



Novartis Investor Relations

Investor Update on Access and Sustainability

November 30, 2022

Disclaimer

This presentation contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995, that can generally be identified by words such as “potential,” “expected,” “will,” “planned,” “pipeline,” “outlook,” or similar expressions, or by express or implied discussions regarding our environmental, social and governance activities; or regarding potential new products, potential new indications for existing products, potential product launches, or regarding potential future revenues from such products; or regarding research and development activities and timelines; or regarding current and potential future or pending collaborations and alliances; or by discussions of strategy, plans, expectations or intentions, including with respect to current, planned and potential future actions in the areas of access to healthcare and our access principles and our focused patient reach mandate to drive access to innovation; or regarding our environmental commitments on net-zero, circular economy, plastic neutrality and water sustainability; or regarding our ability to maintain a resilient supply chain; or regarding our ability to remain agile as regulations continue to evolve. Such forward-looking statements are based on the current beliefs and expectations of management regarding future events, and are subject to significant known and unknown risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those set forth in the forward-looking statements. You should not place undue reliance on these statements. In particular, our expectations could be affected by, among other things: disruptions of our manufacturing or supply chain impacting our ability to meet demand for our products in the future; global trends toward healthcare cost containment, including ongoing government, payer and general public pricing and reimbursement pressures and requirements for increased pricing transparency; uncertainties regarding potential significant breaches of data security or data privacy, or disruptions of our information technology systems; regulatory actions or delays or government regulation generally, including potential regulatory actions or delays with respect to the development of the products described in this presentation; the potential that the strategic benefits, synergies or opportunities expected from the transactions described, may not be realized or may be more difficult or take longer to realize than expected; the uncertainties in the research and development of new healthcare products, including clinical trial results and additional analysis of existing clinical data; our ability to obtain or maintain proprietary intellectual property protection, including the ultimate extent of the impact on Novartis of the loss of patent protection and exclusivity on key products that commenced in prior years and is expected to continue this year; safety, quality, data integrity, or manufacturing issues; uncertainties involved in the development or adoption of potentially transformational technologies and business models; uncertainties regarding actual or potential legal proceedings, including, among others, product liability litigation, disputes and litigation with business partners or business collaborators and intellectual property disputes; our performance on environmental, social and governance measures and our ability to achieve our environmental, social and governance goals and targets; general political, economic and business conditions, including the effects of and efforts to mitigate pandemic diseases such as COVID-19; uncertainties regarding future global exchange rates; uncertainties regarding future demand for our products; and other risks and factors referred to in Novartis AG’s current Form 20-F on file with the US Securities and Exchange Commission. Novartis is providing the information in this presentation as of this date and does not undertake any obligation to update any forward-looking statements as a result of new information, future events or otherwise.

Vas Narasimhan

Chief Executive Officer

Company strategy



New Novartis: Our strategy

Deliver high-value medicines that alleviate society's greatest disease burdens through technology leadership in R&D and novel access approaches

Our focus

5 core Therapeutic Areas¹

Cardiovascular, Immunology,
Neuroscience, Solid Tumors, Hematology



2 + 3 technology platforms

Chemistry, Biotherapeutics
xRNA, Radioligand, Gene & Cell Therapy



4 priority geographies

Aiming to be a top 5 player in the US,
continue as a leading player in
Europe, China, Japan



Our priorities

Accelerate growth

Deliver
high-value
medicines

Deliver returns

Embed
operational
excellence

Strengthen foundations

Unleash the
power of our
people

Build trust
with **society**

Scale data
science and
technology

Selected ESG priorities

- 1 Access to medicines and innovation
- 2 Human capital
- 3 Environmental sustainability
- 4 Ethical standards

1. Other TAs opportunistically.

Our speakers

Guest speaker: Sir Ronald Cohen

Chair, Global Steering Group for Impact Investment
Author, “Impact: Reshaping capitalism to drive real change”

Impact

Lutz Hegemann

President, Global Health & Sustainability

Innovation and access to medicines

Steffen Lang

President, Operations

**Environmental sustainability
Supply chain resilience**

Klaus Moosmayer

Chief Ethics, Risk & Compliance Officer

Ethical standards

Lutz Hegemann

President, Global Health & Sustainability

Innovation and access to medicines



Access to medicines is an evolving journey

We consistently apply learnings and course correct as needed



ATOM – Access to Oncology Medicines, LMIC – Low- and middle-income country, NTD – Neglected tropical disease

1. Education / medicines to patients at the bottom of the income pyramid. 2. Basket of 15 on- and off-patent medicines for non-communicable diseases.

