Twist Bioscience Corporation
ESG Report

JANUARY 2022

CORPORATE OVERVIEW AND OUR APPROACH TO SUSTAINABILITY
We are #WritingTheFuture.
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A letter from our CEO, Emily LeProust, Ph.D.

At Twist Bioscience, our mission is to make synthetic DNA to improve health and sustainability. The power of our silicon-based platform drives our ability to make synthetic DNA at a scale otherwise unavailable to our customers. We leverage this bold, innovative technology to improve environmental sustainability, as our proprietary DNA manufacturing process reduces the volume of chemical reagents used and waste generated by 99.8%.

By taking a technology approach to dramatically reduce the environmental impact of DNA synthesis we enable our customers a more sustainable way to design, build, test, and commercialize future therapeutics, diagnostic tests, agricultural products, materials, biobased chemicals, and data storage solutions.

This proprietary platform along with the surrounding software and commercial infrastructure allows us to work in service of our customers who are changing the world for the better.

As we expand our company and serve more customers, we acknowledge an increasing responsibility to operate our business for the benefit of our stakeholders, reaching beyond our walls. This includes our employees, customers, suppliers, communities, and investors. The impact beyond our walls has been tangible, as evidenced by 74% of Twisters who feel that our commitment to social responsibility is genuine*, a 16% increase from our previous Employee Engagement Survey.

As a recent example of our commitment, we published a Supplier Code of Conduct Policy Statement in order to engage at a deeper level with our suppliers to work together on the values we embody not only for our Twisters but also for our suppliers.

Our ESG strategy is rooted in our guiding principles, our culture and in the way we operate. We believe in doing the right thing. As Twisters, we know that the world is changing and the way we respond to that change defines our impact in and on the world.

In 2022, we intend to align our business operations with the most appropriate United Nations Sustainable Development Goals.

* 2021 Employee Engagement Survey
Our governance begins at the Board level and reaches throughout every level of the organization. Achieving our vision requires strategic planning and long-term commitment from our Board and our employees, while executing our daily objectives always with an eye on the future.

Our integrity and ethics guide our business practices as we expand our reach. We actively protect our tangible and intangible assets, invest in the development of our employees, while we evaluate, and mitigate risks across our operations and our products.

We invest and innovate relentlessly to address complex challenges and empower groundbreaking science across many industries. We embrace sustainable business practices and socially conscious operations. We hire experts across multiple disciplines, people committed to challenge the status quo who truly want to make a difference. Our globally diverse employee base embodies our guiding principles of Grit, Impact, Service and Trust, working to fulfill our mission to provide the highest-quality synthetic DNA and DNA products to improve health and sustainability.

Our Twisters work in service of our customers. And at Twist, we often say that Diversity is in our DNA — a play on words, of course, as we sell a variety of products that stem from our proprietary silicon-based synthetic DNA platform. But we also mean that we value diversity of all kinds — race, geography, gender identification, sexual orientation, and so much more.

We believe that diversity of thought and experience drive us to challenge assumptions and biases to work toward the best business outcome. This highly dynamic, yet, highly respectful and collaborative environment leads to creative problem-solving in teams aligned toward a common vision to benefit the greater good.

Our tagline of “Writing the Future” focuses on advancing science for each person, full stop no caveats.

We are #WritingTheFuture.

Sincerely,

EMILY M. LEPROUST, PH.D.,
CEO AND CO-FOUNDER OF TWIST BIOSCIENCE
Our Guiding Principles

**SERVICE**
- Always ask, what can I do for you?
- Listen, hear and dialogue empathetically
- Relentlessly focus on internal and external customer needs
- Communicate to deliver outstanding service
- Build mutually beneficial, long-lasting relationships

**IMPACT**
- Bold ideas, daily incremental contributions
- Skillfully deliver on ambitious goals and stay humble
- Collaborate and share knowledge to create value
- Diligently improve quality, velocity and cost
- Voice your ideas, commit the time, find new ways

**GRIT**
- Passionate drive, fierce determination
- Always strive for excellence and persevere
- Adapt resiliently and learn from each attempt
- Drive strategic and sustainable outcomes
- Take ego-less ownership and focus on resolution

**TRUST**
- Vigilant stewardship, transparent interactions
- Provide products designed and intended for public benefit
- Protect the well-being of people and our planet
- Demonstrate integrity and ethical behavior
- Interact in an accountable, respectful and transparent manner
Our Business

At Twist Bioscience Corporation, we work in service of customers who are changing the world for the better. In fields such as health care, food/agriculture, industrial chemicals, academic research and data storage, by using our synthetic DNA tools, our customers are developing ways to better lives and improve the sustainability of the planet. We believe that the faster our customers succeed, the better for all of us, and we believe Twist Bioscience is uniquely positioned to help accelerate their efforts.

We have developed a disruptive DNA synthesis platform to industrialize the engineering of biology that provides DNA for a wide range of uses and markets. The core of our platform is a proprietary technology that pioneers a new method of manufacturing synthetic DNA by “writing” DNA on a silicon chip.

We have miniaturized traditional chemical DNA synthesis reactions to write over one million short pieces of DNA on each silicon chip which is approximately the size of a large mobile phone. As a result of these efforts our core platform technology reduces waste and consumption of chemical reagents by 99.8%, making our process significantly more sustainable and environmentally friendly than legacy methods. By using our synthetic DNA and DNA products, our customers utilize more sustainable inputs when creating their products.

The miniaturization of our manufacturing process allows us to use a relatively compact physical footprint when compared to traditional DNA synthesis manufacturing methods.

We have combined our silicon-based DNA writing technology with proprietary software, scalable commercial infrastructure, and an e-commerce platform to create an integrated technology platform that enables us to achieve high levels of quality, precision, automation, and manufacturing throughput at a significantly lower cost than our competitors. We offer the lowest cost of DNA in the industry, with clonal genes as low as $0.09 per base pair, democratizing access to synthetic DNA and enabling responsible research across many industries.

We have applied our unique technology to manufacture a broad range of synthetic DNA-based products, including synthetic genes, tools for next generation sequencing, and antibody libraries for drug discovery and development, all designed to enable our customers to conduct research more efficiently and effectively. Additionally, we are expanding our capabilities by harnessing our proprietary platform to disrupt and innovate within larger market opportunities and new applications for synthetic DNA, including antibody discovery and optimization for therapeutic drugs and DNA data storage. In fiscal 2021, we shipped our products to a global base of approximately 2,900 customers across a broad range of industries.
Background on Synthetic DNA and How it Fuels Product Development

DNA is the fundamental building block of biology. The ability to design DNA and engineer biology, is growing rapidly, and we believe this field represents one of the most exciting areas of growth and technological innovation in the 21st century. Synthetic Biology allows customers to build their applications using DNA, in many cases replacing fossil fuel as the precursor material.

