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 AWARDEE REPORT FORM

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| NAME | Emma Kelly |
| TWITTER HANDLE\* *optional* | @emm\_bio |
| UNIVERSITY | University of Glasgow |
| NAME OF AWARD | Public Engagement and Outreach Awards 2022/23 – Round 2 |
| PURPOSE OF AWARD *conference/event attended/organised (full name) with city and dates.* |
| **The purpose of the award was to fund a public engagement activity:** The activity took place at the Glasgow Science Centre for one of their “Science Lates” evenings – an adult only evening event where adults are given the permission and space to unlock their inner curiosity. Science Lates Body looked at human biology, precision medicine, health and wellbeing. The award allowed us to purchase equipment to cover two tables with two activities at the event. The activity kit can also be reused for future events. The activities included a mystery box activity (Part 1) and a histology activity (Part 2).Part 1: To educate and discuss mechanical properties we designed an activity that looked at the properties of tissues, such as stiffness and elasticity. We had a box, containing different materials (e.g lego brick, jelly in a ziplock bag, stress ball, water). The participants stuck their hands behind a curtain in the box and the materials are hidden from their view. We gave them the materials to feel and investigate. We then asked participants to match what they were feeling to the organs we had on display (anatomical or home-made models) e.g., bone, brain, blood, heart etc. We asked them to match the properties of the materials to what they think the important properties of the tissues/organs are, e.g., stiffness, elasticity, fluidity etc. We then covered their results and talked to them about how knowing the biomechanical properties, like stiffness, are important for tissue engineering.Part 2: To educate and discuss how this relates to microscopic anatomy, we had an activity that showed participants histology slides and asked them to match to the different tissues which they investigated at the previous station. We continued to discuss how we can relate the biomechanical properties to what we see in histology. |
| REPORT: What were your anticipated benefits? |
| * We aimed to show the benefits of research on microscopic anatomy (histology), and how microscopic anatomy is a complex relationship between our cells and their extracellular matrix (ECM).
* We aimed to discuss how each tissue type has key biomechanical properties, like stiffness, that should be taken into consideration for research –e.g., stiffness of hydrogels for tissue engineering. If biomaterials for tissue engineering are too stiff, stem cells may be promoted to differentiate into adipocytes over osteocytes.
* We aimed to show a broad range of tissue types. We utilised an interactive activity to discuss cells and ECM by getting participants to match a stiffness to a tissue.
* We also aimed to utilise histology images to further the participants understanding of the complex relationship between cells and ECM.
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| COMMENTS: Describe your experience at the conference / lab visit / course / seminar/ event. |
| The event was well attended by the local community, with over 500 attendees. The event was busy throughout the night with a lot of groups visiting our activity. Most groups spent at least 5-10 minutes at our activity and were actively engaged with the interactive elements of the activities together in groups. Overall, the participants interacted well with the activities, and the models. Having anatomical models for the participants to see and examine was key in bringing participants towards our activity. The theme of tissue engineering sparked a lot of conversations about anatomy and ethics during the evening – proving to be an interesting topical area that the public are keen to engage with. We were also placed on a floor at the Science Centre with a lot of interactive displays on the human body, which worked well with our activity theme. We found the first activity utilising the mystery box to be the easiest to delivery due to the element of group discussion from the participants. The histology activity was more difficult to deliver due to the need for participants to utilise microscopes and changing over slides. It became difficult to deliver this activity in its entirety due to waiting queues and equipment limitations (one person using microscope at a time, one slide on a microscope at a time), so we reduced the number of slides shown in this activity to one or two per group.  |
| REPORT: In relation to skills, what were the most important things you gained? *(does not apply to equipment grant.* For public engagement/outreach awards what did your audience gain and how did you evaluate success? |
| We collected feedback from the event using a QR code. Given space limitations on the tables we opted not to use a paper evaluation form. In collaboration with the Science Centre, we also noted the time spent at activity. There were 518 attendees at the event overall:* Based on those who gave feedback, 100% of participants enjoyed our mystery box activity (part 1), and 88% enjoyed the histology activity (part 2).
* Based on the feedback, the most informative activity was the part 1: 30% said they learnt something from both activities, 68% said they only found part 1 informative and 2% said they only found part 2 informative.
* Visitors to our activities tended to be groups with around 2-5 visitors in the group participating in the activities. Most participants spent 5-10 minutes at the activity, with few larger groups spending 15-20 minutes.
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| REPORT: How do you think you will put this learning experience into practice in the future? For public engagement/outreach awards how with the materials/knowledge generated by this activity be used in the future? |
| Part of the kits created for this activity will be reused for an activity at Glasgow Science Festival in June. We aim to adapt part 2 of the activity to be more interactive, potentially giving participants an opportunity to create a hydrogel (synthetic extracellular matrix) in place of the histology activity. Based on the feedback – the participants enjoyed this part of the activity less, and the key message was lost in the time taken to deliver this activity. It also became difficult to deliver two activities when queues began to build up. For larger events we will focus on one activity per table to improve participant flow through activities. We have also gained an insight into the most appropriate methods for feedback collection, including time spent at activity and quick QR code linked feedback forms.  |
| Data Protection/GDPR: I consent to the data included in this submission being collected, processed and stored by the Anatomical Society. Answer YES or NO in the Box below |
| Yes |
| Graphical Images: If you include graphical images, you must obtain consent from people appearing in any photos and confirm that you have consent. A consent statement from you must accompany each report if relevant. A short narrative should accompany the image. Answer N/A not applicable, YES or NO in the box below |
| Yes |
| Copyright: If you submit images, you must either own the copyright to the image or have gained the explicit permission of the copyright holder for the image to be submitted as part of the report for upload to the Society’s website, Newsletter, social media and so forth. A copyright statement must accompany each report if relevant. Answer N/A not applicable, YES or NO in the box below |
| Yes |
| SIGNATURE | Emma Kelly | DATE | 20/03/2023 |

*If submitted electronically, a type-written name is acceptable in place of a hand-written signature*

*File: AS-Award-Report-Form-220922 – International Conference*