

Thank you

FOR POWERING THE SCIENCE
THAT KEEPS WOMEN AND
THEIR FAMILIES SAFE



SILENT SPRING INSTITUTE

is a mission-driven scientific research organization dedicated to uncovering the environmental causes of breast cancer.



When I think of the impact you have achieved for women and science in 2022, I am filled with gratitude.



Because of your passion for prevention science and your farsighted generosity, you acted on your beliefs and helped so many people in so many ways:

- You helped scientists identify, study, and understand the dangers of a growing number of chemicals that contribute to breast cancer risk.
- You helped advocates and legislators pass safer textile laws that will protect children and adults alike.
- You helped your neighbors in areas with contaminated water supplies get tested so they can know their exposure levels and take appropriate action.
- You helped regulators by informing them about which chemicals are the most dangerous and should be removed from consumer products.
- You helped immigrant women working in health care participate in research about their potential toxic exposures on the job.
- You helped all women become better informed of the science so that they can limit their environmental exposures and reduce their risk of breast cancer.

You truly are part of a special group of people with a shared vision of the future – one in which women inherit a lasting legacy of health, wisdom, and joy born of the fruits of science. Thank you for standing up for what we deserve.

In these pages, I'm happy to share in depth with you some of the good work we accomplished together in 2022.

With deep appreciation from your biggest fan at Silent Spring Institute,

A handwritten signature in blue ink that reads "Julia Brody".

Julia Brody, PhD
Executive Director



Silent Spring helped organize a highly successful continuing medical education series on cancer and the environment. The series garnered rave reviews from participants, with one nurse describing it as **“the best continuing education I’ve ever seen.”**

You are helping TO CHANGE THE STORY ABOUT CANCER

In 2022, you helped save lives by advancing cancer prevention, especially as it relates to environmental chemicals. Your support in this area is helping to address two important trends:

- 1 Patients are increasingly asking their healthcare providers about the links between toxic chemicals and cancer — and what steps they can take to protect themselves. And yet...
- 2 Healthcare providers are feeling ill-equipped to answer their questions.

That’s because far too many doctors don’t know about the science — the large body of evidence that shows environmental chemicals are important contributing factors in the development of cancer. What’s more, the current medical

system tends to focus on treatments. Aside from addressing risk factors like smoking and diet, prevention is largely ignored.

The story about cancer is essentially dictated by the medical establishment. So the story about cancer can’t change until the medical establishment puts this kind of prevention on its radar. What’s needed is continuing medical education aimed at engaging doctors and nurses — to equip them with information about environmental risk factors for cancer and strategies for prevention.

Here’s where you stepped in

Because of supporters like you, Silent Spring was able to form a groundbreaking partnership with a major cancer center, and we combined forces to provide cancer prevention education.

Early last year, Silent Spring Institute,

co-hosting with Dana-Farber Cancer Institute, Cancer Free Economy Network, UMass Lowell, and other partners, led the way forward with a continuing education series known as the Cancer & Environment Forums.

The Forums comprised three 2-hour workshops in February and March of 2022. Over 520 clinicians, community members, scientists, and others registered to attend. More than 125 clinicians received Continuing Medical Education (CME) credits. The reviews were highly positive. One nurse called it “the best continuing education I’ve ever seen.”

Topics covered by nationally prominent physicians and scientists included:

- The biological characteristics of carcinogens
- How inherited genes interact with environmental pollution
- Strategies for doctors to advance cancer prevention policies
- Methods for care providers to talk (blame-free) with cancer patients about exposure reduction

- How to recognize industry strategies that use biased science to create doubt about environmental carcinogenesis.

With your support, we plan to expand our successful Forums by collaborating with other cancer centers across the country to host more workshops featuring updated science, tailored topics, and regionally relevant case studies.

Our educational series is designed to enlighten healthcare providers about the importance of prevention to advance a paradigm shift in the narrative around cancer. We’re now planning our next set of Forums, which will take place in June at Columbia University.

Yes, many cancers can be prevented by reducing harmful exposures. It’s high time doctors and patients talk about these opportunities to stop cancer before it starts. It’s high time we make these conversations an integral part of routine care.

Together with you, we’re committed to telling the whole story about cancer and saving more lives.

