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ESG Update Q4 2022

for investors and analysts



Dear investors and analysts

We hope you and your families have had a restful winter break. In our Q4 ESG update, we share highlights from the recently published Novartis in Society Report, a brief recap from Q4 events - including our ESG Event on November 30, ratings changes, and topics related to the upcoming Annual General Meeting on March 7, 2023.

As with each newsletter, the feedback and questions we have received during this quarter are reflected in the Q&A on pages 9 – 11.

We appreciate your engagement on all ESG-related topics.

Thank you.

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Key takeaways from Novartis in Society Integrated Report

We published our second Novartis in Society Integrated Report on February 1, which provides an overview of our business, strategy and performance during 2022. It also describes how we create value for stakeholders and society. [The report can be found here.](#) We share our top 10 takeaways from the Report.

01 A transformative year for Novartis

Novartis is evolving from a diversified healthcare conglomerate into a focused, innovative medicines company. 2022 was a pivotal year in this journey. In 2022, we initiated a structural transformation to align our operating model with our focused strategy. We also announced our intention to spin off our Sandoz Division into a standalone company.

2022 by numbers

5 core Therapeutic Areas with high unmet patient needs

5 technology platforms: Chemistry, Biotherapeutics, RNA Therapy, Radioligand Therapy and Gene and Cell Therapy

4 priority geographies (US, Germany, China, Japan) which account for the majority of expected growth

USD 1.5 billion estimated cost savings by 2024 from the major organizational changes initiated in 2022

02 Our core remains the same

While Novartis pursued bold portfolio change in 2022, core elements of our company remain the same. Our vision is to become the most trusted and valued medicines company in the world, valued not only for our business performance, but for the difference our innovation makes for patients and society.

2022 by numbers

USD 10 billion invested in R&D

USD 7.5 billion dividends paid to shareholders

49% reduction in greenhouse gas emissions in our own operations (vs. 2016 baseline)

03 Our strategy meets the challenges and opportunities we see in our business environment

Medical technology continues to accelerate, as advanced new treatments emerge to meet the growing demand for high-quality healthcare.

2 billion people in the world still lack access to essential medicines¹

Spending on medicines globally is forecast to **rise by 3 - 6%**, over the next 5 years²

250,000 deaths expected to be caused by climate change between 2030 - 2050³

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04 New launches and growth products

Delivering new medicines is at the core of our purpose and value creation as a company. In 2022, we continued to deliver high-value medicines for patients that address leading causes of death and disability around the world.

Highlights

10 million patients worldwide are estimated to be treated for heart failure and hypertension with Entresto®

Our cholesterol-lowering treatment Leqvio® is approved for use in **70 countries** worldwide

We secured approval for Pluvicto®, our radioligand therapy that treats an **advanced form** of prostate cancer

05 Innovating with patients

We made substantial investments in R&D to advance our pipeline of investigational medicines and bring the next generation of medicines for patients.

Highlights

USD 10 billion invested in R&D, compared with USD 9.5 billion in the prior year

44 ongoing Phase III programs in our development pipeline

24 submissions for regulatory approval in the US, EU, Japan and China

06 Solid financial performance

Despite challenging macroeconomic conditions and an unstable geopolitical environment, we delivered a solid financial performance in 2022, that underscores the progress we are making in executing on our strategy.

Highlights

USD 50.5 billion in group net sales, up 4% (cc) from the prior year

8% (cc) core operating income increase driven by sales growth and productivity¹

USD 41.3 billion Innovative Medicines Division net sales, up 4% (cc) from the prior year

07 Leading the way on access to medicines

Access to medicines represents one of the world's biggest healthcare challenges. Many of the most acute issues are in LMICs, but the COVID-19 pandemic also exposed deep structural inequities in higher-income countries.

