

2021 Report

Social and Environmental Impact





Cell Signaling Technology is a
global company of caring people
driven by a devotion to facilitating
good science—a company
committed to doing the right thing
for our customers, our communities,
and our planet.

Cover: Corporate Partner Seeding Labs
Highlight Chantal Atchie, Dedeou
Tchokponhoue, and Kenou Adonon
are observing miracle berry fruits
growing in the experimental fields at
the university.

Photo: courtesy Université d'Abomey-Calavi/
Seeding Labs

Photo: Josh Pelta-Heller, CST US Sales Team

A Letter from Michael Comb



For the first time since life has evolved, our planet's natural systems are out of balance due to one species' ability to dominate and determine what future life will look like. Science can provide answers to some of the questions we seek but our future will ultimately be determined by political and social will. As a citizen, and CEO of a private, family-owned biotech company, I recognize my responsibility and place in a much larger world economy that connects us and our actions to the health of the planet. The path we are currently following is not sustainable. We need to make changes in the way we operate as companies and as individuals.

CST continues its transition to become a more sustainable and innovative company that will create positive change. We are rethinking the way we use energy to stop burning fossil fuels that emit greenhouse gases and are focused on how to use less water and generate less waste. If we can move to more circular economies that reuse what is produced, we can allow enough space for the rest of the planet's amazing biodiversity to thrive. We must show more respect and compassion for other life forms on the planet by preserving needed wild space. Our new partnership with 1% for the Planet will reinforce our mission and align with our values.

For nearly a half century, Sir David Attenborough has inspired me to celebrate the Earth's natural systems and the incredible life and functions they support. I couldn't agree more with his sentiment:

"The truth is: the natural world is changing. And we are totally dependent on that world. It provides our food, water, and air. It is the most precious thing we have, and we need to defend it."

Businesses must be more responsible and work in partnership with each other and our communities to foster inclusion and respect. The impact of human society on the natural world is evident. As a grandfather, scientist, businessman, and member of humanity, combating climate change and the loss of biodiversity is the most pressing challenge for my generation and future generations that follow.

A handwritten signature in black ink that reads "Michael Comb".

Michael J. Comb, PhD,
President and Chief Executive Officer



Photo: Tristan Comb

"The path we are currently following is not sustainable. We need to make changes in the way we operate as companies and as individuals."

Measuring Impact

The business of antibodies at Cell Signaling Technology has always been about advancing science, first and foremost. Do researchers have the tools they need to get the answers they pursue? That simple question started a business that thrives today. Each dollar earned is an opportunity to reinvest, to learn more about the scientists in the field, their needs, and the challenges that they face every day. Each discovery made becomes knowledge that benefits all.

Once you start thinking that big, it's difficult to scale back. You start looking for new ways to make the world better. How can we help fight climate change? How can we give back to communities near and far, scientific or otherwise? Beyond our research tools, what else can we give?

These questions aren't easily answered, but the most important thing is to do good. American poet Maya Angelou said, "Do the best you can until you know better. Then when you know better, do better." We want to do better. One tenet we've lived since the beginning is the idea of Continuous Improvement. Take what you can do today and make it better tomorrow.

Small enhancements can yield big results, but you can't improve something that you don't understand. Improvement requires honest self-examination and data. We have prioritized our social and environmental impact areas into three pillars:

- **Innovation & Operations**
- **Culture & Community**
- **Planet & Health**

It feels a bit strange to try to quantify our efforts to impact our business and the world around us. The past two years have given the added challenge of pivoting to necessary COVID-19-related efforts. However, we also feel it's important to be accountable. Are we doing what we set out to do? How are we effecting positive change? This report is a way for us to paint the picture in broad strokes. It's a way for us to collect and focus our efforts, to make sure that next year we do a little better.



"Do the best you can until you know better. Then when you know better, do better."

—Maya Angelou

Front entrance of CST Headquarters in Danvers, MA

COVID-19 Pandemic Response

We worked to keep our employees, our families, and our community safe. Early in the pandemic it became clear that a measured approach, backed by data and CDC guidance, would be the best path to safety. We ramped down non-critical operations, while continuously working on COVID-related development projects. There was no disruption in shipping or supporting our Customers, who continued to perform essential research to understand the virus.

