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About This Report

In our 2023 Corporate Responsibility Report, we aim to share our commitment to corporate responsibility and highlight progress on our environmental, social and governance (ESG) priorities that are important to the success of our company. Unless otherwise noted, all performance reporting covers January 1, 2023 to December 31, 2023. All financial information is reported in United States (U.S.) dollars. Information on documents filed with the Securities and Exchange Commission (SEC), such as our annual Form 10-K, can be found at www.ionispharma.com.

Cover photo: Isabella, living with SMA Type 1, and Ionis employees participating in our 2023 Surf Away SMA event.

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CEO Letter

At Ionis, we work to bring better futures to people with serious diseases. We pioneered the field of RNA medicines, bringing life-changing treatments to people with serious diseases, and continue to drive innovation in RNA-targeted therapies, as well as emerging areas such as gene editing. Our science is driven by a deep understanding of disease biology and a commitment to advancing next-generation technology, coupled with an urgency to advance medicines for patients in need. Operating responsibly and sustainably is core to achieving our vision of a healthier future for patients, society and all our stakeholders.

2023 was a landmark year of achievement for Ionis, setting us on a path to bring a steady cadence of important new medicines to patients for years to come. We received approval for two of our medicines, including WAINUA™, which we are co-commercializing with AstraZeneca. Since our last report, we have also reported positive Phase 3 results for three late-stage medicines, including WAINUA for hereditary ATTR polyneuropathy, olezarsen in a rare disease known as familial chylomicronemia syndrome and, in early 2024, for donidalorsen in hereditary angioedema — the latter two we intend to bring to patients directly as our first independent U.S. commercial launches.

As our business grows, Ionis continues to reinforce our commitment to corporate responsibility (CR) in all aspects of our work. This includes conducting our first CR materiality assessment in 2023 and developing a clear CR strategy with actionable goals that show our commitment to holding ourselves accountable. We are pleased to share our new CR pillars and progress in our 2023 Corporate Responsibility report, including:

Innovate to improve the lives of people with serious diseases

We innovate across the business and work tirelessly to discover, develop and deliver important new medicines for people with serious diseases.

- In 2023, we celebrated the U.S. approval of WAINUA (eplontersen) for the treatment of polyneuropathy of hereditary transthyretin-mediated amyloidosis (ATTRv-PN) and the accelerated approval of QALSODY® (tofersen) for superoxide dismutase type 1 amyotrophic lateral sclerosis (SOD1-ALS).

- We also continued to advance our broad clinical pipeline, which now includes nine medicines in Phase 3 development for 11 diseases and many mid- and earlier-stage candidates for diseases that currently have no approved treatment options. And we are expanding and diversifying our technology capabilities, which now include multiple RNA modalities and gene editing.
- In addition, we worked closely with nearly 100 patient advocacy groups to support patients and caregivers across the globe.

Empowering our employees and communities

We are committed to fostering an inclusive culture that drives excellence, embraces diversity and supports our communities.

- At Ionis, our success is directly attributed to our extraordinary team and our focus on nurturing an open, diverse culture where employees feel included, supported and heard.
- In 2023, we introduced our new VisiON Awards and recognized six outstanding employees for their positive impact through championing innovation, community service and modeling Ionis' culture and core principles.
- We also launched our new corporate [DEI site](#), expanded our employee resource groups to nine and gave back to our local communities through volunteerism and philanthropy.

Operating responsibly and sustainably

We operate with integrity to help create a better, more sustainable future for all through environmental stewardship and responsible business practices and stakeholder interactions.

- In 2023, we continued to manage our environmental impact as our operations grew, including breaking ground on a new state-of-the-art research facility on our Carlsbad, California campus, which is designed to achieve LEED Gold certification.
- As we prepare for our first independent commercial launch, we continue to focus on maintaining high ethical standards and compliance across all our operations and in our interactions with stakeholders.

As we look ahead, we are developing action plans to advance our corporate responsibility goals. I am grateful and proud of the hard work and dedication of Ionis employees to create a better future for patients and society. The work we do every day contributes to helping people live fuller, healthier lives and ensures a responsible and sustainable company that will continue to deliver life-changing advances for years to come.

Best Regards,

Brett P. Monia, Ph.D. // Chief Executive Officer



About Ionis

For three decades, Ionis has invented medicines that bring better futures to people with serious diseases. Ionis has discovered five currently marketed medicines and has a leading pipeline in neurology, cardiology and other areas of high patient need. As the pioneer in RNA-targeted medicines, Ionis continues to drive innovation in RNA therapies in addition to advancing new approaches in gene editing. A deep understanding of disease biology and industry-leading technology propels our work, coupled with a passion and urgency to deliver life-changing advances for patients.

Ionis at a Glance¹

\$788M

Total Revenue

2023 FDA Approvals²



\$900M

R&D Investment



897

Total Employees

9

Medicines in Phase 3 trials for 11 potential indications

Committed to Delivering Next-Level Value for Patients and All Stakeholders

1

Wholly Owned Pipeline

Advancing and growing our **wholly owned pipeline** in focused therapeutic areas (neurology and cardiology)

2

Leading Technology

Advancing technology to **expand existing franchises and address new therapeutic areas**

3

Integrated Commercial Capabilities in Place

Steady cadence of **new potentially transformational medicines** to the market

4

Effective Financial Strategy Poised for Growth

Significant **revenue opportunity** to enable future positive cash flow



¹ Data as of December 31, 2023

² QALSODY: www.qalsody.com. Biogen is responsible for commercializing QALSODY; WAINUA: www.wainua.com. Ionis and AstraZeneca are responsible for commercializing WAINUA.

Our Approach to Corporate Responsibility

At Ionis, we work with a sense of urgency to discover, develop and deliver medicines to create a better future for people with serious diseases. We believe operating responsibly and sustainably creates long-term value for our company and our stakeholders. And we recognize the importance of corporate responsibility (CR) and environmental, social and governance (ESG) initiatives to support our business strategy and effective risk management. At Ionis, every day we work to make a positive impact for patients, communities and the broader world by creating a healthier and more resilient future for all.

In 2023, we continued to evolve our CR program, building on our foundation and further defining our strategic direction. Informed by the results of our first CR materiality assessment, we established three corporate responsibility pillars and associated goals that we believe are most important to our business. These pillars guide our approach to CR and provide a framework for reporting on our performance.

Our CR strategy is aligned with the United Nations Sustainable Development Goals (UN SDGs), which represent the international community's plan of action to address the most pressing challenges facing our world today. We recognize the urgency of this global initiative and have identified the four SDGs that we believe align most closely with our company vision and mission, and where Ionis can drive the most impact.

Ionis Corporate Responsibility Strategic Pillars

Pillar	Goals	UN SDGs
 <p>Innovate to Improve the Lives of People with Serious Diseases</p> <p>We innovate across the business and work tirelessly to discover, develop and deliver important new medicines for people with serious diseases.</p>	<ul style="list-style-type: none"> • Maintain strong investment in innovative R&D rooted in patient need • Collaborate with organizations that address important needs in patient communities • Ensure high-quality processes to support clinical development and safe, reliable product supply • Support equitable access and affordability of our medicines 	
 <p>Empower Our People and Communities</p> <p>We are committed to fostering an inclusive culture that drives excellence, embraces diversity and supports our communities.</p>	<ul style="list-style-type: none"> • Cultivate a thriving workplace culture that is safe, inclusive and fosters innovation • Continue to strengthen and expand diversity, equity and inclusion across the company • Drive positive social impact through employee volunteerism and community support 	 
 <p>Operate Responsibly and Sustainably</p> <p>We operate with integrity to help create a better, more sustainable future for all through environmental stewardship and responsible business practices and stakeholder interactions.</p>	<ul style="list-style-type: none"> • Act with integrity and uphold our commitment to high ethical standards • Responsibly manage our environmental impact as we grow our operations 	



Materiality Assessment

In 2023, we conducted our first CR materiality assessment³ to identify and prioritize CR and ESG topics that could impact our business success and matter most to our stakeholders. This process considered both internal and external perspectives and included:

- Review of best practice from ESG raters and reporting standards, and peer benchmarking to identify an initial list of important CR topics impacting our business
- Assessment of external stakeholder priorities including investors, ratings and rankings agencies, patient advocacy organizations, community groups and other stakeholders

- Interviews with internal business leaders and experts to rank CR topics based on their importance to our business and their ability to impact our stakeholders
- A prioritization session with the CR Committee to develop our materiality matrix, which was finalized following endorsement by our CEO and Board of Directors

All material topics are important, and we are committed to addressing these issues proactively. Our materiality matrix helps us focus our efforts, while still ensuring visibility and action on all material issues. Prioritizing these topics helps us allocate resources and communicate more effectively with both internal and external audiences on the issues and topics that matter most to our business and our stakeholders.

CR Governance

Our corporate responsibility initiatives are driven by our Chief Executive Officer and executive-level Corporate Responsibility Steering Committee (CR Committee). The CR Committee consists of senior leaders in key functions across the company, including Legal, Finance, Investor Relations, Human Resources, Research and Development, Manufacturing, Commercial, Compliance and Corporate Affairs. In 2023, we expanded our CR Committee to include a broader cross-section of senior leaders to ensure we continue to develop the right programs, policies and systems to oversee ethical and sustainable operations across our business.

Our Board of Directors, specifically the Nominating, Governance and Review Committee, has oversight of our overall CR strategy and material ESG risks and opportunities as outlined in the Committee’s charter. The Board receives updates at least once annually and is engaged on specific topics as needed.

Our approach to CR strategy and disclosure is informed by our stakeholders and third-party frameworks such as the Sustainability Accounting Standards Board (SASB) Health Care – Biotechnology and Pharmaceuticals Standard and the Task Force on Climate-Related Financial Disclosures (TCFD). Our SASB Index and TCFD reporting are included in the [Appendix](#) of this report.

Corporate Responsibility Materiality Matrix

Topics are listed in alphabetical order, not importance



Priority

Importance to the business

Higher Priority

³ Refer to the Definition of Materiality in This Report in the Appendix.

2023 Corporate Responsibility Highlights

2 FDA approvals
for people living with
life-threatening rare diseases²

Launched new
DEI site and dashboard

1,400+ hours
of employee volunteering

9 Employee Resource Groups
expanded with BLEND (Black and LatinX
Employee Networking and Development) ERG

Completed
CR materiality assessment

New **CR strategic
pillars and goals**

**73% employee
engagement**
in 2023 survey

**\$3.0M total
corporate contributions**
(including grants, sponsorships
and charitable donations)

Nearly **100 patient and
caregiver advocacy groups**
engaged in the U.S. and globally

6 Ionis-led community volunteerism events
and **15+ nonprofits** supported



Innovate to Improve the Lives of People with Serious Diseases

We innovate across our business and work tirelessly to discover, develop and deliver important new medicines for people with serious diseases.

Our Goals

Maintain strong investment in innovative R&D rooted in patient need

Collaborate with organizations that address important needs in patient communities

Ensure high-quality processes to support clinical development and safe, reliable product supply

Support equitable access and affordability of our medicines

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Patient Advocacy and Engagement	15



Our Approach to Patients and Innovation

At Ionis, we are committed to discovering, developing and delivering life-changing medicines for people with serious diseases. From drug discovery to development and commercialization, we strive to pursue high standards of quality, compliance, safety and performance to ensure effective and safe therapies for patients. Realizing the promise of our innovative medicines is possible because of collaborations with scientists and clinical investigators, and partnerships with patients, caregivers and advocacy organizations.



