1) PROTOCOL TITLE

Science news survey on harassment and intimidation of scientists

2) OBJECTIVES

To investigate how widespread the experiences of harassment, intimidation, and other unwanted behaviors have been for researchers publishing on COVID-19, as well as researchers across disciplines; and what the personal and professional effects of these experiences have been.

3) BACKGROUND

Two surveys will accompany an in-depth feature article in the news section of the academic journal *Science*. The first will survey COVID-19 researchers specifically, and the second will survey the AAAS membership. While the feature article will use narrative, direct quotes and expert opinion to explore the topic of harassment of scientists, the survey will provide quantitative data to understand the scope and effects of the problem.

4) INCLUSION AND EXCLUSION CRITERIA

Participants in the first survey will be researchers who have published academic research papers or commentaries on COVID-19, as indexed in Web of Science, recruited via emails sent to the addresses listed for corresponding authors of these papers and commentaries. Participants in the second survey will be the AAAS membership, recruited by emails sent to members' addresses. The nature of the sampling procedures mean that the following will NOT be included in the sample:

- Adults unable to consent
- Individuals who are not yet adults (infants, children, teenagers)
- Prisoners

The researchers will not deliberately seek to include or exclude pregnant women in the sample. We are not interested in participants' pregnancy statuses, and will not be enquiring about this at any point.

5) STUDY-WIDE NUMBER OF SUBJECTS

Approximately 5,000 researchers will be contacted based on Web of Science records. Approximately 70,000 AAAS members will be contacted. We hope for a response rate of between 5-20%.

6) STUDY-WIDE RECRUITMENT METHODS

Participants in the first survey will be researchers who have published academic research papers or commentaries on COVID-19, as indexed in Web of Science, recruited via emails sent to the addresses listed for corresponding authors of these papers and commentaries. Participants

in the second survey will be the AAAS membership, recruited by emails sent to members' addresses.

The text of the recruitment and reminder emails will be as follows:

COVID researchers – INVITATION

Subject: Science Magazine needs your help to study abuse of scientists during the pandemic

Dear Colleague,

The COVID-19 pandemic has pushed many researchers into the spotlight of media attention and public policy influence. Some researchers have reported experiencing online and offline harassment, threats, and intimidation as a result.

Science is planning to publish an article on the scope and consequences of this problem and we need your input. If you have published any research or commentary on any element of the COVID-19 pandemic, please take a moment to complete this survey, whether or not you have experienced any harassment, intimidation, or other unwanted behavior. It is very important that we hear from people who both have and have not experienced these problems.

This anonymous survey will take approximately 15-30 minutes. After you complete the survey, you will have the chance to select one of three charities to receive a donation on your behalf.

<Call to Action Button: Click here to start the survey>

Please note that the survey will be available until Saturday, 15 January. Please be sure to participate by that date.

The survey is being conducted by the news department of the journal *Science*, with academic and ethical oversight (IRB protocol number: xxx). It will inform an in-depth news article on the problem of harassment and intimidation facing COVID-19 researchers specifically, and scientists more broadly. The information that you give in the survey will be handled confidentially and identifying details will not be published. Your participation in the study is completely voluntary and you must be 18 or older to participate. Please see the consent form at the survey link for further details on how your answers will be used.

You received this email because you were identified as a scientist who published in a Web of Science indexed journal between 2020 and 2021. We used the email address stored in Web of Science to contact you.

If you received our request to participate multiple times or participated already in the survey, we apologize for this email.

Thank you so much for your time!

Tim Appenzeller, News Editor, Science

Cathleen O'Grady, Contributing Correspondent, Science

COVID researchers – REMINDER 1

Subject: Friendly reminder that Science Magazine needs your help to study abuse of scientists during the pandemic

Dear Colleague,

The COVID-19 pandemic has pushed many researchers into the spotlight of media attention and public policy influence. Some researchers have reported experiencing online and offline harassment, threats, and intimidation as a result.

Science is planning to publish an article on the scope and consequences of this problem and we need your input. If you have published any research or commentary on any element of the COVID-19 pandemic, please take a moment to complete this survey, whether or not you have experienced any harassment, intimidation, or other unwanted behavior. It is very important that we hear from people who both have and have not experienced these problems.

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Tim Appenzeller, News Editor, Science

Cathleen O'Grady, Contributing Correspondent, Science

COVID researchers – REMINDER 2

Subject: Last chance to help Science Magazine study abuse of scientists during the pandemic

Dear Colleague,

The survey that will inform *Science's* upcoming article on COVID-19 researchers' experiences with harassment will close at midnight (U.S. Eastern time) on 15 January, and we need your input whether or not you have experienced any harassment, intimidation, or other unwanted attention.

