

Imperial College  
London

# Engagement Academy

2022-23

# Engagement Academy

Each cohort of this staff training programme explores the evolving relationship between research and society to develop their public engagement practice through study, active experimentation and reflection.

The [Engagement Academy](#) is delivered by Imperial's [Science Communication Unit](#) and [Public Engagement Team](#), and accredited by [Institute of Leadership and Management](#) in line with the Higher Education Academy.

## What does the Academy involve?

- Seven days of seminars, practical workshops, visits and group discussions
- Internal and external speakers
- Reading and activities between sessions
- Developing, delivering and evaluating their own practical engagement activity with support and feedback from session leaders and peers

# Engagement Academy 2022-23 Staff

## Science Communication Unit

A team of practitioners and researchers delivering internationally-renowned masters courses which combine media training with academic perspectives.

**Dr Stephen Webster** (he/him)

**Dr Felicity Mellor** (she/her)

**Julia Pitts** (she/her)

**Gareth Mitchell** (he/him)

## Public Engagement Team

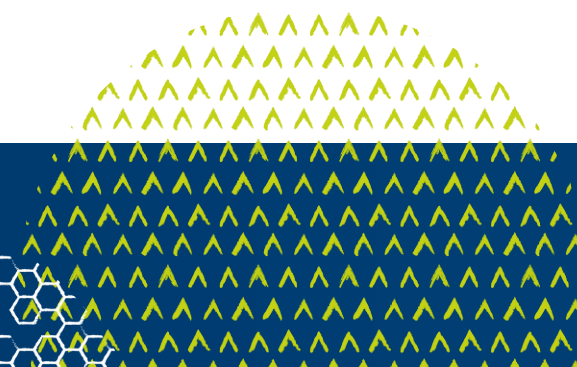
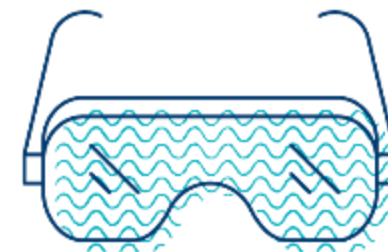
Central team of practitioners supporting staff and students to engage diverse audiences with Imperial's work through exchanging ideas and experiences.

**Vicky Brightman** (she/her)

**Dr Amy Seakins** (she/her)

**Charlotte Coales** (she/her)

**Liz Danner** (she/her)



# Engagement Academy 2022-23 Cohort

**Aba Adebajo** (she/her) Outreach

**Blerina Ahmetaj-Shala** (she/her) National Heart and Lung Institute (NHLI)

**Shyam Sundar Budhathoki** (he/him) School of Public Health

**Lidia Bonomi** (she/her) Faculty of Medicine Centre

**Laura Fabbri** (she/her) National Heart and Lung Institute (NHLI)

**Stav Friedman** (she/her) School of Public Health

**Kristin Gembiak** (she/her) Advancement

**Harry Jenkins** (he/him) Enterprise

**Liyun Ma** (she/her) Department of Bioengineering

**Pedro Nakasu** (he/him) Department of Chemical Engineering

**Angela Pinot de Moira** (she/her) National Heart and Lung Institute (NHLI)

**Gemma Ralton** (she/her) Data Science Institute

**Marta Sousa de Sotto-Mayor** (she/her) Outreach

**Sukhi Ubhi** (she/her) Medical Education Innovation and Research Centre (MEiC), Department of Primary Care and Public Health

**Maria Valdivia-Garcia** (she/her) Department of Metabolism, Digestion and Reproduction



# Project Summaries

Engagement Academy participants have developed a range of projects to engage audiences with Imperial research.

Read about their ideas on the following pages.