Upon returning, CST employees met new challenges with vigor. Not only did they perform their usual jobs, but did so with fewer people onsite, learning new roles, and working around the clock to create a safe and flexible work environment to protect and support CST families. Everyone was tremendously careful to protect each other.

We added employee benefits:

- Health and wellness services
- COVID testing onsite and at contracted clinics
- Increased cleaning services at our facilities
- Barriers, masks, other safety precautions at U.S. labs and global shipping facilities.
- Flexible work-from-home policy
- Seminars to help with mental health, child care, anxiety, and other impacts of the pandemic
- IT equipment and ergonomic support for work-from-home employees

Staying connected was a priority.

The COVID Response Team communicated weekly with all employees on the state of the pandemic and how it affected our business and our employees' welfare. We became virtually connected, creating linkages not only on a business level, but personally to check on each other.

This was a global pandemic and it brought us together as a global company.

We were informed by employees in our China office in January 2020 of what was happening in Wuhan. They requested PPE for their crisis, and we responded immediately. Later in the year, they would return the favor as the situation worsened in the US. It was a reminder that all our global offices worked through this together—supporting each other however we could along the way.



Early efforts by CST China to understand the virus enabled us to identify ACE2 and other potential SARS-CoV-2 research targets to be added to the product development pipeline immediately. It was vital to provide useful tools to scientists researching the virus as quickly as possible.



As our U.S. facilities were temporarily shutting down, CST immediately donated nearly \$10K worth of PPE to a local hospital desperately in need.

Innovation & Operations

We are a company of scientists working for scientists. We understand how frustrating it is to use tools that don't work. Each experiment ought to be a success, even if the resulting data aren't what you predicted. Validation data and knowledge sharing help deliver discoveries and promote advancements that benefit all.

Delivering expert scientific collaboration is a foundational part of who we are and what we do. Can all that important work be made more sustainable? Are we acting responsibly with our product development and production processes? Is each employee set up for success in the safest possible work environment? These are the questions that drive this impact pillar.

Scientific Seminars

Expertise fades if it isn't nurtured. It's important to keep our development goals aligned with all of the latest advancements and discoveries in the field. Our mission is to develop the tools researchers need, and this is one of the ways we calibrate our efforts with theirs. These are some of the speaker highlights over the last few years.

- **Dr. Lisa Coussens:** Evaluating Myeloid Targets to Enhance Anti-Tumor Immune Responses in Solid Tumors (2019)
- **Dr. Cigall Kadoch:** Structure and Function of Mammalian SWI/SNF Chromatin Remodeling Complexes in Human Disease (2018)
- **Dr. Reuben Shaw:**
 - AMPK and ULK1: Guardians of Metabolism and Mitochondria (2018)
 - The LKB1-AMPK Pathway: from Lung Cancer Immunotherapy to Parkinson's Disease (2019)
 - New Unexpected Targets: AMPK Family Kinases That Suppress Lung Cancer and Restore Metabolic Balance (2021)
- **Dr. Li-Huei Tsai:** Non-invasive Sensory Stimulation to Induce Gamma Entrainment and Neuro protection (2021)



**Between 2018 and 2021,
CST hosted over 60 invited
scientific speakers, from all
over the world.**



*Left to right from top: Dr. Lisa Coussens
Dr. Cigall Kadoch, Dr. Reuben Shaw,
Dr. Li-Huei Tsai*

A History of Impact

1999



- Founded
- CST's first catalog and annual nature calendar

2000



- Recycle /Waste Reduction Program begins

Scientific Publications

CST products have earned 105,886 total citations with 49,520 citations since 2018. Seven of the top ten most-cited antibodies in 2021 were from CST. CST-authored *YAP vs. TAZ: differences in expression revealed through rigorous validation of target-specific monoclonal antibodies* was awarded Best Paper by the National Society for Histotechnology. Authors: Crosby, Wood, Simendinger, Grange, Carr, Costa-Grant, Roller, Polakiewicz

Internships

Many of us have been lucky enough to be mentored by someone in our lives — and we believe it is our responsibility to provide opportunities for hands-on internships to future scientists. Student interns at CST are paired with mentors in multiple areas of scientific discovery and business, including R&D, Production, Marketing, and Information Technology departments. Many of the student interns are invited to continue their internship for consecutive years. After completing their degrees, several interns have returned as full-time employees.

In 2018–19, we hosted 80 interns with a program investment of \$375K.