“We know cancer is related to whether you smoke and your diet.”

“But I don’t smoke and I eat well. What about the environment?”



Source:
Mary Beth Terry,
Cancer & Environment Forums
2022, Session 1.



YOU ARE HELPING TO POWER THE SCIENCE THAT EVENS THE PLAYING FIELD AND PROTECTS WOMEN'S HEALTH

Safer Chemicals Program TAKES ON SEXISM IN CHEMICALS REGULATION

Dr. Jenny Kay

Dr. Jenny Kay is a Silent Spring research scientist whose work focuses on the biological effects of toxic chemicals. She's particularly interested in how DNA damage, inflammation, and the stimulation of hormones can lead to the development of breast cancer. Dr. Kay received her PhD in Biological Engineering at Massachusetts Institute of Technology. We're thrilled to have her on our team!

Did you know that in the United States, and around the world, the most commonly diagnosed cancer is breast cancer? And strong evidence suggests that exposure to toxic chemicals in our everyday environment is an important risk factor. Yet chemical safety testing is overwhelmingly focused on male biology.

According to Silent Spring scientist Dr. Jenny Kay, "In testing chemicals for safety, the required assessments for male reproductive organs are far more extensive than those for females. And the word 'mammary' doesn't appear at all in the EPA test guidelines for reproductive and developmental toxicity."

We know that the medical establishment favors men's health. It's a kind of gender discrimination that's been baked into the system. But with your help, scientists like Dr. Kay are

pushing back so that all of us can move toward a healthier, more equitable future.

This is thanks in large part to the Safer Chemicals Program — Silent Spring's effort to identify chemicals that increase the risk of breast cancer and other women's health issues.

"We highlight chemicals that should be prioritized for exposure reduction and identify chemicals for further research," Dr. Kay says. "We're particularly focused on chemicals that people can be exposed to through consumer products. And we're

pushing for regulatory agencies to do a better job of protecting female body parts, especially the breast."

The research cannot be ignored any longer

The research published by the Safer Chemicals Program team makes it difficult for product manufacturers to claim they didn't know a certain chemical causes breast cancer. "We can say, 'Here's the evidence, you can't ignore it,'" Dr. Kay notes.

This protects women in three ways. First, Silent Spring scientists bring their research to agencies such as the EPA. Next, they advocate for improved testing of chemicals for harmful effects on the breast. And finally, they advocate for the use of the best science in determining whether a chemical is safe or not.

Dr. Kay said she's especially proud of a scientific article she published with Silent Spring Research Director Ruthann Rudel as part of an international group of scientists who are experts in breast toxicology and breast cancer.

In this article, the researchers show how current testing for chemical safety is inadequate — especially for harmful effects on the mammary gland, which is not included in most testing required by regulatory agencies.

As a result, chemicals that

increase the risk of breast cancer, cause early breast development, or reduce the ability to breast-feed may not be identified.

"Regulators are not using the best available science," Dr. Kay says. "They are resistant to using sensitive methods such as looking for changes to normal mammary gland development — possibly due to industry pressure to minimize required testing."

With all this in mind, we're taking action. In November, Silent Spring and Breast Cancer Action organized a workshop, which brought together more than 65 scientists, advocates, and policy experts to identify new strategies for promoting federal testing requirements that protect female bodies. Their findings were shared with you, our donors, at Silent Spring's December Science Café. The goal now, Dr. Kay says, is to move the needle with advocacy campaigns and perhaps a congressional briefing.

Also coming soon is a Safer Chemicals Program paper that will identify over 900 chemicals that could increase the risk of breast cancer.

You are helping to create a world where breast cancer is no longer the most commonly diagnosed cancer — that's a "#1" women don't need. And where regulators no longer treat women as second class, failing to protect them from chemicals that cause breast cancer — that's a "#2" women don't deserve.

Why I give



"Going through our daily lives, we don't see how we're poisoning the air, the soil, the water, and the body with toxic chemicals. Silent Spring Institute is doing the painstaking work of making the invisible visible to us. Every little thing they do holds the hope of preventing cancer."

Carolyn Fine Friedman
Silent Spring Donor

YOU ARE PROTECTING CHILDREN FROM **harmful chemicals in clothes**

Change is incremental. It comes step by step. We made a big one in 2022, thanks to your heartfelt and visionary support of prevention science.

