

# 2019 Making an Impact

A year closer to achieving our goal  
of ending smoking in this generation

2019 Annual Report

“

As the Foundation forges on, we remain committed to our goal of ending smoking in this generation. Though pursuing this goal entails a global fight, it is also a deeply human venture.

**Dr. Derek Yach**

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# Introduction

“As the Foundation forges on, we remain committed to our goal of ending smoking in this generation. Though pursuing this goal entails a global fight, it is also a deeply human venture.”  
- Dr. Derek Yach

## Who is FSFW?

The Foundation for a Smoke-Free World (FSFW) supports, funds, and advances innovative programs and research that will lead to real change.

## 2019 Impact

The Foundation launched many initiatives aimed at filling gaps.

## Current & Future Work

We’re working with partners to embrace innovation that could not have been imagined just a few years ago.



A background image showing a group of scientists in white lab coats working in a laboratory. In the foreground, a man with a beard and grey hair is looking through a microscope. Other scientists are visible in the background, also working. The scene is brightly lit, typical of a modern laboratory.

## Who is FSFW?

Ending smoking within the next 30 years means eliminating combustible cigarettes worldwide. We, the Foundation for a Smoke-Free World, know this is a bold, complicated, and entirely attainable goal.

The why is urgent. The how will require embracing new ideas.



## A Letter from Derek

Smoking remains one of the most devastating public health crises on earth. More than 8 million people die every year from tobacco-related illnesses, however that number is not news and rarely makes headlines. The longevity of the smoking crisis, it seems, has desensitized us to its path of destruction.

Today, as the world grapples with an unprecedented pandemic, the dangers of smoking are back on the front page. COVID-19 joins a very long list of diseases that may affect smokers differently than nonsmokers. Yet, the precise interaction between smoking status and COVID-19 remains unclear. To resolve this ambiguity, the Foundation announced a request for proposals for research investigating the ways in which nicotine and tobacco use may affect COVID-19 infection rates, severity, and mortality.

A pandemic in its own right, smoking has long been the world's largest preventable cause of death—a fact that will remain true after COVID-19 recedes. Indeed, as this virus brings new prominence to the public health community, we must use this platform to revitalize tobacco control efforts.

It has been fifteen years since the adoption of the World Health Organization's Framework Convention on Tobacco Control (FCTC). In that time, the world's richest countries have experienced substantial declines in smoking rates; yet, much work remains to be done. There are still more than 1 billion smokers worldwide, over 80% of whom live in the developing world.

In November of 2021, the ninth session of the Conference of the Parties will gather to review progress toward the FCTC's goals, considering: What have we learned since the adoption of the treaty? And how can

we do better? At the Foundation, we have spent the past year asking ourselves the same questions, finding cause for both celebration and concern.

While we endorse many of the FCTC's admirable articles, their implementation has been slow and, in some cases, nonexistent—a shortcoming that largely can be attributed to a lack of funding for the appropriate initiatives. Moreover, the original FCTC pays inadequate attention to the promise of harm reduction, as well as the unique needs of women and indigenous people who smoke, those living with comorbid conditions, and farmers whose lives depend on income from tobacco.

In 2019, the Foundation launched several initiatives aimed at filling these gaps:

- The Health, Science, and Technology team supported research investigating how the tobacco epidemic uniquely affects women. Grantees are also developing gender-specific, culturally sensitive smoking cessation and harm reduction interventions.
- In Malawi, our Agricultural Transformation Initiative (ATI) affiliate supported the launch of the Center for Agricultural Transformation. This facility aims to help farmers diversify their incomes to build resilience and ease the heavy reliance on the declining tobacco sector.
- ATI also supported the Agripreneur Accelerator Program, scholarship funds, and other capacity-building efforts.
- Grantee Marewa Glover conducted vital work through the Centre of Research Excellence on Indigenous Sovereignty & Smoking in New Zealand. This center is investigating how rapidly reducing tobacco smoking rates among indigenous peoples can assist the broader global smoking problem.

