# Public Engagement Fund  Application Form

Thank you for your interest in applying to the Doctoral School's Public Engagement Fund.

Applications are invited from University of Sussex doctoral researchers and early career research staff for small grants of up to £750 per activity.

The deadline for applications is 28th February 2018.

Please ensure that you have read the guidance notes before completing your application.

1. Name

; ; ; ; ; ; ; ; ;
First

; ; ; ; ; ; ; ; ;
Last

2. Sussex e-mail address

; ; ; ; ; ; ; ; ;@sussex.ac.uk

3. Contact telephone number

; ; ; ; ; ; ; ; ;

4. School and  department of lead applicant

School of Life Sciences (GDSC)

5. Are you  a doctoral researcher or early career research staff?

Doctoral researcher

## About the  activity

Please tell us about the purpose of the public engagement activity.

You may select any or all of the options below. Please explain your rationale when prompted.

6. Is the purpose  of your activity to inform and inspire the public?

Yes  No

Activities designed to inform and inspire will have a dissemination function, inspiring, informing, educating and making your research more accessible. Possible activities might include participation in festivals, interactive talks and shows, films and animations.

6a. Please explain your rationale

The project will give the opportunity to several year 12 students to undertake an experiment directly related to ongoing research. During this process, they will learn about genetic stability and its importance in cancer and other diseases. They will execute a scientific experiment and learn how to collect and interpret results from it. This first-hand experience could be an excellent inspiration to choose STEM subjects for their further studies.

7. Is the purpose  of your activity to consult and listen to public views?

Yes  No

Consultation activities will involve listening to the public’s views and concerns about your research, and providing an opportunity to gain fresh perspectives and insights into your work. Possible activities might include public debates, online consultations, panels and user-groups.

7b. Please  explain your rationale

The direct interaction with students and teachers will provide the opportunity to get continuous feedback on how to develop the project further. Working with small groups will also allow fruitful discussion on the science behind the project and might open up new aspects that could improve our research.

8. Is the purpose of your activity to collaborate with the public?

Yes No

Here researchers and the public work together on projects. The public help to define your future research

Our group leader, [redacted] set up this project where we are seeking to collaborate with 12th year students who will carry out a simple and established assay to determine the genetic stability of different yeast strains where a protein of interest is mutated. In this assay, yeast cells are plated out and the colour change of the colonies is an indicator of genetic instability within the strain. The results will be analysed by counting the different colour patterns of the colonies. As many colonies are needed to be counted and the distinction of certain patterns are not always straightforward we ask the students to take pictures of the plates which we can upload to a citizen scientist web portal (Zooniverse) where we set up a game where students can identify the different colony colour patterns. These data can then be analysed and be a part of our research project. Altogether, this project has multiple objectives. 1. Engage 12th year students with an actual science research project which they can conduct themselves and can gain knowledge about genetic stability. 2. With the citizen scientist part of the project, we are aiming to

This project will not only generate data that we can directly use in our research but its analysis will require me to develop a number of new skills. Apart from learning how to communicate with people from outside academia, the design and maintenance of the citizen scientist project is providing me some experience in basic html syntaxes, how to prepare and upload pictures and download data. The analysis of these datasets will require the development of bespoke tools, which will improve my bioinformatics skills.

15. What is the potential legacy of the project?

The project will give the opportunity for a number of 12th year students to try hands –on experiments related to real ongoing research. This can be an inspiration for them that might direct them to choose STEM subjects when they continue their studies at higher level. They will also learn how to analyse and interpret their data, which will develop their scientific reasoning. The project also directly promotes the University of Sussex to the students who might then choose our university for their further studies. If the project proves to be sustainable and successful, it can be set up as a continuous interaction with schools in the future inviting more and more students to have a try with research experiments.

16. Please outline your public engagement experience to date

Since joining the Genome Damage and Stability Centre in 2013, I have been involved in various public engagement activities. I helped at the GDSC open day in 2013, I demonstrated to 5-10 years old children about genetic inheritance at the Brighton Science Festival in 2016 and 2018 and DNA extraction from strawberries at the Lewes Science Festival (2016). We also presented the project proposed here at the public engagement showcase for the School of Life Sciences and I am currently leading the online side of the activity. At present, I am representing the GDSC on the Life Sciences Engagement and Communication Committee. I am also attending meetings promoting LGBT+ STEM scientists and our group was recently awarded the Diversity in Science grant.

# 17. Budget

Please provide a detailed budget indicating what you would spend the funding on if you are successful in your application.

Please note that the maximum amount of funding you can apply for is £750 per activity.

## Budget details

| Item details | £ |
|---|---|
| Reconditioned 200ul Gilson Classic pipette (quote valid until 30th of April) | £400.00 |
| Reconditioned 1000ul Gilson Classic pipette (quote valid until 30th of April) | £350.00 |

Total: £750.00

Total requested from the Public Engagement Fund
£750.00

18. Budget code

RE009-20