Highlights

54.6 million patients reached through our access programs and initiatives in 2022

26% increase in patients reached with our strategic innovative therapies compared with the previous year, representing an increase of 119% since 2019

USD 250 million pledged in 2022 over five years (2021 – 2025) to advance new treatments for NTDs and malaria

1. Operating income declined (-13% cc) mainly due to restructuring changes

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08 Investing in our culture

We're on a journey to transform our corporate culture to drive innovation and long-term performance.

Highlights

47% of management are women (compared with 42% five years ago)

80+ dedicated **employee resource groups**

More than **11,000 managers** have taken part in our Unbossed Leadership Experience program since 2020

09 Reducing our environmental footprint

We continue to reduce emissions, waste and water consumption sent for disposal in our own operations, in line with our 2025 targets. In 2022, we introduced environmental sustainability criteria into suppliers' contracts.

Highlights

49% - reduction in greenhouse gas emissions in our own operations vs. 2016 baseline

59% - reduction in waste sent for disposal vs. 2016 baseline

42% - reduction in our water consumption vs. 2016 baseline

10 Ethical behavior underpins our business

Our industry faces ethical questions and decisions every day on issues such as patient care, data use and access to medicines.

Highlights

We have a comprehensive Code of Ethics, which we developed together with our employees. In 2022, **98% of employees** completed training on our Code of Ethics and more than 33,000 people responded to our global ethics survey

In 2022, we updated and streamlined our **Human Rights Commitment Statement** to focus on four priority areas, and updated our Third Party Code, both aligned with the Novartis Code of Ethics



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Events in Q4

ESG Event: Investor Update on Access & Sustainability

We continue to evolve our strategy, strengthen our governance, and deliver real and meaningful progress on ESG topics. In 2022, we chose to focus our event on sustainability and impact, given the high interest from our investors.

Our ESG Event, held on November 30, included senior speakers from Novartis and Sir Ronald Cohen, Chair of the Global Steering group for Impact Investment, who discussed impact at Novartis and within the pharmaceuticals sector. [Our presentation can be viewed here.](#)

Our Novartis ESG priorities are:

Access to medicines and innovation

Human capital

Environmental sustainability

Ethical standards





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Update on Q4 ratings

We summarize the **latest recognitions** of our ESG progress below:

ATMI 2022

In the latest Access to Medicine Index (ATMI) 2022, Novartis has been ranked 4th (vs. 2nd in 2021) and recognized for its efforts in product delivery and R&D.

ATMI noted that Novartis has scaled up and piloted the highest number of inclusive business models of all companies and has performed strongly in high-quality capacity-building initiatives across all fields.

Novartis has been consistently ranked as an index leader since 2014:

2014	#4
2016	#3
2018	#2
2021	#2
2022	#4

CDP Upgrade

In December, CDP recognized Novartis as a leader in corporate transparency and action on climate change and water security, having upgraded Novartis to 'A' (Leadership) in both CDP Climate Change and CDP Water Security, in its annual 'A List'.

We have improved our CDP Climate Change score by two levels and our Water Security score by one level year-on-year. This upgrade represents the first time Novartis has achieved double A-list status, and the first time since 2011 that we gained an 'A' score in CDP Climate.

Of nearly 15,000 companies scored, Novartis is one of a small group that achieved a double 'A' score.

S&P Global and Dow Jones

Novartis has again been included in the DJSI World and DJSI Europe indices, maintaining its previously achieved high ESG score of 84%.

As of November 2022, Novartis ranks 4th (vs. 5th in 2021) in the pharmaceuticals sector and our overall percentile rank is 98 (vs. 97 in 2021).

We are proud of our industry-leading performance in the areas of Policy Influence, Risk & Crisis Management, Social Reporting, Environmental Reporting, Materiality, and Access to Healthcare, among others.





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Medicines for Malaria Venture

On November 23 2022, Novartis and Medicines for Malaria Venture (MMV) announced the move to Phase 3 study in 2023 for novel non-artemisinin combination to treat uncomplicated malaria.

