

# JAMES RENNIE BEQUEST

## REPORT ON EXPEDITION / PROJECT / CONFERENCE

**Expedition/Project/  
Conference Title:** iGEM Grand Jamboree 2023

**Travel Dates:** 1<sup>st</sup> – 5<sup>th</sup> November

**Location:** Paris, France

**Group member(s):** Devansh Kumar, Matthew Whitehead, Gabriel Espinoza Diaz, Edvardas Eigminas, Will Green, Karen Leung, Tom Zilka

**Aims:** Represent University of Edinburgh at the IGEM competition  
Present our Findings. Getting our project Judged.

**Photography consent form attached:**  Yes  
(please refer to your award letter)  No

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### OUTCOME (a minimum of 500 words):-

Our team travelled to Paris for the 2023 iGEM Grand Jamboree to present 2023 University of Edinburgh's iGEM project. Over the course of six months, we immersed ourselves doing fundamental research in the development of cyanobacteria biophotovoltaics, aimed at harnessing solar energy through living cell systems. Alongside this primary focus, we undertook a series of side projects with the aim of contributing to a circular economy. One such endeavour involved recycling used cyanobacteria into bee pollen, promoting ecological balance and sustainability. Concurrently, we prioritized biosafety measures to ensure the responsible application of our research.

Notably, I got the opportunity to present our project and its finding before a diverse audience. The experience not only refined my ability to communicate complex ideas effectively but also bolstered my confidence in presenting my work to a wider audience. Participating in the judging sessions was a nerve-wracking but rewarding experience, as we successfully defended our project, securing a gold medal. The recognition was not just an acknowledgment of my hard work but a reinforcement of the importance of dedicated efforts in the realm of scientific innovation. Herein, our comprehensive biosafety measures also led us to clinch the special prize in Safety and Security in the postgraduate division. This was highly validating, considering the substantial effort invested throughout the entire summer and more than half of the semester.

Furthermore, being at one of the biggest conferences in the world, my interactions spanned various spheres, from fellow iGEM teams and industry professionals to PhD students and influential leaders. Networking became more than just a buzzword; it evolved into a platform for valuable exchanges, opening my eyes to different perspectives and fostering connections that could fuel future collaborations. One of these conversations prompted me to apply to a specific institution. Following a meeting with their team, I gained genuine insights into their ethos and approach. This interaction not only solidified my interest but also highlighted the alignment between my aspirations and the values of the institution.

I also had the opportunity to attend numerous talks and workshops presented and hosted by both industry professionals and academics. These sessions proved to be an enriching aspect of the event, offering diverse perspectives on the current trends, challenges, and

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advancements in the field of synthetic biology. One of the most interesting talks was by the FBI about bioterrorism. Moreover, engaging in a bioinformatics workshop not only enhanced my technical proficiency but also emphasized the pivotal role of computational tools in deciphering the complexities of biological systems. This experience broadened my skill set, reinforcing the interdisciplinary nature of synthetic biology and its reliance on cutting-edge computational methodologies.

In general, these conversations, talks and workshops provided more than just academic insights—it was a reality check, offering me a realistic glimpse into the challenges and opportunities within the scientific community. These conversations deepened my understanding of the practical aspects of research and most importantly, solidified my aspiration to pursue a PhD in the near future.

Looking back, the iGEM 2023 Grand Jamboree in Paris was a significant experience. It was practical, full of exchanges, and the recognition we received made it all worthwhile. As we head back, we're carrying not just new knowledge but also the motivation to keep pushing the boundaries of scientific exploration for a sustainable future.