Impact & Health Equity

Novartis 10th annual ESG investor event

November 13, 2023
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Key highlights

Vas Narasimhan
Chief Executive Officer
Equitable access to innovative medicines

Lutz Hegemann
President, Global Health & Sustainability
Agenda

**Equitable access to innovative medicines**

Lutz Hegemann  
President Global Health & Sustainability

**Innovation for Global Health to drive impact in neglected tropical diseases**

Drug discovery for Global Health

Thierry Diagana  
Head Global Health Research

Linking development with access

Sujata Vaidyanathan  
Head Global Health Development Unit

**Evolving ESG reporting landscape**

Paul Penepent  
Head Finance Reporting & Accounting
Focusing on innovation and access to medicines to create value for the company while mitigating risks

**Value creation**

**Innovation and access to medicines**
- Future-proof pipeline addressing unmet medical and societal needs
- Broad access to our medicines, including underserved populations
- Dedicated Global Health unit

**Human capital**
- Diversity, Equity & Inclusion
- Culture
- Talent

**Risk mitigation**

**Environmental sustainability**
- Climate
- Water
- Waste

**Ethical standards**
- Ethics
- Compliance
- Human rights

**Enablers**
- Governance, transparency, non-financial reporting
- Management systems & tools

**Right thing to do**

**Reaching more patients with innovative medicines**

**Creating sustainable social and economic impact**

**Building trust with society**
Creating impact by fulfilling unmet medical need through delivering innovative, quality medicines to as many people as possible

>250 million patients reached with innovative medicines (2022)

~130 pipeline projects further expanding patient reach

First gene, siRNA and radioligand therapies (at scale), fulfilling unmet medical need

~40 new drug approvals over the last 20 years, delivering innovative medicines

Recent innovation highlights:

- **Kisqali®**
- **NATALEE eBC**
- **Scemblix®**
- **CML**
- **Pluvicto®**
- **Prostate cancer**
- **iptacopan**
- **PNH and C3G**
Innovation and access to medicines is required to address the R&D and access gaps irrespective of a country's income

Illustrative: schematic representation of access challenges across different country income groups

<table>
<thead>
<tr>
<th>Country Income Group</th>
<th>High-income countries (HICs)</th>
<th>Upper middle-income countries</th>
<th>Lower middle-income countries</th>
<th>Low-income countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal healthcare</td>
<td>Full access</td>
<td>Mostly established access</td>
<td>Significant access gaps</td>
<td>Large access gap</td>
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<tr>
<td>Innovative Medicine</td>
<td>Mostly full access</td>
<td>Delays and access gaps</td>
<td>Severe access gap</td>
<td>No access</td>
</tr>
</tbody>
</table>


Healthcare coverage

- **High-income countries (HICs)**: Full access
- **Upper middle-income countries**: Mostly established access
- **Lower middle-income countries**: Significant access gaps
- **Low-income countries**: Large access gap

Access gap to underserved patients also persist in HICs.
For Novartis, ESG is a framework to manage business risks whilst also delivering impact which creates value for our stakeholders.

**Impact**
ensuring our activities create a net positive effect on society

**Risk**
ensuring our activities match the company’s risk profile

**Returns**
ensuring our activities are financially sustainable in the long-run

ESG is a framework to incorporate environmental, social and governance factors into business activities. What we must do as a baseline to manage material risks.

**IMPACT** is change in wellbeing beyond what would have happened otherwise and must be measurable. Where we can create value for stakeholders.
Novartis Access Principles are designed to drive impact

Bringing more of our medicines to more people, no matter where they are

For all new medicines, systematically integrate access in how we research, develop, deliver globally

100% of launches with global access strategy

Selected examples

**R&D**
- Trial diversity strategy
- Adaptive development: Modification of medicines for vulnerable populations

**Affordability**
- Tiered pricing framework (EMBs)
- Sub-Saharan Africa: Shift from margin to impact focus
- ATOM: 1st company to contribute an innovative medicine

**Healthcare systems**
- One Novartis Health System Strengthening framework
- US Foundation made disparities of care a priority

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1. Impact is change in wellbeing beyond what would have happened otherwise and must be measurable.
2. ATOM – Access to Oncology Medicines. Novartis granted a “freedom to operate” license ahead of patent expiry in multiple LMICs for nilotinib in chronic myeloid leukemia.
Example 1: A long-term approach to chronic myeloid leukemia in Ethiopia

Commitment
Since 2004, we have been donating first line treatments for CML through the Glivec® International Patient Assistance Program, in partnership with the Max Foundation.