Sydney, living with HAE

Innovation and Drug Discovery Research, Development and Pipeline

We invest significantly in research and development (R&D) to innovate and bring new medicines to patients in need. Our science is driven by a deep understanding of disease biology; our team of researchers continues to transform and accelerate the drug discovery process, enabled by our extensive expertise in RNA-targeted therapeutics and new, emerging technologies.

Our research focus areas include neurology, cardiology and other areas of high patient need, and we continue to make progress advancing a steady cadence of medicines. Our pipeline currently includes nine medicines in Phase 3 trials for 11 potential indications and five Ionis-discovered medicines are currently on the market. Since our last report, we celebrated the U.S. approval of two new medicines, including WAINUA (eplontersen) for the treatment of polyneuropathy of hereditary transthyretin-mediated amyloidosis (ATTRv-PN) and the accelerated approval of QALSODY (tofersen) for superoxide dismutase type 1 amyotrophic lateral sclerosis (SOD1-ALS). We also reported positive Phase 3 results for three of our late-stage medicines for rare diseases with high patient need, including WAINUA, olezarsen for familial chylomicronemia syndrome (FCS) and, in early 2024, donidalorsen for hereditary angioedema (HAE) — the latter two we intend to bring to patients directly as our first independent U.S. commercial launches. In addition, we continue to advance our robust mid- and earlier-stage pipeline, which includes medicines for a range of serious diseases, many of which have no approved treatment options. View our [full clinical pipeline here](#).

We are also expanding and diversifying our technology capabilities — which now includes multiple RNA-targeted modalities and gene editing — with an eye to discovering and developing new medicines and methods of treatment to expand options for patients. Some recent technology advances enable us to improve on potency or reduce dosing frequency in existing medicines. Other innovations are designed to target new tissues in the body that were previously impossible or challenging to address, such as targeting muscle to treat cardiovascular and neuromuscular diseases. We are also pursuing several approaches to enable crossing the blood-brain barrier to treat neurological diseases.



For me, innovation is a mentality. It's about curiosity and the courage to test and go beyond what we know in our work and daily life."

Crystal Zhao // Director, Gene Editing

Recent Highlights

3

Positive Phase 3 Readouts⁴

3

Phase 3 Study Starts⁵

4

Key Studies Fully Enrolled⁶

2023 FDA Approvals²


QALSODY™
(tofersen)


WAINUA™
(eplontersen)

² QALSODY: www.qalsody.com. Biogen is responsible for commercializing QALSODY; WAINUA: www.wainua.com. Ionis and AstraZeneca are responsible for commercializing WAINUA.

⁴ NEURO-TTRransform (eplontersen for ATTRv-PN), Balance (olezarsen for FCS) and OASIS-HAE (donidalorsen for HAE).

⁵ Bepirovirsen (chronic HBV), IONIS-FB-LRx (IgA nephropathy) and Zilganersen (Alexander disease).

⁶ OASIS (donidalorsen for HAE); RADIO-TTRransform (eplontersen for ATTR-CM); GOLDEN (IONIS-FB-LRx for GA); HALOS (ION582 for Angelman syndrome).



The Ionis Pipeline⁷

Medicine	Partner	Disease/Condition	Phase
Neurological			
Ulefnersen (FUS)	Ionis-Owned	Amyotrophic Lateral Sclerosis	Phase 3
Tofersen (SOD1)	Biogen	Amyotrophic Lateral Sclerosis	Phase 3
Zilganersen (GFAP)	Ionis-Owned	Alexander Disease	Phase 3
ION717⁸ (PRNP)	Ionis-Owned	Prion Disease	Phase 3
IONIS-MAPT_{Rx} (TAU)	Biogen	Alzheimer's Disease	Phase 3
ION859⁹ (LRRK2)	Biogen	Parkinson's Disease	Phase 3
ION464⁹ (SNCA)	Biogen	Multiple System Atrophy and Parkinson's Disease	Phase 3
ION541¹⁰ (ATXN2)	Biogen	Amyotrophic Lateral Sclerosis	Phase 3
ION582⁸ (UBE3A-ATS)	Biogen	Angelman Syndrome	Phase 3
Tominersen (HTT)	Roche	Huntington's Disease	Phase 3
ION306 (SMN2)	Biogen	Spinal Muscular Atrophy	Phase 1

Medicine	Partner	Disease/Condition	Phase
Cardiovascular			
Eplontersen (TTR)	Ionis/ AstraZeneca ¹¹	Transthyretin Amyloid Cardiomyopathy	Phase 3
Olezarsen (ApoC-III)	Ionis-Owned	FCS	Phase 3
Olezarsen (ApoC-III)	Ionis-Owned	Severe Hypertriglyceridemia	Phase 3
Pelacarsen (Apo(a))	Novartis	CVD	Phase 3
Fesomersen (Factor XI)	Ionis-Owned	Thrombotic Disorders	Phase 3
ION904 (Angiotensinogen)	Ionis-Owned	Treatment-Resistant Hypertension	Phase 3
Specialty Rare			
Donidalorsen (PKK)	Ionis-Owned ¹²	Hereditary Angioedema	Phase 3
Sapablursen (TMPRSS6)	Ionis-Owned	Polycythemia Vera	Phase 3
Other Medicines			
Bepirovirsen (Hepatitis B Virus)	GSK	Hepatitis B Virus Infection	Phase 3
IONIS-FB-L_{Rx} (Complement Factor B)	Roche	IgA Nephropathy	Phase 3
IONIS-FB-L_{Rx} (Complement Factor B)	Roche	Geographic Atrophy/AMD	Phase 3
ION224 (DGAT2)	Ionis-Owned	Metabolic Dysfunction-Associated Steatohepatitis (MASH)	Phase 3
ION839 (PNPLA3)	AstraZeneca	Metabolic Dysfunction-Associated Steatohepatitis (MASH)	Phase 3
ION455 (HSD17B13)	AstraZeneca	Metabolic Dysfunction-Associated Steatohepatitis (MASH)	Phase 1
ION532 (APOL1)	AstraZeneca	Chronic Kidney Disease	Phase 1

Key



⁷ Pipeline details as of March 1, 2024.

⁸ This investigational antisense medicine is in a Phase 1/2a study.

⁹ This investigational antisense medicine is in a Phase 1 study. It is listed here in Phase 2 because the medicine is being tested in patients and not healthy volunteers.

¹⁰ This investigational antisense medicine is in a Phase 1/2 study.

¹¹ Ionis and AstraZeneca are jointly developing and commercializing eplontersen.

¹² Otsuka Pharmaceuticals will commercialize donidalorsen in Europe.



Focus on Next Wave of Potential Neurology Medicines

Neurology is an area with a huge need for effective medicines to treat devastating diseases. It has also been a longstanding focus for Ionis, as showcased by approved medicines SPINRAZA® (nusinersen)¹³ and QALSODY. Ionis has made significant progress in understanding the fundamental mechanisms of neurological disease and is a leader in developing RNA-targeted medicines that specifically and selectively address these mechanisms. With 11 products in clinical development for neurology, our next wave of wholly owned medicines includes six medicines in clinical studies by the end of 2024, in areas including rare pediatric neurology, dementia and motor diseases.

InnovatION in Action

Innovation is core to Ionis and comes to life through the passion and dedication of our employees and a culture where professional development and personal growth are encouraged at all career stages.

We recognize and feature employees who exemplify this spirit of innovation through our InnovatION Award, which is part of the Ionis VisION Awards. This award recognizes employees for creativity and innovation to achieve breakthrough results for our business. In 2023, two employees received the InnovatION Award for their work on portfolio planning in our development pipeline and their research advancing RNA-targeted modalities. See the [Workplace Culture](#) section of this report for more details.



2023 Recognition



2023 Rainwater Prize winners (left-right): Drs. Don W. Cleveland, Timothy Miller and C. Frank Bennett (Photo: Rainwater Charitable Foundation)

Rainwater Prize for Outstanding Innovation in Neurodegenerative Disease Research

C. Frank Bennett, Ph.D., Ionis' Chief Scientific Officer, was named a co-recipient of the 2023 *Rainwater Prize for Outstanding Innovation in Neurodegenerative Disease Research*. Dr. Bennett shared the prize with fellow researchers Drs. Don W. Cleveland (University of California, San Diego) and Timothy Miller (Washington University School of Medicine in St. Louis) for their work advancing antisense technology for the treatment of neurodegenerative diseases including ALS, Huntington's disease, Alzheimer's disease and tauopathies.

Drs. Ayeez and Shelena Lalji and Family ALS Endowed Award for Innovative Healing

Frank Rigo, Ph.D., Ionis' Senior Vice President, Functional Genomics and Core Research, and Paymaan Jafar-Nejad, M.D., Executive Director, Neurology Research, were awarded the 2023 *Drs. Ayeez and Shelena Lalji and Family ALS Endowed Award for Innovative Healing* along with Drs. Neil Shneider (Columbia University), Robert Brown (UMass Memorial Health) and Sandrine Da Cruz (KU Leuven). Presented by the [Sean M. Healy and AMG Center](#), the team received this award for the discovery and development of ulfnersen, an investigational medicine for people living with a rare, genetic type of ALS caused by the fused in sarcoma (FUS) protein.

¹³ SPINRAZA: www.spinraza.com Biogen is responsible for commercializing Spinraza.

Safe and Ethical Clinical Trials

At Ionis, we are committed to ensuring that all our clinical trials are conducted in a safe and ethical manner. Our Clinical Development and Clinical Operations teams bring investigational candidates through the full clinical development process, from trial design to study execution and lifecycle management.

We have established a series of policies and procedures that govern the ethical conduct of clinical trials and we adhere to applicable standards set by the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH). We also follow Good Clinical Practice (GCP) guidance and regional laws and regulations for designing and conducting clinical trials and reporting trial results. Compliance with GCP standards, in addition to Good Laboratory Practice (GLP) and Good Manufacturing Practice (GMP) standards (collectively “GxP”), provides assurance that the rights, safety and well-being of trial participants are protected, and that clinical trial data are credible. To protect patient privacy, patient data are de-identified and captured in systems that pass rigorous validation processes to ensure compliance with key health authority regulations.

The Ionis Protocol Review Committee (PtRC) is our advisory board for all clinical trials, offering comprehensive feedback on protocols from a cross-functional group of Ionis employees experienced in various aspects of clinical trials. Additionally, Institutional Review Boards (IRBs) monitor the ethical conduct of our trials and have the authority to approve, modify or stop trials. Independent ethics committees, IRBs and health authorities review and approve essential clinical trial documents, such as protocols and informed consent forms before they are used. Our Safety Oversight Committee and, for some studies, independent Data and Safety Monitoring Boards (DSMBs), monitor safety data across all study participants to support rapid and effective response to any potential safety concerns.

All employees in our Clinical Development and Clinical Operations and Data Management organizations are trained in standard operating procedures with specialized training for those engaged in supporting clinical trials.



Clinical Trial Transparency

Ionis supports the overall principles of greater clinical trial data transparency and we share the findings of our clinical research and clinical trials in a transparent, ethical and accurate manner, regardless of the outcome, to further science and move closer to improving the lives of patients.

We disclose the results of company-sponsored clinical trials in accordance with applicable laws, regulations and industry standards. Drug Safety, Clinical Development and Clinical Operations teams evaluate the benefits and risks associated with our clinical studies and our annual summary reports and post-approval safety surveillance reports are shared with health authorities. All identified safety risks associated with a clinical trial are disclosed in the summary sections of these reports.