Perhaps you hear the words “per- and polyfluoroalkyl substances” and feel nothing. But if you hear “PFAS,” we hope you do feel something: a sense of danger.

That’s because PFAS pose a threat to all of us. They’re toxic chemicals that stay in the body for years, and they’re associated with many health problems including asthma, thyroid disease, decreased response to vaccines, and cancers.

The kicker: PFAS are ubiquitous. They’re added to a wide variety of consumer products

advertised as nonstick, waterproof, and stain-resistant.

Think of the children. Their bodies are small. Their immune systems are not yet fully developed. To kids, PFAS pose a greater threat. And exposures early in life can lead to health problems in adulthood.

You may be familiar with how PFAS can be found in common household items such as carpeting and nonstick cookware. It’s also important to be aware of the textiles that the children in

your life could be using every day — especially waterproof and stain-resistant bedding and clothing.

Unfortunately, you can’t always rely on labels. A recent Silent Spring study found PFAS in waterproof and stain-resistant children’s products, including products labeled as “eco-friendly” or “green.” This is wrong — and we aim to right it.

The science you make possible

Recent Silent Spring research on PFAS in children’s textiles has caused “green” certifiers to strengthen their certification requirements. We’re partnering with advocacy groups to ensure they have the science they need to inform their work.

Collaborating last year with our partners at Safer States — a group committed to coordinating a state-driven national advocacy movement to eliminate exposures to PFAS — Silent Spring persuaded several green certifiers including Bluesign, AFFIRM, OEKO-TEX, and ZDHC to update their safety criteria to include toxic PFAS chemicals. Products with intentionally added PFAS will no



longer be certified as safe by these third-party groups.

Another wonderful achievement you made happen in 2022 came after Silent Spring provided testimony in support of a new bill in California that would prohibit PFAS in clothing and other textiles such as handbags, backpacks, draperies, and upholstery. Silent Spring was one of two leading experts asked to testify. The bill was signed into law in September. And when California makes laws, other states follow. Each new safety law makes millions of people safer.



→ OUR RESEARCH STARTS WITH YOU!

STUDYING PFAS IN **drinking water**

Silent Spring is in the middle of a 5-year study on how PFAS contaminants in drink-



ing water affect human health. The Massachusetts PFAS & Your Health Study began in Hyannis, where people were recruited for health assessments and to have their blood tested for PFAS.

In 2022, for the study’s second phase, a new office was opened in Ayer. Both towns’ public drinking water supplies had been contaminated by PFAS from firefighting foams used at nearby fire training areas.

The study’s findings will inform policies to protect public health and support communities in reducing their exposures.



→ THE RESEARCH YOU ARE MAKING POSSIBLE WILL HELP PROTECT IMMIGRANT WOMEN FROM JOB-RELATED CANCER RISKS

TOXIC EXPOSURES **immigrant women face on the job**

America is a story of immigrants. With each new wave of immigration, we benefit from an infusion of diversity, change, and strength that helps sustain and restore the United States. But immigrants are faced with grave dangers — dangers that are often job-related.

It's with this in mind that Silent Spring scientists Dr. Kristin Knox and Dr. Jennie Ohayon are conducting a new study — one that began last year and is due to wrap up in April.

Funded by the California Breast Cancer Research Program, the two-part initiative is currently in an exploratory phase. Silent Spring was chosen as one of three teams for a one-year pilot program that could lead to further research.

Dr. Knox said when she and Dr. Ohayon began their research, they started with a guiding question:

“Why do immigrant women seem to have an increased breast cancer risk after they come to the US?”

To answer this question scientifically, Dr. Knox is analyzing publicly available data collected by the U.S. Census Bureau and the CDC, some of which include data on immigrant women's exposures to toxic chemicals such as PFAS. Meanwhile, Dr. Ohayon is gathering new data from interviews. The researchers' findings complement each other.

“I'm doing the quantitative research and Dr.

Ohayon is doing the qualitative research,” Dr. Knox noted. In other words, she's crunching the numbers and Dr. Ohayon is talking to immigrant women, gathering their stories.