Access to healthcare remains a formidable obstacle in both LMICs and HICs

2 billion

patients worldwide do not get the medicines they need¹

Low and middle income countries

Dual burden of:

1. NCDs (on the rise)
2. CDs (unfinished agenda)

Challenges

- **Structure of healthcare systems**
Shortage of HCPs, lack of investments, rising inequality
- **Geopolitical and economic**
Cost, political instability, economic hardship

High income countries

Remains a concern in developed countries, where COVID-19 highlighted

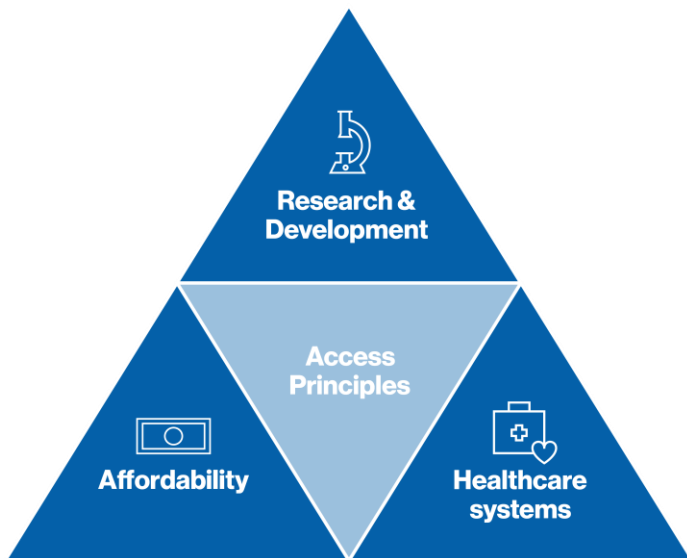
Challenges

- **Structure of healthcare systems**
Health outcomes/risks determined by social factors²; inefficiencies, including lack of effective reimbursements, health inequities
- **Demographic and economic**
Aging population, healthcare rising cost

1. Access to Medicine Foundation. 2. <https://www.cdc.gov/socialdeterminants/about.html>

Novartis Access Principles: Driving social impact

Systematically integrating access strategies in how we research, develop, deliver all new medicines.
Commitment: 100% of launches with global¹ access strategy



R&D

- › Global Health R&D programs
- › Trial diversity strategy

Affordability

- Tiered pricing framework
- Emerging Market Brands
- › Sub-Saharan Africa strategy

Health systems

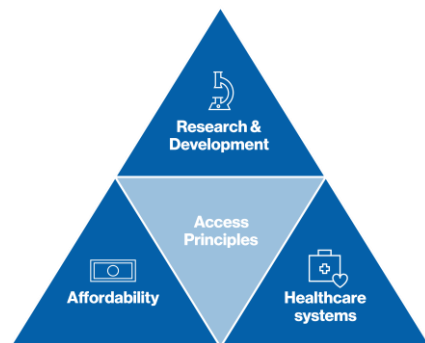
- › Health system strengthening for high burden disease areas
- › Novartis US Foundation: Disparities of care a priority

1. Including HIC and LMICs (LIC, LMIC, UMIC) countries.

Novartis Access Principles in practice: Long-standing commitment to Malaria together with other partners resulted in >7m lives saved

Malaria

One of the world's biggest killers
Africa's leading cause of mortality
for children age <5



R&D

1st fixed-dose Artemisinin-based Combination Therapy (ACT) (1999)

Coartem[®] dispersible pediatric formulation (2009)

2 drug candidates with new MoA in Ph2 (2017)

USD 100 m commitment over 5 years for next-generation treatments (2018)

Development of new Coartem[®] formulation for newborns (2019)

USD 250 m commitment over 5 years for R&D in malaria and NTDs (2022)

Ganaplacide + new formulation of lumefantrine (Ph3 planned 2023)

Cipargamin for severe malaria (Ph2 ongoing)

Affordability

Coartem[®] no-loss strategy (2001)