The survey will take approximately 15-30 minutes. After you complete the survey, you will have the chance to select one of three charities to receive a donation on your behalf.

<Call to Action Button: Click here to start the survey>

The survey is being conducted by the news department of the journal *Science*, with academic and ethical oversight (IRB protocol number: xxx). It will inform an in-depth news article on the problem of harassment and intimidation facing COVID-19 researchers specifically, and scientists more broadly. The information that you give in the survey will be handled confidentially and identifying details will not be published. Your participation in the study is completely voluntary and you must be 18 or older to participate. Please see the consent form at the survey link for further details on how your answers will be used.

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Tim Appenzeller, News Editor, Science

Cathleen O'Grady, Contributing Correspondent, Science

AAAS members – INVITATION

Subject: Dr. <Last Name>, Science Magazine needs your help to study abuse of scientists Dear Dr. <Last Name>,

The COVID-19 pandemic has pushed many researchers into the spotlight of media attention and public policy influence. Some researchers have reported experiencing online and offline harassment, threats, and intimidation as a result. And researchers in other fields – including climate science and vaccine research – have long faced problems like these.

Science is planning to publish an article on the scope and consequences of this problem and we need your input. Whether or not you have experienced any harassment, intimidation, or other unwanted behavior, please take a moment to complete our survey. It is very important that we hear from people who both have and have not experienced these problems, and from researchers in all disciplines.

The survey will take approximately 15-30 minutes. After you complete the survey, you will have the chance to select one of three charities to receive a donation on your behalf. Follow this link for the survey:

<Call to Action Button: Click here to start the survey>

Please note that the survey will be available until Saturday, 15 January. Please be sure to participate by that date.

The survey is being conducted by the news department of the journal *Science*, with academic and ethical oversight (IRB protocol number: xxx). It will inform an in-depth news article on the problem of harassment and intimidation facing COVID-19 researchers specifically, and scientists more broadly. The information that you give in the survey will be handled confidentially and identifying details will not be published. Your participation in the study is completely voluntary and you must be 18 or older to participate. Please see the consent form at the survey link for further details on how your answers will be used.

Thank you so much for your time!

Tim Appenzeller, News Editor, Science

Cathleen O'Grady, Contributing Correspondent, Science

AAAS members – REMINDER 1

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Thank you so much for your time! Tim Appenzeller, News Editor, *Science* Cathleen O'Grady, Contributing Correspondent, *Science*

7) STUDY TIMELINES

Participation (from consent through to debriefing) will take no more than 15-30 minutes. Once the necessary approvals have been granted, recruitment will begin. After an initial recruitment email has been sent out, two follow-up emails will be sent, 6 days and 11 days after the initial email. We will close the survey two weeks after the first recruitment email. The study will be completed by the end of 2022.

8) STUDY ENDPOINTS

After an initial recruitment email has been sent out, two follow-up emails will be sent, 6 days and 11 days after the initial email. We will close the survey two weeks after the first recruitment email. The study will be completed by the end of 2022. The study will conclude with the submission of a data file to the news team at *Science*.

The procedures in this study are benign. There are no safety endpoints.

9) PROCEDURES INVOLVED

Materials

The survey will be conducted using Alchemer. The questions to be asked may be found in an attached PDF file.

Procedure

After completing the consent process, participants will be directed to an online survey. After completing the survey, they will receive the following debrief information:

Thank you for taking this survey!

The purpose of this survey is to understand the scope and consequences of harassment/intimidation of scientists. We greatly appreciate your contribution and time. As thanks to everyone who participates in this survey, Science will donate \$500 to charity, divided proportionally among three charities according to participants' selections. The options are:

- Malaria Consortium this charity distributes antimalarial drugs to children aged 3-6 years old, and protects a child from malaria for each \$7. Malaria Consortium is the top-rated charity assessed by GiveWell, which examines the evidence of how effective charities are and how much good a program accomplishes for each dollar spent. Read more here: https://www.givewell.org/charities/malaria-consortium.
- COVID-19 Solidarity Response Fund this fund supports the World Health Organization and
 its partner organizations (including the African CDC, United Nations Refugee Agency, and
 World Food Programme) in providing essential resources to low-income countries, helping
 displaced people, and more. Read more here: https://covid19responsefund.org/en/impact/.

3. GiveDirectly – this charity gives money directly to low-income households in developing countries, which evidence suggests helps people by allowing them to spend donations on the goods and services they most need. Like Malaria Consortium, this charity is highly rated by GiveWell. Read more here: https://www.givewell.org/charities/give-directly.