- Six of the interns have become full-time CST employees since finishing their degrees.
- The internship program was paused for 2020–21 for COVID safety, but returned in 2022.

While employed at CST, our scientists have authored or co-authored nearly 160 peer-reviewed articles since 1999, and 55 since 2018.



A summer intern and her proud mentor at the annual Internship Poster Session held to display interns' projects and help them earn valuable experience presenting their work

2001



- Formation of Green Committee
- Summer intern program begins

2002

- Formation of Corporate Donations Committee

2003



- Plight of the Pollinators catalog

Resource Conservation Programs

CST provides composting and single-stream recycling at all US facilities. We have lab-specific recycling programs for EPS foam, pipette tip boxes and amber glass bottles. The facilities team at the Danvers headquarters is able to reuse waste water from our reverse osmosis deionized (RODI) system for onsite irrigation.

Green Chemistry

Labs at CST have reduced or eliminated the use of hazardous chemicals like formaldehyde and dimethylformamide through process changes and the utilization of less hazardous alternatives.

Equipment Reuse

Retired equipment is donated to scientists-in-need through programs like those of Seeding Labs, giving it a second life for research. From 2018-2021, a total of \$16K worth of equipment was donated, including essential items like electrophoresis equipment, water baths, vacuum pumps, thermocyclers, microscope accessories, freezers, and incubators.



Photo: courtesy of University of Namibia/
Seeding Labs

Pharmacy Technician students at the University of Namibia School of Pharmacy unpacking equipment provided by Seeding Labs' Instrumental Access program

CST ships all cold products in thermal packaging that is completely recyclable, with insulation made from paper fibers and lined with paper. There is no use of EPS foam for shipping by any CST facility.

2005



- Shift to a 100% Post Consumer Waste shipping envelope

2005



- Switch to shipping some products and antibodies at room temperature, reducing cold temp packaging and shipping materials

Culture & Community

Community is a funny thing. It exists on the smallest of scales but extends the world over. All workers in a company share a culture, with subcultures in each group and department. It's important to us that we do good equally. How can we help each other within the company? How can we help those around us, near and far?

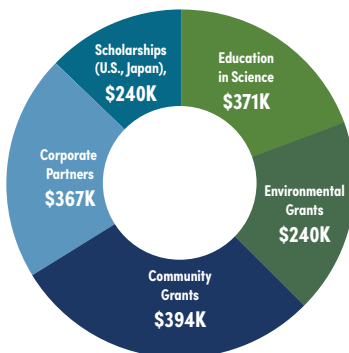
So many things contribute to a rich and vibrant culture: the arts and humanities, giving and activism, how we celebrate accomplishments and recognize excellence. Perhaps the most important component is how we help each other when we see a need.

As individuals, we give back through employee volunteer work. Because there are so many deserving volunteering organizations, CST partners with several non-profits to make sure that we do good for those with the greatest need. It's sometimes a struggle knowing you can't help everyone, but it's deeply satisfying to help those we can.

We strive to build employee engagement to foster a positive work culture and an inclusive company community through Corporate Partnerships, Volunteering, and Giving, to engage our employees in good citizenship and work/life balance.

We focus on the following areas to give back to our communities:

- Inspiring the Next Generation of Scientists
- Protecting the Environment
- Community Support: Helping the Underserved and Supporting the Arts



2018-2021 Annual Philanthropy Categories and amounts

CST grant committees are employee-run, with members rotating every 2 years.



Photo: Sarah Klein, Group Leader, Multiplex Assay Development

2006



- Relocate to 3 Trask Lane, Danvers, MA
- Renovate King's Grant Hotel into Trask Lane LEED Certified biotech facility

2006

- Art Gallery and Art Program to support local artists started

Corporate Partnerships

What makes a good Corporate Partner? We continuously look for ways to strengthen our alignment with organizations that encourage science and environmental education, art enrichment, and support for the underprivileged throughout our local communities.



Our Corporate Partnership Program identifies non-profit organizations that demonstrate missions, visions, and values with which we feel aligned.

Volunteering

From 2018–2021 CST employees donated over 5,700 volunteer hours to local nonprofits. Volunteer participation has been as high as 71% of U.S. employees. Almost 200 nonprofits have benefitted from employee time and effort.