All clinical trials are disclosed in credible and publicly available databases, including [ClinicalTrials.gov](https://www.clinicaltrials.gov) and the European Union’s Clinical Trials Information System (CTIS). In addition, we make reasonable efforts to share de-identified patient-level datasets with qualified scientific and medical researchers in the interest of improving patient care and advancing science. We also prepare plain language summaries (PLS) for clinical trials and their results to share with patients and the public. For more information, see our [Clinical Trial Transparency Statement](#).



CARDIO-TTRansform Clinical Trial

Our Phase 3 CARDIO-TTRansform study, Ionis' largest clinical trial to-date with more than 1,400 patients, is also the largest study ever conducted for transthyretin-mediated amyloid cardiomyopathy (ATTR-CM). ATTR-CM is a progressive, fatal disease caused by the accumulation of misfolded TTR protein in the cardiac muscle, which can result in progressive heart failure. Black people and African Americans are more likely to develop the genetic type of ATTR-CM through a common mutation in their TTR gene. To ensure a diverse and equitable clinical trial that includes participation of people of color, we developed a comprehensive plan to increase awareness and to help address barriers to engagement including:

- **Patient Toolkit:** A comprehensive toolkit including trial information and FAQs helped demystify the trial process and encourage informed decision making for ATTR-CM community members and caregivers.
- **Community Outreach:** We hosted scientific presentations and sponsored programs at national medical conferences, with a focus on people from underrepresented groups.

The aim was to elevate awareness and provide investigators and healthcare providers with the necessary tools and knowledge to actively recruit diverse trial participants.

- **Training:** We delivered specialized training to clinical trial teams, emphasizing the importance of considering demographics during site selection to ensure more inclusive recruitment. Tailored educational content concentrated on specific disease manifestations in community members of color and how to understand and navigate cultural nuances.
- **Data Review:** We conduct thorough reviews of our baseline data on an ongoing basis, focusing on demographic characteristics, which has helped us understand and address any disparities and opportunities to evolve our approach.

These efforts have translated into a 35% increase in enrollment of Black people and African Americans to the CARDIO-TTRansform trial since we initiated our plan in 2021, reconfirming our commitment to help break down barriers and create a more equitable healthcare landscape.

Diversity in Clinical Trials

To enhance patient access and ensure diverse representation, Ionis is developing initiatives aimed at better aligning the demographics of our clinical trial participants with those of the affected patient populations. In support of these and broader clinical trial efforts, the PtRC is evaluating trials through a diversity and health equity lens to identify and address potential barriers to participation, ensuring our trials are accessible and equitable. Additionally, we are focused on expanding our outreach efforts and **partnerships with advocacy groups**, which support recruitment of participants from underrepresented populations to broaden the diversity of our clinical trials.

Product Quality and Patient Safety

At Ionis, we rigorously monitor the quality and safety of our products throughout their lifecycle. We are committed to complying with applicable laws, regulations, global standards and collective GxP guidelines as they pertain to patient safety, product quality and data integrity. We have safety monitoring and pharmacovigilance processes in place to document, evaluate and report relevant safety information and adverse events to relevant regulatory authorities. Annually, our employees undergo training on adverse events and on applicable GxP guidelines related to their roles. In addition, we work closely with our partners and contract manufacturing organizations (CMOs) to ensure that quality and safety meet our standards.

Through our network of partners and guided by local regulations and requirements, we work to ensure a process of product serialization in all authorized markets that safeguards the traceability of our products through unique codes and printing on the packaging. This process monitors the distribution of our medicines and is designed to protect patients from counterfeit or falsified products and other forms of tampering.

Quality Management System

The principles and structure of our integrated quality management system (QMS) are outlined in our Quality Manual. Our QMS complies with GxP and ensures the quality and integrity of investigational medicines used in nonclinical, preclinical and clinical studies, as well as commercial supply. In the past year, we focused on a number of enhancements to our quality system, including implementing a new technology to support improved audit management.

Quality risk management is embedded in our QMS, which outlines a systematic, proactive and objective approach to identify, assess, control, monitor and document risks. Risk management processes are managed collaboratively by functional area managers, Quality Assurance and Quality Control. Our quality risk management includes, but is not limited to quality surveillance; safety monitoring; mechanisms and processes for issue escalation and reporting; and quality metrics for corrective and preventative actions, investigations and change control.

Ionis maintains a rigorous standard for quality, and we expect the same standard when introducing new CMOs and vendors into our supply chain based on GxP compliance. To mitigate supplier risk, our external audit program includes an approved GMP vendor list and determines the frequency of risk-based vendor audits. Our senior management oversees quality in our supply chain, including vendor selection, monitoring and auditing, all of which are part of our quality risk management process.

Access and Affordability

At Ionis, we recognize that it is critical for the medicines we develop to be accessible and affordable for the patients who need them. We think about access holistically, starting with designing trials that support patient access and enrollment, and providing expanded access to investigational therapies when appropriate. Commercial market access activities for our currently-approved medicines are handled by the licensees of these medicines. Moving forward, Ionis expects to independently commercialize our wholly owned medicines in the U.S. and we will work to provide equitable access to all patients regardless of their racial, ethnic or socioeconomic background or ability to pay. Ionis is designing patient services and access programs that best serve patients and working to address potential barriers so patients can rapidly gain access to our medicines once they are commercially available. Highlights from some of our access initiatives include:

- **Ionis Sponsored Genetic Testing, Genetic Counseling and Diagnostic Programs** – Rare genetic conditions often go undiagnosed for years or decades, which can mean missed opportunities for understanding the condition and gaining access to medical management and interventions. To help address this, Ionis has developed genetic testing and diagnostic programs with the aim to improve access for patients. Additionally, we offer confidential third-party genetic counseling for patients and their families.
- **Ionis Expanded Access Policy** – Our expanded access policy outlines when we will consider providing access to an investigational medicine for an individual patient outside of a clinical trial. We review and consider expanded access requests regularly, evaluating all requests in a fair and equitable manner and as new information about an investigational drug and its impact emerges from our clinical trials. For more information, see our [Expanded Access Policy](#).



WAINUA Patient Education Manager Team

Our first Patient Education Manager (PEM) team was launched in 2023 for our co-commercialized medicine, WAINUA. Once a patient is diagnosed and prescribed WAINUA, they are enrolled and have the opportunity to opt in to our Patient Services, at which time they are assigned a PEM based on their location.

Our PEMs are a carefully selected group of knowledgeable and tenured registered nurses, nurse practitioners and doctorates in nursing. PEMs deliver in-depth, personalized

disease state education and support that is customized to patient needs. Their responsibilities include delivering product education and guidance as patients get started with WAINUA as well as providing high-level education on access programs and reimbursement.

In addition to our PEM team for WAINUA, we plan to establish similar patient-facing education teams for olezarsen and donidalorsen, pending regulatory review and approval.

- **Ionis Patient Education Managers** – Our Patient Education Managers (PEMs), part of our Patient Services organization, are the primary points of contact for patients and caregivers for our co-commercialized medicine, WAINUA. Ensuring individuals stay informed and supported throughout their experience and access journey, PEMs deliver in-depth disease-state education, administration support and other services customized to patient needs.

As we continue to establish our commercial access approach and in advance of our anticipated first independent commercial launch, we are also focused on ensuring our programs support equitable access and education around our medicines including in diverse and underserved communities.

We are also committed to ensuring our products are priced according to the value they deliver to patients and caregivers, healthcare systems and society. In addition, we plan to work collaboratively with partners in the healthcare system to develop innovative and compliant affordability solutions and financial assistance programs, striving to ease the financial burden of our medicines for patients.



Patient Advocacy and Engagement

At Ionis, our work with patients, caregivers and their families inspires and informs us as we discover, develop and deliver new medicines to people who need them. We are committed to understanding the challenges and unmet needs they face.

Our Patient Advocacy team collaborates with advocacy organizations to build long-term, mutually beneficial relationships throughout all stages of drug development. Through these partnerships, we gather diverse perspectives and develop impactful programs and initiatives that help to enhance our mission and advance our research. By engaging early and often, we are better able to understand the unique and shared challenges of patients, their families and the broader disease communities. In addition, we are able to explore potential collaborations that may address unmet needs and improve lives.

In 2023, we engaged with nearly 100 patient and caregiver advocacy groups in the U.S. and globally across our therapeutic areas. As our pipeline continues to grow and programs advance to later stages of development, we plan to expand our advocacy network and efforts to ensure that community perspectives continue to be integrated into the work that we do.



Jackson, living with Angelman Syndrome

Partnering with Patient Communities

In 2023, Ionis engaged and partnered with patients, caregivers, family members and advocacy organizations in a variety of ways including:

Familial Chylomicronemia Syndrome (FCS)

We launched a research initiative for those with FCS, sponsored a cooking class with FCS-friendly recipes, and participated in the [FCS Foundation's](#) 4th Annual Virtual 5K.

Hereditary Angioedema (HAE)

Teams from Ionis attended the [HAE Association](#) National Summit and the [American College of Allergy, Asthma and Immunology \(ACAAI\)](#) Annual Meeting to engage with patient and physician communities and inform our ongoing HAE community engagement strategy.

Angelman Syndrome (AS)

Ionis supported the AS community on multiple initiatives intended to advance clinical care and research in Angelman syndrome. We were part of a consortium to identify and advance biomarkers and outcome measures, as well as

an initiative to support clinical centers of excellence. Ionis presented at several different Angelman meetings across the world, providing updates on our ongoing Phase 1-2a HALOS clinical trial for AS. We also held a meeting with caregivers of individuals living with AS to gather insights that may inform future clinical studies.

Severe Hypertriglyceridemia (sHTG)

Ionis created [TGAware.com](#) to help increase awareness of sHTG and serve as a resource for physicians and community members.

Prion Disease

Ionis worked with the Prion Disease community to announce the initiation of our PrProfile study, a global, multi-center, early-phase clinical trial in individuals diagnosed with symptomatic Prion Disease, which causes severe, fatal dementia.

Listening and Learning with Advisory Boards

Through our patient advisory boards, we engage directly with patient community members to allow for ongoing connection and two-way dialogue.

Familial Chylomicronemia Syndrome (FCS): During our virtual meeting with the FCS patient advisory board in 2023, the patient community members shared their personal stories with FCS, provided insights into how they manage their condition and discussed trusted sources of information and what additional resources, communication and support could be helpful to the FCS community.

Hereditary Angioedema (HAE): We hosted an in-person HAE advisory board meeting in 2023, which brought together people living with HAE and caregivers for an immersive day-long session of interactive activities. Together with the Ionis team, the workshop provided participants with the opportunity for deep thinking and rich dialogue around their lived experiences with HAE.



Empower Our People and Communities

We are committed to fostering an inclusive culture that drives excellence, embraces diversity and supports our communities.

In This Section

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Our Goals

Cultivate a thriving workplace culture that is safe, inclusive and fosters innovation

Continue to strengthen and expand diversity, equity and inclusion across the company

Drive positive social impact through employee volunteerism and community support



Our Approach with Employees and Communities

Ionis is where passionate, driven individuals come together to help people — from patients in need to our local communities. Our success can be directly attributed to our outstanding employees, which is why we are focused on cultivating a diverse, thriving workplace culture that is safe, inclusive and fosters innovation.



Workplace Culture

With nearly 1,000 employees globally, Ionis is dedicated to maintaining a culture where every employee feels respected and valued and we are committed to providing ongoing opportunities for their career development, learning and personal growth. Our Culture Statement and Core Principles guide us in our mission to improve the lives of people living with serious diseases and motivate us to strive for the highest level of individual and organizational excellence.

The Culture We Desire

WE KNOW that patients depend on us.

WE ARE RESPONSIBLE for helping to create the future.