Impact
2,000 patients on program as of 2023. As the median age of CML patients in Ethiopia is ~38 years (below global average), outcomes from this program translate to sustained socio-economic impact.

Catalyzed development of healthcare provider capabilities; e.g. number of hematologists has grown from 3 to 30 since 2004.

Sustainability
Government of Ethiopia is now financing second line treatments for CML patients who progress or are resistant to Glivec®, with 160 patients benefitting from access to Tasigna®.
Example 2: Significantly increasing impact\(^1\) in cardiovascular disease through Entresto\(^\circledR\) emerging market brands

<table>
<thead>
<tr>
<th>Year</th>
<th>Entresto(^\circledR) Emerging Market Brand in LMICs</th>
<th>Entresto(^\circledR) Originator Brand</th>
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</thead>
<tbody>
<tr>
<td>2019</td>
<td><img src="image1.png" alt="Graph" /></td>
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<tr>
<td>2020</td>
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### Quality-adjusted life years gained per year through Entresto\(^\circledR\) in LMICs\(^2\)

**Access Principles**
Helped us broaden our coverage and deepen our impact. Launched in 69 LMICs\(^3\); first LMIC launch: 2 months after EU launch\(^4\)

**Affordability**
Entresto\(^\circledR\) emerging market brand launched in 43 countries; generated an additional 17,000 quality-adjusted life years in 2022 vs. >6,000 in 2019

**Health System Strengthening**
Improving CVD management, detection and prevention through partnerships as well as activities of Novartis Foundation\(^5\)

**R&D**
Running a Ph4 trial in Chagas disease (neglected tropical disease) - related cardiomyopathy

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1. Change in wellbeing beyond what would have happened otherwise, measurable.
3. 43 LMICs with EMB (incl. Cameroon, Zimbabwe, Ethiopia, Ghana, Indonesia, Kenya, Sri Lanka, Morocco, India, Nigeria, Philippines, Sudan); 26 LMICs with Originator Brand (incl. Rwanda, Venezuela, Egypt, Malaysia).
4. Entresto\(^\circledR\) Launching in Malaysia 2 mos after EU; EMB launched in India 12 mos after EU.
5. Non-profit focused on urban heart health equity, leveraging data AI for prevention.
Core business and Global Health approaches are complementary across portfolio, geographies and income brackets

Illustrative: global schematic representation of access challenges across different country income groups

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<th>GNI per capita</th>
<th>HIGH</th>
<th>LOWER</th>
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<td># clinical trials</td>
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<td>Access to innovative medicine</td>
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<td>Access to basic healthcare</td>
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**Approach to reach underserved patients (selected)**
- Post-trial access, Population health models
- Emerging Market Brands
- Donations, philanthropy, non-enforcement of patents
- Beacon of Hope in the USA
- Health System Strengthening
- Sub-Saharan Africa Strategy, Global Health Priority Disease Areas

**Notes:**
1. Source: BCG analysis 2023
2. Malaria, Sickle Cell Disease, Leprosy, Chagas disease.

**ATOM – Access to Oncology Medicines**
The vast majority of Novartis Global Health programs have remained in Novartis after the Sandoz spin-off

**Remains with Novartis**

- Global Health programs and access initiatives
  - Malaria
  - Chagas disease
  - Sickle cell disease
  - Leprosy
  - Community health programs
  - Discovery of new medicines for priority disease areas
  - AMR Action Fund

- Sub-Saharan Africa
  - Fully focused on innovative medicines

- R&D
  - Continued R&D for neglected diseases

**Transferred to Sandoz**

- Former “Novartis Access Portfolio” and related contracts
- Antibiotics portfolio
- Generics portfolio

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AMR – Antimicrobial resistance. NCDs – Non-communicable diseases.
Innovation for Global Health to drive impact in neglected tropical diseases

Thierry Diagana
Head Global Health Research
Drug discovery for Global Health

Sujata Vaidyanathan
Head Global Health Development Unit
Linking development with access