Inspiring the Next Generation of Scientists

Education in Science Grants

These resources help make small dreams a reality at local schools and organizations. Teachers submit applications describing their unique needs and explaining how CST can help. During 2018–2021, 11 local high schools, 6 middle schools, 11 elementary schools, 13 STEM-focused nonprofits for K–12, and 2 clubs (Scouts and Girl Scouts) were awarded grants from CST.

Science Scholarships

Scientific endeavor is instrumental in solving social, environmental, and technical challenges that societies face worldwide. We support schools in our community to inspire young people to choose a career committed to science.

Our goal is to encourage and support students with an interest in STEM by providing financial security during their college years with a \$10K scholarship.

Students of color are underrepresented in STEM programs and courses compared to their overall college enrollment rate. There is racial imbalance amongst STEM majors, evidenced by the fact that only 7.6 percent of all STEM bachelor's degrees were obtained by students of color in recent years. To help drive diversity and innovation, CST added four additional \$10K scholarships available to high school senior students of color in Essex County, Massachusetts that are accepted and enrolled in undergraduate STEM-related majors.

Employee volunteers serve organizations to help promote science education, and CST is proud to provide financial support.

Between 2018–2021, CST provided science teachers \$317,846 in 64 grants to 43 different schools and organizations.

2007

- Environmental speaker program begins

2009



- CSR Program formally begins with creation of CSR Director role.
Pictured: first Director David Comb

Rising Black Scientist Awards

There is a representation problem within the U.S. scientific community. Acknowledging the problem is an important first step, but it was important to us to take immediate action to diversify the voices at the table—and in the lab, especially after the murder of George Floyd in 2020.

The annual Rising Black Scientists Awards were established with Cell Press to provide a \$10K cash prize and \$1K in scientific materials to two promising African American scientists in the U.S. The winners' personal essays are published in the journal *Cell*. One undergraduate and one graduate or post-doctoral scholar are chosen by an independent panel of reviewers.

- **2020** Undergraduate winner **Fola Olusanya** of Howard University
- **2020** Graduate Winner **Chrystal Starbird**, PhD of Yale University
- **2021** Undergraduate winner **Charleese Williams** of Georgia State



Elle Lett, PhD, 2021 graduate Rising Black Scientists Award winner

Science Education Corporate Partners

- **Change is Simple 2018-2021 | \$125K** Instilling lifelong social & environmental responsibility through experiential learning that inspires action for healthy people, planet, and community
- **Seeding Labs 2018-2021 | \$41K** Balancing the inequities of resources to further scientific discovery



From 2018-2021, we awarded 20 STEM student scholarships. For 2021, we doubled the number of scholarships available from 4 to 8 students annually.

2009

- First Greenhouse Gas inventory completed



2010

- Composting and compostable food service ware introduced

2011



- First Sustainability Coordinator hired

Protecting the Environment

Environmental Grants

A portion of our annual giving is earmarked for environmental causes. These funds help support local conservation and preservation projects, address the loss of biodiversity, and engage the public with nature. Every year, our Environmental Grant Committee always has a stack of quality proposals to sort through. Of course, it would be wonderful to fund everything. Here are a few of the organizations receiving grants.

- **Ecologic Development Fund**
- **Seaside Sustainability**
- **Girls Inc. of Lynn**
- **Supportive Living**
- **Backyard Growers**

Environmental Corporate Partners

- **Greenbelt 2018–2021 | \$27K:** Championing conservation of farmland, wildlife habitats, and scenic landscapes throughout the Essex County region
- **Ipswich River Watershed Association 2018–2021 | \$50K:** The voice of the Ipswich River, protecting nature and ensuring that there is enough clean water for people, fish, and wildlife—for today and future generations

We awarded \$293K in 46 environmental grants from 2018–2021. These helped preserve habitats and wildlife and provide preservation education.



Photo: Greenbelt

Aerial view of Russell Orchards in Ipswich, Massachusetts, protected by our Corporate Partner, Greenbelt; Greenbelt works within the 34 cities and towns of Essex County, Massachusetts, helping individuals, families, municipalities, and organizations realize their conservation goals.

2011



- Alternative Transportation Program implemented

2012

- LEFE qualified bonuses begin

2013



- Bio cooler introduced to replace sEPS foam for shipping
- Mesoamerican Reef Marine Conservation catalog

Community Support: Helping the Underserved

Community Grants

A percentage of our annual giving is reserved for the communities in which we operate. These funds help provide, food, shelter, safety, and services to local residents in need. The Community Grant Committee determines which eligible groups will receive funds each year. Here are some of the highlights from the last few years.