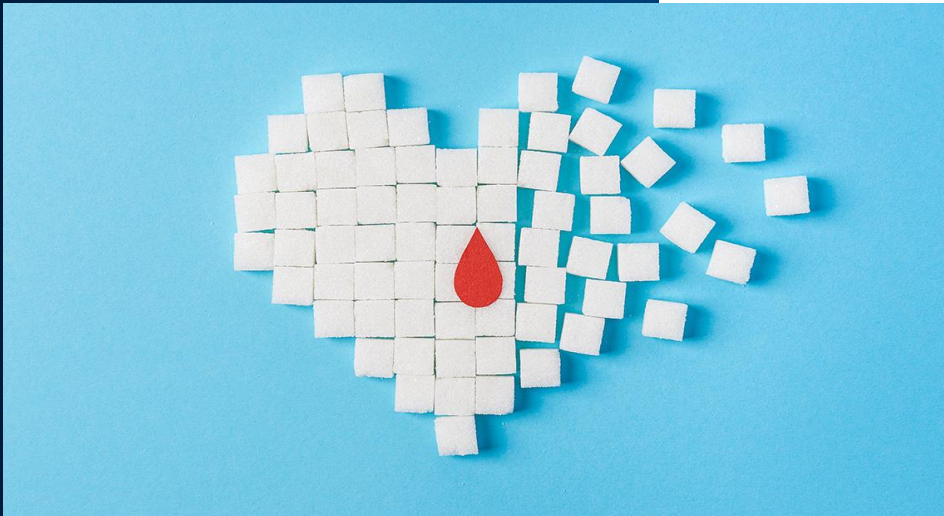




# Blerina Ahmetaj-Shala (she/her)

National Heart and Lung Institute (NHLI)

**The sweet danger of sugar to the heart: A series of activities co-created with residents living in or near White City with the aim of increasing awareness of the link between heart disease and diabetes.**



Feeling more tired than usual after eating certain foods? Or, feeling thirsty and need to go to the toilet during the night? If yes, then you may have diabetes – a condition when the body cannot control the amount of sugar in the blood. But don't worry, diabetes is very common – in fact there are 520 million people in the world that have it right now, so you are not alone.

Find us at the local drop-in food bank centre at White City, where over three separate sessions and a mixture of individual and group activities and games, you can learn more about what diabetes is, how it can be managed and how it is linked to heart disease. Friends and families are welcome!

This activity is run in support with W12 Together.

# Shyam Sundar Budhathoki (he/him)

School of Public Health



## Societal Impact Afternoon: A learning and sharing event involving students and community-based organisations

Imperial College London's Global Health BSc program encourages its students to collaborate with local community-based organizations for placement learning and service evaluation. Through these placements, students gain valuable experience contextualizing their learning about global health and equity issues within population groups in London. The partnership between the college and these organizations is unique in that students work closely with staff to develop a mutually beneficial evaluation project and deliver it over the placement period. This allows students to interact with community members and gain an appreciation for how health and well-being are catered to outside of the NHS within the community.

To foster further engagement and collaboration, a half-day event will be held at the Invention Rooms bringing together Global Health course staff, students, organization staff, and community members to disseminate the evaluation projects jointly developed by each student-organization staff group. The event will also provide an opportunity for networking among participating organization staff and generating ideas for community and college partnerships in education and community development.





# Lidia Bonomi (she/her)

Faculty of Medicine Centre

## Admissions workshop for secondary school teachers



This activity aims at involving secondary school teachers in the admissions process at Imperial College School of Medicine. Teachers are often the main, if not the only, point of contact for many students, particularly those who are the first in their families to go to university, or do not have much support in their application to the medicine.

This teacher workshop will consist of informal meetings with teachers, who will be invited to the South Kensington campus for a tour, and they will have the chance to meet our current Medicine students and staff. They will participate to an interactive talk in which they will “apply” to Medicine themselves and experience our Multiple Mini Interviews.

In exchange, we will ask for their invaluable input on the admissions process and listen to their opinions on how to make sure this caters for everyone, regardless of their background and life conditions.