Our Customers Use Our Products & Solutions for Many Applications

**MEDICINE**

Synthetic DNA is a critical component in the development and production of next generation therapeutics, including cell, gene, and nucleic acid therapies. In addition, the development of biologics and antibody drugs are not possible without robust synthetic DNA sources. Synthetic DNA is also integral to the development of Next Generation Sequencing (NGS)-based molecular diagnostic tools, and the corresponding personalized therapies built to treat diseases like cancer, Alzheimer’s and Parkinson’s. The realization of personalized medicine will require individualized synthetic DNA to potentially correct genetic mutations discovered through these NGS-based diagnostics, possibly through CRISPR or other genome editing technologies. In addition to personalized medicine approaches, synthetic DNA is also integral to the emerging discovery of new natural products following the deep sequencing of environmental microbiomes, and to the inexpensive enzymatic synthesis of chemical entities.
**INDUSTRIAL CHEMICALS**

The production of chemicals is shifting to bioprocesses that use atmospheric carbon dioxide (CO₂) as the source of carbon instead of petroleum. By introducing synthetic DNA into the genes of yeast, bacteria and algae, the natural process of sugar fermentation can be harnessed to produce any chemical, e.g., nylon used in carpet, rubber used in tires, plastics used in everyday life. In addition to a net reduction in atmospheric carbon that promotes sustainability, the cost of production decreases when compared to oil-based products. Also, new high value chemicals not accessible through petroleum-based chemistry can be manufactured through synthetic DNA, e.g. synthetic silk, cosmetics and advanced materials.

**AGRICULTURAL-BIOTECHNOLOGY AND ANIMAL HEALTH**

The security of the worldwide food supply requires the engineering of crops resistant to evolving pests, adapted to more extreme drought and flood conditions, and cheaper to grow by eliminating the need for fertilizers. Current and emerging genetic modification technologies use synthetic DNA to add traits to plants and the microbes living synergistically with them. Additional advancement now allows for the ability to add multiple traits at once, also known as trait stacking. In addition to plant species, the sustainable maintenance and optimization of production animals and livestock is critical to supporting both local and global economies. Synthetic DNA is enabling the development of robust and cost-effective diagnostic tests to screen for disease and help with livestock health management. In addition, NGS-based genetic tests enable favorable trait screening which allows producers to perform selective breeding to enrich their populations for the most robust and valuable traits.
Pursuing Vertical Market Opportunities

STORING DIGITAL DATA ON DNA: NATURE’S WAY

The amount of digital data worldwide continues to grow at an exponential rate. The scaling of mainstream data storage media technologies is slowing down and experts estimate they will not be able to keep up with demand, thus the industry is seeking additional storage media technologies. Archival storage (data that is stored and accessed infrequently) is expected to grow to 60-80% of data storage given that data temperature (access frequency) overall is cooling down, making the archival class of storage the fastest growing storage tier. All current mainstream storage technologies have limited longevity and require data migration as well as substantial maintenance and energy when active. DNA is the only storage solution that has the potential to scale to meet the anticipated demand while enabling sustainable data storage solutions.

DNA provides several benefits over current storage methods: density — solutions scaling from data lakes to data oceans; longevity — enabling century and millennium scale archive storage; immutability — stable form where the data is the medium (we will always be able to read DNA); sustainability — lowest energy carbon footprint amongst all media.

DRUG DISCOVERY AND DEVELOPMENT

In drug discovery, there is an opportunity to improve the process of antibody optimization to identify the best antibody or series of antibodies for a specific disease treatment. Current methods of drug discovery are based on the creation and screening of randomly created antibody libraries that do not follow the rules of the human repertoire and do not explore the sequence space rationally, analogous to looking for a needle in a haystack, resulting in long and costly timelines. By designing and building precise libraries of antibodies that follow the rules of the human repertoire and explore the sequence space rationally, analogous to stacks of needles, Twist Bioscience’s synthetic DNA is accelerating the process of antibody discovery, optimization and humanization, thus minimizing time and maximizing discovery output.
Who Leads ESG at Twist Bioscience

As a company, we committed to ESG goals and established an internal ESG Team.

Nelson Chan is our Board of Directors representative overseeing our ESG efforts.

Angela Bitting is our Chief ESG Officer, with executive objectives and compensation tied to achieving ESG goals.

Carlos Zapata is our Senior Staff ESG Specialist.
Our ESG Ambassadors represent diverse areas of the company and meet at least quarterly.

These include the following Twist Employees:

- **Jim Thorburn**
  CFO

- **Paula Green**
  SVP, HR

- **Maite Gorrino**
  Director of Supply Chain

- **Jacqueline Fidanza**
  VP Operations

- **James Diggans**
  Distinguished Scientist, Bioinformatics and Biosecurity

- **Nam Doan**
  Sr. Director, Information Technologies

- **Shakil Ahmed**
  Sr. Director, Quality Assurance

- **Jimmy Jin**
  VP, Marketing
Twist’s Environmental Commitment

Writing the Future

From our original corporate vision to provide synthetic DNA to improve health and sustainability, Twist recognizes the essential role we play in creating a bright and positive future for our world and all who inhabit it. To celebrate Earth Day 2021, we highlighted a key sustainability initiative at Twist — reducing our chemical footprint.

WHAT IS A CHEMICAL FOOTPRINT?

Every company has a chemical footprint, defined as the total mass of chemicals used by an event, organization, service, building, or product. Minimizing the use of toxic or environmentally hazardous chemicals throughout supply chains ultimately results in less potentially damaging waste, a safer environment for employees, and a cleaner environment for the planet.
Chemicals Used in Twist’s Workflow

At Twist, we specialize in DNA synthesis. For the last 40 years, the established production method for synthetic DNA has been based on phosphoramidite chemistry.

**THERE ARE SIX MAIN COMPONENTS TO THIS REACTION:**

<table>
<thead>
<tr>
<th><strong>PHOSPHORAMIDITES</strong></th>
<th>The building blocks of synthetic DNA</th>
<th><strong>OXIDIZER</strong></th>
<th>Forms a strong chemical bond between the new base and the growing DNA strand.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACTIVATOR</strong></td>
<td>Activates the new phosphoramidite for addition to the growing DNA strand.</td>
<td><strong>DEBLOCKER</strong></td>
<td>Removes protective chemical groups on the phosphoramidite.</td>
</tr>
<tr>
<td><strong>CAPPER</strong></td>
<td>Blocks off any DNA molecules that did not react as intended in the previous cycle.</td>
<td><strong>WASH</strong></td>
<td>Cleans the growing strand between steps, minimizing unintended reactions.</td>
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**Oligonucleotide Synthesis**

A diagram showing the reaction cycle for phosphoramidite chemistry, the industry-standard oligo synthesis technology.
The phosphoramidite reaction has been the gold-standard method for DNA synthesis since its invention almost 40 years ago. DNA synthesis companies use phosphoramidite chemistry to generate oligonucleotides (oligos), single-stranded DNA molecules between 20 and 300 bases in length. Oligos can be used in various applications, from creating longer genes to study disease to creating therapeutics and diagnostic tests and even gene editing applications.