- The Open Door/Cape Ann Food Pantry
- North Shore Alliance of Gay, Lesbian, Bisexual, and Transgender Youth
- Healing Abuse Work for Change
- Lifebridge
- Pathways or Children, Inc.

Disaster Relief

CST matches funds for global disaster relief donations by employees. The following is a sample of employee + corporate combined giving.

- **2018 | \$8,365:** California Wild Fire Disaster Relief
- **2019 | \$7,895:** Hurricane Dorian Relief
- **2020 | \$50,794:** Wildfires in Australia, Earthquake in Puerto Rico, COVID outbreak in Wuhan
- **2020 | \$7,797:** India COVID Relief
- **2020 | \$25,000:** Japan Disaster Relief
- **2020 | \$19,936:** U.S. Racial Justice (not including Rising Black Scientists Awards):
- **2021 | \$27,000:** U.S. Wildfires, Flooding in Germany, Earthquake in Haiti, Kentucky Tornado Relief

Community Corporate Partners

- **Beverly Bootstraps 2018-2021 | \$75K:** Providing critical resources to families and individuals to achieve self-sufficiency: food, housing, education, counseling, and advocacy
- **LEAP for Education 2018-2021 | \$21K:** Empowering first-generation-to-college and underserved youth to graduate from college and succeed in career and life

CST awarded \$394K in 79 community grants from 2018-2021. The grants helped provide community food, shelter, and recovery programs.



Employees work at a local food bank, Haven from Hunger, separating and packaging food for clients.

2013



- Employee community gardens established

2013

- Small Grants program established

2013



- Tozer Road facility renovation complete with several energy-efficient upgrades

Global Giving

We enjoy gathering for summer and winter company events, but safety protocols dictated that we forego such events during the COVID-19 pandemic. \$150K that would have been used for company social events were donated to organizations across the globe, chosen by employees.

Employee-nominated Global Giving Recipient Organizations (2021):

- **Beverly Bootstraps (U.S.)**
- **Sierra Club Foundation (U.S.)**
- **Han Hong Love Charity Foundation (China)**
- **One Foundation (China)**
- **Katariba (Japan)**
- **Kidsdoor (Japan)**
- **The Ocean Cleanup (Global)**
- **Red Cross EU (Europe)**
- **World Food Programme (Global)**
- **Environmental Defense Fund (Global)**

Supporting the Arts

Science and art are both intimately connected and universal languages. You need to think creatively to inspire new science and truly innovate. CST values this relationship and helps to foster it through our Arts Support Programs.

We invite professional global artists to show their work in rotating exhibitions to spark creativity and connect with our internal community.



Photo: Raw Art Works

We also encourage our own talented employees to show their work (paintings, collage, photography, music, and dance) to inspire each other and create bonds to strengthen our work culture. CST has curated a collection of work created by local artists, which is displayed in our facilities for employees to enjoy.

Michael Aghahowa with some of his many self-portraits he created while attending Raw Art Works (RAW) – RAW is located in Lynn, MA and provides free art therapy-based programming to hundreds of young people in the community every year. It is a place where youth build trusting relationships, learn to express themselves through art, and make plans for the future.

2014



- Nitrile glove take-back program started

2014



- Volunteer program begins

2014

- First EV bonus given to employee

Arts Corporate Partners

- **Montserrat College of Art 2018–2021 | \$20K:** Providing a place of inspiration, respect, and encouragement, where young artists can develop their talents and achieve their vision
- **Raw Art Works 2018–2021 | \$28K:** Providing children the tools to create in unexpected ways and envision new possibilities for their future

Company Culture

Diversity, Equity, and Inclusion

We strongly believe that diverse, inclusive environments are critical for maximizing scientific achievement. Throughout history, so much scientific potential has been squandered because of prejudice and bias. This must end. We strive to develop a culture that cherishes its employees and the diversity of their ideas.

A monthly seminar series of external, expert speakers was launched in 2021, providing CST employees opportunities to learn more about supporting inclusive culture. Topics from the first year included: Unconscious Bias, Equity and Equality, Belonging, Women in Leadership, Microaggression, Confronting Ableism, Minding Your LGBTQ+, Diversity and Innovation, Beating the Odds as an Immigrant, Prioritizing Mental Health, and Becoming Good Allies.