WE BELIEVE that the future will be defined by outstanding people and we are committed to recruiting, developing, motivating and rewarding them.

WE ARE COMMITTED to planned and well-managed change.

WE HAVE THE COURAGE to tackle tough problems with determination and humor.

WE KNOW that we depend on each other. We treat one another fairly and with respect. We are committed to the well-being and growth of every person in the organization.

WE STRIVE for excellence. Mistakes made in the pursuit of challenging objectives are accepted.

WE ENCOURAGE diversity in our work force. Prejudicial barriers to human potential and productivity are foreign to our values.

WE BELIEVE that open debate and the free expression of ideas from all individuals lead to the best decisions. We interrogate concepts. We challenge hypotheses. We support people.

WE ARE COMMITTED to getting the job done efficiently, on time and with the resources available.

WE HAVE A PASSION to learn, to build, to grow, to create, to develop and to market

We recognize and celebrate employees through our spot recognition program, the ‘Say Yes’ Awards, our Service Awards for long-term service to the company and our VisION Awards, given to those that embody our priorities of innovation, enriching our culture and giving back.

We provide employees with a workplace and environment where they can do their best work and want to stay long term. In 2023, our voluntary turnover was 5.2%, which is well below the U.S. average of 23% for our industry according to a survey published by Radford — an Aon Hewitt Company.

Core Principles

DREAM big

STAY lean

INNOVATE

COMMIT to science and the scientific process

DEMAND intensity, productivity and accountability

HAVE a bias to act and say yes

ESTABLISH the fewest possible rules

DECENTRALIZE decision making

BE transparent

HAVE fun



Equal Opportunity Employer

Ionis is proud to be an Equal Opportunity Employer, and we seek to employ the best qualified people for every position, striving to provide opportunities for advancement. Our full [EEO statement](#) can be found on our website.

Insights Into Action

In 2023, Ionis conducted our second employee engagement survey, followed by an initiative called *Insights Into Action*. Building on our inaugural employee engagement survey from 2021, we focused on key dimensions to help us understand the employee experience, including work environment, career development, communications and work-life balance.

With 88% of employees participating, the 2023 survey results showed 73% were highly or moderately engaged. This is a 24% increase in engagement compared to our 2021 survey and ranks Ionis well above the U.S. Pharmaceutical Industry Average. As a follow-up, we formed action committees as part of the *Insights Into Action* initiative to analyze feedback and develop recommendations to continue to make Ionis a better place to work.

INSIGHTS INTO ACTION 2023 Employee Engagement Survey

88%

Participation Rate (vs. 68% in 2021)

73%

Employee Engagement (vs. 49% in 2021)
15% above U.S. Pharmaceutical Industry Average

Ionis VisION Awards



Several VisION Awards recipients with Ionis CEO, Brett Monia, at our 2023 end of year celebration.

IONIS
vision awards

Launched in 2023, the Ionis VisION Awards were created to recognize and celebrate employees who have made a positive impact on Ionis, our patients and the broader community. Six employees received these awards in 2023.

InnovatIION

Employees who demonstrate creativity and innovation to achieve breakthrough results for our business. Our 2023 InnovatIION recipients were recognized for their research and work advancing RNA modalities and for developing a framework to ensure thoughtful and strategic portfolio planning and prioritization of our development pipeline.

HumanitarION

Employees who have made a transformational difference to patients or the community through significant volunteerism or service. Our 2023 HumanitarION recipients were recognized for their passion in founding our annual Surf Away SMA event and for their leadership and support for students interested in careers in science through our Ionis NEXT employee resource group.

Culture ChampION

Employees who model our Culture Statement and Core Principles through their behaviors and actions. Our 2023 Culture ChampION recipients were recognized for being great Ionis ambassadors to new employees and teams and for constantly delivering in an expeditious and innovative way, while maintaining scientific rigor.



Talent Attraction, Development and Retention

At Ionis, we are focused on building an extraordinary team with a passion to deliver life-changing advances for patients. Our success is a direct result of our outstanding employees and we aspire to be an organization where every individual feels valued and supported throughout their career journey here.

Talent Recruitment

We have a formal talent recruitment strategy and processes in place to support the fair and equitable recruitment of the best and most qualified candidates. We post our positions to a wide range of job boards to help ensure a diverse candidate pool.

Whether we are hiring entry-level, mid-career or executive-level candidates, we look beyond a candidate's academic qualifications to identify valuable experience and skills that we believe will add to our culture and organizational capacity.

Early Career Opportunities

Ionis offers internships, postdoctoral fellowships and clinical fellowships to extend the reach of our talent pipeline. These programs provide opportunities to be a part of cutting-edge science in a research-focused environment, while contributing to advancing RNA-targeted medicines and drug development technologies.

Postdoctoral and Clinical Fellowships

Our postdoctoral researchers work with world-class scientists and our academic collaborators to discover and develop new therapeutics. A fellowship at Ionis typically lasts two years, with the potential for a third-year extension and can be in fields such as: Chemistry, Cell Biology, Biochemistry, Toxicology, Pharmacology, Pharmaceutical Development and Clinical Development. After the fellowship, a full-time career at Ionis is possible, as some of our most accomplished scientists started as postdoctoral researchers in the program.

Celebrating Interns and Fellows

Each year, we celebrate and recognize our interns and postdoctoral fellows with two special events:

Internapalooza

Interns, both scientific and business focused, give presentations describing their projects, followed by time for questions and answers with the audience. The 2023 intern program brought together an outstanding group of 18 energetic and hardworking interns from across the U.S., who contributed in onsite, remote and hybrid roles.

Postdocapalooza

The postdoctoral fellow program is one of Ionis' most successful initiatives, featuring talented scientists and clinicians from around the world who participate in a one- to two-year fellowship. The 2023 event was an opportunity to showcase the exceptional work of the seven postdoctoral fellow researchers, during which they gave presentations, then participated in a lively game of Postdoc Jeopardy.



Winners of Postdoc Jeopardy from our postdoctoral fellows program

Internships

Ionis interns have the opportunity to grow professionally through interactions with research and business professionals in support of projects aligned with department initiatives. All interns learn and work under a practicing professional who provides guidance and mentorship. Open to both undergraduate and graduate students, our internships are focused in the following areas:

- **Research and Development:** Pharmacology, Biochemistry, Cellular and Molecular Biology, Genomics and Bioinformatics, Medical Affairs, Toxicology, Pharmacokinetics, etc.
- **Business Operations:** Finance, Corporate Communications, Alliance Management, Regulatory Affairs, Human Resources, Information Technology, Commercial, etc.



Career Development

We empower our employees to build rewarding careers at Ionis, driven by a culture that encourages personal and professional growth. Ionis offers robust training opportunities with course offerings and events available to every employee regardless of level or function.

The Learning Continuum

Beginning with onboarding, we aim to provide our employees with the tools and training necessary to succeed at every stage with Ionis. Our robust training and development program, The Learning Continuum, supports each employee on their career journey.

In our Learning Continuum, we offer virtual, hybrid, in-person and instructor-led training and development opportunities to support employees at every stage in their development. In 2023, we offered more than 100 live training sessions facilitated by Human Resources team members and functional area leaders from around the organization. In addition, employees also have access to the Ionis Learning and Development Library, a collection of leadership and management resources, and LinkedIn Learning for on-demand development courses.

Annual Performance Reviews

All Ionis employees receive a performance appraisal annually, which includes completion of a self-appraisal ahead of formal performance review with their manager. In addition, employees develop individual objectives and development plans on an annual basis. Outside of the annual review process, managers are encouraged to check in with employees throughout the year to discuss strengths and performance contributions, and to regularly discuss their career development and goals.



Ion Mentor Program

The Ion Mentor program was launched in 2023 in response to employee feedback about a desire for a more formalized cross-functional mentoring program. Designed to support employees' continued growth and development, the program matches mentees and mentors based on aligned professional

and personal development goals and expertise. Employees enroll for a six-month period and have access to resources and training to support them in their roles and facilitate more engaging and productive partnerships. The first cohort of the program included 46 mentor-mentee pairs. In addition, Ionis hosts interactive *Career Development Spotlight* sessions, which highlight the career journeys of Ionis leaders.

Ionis Learning Continuum

New Employees (Integration Programs)

- New Hire Orientation
- Ionis Buddy Program
- 3-Week Check-In
- "Working the Ionis Way" Series
- Culture Video Series
- Antisense 101
- History of Ionis

Managing Others (Supervisory Programs)

- 2-Day Supervising at Ionis Program
- Performance Management
- Prevention of Sexual Harassment
- Managers Book Club

New Employees

Developing Employees

Managing

Leading

Open Training Programs

- Conflict Resolution
- Influencing at Ionis
- Interpersonal Effectiveness
- Interviewing and Hiring
- Setting Objectives
- Effective Teams
- Innovative Teams
- Time Management and Effective Meetings
- Ionis Science for Non-Scientists
- Emotional Intelligence and DEI; Unconscious Bias; Inclusion and Belonging; Allyship and Advocacy; Cultural Competence

Leading the Organization (Ionis Leadership)

- 2-Day Introduction to Ionis Leadership Program
- 2-Day Leadership Conference



Compensation, Benefits and Well-Being

In addition to our supportive and inclusive culture, we offer employees a combination of robust and meaningful compensation, benefits and well-being programs. Our compensation is awarded based on individual and company performance. We recognize achievements with salary increases, equity awards, promotions and bonus opportunities.

We offer highly competitive benefits to all regular employees who work at least 20 hours per week. In addition to our benefits, we offer a range of industry-leading wellness and stress management initiatives and programs. For more information about benefits and well-being at Ionis, visit our [website](#).

Pay Equity

On an annual basis, we monitor our pay equity status and market competitiveness, and perform a pay equity analysis that reviews pay equity by gender, race and age. Our 2023 pay equity analysis confirmed we do not have a statistically significant difference in pay for the same or similar work, based on gender, race, ethnicity or age.



Diversity, Equity and Inclusion (DEI)

At Ionis, our diverse workforce represents a wide range of identities, backgrounds, perspectives and experiences. To realize the full potential of our employees, we must cultivate an inclusive culture where everyone feels empowered to contribute fully. We strive to create an environment that values and amplifies different perspectives, which we know leads to better ideas and increased innovation.



Ionis DEI Strategy

To expand and reinforce DEI at Ionis, we enhanced Ionis' DEI strategy in 2023. The following elements of DEI help to guide our efforts and measure change over time as we execute our programs:



Engage

We endeavor to attract and involve our community through various programs, initiatives and outreach. Our DEI community includes job candidates, patients, employees, suppliers and shareholders.

Goal: Increase overall employee engagement, ERG participation and community outreach, including students, suppliers and patients.



Empower

We provide leadership development opportunities, financial resources, training and best practice guidance to support our DEI events, initiatives and programs.

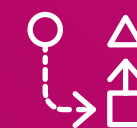
Goal: Provide adequate resources for our employees to thrive, our employee resource groups (ERGs) to develop and equity-seeking groups to be represented.



Evaluate

We collect, review and report on our DEI metrics. We analyze, interpret and share our outcomes as part of our overall corporate responsibility efforts.

Goal: Use data to inform our programs and measure our progress. Be accountable for our results by comparing them against industry benchmarks and publishing our outcomes.



Evolve

Informed by data and best practices, we experiment with different programs and initiatives to help us reach our DEI goals. We make iterative changes to optimize our efforts to provide innovative and integrated solutions.

Goal: Add, change and expand DEI programs and initiatives to meet identified needs of the organization.