Twist Bioscience was founded on the ability to miniaturize the chemical reaction of synthesizing DNA, minimizing the volume of chemical reagents used. For each gene synthesized, Twist reduces the volume of reagents used by more than **99.8% when compared to standard gene synthesis methods.**
Minimizing Twist’s Chemical Footprint

Many DNA synthesis companies synthesize oligos on a 96-well plate, generating 96 oligos in parallel, one in each well. While this process successfully achieves DNA synthesis, it requires high volumes of each reagent. Conversely, Twist synthesizes over 1 million oligos on a silicon plate with the same footprint as a 96-well plate which makes 96 oligos. Each silicon plate contains over 1 million nanometer-scale devices. With the invention and implementation of picoliter-scale fluidic handling, Twist has dramatically miniaturized every step of the synthesis process, including reagent usage.

Twist’s silicon synthesis chip (left) enables the synthesis of over 1 million oligos at once and takes the same form factor as a 96-well plate (right).

For comparison, we evaluated the reagents used to generate two genes using Twist synthesis relative to an industry-standard plate-based oligo synthesizer. We assume that one gene requires 96 oligos to generate, so one run of a typical 2-plate system will create enough material for two genes.
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<th>REAGENT</th>
<th>PLANT-BASED SYNTHESIS REAGENT CONSUMPTION FOR 192 OLIGOS (L)</th>
<th>VOLUME REDUCTION BY TWIST BIOSCIENCE</th>
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<tr>
<td>Phosphoramidites</td>
<td>0.58</td>
<td>&gt;99.999%</td>
</tr>
<tr>
<td>Activator</td>
<td>0.86</td>
<td>&gt;99.999%</td>
</tr>
<tr>
<td>Capper</td>
<td>1.54</td>
<td>&gt;99.8%</td>
</tr>
<tr>
<td>Oxidizer</td>
<td>1.15</td>
<td>&gt;99.8%</td>
</tr>
<tr>
<td>Deblocr</td>
<td>6.16</td>
<td>&gt;99.9%</td>
</tr>
<tr>
<td>Wash</td>
<td>11.52</td>
<td>&gt;99.9%</td>
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Due to competitive reasons, we did not provide absolute volumes for Twist reagent usage; volume reduction is provided instead.

As shown above, Twist Bioscience’s miniaturization of oligo synthesis means at least **99.8% less reagent is used per gene compared to plate-based synthesis, leading to a safer, more environmentally friendly process.**

Notably, plate-based synthesizers don’t just lead to wasted reagents but also the wasted product, as they generate around 20x more oligo than is needed for gene synthesis (e.g. 5 nanomoles generated when only 0.25 nanomoles required). On the other hand, Twist has a fully integrated process where no excess oligo is produced, completely removing oligo waste from the gene synthesis process.

**We are committed to writing the future of sustainability.** We are proud that our customers can make a positive environmental impact by choosing a DNA synthesis process with a reduced chemical footprint to achieve more sustainable development of therapeutics, diagnostic tests, agriculture yields, or significantly reduce air pollution. Our synthetic DNA is also used to reduce dependence on pesticides and fertilizers, to produce plastics, flavors, perfumes, sweeteners, and so much more through fermentation rather than petroleum-based products.

We are committed to the continued integration of environmental sustainability practices into our business, ensuring Twist maintains a positive impact on the planet.

“Nature is telling us that we are on an unsustainable path, and it’s time to course-correct, that does not mean abandoning technology but rather harnessing the power of biology itself to reconcile the creature comforts of human civilization with the natural world.”

**EMILY LEPROUT, CEO AND CO-FOUNDER**
**TWIST BIOSCIENCE**
Recycling Programs at Twist

In building toward a greener future, Twist incorporates sustainability beyond its DNA synthesis platform. Through miniaturized chemistry, Twist enables massive scaling of the DNA synthesis process while also greatly reducing the company’s chemical footprint as described above. But, to truly work towards a sustainable future, we believe we must go beyond our products to address the challenge of sustainable science.

To begin addressing the large plastic waste challenge in labs as a whole, in January 2019 Twist launched an initiative to reduce the company’s waste by recycling plastic gloves. We’re extremely proud of this program and we hope to inspire others to adopt similar initiatives.

Twist has been recycling nitrile gloves in partnership with The RightCycle™ Program from Kimberly-Clark Professional since 2019. What initially started as a pilot program with Twist’s Research and Development team quickly expanded to a company-wide process, as it proved to be both effective and simple to implement.

Because only specific types of materials are suitable for this type of recycling, Twist laboratories primarily uses nitrile gloves from Kimberly-Clark Professional. Used gloves are collected in designated, reusable bins. Once full, the gloves are shipped in any available corrugated cardboard box to Kimberly-Clark Professional processing facilities, where they are turned into new pellets. The pellets are used to produce new gloves or other consumer products and durable goods, such as flowerpots and lawn furniture, benches and bicycle racks. The ability to ship the gloves in recycled boxes is an additional recent benefit that further reduces our carbon footprint.

In total, Twist has now diverted 11,755 pounds of plastic waste from landfills and has plans to expand the program’s scope to include other forms of personal protective equipment as well.

As a direct result from our recycling initiative, we are proud to have been recognized by Kimberly-Clark Professional for our exceptional efforts toward sustainability by awarding Twist’s laboratories the 2020 Greenovation Award—an award intended to honor the waste diversion efforts of participants in The RightCycle™ Program.
Materiality Assessment

As an important part of our ESG efforts, we conducted a materiality assessment to determine areas of material environmental, social and governance risk to Twist and to our stakeholders.

To create the materiality matrix, we conducted interviews across all executive members and all departments across the organization.

We then reviewed the results with the executive leadership team to prioritize the risks and presented the data to the Board of Directors.

For each risk identified, we have mitigation plans in place. In many areas of risk, we also see tremendous opportunity.
Supply Chain Management

As the world struggles with the COVID-19 pandemic and the severe strains it has caused on the global supply chain, we have been working closely with our suppliers to develop contingency plans to assure continuity of supply while maintaining high quality and reliability, and in some cases, we have established long-term supply contracts with our suppliers. During the pandemic, we increased our supply of several components and sourced additional suppliers for key materials to mitigate supply chain disruptions and ensure ongoing operations.

