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AWARDEE REPORT FORM

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| NAME | | Neal Anthwal | | |
| TWITTER HANDLE\* *optional* | | nanthwal | | |
| UNIVERSITY | | King’s College London | | |
| NAME OF AWARD | | Symmington Bequest | | |
| PURPOSE OF AWARD *conference/event attended/organised (full name) with city and dates.* | | | | |
| Attend the European Developmental Biology Congress/ British Society for Developmental Biology, Keeble College, Oxford. 25th-28th September 2023 | | | | |
| REPORT: What were your anticipated benefits?  *Minimum number of words between 200-400. Please write in coherent paragraphs.* | | | | |
| Attending the European Developmental Biology Congress meeting was an exciting prospect, promising a valuable opportunity to delve into the current landscape of Developmental Biology across the continentIw as keen to gain insights into the cutting-edge developments and emerging trends, and to identify potential areas for collaboration and knowledge exchange. I regularly attend the British Society for Developmental Biology meeting, who were hosting the EDBC, and so I expected that I would find like-minded professionals gathered to explore, discuss, and share their research findings.  Moreover, the hybrid format of the meeting, with presentations taking place in three different locations, intrigued me for various reasons. Firstly, it offered a unique glimpse into the future of scientific gatherings. With the world increasingly emphasizing sustainability and accessibility, I was keen to witness how this hybrid approach would facilitate engagement while minimizing environmental impact. As someone with aspirations of organizing events myself, understanding the dynamics and logistics of this format was of particular interest. I believed it would provide invaluable insights into the feasibility, benefits, and potential challenges of hosting similar meetings in the future, possibly fostering more sustainable and inclusive scientific exchanges. | | | | |
| COMMENTS: Describe your experience at the conference / lab visit / course / seminar/ event.  *Minimum number of words between 200-400. Please write in coherent paragraphs.* | | | | |
| The 2nd European Developmental Biology Congress (EDBC), hosted by the British Society for Developmental Biology (BSDB) at Keeble College, Oxford, introduced an innovative hybrid format aimed at reducing carbon emissions by minimizing the need for extensive travel, while also making the event more inclusive to those who might unable to travel to Oxford. In parallel to the primary gathering in Oxford, smaller hubs in Paris and Barcelona were set up, enabling the remote streaming of talks. Moreover, the option for entirely virtual participation was available, with numerous universities and research centres organizing watch parties, thus creating a global platform for scientific exchange.  The scientific content of the congress was particularly impressive. Talks highlighted significant advancements in the understanding of morphogenesis and the intricate interplay between physical environments and biomechanical interactions in shaping developmental processes. These breakthroughs signify the exciting prospects of the field.  However, the hybrid approach did come with certain limitations. Despite the BSDB traditionally drawing around 400 attendees, only 150 were present in Oxford, with notable absences from the anticipated roster. The hubs, although providing access, discouraged some European researchers from making the journey to Oxford, potentially diminishing the diversity of perspectives and opportunities for discussion. Balancing the advantages of reduced carbon footprint and accessibility with the need for vibrant in-person interactions remains a challenge for future meetings.  Finally, since this was a BSDB event, the final night party was a lot of fun. The drinks were held in the Pitt-Rivers Museum, while the buffet dinner and disco were help in the adjoining Natural History Museum, including dancing beneath the Tyrannosaurus rex! | | | | |
| 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?  *Minimum number of words between 200-400. Please write in coherent paragraphs.* | | | | |
| The talks, and in particular the discussions with other researchers were useful in highlighting potential techniques I could use to enhance my current research, and which could be incorporated into my future research  One noteworthy aspect was my interaction with a colleague from Germany, with whom I discussed advance imaging, including the use of lightsheet to image of developing bone in explant culture. Although I was already familiar with the basics of this technique, our conversation led to a deeper understanding of its applications and potential. This exchange opened the door to the possibility of future collaboration, enriching my skill set through the sharing of diverse perspectives and methodologies.  Another skill-oriented aspect that I explored during the congress was the measurement of material properties during development, specifically with Atomic Force Microscopy (AFM) and nano-indentation techniques. These discussions and presentations provided me with a more comprehensive grasp of the tools and strategies for investigating the mechanical properties of developing tissues and structures, which I anticipate will be beneficial in my ongoing research.  Additionally, I also discussed different modern multiplex in situ hybridisation techniques. Specifically, I considered the merits of RNAScope, a method we routinely use in our lab, against alternative techniques based on Hybridization Chain Reaction (HCR). This discussion shed light on the advantages and cost-effectiveness of various techniques, prompting me to reconsider the methodologies employed in my own | | | | |
| 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?  *Minimum number of words between 200-400. Please write in coherent paragraphs.* | | | | |
| The insights gained at the European Congress of Developmental Biology have shown a clear path towards future actions and applications in my research endeavours. Firstly, I will investigate the available lightsheet imaging options at my institution, King's College London, as well as exploring wider possibilities across the city at other institutions (eg, UCL or the Crick). The knowledge and discussions at ECDB underscored the significance of advanced imaging techniques, particularly in developmental biology, and I believe this will greatly benefit my research. The insights and techniques I have acquired will be directly applied to enhancing the quality and depth of my imaging experiments, ultimately leading to a more comprehensive understanding of the developmental processes I investigate.  Another practical application lies in the evaluation of the cost and feasibility of implementing Hybridization Chain Reaction (HCR) techniques in my future research. This assessment is pivotal, especially as I aspire to establish my own research group in the coming years. Incorporating cost-effective, efficient molecular techniques is crucial for the sustainability and productivity of research programs. The knowledge garnered at ECDB regarding alternative multiplex in situ hybridization methods, including HCR, will inform my decision-making process. By integrating HCR or similar techniques into my research protocols, I can anticipate not only cost savings but also enhanced efficiency in exploring gene expression patterns during development, contributing to the success of future research projects.  Furthermore, what I learned from meeting regarding mechosensing in development, holds particular significance for one of my research projects on the development of the temporomandibular joint (TMJ). I intend to delve deeper into the expression patterns and functions of mechnosensing proteins in the TMJ during development. These insights are essential for the advancement of my research, leading to a more comprehensive and nuanced understanding of the intricate processes at play in the relationship between the various parts of the TMJ (the bones, cartilage, fibrocartilage and muscles) during its formation | | | | |
| 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 | | | | |
| N/A | | | | |
| 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 | | | | |
| N/A | | | | |
| SIGNATURE | Neal Anthwal | | DATE | 31/10/23 |

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

*File: AS-Award-Report-Form-171023*