

PRESS RELEASE

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ZICCUM AB joins United Nations Global Compact – 'World's first 'green vaccines' will be crucial drivers of sustainable development' Ziccum CEO

ZICCUM AB has been formally accepted as a member of the United Nations Global Compact, joining over 14,000 businesses and 162 countries in the world's largest corporate sustainability initiative. CEO Göran Conradson: "All the mega trends are pointing the same way – towards 'green vaccines' as a key driver of sustainable development. And we're seeing rapidly increasing demands from High Income Countries for more sustainable vaccine products. This membership will open many new doors for extensive collaboration around sustainability. We are excited to join this dynamic, extensive network."

Worldwide, across all industries and continents, sustainability is an increasingly urgent priority. With 14, 351 businesses and 162 nation-states worldwide, the United Nation's Global Compact is the world's largest business and policy partnership created to drive the implementation of the UN's Sustainable Development Goals (SDGs). Many of the UN Global Compact's projects directly intersect with key Ziccum strategies - such as its 2021-2023 Africa Strategy to drive the implementation of UN SDGs in Africa, and its work on improving sustainability and safety in global Supply Chains.

Ziccum placed sudstainability at the heart of its strategic and operational focus in April 2021 when it announced that it was focusing on <u>six UN goals in particular</u> that it believed can be driven forward with its ambient air-drying technology that aims to manufacture a new generation of 'green' thermostable dry-powder vaccines that can be stored and transported at room temperature, with no energy-intensive cold chain needed.

'Green vaccine' sustainably produced

"Essentially these will be the world's first 'green vaccines'," says CEO Göran Conradson, "manufactured in regional networks of small, energy-efficient Fill and Finish - all with low-carbon footprints and driving local economies and outcomes."

Each Fill and Finish plant would enable the local production of up to 30 million vials of thermostable dry powder vaccine, yielding up to 300 million doses - at 80% less energy costs, 65% less OPEX costs and 50% less CAPEX costs than today's energy-intensive freeze-drying plants.

The aim of the plants is to drive vaccine self-sufficiency and sustainable development, particularly in Middle- and Low-Income Countries, reducing dependence on imports and ultimately improving social and health outcomes. Policymakers and institutional investors from the Africa Development Bank to the International Finance Corporation all forecast a rapid growth in manufacturing in Africa, making the Ziccum model highly relevant: "In the next 20 to 30 years, Africa's manufacturing sector is expected to double in size. The African Union's Agenda 2063, its blueprint for development, envisions transforming the continent from an exporter of raw materials into a sustainable production center that utilizes its own resources to manufacture locally, generate new wealth, create jobs, and lift living standards." (1)

Sustainability is driving investment

In High Income Countries too, investments in large-scale sustainable infrastructure projects are urgent priorities for both institutional and retail investors. "Between 2018 and 2021 there was a 42% increase in the amount of US investment assets directly connected to sustainability (2)," says Ziccum CFO Frida Hjelmberg. "Today, well over a third of all US investment assets are tied to sustainable investment goals. Currently 7% of all global greenhouse gas emissions come from cooling in supply chains, industrial processes and buildings (3). The global pharmaceutical cold chain is one of the largest in the world – 99% of a typical vaccine's carbon footprint comes from its cold chain carbon footprint. A green vaccine – manufactured sustainably with no cold chain requirements or carbon emissions - would be exactly the kind of infrastructural sustainability solution that investors are presently exploring."

The race for sustainability in pharma

Hjelmberg points out too that growing number of organizations are including ambitious sustainability requirements in their procurement tenders. "If suppliers want to win that contract they are increasingly being required to measure and prove how their product performs in sustainable development," she says. "To an extent, vaccine manufacturers have been given a free pass around this over the last year because of the pandemic. But that's changing fast. Requirements such as the UN's 12 Sustainable Procurement Indicators are becoming standard. Pharma manufacturers with a 'green vaccine' and a credible sustainability strategy will have an enormous first mover advantage."

Preparing for pandemics – and 'brandemics'

The last year has seen a sharp escalation in the consumerization of vaccines and vaccine brands too. In a 2021 survey, 74% of Americans said they had a brand name preference for their Covid19 vaccine and 10% said they would refuse a Covid19 vaccine dose if their preferred brand wasn't available (4). Younger Gen Z and millennial consumers in particular showed strong brand preferences. In repeated surveys younger consumers too show a sharp preference for green products and services – with 39% of Generation Z and 42% of Millennial respondents saying they would be willing to pay more - and would accept a 25% percent price premium - for sustainable products (5).

Frida Hjelmberg CFO: "No vaccine manufacturer has yet branded a "green vaccine", emphasizing the sustainability credentials of the vaccine throughout the value chain – from manufacture through packing to supply. No one has connected regional vaccine access to sustainable manufacture and distribution. Why not? When next-generation consumers are telling us that this is exactly the kind of product they want. The world's first 'green vaccine' could be premium priced in many markets and would likely achieve instant brand recognition."

Ziccum CEO Göran Conradson: "The United Nations Global compact brings us together with a wide range of other companies from our sector, and beyond - all united by a shared urgency around sustainability – we are delighted to begin meeting and working with these new peers and partners."

- International Finance Corporation: https://www.ifc.org/wps/wcm/connect
 /news_ext_content/ifc_external_corporate_site/news+and+events/news/insights/for-africamanufacturers-going-green-may-offer-profits
- 1. CNBC News: https://www.cnbc.com/2020/12/21/sustainable-investing-accounts-for-33percent-of-total-us-assets-under-management.html
- UK Parliament: https://researchbriefings.files.parliament.uk/documents/POST-PN-0642 /POST-PN-0642.pdf
- 1. Quaerz: https://qz.com/1990168/consumer-attitudes-about-pfizer-jj-and-other-covid-19-vaccine-brands/
- 1. https://www.consultancy.uk/news/29424/third-of-consumers-willing-to-pay-more-for-sustainable-products

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About Ziccum

Ziccum develops new thermostable versions of the world's most urgently needed, life-saving vaccines. The Company's patented technology, LaminarPace, enables the production of new, gently air-dried formulations that can be transported easily and cost-effectively, with no need for a costly and complicated cold chain, all the way from the factory to the last child in the last mile of the supply chain.

Attachments

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