We are committed to ensuring social and environmental responsibility and ethical conduct throughout our supply chain. We implemented a Supplier Code of Conduct to identify and engage in business with organizations that conduct their business with principles that are consistent with the Code. Specifically, we are committed to addressing issues throughout our supply chain, such as human rights, forced labor and human trafficking, child labor, working hours, wages and benefits, health and safety, environmental practices, among others, as detailed in our code of conduct.
Product Quality & Management

We are committed to delivering and enabling quality across the Twist Bioscience organization. Our Quality Policy states “Implicit in our quality policy is the commitment to customer satisfaction while complying with legal and regulatory requirements and providing high quality products and services. This commitment is a mandatory component of our culture and the values we uphold as an organization. Quality is an objective owned by all at Twist as we strive for meeting quality objectives and with continual improvement, we maintain an effective quality management system.”

As part of our quality policy, we certified our Quality Management System (QMS) for our Target Enrichment Panels to the ISO 13485:2016 standard (Medical devices—Quality management systems—Requirements for regulatory purposes). ISO is a global network of national standards with over 18,000 standards for nearly every aspect of technology and business.

During our annual recertification in 2021, we added several products to our certification:

1. NGS Kits (Catalog Products)
2. Synthetic RNA and Respiratory Virus Controls
3. Synthetic DNA Controls

“Modern global sustainability is the integration of the environment, people, and the economy, each of them is needed to thrive. You can’t have one without the other. Therefore, the practice of sustainability recognizes that everything is connected and requires a different approach.”

Emily Leproust, CEO and Co-Founder
Twist Bioscience
Twist's Social Responsibility

Diversity is in our DNA

At Twist, we are committed to investing financial and personnel resources to recruit, train, develop and retain a diverse global workforce.

We are committed to creating and maintaining a diverse, inclusive, and safe work environment where our employees can bring their best selves to work each day and are respected and valued regardless of gender, age, race, ethnicity, national origin, sexual orientation or identity, disability, education, or any other trait.

We provide equal opportunities for employment and advancement. We respect the value that diverse life experiences bring to our Board, our leadership and our employees.
Human Capital Management

OVERSIGHT

We have twelve dedicated, full-time employees who oversee all aspects of our human resources processes including attracting, retaining and motivating our employees. We are consistently looking at new opportunities and avenues to recruit talented individuals to work in our organization.

Our Compensation Committee oversees human capital management at the Board level and receives quarterly reports from the SVP, HR. Our SVPs also receive regular reports on our human capital resources.

STRATEGY

As part of our focus on diversity in recruiting we have a partnership with the California Community Colleges. In addition to hiring many students from their programs, we support the Bioscience Development Hub project and participate in the Advising Committee while providing input for the biotech curriculum.

We are an active member of the BioMADE Manufacturing Innovation Initiative (MII) that will launch an after-school program focused on training students for biomanufacturing careers. This program will be credit-bearing, industry-informed, and based on the successful Innovation Pathways framework through Worcester Public Schools. BioBuilder will develop the curriculum, which will feed into relevant certificate and credentialing programs at Quinsigamond Community College (QCC). The curriculum will be informed by Twist along with Worcester Polytechnic Institute’s (WPI) Biomanufacturing Education and Training to ensure that the program meets industry’s technical and hiring needs. In addition to developing an industry-responsive biomanufacturing curriculum, this project will define how students can further their education through QCC or WPI; build relationships with local industries for work-based learning opportunities; and inspire high school students to see biomanufacturing as a career path for themselves. Ultimately, this training model could serve as a template for nationwide implementation.

We recently joined an organization in Portland, OR Partnerships in Diversity, to build relationships with local organizations to help ensure that we continue our diversity recruiting efforts for Twist’s new Wilsonville, OR location. These are just some of our continued efforts in our commitment to ensuring that we always have a diversity focus with our recruiting strategy.

82% of Twist employees say this is a great place to work
82% of employees at Twist Bioscience Corporation say it is a great place to work compared to 59% of employees at a typical U.S.-based company.

Source: Great Place to Work® 2019 U.S. National Employment Engagement Study.
Twist’s 2021 Engagement Survey
2019 survey

91%
I’m proud to tell others I work here

89%
People here are given a lot of responsibility

88%
I feel I make a difference here

86%
When I look at what we accomplish, I feel a sense of pride

86%
People here are willing to give extra to get the job done
Leadership and Development

Our diverse workforce allows us to attract greater numbers of non-traditional candidates. Our people and their diversity is one of our greatest strengths as it drives our innovation and engagement. Once a Twister signs on as an employee, their journey continues as we focus on their development. We work hard to promote from within, building out cultural agility and communication.

We invest significant financial and support resources to develop the talent we need to remain at the cutting edge of innovation to ensure Twist Bioscience is an employer of choice. We recently launched a new performance management system to support our culture, maintain consistency with our guiding principles and to focus on continuous learning and development during our annual formal performance review cycles. Our success in the market depends on employees understanding and embracing how their job contributes to the company’s overall strategy. We encourage cross team communication as well as integrated departmental communication. We believe this broadens our employees’ skill sets and provides opportunity for growth and advancement. We invest in our next generation of leaders through a one-year leadership program for mid-level managers.

In addition, we offer tuition reimbursement aimed at growth and career development. If employees are interested in continuing their education through an accredited program, **Twist will reimburse employees up to $5,250 per year.** We have made a significant investment in an online learning platform with on-demand, video-based content. Employees have the opportunity to refine or develop professional skills, learn new software, and explore as they plan their career growth. The platform also offers tremendous potential for managers and employees to create development plans as part of the performance review process.
Twist is committed to professional development, leadership development, and learning, and invested over $600,000 in employee learning, training, and development. In fiscal 2021, all employees received access to self-directed learning and development, with 78 leaders receiving leadership development coaching. Twisters participated in more than 8800 hours of coaching, training, and development in the period from October 1, 2020 to September 30, 2021. To continue building on our commitment to the professional development of our colleagues, Twist has set measurable targets to increase our expenditure by 10% by 2025.