Our output/ impact

>1bn doses

Coartem[®]
delivered to date

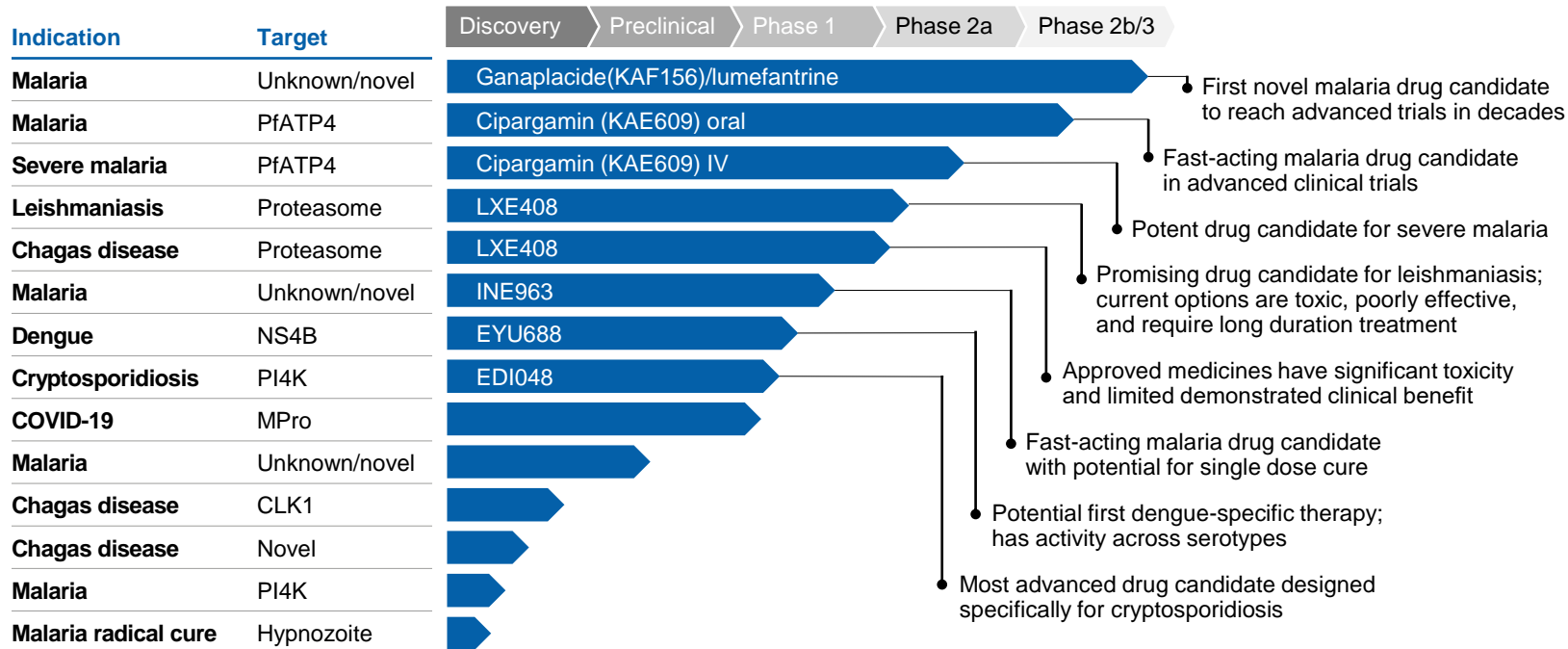
7.6m lives

saved, thanks to
Coartem[®] alongside
other prevention tools¹

Industry-leading
portfolio of
next generation
antimalarials

NTDs – Neglected tropical diseases 1. <https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2020>.

A robust portfolio of novel drug candidates at the Novartis Institute for Tropical Diseases



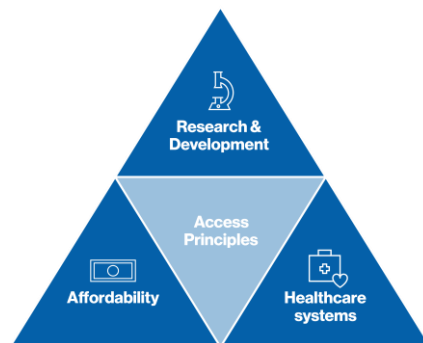
Novartis Access Principles in practice: Sickle cell disease program with holistic ecosystem approach