Ganaplacide is a novel agent with a new mechanism of action, which is combined with a new formulation of lumefantrine optimized for once-daily dosing. This combination has the potential not only to clear malaria infection, including artemisinin-resistant strains, but also to block the transmission of the malaria parasite. This medicine is being developed with scientific and financial support from MMV and their partners.

“We are increasingly seeing parasites with decreased sensitivity to artemisinin, even in Africa. If the Phase 3 trial is successful, this new combination will increase the number of options available to countries and help save the lives of children at risk of this devastating disease.”

Dr Timothy Wells,
Chief Scientific Officer, MMV



According to the latest World Malaria Report, there were an estimated **241 million cases** of malaria and **627,000 resulting deaths** worldwide in 2020. This represents about 14 million more cases in 2020 compared to 2019, and 69,000 more deaths.

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March 7, 2023

Nominations for election

The Novartis Board of Directors announced that it is nominating John D. Young for election to the Board. He retired from Pfizer in June 2022 where he held several senior positions over more than 30 years and served as a member of Pfizer's Executive Leadership Team since 2012. John successfully led and developed USD multi-ten-billion global businesses and brings a wealth of industry experience in leadership, strategy, business development and commercialization of innovative medicines to the Board of Directors. John D. Young currently serves on the Boards of Johnson Controls International, Arvinas Inc, and privately held biotech, Imbria Pharmaceuticals.

Re-election of the Chairman and board members

The Novartis Board of Directors proposes the re-election of Joerg Reinhardt (also as Board Chair), Nancy C. Andrews, Ton Buechner, Patrice Bula, Elizabeth Doherty, Bridgette Heller, Frans van Houten, Daniel Hochstrasser, Simon Moroney, Ana de Pro Gonzalo, Charles L. Sawyers, and William T. Winters as members of the Board of Directors.

Andreas von Planta has already announced that he will not stand for re-election. The Board of Directors and the Executive Committee of Novartis thank him for many years of distinguished services on the Board and his outstanding contributions to the company.

Re-elections and elections to the Compensation Committee

The Novartis Board of Directors proposes the re-election of Patrice Bula, Bridgette Heller, Simon Moroney, and William T. Winters as members of the Compensation Committee. The Board of Directors intends to designate Simon Moroney again as Chairman of the Compensation Committee.

Dividend proposal

The Novartis Board of Directors proposes a dividend payment of CHF 3.20 per share for 2022, up 3.2% from CHF 3.10 per share in the prior year, representing the 26th consecutive dividend increase since the creation of Novartis in December 1996. Shareholders will vote on this proposal at the Annual General Meeting on March 7, 2023.

Potential further Share Repurchases

As of December 31, 2022, the remaining available amount under the existing shareholder authorities granted at the 2021 and 2022 annual general meetings is CHF 8.3 billion. To allow for the full execution of the already announced share buyback of up to USD 15 billion and potential additional share buybacks, the Board of Directors proposes that shareholders, in addition to the remaining authorization of CHF 8.3 billion, authorize the Board of Directors to repurchase shares as deemed appropriate from time to time up to a maximum of CHF 10 billion between the Annual General Meeting 2023 and the Annual General Meeting 2026.

Reduction of Share Capital

The Novartis Board of Directors proposes to cancel 126,243,500 shares (repurchased under the authorizations of March 2, 2021, and March 4, 2022) and to reduce the share capital accordingly by CHF 63.1 million, from CHF 1,201,860,626 to CHF 1,138,738,876.

Swiss Corporate Law Reform

In connection with the Swiss corporate law reform, the Board of Directors proposes amending the Articles of Incorporation of Novartis AG. In addition to adaptations to new mandatory provisions and various other minor changes, the Board proposes the introduction of a statutory basis for virtual shareholder meetings (limited to five years).