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<tr>
<th>L&amp;D MODALITY</th>
<th>INTENDED OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Learning and Development</td>
<td>• Ensure all Twisters have access to self-directed L&amp;D</td>
</tr>
</tbody>
</table>
| Leadership Development for Senior Directors | • Reach their individual leadership goals  
• Utilize change management model to lead their teams  
• Develop self awareness  
• Use a coach approach to leadership  
• Outcome: 7/14 (50%) of employees who completed the group coaching were promoted during or after their coaching engagement |
| Mid-level Manager Development          | • Find out leadership purpose  
• Motivate and engage others  
• Understand decision-making  
• Learn to coach others |
| Sales Training                         | • Establish a common sales language and sales methodology  
• Leverage Blue Sheets to review Complex Deals to reduce the risk of complex deals to slip and provide transparency to complex deals across Twist Sales Leadership |
| 1:1 Coaching Offered                   | • Leadership development                                                                              |
| Tuition Reimbursement                  | • Encourage Twisters to take steps to further develop within their profession                          |
Diversity, Equity & Inclusion

Diversity is in our DNA. We believe diversity includes gender, racial identity, cultural identity, sexual orientation, physical ability, mental ability and more. Our employees come from more than 25 countries and bring many different thoughts, identities and lived experiences to Twist. We believe our company is stronger because of the variety of experiences and backgrounds our employees bring to their work every day. We believe diverse teams drive better business decisions by challenging each other, sharing a broader range of possibilities from their experiences and resulting in more innovative products and services.

We believe that by fostering an inclusive work environment—one which appreciates individual differences and the adoption of equitable practices to advance underrepresented groups—contributes to increasing employee job satisfaction and commitment to their company, as well as reduced absenteeism.

Our commitment to diversity extends through our recruitment, retention, learning and engagement and community partnerships. As part of our diversity, equity, inclusion and belonging strategy, we made an active decision to pursue opportunities for learning and engagement that bring people from different backgrounds together into conversation. We’ve initiated monthly Culture Conversations where we explore identities and systems of power using an intersectional lens each month. Past topics include disability, LGBTQIA+, ageism, Latinx identity, and more. Our objective is to appreciate each other as individuals with unique lived experiences, rather than define one another by a single trait such as race, sexual orientation, or geographical location. To assess our efforts toward building a diverse workforce, we have included questions in our engagement survey to measure employee perception of inclusive culture.

In addition, we mandate training for all employees and managers to prevent workplace harassment. The course equips leaders and employees with the tools they need to identify and address unwelcome conduct in non-adversarial, respectful terms.

We actively engage with underrepresented populations through a variety of outreach including targeted recruitment and collaboration with local community colleges. Additionally, we invest in STEM education for all ages and global populations to encourage education and new career pathways within the synthetic biology field.

With an active program in place for our employees, we are striving to further support our female and underrepresented employees advance their careers while continuing to focus on hiring diverse talent at more senior positions.
WOMEN AT TWIST BY THE NUMBERS

We are very proud of the fact that there is no glass ceiling for women at Twist. Our Board of Directors is made up of 30% women; our CEO is a woman; our executive team is comprised of 42% women. Women make up a large fraction of our revenue generating positions and are present throughout every level of the organization.

EXECUTIVE TEAM 42% WOMEN

WOMEN AT TWIST BY MANAGEMENT LEVEL*

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women in total workforce</td>
<td>39%</td>
</tr>
<tr>
<td>Women in management positions</td>
<td>33%</td>
</tr>
<tr>
<td>Women in mid-level positions (Supervisor to Senior Manager)</td>
<td>29%</td>
</tr>
<tr>
<td>Women in senior management positions (Director and Senior Director)</td>
<td>37%</td>
</tr>
<tr>
<td>Women in executive positions (VP, Senior VP, and Executive)</td>
<td>42%</td>
</tr>
<tr>
<td>Women in senior management &amp; executive positions (Director and Executive)</td>
<td>39%</td>
</tr>
</tbody>
</table>

WOMEN AT TWIST IN REVENUE-GENERATING POSITIONS (ON SALES COMP PLAN)*

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women in revenue-generating positions</td>
<td>32%</td>
</tr>
</tbody>
</table>

WOMEN AT TWIST BY DEPARTMENT*

<table>
<thead>
<tr>
<th>Department</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales &amp; Marketing</td>
<td>41%</td>
</tr>
<tr>
<td>Operations</td>
<td>36%</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td>38%</td>
</tr>
</tbody>
</table>

HOW TO INTERPRET

- Of the 658 Twist employees, 39% (254) are female.
- Of the 121 sales employees, 32% are female.
- Our business focuses on STEM and as such, we consider all Sales & Marketing, Operations and Research & Development positions STEM positions.

*Data as of September 30, 2021

89% OF EXECUTIVES BRING CULTURALLY DIVERSE BACKGROUNDS†

†Defined as female, or born outside of the United States
RACE/ETHNICITY AT TWIST

From our founding, creating a diverse culture has been important to the leadership team at Twist. We come from diverse backgrounds and believe that bringing different cultural experiences to our work life creates more impactful and innovative teams. We are committed to building and maintaining a diverse organization, which at the end of December 2020 was predominately made up of people of color (63%). Present throughout the organization, women of color make up 27% of our STEM organization. We believe our commitment to diversity education for all members of our company allow underrepresented communities to find belonging within Twist, and employees to raise their own awareness to become allies. Twist has outstanding diversity with 9% Latinx, 3% Black, 4% Native Hawaiian/Pacific Islander, 39% Asian, 7% Two or More Races, and several American Indian/Alaskan Native individuals, with racial representation across levels and departments. In addition, our executives come from diverse backgrounds, with many born outside of the United States. We will continue to develop diverse leadership, by monitoring who we are engaging in our leadership development programs and promoting.

NOTES

1. There are limitations in the way the federal government collects race/ethnicity data. For example, individuals may identify as Hispanic/Latinx and an additional race/ethnicity, but may only be reflected as Hispanic/Latinx in the data.

2. People of color includes Hispanic/Latino, Black or African American, Native Hawaiian or Pacific Islander, Asian, American Indian or Alaskan Native, and Two or More Races
<table>
<thead>
<tr>
<th></th>
<th>TOTAL EMPLOYEES</th>
<th>MID-LEVEL MANAGERS</th>
<th>SENIOR/EXECUTIVE POSITIONS</th>
<th>REVENUE GENERATING POSITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latino</td>
<td>9%</td>
<td>3%</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>Not Hispanic/Latino</td>
<td>91%</td>
<td>97%</td>
<td>100%</td>
<td>88%</td>
</tr>
<tr>
<td>White</td>
<td>37%</td>
<td>37%</td>
<td>60%</td>
<td>65%</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>7%</td>
<td>5%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Women of Color</td>
<td>27%</td>
<td>11%</td>
<td>13%</td>
<td>24%</td>
</tr>
<tr>
<td>Men of Color</td>
<td>36%</td>
<td>53%</td>
<td>27%</td>
<td>12%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>3%</td>
<td>0%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>4%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Asian</td>
<td>39%</td>
<td>50%</td>
<td>20%</td>
<td>18%</td>
</tr>
<tr>
<td>American Indian or Alaskan Native</td>
<td>0.5%</td>
<td>3%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total People of Color</strong></td>
<td><strong>63%</strong></td>
<td><strong>63%</strong></td>
<td><strong>40%</strong></td>
<td><strong>35%</strong></td>
</tr>
</tbody>
</table>