DEI Roles and Responsibilities

To support our DEI purpose and drive the four elements of our strategy, we have defined the following roles and responsibilities:

Executive Leadership Team (ELT)

Senior leadership team; CEO final decision maker on corporate strategy

Corporate Responsibility Steering Committee (CR Committee)

Subject Matter Experts/Leadership advisory group to ELT on larger CR and ESG framework, decisions and reporting

DEI Advisory Council (DEIAC)

Volunteer employee representatives to advise senior leaders on employee perspectives of DEI

ERG Leadership Council (ERGLC)

Cross-functional ERG Leaders sharing knowledge and resources on ERG best practices and progress

Employee Resource Groups (ERGs)

Employee Leaders and Executive Sponsors organizing groups of employees as inclusion networks based on a dimension of diversity

Employee Resource Groups

We have nine employee-initiated and led inclusion networks that allow employees to create community around common bonds or similar backgrounds.

These ERGs foster a positive work environment and important social connections at work. Many of our ERGs are also active in our local communities, engaging with students and patients and collaborating with local non-profit organizations and other life science companies.



Black & LatinX Employee Networking & Development

IONIS Employee Resource Group



NEXT

IONIS Employee Resource Group



New Employee Opportunity Network

IONIS Employee Resource Group



DEI Advocates

IONIS Employee Resource Group



LGBTQIA+

IONIS Employee Resource Group



The Parent Network

IONIS Employee Resource Group



empowHER

IONIS Employee Resource Group



Mental Health & Wellness

IONIS Employee Resource Group



Veterans

IONIS Employee Resource Group

ERG Summit

In 2023, Ionis hosted its second annual ERG Summit, which included virtual office hours for remote employees, an all-employee lunch at our corporate headquarters and a special event featuring Dumebi Egbuna, Co-Founder and Chief Marketing Officer at Chezie, who shared ERG best practices and trends.



DEI Training

To support Ionis employees in growing their DEI competencies, we have a voluntary DEI training series, which includes four modules:

- Exploring Unconscious Bias
- Inclusion and Belonging
- Allyship and Advocacy
- Cultural Competence

We continue to expand our DEI training offerings, adding the fourth module, Cultural Competence, in 2023. Since 2020, more than 250 employees have been trained in one or more of our DEI modules, including our ELT.

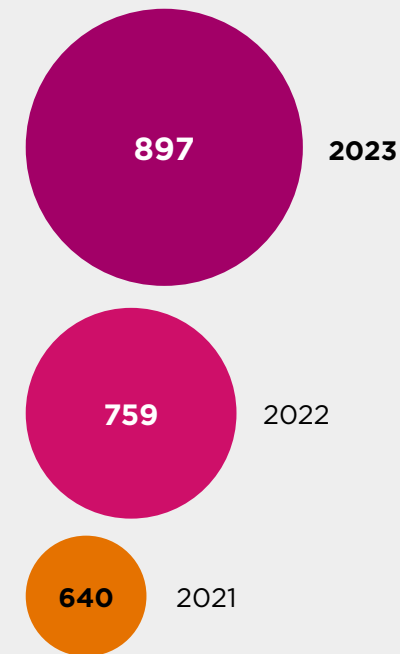
Ionis DEI Site and Dashboard



In 2023, we launched a new DEI site and dashboard on [Ionis' website](#) to continue to create transparency and drive accountability toward our DEI objectives. The site highlights our DEI purpose and strategy, and provides information about our demographics, structure, nine ERGs and more.

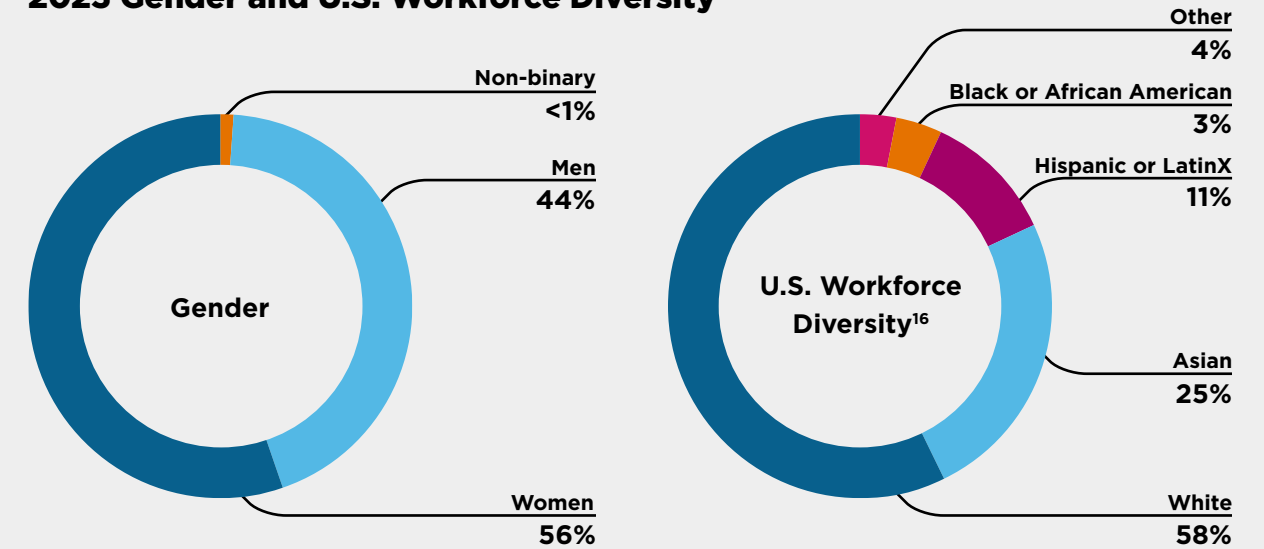
Our Workforce Demographics¹⁴

Total Employees¹⁵



For detailed multi-year workforce information, please view the [Appendix](#) section of this report.

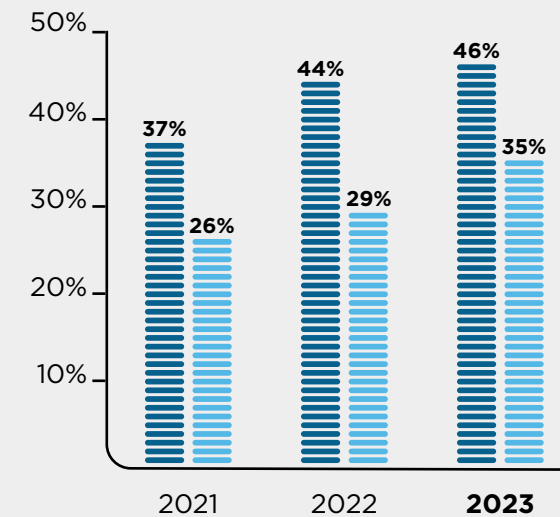
2023 Gender and U.S. Workforce Diversity



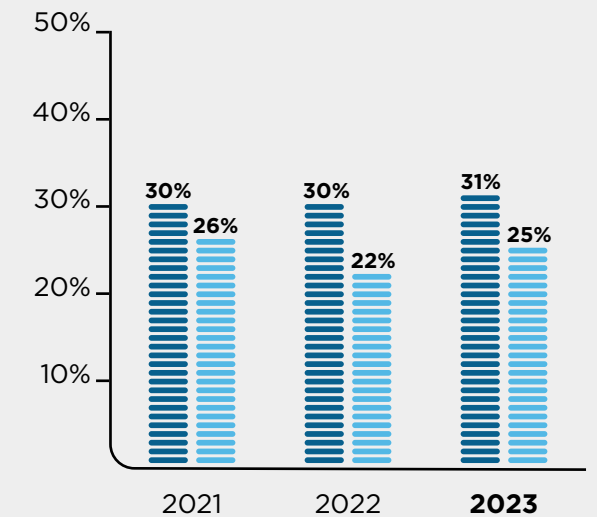
2021-2023 Leadership Diversity

● Director Level and Above ● Vice President Level and Above

Women



People of Color¹⁶ (U.S. Workforce)



¹⁴ All data as of December 31st of the applicable year. Due to rounding, some data may not add up to 100%.

¹⁵ Includes all employees globally.

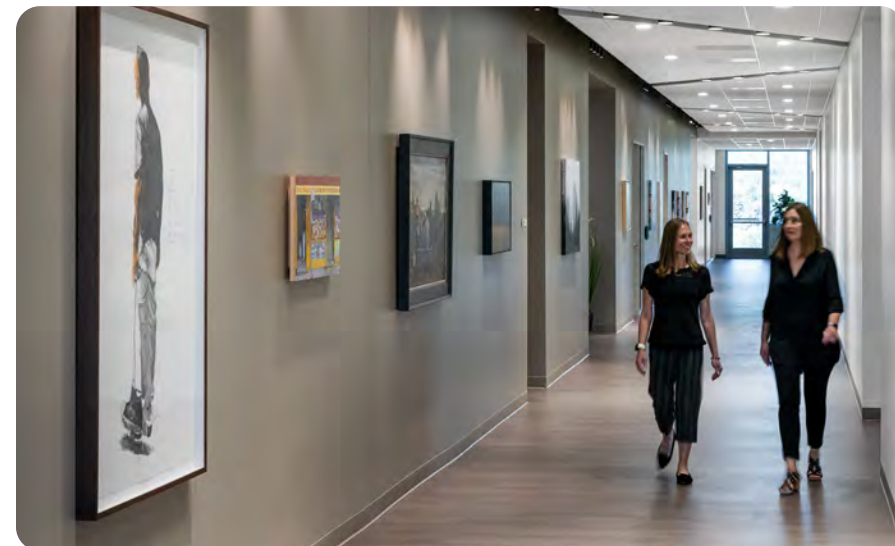
¹⁶ Based on self-identification. Other category includes Native Hawaiian, Pacific Islander, American Indian, Alaskan Native or two or more races.

Workplace Health and Safety

At Ionis, we strive to protect the health and safety of all employees, contractors and visitors. We are also committed to providing an injury-free workplace. Our **Health, Safety and Environment (HSE) Policy** reinforces this commitment and outlines our intention to:

- Maintain a safety management system employing risk metrics, monitoring, auditing and target setting to continuously improve occupational health and work safety performance
- Oversee process safety management of our pharmaceutical manufacturing operations to control safety risks and hazards
- Assess health-related risks to employees, contractors and visitors and proactively manage those risks
- Conduct regular training of all employees and routine auditing for health and safety compliance
- Promote a strong safety culture in line with our own corporate culture

We continue to focus on continuously improving our health and safety management system. Throughout the year, our HSE team provides safety reports to leaders and works with them to proactively address issues and reduce potential incidents.



Workplace Health and Safety Metrics¹⁷

N/R = Not reported

Category	2021	2022	2023
Recordable Injury Rate (RIR) (per 200,000 hours worked)	0.94	1.58	0.89
Lost Time Injury Rate (LTIR) (per 200,000 hours worked)	0.47	0.92	0.45
Days away, restricted or transferred (DART) (per 100 full-time employees)	N/R	1.19	0.56
Fatalities	N/R	0	0

¹⁷ Data as of December 31 of the applicable calendar year

Social Impact and Community Engagement

At Ionis, we are committed to having a positive influence on the communities in which we live and work. Every year we provide support to various organizations that are making a difference in their community. We seek sustainable partnerships and initiatives that encourage scientific innovation and help address unmet needs for people impacted by serious diseases and for local communities where we live and work. We do this through our core social impact activities:

- **Employee volunteering and community engagement:** Creating opportunities for employees to give back, make a positive impact in the community and feel connected to our purpose
- **Corporate giving:** Partnering with nonprofits to empower communities to thrive by investing in their well-being, education and access to opportunities

It has always been a priority for us to give back and provide support to communities in need through partnerships, financial assistance, employee volunteerism and other key initiatives. In 2023, we developed a formal social impact strategy to help amplify and focus our efforts. The strategy identified three main priority areas: adaptive experiences, STEM education and support for local communities. We are developing a multi-year plan to support these priorities, which will be rolled out in 2024.