I am encouraged by the tremendous work we have accomplished in the past year. But we are only just beginning. As the Foundation forges on, we remain committed to our goal of ending smoking and the use of toxic smokeless tobacco products. Though pursuing this goal entails a global fight, it is also a deeply human venture. It is my task—and the task of all who join me on this journey—to prioritize the needs of the people we aim to help:

The woman desperately seeking assistance in kicking her decades-long cigarette habit.

The indigenous child who just lost a parent to lung cancer.

The tobacco farmer who can no longer support her family.

The e-cigarette user pondering whether he should switch back to combustible tobacco.

The patient with schizophrenia struggling to manage his disease and his addiction.

These are the people who motivate me every day—and who will continue to motivate the work of the Foundation in 2020 and beyond.

Sincerely,

Dr. Derek Yach  
President  
Foundation for a Smoke-Free World

# Mission & Purpose

At the Foundation for a Smoke-Free World, we support, fund, and advance innovative programs and research that will lead to real change. Unique among our peers, our approach is based on first understanding the challenges smokers face when quitting, and then researching and applying innovative solutions. We're committed to helping adult smokers quit the habit or switch to tobacco harm reduction products.

The Foundation is also attentive to the needs of vulnerable populations impacted by the declining demand for tobacco. Focusing on smallholder farmers, we work ensure that these populations are supported in the transition to sustainable alternative livelihoods.



There are over

## 1 BILLION

smokers in the world today.<sup>1</sup>

**That's 280 million more smokers than in 1980.**

Developing a solution is critical and timely. Smokers demand better and safer options, yet implementation of research in this area is lagging. Today, we have the opportunity to leverage innovative technologies that separate the health risks associated with nicotine from those of emissions found only in combustible cigarettes.

We can improve the lives and health of millions through our three core pillars:

**Health, Science, and Technology:**

Complement ongoing tobacco control efforts to accelerate quitting while understanding the individual smoker; and enhance access to independent research about tobacco harm reduction products.

**Agricultural Transformation Initiative:**

Promote diversification in tobacco-dependent economies.

**Industry Transformation:**

Focus on delivering change across the entire global tobacco industry and nicotine ecosystem.

Embedded in these principles is the Foundation's commitment to gender equality and the application of a comprehensive gender perspective.

<sup>1</sup>. World Health Organization. Global NCD Target: Reducing Tobacco Use. <https://www.who.int/beat-ncds/take-action/ncd-tobacco-target.pdf>. Published July 2016. Accessed May 3, 2019.



# Leadership



**Derek Yach**  
President

**“Ending smoking within a generation is an extremely challenging and beneficial mission. This presents a great opportunity for me to use my commercial as well as nonprofit skills learned over the last two decades. I am particularly attracted to the notion that there is a pathway between smoking and quitting that involves technology-driven harm reduction strategies.”**

– Nitin Mittal, Chief Operating Officer and Chief Strategy Officer



**“I’m proud to work for such a mission-driven Foundation that looks at the big picture of how tobacco is impacting the world, and leads with facts and science.”**

– Amy Curry, Chief of Staff

**“I am proud to work for the Foundation because it supports unbiased, transparent and objective research on tobacco and tobacco harm reduction products within many scientific fields, including economics to provide evidence that will shed light on how the global community will be able to efficiently end the tobacco epidemic. I feel privileged to work with great minds and global experts in these fields who are humble, openminded and forward-looking.”**

– Ayda Yurekli, Principal Economist, Finance



**“We have a great opportunity to perform good works and to help smokers and smallholder farmers improve their lives. I like the challenge of tackling complex problems that have frustrated people for a long time by bringing a fresh outlook and an open mind. Despite the great progress that has been made, so much more needs to be done – and is being done by the Foundation.”**

– David Janazzo, Chief Financial Officer and Vice President, Industry Transformation