CST has committed to 50% diversity representation on the corporate Leadership Team by 2025.

- **Employee Resource Groups** have been founded to support LGBTQ and Women in Science within the CST community.
- **A Reverse Mentorship Program** was initiated to give members of CST leadership fresh perspective on company culture and how young workers regard careers and development.
- **A CST Employee Art Auction** to benefit US Racial Justice was hosted in 2021. Matching funds were donated to support the cause.

**Diversity is the mix...
Inclusion is making
the mix work."**

– Andrés Tapia



*Andrés Tapia is a Senior Client Partner and is Korn Ferry's Global Diversity and Inclusion Strategist. He is the author of several books on diversity and inclusion, most recently *The 5 Disciplines of Inclusive Leaders: Unleashing the Power of All of Us*.*

2014

- High-efficiency ULT freezer (Stirling) piloted



2014

- EV charging stations are installed at Trask Lane facility



2015

- Global offices are included in CSR programs

Global Employee Engagement

Balance is so important, especially when it comes to engagement. Are we creating opportunities to get involved in all the areas we value: work/life balance, creating positive change, helping others and the environment?

Employee engagement opportunities at CST include:

- Art Exhibitions
- CSR Speaker Series
- Lunch and Learn Knowledge Sharing
- Friday Company Talks
- Hobby and Interest Series
- Clubs and Teams
- Multicultural Potluck
- Employee Concerts
- Community Volunteering

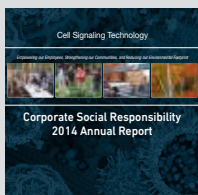


In 2021, CST officially completed our first-ever international cycling fund-raising ride Stofwisselkracht (Metabolic Force) to raise money for metabolic disease in children. Employees from across the globe rallied to support this important cause.

CST employees in Danvers, Massachusetts enjoy home-cooked meals from their coworkers' homelands, an annual tradition we call The Multicultural Potluck.



2015



- First CSR Report is published
- Science Scholarship established

2015



- Compostable cup reduction challenge to promote reuse

2016

- EV Bonus begins

17-20% of our employees at CST serve on our committees and boards for a 2-4 year term. This truly means that the voices driving our awards are those of our employees.

Employee-run Committees at CST:

- Grant Committees
- Scholarship Committee
- Internship Committee
- 401K Committee
- Volunteer Committee
- Green Committee



Employees volunteering outside of a local grocery store collecting donations to support our valued nonprofit Community Partner, Beverly Bootstraps



Employees hard at work assembling furniture for local nonprofit A Bed for Every Child

Photo: Kim Lee

2016

- Commit to Paris Agreement by reducing greenhouse gas emissions annually



2017

- Solar PV arrays installed at both U.S.-based facilities

2018

- LED upgrades and retrofits at both U.S.-based facilities

Planet & Health

There's no question that the planet is in crisis; the effects of climate change are evident. The planet's biodiversity is in jeopardy and the science to understand the cause is clear. The only question we face every day is: what can we do about it? It's easy to dismiss individual action when, at times, that contribution seems too small to make a difference. We believe that corporate action must be paired with sustainable actions we can all take in our everyday lives. We must empower employees, customers, and our communities with the tools to create positive change.

The life science industry does a lot of good. We provide tools that help researchers make discoveries to treat and cure disease. However, we also use a lot of energy and resources in the process. The first step is to acknowledge the environmental costs. Then you can innovate and lead. How can we continue to make the best research tools we can, but cut our greenhouse gas emissions in the process? Can we operate safely while trying to eliminate single-use items? Can we think creatively about transport options and how our individual footprints together form the whole?

As important as it is to grow our business, the goal has always been to improve human health overall. We must make sure that our employees work in healthier spaces, have a good work-life balance, and live a complete life beyond the value they bring to CST. We must take advantage of the opportunities we have to go beyond our area of expertise and contribute to endeavors to create a better, healthier world whenever we are able.

Image shared by our CST China office colleagues of the devastation caused by flooding in the summer of 2020—the intensity and frequency of weather events continue to increase due to climate change.