2023 Social Impact

\$3.0M

total corporate contributions
(including grants, sponsorships and charitable donations)

15+

non-profit partners supported

1,400+

volunteer hours
(>30% employees participated)

6

Ionis-led community volunteer events



Surf Away SMA

In partnership with [Cure SMA](#), Ionis hosts this annual adaptive surfing event for community members and their families affected by Spinal Muscular Atrophy (SMA). Surf Away SMA has become a celebratory day at the beach in La Jolla Shores, California. In 2023, more than 80 volunteers from Ionis helped make surfing a reality for 20 people impacted by SMA, who would otherwise not be able to experience this type of activity. In addition to surfing, food, friends and fun, the 2023 event included a [special tribute to Ricochet "The Surf Dog"](#), the event's original mascot.



Jenny H. and her son, Ben, at 2023 Surf Away SMA event

“

The enduring commitment, professionalism and genuine empathy volunteers exhibit make each event increasingly meaningful. This gathering serves as an annual touchstone of positive energy for my son. Its transformative impact on his well-being is palpable, rendering him noticeably rejuvenated.”

Jenny H. // Parent, Caregiver and SMA Community Member





Hope Scholarship

In collaboration with [Adapt Functional Movement Center](#), the Ionis Hope Scholarship grant program provides fully sponsored care services, rehabilitation programs and education to individuals impacted by ALS. Hope Scholarship grants support ALS patients' participation in group classes, massage therapy, meditation and functional movement therapy. With Ionis' support, 43 grants were distributed to Hope Scholars in 2023. The program has awarded more than \$300,000 in grants to individuals impacted by ALS since 2020.



I want to travel and be active and this has allowed me to do that. For the first time since I was diagnosed, I feel like I have people to help me who understand the disease, and I feel very lucky to have them.”

Craig G. // Hope Scholar Recipient

Holiday HOPE

In its fourth year, Ionis' Holiday Hope initiative provides employees across the company with the opportunity to make a positive impact during the holiday season through both in-person and virtual volunteering and donations. Partners and activities included:

- **Life Science Cares:** Building warm winter kits for communities impacted by homelessness
- **ALS Association** and **Adapt:** Assembling gifts for more than 180 ALS Families and hosting two holiday open houses for community members
- **Monarch School:** Assembling hygiene kits for over 100 unhoused students (sponsored by Ionis' NEXT ERG)
- **Toys for Tots:** Participating in a toy donation drive (sponsored by Ionis' Veteran ERG)



Holiday Hope has allowed us to make a positive impact on families that are experiencing hardships due to neurological disease. It's incredibly special to have the opportunity to be a bright spot for them in what can otherwise be a very challenging time of year.”

John Monteith // Executive Director, Adapt Functional Movement Center





Operate Responsibly and Sustainably

We operate with integrity to help create a better, more sustainable future for all through environmental stewardship and responsible business practices and stakeholder interactions.

In This Section

Environmental Sustainability

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Governance and Integrity

30

Our Goals

Act with integrity and uphold our commitment to high ethical standards

Responsibly manage our environmental impact as we grow our operations



Our Approach to Environment and Governance

Ionis is committed to responsibly managing our environmental impact as we grow our operations, which includes ensuring our new facilities are designed with meaningful sustainability measures. We act with integrity and uphold high ethical standards, ensuring governance structures oversee every aspect of our operations while we pursue our business objectives.



Environmental Sustainability

Our Environmental Impact

We are committed to conducting our operations in an environmentally responsible manner to protect our employees, the environment and the communities in which we operate. It is important that we incorporate environmental considerations into all our business activities and continuously improve our performance.

Environmental Management System

Ionis has an environmental management system (EMS) that serves as a systematic approach to managing and continuously improving our environmental performance across company operations. The EMS is designed in accordance with the U.S. Environmental Protection Agency's guidance standard and based upon the ISO 14001:2015 standard.

Our EMS establishes policies and procedures, outlines processes for identifying risk and implementing preventative measures, and sets performance standards to improve our environmental performance. In 2023, we also made updates to our EMS to ensure we track and comply with local, state and federal mandates. Our **Health, Safety and Environment (HSE) Policy** is included in the EMS manual and provides the framework for setting and reviewing environmental objectives and targets. This policy is communicated to all relevant employees and our Executive Director of Health, Safety and Environment (HSE) serves as the EMS Officer, providing oversight of our EMS and reporting our annual HSE Scorecard to our head of manufacturing and other members of senior management.

GHG Emissions and Energy Use

Ionis recognizes the critical need for energy and materials used in our operations. We strive to improve the sustainability of our operations by using natural resources and energy more efficiently, reducing waste and conserving water to minimize our environmental impact. To achieve this, we are committed to do the following:

- Invest in technology and infrastructure to reduce our electricity use through implementation of solar energy systems and energy efficiency programs
- Incorporate energy-efficient design into the construction of our facilities, such as meeting LEED certification standards
- Assess environmental aspects and impacts associated with operations at each facility

We track both our Scope 1 and 2 greenhouse gas (GHG) emissions, and the energy efficiency performance of our buildings is monitored through a building management system. In addition, we have several solar photovoltaic panel systems in place to generate electricity onsite and we monitor and report their output annually. Our investment in technology and infrastructure, including the implementation of solar energy panels and energy efficiency plans, has helped us achieve 51% renewable energy use in 2023 with 17% of electricity from renewable sources generated onsite. We also offer 12 standard electric vehicle (EV) parking stations and two accessible EV parking stations at our Carlsbad headquarters, which are available to employees and visitors.

While our total Scope 1 and 2 GHG emissions increased by 18% since 2021, our emissions intensity per employee decreased by 15% and is nearly half of the biopharmaceutical industry average. During this same period, our workforce has expanded by more than 40% and we have continued to invest significantly in our commercial readiness activities. Looking ahead, we are committed to continuous improvement of our sustainability practices to ensure we are actively managing our emissions and environmental impact to support our growth.



Waste and Water Management

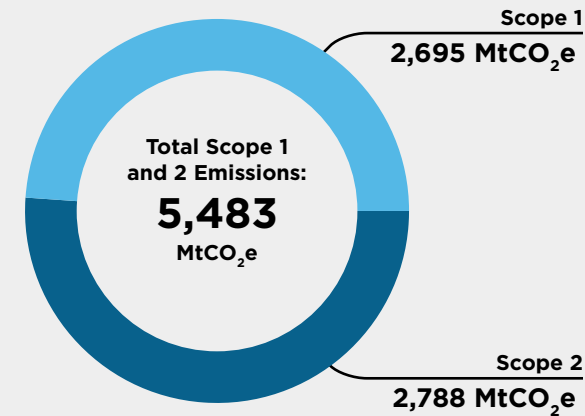
Ionis recognizes the need to effectively manage waste and minimize water use to protect human health and the environment. At our manufacturing and research facilities, we have controls and programs in place to evaluate our processes for resource reduction and waste minimization opportunities and use waste disposal alternatives such as beneficial use and recycling when available. To achieve this, we are committed to the following:

- Evaluate opportunities and establish goals to reduce, reuse and recycle materials including increasing our diversion rate of waste from landfills
- Implement initiatives, evaluate partnerships and provide internal education for hazardous waste management
- Monitor and evaluate water use routinely at each facility, identifying opportunities for reduction and reuse

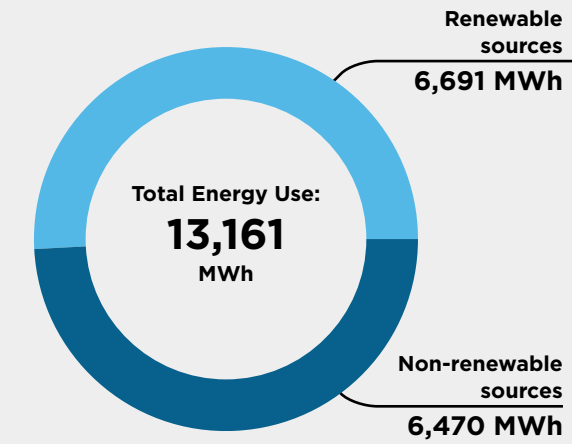
In 2023, we launched a new condensate water collection system for reuse in our cooling tower at our Carlsbad headquarters. In addition, Ionis participates in the Pharmaceutical Product Stewardship Work Group's MED-Project USA, which supports the collection and disposal of unwanted medicines and sharps through take-back programs.

2023 Environmental Data

Scope 1 and 2 GHG Emissions



Energy Use



51%
renewable energy use

17%
renewable energy generated onsite (1,129 MWh)

24% reduction
in water use since 2021
(12.85 million gallons in 2023)

For detailed multi-year environmental data, see the ESG Data Table in the [Appendix](#) section of this report.



Sustainable Building

Our main Carlsbad headquarters building was designed and built to meet energy-efficient Leadership in Energy and Environmental Design (LEED) Silver standards, a green building rating system. Our conference center was also built to the U.S. Green Building Council's Green Building Codes and Standards in alignment with LEED standards. In addition, a new state-of-the-art research and development facility is being constructed on our Carlsbad campus, for which the developer plans to pursue LEED Gold certification.



Governance and Integrity

At Ionis, we hold ourselves to the highest ethical standards and adhering to these standards is of the utmost importance to our employees and our business. A strong governance structure oversees every aspect of our operations and ensures we act with integrity while pursuing our objectives. As we grow and look toward commercializing our medicines independently, we seek to maintain robust structures and systems to effectively manage our risk and uphold our commitment to ethics and integrity.

Corporate Governance

Our Board of Directors is committed to effective corporate governance and represents the interests of Ionis' stockholders by providing guidance and strategic oversight to optimize long-term value. Of our ten directors, eight are independent, three are women, two are racially diverse and one identifies as LGBTQIA+. Our Board has an independent chair and an independent Lead Director and has established six committees: Audit; Compensation; Compliance; Finance; Nominating, Governance and Review; and Medical and Science.

For more information on Ionis' commitment to corporate governance, including Board duties and criteria, Board committee charters and committee composition, visit Investors and Media on our [website](#).

Ethics and Compliance

Ionis works to achieve and maintain a high level of integrity and ethics across all our business operations and in our interactions with stakeholders. As a company based in the U.S., Ionis is governed by and required to comply with U.S. federal law. In addition to complying with federal law, we conduct our activities in compliance with all applicable international, national, state, and local laws, regulations and judicial decrees wherever we conduct business.

Code of Ethics and Business Conduct

At Ionis, we are guided by our [Code of Ethics and Business Conduct \(Code\)](#), which applies to all employees, including executive officers and all members of our Board of Directors.

The Code also applies to all employees of our subsidiaries and affiliates worldwide. The Code sets expectations on ethical decision making, makes clear when and how individuals should raise concerns, and documents our non-retaliation policy. All employees receive training on the Code to reinforce compliance and must sign their acknowledgment of the Code on an annual basis. In 2023, we exceeded our goal of 95% of employees trained on the Code.