Impact & Health Equity Annual investor event | November 2023
One of the most extensive pipelines in Global Health with 7 new chemical entities currently in human trials across 6 disease areas

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<td>Proteasome</td>
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<td>Dengue</td>
<td>NS4B</td>
<td>EYU688 Co.</td>
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<td>PI4K</td>
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<td>Chagas disease</td>
<td>Topo II</td>
<td>LXE408 Co.</td>
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<tr>
<td>Chagas disease</td>
<td>CLK1</td>
<td>LXE408 Co.</td>
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<td>LXE408 Co.</td>
<td>LXE408 Co.</td>
<td>LXE408 Co.</td>
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<tr>
<td>Malaria radical cure</td>
<td>Hypnozoite</td>
<td>LXE408 Co.</td>
<td>LXE408 Co.</td>
<td>LXE408 Co.</td>
<td></td>
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</tr>
<tr>
<td>Sickle cell disease</td>
<td>BCL11A (GT)</td>
<td>LXE408 Co.</td>
<td>LXE408 Co.</td>
<td>LXE408 Co.</td>
<td></td>
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</tr>
<tr>
<td>Pandemic preparedness</td>
<td>Multiple¹</td>
<td>LXE408 Co.</td>
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<td></td>
</tr>
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GT – In vivo gene therapy. ¹ Viruses with epidemic or pandemic potential: flaviviruses, henipaviruses, coronaviruses.

First novel malaria drugs combination to advance to phase III trials in decades

Potent drug candidate for single dose cure

Fast-acting drug candidate in advanced trials for uncomplicated and severe malaria

Fast-acting novel malaria drug candidate with potential for single dose cure

Promising drug candidate for leishmaniasis; current options are toxic & poorly effective

Approved medicines have significant toxicity and limited demonstrated clinical benefit

Potential first dengue-specific therapy; has activity across serotypes

Most advanced drug candidate designed specifically for cryptosporidiosis

Novel non-peptidomimetic SARS CoV-2 Mpro inhibitor, Phase I FPFV achieved in 10 months after DC

Fast-acting anti-malarial with high barrier to resistance and potential for single dose cure as part of combination therapy
Novartis is proud of our long-term commitment to Global Health R&D which creates value for all our stakeholders

**Value creation**
Innovation for Global Health aims to drive impact in neglected tropical diseases

Novel drugs for tropical diseases are eligible for PRV, a financial incentive and external validation of the unmet need.

**Risk mitigation**
As the global population grew from 7 to 8bn, ~70% of the added population was in LICs and LMICs... when the population rises from 8 to 9bn, ~90% of the growth will take place in LICs and LMICs.

Novartis assesses impacts of changing disease burdens: Novartis portfolio covers disease areas that could be most impacted by climate change, incl. cardiovascular, NSCLC, malaria, dengue.

**Right thing to do**
Underserved patients are severely impacted by diseases for which traditional market incentives to conduct R&D do not exist

Novel Global Health therapies can change the course of some of humanity’s most longstanding unsolved health challenges.

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1. 6 candidates in our Global Health pipeline eligible for PRVs; 2 PRVs already received by Novartis. FDA and Cosmetic Act, section 524, authorizes FDA to award Priority Review Vouchers (PRVs) to sponsors of approved medicines to treat certain tropical diseases. Tropical Disease Priority Review Voucher Program | FDA.
3. Internal analysis of scientific literature.
We leverage Novartis core research and development competencies for Global Health

Disease-focused innovation for Global Health

We apply scientific expertise and advanced technology platforms to discover and develop medicines that target disease areas where we can transform lives

Platforms

- **Biology and lead discovery**
  - High throughput assay and screening capacity

- **Pharmacology**
  - Small and large animal models

- **Medicinal chemistry**
  - Chemical optimization and chemical biology

- **Artificial intelligence and machine learning**
  - Internal multitask prediction models

- **Structural & biophysical chemistry**
  - X-ray structure, biophysics, mass spectrometry

- **Trial capabilities**
  - Early and late stage
We prioritize our portfolio, beginning with the identification of Global Health challenges identified by the World Health Organization

2 billion patients do not get medicines they need\(^1\)