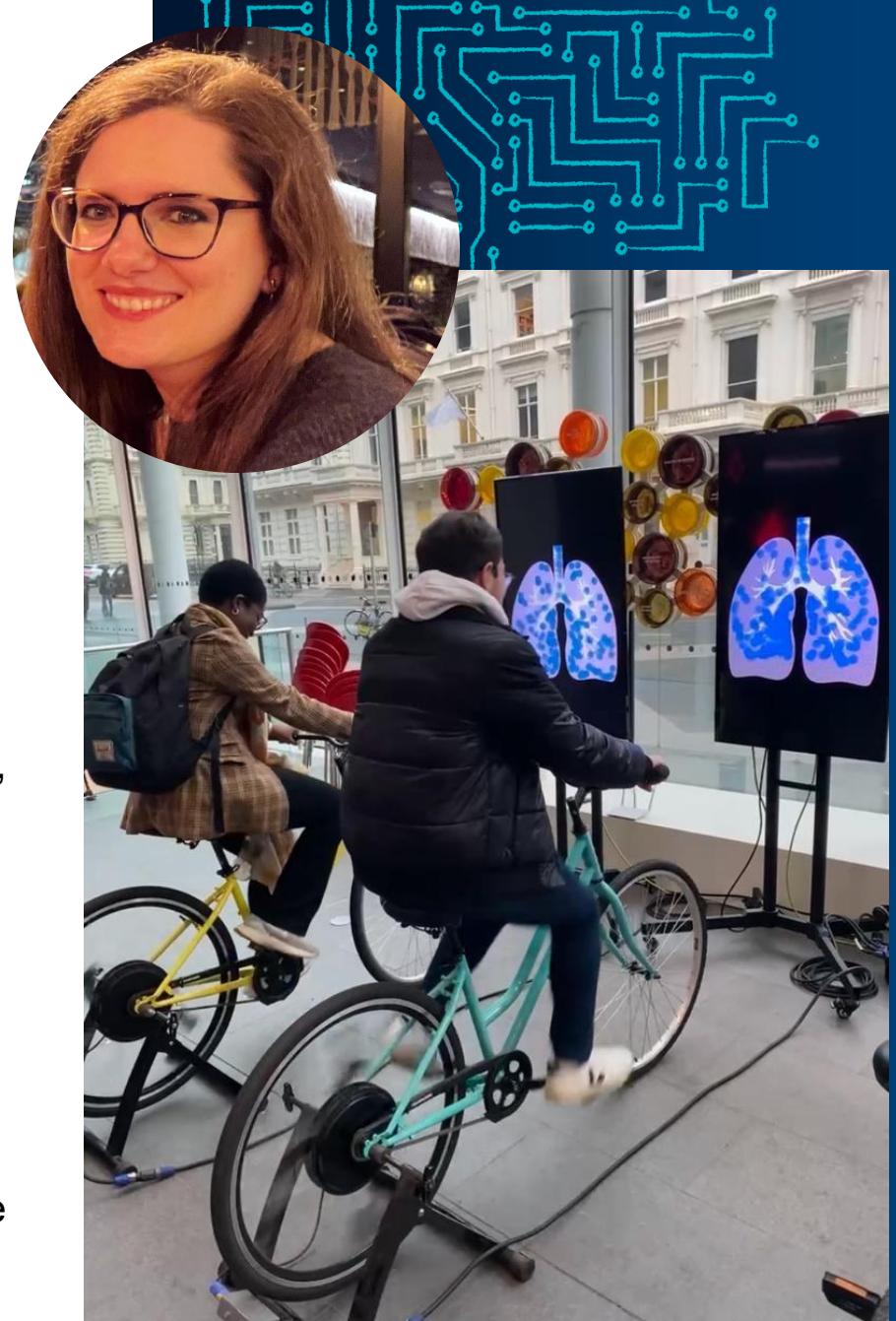
# Laura Fabbri (she/her)

National Heart and Lung Institute (NHLI)

## Can we take your breath away?

We aimed to create fun and engaging activities to increase the public's awareness of Pulmonary Fibrosis. Pulmonary fibrosis is a rare condition that causes the deposition of fibrotic material (like scars) in the lungs, increases stiffness, and lowers oxygen levels. People with pulmonary fibrosis experience symptoms such as cough, fatigue, and shortness of breath. The disease is progressive, and everyday activities, such as talking or showering, may represent a challenge for them. We estimate that more than 100,000 people live with this condition in the United Kingdom.