**“FSFW is a mission-focused organization with the goal of ending smoking worldwide in this generation. This allows us to be creative in considering the best ways to help smokers quit by exploring new technologies, working with innovative scientists new to the field, and allowing the science to truly lead the way.”**

– Brian E. Erkkila, PhD, Vice President, Health, Science, and Technology

**“I am proud to work toward the elimination of the world’s leading cause of preventable death, and for an organization that meets the people we seek to help where they are and without judgment. I’m also humbled to work with colleagues who are courageous, creative, and extraordinarily intelligent.”**

– Heidi B. Goldstein, General Counsel



**“I’m passionate about the power of the private sector and innovation to drive national economic and agricultural transformation. I’m proud to work for FSFW and ATI because our strategy and funding allow us to invest in great partners and programs that share our vision of vibrant, inclusive economies that create prosperity for smallholder farmers, our core customers.”**

– Rob Henning, Director, Agriculture and Economic Diversification Programs



**“Since the inception of the FCTC, virtually nothing has been done to meaningfully fulfill Article 17. Because of this lack of action, there is now an urgent need to diversify smallholder tobacco farmer incomes and the governments dependent on those revenues. I am extremely proud to lead a team whose singular mission is to fill this glaring gap.”**

– Jim Lutzweiler, Vice President, Agriculture and Livelihoods

**“The commitment to good science which will lead to the continuing knowledge and actions necessary to achieve a ‘smoke-free world.’”**

– Carolyn A. Blanckmeister (C.B.), Chief Officer of Health, Science, and Technology

# Board Members

**Vandana Abramson**  
Board Member

**Dyborn Chibonga**  
Board Member

**Zoe Feldman**  
Board Member

**Paul Gardner**  
Board Member

**Darshita Gillies**  
Board Member

**Corinna Lathan**  
Board Member

**Angela Marshall Hofmann**  
Board Member

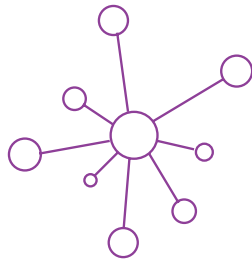
**Pamela Parizek**  
Board Member

**Noriko Tojo**  
Board Member

**Derek Yach**  
Board Member



# Our Core Principles



## Health, Science, and Technology (HST)

We know most smokers want to quit, but struggle with cessation tools that offer success rates of less than 10%.<sup>1</sup> Improving these outcomes requires that we go beyond the current available information to understand the role that smoking plays in the individual smoker’s life. Our efforts also attend to the diversity of tobacco products used across the world. We are working, for example, to identify strategies that will reduce the use of toxic smokeless tobacco products in South Asia.

Over the next several years, we will leverage data, research, and input from stakeholders and experts to complement ongoing tobacco control efforts by the World Health Organization. We will accelerate the development of more effective tools to help smokers quit or reduce their risks with a focus on building capacity for research targeting the low- and middle-income countries where the majority of smokers live.

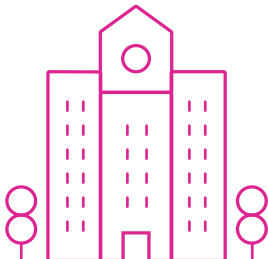
<sup>1</sup>. World Health Organization, WHO Report on Global Tobacco Epidemic: Monitoring Tobacco Use and Prevention Policies. <https://apps.who.int/iris/bitstream/handle/10665/255874/9789241512824-eng.pdf>. Accessed May 3, 2019.



## Agriculture and Livelihoods

To prepare for a future of reduced tobacco demand, we are working to make the agriculture sector globally more competitive. To achieve this goal, we collaborate with smallholder tobacco farmers toward the development of new business models that create value for existing participants in the tobacco supply chain.

In this spirit, our Agricultural Transformation Initiative (ATI) affiliate is partnering with the private sector, smallholder farmer organizations, government entities, and financial stakeholders to catalyze investment, develop and strengthen extension services, and promote entrepreneurship. The goal of this initiative is to support tobacco farmers in their efforts to transition to alternative crops and livelihoods.