More than a billion people suffer from neglected infections each year (parasitic, viral, and bacterial), largely in "tropical" regions\(^2\)

Underserved patients living predominantly in lower income countries

Triple burden of disease in LMICs: neglected communicable diseases, non-communicable diseases on the rise, epidemics and pandemics

Unmet therapeutic needs

There are no treatments, or current medicines are suboptimal, for many priority health challenges identified by the World Health Organization

Examples:

<table>
<thead>
<tr>
<th>Emerging drug resistance</th>
<th>Toxic or poorly effective available therapies</th>
<th>No approved therapies</th>
</tr>
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<tbody>
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<td>Chagas disease</td>
<td>Dengue fever</td>
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<td></td>
<td>Leishmaniasis</td>
<td>Viral pathogens</td>
</tr>
<tr>
<td></td>
<td>Parasitic diarrhea (cryptosporidiosis)</td>
<td>with epidemic or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pandemic potential</td>
</tr>
</tbody>
</table>

In malaria, our pipeline is designed to maintain the progress achieved and support efforts for disease elimination

Novartis introduced Coartem, the 1st artemisinin-based combination therapy (ACTs), in 1999

ACTs were designated as first-line therapy for malaria by WHO in 2001

More than a billion doses of Coartem have been distributed

ACTs, along with indoor residual spraying and use of bednets, have led to substantial reduction in malaria deaths\(^1\)\(^2\)

Progress is fragile and could reverse

Annual Malaria deaths by world region 1990-2019

Our pipeline addresses unmet needs for malaria control and elimination

Novel medicines to address emerging drug resistance

Simplified dosing regimens

Improved treatments for severe malaria

Improved formulations for infants

Novel medicines to address the dormant (Plasmodium vivax) form of malaria

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Our malaria development programs address unmet needs including emergence of resistance, supported by our partners

2020 – 2022

COARTÉM
New formulation (dispersible tablet) for neonates/infants < 5kg

Uncomplicated acute Malaria

Ph2 Ganaplacide (KAF156)/LUM-SDF
- Novel non-artemisinin (OD) curative for P. falciparum
- Active against resistance mutations

Severe Malaria

Ph2 Cipargamin (KAE609) I.V.
- Fast onset non-artemisinin antimalarial
- Potential combination injectable as high barrier against resistance

2023 – 2030 Reduction of parasite susceptibility to ACTs

Active partnerships
We then identify areas where we can deliver impact at regional or global scales

Prioritization based on
Our greatest impact is in areas of unmet need, scientific feasibility, and enabling partnerships

Example: Dengue
- Nearly half of the world’s population is now at risk, with 100-400m infections/year\(^1\)
- Severe disease can cause death\(^1\)
- Novartis drug candidate, EYU688, is expected to be soon in Ph2 trials

<table>
<thead>
<tr>
<th>Unmet need</th>
<th>Feasibility</th>
<th>Partners</th>
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<tr>
<td>There is no approved direct-acting dengue antiviral medicine</td>
<td>Novartis discovered a pan-serotype inhibitor of the dengue virus nonstructural protein 4B (NS4B) that shows strong potency against all four serotypes of dengue virus in pre-clinical models(^2)</td>
<td>Welcome partnered in research efforts for EYU688 and current novel discovery work involves collaboration with US National Institutes of Health</td>
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2. Moquin S, et al. “NITD-688, a pan-serotype inhibitor of the dengue virus NS4B protein, shows favorable pharmacokinetics and efficacy in preclinical animal...
Novartis and DNDi are collaborating on the development of LXE408 in kinetoplastid disease and preparing for access

LXE408 oral, first-in-class inhibitor of the kinetoplastid proteasome

Visceral Leishmaniasis
- India Phase 2a: Safe, efficacious oral therapy vs Ambisome
- Africa Phase 2a: Safe, efficacious oral therapy vs SSG&PM

Chagas disease
- CICD² Phase 2a: Biomarkers, Safe/efficacious oral therapy vs Benznidazole
- CICD Phase 2b/3: Registration program, Adults and children, Including long-term follow up

Partnerships

1. SSG&PM: Sodium Stibogluconate & paramomycin. 2. CICD: Chronic Indeterminate Chagas disease.
Importantly, diseases in our Global Health portfolio are assuming increased relevance due to climate change