We designed a cycling station where the public could experience the difficulties lived by a person affected by pulmonary fibrosis. Three bicycles are set with increasing resistance. Each bike is wired to a screen showing normal, mild, and severe fibrotic lungs. Cycling, users pump “oxygen molecules” into the lungs until filling them. Trying all three bikes, users notice the increasing challenge in completing the task.





# Stav Friedman (she/her)

School of Public Health

**What makes a scientist? Meet the wonderful women doing research at Imperial College London's White City campus!**

Who comes to mind when you hear the word scientist? Is it a man in a white coat working in a lab? Or a professor giving a lecture in a tweed jacket?

Today, women make up about 38% of the scientific workforce in the UK – a number that's slowly rising. Women scientists are responsible for incredible research exploring everything from people's health, to environmental pollution to animal welfare. The role of women in science, technology, engineering and maths is invaluable, and creating and supporting workforces that are inclusive, accessible and championing equality is invaluable to the future of science.

The Environmental Research Group ERG is a team of over 100 scientists, researchers and support staff who are investigating the impacts of pollution on our environment, health and the way we live our lives. Join us for an exciting event celebrating the science and research of the Environmental Research Group's women scientists, who make up 47% of the team. From understanding how air pollution effects our lungs, to monitoring what chemicals are in our waters, to assessing how microplastics are affecting our bodies – the ERG women researchers are doing it all! This event will be open to the White City community, home of the ERG, and feature talks and networking activities for the community to meet some of Imperial's fantastic female researchers and help breakdown the stereotypes of what a 'scientist' may look like.



# Kristin Gembiak (she/her)

Advancement

**Top tips on engaging the public – an alumni panel event for researchers, practitioners and anyone who wants to learn more about it**

Are you a researcher and about to plan your first public engagement activity to share your findings? Do you want to involve the public to join your research project but you're unsure on how to go about it?

Join an interactive online alumni panel event with alumni speakers who have implemented public engagement activities as part of their research and outreach. You will hear from 3 outstanding alumni from diverse backgrounds and disciplines including medicine, natural sciences and engineering about their case studies, best practice, and top tips for public engagement. Moreover, we are thrilled to learn from an alumni panellist who works in public engagement in their day-to-day job. Our remarkable speakers will also address public engagement as an integral part of research proposals.

The event will be evaluated using polls during the online event and a feedback survey send to participants after the event.



# Harry Jenkins (he/him)

Enterprise



## Drug trial escape room: can you escape the clinic?

I developed and ran a pop-up escape room about the PRESTIGE-AF project as part of Imperial Lates: Drug Experiments in February 2023. At the core of the project is a drug trial to help prevent further stroke in a vulnerable group of patients.

Working off this, I worked with members of the project to create a scenario where visitors taking part in the escape room adopt the role of clinicians who need to solve puzzles, crack codes and uncover hidden messages to find the information necessary to enrol a patient into the clinical trial.

Along the way they explore the science of stroke, learn how drug trials work, and find out how these trials can help doctors answer difficult questions.



We are now taking the activity forward to the Great Exhibition Road Festival and the Science Museum's July Lates.