## Industry Transformation (IT)

Our Industry Transformation efforts focus on attaining change within the global tobacco industry and nicotine ecosystem. Establishing a comprehensive data set that encompasses the companies that produce nicotine-based products is a necessary precursor to developing effective policies. The Global Trends in Nicotine reports are an important part of our overall research efforts and lay the foundation for our work.

The Tobacco Transformation Index, which is the first action of the Foundation’s Industry Transformation initiative, aims to accelerate the reduction of harm caused by tobacco use. The Index is a tool to catalyze the transformation of the global tobacco industry for the benefit of public health. By monitoring and critically evaluating tobacco companies’ behavior, including actions that either support or impede tobacco harm reduction, the Index will provide objective, transparent information to all stakeholders and incentivize companies to act more quickly and responsibly than they otherwise would.

# 2019 Progress Summary

2017



2018



2019

**\$0.1**  
MILLION  
GRANTS PAID

**\$6.7**  
MILLION  
GRANTS PAID

**\$41**  
MILLION  
GRANTS PAID

Grants authorized as of December 31, 2019: **\$161.7 million**

In 2019, the Foundation made significant progress toward our goal of ending smoking in this generation:

We filled gaps in our understanding of smoking beliefs and behaviors by surveying over 54,000 adults across seven countries in the Global State of Smoking Poll 2019, a follow-up to the initial 2017 poll.

We continued our efforts to prepare farmers for an era of reduced tobacco demand by supporting the ATI's Second Annual Agricultural Transformation Summit in Malawi.

We took our first step toward understanding the global flow of tobacco and studied its implications for tobacco control efforts by publishing the Global Trends in Tobacco Production and Trade Report.

We launched the development of the Tobacco Transformation Index with a global consultation process designed to gather feedback from a wide range of experts and interested parties. These included representatives of academia, associations, business, international organizations, the investment community, media, NGOs, think tanks, and advocacy organizations. Consultation was conducted primarily via a global series of multi-stakeholder dialogues, consisting of eight full- or half-day sessions held in seven countries. The Tobacco Transformation Index will be published later in 2020 and will evaluate many of the largest nicotine delivery companies in the world.

As we move into 2020, we are laser-focused on advancing research that increases our understanding of tobacco use and supporting innovators whose work will catalyze the end of smoking.

The Foundation for a Smoke-Free World is an independent, U.S. nonprofit 501(c)(3) organization with the purpose of improving global health by ending smoking in this generation. The Foundation is currently funded by Philip Morris International (PMI) through a binding pledge agreement for 12 years. The Foundation guaranteed its independence through its Certificate of Incorporation and Bylaws that preclude any influence from PMI or any other tobacco company on the Foundation's activities or funded research. The Foundation's Board of Directors and independent external auditors hired by the Board ensure compliance.



The background image shows a group of people, likely farmers or workers, in a lush green field. They are wearing light blue shirts and green aprons, and are working with plants. An orange circle is overlaid on the left side of the image, containing the text '2019 Impact' and a paragraph about initiatives aimed at filling gaps.

## 2019 Impact

The Foundation launched many initiatives aimed at filling gaps.





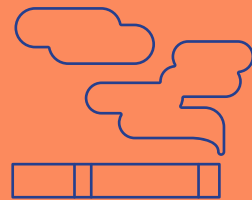
## 2019 Achievements

In 2019, the Foundation's work focused on our three core strategic pillars: Health, Science, and Technology; Agriculture and Livelihoods; and Industry Transformation. We commissioned studies to drive progress toward changing the global tobacco and nicotine ecosystem. Currently, the Foundation provides grants that allow more than 100 international researchers to advance research in smoking cessation and harm-reduction. In Malawi, ATI held its Second Annual Agricultural Transformation Summit and continued crop diversification initiatives that may serve as models for other tobacco-dependent economies.