Rising temperatures may increase climactic suitability of malaria, dengue and other diseases

Emerging evidence that climate change may influence the tropical disease burden

**Dengue**
Millions of people may be threatened with new exposure to dengue over the next century

Locally acquired dengue infections have increased in parts of Europe

**Malaria**
Transmitted locally in southern US for the first time in decades

>5bn people could be at risk for malaria by 2040 due to climate and population growth

Conducted life-cycle assessment of environmental impact of Coartem®

**Viral threats**
Climate change expected to substantially increase cross-species virus transmission

One of the most extensive pipelines in Global Health with 7 new chemical entities currently in human trials across 6 disease areas

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<tr>
<td>Malaria</td>
<td>Unknown/novel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chagas disease</td>
<td>Topo II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chagas disease</td>
<td>CLK1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaria radial cure</td>
<td>Hypnozoite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sickle cell disease</td>
<td>BCL11A (GT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pandemic preparedness</td>
<td>Multiple¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DC** – development Candidate nomination. **FFPV** – First patient, first visit / trial initiation. **GT** – In vivo gene therapy. ¹ Viruses with epidemic or pandemic potential: flaviviruses, henipaviruses, coronaviruses.

- Fast-acting drug candidate in advanced trials for uncomplicated and severe malaria
- Fast-acting novel malaria drug candidate with potential for single dose cure
- Potent drug candidate for single dose cure
- Approved medicines have significant toxicity and limited demonstrated clinical benefit
- Potential first dengue-specific therapy; has activity across serotypes
- Most advanced drug candidate designed specifically for cryptosporidiosis
- Novel non-peptidomimetic SARS CoV-2 Mpro inhibitor, Ph1 FPFV achieved in 10 months after DC
- Fast-acting anti-malarial with high barrier to resistance and potential for single dose cure as part of combination therapy
- First novel malaria drugs combination to advance to phase III trials in decades
We use Novartis Access Principles to link clinical development and access

Planning early for access
Drug development discipline across the life cycle

Clinical trial diversity
Ensuring representative trials

External partnerships
Early access planning, trial diversity and partnerships are critical success factors in advancing health equity

Value creation

- Bring innovation faster and to more patients in HICs and LMICs
- Improve medical research
- Contribute to strengthening healthcare systems

Risk mitigation

- To ensure medical needs of underserved patients are not overlooked
- Ensure trial participants represent a diverse patient population to assess safety and efficacy of our medicines
- To address complex access-to-medicine barriers
- To comply with new regulations

Right thing to do

- Scientifically sound
- Social responsibility
- Sustainability of the program

Equitable access to innovative medicines

Evolving ESG reporting landscape

Innovation for Global Health to drive impact in neglected tropical diseases

Click below to navigate through the document

Impact & Health Equity Annual investor event | November 2023
Adaptive development further increases the impact of our medicines

Example 1: Sacubitril/valsartan (Entresto®) for potential use in Chagas disease

**Adaptive R&D**: Adapting existing medicines via R&D; such as new formulations, new fixed-dose combinations, repurposing for additional indications, or developing for a new target age group, e.g. children.

---

**Chagas disease**

A neglected tropical disease (NTD) caused by a parasite (*T.cruzi*), recognized by WHO as one of the 10 priority NTDs

~30% of infected individuals exhibit evidence of chronic cardiomyopathy, a leading cause of death in Chagas disease patients: ~10k deaths per year¹

---

**Unmet need**

Heart failure caused by Chagas disease has unique characteristics, higher mortality rates and no evidence-based treatment

---

**Feasibility**

Additional study to demonstrate Entresto® superiority over SoC in Chagas disease (Argentina, Brazil, Colombia, Mexico)

Recruitment completed with 900 patients enrolled

---

**Partners**

Working with partners² to increase disease awareness, foster synergies in controlling the disease and promoting access to diagnosis and treatment

---

Adaptive development further increases the impact of our medicines

Example 2: Hydroxyurea in sickle cell disease (SCD)

Globally, the number of people living with SCD increased from ~5.5m in 2000 to almost 8m in 2021 representing >40% increase. 1,000 children in Africa are born with SCD every day, up to half will die before they reach five years of age. 