Anti-bribery and Anti-corruption

We are committed to upholding a comprehensive and rigorous ethics program, including anti-bribery and anti-corruption commitments, as detailed in the Code. Our Chief Compliance Officer and our Chief Legal Officer, General Counsel and Corporate Secretary provide oversight for all anti-bribery and anti-corruption matters. We use a risk-based approach to perform internal audits and conduct compliance risk assessments on an as-needed basis.

Ethics and Compliance Helpline

We strive to create an environment in which employees feel comfortable speaking up. The Code addresses processes for reporting potential ethics and legal violations confidentially at Ionis. Employees are encouraged to raise concerns to any manager or supervisor, Human Resources, Legal or Compliance, or make an anonymous report to the [Ionis Helpline](#).

Available to employees, vendors, customers and other stakeholders, the Ionis Helpline is a confidential 24/7 service, which is hosted through a third-party provider and accessed via phone or online with multiple language options. The Helpline allows employees or anyone else to report any potential or actual violations of Ionis' Code of Ethics and Business Conduct, company policies and procedures, or applicable laws and regulations.

We have a structure in place to ensure reports of any issues are logged, reviewed, assigned for investigation (as appropriate) and tracked until resolved. The Code also makes clear we do not tolerate retaliation against anyone who, in good faith, reports an ethical or legal concern.

Ionis Policies and Disclosures



- [Code of Ethics and Business Conduct](#)
- [Privacy Policy](#)
- [Equal Opportunity Employer](#)
- [Clinical Trial Transparency Statement](#)
- [Expanded Access Policy](#)
- [Corporate Governance](#)
- [Health, Safety and Environment Policy](#)
- [Financials](#)

>95%

of Ionis employees completed Code of Ethics and Business Conduct training in 2023



Cybersecurity and Data Privacy

At Ionis, cybersecurity and data privacy are important priorities, as we know personal information is highly sensitive. We have a responsibility to appropriately protect patient and personal data and we have a deep sense of commitment to patients, employees, customers and any individuals we work with who entrust us with their private information. We handle this information with the appropriate safeguards in place and will not collect, store, transfer or share any personal information unless we have the express authorization or right to do so. In 2023, we hired a Data Privacy Officer and appointed a Chief Information Security and Compliance Officer to manage our privacy and cybersecurity programs, with oversight of each area by the Compliance Committee and the Audit Committee of the Board, respectively.

We are committed to compliance with all applicable privacy laws, such as the E.U.'s General Data Protection Regulation (GDPR). Our privacy program includes privacy-related policies and system operating procedures and controls that guide our practices. In 2023, we initiated "Privacy 101" in-person training with teams and departments across the company. And in early 2024, we released an updated privacy training module, which is mandatory for all current and new employees.

Ionis' cybersecurity program has policies and procedures in place to guide our information security, including a virtual security operations center, email monitoring, threat detection, endpoint monitoring and an audit program to assess vendor security profiles. We have implemented and maintain various information security processes designed to detect, respond to, recover and protect our technology ecosystem from cybersecurity threats. To help all Ionis employees build their knowledge and understanding of the importance of cybersecurity and data privacy, we have ongoing awareness campaigns, monthly training and incident-based training.

Supplier Responsibility

At Ionis, developing strategic, long-lasting and mutually beneficial relationships with suppliers is critical to our long-term success. Our teams across the business engage with a diverse mix of suppliers to drive innovation, leverage capabilities, mitigate risk and ensure we remain agile as we navigate the complexities of scaling our growing organization. In addition, we seek to partner with suppliers who share our values and our commitment to ethics, compliance and sustainable business practices.

To gain deeper insights into our supply chain, we plan to conduct an assessment of our current supplier base in 2024. This initiative will serve as a foundation for optimizing our future sourcing strategies and refining our supplier practices, ensuring alignment with our organizational goals and corporate responsibility objectives.

Engagement with Patients, Caregivers and Healthcare Professionals

At Ionis, our efforts begin and end with the patient in mind. We strive to interact with patients, caregivers, healthcare professionals and healthcare organizations in an appropriate manner and in compliance with applicable laws, regulations, relevant industry codes and Company policies, including our Code of Ethics and Business Conduct.

We are committed to developing ethical and responsible marketing strategies with our patients in mind. Our Promotional Review and Medical Review Committees have oversight of drug promotion and applicable medical education standards at Ionis to ensure materials about products or conditions meet regulatory and medical guidelines. We require promotional activities and materials to comply with all applicable laws, regulations, codes and our own applicable policies. Visit our [Code of Ethics and Business Conduct](#) for more information.

Public Policy and Political Contributions

We established a formal government affairs and public policy function in 2024. As our approach evolves, we are committed to transparency and we plan to make required lobbying disclosures, trade association memberships and contributions publicly available.

Ionis does not use corporate resources, either directly or indirectly, to contribute to or support any election-related activity, including contributions to candidates, political parties or committees, ballot initiatives or measures or other political entities.

Animal Testing

Ionis is committed to avoiding animal testing whenever possible and only doing so when absolutely required. As an accredited organization with the Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC), we strive to avoid using animals where possible or replace the number of animals used in drug discovery and strictly follow the principles of Reduce, Refine and Replace (the 3 R's).

Our Institutional Official and Vice President, Drug Discovery and our Institutional Animal Care and Use (IACUC) Committee provide oversight of our animal care and use program. The IACUC Committee is also responsible for assessing the ethics of proposed animal research projects. All animal use protocols address the 3 R's and have a mandatory annual review and a three-year expiration. Our IACUC Committee includes a licensed veterinarian who reviews all protocols to ensure the most ethical use of research animals. Our facility and program are inspected semi-annually by our IACUC committee. As an AAALAC-accredited organization, we submit an annual report and hold a site visit with the AAALAC every three years. In the event that an animal testing-related issue arises, Ionis follows our adverse events reporting policy and promptly reports the issue to the AAALAC.



Appendix

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Environmental, Social and Governance (ESG) Data Table

Data as of December 31 of applicable year

	2021	2022	2023
Business Overview			
Total Revenue (USD, millions)¹⁸	810	587	788
Total Number of FDA-Approved Medicines	3	3	5
Research and Development Expense (USD, millions)¹⁸	644	833	900
Social			
Workforce			
Total Employees (global)	640	759	897
U.S. Workforce by Gender (%)			
Women	52%	53.5%	54.5%
Men	48%	46.5%	43.5%
Non-binary	<1%	<1%	<1%
Global Workforce by Age (%)			
Under 30 years old	N/R	N/R	10%
30-50 years old	N/R	N/R	55%
Over 50 years old	N/R	N/R	35%

¹⁸ Per annual Form 10-K.

N/R = Not reported

	2021	2022	2023
Diversity of U.S. workforce (%)			
Asian	25%	25%	24.5%
Black or African American	3%	3%	3%
Hispanic or LatinX	10%	10%	11%
Other ¹⁹	4%	4%	3.5%
White	58%	58%	58%
Women or People of Color in Leadership Positions (U.S. workforce) (%)			
Director Level or Above			
Women	37%	44%	46%
People of Color (POC)	30%	30%	31%
Vice President Level or Above			
Women	26%	29%	35%
People of Color (POC)	26%	22%	25%
Retention Rate (%)			
Turnover Rate	16%	13%	7%
Voluntary Turnover Rate	13.3%	11.8%	5.2%

¹⁹ Includes Native Hawaiian or Pacific Islander, American Indian or Alaskan Native, Two or more races



	2021	2022	2023
Social: Workforce (cont)			
Employee Engagement Rate (%)	49%	N/A	73%
Workplace Health and Safety			
Recordable Injury Rate (RIR) (per 200,000 hours worked)	0.94	1.58	0.89
Lost Time Injury Rate (LTIR) (per 200,000 hours worked)	0.47	0.92	0.45
Days away, restricted or transferred (DART) (per 100 full-time employees)	N/R	1.19	0.56
Fatalities	N/R	0	0
Social Impact			
Corporate Contributions²⁰ (USD, millions)	2.0	2.7	3.0
Employee Volunteer Hours (estimate)	N/A	1,300	1,400+
Governance <i>As of February cutoff date of applicable year (per proxy filing)</i>			
Board Composition²¹			
Board Size	10	9	10
Number of Independent Directors	8	7	8
Independent Directors on the Board (%)	80%	78%	80%
Number of Women on the Board	3	3	3
Women on Board (%)	30%	33%	30%
Number of Diverse Board Members	1	1	2
Diverse Board Members (%)	10%	11%	20%
LGBTQIA+	1	1	1

	2021	2022	2023
Environment			
Greenhouse Gas (GHG) Emissions (metric tons CO₂e)			
Scope 1 (fuels, natural gas, refrigerants)	2,566	2,456	2,695
Scope 2 (electricity use) (market-based)	2,052	1,841	2,788
Total Scope 1 and 2 (market-based)	4,618	4,297	5,483
Emissions Intensity (Scope 1 and 2) (tCO ₂ e/employee)	7.22	5.66	6.11
Energy Use (MWh) (by source)			
Total electricity use from non-renewable sources	6,466	6,760	6,470
Total electricity use from renewable sources	6,017	6,387	6,691
Energy generation onsite	1,535	1,211	1,129
Total Energy Use (MWh)	12,483	13,147	13,161
Total Water Consumption (million gallons)	16.84	17.61	12.85
Total Waste Generated (tons)²²	679	635	634
Non-hazardous Waste Disposal (tons)			
Landfilled	254	216	223
Recycled	148	154	164
Hazardous Waste Disposal (tons)	277	265	247

²⁰ Includes grants, sponsorships, and philanthropic donations

²¹ Based on self-identification. For board diversity, includes Asian, Black or African American, Hispanic or LatinX, Native Hawaiian or Pacific Islander, American Indian or Alaskan Native, Two or more races.

²² Waste figures exclude construction and demolition waste



Sustainability Accounting Standards Board (SASB) Index

The following table provides data and information for Ionis utilizing the Sustainable Accounting Standards Board's (SASB) Health Care Sector – Biotechnology and Pharmaceuticals industry standard. The data represents full-year 2023 performance.

Category	Code	Accounting Metric	Information
Safety of Clinical Trial Participants	HC-BP-210a.1	Discussion, by world region of management process for ensuring quality and patient safety during clinical trials	For details, see Safe and Ethical Clinical Trials section of this report.
	HC-BP-210a.2	Number of FDA sponsor inspections related to clinical trial management and pharmacovigilance that resulted in 1) Voluntary Action Indicated (VAI) and 2) Official Action Indicated (OAI)	All data reported to relevant national regulators.
	HC-BP-210a.3	Total amount of monetary losses as a result of legal proceedings associated with clinical trials in developing countries	Not applicable.
Access to Medicines	HC-BP-240a.1	Description of action and initiatives to promote access to health care products for priority diseases and in priority countries as defined by the Access to Medicine Index	For details, see Access and Affordability section of this report. Note that Ionis does not have responsibility for commercialization or access of any medicine outside the U.S.
	HC-BP-240a.2	List of products on the WHO List of Prequalified Medicinal Products as part of its Prequalification of Medicines Programme (PQP)	No Ionis products are on the WHO List at the time of reporting.