A Fiery-throated Hummingbird (Panterpe insignis) typically found in mountain cloud forests above 4,000 feet in Costa Rica and Panama



Photo: Carrol Henderson

2018

- Corporate partnerships created as Nonprofit Alliance Members

2018

- Disaster Relief Matching Program established: Up to \$25K/year in matching funds

2018

- Employee Donation Matching program created: \$300 annually per employee/year

Reducing Emissions

CST is reducing its greenhouse gas emissions through energy conservation measures and equipment upgrades, purchasing energy-efficient, ultra-low-temperature freezers, upgrading fume hoods and biosafety cabinets, and installing onsite renewables.

Solar panels installed at Trask Lane and Tozer Road facilities (U.S.)

- Solar at Tozer Road has **generated 776 MWh** over its lifetime and **avoided 466 MTCDE**

- Solar at Trask Lane has **generated 323 MWh** over its lifetime and **avoided 194 MTCDE**

MWh = Megawatt Hours • **MTCDE** = Metric Tons of Carbon Dioxide Equivalent



Onsite renewables ensure the use of clean energy and help reduce CST greenhouse gas emissions to combat climate change.

Alternative Transportation Program

This Program offers incentives to our U.S.-based employees who commute to and from work via carpool, bicycle, public transit, jogging, walking, and even riding a motorcycle. Employees can earn an extra 2 days off per year or pay it forward by donating proceeds to an environmental nonprofit of their choice.

There have been 90 participants in the Alternative Transportation Program since 2018.

2019



- Automatic sash closers for fume hoods installed at both U.S. facilities
- \$25K/year of matching funds reserved to complement employee personal donations

2019



- Wildflower habitation pollinator project planting along highway at Trask Lane facility

Electric Vehicles Infrastructure

CST has committed to the future of electric vehicles (EV). We offer a \$2K rebate paid to employees who purchase an EV for their personal vehicle. There are a total of 22 charging stations installed at U.S. facilities that are free to use and open to the public.

Sustainable Business Travel

As a global business, a certain amount of international travel is necessary. Offsetting the carbon footprint of these activities is also becoming a priority throughout the organization.

The CST Netherlands office reduces CO2 emissions by using green seats for each flight and working closely with Climate Neutral Group to invest in climate projects, like the Borehole Uganda Project. By offsetting and flying 100% climate neutral, we minimize our impact on the climate and give people in a country like Uganda access to clean energy and a better standard of living.



Jeske Koomen from our Netherlands office visited the Borehole Uganda Project that was funded through our commitment to reducing our CO2 emissions calculated through business travel.

57 CST employees have purchased personal electric vehicles to date. **This represents about 14% of the company,** and over 4x the U.S. average for new car sales.

The CST Netherlands office tracks and offsets all greenhouse gas emissions associated with air travel.

2019



- Beehives at Trask Lane facility through Beverly Bees

2019

- Commit to no pesticides used onsite for landscaping at both U.S.- based facilities

2020



- First Annual Rising Black Scientist Awards in U.S.

Nature and Ecosystems

We only get one planet. Its survival and our own are inextricably linked. We also seek to take physical corrective action where we can. These represent some of our initiatives to promote planetary health.

Pollinator Protection

Pollinator gardens were created at the Trask Lane facility in 2019, and have always existed at our Tozer Road facility. These gardens offer pollinators access to wildflowers in more continuous open spaces. To protect our pollinators, we have made a commitment to no pesticide use onsite for landscaping.

Community Garden

A community garden is maintained by the CST Garden Club, which is also teaching individuals how to grow their own produce, promoting plant-based diets, healthy soil, and biodiversity. Harvested produce is available to employees and has been served in our cafeterias.

Responsible Printing

In the past, the biotech industry utilized printed catalogs to describe product offerings. Initial CST catalogs offered some of our earliest opportunities to raise awareness for environmental conservation through targeted themes like *Plight of the Pollinators* and *Mesoamerican Reef Marine Conservation*. We have since moved to digital catalogs, but when we need to print, we do so responsibly by printing on-demand, using eco-friendly paper and soy-based inks whenever possible.

Employee Wellness

Our important work begins with the health and wellness of employees. It's important to nurture every part of ourselves and come to work every day refreshed. CST globally offers employees:

- Plant-based food options served in our cafeterias
- Onsite and virtual yoga classes
- Step Challenges to promote health and physical activity
- Weight loss support through on-site Weight Watchers and health and wellness challenges
- Running, outdoor, fitness, cycling, dance, tennis, and other clubs to promote exercise
- Shower and changing rooms as well as bike storage at U.S. facilities for cyclists and participants in the Alternative Transportation program



Photo: Jonathan King, Senior Research Associate in Antibody Manufacturing



The CST Garden Club grows flowers for local pollinators and a wide variety of produce.