# Discovery

The Foundation commissioned key studies in 2019 and supported ongoing research.



## Global State of Smoking Poll 2019

This poll serves as a follow-up to a similar poll conducted by FSFW in 2017 and provides an understanding of the experiences and challenges of smokers, their habits, and their perceptions of the risks associated with tobacco products and alternative nicotine delivery systems.

[Read the Country Reports](#)



## Global Trends in Nicotine: 2019 Update

Laying the groundwork for the Tobacco Transformation Index, the 2019 Update builds on the 2018 Report by identifying major players in nicotine delivery, outlining their product organization and geographic focus, and quantifying their output.

[Read the Report](#)



## Global Trends in Tobacco Production and Trade

This Agriculture and Livelihoods report investigates patterns in the production and trade of unmanufactured tobacco leaf. Historically, research has focused on trends in tobacco production, without considering trade patterns. This report thus fills an important knowledge gap.

[Read the Report](#)



## Insurer Perspectives on Smoking Risks

The Foundation commissioned crucial research on current practices related to insuring smokers and how these practices might be improved. Marsh & McLennan (MMC) Advantage Insights produced the report.

[Read the Report](#)



## Working Paper Series

In 2019, the Working Paper Series was introduced to provide preliminary and timely access to ongoing research being generated by, or closely relevant to, the Foundation's work. The recent report, Rural Perspectives on Alternatives to Tobacco Farming and Environmental Degradation in Malawi, is the first paper in this series. It offers a rich narrative based on current challenges for tobacco farmers in the country, as well as opportunities for alternative livelihoods.

[Read the Report](#)

Research reports and journal articles by the Foundation and its partners that were published prior to 2019 can be accessed [here](#).

## In Malawi

Our affiliate, the Agricultural Transformation Initiative (ATI), is preparing smallholder farming communities for a future of reduced tobacco demand. Through ATI, we are confronting an area of deep neglect: tobacco farmers in low- and middle-income countries (LMICs).

We continue our dedication to agriculture transformation in Malawi, an effort that involves both on-the-ground initiatives and remote research. The recent report, *Global Trends in Tobacco Production and Trade*, for example, identified three major economies—China, Brazil, and India—that play an outsized role in the global supply of tobacco. The findings of this report have global implications, and are of particular relevance to LMICs like Malawi. Given the country’s decreasing role as a tobacco leaf producer, there is an urgent need for diversification to alternative crops and livelihoods. Our goal is to make the agriculture sector in Malawi and the southern Africa region globally competitive.

In November 2019, ATI convened the Second Annual Agricultural Transformation Summit, which brought together experts and stakeholders to discuss issues on the theme: “The Role of Inclusive Science, Technology, and Innovation in Driving Agricultural Transformation.” Renowned journalist Femi Oke moderated again this year; and William Kamkwamba, best-selling author of *The Boy Who Harnessed the Wind*, delivered the keynote address.

During the Summit, the Centre for Agricultural Transformation (CAT) hosted the “AgTech Challenge,” a science fair inviting students to present solutions for challenges faced by Malawian groundnut farmers. Mr. Kamkwamba served as a mentor for the students, marking the first in a series of projects on which he and the CAT staff will collaborate. These efforts, like other ATI initiatives, are gender inclusive and aim to address the particular needs of female farmers.

The goal of the CAT is to help transform Malawian agriculture systems and the lives of smallholder farmers by enhancing access to innovation in agricultural science through a range of commercialization channels.





# Centers of Excellence

The Foundation has awarded grants to a number of world-renowned researchers who are spearheading innovative smoking cessation and harm reduction projects. Meet three individuals who are leading Centers of Excellence (COE).



