

FSFW HEALTH, SCIENCE, AND TECHNOLOGY WAVE 2 REQUESTS FOR PROPOSALS

TOPIC 1: NEW AND BETTER TOOLS FOR RESEARCH: PRODUCT CHARACTERIZATION

PRODUCT CHARACTERIZATION: INTRODUCTION

Smoking¹ is the leading preventable cause of premature death in the world. There is an urgent need to help the approximately 1 billion smokers in the world to either quit or switch to products which pose lower risks to their health. The last decade has seen the proliferation of alternative nicotine delivery systems (ANDS, e.g., snus, vapes, heated tobacco products) with significantly lower levels of harmful constituents. If smokers were to move to these ANDS, they would very likely decrease their risk of death and disease compared with continuing to smoke. Assessing the harm reduction potential of these products depends in part upon rigorous testing to measure the levels of harmful and potential harmful constituents (HPHCs) to which a user may be exposed. This information can then be communicated to regulators, healthcare professionals and, most importantly, consumers.

The importance of proper tobacco product testing is evidenced by the inclusion of Articles 9 and 10 in the Framework Convention on Tobacco Control. These articles call for parties to implement a program of in-country product testing to provide information on product HPHC levels to governments and the public. Guidelines for strengthening country capacity were laid out in a recent WHO publication². They suggest that such data may be used to set product standards, educate the public, and inform future legislation. These WHO guidelines also suggest that in order to maximize potential public health benefit, priority for product testing should include products which are most prevalent on the market and products which are most harmful to users.

However, the capacity to develop tobacco testing laboratories differs widely by country due to differences in financial, workforce and infrastructure resources. The cost for analytical equipment alone could run into millions of dollars. That is before factoring in laboratory space, IT systems, hiring and training staff, and working through the laboratory accreditation and method validation process. The lack of resources may explain why in 2018 less than half of the parties to the FCTC reported fully implementing guidelines regarding product testing and disclosure of product emissions to regulators and the public.

The Foundation plans to assess global product characterization capacity, focusing on regions where capacity

strengthening may have the greatest public health benefit. In addition, although there have been advances, most nicotine product characterization laboratories were built to test the traditional combustible cigarette. While testing cigarettes remains important, we intend to evaluate how innovation could lead to methods which could increase throughput, reduce costs, and be adapted for emerging nicotine delivery products. The Foundation is exploring the possibility of supporting country-based centers for product characterization, as well as regional hubs focused on coordination and method innovation.

2 ¹ And, especially in India, the use of unrefined oral tobacco products

² Tobacco product regulation: building laboratory testing capacity. Geneva: World Health Organization; 2018. License: CC BY-NC-SA 3.0 IGO

REQUEST FOR PROPOSAL 1A: CAPACITY ASSESSMENT

Issue date:	January 18, 2019
Closing date:	May 13, 2019
Closing time:	5pm US Eastern Standard Time
Contact information:	support@smokefreeworld.org
Submit questions to:	support@smokefreeworld.org
Submit proposals to:	See submission instructions in RFP
Financing instrument:	Grant
Financing amount:	Up to US\$ 1 million
Financing duration:	Up to 6 months

(Please review the Topic 1 Introduction document as well for further background)

RESEARCH QUESTION

What is the current and expected global capacity to conduct nicotine product characterization?

In order to bring smoking to an end in this generation, policymakers, the medical community and consumers need reliable information about the absolute and relative risks of the products used in their country. However, the capacity to develop nicotine product testing laboratories differs widely by country due to differences in financial, workforce and infrastructure resources. We therefore plan to assess global product characterization capacity, focusing on regions where capacity strengthening may have the greatest public health benefit.

Deliverables

A report on global nicotine product testing capacity which includes:

- For in-scope countries (see below):
 - Assessment of existing public and private capacity to adequately characterize multiple product types (e.g., cigarettes, electronic cigarettes, heated tobacco products, snus) and also characterize a full profile of HPHCs (e.g., nicotine, PAHs, VOCs)
 - Assessment of “latent” laboratory capacity that could be adapted to perform nicotine product characterization
- Bottlenecks to capacity development, particularly in LMICs
- Assessment of minimum economic scale for laboratories and implications for appropriate number per country or region.

Qualifications

The Foundation encourages those groups to participate whose mission aligns with the Foundation’s purpose of ending smoking within a generation. These groups may include institutions of higher education, nonprofits, commercial enterprises, governmental agencies, or other research-based organizations.

Applicants should have a track record of researching and evaluating the scientific capacity of a geographically diverse range of countries, institutions and laboratories. They should also be familiar with nicotine delivery products, constituents relevant to their characterization, and international standards for validating and accrediting methods.

Geographic focus

For this initial effort, we plan to focus on some of the countries where most smokers live: China, India, Pakistan, Indonesia, Philippines, Russia, Romania, Mexico, and South Africa.

Estimated budget and duration

Up to \$1 million in total and up to six months

(We may issue multiple grants to cover different countries and regions.)

Submission Instructions

Applications should be submitted through our online portal which can be accessed [here](#). This link will always start a new application form.

You may save a started application at any time by using the 'Save & Finish Later' button at the end of each page. If you do so please use [this link](#) to return to the log-in screen to access the saved form.

A list of application portal FAQs can be found [here](#).

For all access inquiries, please contact us at support@smokefreeworld.org.

REQUEST FOR PROPOSAL 1B: TECHNOLOGY ASSESSMENT

Issue date:	January 18, 2019
Closing date:	May 13, 2019
Closing time:	5pm US Eastern Standard Time
Contact information:	support@smokefreeworld.org
Submit questions to:	support@smokefreeworld.org
Submit proposals to:	See submission instructions in RFP
Financing instrument:	Grant
Financing amount:	Up to US\$ 500,000
Financing duration:	Up to 6 months

(Please review the Topic 1 Introduction document as well for further background)



RESEARCH QUESTION

What is the outlook for innovative nicotine product characterization methods and tools?

Assessing the potential risks of nicotine delivery products depends upon rigorous product characterization to measure the levels of constituents to which a user may be exposed. In addition, although there have been advances, most nicotine product characterization laboratories were built to test the traditional combustible cigarette. While measuring emissions from cigarettes remains important, we intend to evaluate how innovation could lead to methods which increase throughput, reduce costs and can adapt to emerging nicotine delivery products.

Deliverables

A report on innovations in product characterization science which includes:

1. A catalogue of existing technologies and methods for characterizing potential exposures from nicotine delivery products:
 - a. By product type (e.g., combustible products, electronic cigarettes, heat-not-burn devices, oral tobacco products, inhaled powdered tobacco)
 - b. By class of constituent (e.g., nicotine, PAHs, VOCs)
 - c. Assessment of the method including sensitivity, reproducibility, speed, price and validation information
2. Analysis of the pipeline of emerging nicotine product characterization methods/technologies covering the parameters above
3. Identification of potential technologies which are currently not being developed for nicotine product characterization but could be applied to increase throughput, increase quality or decrease cost.

Qualifications

Applicants should have a track record of researching and evaluating analytical methods, particularly those related to nicotine products, as well as a deep understanding of the development of international standards, method validation and laboratory accreditation. They should also be familiar with nicotine delivery products, and constituents relevant to their characterization (e.g., nicotine, PAHs, VOCs, TSNAs).

Geographic focus

Global

Estimated budget and duration

Up to \$500k and up to six months

Submission Instructions

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