**Hydroxyurea** is proven to decrease mortality from sickle cell disease.

### Unmet need
Access to a children-tailored formulation has been severely lacking in Africa, which impairs compliance with potentially life-saving medicine.

### Feasibility
Novartis developed a film coated tablet that is dissolvable in water for administration to young children. The naturally bitter taste of the active pharmaceutical ingredient was masked with a flavored sweetener.

### Partners
Ghana was the first country to approve the formulation in 2022. It has since been approved in 4 other African countries and registration is pending in more.

---

Addressing barriers to ensure people from diverse backgrounds join clinical trials

**Trial participants should represent the patients that will use the medical products**

However...

52% of US trials occur in 1.5% of the zip codes. A person’s zip code can have a significant impact on life expectancy.

39% of US population comprise of racial/ethnic minorities, but only account for 2% to 16% of clinical trial participants.

Root causes: mistrust and bias

---

**Beacon of Hope**

Co-create effective, measurable solutions for health equity

- Novartis initiated and leads, $50m contribution
- 10-year collaboration
- 26 Historically Black Colleges/Universities and expanding members
- 1200 scholarships over 10 years, mentorship and internship
- Supporting establishment of digitally enabled clinical trial Centers of Excellence
- Supporting research in health inequity, impact of environment on health

---

**Innovative Health Initiative**

Ensure equitable representation of underserved populations in clinical research

- Novartis is lead partner with in-kind contribution of €7.5M
- Agree on a common definition of underserved, understand culture-specific barriers
- Build sustainable infrastructure to improve recruitment/retention of underserved patients

---

**Metric:** 100% of US Phase 3 studies have evaluated D&I principles in feasibility planning

Source: 1. Clinical Trial Diversification Better Practices. Trans Celerate. 2. USC researchers rise to the challenge of improving diversity in clinical trials. 3. D&I principles: Race/ethnicity/gender epidemiology variances for the indication are considered during feasibility planning and trial recruitment.
Innovation for Global Health to drive impact in neglected tropical diseases

1. Long-term commitment to Global Health and underserved population

2. One of the most extensive and innovative Global Health pipelines

3. Global Health (R&D) creates value across our stakeholders by driving impact in neglected tropical disease

4. Longstanding partnerships with philanthropies and other major stakeholders to catalyze R&D efforts

5. Critical success factors to advance health equity include early access planning, trial diversity and partnerships
Evolving ESG reporting landscape

Paul Penepent
Head Finance Reporting & Accounting
Our objectives and philosophy for non-financial reporting

**External environment**
ESG reporting environment evolving at varying pace and with different requirements across the markets in which we operate

**Drivers**
1. Maturing regulatory requirements
2. The need for confidence and reliability over data to facilitate tracking against public commitments
3. Investor, customer and employee expectations continues to increase
4. Preparing for reasonable assurance

**Novartis**
Continue to advance our ESG reporting, preparing for a future convergence of financial and non-financial reporting in line with regulations

Non-financial reporting goes beyond our disclosures, allowing us to build trust with society and drive long term, sustainable value

Continued focus and investment into our ESG reporting capabilities, underpinned by a structured reporting operating model, positions us well to meet these existing and emerging requirements
# The ESG reporting landscape

There are significant upcoming ESG reporting regulations which are expected to impact Novartis integrated report and assurance requirements.

<table>
<thead>
<tr>
<th>Regulation</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swiss Code of Obligations Article 964 (Non-financial reporting and due diligence)</td>
<td></td>
<td></td>
<td></td>
<td>FY24 to be reported in 2024</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swiss Ordinance on Climate Reporting (Aligned to TCFD – Task Force on Climate-related Financial Disclosures)</td>
<td></td>
<td></td>
<td>FY24 to be reported into 2025</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Sustainability Reporting Directive (CSRD)</td>
<td></td>
<td>FY25 to be reported in 2026</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For non-EU entities</td>
</tr>
<tr>
<td>EU Taxonomy</td>
<td></td>
<td>FY25 to be reported in 2026</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For non-EU entities</td>
</tr>
<tr>
<td>The California Climate Disclosures</td>
<td>AB1305: FY23 to be reported in 2024</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Sustainability Standards Board (“ISSB”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TBD: Depending on adoption by local jurisdictions</td>
</tr>
<tr>
<td>US Securities and Exchange Commission (“SEC”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TBD</td>
</tr>
</tbody>
</table>

1. >250 employees, EUR 40m turnover, EUR 20m assets.
**Novartis is successfully preparing for emerging requirements**

We are well positioned to meet existing and emerging requirements in this rapidly evolving, and complex regulatory landscape.