# Liyun Ma (she/her)

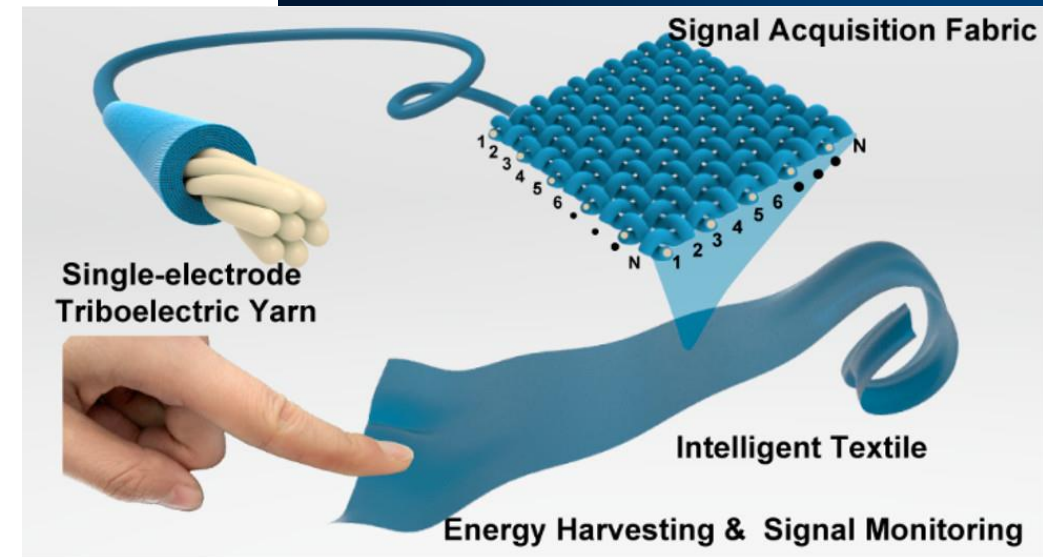
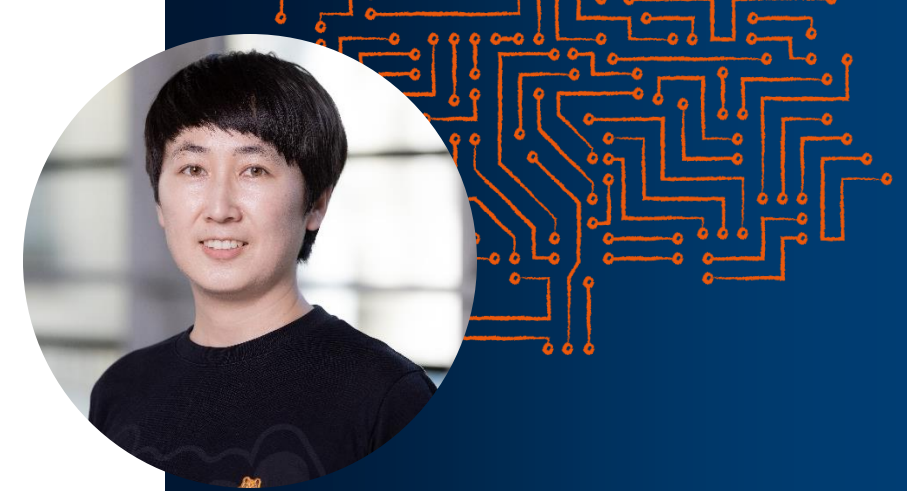
Department of Bioengineering

## Warp and weft weave heaven and earth

Short videos are an effective way to introduce high school students to the exciting and diverse field of textile engineering. By showcasing real-world examples of textile science in everyday life and demonstrating the processes involved in fibre, yarn, and fabric production, students can better understand the significance and potential of this field.

To achieve this, simple and relatable examples, such as the use of fabrics in sports clothing, space suits, geotextile, medical textiles, and smart textile, could be used, along with hands-on demonstrations.

The goal of this public engagement is to encourage more students to consider textile engineering or similar unconventional majors, thus bridging the skill gap in the textile industry and fostering innovation in the future. By increasing awareness and interest in the field, informative and engaging short videos can demonstrate the practical aspects of textile engineering and inspire the next generation of textile innovators.



