Twist Bioscience Releases 2024 Corporate Responsibility Report and Quantifies Carbon Footprint of Oligo Manufacturing Process for NGS Target Enrichment Panels

September 9, 2024

SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)--Sep. 9, 2024-- Twist Bioscience Corporation (NASDAQ: TWST), a company enabling customers to succeed through its offering of high-quality synthetic DNA using its silicon platform, today released its 2024 corporate responsibility report detailing Twist's approach to sustainability, social responsibility and ethics. The report highlights Twist's ongoing commitment to advancing sustainable initiatives to best serve customers, communities and the planet.

"At Twist, we're always looking to the future and improving what we do, whether that's delivering new products, providing development opportunities for our employees, continuing to hold ourselves to the highest standards of biosecurity or our efforts in sustainability," said Emily M. Leproust, Ph.D., CEO and co-founder of Twist Bioscience. "Last year we quantified the carbon footprint of manufacturing a single Twist gene compared to approaches that use a 96-well plate and found the differential to be astounding. This year we quantified the carbon footprint of our oligo manufacturing process specific to our NGS target enrichment panels. For a year's production of Twist panels, we found that our process emitted the equivalent CO_2 emissions as about 2.4 tanker trucks of gasoline compared to over 6,000 tanker trucks' worth of gasoline for the industry standard 96-well plate approach.[1]"

Dr. Leproust continued, "Sustainability starts with our platform. Whether our customers purchase genes and other synbio products manufactured in our Wilsonville facility or target enrichment panels manufactured in South San Francisco, by choosing Twist, they receive excellent products and a remarkable team, and for no extra cost, embrace sustainable practices, as corporate responsibility is integrated into our operations."

An Inherently Sustainable Platform

Twist's silicon-based synthetic DNA manufacturing platform offers a more sustainable alternative to legacy methods by miniaturizing the chemical reaction to synthesizing DNA, using 99.8% less reagents than 96-well plate approaches. Twist quantified the carbon footprint of manufacturing a single gene using its silicon chip-based platform compared to approaches that use a 96-well plate. Twist's approach emits 36 grams (0.036 kilograms) of carbon dioxide equivalent (CO_2e) per gene, compared to up to 23,000 grams (23 kilograms) per gene emitted by 96-well plate approaches[2].

Beyond quantifying the carbon footprint of manufacturing a single gene, Twist calculated the carbon footprint of its oligo manufacturing process specific to its NGS target enrichment panels and found that the chemicals used in Twist's NGS target enrichment panel production for fiscal 2023 generated 180,000 kg of CO_2e emissions. In contrast, using the industry standard 96-well plate chemical volumes and approach to manufacture the equivalent number of NGS target enrichment panels would have generated a massive 470,000,000 kg of CO_2e[2].

For the first time in its 11-year history, Twist disclosed its Scope 1 and Scope 2 emissions of 6.27 and 14,315 metric tons of CO_2e, respectively, across its U.S. sites. Disclosing these data further demonstrates Twist's commitment to transparency and environmental stewardship.

Commitment to Ethics and Governance

Twist works with governments as well as other DNA synthesis providers to develop, promote and evolve a consistent set of biosecurity best practices. These partnerships align with the company's dedication to biosecurity and export control screening, ensuring Twist supports safe, responsible research and that potentially dangerous DNA sequences are not synthesized or shipped to unlicensed organizations.

Twist also prioritizes the privacy of its customers and employees by consistently evaluating and upgrading its system security. The company has implemented robust cybersecurity and biosecurity policies, including an International Organization for Standardization (ISO) certified information security management system with a recent 2022 revision certification (ISO 27001:2022). This positions Twist well ahead of the 2025 requirement for all ISO-certified organizations and reinforces Twist's commitment to protecting customer and partner data.

Fostering a Diverse Workforce

Twist is committed to employing a diverse workforce and fostering a culture of inclusivity. As of the end of fiscal 2023, 56% of Twist's U.S. organization identified as an individual of color, with 24% of the U.S. employee base identifying as women of color. Women play a pivotal role in the company at all levels, making up 42% of Twist's executive team and 42% of its total workforce in fiscal 2023.