<table>
<thead>
<tr>
<th>Regulations and standards</th>
<th>Effective from</th>
<th>Implications and Novartis status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swiss Code of Obligations Article 964</td>
<td>FY 2023</td>
<td>Novartis Integrated Report 2023 for the first time subject to a shareholder vote at AGM 2024</td>
</tr>
<tr>
<td>Swiss Ordinance on Climate Reporting</td>
<td>FY 2024</td>
<td>Disclosures on climate-related risks / opportunities, financial impacts</td>
</tr>
<tr>
<td>Corporate Sustainability Reporting Directive (CSRD) (legislation) using ESRS (standards)</td>
<td>FY 2025</td>
<td>Disclosures across 2 cross-cutting and 10 topic standards – subject to materiality</td>
</tr>
<tr>
<td>EU Taxonomy</td>
<td>FY 2025</td>
<td>Disclosure of sustainable ('green') share of eligible and aligned revenue, CAPEX, and OPEX</td>
</tr>
<tr>
<td>The California Climate Disclosures</td>
<td>FY2025</td>
<td>SB253: require carbon emissions reporting, 3rd party assurance</td>
</tr>
<tr>
<td>International Sustainability Standards Board (“ISSB”)</td>
<td>FY 2024</td>
<td>Investor-focused standards, designed to form global baseline for sustainability reporting</td>
</tr>
<tr>
<td>US Securities and Exchange Commission (“SEC”) Climate Proposal</td>
<td>TBD</td>
<td>TBD – ongoing uncertainty regarding final rules and timelines</td>
</tr>
</tbody>
</table>

Novartis is successfully preparing for emerging requirements.
ESG reporting at Novartis

We continue to articulate our sustainability journey, communicating our progress and performance to our stakeholders and ensuring we comply with regulatory requirements applicable to our company.

Our focus continues to be

- Preparing for additional regulatory requirements and the future alignment of ESG and financial reporting.
- Conducting regular materiality assessments to monitor and manage our most material risks and opportunities.
- Continuous assessments of quantitative and qualitative metrics to further enhance and articulate our sustainability position.
- Preparing for future assurance requirements, planning our transition from limited to reasonable assurance.
- Continuing to explore our measurement of ‘impact’ in line with the Value Balancing Alliance and International Foundation of Value Impact.
- Continuing to focus and invest in our ESG reporting operating model to drive further improvements and stay at the forefront of ESG reporting.
Conclusion

Lutz Hegemann
President, Global Health & Sustainability
We still have a long way to go in reaching our ambitious long-term targets, but we are making progress; plans and commitments on track...