**Marewa Glover, PhD**

An indigenous behavioral scientist and 2019 finalist for New Zealander of the year, Marewa has worked on reducing the health burden from smoking for over 25 years. She leads the Centre of Research Excellence: Indigenous Sovereignty & Smoking in New Zealand, building indigenous peoples’ capacity to reduce the harms from tobacco. This research addresses, among other things, how the tobacco epidemic uniquely affects women in often-overlooked communities. The Centre’s outputs include the following reports and scientific articles:

- [Quantifying Māori Spend on Tobacco, Alcohol and Gambling](#)
- [Suki and Tobacco Use Among the iTaukei People of Fiji](#)
- [Do We Really Need Another Law? The Cost to New Zealand of Banning Smoking in Cars](#)
- [Potential Effects of Using Non-Combustible Tobacco and Nicotine Products During Pregnancy: A Systematic Review](#)
- [Reducing Smoking-Related Morbidity and Mortality in Kalaallit Nunaat \(Greenland\)](#)



**Jed Rose, PhD**

Co-inventor of the nicotine patch and Director of the Duke Center of Smoking Cessation, Jed has authored more than 200 peer-reviewed articles and is the recipient of numerous grants from the National Institutes of Health. His work is devoted to the discovery of novel compounds and innovative, personalized treatments to improve the efficacy of smoking cessation therapy.



**Riccardo Polosa, MD, PhD**

A respiratory physician and harm reduction expert, Riccardo is the director of the Center of Excellence for the Acceleration of Harm Reduction (CoEHAR) at the University of Catania. The CoEHAR’s research program encompasses developed and developing countries and uses a multidisciplinary approach to better understand harm reduction. Its projects include, for example, the chemical characterization of nicotine products and multiyear cohort studies. CoEHAR’s 2019 outputs include the following peer-reviewed articles:

- [Smoking and Diabetes: Dangerous Liaisons and Confusing Relationships](#)
- [High Nicotine Exposure in Rodents is Unlikely to Inform About its Toxicity](#)

The grantee network also features researchers from a number of prominent academic institutions, including Yale University, the University of Minnesota, and Stellenbosch University.



## Current & Future Work

We're working with partners to embrace innovation that could not have been imagined just a few years ago.



# Promoting Gender Equality

In 2019, the Foundation instituted a formal Gender Policy to support our commitment to gender equality. This policy applies a comprehensive gender perspective to all of our work. A cornerstone of this commitment is increasing the number of women in leadership roles – within the institutions submitting grant proposals, as the drivers of research and capacity-building programs, and as the implementers of interventions. This commitment expands our impact on global health by creating inclusive economic development in LMICs, and by reducing inequality across core industry sectors.



# Agricultural Transformation Initiative Affiliate's Work

The Agricultural Transformation Initiative's work has included:

- **Centre for Agricultural Transformation (CAT)**

The CAT program, which combines scientific research, smallholder farming, business incubation, and large-scale commercialization to facilitate transformational agricultural development, has chosen groundnuts as their preliminary value chain focus. In 2019, the CAT program successfully completed their first AgTech Challenge, which took place one day prior to the Agricultural Transformation Summit. The event called for primary, secondary, and tertiary students to generate innovative ideas for labor-saving interventions in groundnut production. Out of over 60 applicants, 19 finalists were invited to attend the Summit to demonstrate their prototypes and designs. William Kamkwamba (author of *The Boy Who Harnessed the Wind*) mentored the students alongside the CAT team.

- **Investment Support Facility (ISF) for Inclusive Smallholder Transactions**

The ISF program, which supports the packaging of international investor-grade transactions with smallholder-inclusive business models, wrapped up its financial sector and crop insurance scoping activities. ISF has held workshops where investors collaborated with a group of pre-vetted Transaction Advisory Service Providers (TASPs) to build relationships, manage expectations, and exchange information in advance of the Summit. The ISF is working with local TASPs to support the development of a strong cadre of transactions that focus on smallholder impact.