*Data as of October 15, 2020 for U.S. employees only.*

**HOW TO INTERPRET**

1. Hispanic/Latino & Not/Hispanic Latino sum to 100%
2. The racial identities [White through Two or More Races] sum to the total of Not/Hispanic Latino
3. People of Color = 100% — the percentage of white employees
   - Of the 439 employees, 9% (38) of employees identified as Hispanic/Latino.
   - Of the 38 mid-level managers, 50% (19) of employees identified as Asian/Asian American.
   - Of the 439 employees, 27% are women of color.
   - Of the 15 senior/executive positions, 40% are people of color
EMPLOYEE ENGAGEMENT SURVEY FINDINGS ON DIVERSITY, INCLUSION AND BELONGING

- 89% of Twisters report believing that Twist values diversity.
- 85% of Twisters report feeling respected at Twist.
- 82% of Twisters report feeling like they belong at Twist.
- 78% of Twisters report feeling valued when they share their opinion.
- Twist has cultivated a diverse and inclusive work environment.

TARGETS

Based on the metrics reported, Twist has set metrics to increase the percentage of women and racial diversity by 3% by December 31, 2022.
Recognizing that our single-most important resource is our workforce, we continuously strive to reduce our employee turnover through the careful and thoughtful implementation of career growth and development opportunities. To this effect, Twist Bioscience has established internal leadership programs, specialized trainings, and tuition reimbursement programs to identify the company’s future leaders. At the same time, the programs implemented by Twist allow the company the opportunity to address, in early stages, employees who may need additional training or mentoring, helping us reduce involuntary turnover.

We have put in place recruiting programs to help us identify the right people for our company from their skillset perspective, as well as culturally. We provide employees with flexibility in their work arrangements, and we have a robust annual employee engagement survey.

While 82% of Twisters who feel our company is a Great Place to Work® is a significant number, we are not stopping there. Twist is committed to increasing the number of workers who feel this is a great place to work by also enhancing our already top-of-the-line benefits and compensation packages.

SSGA Gender Diversity Index (SHE)

In recognition of our gender diversity accomplishments, State Street Global Advisors included Twist Bioscience in the SSGA Gender Diversity Index (SHE) in August 2021.

The SSGA Gender Diversity Index is designed to track the performance of US large-cap companies that lead their industry sectors in advancing women by promoting gender diversity on their boards and in senior leadership positions. This is the first index of its kind, and is a landmark on the ESG landscape.

**INDEX CONSTITUENTS ARE SELECTED BASED ON THE FOLLOWING RATIO-BASED CRITERIA:**

1. ratio of female executives and female members of the board of directors to all executives and members of the board of directors;
2. ratio of female executives to all executives; and
3. ratio of female executives excluding executives who are members of the board of directors to all executives excluding executives who are members of the board of directors.
Employee Engagement

Twist conducts an annual employee engagement survey focused on cultural consistency to measure and observe the alignment between culture and behavior; to measure the day-to-day behaviors of employees and to rigorously determine how they drive the success of the organization. In our most recent survey, where 88% of our employees responded:

- 96% of employees understand Twist’s mission
- 93% understand how they contribute to the mission of the company
- 93% understand how their goals contribute to Twist

Our executive leadership team identified key initiatives within each of their departments that tie directly back to the survey feedback to further increase employee engagement moving forward. Each executive details and will be responsible for performance against one key objective for their group.

In addition, Twist holds all company meetings twice per month as well as monthly managers meetings to engage with its employees. The CEO hosts these meetings and both have active question and answer sessions with all employees.

Twist maintains a robust intranet to keep employees informed and up to date with the activities ongoing within the company. Twist produces a magazine for its employees called Synthesize to highlight different teams within the company and their work.
Compensation and benefits, health and wellness

We strive to provide pay, comprehensive benefits and services that help meet the varying needs of our employees. Our generous total rewards package includes above-market pay; fully covered healthcare benefits for employees, with family member healthcare benefits covered at 90%; a health savings account that is fully funded for individuals and their families; approximately four weeks of paid vacation; a minimum of four months of parental leave for all employees globally; flexible and work-from-home schedules; commuter benefits, and onsite services. In addition, we offer every full-time employee, both exempt and non-exempt, the benefit of equity ownership in the company through stock option grants and our employee stock purchase plan.

We have an expert-built educational platform to assist employee’s fertility & family building needs with the help of treatment, fostering or adopting, plus dedicated resources for egg freezers, egg donation, LGBTQ+ families, and solo parents.

We make a significant financial investment in our well-being benefits, by offering programs that help workers monitor and reduce their stress levels, providing apps to support sleep and relaxation. In 2021, we implemented a Walking Challenge to promote physical health and employee connections.

We have further addressed employees’ emotional health and well-being by providing meditation sessions and using telehealth programs to offer mental health counseling.

In January 2022, Twist Bioscience started a matching contribution program into 401(k) retirement plans for our employees. In countries where possible, Twist also offers pension opportunities.
Health & Safety

We remain steadfast in our commitment to promote the health and safety of our employees. We require annual workplace safety training to reinforce workplace safety procedures that may be useful in the event of emergency situations and to assist our employees in helping to prevent workplace accidents.

We are proud of the progress we have made in the past four years in improving our company’s work environment safety program. As a result of these improvements, we are happy to report the following data:

<table>
<thead>
<tr>
<th>LOST TIME INJURY FREQUENCY RATE</th>
<th>FY 2019</th>
<th>FY 2020</th>
<th>FY 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>1.44</td>
<td>1.41</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FATALITIES</th>
<th>FY 2019</th>
<th>FY 2020</th>
<th>FY 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Our Employee Health and Safety Committee, which is comprised of numerous cross-departmental members, meets on a quarterly basis to review workplace safety and adherence to safety policies. As part of our efforts, all employees and managers complete workplace harassment and sexual harassment training that includes details on how to report any violation of these policies.
Our Community/Philanthropy

**LIFE SCIENCE CARES**

Twist has joined the growing Life Science Cares (LS Cares) collective of companies from the life science industry looking to make a positive impact in our local communities and address poverty and inequality in the San Francisco Bay Area, Boston, Philadelphia and San Diego regions.