Twist's commitment to diversity in its recruitment efforts extends to partnerships with local community colleges in California, Oregon and Massachusetts to help shape the biotech curriculum and train the next generation of biomanufacturers.

As part of its commitment to employee development, Twist encourages educational and developmental growth for employees by offering a year-long leadership program for mid-level managers and an annual tuition reimbursement of up to $5,250 for all employees. In the last fiscal year, Twist invested over $220,000 in employee learning, specialized training, and in providing self-directed learning opportunities for all employees and leadership looking to refine or develop their professional skills.

In fiscal 2023, Twist employees volunteered a total of 1,143 hours to numerous causes and organizations, made possible by a Volunteer Time Off

program encouraging employees to participate in philanthropic initiatives by providing 8 hours of paid time off per year for volunteer efforts.

To download the full report visit: https://www.twistbioscience.com/company/corporate-responsibility

[1]Calculated Twist internal data using Dr. Oligo benchmark January 2021. Comparison calculated using the EPA Greenhouse Gas Equivalencies Calculator

[2]Calculated Twist internal data using Dr. Oligo benchmark January 2021

About Twist Bioscience Corporation

Twist Bioscience is a leading and rapidly growing synthetic biology and genomics company that has developed a disruptive DNA synthesis platform to industrialize the engineering of biology. The core of the platform is a proprietary technology that pioneers a new method of manufacturing synthetic DNA by “writing” DNA on a silicon chip. Twist is leveraging its unique technology to manufacture a broad range of synthetic DNA-based products, including synthetic genes, tools for next-generation sequencing (NGS) preparation, and antibody libraries for drug discovery and development. Twist is also pursuing longer-term opportunities in digital data storage in DNA and biologics drug discovery. Twist makes products for use across many industries including healthcare, industrial chemicals, agriculture and academic research.

Follow us on LinkedIn | X | YouTube | Instagram

Twist Bioscience Legal Notice Regarding Forward-Looking Statements

This press release contains forward-looking statements. All statements other than statements of historical facts contained herein are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including the execution of Twist’s vision and strategy with respect to sustainability, diversity, governance, and ethical commitments and the completion of Twist’s projects that are currently underway, in development or otherwise under consideration. Forward-looking statements involve known and unknown risks, uncertainties, and other important factors that may cause Twist Bioscience’s actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the ability to achieve the expected benefits of Twist Bioscience’s restructuring activities and reduced investments in DNA data storage; the ability to attract new customers and retain and grow sales from existing customers; the ability of Twist Bioscience to achieve sufficient revenue to achieve or maintain positive cash flow from operations or profitability in any given period will depend heavily on the success of our existing products and the development and commercialization of additional products in the synthetic biology, biologic drug and data storage industries; risks and uncertainties of rapidly changing technologies and extensive competition in synthetic biology that could make the products Twist Bioscience is developing obsolete or non-competitive; uncertainties of the retention of significant customers; the ability of Twist Bioscience to successfully integrate acquired companies and to achieve expected benefits from acquisitions; supply chain and other disruptions; risks of third party claims alleging infringement of patents and proprietary rights or seeking to invalidate Twist Bioscience’s patents or proprietary rights; and the risk that Twist Bioscience’s proprietary rights may be insufficient to protect its technologies. For a description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to Twist Bioscience’s business in general, see Twist Bioscience’s risk factors set forth in Twist Bioscience’s Annual Report on Form 10-K filed with the SEC on November 21, 2023 and subsequent filings with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and Twist Bioscience specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

View source version on businesswire.com: https://www.businesswire.com/news/home/20240909630223/en/

For Investors:
Angela Bitting
SVP, Corporate Affairs
925-202-6211
abitting@twistbioscience.com

For Media:
Amanda Houlihan
Communications Manager
774-265-5334
ahoulihan@twistbioscience.com

Source: Twist Bioscience Corporation