Category	Code	Accounting Metric	Information
Affordability and Pricing	HC-BP-240b.1	Number of settlements of Abbreviated New Drug Application (ANDA) litigation that involved payments and/or provisions to delay bringing an authorized generic product to market for a defined time period	Not applicable.
	HC-BP-240b.2	Percentage change in 1) average list price and 2) average net price across U.S. product portfolio from previous year	Not applicable.
	HC-BP-240b.3	Percentage change in 1) list price and 2) net price of product with largest increase compared to previous year	Not applicable.
Drug Safety	HC-BP-250a.1	List of products listed in the FDA MedWatch Safety Alerts for Human Medical Products database	No products listed. Please visit the U.S. FDA FAERS MedWatch website for more information.
	HC-BP-250a.2	Number of fatalities associated with products as reported in the FDA AERS	None. Please visit the U.S. FDA FAERS MedWatch website for more information.
	HC-BP-250a.3	Number of recalls issued, total units recalled	Ionis did not issue any recalls in 2023. Akcea Therapeutics issued one voluntary recall for 450 cartons of Tegsedi in 2022. Akcea is a wholly owned subsidiary of Ionis.
	HC-BP-250a.4	Total amount of product accepted for takeback, reuse, or disposal	Not reported.
	HC-BP-250a.5	Number of FDA enforcement actions taken in response to violations of current Good Manufacturing Practices (cGMP), by type	No FDA enforcement actions taken in 2022 or 2023 in response to violations of current Good Manufacturing Practices (cGMP).



Category	Code	Accounting Metric	Information																			
Counterfeit Drugs	HC-BP-260a.1	Description of methods and technologies used to maintain traceability of products throughout the supply chain and prevent counterfeiting	For details, see Product Quality and Patient Safety section of this report.																			
	HC-BP-260a.2	Discussion of process for alerting customers and business partners of potential or known risks associated with counterfeit products	For details, see Product Quality and Patient Safety section of this report.																			
	HC-BP-260a.3	Number of actions that led to raids, seizure, arrests, and/or filing of criminal charges related to counterfeit products	None.																			
Ethical Marketing	HC-BP-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	No losses related to false marketing claims.																			
	HC-BP-270a.2	Description of code of ethics governing promotion of off-label use of products	For details, see Governance and Integrity section of this report and our Code of Ethics and Business Conduct .																			
Employee Recruitment, Development and Retention	HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and research and development personnel	For details, see Talent Attraction, Development and Retention section of this report.																			
	HC-BP-330a.2	1) Voluntary and 2) Involuntary turnover rate for (a) executive/senior managers, (b) midlevel managers, (c) professionals, and (d) all others	<table border="1"> <thead> <tr> <th colspan="2">(1) Voluntary turnover rate for 2023:</th> </tr> </thead> <tbody> <tr> <td>(a) executives/senior managers</td> <td>3.2%</td> </tr> <tr> <td>(b) midlevel managers</td> <td>2.8%</td> </tr> <tr> <td>(c) professionals</td> <td>6.3%</td> </tr> <tr> <td>(d) all others</td> <td>7.1%</td> </tr> <tr> <th colspan="2">(2) Involuntary turnover rate for 2023:</th> </tr> <tr> <td>(a) executives/senior managers</td> <td>1.6%</td> </tr> <tr> <td>(b) midlevel managers</td> <td>1.6%</td> </tr> <tr> <td>(c) professionals</td> <td>2.1%</td> </tr> <tr> <td>(d) all others</td> <td>1.4%</td> </tr> </tbody> </table> <p>Average employee turnover rate in 2023 was 7% and the voluntary turnover rate was 5.2%.</p>	(1) Voluntary turnover rate for 2023:		(a) executives/senior managers	3.2%	(b) midlevel managers	2.8%	(c) professionals	6.3%	(d) all others	7.1%	(2) Involuntary turnover rate for 2023:		(a) executives/senior managers	1.6%	(b) midlevel managers	1.6%	(c) professionals	2.1%	(d) all others
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(b) midlevel managers	1.6%																					
(c) professionals	2.1%																					
(d) all others	1.4%																					



Category	Code	Accounting Metric	Information
Supply Chain Management	HC-BP-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in the Rx-360 International Pharmaceutical Supply Chain Consortium audit program or equivalent third-party audit program for integrity of supply chain and ingredients	Not reported.
Business Ethics	HC-BP-510a.1	Total amount of monetary losses as a result of legal proceedings associated with corruption and bribery	To date, Ionis has incurred no monetary losses as a result of legal proceedings associated with corruption and bribery.
	HC-BP-510a.2	Description of code of ethics governing interactions with health care professionals	For details, see Governance and Integrity section of this report and our Code of Ethics and Business Conduct .
Activity Metrics	HC-BP-000.A	Number of patients treated	To date, more than 14,000 patients have been treated with SPINRAZA® (nusinersen) for spinal muscular atrophy (SMA) globally. Our partner, Biogen, is responsible for commercializing SPINRAZA worldwide.
	HC-BP-000.B	Number of drugs in portfolio and research and development (Phase 1-3)	For details, see Innovation and Drug Discovery section of this report or visit the Ionis Pipeline at www.ionispharma.com .



Task Force on Climate-related Financial Disclosures (TCFD) Index

We recognize the importance of ESG and climate-related initiatives as they relate to our business strategy and risk assessment. We are committed to providing transparency on our climate-change risk management, governance and performance. The Task Force on Climate-related Financial Disclosures (TCFD) has developed voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to stakeholders. A summary of our response to the TCFD-recommended disclosures is below.

Metrics	Response
Governance	
Describe the board's oversight of climate-related risks and opportunities.	Our Board of Directors, specifically the Nominating, Governance and Review Committee as reflected in the Committee's charter, has oversight of our overall corporate responsibility strategy and material ESG risks and opportunities, including environmental and climate-related issues. They receive updates at least once annually and are engaged on specific topics as needed.
Describe management's role in assessing and managing climate-related risks and opportunities.	Our corporate responsibility initiatives, including climate-related initiatives, are driven by our Chief Executive Officer and executive-level Corporate Responsibility Steering Committee (CR Committee). The CR Committee, which includes the Senior Vice President (SVP) of Manufacturing and the SVP who oversees Facilities, regularly discusses risks and opportunities, including those related to environmental issues, as well as how to apply policies and strategies to address these issues in each area of our business.



Metrics	Response
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Strategy	
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<p>Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</p>	<p>While we do not believe climate change poses a material business risk, we have identified potential climate change-related risks that may impact our business over the short-, medium- and long-term, which include the following:</p> <p>Physical Risks — As a biopharmaceutical company, our products face few climate-related risks, with little potential for such risks to have a significant financial impact on our business. However, extreme weather events and changing weather patterns have become more common in recent years. As a result, we are potentially exposed to varying natural disaster or extreme weather risks such as hurricanes, tornadoes, earthquakes, fires, droughts, floods or other events that may result from the impact of climate change on the environment. The potential impacts of climate change might also include increased operating costs associated with additional regulatory requirements and investments in reducing energy, water use and greenhouse gas emissions. In addition, we manufacture most of our research and clinical supplies in a manufacturing facility located in Carlsbad, California. Currently, we manufacture drug substances and finished drug product for marketed products at third-party contract manufacturers. The facilities and the equipment we and our contract manufacturers use to research, develop and manufacture our medicines would be costly to replace and could require substantial lead time to repair or replace. Our facilities or those of our contract manufacturers might be harmed by natural disasters or other events outside our control and our development and commercialization efforts may be impacted.</p> <p>Regulatory Risks — We do not currently view climate change as a significant business risk. However, climate change could pose regulatory risks due to potential future carbon disclosure and compliance requirements or reputational risks due to not proactively addressing climate change issues. Possible carbon tax or regulatory incentives to encourage the use of renewables could affect energy costs. We do not expect this would have a significant impact on our business and financial performance.</p>
<p>Describe the impact of climate-related risks and opportunities on the organization’s business, strategy, and financial planning.</p>	<p>We plan to conduct our first scenario analysis in 2025 to evaluate how each identified material risk and opportunity might impact our business, strategy and financial planning and share the results of this process in a future report.</p>
<p>Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</p>	<p>We plan to conduct our first scenario analysis in 2025 to evaluate the resilience of our strategy to different climate-related scenarios. We plan to share the results of this process in a future report.</p>



Metrics	Response
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Risk Management

<p>Describe the organization’s processes for identifying and assessing climate-related risks.</p>	<p>In 2023, Ionis undertook our first CR materiality assessment that used a combination of internal and external insights to identify and prioritize material topics, including climate-related risks and opportunities. We leveraged the process explained in the Materiality Assessment section of this report.</p>
<p>Describe the organization’s processes for managing climate-related risks.</p>	<p>This report discloses the methodology and outcomes of Ionis’ first CR materiality assessment. Ionis is reviewing the identified material risks and opportunities and working on developing action plans to effectively manage these risks, include climate-related risks. In addition, climate-related risks are assessed as a component of the Ionis’ enterprise risk management program. For more information, see the Our Approach to Corporate Responsibility and Environmental Sustainability sections of this report.</p>
<p>Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.</p>	<p>Our process for integrating risk management throughout the business includes identifying, evaluating and addressing ESG risks and opportunities on a regular basis. The risks and impacts associated with our business require effective collaboration among departments, business units and external stakeholders. Our senior management and Board are focused on ensuring business continuity and managing and mitigating various risks to our business and financial performance, including climate change-related risks.</p>

Metrics and Targets

<p>Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</p>	<p>Ionis provides annual updates to metrics on climate-related risks associated with GHG emissions, energy, water and waste in our Corporate Responsibility Report (available on our website). These metrics include Scope 1 and 2 emissions (MTCO₂e), total energy use (MWh), renewable energy use (MWh) and electricity generated onsite (MWh). For more information, see the Environmental Sustainability section of this report.</p>
<p>Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</p>	<p>Ionis provides annual updates on our Scope 1 and 2 GHG emissions in our Corporate Responsibility Report (available on our website). For more information, see the Environmental Sustainability section of this report.</p>
<p>Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</p>	<p>In 2023, Ionis established three corporate responsibility pillars and actionable goals, including managing environmental impact and climate-related risks and opportunities. These pillars guide our approach and provide a framework for reporting on our performance. For more information, see the Our Approach to Corporate Responsibility section of this report.</p>



FORWARD-LOOKING STATEMENTS

This report and the information incorporated herein by reference includes forward-looking statements regarding Ionis' business, and the therapeutic and commercial potential of Ionis' commercial medicines, additional medicines in development and technologies. Any statement describing Ionis' goals, expectations, financial or other projections, intentions, or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, including but not limited to those related to our commercial products and the medicines in our pipeline, and particularly those inherent in the process of discovering, developing and commercializing medicines that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such medicines. Ionis' forward-looking statements also involve assumptions that, if they never materialize or prove correct, could cause its results to differ materially from those expressed or implied by such forward-looking statements. Although Ionis' forward-looking statements reflect the good faith judgment of its management, these statements are based only on facts and factors currently known by Ionis. Except as required by law, we undertake no obligation to update any forward-looking statements for any reason. As a result, you are cautioned not to rely on these forward-looking statements. These and other risks concerning Ionis' programs are described in additional detail in Ionis' annual report on Form 10-K for the year ended Dec. 31, 2023, which is on file with the SEC. Copies of this and other documents are available at www.ionispharma.com.

DEFINITION OF MATERIALITY IN THIS REPORT

The discussion of topics included in this report and our other corporate responsibility and sustainability disclosures should not be read as implying that such topics are "material" in the context of the U.S. federal securities laws, Delaware General Corporation Law or any other regulatory framework, even where we use words such as "material" or "materiality." Our approach to sustainability and other corporate responsibility disclosures is informed by sustainability reporting frameworks, that involve broader definitions of materiality than used for purposes of our compliance with SEC disclosure obligations. As a result, "materiality" for purposes of our corporate responsibility reporting includes impacts on communities, the environment and stakeholders such as employees, patients and suppliers, and the inclusion of topics in such reporting, even when described as "material," does not indicate that such topics are material to the Company's business, operations or financial condition.

Ionis Pharmaceuticals, Inc.

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