Sickle Cell Disease

Hereditary, life-threatening condition^{1,2}; causes extreme emotional, physical, financial toll^{3,4}

50-90% of infants born in Africa with SCD will die before their 5th birthday⁵

14m newborns will be affected with SCD between 2010 and 2050⁶



R&D

Crizanlizumab: Clinical trial in SSA; First Marketing Authorization in Ghana

Hydroxyurea child-friendly formulation approved in Ghana and Uganda (plans to expand)

Curative therapy: In partnership with BMGF, develop in vivo gene therapy for LMICs

Health system strengthening

Education and awareness, screening, diagnosis: e.g. digital app for newborn screening

National treatment guidelines in 5 countries

~100 SCD treatment centers across Ghana and Uganda

Affordability

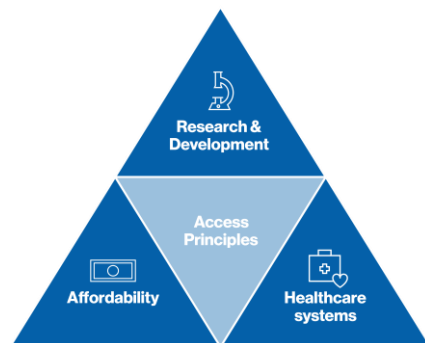
Hydroxyurea at affordable pricing introduced in 4 countries

SCD – Sickle cell disease | BMGF - Bill & Melinda Gates Foundation | See last slide for references.

Novartis Access Principles in practice: 20 years of oncology equitable access initiatives in LMICs

Oncology

- ~10 m cancer deaths per year
- ~1 in 6 deaths globally
- 70% of global cancer deaths occur in **LMICs**



CancerPath to Care (2002 – present)

20-year collaboration with Max Foundation¹: Provision of medication (CML, GIST, breast cancer) at no cost in select LMICs

Aim: Treat up to 36,000 patients in >70 LMICs by 2025

Novartis Oncology Access (2008 - present)

Cost-sharing approach³: Asia, Middle East, Central & Eastern Europe, Africa, Latin America

Access to Oncology Medicines Coalition (2022)

1st company licensing patented cancer medicine: public health-oriented **voluntary licensing**⁴

Humanitarian Partnership for Access to Cancer Treatment² (2022)

5 LMIC countries planned in 2023: access to advanced breast cancer treatment

Source: WHO; WEF CML – Chronic myeloid leukemia GIST – Gastrointestinal tumors LMICs – Low and middle-income countries See last slide for references.

Novartis Sub-Saharan Africa: Scaling a sustainable business model to reach underserved populations

Focused **patient reach** mandate to drive **access to innovation**; sustainably **delivering access** across the full income pyramid and operating **at scale**

New focused strategy

3 Core Therapeutic Areas
Cardiovascular, Neuroscience,
Ophthalmology

5 Specialty medicines & programs
Malaria, SCD, Oncology,
Transplant, AMR

14 Focus markets while retaining
presence in all 46 markets

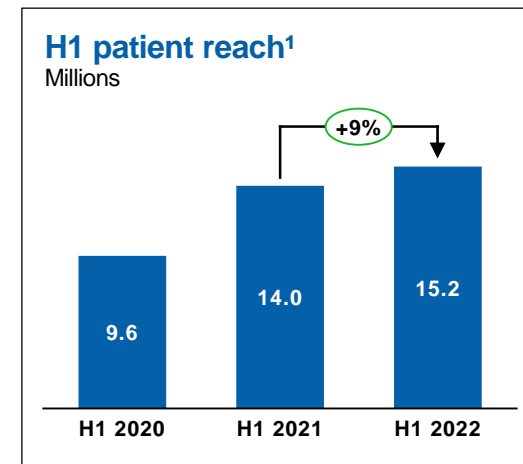
Working in partnership

Examples:

NCD partnership in Ghana with
Christian Health Association of Ghana

Partnership with JUDEA HOPE to reach
1m people through **disease awareness**

SCD Partnership with Governments
in Uganda, Kenya and Tanzania²:
Aimed at improving care