Twist donated $20,000 to the San Francisco Bay Area chapter of LS Cares, and our employees have the opportunity to get involved with impactful partner organizations. LS Cares and we look forward to partnering with them going forward to identify opportunities to get involved with their most impactful partner organizations throughout their network. LS Cares focuses on addressing three fundamental gaps: survival, education and sustainability. Our San Diego and Boston based employees will also be able to participate in volunteer opportunities through Life Science Cares San Diego and Life Science Cares Boston.

**INTERNATIONAL GENETICALLY ENGINEERED MACHINE (iGEM) FOUNDATION**

Twist Bioscience is proud to be a long-time supporter of iGEM, a worldwide synthetic biology competition that was initially aimed at undergraduate university students, but has since expanded to include divisions for high school students, entrepreneurs, and community laboratories, as well as ‘overgraduates’. Twist provides a streamlined approach to change the way iGEM Competition teams contribute to the Registry of Standard Biological Parts, a free online database for synthetic biologists. Teams now submit their part sequences and documentation to the Registry and Twist then synthesizes samples of these parts for the following year’s competition.

In addition to synthesizing the parts, Twist provides all iGEM teams with 10,000 bases of DNA to support their project.

**EMPLOYEE VOLUNTEER TIME OFF**

As part of our commitment to social responsibility and addressing our employees’ own philanthropic inclinations, we are happy to report that in fiscal year 2021 Twist employees volunteered 484 hours for the causes and organizations they most care about, through our Volunteer Time Off program, allowing each Twister 8 hours of paid time per year for these efforts. With our new community partnerships in place, Twist is committed to increasing the number of annual employee-volunteered hours within their communities.

**INTERNSHIPS AT TWIST BIOSCIENCE**

We also partnered with Gloucester Biotechnology Academy to provide annual internship opportunities for college students in the biology field to help in our antibody discovery efforts. Interns play multiple roles and work within a team responsible for antibody discovery utilizing a number of in vitro display technologies, such as phage display, ribosome display, and yeast display. We are proud of this partnership, as it strengthens our contribution to research and to expose future talent to our field.
Company and Leadership Awards

In March 2021, Twist Bioscience was named one of Fast Company’s Most Innovative Companies in Biotech.

During the COVID-19 pandemic, our team quickly developed an infectious disease product suite to enable institutions to detect, trace and combat COVID-19 as well as other respiratory diseases. We provide positive RNA controls for all known variants of concern that act to validate that COVID tests are working as expected. These controls also allow for researchers to work with the full viral synthetic sequence, cut up into pieces so it cannot be reconstituted, without risk of disease. In addition, these controls enable research and innovation to occur beyond Biosecurity Level 3 (BSL3) labs, accelerating understanding, product development and other advancements, some of which are detailed below.

Using our infectious disease product line, our customers can now:

- develop more efficient and effective testing
- mitigate shortages of key supplies for testing
- minimize the risk of working with live virus (which is difficult to procure and requires a high level of laboratory containment)
- track virus origins
- monitor viral evolution and identify the variant in a positive sample
- surveil populations for outbreaks of COVID-19
- prepare for the upcoming flu season
- differentiate the cause of underlying respiratory symptoms
- identify approved drugs or development-stage compounds that may be effective in treating COVID-19
- identify and develop potent antibodies that may treat COVID-19

The result of our work to fight COVID-19 was acknowledged by Fast Company, who named us One of the Most Innovative Companies in Biotech in 2021.
Our products have enabled rapid testing even when there is a shortage of sample preparation or collection tactics. Several groups (two examples here and here) developed tests that did not rely on kits for RNA extraction (RNA extraction kits were in very short supply in the early days of the pandemic) using our products. Our genes enabled Vanderbilt University to identify and advance potent antibodies with AstraZeneca, one of which received Emergency Use Authorization from the U.S. Food and Drug Administration in December 2021 for the pre-exposure prevention of COVID-19 in certain individuals. In addition, our products were used for the identification of drugs that are already approved by FDA or in development that may be applicable to treat COVID-19.

The result of our work to fight COVID-19 was acknowledged by Fast Company, who named us One of the Most Innovative Companies in Biotech in 2021.

In 2021, we launched Revelar Biotherapeutics, Inc., an independently operated new biotechnology company in which Twist retained a significant minority ownership interest, to develop and commercialize an antibody that neutralizes all known variants of concern of the SARS-CoV-2 virus. The initial antibodies in development by Revelar were discovered and optimized by Twist Biopharma, a division of Twist Bioscience. In addition, Revelar will have the ability to leverage Twist Biopharma’s antibody discovery and optimization platform to license additional non-COVID antibodies for up to five targets over the next four years.

DELOITTE TECHNOLOGY FAST 500

For the past 26 years, Deloitte has been honoring the most innovative public and private technology companies that hail from cities across North America. The Technology Fast 500 was created to recognize the passion and dedication it takes to be an industry disruptor. The ranking is compiled based on submitted applications and public company database research, with winners selected based on percentage fiscal-year growth over a three-year period. We are proud to have achieved this distinction in both 2020 and 2021.
INC. MAGAZINE BEST-LED COMPANIES
Twist was named one of Inc. Magazine’s Best Led Companies in 2021. This list recognizes 250 companies that are agile enough to maneuver but also big enough to have a broad impact. All 250 have a successful track record with leadership teams that spur solid performance, create value, penetrate markets, engage with customers, and more. To be considered for the list, each company was analyzed via an algorithm that identified the very best companies according to their leadership teams’ superlative accomplishments in four key areas: performance and value creation; market penetration and customer engagement; talent; and leadership team.

SAN FRANCISCO BUSINESS TIMES MOST ADMIRED CEO
NEWSWEEK MAGAZINE AMERICA’S GREATEST DISRUPTORS
In November 2021, our CEO, Emily LeProust, Ph.D., was named one of the Most Admired CEOs by the San Francisco Business Times. In December 2021, she was named one of America’s Greatest Disruptors by Newsweek Magazine.
Twist’s Commitment to Ethics

Guiding Principles and Business Ethics

Our guiding principles of grit, impact, service, and trust serve as our cultural pillars. Our guiding principles set the tone for how we work together, provide a framework for giving feedback and increase the power of our brand.

Service is at the core of our business and our interactions with one another. We relentlessly focus on exceeding internal and external customer needs.

Government Affairs

Twist Bioscience does not make contributions to political campaigns, organizations or parties.
Data Privacy and Cybersecurity

We take data and information security very seriously at Twist Bioscience. We understand the critical importance to our business of protecting our information assets as well as the information assets entrusted to us by our customers. Twist is committed to developing, implementing, and continuously improving our Information Security Management System, and to continuously educating and testing the cybersecurity awareness of Twisters.