The detailed explanations can be found in the invitation to the AGM, available under [novartis.com/agm](https://www.novartis.com/agm)

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Top 10 ESG-related questions from shareholders and our responses

Question

Response

1
What is your overall approach on impact?

- We believe that we can create impact by fulfilling unmet medical need through delivering innovative and quality medicines to as many people as possible.
- We have reached approximately 743 million patients at Novartis across 140 countries (236 million with Innovative Medicines, 54 million with Novartis Global Health and an additional 453 million patients with Sandoz).
- Some of our impact efforts at Novartis include our 2020 sustainability-linked bond (SLB), our Sub-Saharan Africa strategy and our product launches which focus on innovation and creating value. We believe that accountability is linked to impact, which is why we set out to make these efforts intentional, with measurable KPIs and to deliver access to innovative medicines globally.

2
What is your position on the use of stem cells and fetal tissue?

- Novartis conducts research using human embryonic stem cells (hESCs), adult stem cells, fetal cell lines, and human fetal tissues. Novartis collects and uses somatic stem cells from various sources including tissues from adult human beings and human embryos. We use fetal tissues for limited research and under specific conditions where no alternatives are available. Any acquisition and use of human embryonic stem cell lines or fetal tissue for research purposes undergoes extensive approval processes and procedures.
- Novartis does not currently have any partnerships or outsourced activities in embryonic research and does not produce any products to enable embryonic research nor commercially offer technologies that enable the performance of scientific research on stem cells.

3
What is your position on the Inflation Reduction Act (US)?

- After more than a decade, the Inflation Reduction Act (IRA) has provided a resolution for the US drug price debate.
- On the individual provisions, there are positives and negatives.
- We believe that isolating Medicare patients from high out-of-pocket cost is a positive. It will increase compliance and, as a result, will increase the drug benefit. It will also serve to reduce public concern over the cost of pharmaceuticals. It should potentially also serve to improve industry outlook over the longer term.
 - Inflation rebates are less impactful as our (and presumably peer) plans already included inflation-level price increases.
 - The negotiation provisions are problematic. The incentive structure is not good for patients, especially with small molecules. This could hurt patients with rare diseases, which have previously been 'lead indications' for broader-applied drugs. It is critical that Centers for Medicare & Medicaid Services provides clear guidance on the negotiation criteria and prescription drug plan coverage criteria post negotiations.
- At Novartis, we have modeled the impact on our commercial and patient priorities.

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Question

Response

4

What are some of your R&D efforts on Access from 2022?

- In mid-2022, Novartis endorsed the Kigali Declaration on neglected tropical diseases, pledging USD 250 million to advance R&D of new treatments against NTDs and malaria over 5 years (2021-25).
- We committed funding to advance R&D of the neglected tropical disease program, focusing on novel drug candidates for four diseases:
 - Discover novel, curative anti-parasitic therapies for Chagas disease.
 - Develop LXE408 for the treatment of visceral leishmaniasis; we are currently entering Ph2 clinical development.
 - We made progress on a potential first-in-class compound to treat dengue fever (in Ph1). Although this is the most common vector-borne viral disease in the world, there is currently no specific treatment for dengue.
 - Cryptosporidium infection is the most prevalent form of parasitic diarrhea, a major cause of mortality among young children in developing countries. We have discovered a promising drug candidate, EDI048, currently in Ph1.

5

How is your approach different on increasing diversity in clinical trials?

- Most clinical trial diversity programs focus on recruitment of diverse patients as trial subjects. We recognize that one of the barriers to diverse patient recruitment is a lack of diverse clinical trial investigators. Our effort is designed to build trust with underserved communities by creating more diversity in the entire health research ecosystem.
- Moreover, we know that the hard-fought battle to realize health equity cannot and should not be the job of any one individual, organization, or agency. The participation and inclusion of companies beyond pharma/biotech is also vital. Technology and social interventions present a great opportunity to bridge knowledge and trust gaps.
- Our effort is about increasing representation. The training of more diverse clinical trial investigators is a must to reverse what has become a trust deficit. With the Centers of Excellence, we will also be able to better understand other social and environmental determinants of health through the use of next generation technologies, which we can then use to address related health inequities.