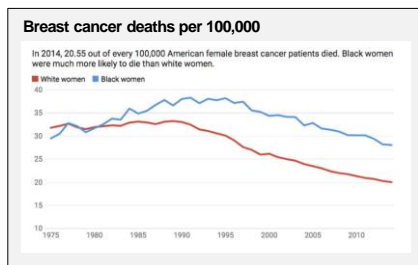
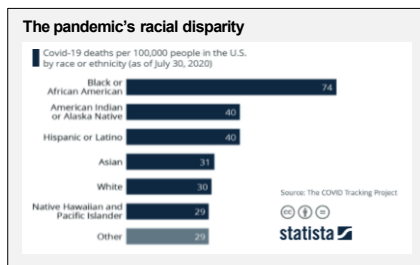
NCD – Non-communicable disease SCD – Sickle cell disease 1. Current year and prior year (re-stated) actual data from QlikSense dashboard. 2. The Ministry of Health, the Tanzania Non-Communicable Diseases Alliance (TANCDA) and Novartis have launched a Sickle Cell Disease Program aimed at improving care for people living with the disease in Tanzania. 3. Non-promotional approach, education and awareness.

Novartis Access Principles in practice in a high-income country

Addressing health inequity in the United States

In US, compared with non-Hispanic whites, Black/African Americans have:

- Lower life expectancy
- Higher mortality rate from leading causes of death (cancer, CVD)
- Higher exposure to adverse conditions related to climate change
- Increased infant mortality rate (IMR)
- Underrepresented in STEM workforce



Beacon of Hope¹

>10 years commitment engaging with Historically Black Medical Schools (USD 30m)

- Build clinical trial centers²
- Fund research, advocacy and education in identified causes of health inequity
- Actively addressing barriers to representation in clinical trials

Enable ~1,200 African American students to become future leaders in health, science, technology (USD 20m)

Our impact

Community trust increasing³

Established best practice through fellowship programs

Demographic targets for key Ph3 trials on track

Established community based collaborations with proven capabilities in health equity and education

See last slide for references

Steffen Lang

President, Operations




Environmental sustainability
Supply chain resilience



We aim to be a net-zero, plastic neutral and water sustainable company



Delivery of our environmental commitments on net-zero, circular economy, plastic neutrality and water sustainability is at the heart of our aspiration

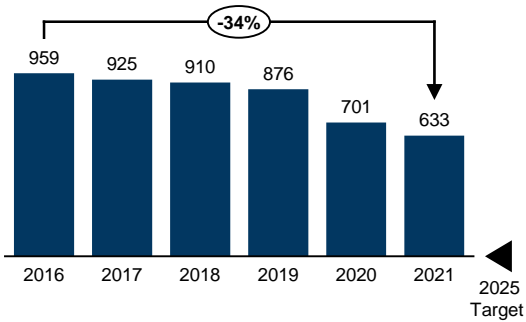
	2025	2030	2040
Climate Net-zero 	Carbon neutral in own operations (Scope 1 and 2) Environmental criteria in supplier contracts	Carbon neutral across the value chain (Scope 1, 2 and 3)	Net zero carbon emissions <div style="border: 1px solid blue; padding: 5px; color: blue; font-size: small;"> In May 2022, committed to set science-based targets </div>
Waste Circular economy & plastic neutrality 	Eliminate PVC in packaging ¹ Waste disposal reduced by half	Plastic neutral ² All new products meet sustainable design principles	
Water Water sustainability 	Water consumption reduced by half in our operations No water quality impacts from manufacturing effluents ³	Water neutral in all areas Enhance water quality wherever we operate	

1. Defined as secondary and tertiary packaging; primary packaging when feasible. 2. Plastic neutral is defined as: the weight of plastic packaging entering the environment for disposal is approximately the same as the weight being recovered for recycling, exact scope being formulated. 3. Includes supply chain.

On track to achieve our 2025 targets

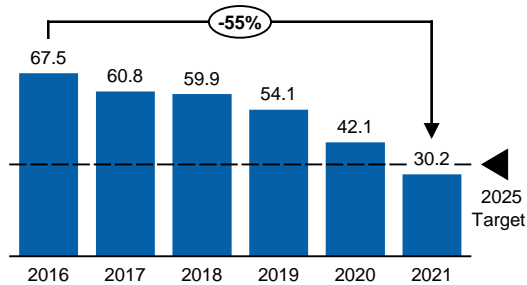
Climate - Scope 1 & 2 performance

Thousand tons CO₂ emissions



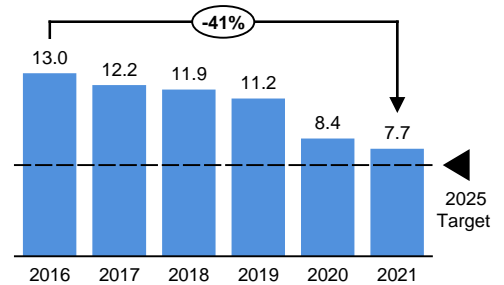
Waste reduction performance

Thousand tons



Water reduction performance

Million cubic meter



CURRENT FOCUS AREAS

Technology driven process optimization to reduce energy demand and switch to clean supply solutions