2020

- Four additional annual scholarships dedicated to supporting students of color

2020

- DE&I Committee founded
- DE&I Seminar Series launches for employees globally

2021

- Director of Sustainability position created and filled, reporting to CEO

2022

- CST joins 1% for the Planet

Promise for Tomorrow



In the early days of CST, one of our goals was to make the best research antibodies we could. As researchers ourselves, we saw that was a big need in our scientific community. Twenty-two years later, we're still making the best reagents available. We've never wavered in that commitment since the beginning because our foundation is a strong belief in the positive impact of science on society and uncompromising business ethics.

Researchers have used our tools to uncover biological mechanisms of action, to unlock the interplay and connection that cell signaling plays throughout biology, and to study disease and seek therapeutic solutions. We couldn't be prouder of the discoveries we've made, the discoveries we've made possible with our products, and the contributions made by sharing knowledge and collaborating with fellow scientists. We are deeply convinced that through our work and the quality we provide to so many biomedical researchers we contribute to making the world a better place.

Now that we have achieved some of our scientific and business goals, we realize there are more opportunities to expand our impact. We can also directly influence the lives of those in our community through outreach and philanthropy. We can encourage everyone inside and outside the company to live a life that balances health and work with art and seeks to enrich and protect our natural and human environments.

I'm honored to be part of an organization that believes in building a better world. Our promise is to never stop searching for ways to improve, fostering sound science, finding sustainable solutions, promoting wellness, and creating spaces for us all to be more connected.

A handwritten signature in black ink, consisting of a large, stylized 'R' followed by a series of loops and a final flourish.

Roby Polakiewicz,
Chief Scientific Officer
Cell Signaling Technology



Looking Forward

The Life Sciences have a major impact on the planet. Across the industry, research is resource-intensive and consumes massive amounts of energy which generates greenhouse gas emissions. It relies heavily on single-use plastic that continues to fill our landfills and our oceans. Life science research also generates hazardous waste that must be disposed of properly so that it does not enter the environment.

CST must be a leader in this space and demonstrate to our peers, Customers, and competitors that we can play a key role in advancing sustainability to combat climate change and improve planetary health.

As such, our sustainability goals focus on emissions, waste, water, giving, and individual action. Corporate goals are essential, but as individuals, we all have the ability to participate through sustainable actions in our everyday lives. What may seem like small steps will add up.

CST has an ambitious, science-based climate goal to achieve net-zero emissions by the 30th anniversary of our founding, in 2029. Scientists agree the world needs to attain net-zero emissions by 2050 to limit global warming to no more than 1.5 degrees Celsius above pre-industrial levels, simply to avert some of the worst impacts of climate change. We believe that we need to act now and demonstrate to other organizations and individuals what is possible.

We will continue to strengthen and globalize our corporate social responsibility efforts and giving through an inspiring philanthropy goal. We will pursue this goal starting in 2022 by becoming a member of **1% for the Planet** and joining the global network of businesses, individuals, and nonprofit organizations tackling our planet's most pressing environmental issues.

The 1% for the Planet movement allows us all to participate in a myriad of ways. Through daily purchases, partnerships, and memberships, we bring diverse efforts together to create a groundswell of collective action. It's an incredible opportunity, and we are creating powerful and effective change together. Becoming a 1% for the Planet Business Member is an investment in ethical, relevant business for the future of our planet and people.

We are excited to drive progress and engage with you to create impactful actions and solutions. Our efforts are stronger together.



Krystyna Hincman

Krystyna Hincman,
Director of Corporate Social Responsibility
Cell Signaling Technology



A handwritten signature in black ink.

Anthony Michetti,
Director of Sustainability
Cell Signaling Technology





Cell Signaling Technology (CST) is a *different* kind of life sciences company—one founded, owned, and run by active research scientists, with the highest standards of product and service quality, technological innovation, and scientific rigor for over 20 years. We consistently provide fellow scientists around the globe with best-in-class products and services to fuel their quests for discovery. CST is a company of caring people driven by a devotion to facilitating good science—a company committed to doing the right thing for our customers, our communities, and our planet.



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