6

What are some of your efforts to ensure suppliers meet your climate change expectations?

- Our suppliers play a key role in helping Novartis achieve its carbon neutrality and net-zero ambitions. We have developed the Environmental Sustainability (ES) Criteria, a legally binding document to formally codify our environmental expectations from suppliers. Our target is to integrate the ES Criteria in all our supplier contracts by 2025. We are on track to having our ES Criteria signed by our priority top 500 suppliers.
- We are updating the Novartis Third Party Code to ensure we have a unified and consistent approach while engaging with all our suppliers to drive our Environmental priorities.

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Question

7
Can you share more detail on your environmental achievements in 2022?

Response

- On carbon neutrality, we reduced our Scope 1 and 2 emissions by 23% year-on-year, which represents an overall reduction of 49% vs. our 2016 baseline. We enhanced our Scope 3 methodology on extent and method of calculation, resulting in an increase in overall Scope 3 emissions vs. our 2016 baseline.
- On waste, we reduced the amount of waste sent for disposal by 9% vs. 2021, which corresponds to a 59% reduction vs. our 2016 baseline. We have already surpassed our 2025 waste reduction target.
- On water, we reduced our water consumption by 2% in 2022 vs. 2021, which corresponds to a total reduction of 42% vs. our 2016 baseline. More than 85% of our own manufacturing sites already meet our 2025 water quality target.

8
What is the difference between your net zero and carbon neutrality goals?

- We have undertaken bold commitments to reduce carbon emissions in our own operations and across the value chain. Our approach to be carbon neutral in our own operations is built on two major pillars: (a) reduction of our energy consumption by adopting new and advanced technologies and efficiency projects (b) a clean supply solution from renewable energy sources.
- Our ambition is to be carbon neutral in our own operations by 2025, across the value chain by 2030, and net zero by 2040 in accordance with the Science Based Target Initiative (SBTi) Net Zero Standard published in October 2021. In May 2022, we committed to the SBTi to develop science-based targets (near-term and long-term targets) in accordance with the SBTi Net Zero Standard, which is aligned with the Paris Agreement (1.5C degree pathway). We now have until April 2024 to get our targets validated by the SBTi.
- To achieve net zero by 2040, we plan to reduce our scope 1, 2 and 3 emissions by more than 90%, and neutralize any residual and GHG emissions released to the atmosphere thereafter.

9
Can you tell us more about your transition to hybrid working?

- Our new guidelines continue to allow for flexibility where it makes sense, in line with our commitments to diversity, equity and inclusion and to maintain a healthy work-life balance.
- Our updated guidance was announced in 2022. It will be implemented in 2023, pending local consultations and country-specific requirements, including local health and safety regulations. Informed by external research and internal insights, it provides greater clarity and accountability for our workforce and empowers our leaders to play a central role in how teams come together and interact.
- Office-based employees are asked to prioritize 12 days a month on site, field-based teams to continue working predominantly at customer locations, and lab and manufacturing staff, who require the use of campus facilities, to make use of the workspaces designed to deliver breakthrough innovation and world-class manufacturing.

10
Are there any updates on ethics and compliance topics?

- On the Average Wholesale Price (AWP) litigation, Novartis settled a putative class action brought by private payers which resolved the last AWP lawsuit. This matter is now concluded.
- In 2021, Novartis received a civil investigative demand from the DOJ seeking information from 2016 to the present, regarding the marketing and pricing of Entresto®. During Q4 2022, the DOJ advised that it has no additional requests, and the matter is considered closed.
- On the South Korea investigation into Novartis alleged business practices pending since 2016, the Supreme Court dismissed the prosecutor's appeal in January 2023 and the matter is now concluded.