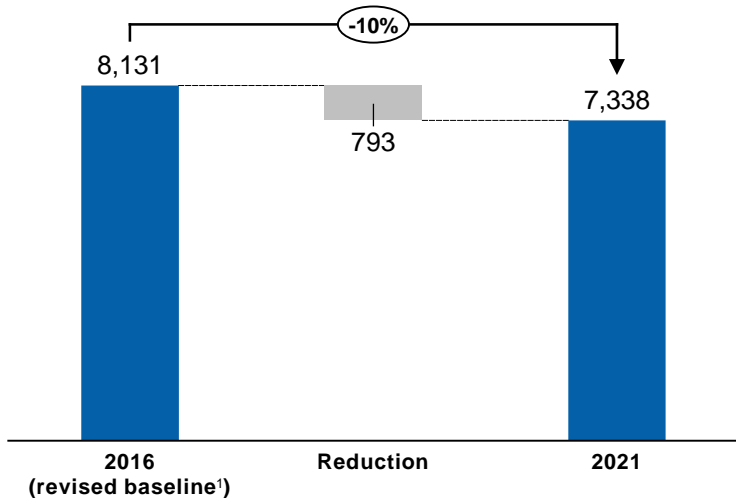
Drive efficient processes to reduce waste in operations and improve material efficiency

Optimize water consumption and increase recyclability of water in our operations

Clear plan to engage with suppliers to transition to net-zero

Scope 3 – Value chain emissions

Thousand tons CO₂ emissions



Key activities

- Clear understanding of **value chain hotspots** to prioritize dedicated actions, e.g. API, Chemical, Biologics suppliers
- Consolidate supplier base and **switch** to more sustainable suppliers, e.g. commodity, tail-end suppliers
- Integrate Novartis **Environmental Sustainability criteria** in suppliers' contracts
- Segment suppliers to define dedicated action plans and collect **product-specific primary emission data**
- **Clear governance and performance tracking** as part of regular supplier performance reviews

1. Methodology used to calculate Scope 3 emissions in 2016 was aligned with Science Based Targets validation criteria which requires to cover at least two-third of total mandatory scope 3 emissions. In 2021 Novartis decided to further improve completeness, transparency and accuracy to cover more than 90% of overall scope 3 emissions. The chart displays the revised figures.

Resilient supply chain ensures we deliver on our mission

Resilient supply chain is critical to be agile and responsive to market disruptions and ensure continued supply of medicines to our customers and patients



Mitigating actions

Diverse network with dual supply

Maintain a critical mass of internal supply network which is complemented with broad external supplier partnerships

>85%

Dual supply points for key brands

Product centricity

Dedicated product management and supply risk management ensure supply continuity for key brands

>90%

Sales supported by dedicated product management team

Strategic inventory

Adequate level of finished goods inventory and stock policies across the value chain and in top markets

>6 months

Inventory for key brands and markets

Adequate capacity

Strong capacity planning process in place to anticipate demand and secure supply incl. make vs. buy decisions

>99.6%

Customer Service Level YTD¹ across Innovative Medicines

1. Year to date 2022.

Klaus Moosmayer

Chief Ethics, Risk & Compliance Officer

Ethical standards



Ethics is embedded within our culture - in times of transformation, this enables us to maintain our integrity

Learnings from external / internal insights....