Together, their work provides a fuller view of the environmental exposures immigrant women encounter on the job.

The work began with a community-led initiative called the Women Workers Biomonitoring Collaborative, Dr. Ohayon explained. “That initiative was set up by firefighters. Nurses joined in later,” she said. “Both groups were concerned about women getting breast cancer from occupational exposures — and they led this work. Now, we're branching out to study other women workers in the healthcare system.”

Dr. Ohayon's team interviewed 48 immigrant women about their potential toxic exposures as well as other relevant risk factors in their health care jobs — for example, as patient care assistants and hospital custodians. She's also investigating non-chemical stressors such as undue job pressure, discrimination, and lack of appropriate health and safety training and protections.

“It's really wonderful to use our research and put it into practice to see how immigrant women are being exposed to these chemicals of

concern,” Dr. Ohayon said.

“I'm proud of this work. We're looking at women workers and what puts them at risk so we can change policies so they're better protected.”

Wanting to express her gratitude, Dr. Ohayon added, **“Thank you to our supporters who've been so helpful in lifting us up over the years!”**



Kristin Knox, PhD
Staff Scientist



Jennie Ohayon, PhD
Research Scientist

Silent Spring scientists Dr. Kristin Knox and Dr. Jennie Ohayon are working to answer the question, “Why does a woman's breast cancer risk rise after she comes to the US?”



THANK YOU, DONORS,
for funding the research that protects women and makes change possible!

DETOX Me

Silent Spring has become a leader in the development of digital tools to increase environmental health literacy.

In 2022, our Detox Me app was featured in the HBO docu-series *Not So Pretty* — an unflinching look at the beauty industry. The app was shown in each episode as a great place to start to protect yourself from toxic chemicals in your everyday environment.

After the series was released, over 100,000 more people downloaded the app. People everywhere are getting the information they need to reduce their exposures to harmful chemicals where they live, work, and play . . . thanks to your support.

Our Detox Me app is also being used in **multiple research projects**, including in a Harvard University study that aims to determine if the app can help couples get pregnant. Thirty couples trying to conceive via a Boston fertility clinic will use Detox Me to reduce their exposures to phthalates and phenols, chemicals that can negatively affect fertility. The hypothesis is that reducing men's and women's levels of these toxics will lead to more pregnancies.

Stay tuned for more updates on how Detox Me is creating a healthier world for families everywhere.

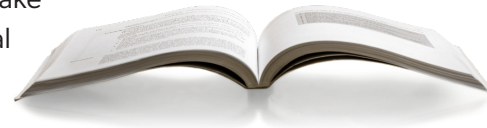
Your Impact in 2022 BY THE NUMBERS

A SNAPSHOT OF WHAT YOU HELPED ACHIEVE



520 clinicians, scientists, and community members attended the new Cancer and Environment Forums, a groundbreaking cancer-prevention partnership between Silent Spring and other leading cancer institutes.

Silent Spring scientists published **10** research papers in highly competitive peer-reviewed journals. Our groundbreaking science and scientific leadership continue to make breast cancer prevention a national research priority.



183 news stories mentioned or quoted Silent Spring's work, including ABC News, The Guardian, The Washington Post, The Hill, NPR, Vox, Bloomberg, and The Boston Globe.

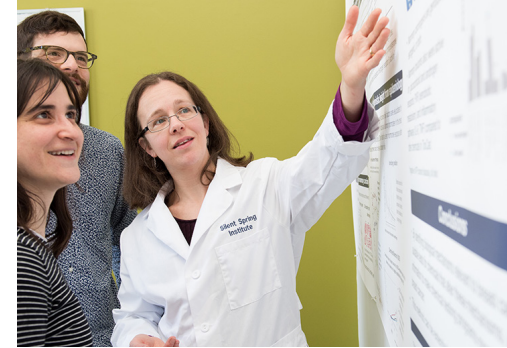
337,000 people have downloaded our popular Detox Me app, a trustworthy guide for clean living. This free app draws on decades of research on how harmful chemicals in our environment affect our health. You can customize the app for recommendations on reducing your exposure to toxics.