As a result of our commitment to Data Privacy and Cybersecurity, we have a privacy policy in place and importantly, Twist Bioscience obtained the ISO/IEC 27001 certification in January 2020, the highest level of information security recognized by ISO, and a certification that applies a standards-based systematic approach to securely managing sensitive company information.

“I believe that biology has the power to balance the competing needs of an expanding population while improving the world we live in today. Plants and microbes will facilitate new developments that allow us to feed the world, to create sustainable energy sources and to maintain the health of people.”

EMILY LEPROUST, CEO AND CO-FOUNDER
TWIST BIOSCIENCE
Biosecurity at Twist Bioscience

Twist is helping shape the future of synthetic biology by generating high-quality synthetic DNA on a global scale while also championing its responsible use. As such, Twist Bioscience invests considerable resources into building, operating, and evolving a comprehensive biosecurity program that includes participating in national programs to improve the algorithms, metadata, and tooling that researchers use to assess the potential biological risk of DNA and protein sequences.

At Twist, we believe that, as a core technology provider, it is our responsibility to advance biosecurity to help ensure that the world remains a safe place in the biotechnology age. Since our founding, we have engaged with and advised governments and have helped build consortia with other DNA synthesis providers to develop and promote a consistent set of biosecurity best practices. We are constantly, and actively helping to write the biosecurity playbook for DNA synthesis providers. As synthetic biology continues to evolve, so too must the biosecurity safeguarding we put in place.

NATIONAL AND INTERNATIONAL REGULATIONS

Twist performs rigorous biosecurity and export control screening to ensure that order fulfillment is consistent with all U.S. government guidance and regulatory requirements. Guidance includes the U.S. government’s Screening Framework Guidance for Providers of Synthetic Double-Stranded DNA and the International Gene Synthesis Consortium’s Harmonized Screening Protocol. The primary regulatory framework governing the control of synthetic DNA sequences is the U.S. Federal Select Agent Program (FSAP). In addition, as Twist Bioscience manufactures DNA in the U.S., the sale of synthetic DNA is subject to compliance with the U.S. Department of Commerce Export Administration Regulations (EAR) which define biological sequences that require a license prior to export from the U.S.

Collectively, these regulatory frameworks help ensure that sequences of DNA that pose significant risk if misused are not synthesized and shipped to unlicensed organizations.
SCREENING OF SEQUENCES AND CUSTOMERS

To prevent synthesis of potentially harmful sequences, it’s necessary to establish a comprehensive screening program. Twist Bioscience screens all double-stranded DNA sequences ordered to determine whether they derive from an organism or toxin deemed to be controlled for possession either domestically or internationally. These controlled organisms or toxins include smallpox, dangerous strains of avian influenza and other pathogens that pose a significant threat to animal, plant or human health. Possession of these controlled organisms or toxins is highly restricted and regulated.

If a controlled sequence or a portion of a controlled sequence is detected during our screening process, we follow up with the customer to verify their intended use and past publication record, as well as any licenses required before shipment.

Additionally, screening is not limited to just the ordered sequences. Government lists such as the U.S. Treasury Specially Designated Nationals list, the U.S. State Department Denied Parties List, and the Department of Commerce Entity List are used to screen each customer, ensuring that synthetic DNA is not sold to potentially dangerous individuals or organizations. Twist also confirms the validity of each of the organizations to which we sell. Further, Twist requires that all customers agree not to resell synthetic DNA produced by Twist Bioscience unless they’ve been licensed to do so under specific contract. Twist will not conduct business if there is an indication that a customer would resupply a sequence.

Finally, Twist will not ship synthetic DNA to a residential address or to a P.O. Box — we ship only to valid commercial addresses.
STAFFING
Twist allocates personnel resources to ensure that employees follow all policies and procedures associated with its biosecurity program and to address any concerns that may arise. This includes a Trade Compliance Manager, a Screening Manager, and a Biosecurity Response Team.

REPORTING
We maintain relationships with several governing and industry bodies to address areas of concern, including the Federal Bureau of Investigation, the Centers for Disease Control and Prevention, the U.S. Department of Agriculture’s Animal and Plant Health Inspections Service, as well as the industry trade group, the International Gene Synthesis Consortium (IGSC), whose members—including Twist Bioscience—manufacture much of the world’s synthetic DNA. Of note, all IGSC members notify other group members of any suspicious orders received to prevent venue shopping.

RECORD KEEPING
Twist’s internal policies require that we maintain documentation for each biosecurity screen of an ordered sequence for eight years.

RED TEAMING
Twist Bioscience puts its biosecurity program to the test. Skilled consultants are engaged to try to subvert or overcome Twist Bioscience’s security measures — a practice that’s common in cybersecurity and is often referred to as red teaming.

In red teaming, consultants place real orders that are designed to subvert the screening process. Thus far, none of the expert’s obfuscation methods have worked, establishing that the system Twist Bioscience has put in place is robust to these efforts.
IN CONCLUSION

We acknowledge that biosecurity and the best practices required to maintain safe access to synthetic DNA will evolve continually as our understanding of biology increases. In addition, we believe that life sciences research has the potential to improve public health surveillance, enhance emergency preparedness and aid response efforts. As such, we encourage flexible governance for emerging concerns as new information or shifting dynamics require.

We engage in active dialogue with leading experts to help ensure Twist Bioscience screening meets or exceeds best practices. As part of this drive to innovate, we participated in the Intelligence Advanced Research Projects Activity Functional Genomic and Computational Assessment of Threats program. This program aimed to develop a suite of next-generation computational and bioinformatics tools that will help all DNA synthesis companies build upon and strengthen their current protocols. Additionally, we participate in the FBI’s International Biosecurity and Prevention Forum, an open forum to discuss biosecurity and communicate with stakeholders at all levels of government, industry, and academia.

While these policies and procedures require both time and monetary investment from Twist Bioscience, we are committed to accelerating scientific research to improve lives worldwide. Synthetic biology holds great promise for improving human health and the global environment. We are proud to provide high-quality synthetic DNA that will help realize this promise, while also conducting disciplined biosecurity screening to help maintain public safety.
Policies

We have several key policies in place that guide our governance. They can be found on our website at www.twistbioscience.com and at the links below.

- CORPORATE GOVERNANCE GUIDELINES
- ANTI-CORRUPTION POLICY
- ANTI-MONEY LAUNDERING POLICY
- MODERN SLAVERY ACT STATEMENT
- CODE OF BUSINESS CONDUCT AND ETHICS
- SUPPLIER CODE OF CONDUCT
For more information about Twist's ESG work, contact media@twistbioscience.com.