1 Associates need to **feel safe to speak up**

2 Effective/mature **compliance management system**

3 Strong **human rights** program
(e.g. in area of **Third Party Risk Management**)

4 We embrace **Digital & AI** and continue to strengthen our oversight



...informed some of our activities in 2022

- Enhanced Speak Up reporting platform
- Launched stand-alone non-retaliation policy, which grants immunity for the act of speaking up
- Launched our first Anti-Bribery report
- Extended Third Party Risk Management to wholesalers and distributors
- Updated our Anti-Bribery Third Party Guideline
- Amended Third Party Code to clarify expectations on human rights due diligence
- Updating our Human Rights Commitment
- Launched awareness campaign and training on information management, data privacy and the use of data

We remain agile as regulations continue to evolve

Strengthening areas such as human rights and third party risk management

Due diligence is a key pillar of our human rights strategy...

3-pillar strategy

Focused on key risk areas¹ and aligned with UNGPs

Due diligence

Risk assessments
Policy commitments
Management systems integration

Empowerment

Grievances & remediation
Targeted training
Awareness raising

Engagement

Collective action
Stakeholder engagement
Human rights reporting

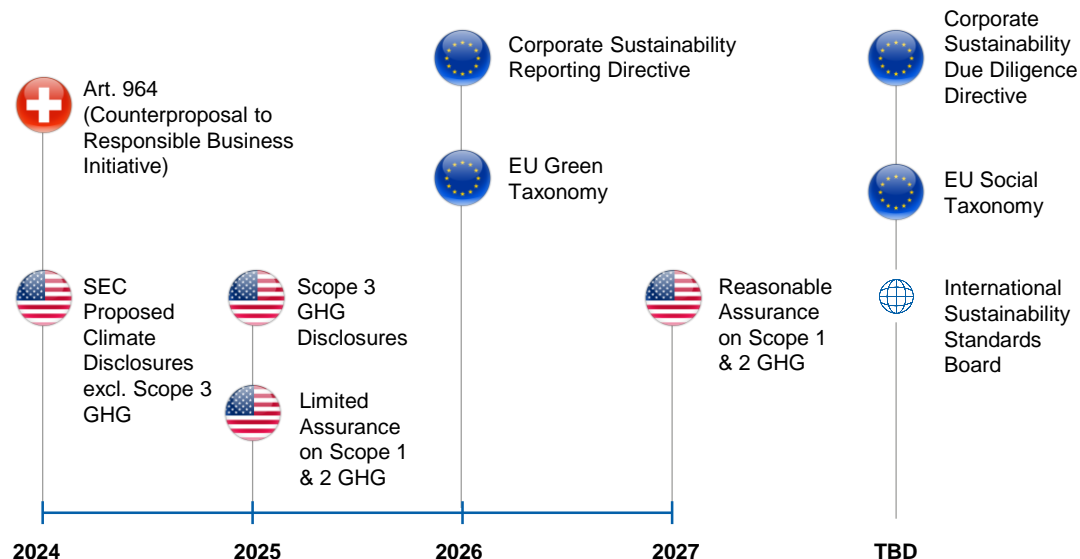
.... and helps us make impactful progress across our value chain

- | | | |
|-------------------------------------|----------------------------------|---|
| <input checked="" type="checkbox"/> | Third Party Code | Updated to explicitly codify our ESG and human rights expectations (effective 2023) |
| <input checked="" type="checkbox"/> | Grievance mechanism | Strengthened through an enhanced non-retaliation policy, also applicable to contractors or third-party associates |
| <input checked="" type="checkbox"/> | High-risk raw materials | Continue to assess and have started integrating responsible sourcing certifications for high-risk raw materials |
| <input checked="" type="checkbox"/> | High-risk third parties | Conducting risk-assessments and pilot projects for high-risk third parties employing vulnerable migrant workers |
| <input checked="" type="checkbox"/> | Research and risk mapping | Conducted on selected supply chain risks |

1. Right to Health, Labor Rights, Environment & Human Rights, Technology & Human Rights.

Strengthening of non-financial reporting to ensure compliance and adherence to key disclosure standards

Monitoring key upcoming regulations/standards^{1,2}



Preparing for regulatory compliance

- ✓ **1st Integrated Report (2021)³**
- ✓ **Link risk management with sustainability and strategy**
- ✓ **Integrating non-financial metrics into financial management systems; non-financial reporting team within Finance**
- ✓ **Improving systems to meet due diligence requirements (Switzerland, Germany, Norway)**
- ✓ **Board Oversight of ESG report, delegated responsibilities to GSNC and ACC**
- ✓ **Involved in consultation processes: Ensure sector-specific criteria, increased focus on social criteria**