- **MwAPATA Institute**

The MwAPATA Institute, which translates into “we’ve achieved it” in Chichewa, is an independent policy think tank run by Michigan State University (MSU). The Institute works closely with the Malawi National Planning Commission, the Lilongwe University of Agriculture and Natural Resources (LUANAR), and other groups to accelerate the adoption of Malawian-led programs that drive agricultural transformation and improve smallholder incomes and nutrition. MwAPATA completed its first major research initiatives, including: (1) the ATI Baseline Survey of 3,500 smallholder households; and (2) an extension experiment in collaboration with the national agricultural extension service.

- **ATI Fellowship and Scholarship Fund**

The ATI Fellowship and Scholarship Fund, managed by the Institute of International Education, received over 1000 applications from Malawians for higher education funding. An independent Selection Committee that does not include any representatives from ATI or FSFW, selected 19 master’s students from Malawi to attend universities in the United States. They will study agriculture, data science, ecology/environmental science, engineering, and business. The Committee also selected seven postdoctoral fellows to join research programs at Stellenbosch University in South Africa.

- **Technology-Enhanced Finance and Training Extension Pilot**

Implemented by Opportunity International, the pilot program has equipped and trained 90 Farmer Support Agents (FSAs) to deliver last-mile financial and extension services to smallholder farmers. Support focuses on training in financial literacy, gender equity, and the paprika, soy, and groundnut value chains as income alternatives to tobacco. Over 4,000 farmers have been profiled across 163 metrics.

- **Opportunity International (OI)**

Opportunity International (OI) is dedicated to improving the livelihoods of smallholder farmers. With support from an ATI grant, OI teaches farmers to employ good agricultural practices and increase their profitability by using a mobile-based last mile delivery platform. To date, the program has trained 219 field service and bank agents, 41% of whom are women.







## Tomorrow's Researchers

The Foundation works with partners to embrace innovation that could not have been imagined just a few years ago. Whether leveraging mobile technology to deliver cessation services in LMICs or developing remote diagnostics tools for clinical trials, these 21st century innovations enable greater access and collaboration, which, in turn, improves program efficacy.



# Current Grants:

## Cambridge Design Partnership (CDP)

CDP is investigating the barriers to adoption of reduced risk products in low- and middle-income countries (LMICs). This research focuses on consumer behavior in the four LMICs with the highest smoking rates (India, Indonesia, China, and Russia), as well as regulatory, commercial, and technological barriers that prevent switching.

## Biomarkers Research

Several grantees are working to identify biomarkers that can help distinguish between users of different nicotine products. These biomarkers are crucial to conducting clinical research and cohort studies.

## Analytisch-Biologisches Forschungslabor (ABF) GmbH

This group out of Germany is conducting a clinical trial collecting blood, urine, and exhaled breath to develop methods for identifying biomarkers that can discriminate between six distinct user groups.

## Behavioral Diagnostics

The diagnostic test innovator is utilizing epigenetic markers to distinguish between users of cigarettes, e-cigarettes/vape, and chewing tobacco. This technique would not only determine product use but also quantify the number of cigarettes smoked. Methylation signatures have been collected for about 500 subjects as enrollment continues.

## Lumos Diagnostics

Lumos is working to create a low-cost standalone and/or a multiplex point-of-care lateral flow device to confirm the use of cigarettes, e-cigarettes/vape, chewing tobacco and/or oral/dermal nicotine through the detection of urinary biomarkers.

## Agenome

Agenome is developing techniques to assess cancer risk in smokers through next-generation sequencing (NGS) and profiling of circulating free DNA and RNA. More than 300 samples have been collected and processed with the goal of detecting biomarkers that could predict cancer and other diseases.

## Telenor Health

This mobile health organization out of Dhaka, Bangladesh has developed a roadmap for 21st century smoking cessation in the developing world. Telenor has designed a system to provide remote support to millions of smokers who might otherwise lack access to cessation services. The mobile technology platform offers video behavioral and clinical support, access to information about cessation products, and digital assistance in quitting.

## Contact Us



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