➔ [Download the app today at detoxmeapp.org](https://detoxmeapp.org)



➔ **YOUR GIFTS HAVE BEEN HARD AT WORK ALL YEAR.**

Silent Spring's message — about reducing our exposures to chemicals linked to breast cancer — reached large, new audiences of clinicians, policymakers, and community members.



67 conferences, webinars, and meetings featured presentations from Silent Spring scientists, reaching more than **5,000** people.

10 Black women social media influencers learned the latest science from Silent Spring on reducing exposures to toxic chemicals in personal care and beauty products. The influencers then shared information on safer beauty choices, which reached over **114,000** followers.



65+ scientists, advocates, and policy experts were brought together by Silent Spring and Breast Cancer Action to identify new strategies for catalyzing change at the federal level.

Silent Spring was **1 of 2** leading organizations asked to testify in support of a new bill in California that would prohibit PFAS in clothing. The bill, which also covers other textiles, was signed into law in September. This represents a huge achievement supported by our prevention science.



HERE'S WHAT YOU CAN DO today

➔ **Phase out your coated nonstick pans.** Use cookware that is steel clad, enameled, cast iron, or anodized aluminum.

➔ **Choose fresh or frozen food** instead of canned or packaged fare. The lining of cans and other food wrapping may contain hormone-disrupting chemicals.

➔ **Read the labels on cosmetics and personal care products** to avoid purchasing those that contain parabens. These chemicals are often added to lotions, shampoos, and deodorants, and may disrupt hormones.

➔ **Avoid buying new furniture or carpeting with stain-resistant treatments like Scotchgard™.** Look for natural fibers whenever possible.

➔ **Invest in a strong vacuum with a motorized brush and HEPA filter** to help minimize indoor pollution and prevent dust from getting into the air.

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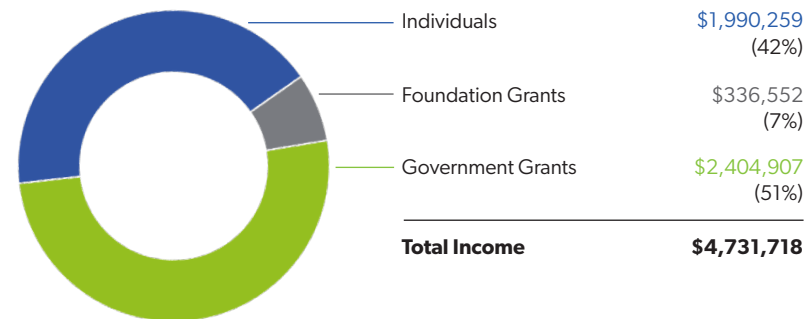


FINANCIAL INFORMATION CALENDAR YEAR 2022

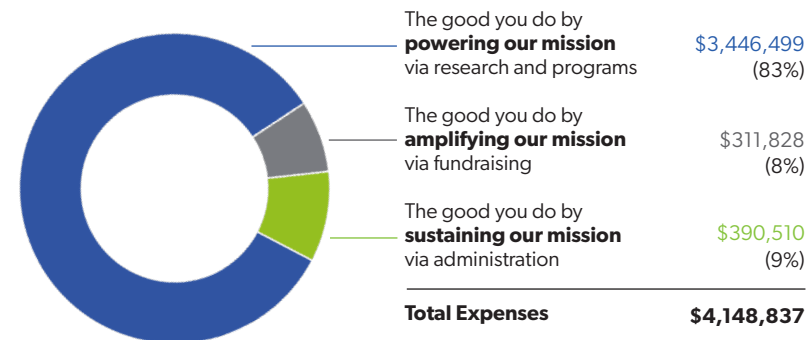
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We are grateful for your generosity and dedication to protecting people from cancer-causing chemicals. That's why, at Silent Spring Institute, we effectively and efficiently use your gifts to maximize your impact.

SOURCES OF SUPPORT



HOW WE USE OUR FUNDS



We value your contributions and your trust. If you would like more information about your impact on our innovative research, please contact **Rachel d'Oronzio Sarvey, Director of Development**, at: sarvey@silentspring.org or 617-332-4288 x215.

Thank you for caring about the science that leads to a cancer-free future.

WE SEE AND TREASURE YOU AND ALL THE GOOD YOU DO.



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SILENT SPRING INSTITUTE
Researching the Environment and Women's Health