Please choose which charity should receive your share of the donation:

- Malaria Consortium
- COVID-19 Solidarity Response Fund
- GiveDirectly

Would you be willing to talk to a journalist at Science about your experiences? If so, please ent	er your
email address here:	

Thank you again. If you have any questions about the study, please contact Cathleen O'Grady at mail@cathleenogrady.com. If you have any questions about your rights as a research subject or complaints regarding this research study, or you are unable to reach the research staff, you may contact a person independent of the research team at the Biomedical Research Alliance of New York Institutional Review Board at 516-318-6877. Questions, concerns or complaints about research can also be registered with the Biomedical Research Alliance of New York Institutional Review Board at www.branyirb.com/concerns-about-research.

10) DATA AND SPECIMEN BANKING

The data for this study (in an anonymous form) will be made 'open' via the OSF.

11) DATA MANAGEMENT

Data Handling

The data will be collected using the Alchemer survey platform. Upon completion of the survey period, data will immediately be downloaded by researchers and deleted from the platform. Because the data includes details such as career, location and demographics that may, in combination, run a small risk of allowing participants to be identified, only the researchers will have access to this complete data file. Email addresses from the end of the survey (in response to the question "Would you be willing to talk to a journalist at Science about your experiences?") will immediately be downloaded into a separate list and deleted from the data file. IP addresses and email addresses collected by the survey software will immediately be deleted before analyses. After analysis, and before publishing an anonymized, open data set, data on demographics and location will be removed, along with free-text responses.

All records related to this study will be stored on password protected servers for a period of at least seven years.

Data Preparation

IP addresses and email addresses will be deleted from the dataset in order to de-identify data. Responses from participants who complete the consent process but do not respond to any questions will be removed.

Primary Analyses

Analyses will be exploratory and will therefore report mainly descriptive statistics.

12) PROVISIONS TO MONITOR THE DATA TO ENSURE THE SAFETY OF SUBJECTS

This research does not involve more than minimal risk to subjects.

13) WITHDRAWAL OF SUBJECTS

There are no circumstances under which participants will be withdrawn from the research without their consent. However, they will be excluded from the sample if they respond negatively to the first question in the survey, which determines whether they meet the criteria for respondents (that is, having published research on COVID-19, or conducting research as primary professional activity).

14) RISKS TO SUBJECTS

The research carries no costs or physical risks to subjects. It will ask about experiences that may have been difficult and painful, which may cause some psychological discomfort.

15) POTENTIAL BENEFITS TO SUBJECTS

The researchers will be given the opportunity to choose a charity to receive a portion of a \$500 charitable donation made on behalf of all survey participants. Participants may appreciate the opportunity to share their experience, and to contribute to an understanding of how widespread the problem of researcher harassment is.

16) VULNERABLE POPULATIONS

This research does NOT involve individuals who are vulnerable to coercion or undue influence.

17) MULTI-SITE RESEARCH

This is NOT a multi-site study.

18) COMMUNITY-BASED PARTICIPATORY RESEARCH

This is NOT community based participatory research.

19) SHARING OF RESULTS WITH SUBJECTS

Neither individual nor aggregated results will be shared with participants. However, they will be free to access all associated publications, which will be available via the Internet.

20) SETTING

Online

21) RESOURCES AVAILABLE

N/A

22) PRIOR APPROVALS

None

23) RECRUITMENT METHODS

Recruitment will occur via the email included above.

24) LOCAL NUMBER OF SUBJECTS

N/A

25) CONFIDENTIALITY

The data, in an anonymized form, will be made 'open' via the OSF.

The data will be collected using the Alchemer survey platform. Some directly identifying data – email and IP addresses – will be collected along with survey responses in order to flag potential duplicate responses to the survey, and deleted before analysis. Because the data combines details such as career, location and demographics that may, in combination, run a small risk of allowing participants to be identified, only the researchers will have access to this complete data file. Before publishing an anonymized, open data set, data on demographics and location will be removed, along with free-text responses.

All records related to this study will be stored on password protected servers for a period of at least seven years.

26) PROVISIONS TO PROTECT THE PRIVACY INTERESTS OF SUBJECTS

This study will be conducted online. Participants will self-select into the sample and will be provided (prior to participating) with information about what data will be collected and how it will be used, stored and disseminated.

27) COMPENSATION FOR RESEARCH-RELATED INJURY

This research does not involve more than minimal risk to subjects.

28) ECONOMIC BURDEN TO SUBJECTS

Not applicable.

29) CONSENT PROCESS

Participants will be provided with an information sheet and asked to complete an online consent form. They will not be able to proceed onto the study until they have digitally agreed to the terms of the consent form. The consent forms are attached in the online submission form.

30) PROCESS TO DOCUMENT CONSENT IN WRITING

Please refer to section 29. Consent will be obtained online.

31) DRUGS OR DEVICES

This research does not involve drugs or devices.