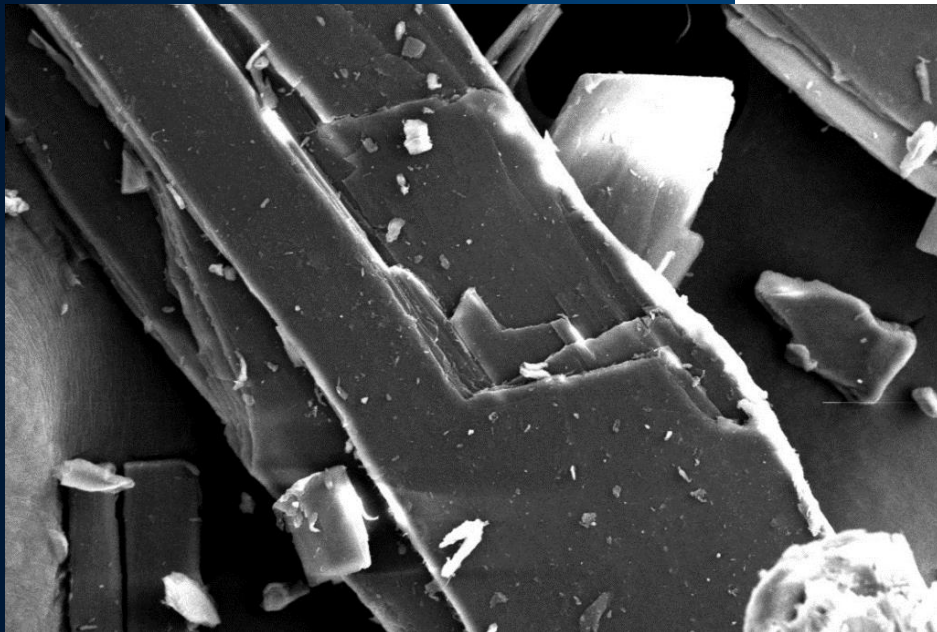


# Pedro Nakasu (he/him)

Department of Chemical Engineering

## From shellfish waste to materials and food

In our research group, we plan to explore new methods to sustainably utilise shellfish waste to produce chitosan and protein and reintroduce these materials into the economy, the so-called circular economy concept. It is fundamental that our research importance and scope reaches wider audiences so that society raises awareness in the idea that our planet does not have infinite resources and waste cannot only be disposed, but properly reutilised and repurposed. The engagement activity for this project is split into two phases across two years.



1. Great Exhibition Hall Festival – a stall with a short explanatory video on the shellfish waste utilisation and basic concepts of circular economy. The participants will be able to “deconstruct” a shellfish waste puzzle into new forms of materials and products and will receive prizes if they succeed it. Handouts will be given to estimate the output of people reach.
2. Imperial Lates - the audience will be introduced to more complex aspects of the project such as what types of chemicals and characteristics of the produced materials such as chitin paper. The audience will see a real example of a chitin paper origami and protein powder. Interaction with the audience will be done via a short quiz where people have to guess some numbers of amount of waste produced annually.

# Angela Pinot de Moira (she/her)

National Heart and Lung Institute (NHLI)



## Snakes and Ladders: Asthma Edition

Asthma is the most common long-term disease affecting children. We do not completely understand what causes this complex disease, but socioeconomic conditions early in a child's life appear to be important. For example, children from poorer backgrounds are more likely to develop asthma, suffer from more frequent asthma attacks, need to be admitted to hospital more often and are more likely to die from their asthma.

My engagement activity aims to raise awareness of these social inequalities and the mediators driving them. The activity will be structured as a modified game of snakes and ladders, with two separate pathways: a "privileged" pathway and a "less privileged" pathway. The privileged pathway has longer ladders and shorter snakes, whilst the less privileged pathway has the converse. Ladders represent protective factors for asthma, whilst snakes represent risk factors. Players are assigned to either of the two pathways by rolling a die, with the highest scoring players assigned the "privileged" pathway. This will mimic the random assignment of life chances from birth.