Progress of selected targets

<table>
<thead>
<tr>
<th>ESG Pillar</th>
<th>Long-term public target</th>
<th>2023 target</th>
<th>Q2/Q3 progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation &amp; Access</td>
<td><strong>+200% patient reach</strong> in LMICs with Strategic Innovative Therapies by 2025¹ (1.6mn) - bond target</td>
<td>1.1m</td>
<td>1.5mn</td>
</tr>
<tr>
<td></td>
<td><strong>+50% patient reach</strong> with Global Health flagship programs² by 2025¹ - bond target</td>
<td>22.6m</td>
<td>18.5m</td>
</tr>
<tr>
<td></td>
<td>100% of new launches have a global access strategy</td>
<td>100%</td>
<td>On track</td>
</tr>
<tr>
<td>Human Capital*</td>
<td>Gender balance in management by 2023 - EPIC pledge</td>
<td>48-52%</td>
<td>48%³</td>
</tr>
<tr>
<td></td>
<td>100% of recruitment <strong>no longer asking for historical salary</strong> by 2023 - EPIC Pledge</td>
<td>100%</td>
<td>92%</td>
</tr>
<tr>
<td>Environmental Sustainability**</td>
<td>Carbon neutral (scope 1 and 2 emissions) by 2025</td>
<td>-60% (scope 1 and 2)⁴</td>
<td>-56%</td>
</tr>
<tr>
<td></td>
<td>Carbon neutral (scope 1, 2, 3 emissions) by 2030; <strong>Net Zero</strong> by 2040</td>
<td>&gt;55% of scope 3 emissions covered with ES criteria in suppliers’ contracts</td>
<td>&gt;54% of scope 3 emissions covered</td>
</tr>
<tr>
<td></td>
<td>Waste disposal reduced by 50% by 2025⁴</td>
<td>&gt;60%⁴</td>
<td>64%</td>
</tr>
<tr>
<td></td>
<td>Plastic neutral by 2030; <strong>eliminate PVC in packaging</strong>⁵ by 2025⁴</td>
<td>-90%⁴</td>
<td>-90%</td>
</tr>
<tr>
<td></td>
<td><strong>Water consumption</strong> reduced by half in our operations by 2025⁴</td>
<td>-45%⁴</td>
<td>-46%</td>
</tr>
<tr>
<td></td>
<td>Water neutral by 2030</td>
<td>Top 25% sites taking actions⁶</td>
<td>On track</td>
</tr>
</tbody>
</table>

¹Renewed EPIC pledge from 2024; existing EPIC targets until 2023. ²Q2 data. ³EPIC – Equal Pay International Coalition. ⁴ES – Environmental Sustainability. ⁵target linked to sustainability-linked bond. ⁶Malaria, Leprosy, Chagas disease, Sickle Cell Disease. ⁷Reflects post-Sandoz spin. ⁸vs. 2016 baseline. ⁹Defined as secondary and tertiary packaging; primary packaging when feasible. ¹⁰High water risk locations identified based on operational risk assessment performed in accordance with WWF Water Risk Filter Tool.
...which is reflected by consistent industry-leading performance across priority ESG ratings

<table>
<thead>
<tr>
<th>Priority rating</th>
<th>Scores¹</th>
<th>Status</th>
<th>Industry perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Updated</td>
<td>Current</td>
<td>Previous²</td>
</tr>
<tr>
<td>MSCI</td>
<td>Jul 2023</td>
<td>AA</td>
<td>AA</td>
</tr>
<tr>
<td>Sustainalytics*</td>
<td>Sep 2023</td>
<td>16.2</td>
<td>16.9</td>
</tr>
<tr>
<td>ISS ESG</td>
<td>Jul 2023</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Access to Medicine Index</td>
<td>Nov 2022</td>
<td>3.87</td>
<td>4.18</td>
</tr>
<tr>
<td>CDP Climate Change</td>
<td>Dec 2022</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>CDP Water Security</td>
<td>Dec 2022</td>
<td>A</td>
<td>A-</td>
</tr>
</tbody>
</table>

1. Score ranges: ATMI: 1 to 5; CDP: D- to A; ISS ESG: D- to A+; MSCI: CCC to AAA; Sustainalytics ESG Risk Rating: 0 (Negligible risk) to 40+ (Severe risk).  
2. ATMI is being published every other year.  
3. Based on the peer group of 14 global healthcare companies as listed in Novartis Annual Report.  
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## Conclusion

1. **Focusing on innovation and access** to medicines to create value for the company while mitigating risks.

2. **Creating impact** by fulfilling unmet medical need through delivering innovative, quality medicines to as many people as possible.

3. Our **Access Principles** are designed to drive impact e.g. significantly increasing impact in CVD through Entresto® emerging market brand.

4. Novartis has one of the **most extensive pipeline in Global Health** with 7 new chemical entities currently in human trials across 6 disease areas.

5. **Long-term commitment, partnerships**, early access planning, trial diversity are critical success factors in Global Health.

6. Well positioned to meet existing/emerging ESG reporting requirements in this complex regulatory landscape.
QA panel

Klaus Moosmayer
Chief Ethics, Risk & Compliance Officer

Lutz Hegemann
President Global Health & Sustainability

Thierry Diagana
Head Global Health Research

Sujata Vaidyanathan
Head Global Health Development Unit

Paul Penepent
Head Finance Reporting & Accounting