1. Examples; not exhaustive. 2. Year the regulation comes into effect and corresponds to business year Novartis needs to report on. 3. in line with Value Reporting framework, SASB, GRI, TCFD. GHG – Green House Gas
 SASB – Sustainability Accounting Standards Board GRI – Global Reporting Initiative TCFD – Task Force on Climate-related Financial Disclosures GSNC – Governance, Sustainability & Nomination Committee; ACC – Audit & Compliance Committee NIS – Novartis in Society (Intergated Report of Novartis)

Ultimate aim of ESG is creating a lasting IMPACT



Sources: <https://www.institutionalinvestor.com/article/b1kr826880fy2/The-Trillion-Dollar-Fantasy>. <https://csp-forimpact.medium.com/does-impact-need-to-be-measurable-to-count-as-impact-4538076985d5>
<https://journals.sagepub.com/doi/full/10.1177/1086026620919202>



Appendix

Novartis ranks no.4 at 2022 Access to Medicines Index



Governance of access

- Integrated access-to-medicine into strategy
- Access-related incentives for executives
- Robust set of compliance controls
- Legal settlement (Alcon legacy issue 2011-14, 2020 settlement)

Research & development

- Access planning processes for all projects in pipeline
- 100% of late-stage projects covered by access plans
- Performs strongly in R&D capacity building
- Leads by publicly disclosing R&D investments for priority neglected diseases

Product delivery

- High-quality access strategies across all country income classifications for a subset of its products
- Scaled up and piloted the highest number of inclusive business models of all companies
- Performs strongly in capacity building across all fields¹
- 1st agreement of its kind: Non-exclusive voluntary licensing to enable Gx supply of an NCD product in LMICs

1. Manufacturing, supply chain, health systems

We have a robust Third Party Management framework

To manage risks in our supply chain, we contract with third parties which are aligned with our ethical standards



In 2022, we made enhancements to our Anti-Bribery Third Party Guideline and our Third Party Code

What remained unchanged is our principle:

No risk assessment, no contract

Third parties

- Suppliers
- Distributors & Wholesalers¹
- Business Development & Licensing deals
- Merges & Acquisitions

Risk areas covered

- Anti-Bribery
- Health, Safety & Environment
- Labor Rights
- Data Privacy
- Animal Welfare
- Information Security
- Trade Sanctions

1. TPRM framework expanded to sell-side in April 2022.

References

Sickle cell disease (Slide 12)

- 1 Kaul D, Finnegan E, Barabino G. Sickle red cell-endothelium interactions. *Microcirculation*. 2009;16(1):97-111
- 2 Steinberg M. Management of sickle cell disease. *N Engl J Med*. 1999;340(13):1021-1030
- 3 Sanger M, Jordan L, Pruthi S, et al. Cognitive deficits are associated with unemployment in adults with sickle cell anemia. *Journal of Clinical and Experimental Neuropsychology*. 2016;38(6):661-671
- 4 Anim M, Osafo J, Yirdong F. Prevalence of psychological symptoms among adults with sickle cell disease in Korle-Bu Teaching Hospital, Ghana. *BMC Psychology*. 2016;4(53):1-9
- 5 Frédéric B. Piel, 2013 Jul; 10(7)
- 6 Br J Haematology. 2017 Jun; 177(6): 919–929

Novartis access principles (Slide 13)

- 1 Collaboration with Max foundation, Started in 2002 with Glivec International Patient Assistance Program (GIPAP).
- 2 Collaboration and resource commitment by Max Foundation, ABC Global Alliance, American Society of Clinical Pathology, Cepheid, and Novartis.
- 3 With governments, charities, other payer, or directly with patients.
- 4 Selected Gx manufacturers to develop, manufacture, supply Gx nilotinib in licensed territory.

Health Inequity in the US (Slide 15)

- 1 Collaboration with key stakeholders like: Coursera, National Medical Association and Thurgood Marshall Scholarship Fund, and 26 HBCUs
- 2 Collaboration with Morehouse School of Medicine and 26 other Historically Black Colleges and Universities, the Thurgood Marshall College Fund, Coursera, and the National Medical Association
- 3 The Atlanta Wellness Pilot where Black Churches will serve as community partners in one of our cardiovascular trials; 4.3 Cardiovascular , 1 Lupus Nephritis trials