I plan to present my activity as part of ongoing engagement activities in the White City area, Imperial Lates and the Great Exhibition Road Festival. The activity will help change perceptions of inequalities and the factors driving them, as well as increasing knowledge of the risk and protective factors for asthma.





# Gemma Ralton (she/her)

Data Science Institute

## The Dark Side of Data: Idea Challenge Workshop with Imperial Enterprise Lab



Throughout the Engagement Academy, I developed several iterations of an engagement activity for an ongoing DSI initiative. Following the session on audiences at the academy, I conducted a focus group with some students from both the Department of Computing and the Business School to understand more about our audience and to help shape the activity.

This led us to team up with Imperial's Enterprise Lab to create a workshop as part of their ongoing 'Idea Challenge' series which aims to foster creative-thinking, entrepreneurship, and problem-diagnosing skills among students across the College. Our workshop in particular will introduce students to the concept of 'negative externalities' and their relation to the use or misuse of data. The students will learn about how certain actions and developments in the digital world have led to unintended consequences such as misinformation or data leaks. We aim to equip students with the critical thinking skills needed to identify examples of these unintended problems and to start thinking creatively about potential innovative solutions to them.



# Marta Sousa de Sotto-Mayor (she/her)

## Outreach

### Engaging with local youth groups

The goal of the project is to engage with young people from White City's local community who would not typically think that Imperial College has anything to offer to them.

The project itself consists in using the expertise and resources of the Reach Out Makerspace workshop to create and deliver a three-session programme to a local youth group, to incite their enthusiasm in Design and STEM. The programme will be full of design and engineering challenges, so that the young people get a small insight into the making world.

The goal is to expand the project in the future by delivering the programme to different youth groups in the local area!





# Sukhi Ubhi (she/her)

Medical Education Innovation and Research Centre (MEiC),  
Department of Primary Care and Public Health

## Widening Access to Healthcare Professions

My engagement activity centres around widening participation into healthcare careers with the intention to provide those from disadvantaged socio-economic backgrounds with the opportunity to meet healthcare professionals that have pursued careers via differing pathways.

The activity, comprising of two parts, is offered to Year 10 learners from local secondary schools in the White City area.

The first part, a tour around Imperial's White City campus and observations of teaching on some of the courses available at the College. The second part of the activity involves a diverse and representative panel of healthcare professionals hosting interactive workstations for small groups to navigate and learn about the professionals' career journeys and insight into their roles.

Following evaluation, an infographic on the outcomes and impact of the engagement activity would be created and shared with other local secondary schools offering future engagement opportunities and widening access to healthcare careers.

widening access to  
healthcare professions



# Maria Valdivia-Garcia (she/her)

Department of Metabolism, Digestion and Reproduction

## Nutrition Quest

Nutritional education has long been a priority for public health, as poor nutrition is a leading risk factor for chronic diseases such as obesity, diabetes, and heart disease. However, traditional education methods, such as lectures and pamphlets, may not always be effective in reaching the population. This is where Nutrition Quest comes in.

The game was designed to make nutrition education more fun and accessible for people of all ages and backgrounds. By presenting nutrition concepts in a game format, I hope to engage players in a way that would be both entertaining and informative. It helps players to gain practical knowledge and to make better choices when preparing meals. For example, by consuming a variety of fruits and vegetables and avoiding excessive amounts of sugar and saturated fats players will gain more points that will allow them to win the game. It also educates players about the different nutrients that our bodies need, such as carbohydrates, proteins, and vitamins. This is especially important in a society where fast food and processed food options are cheaper and more convenient than healthier options.



# Societal Engagement

Empowering people through engagement with science, technology, engineering and maths (STEM)



[societal\\_engagement@imperial.ac.uk](mailto:societal_engagement@imperial.ac.uk)



[www.imperial.ac.uk/be-inspired/societal-engagement/](http://www.imperial.ac.uk/be-inspired/societal-engagement/)