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AWARDEE REPORT FORM

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| NAME | | John Mulley | | |
| TWITTER HANDLE\* *optional* | | @JohnMulley | | |
| UNIVERSITY | | Bangor University | | |
| NAME OF AWARD | | Symington Bequest | | |
| PURPOSE OF AWARD *conference/event attended/organised (full name) with city and dates.* | | | | |
| Attendance at the European Society for Evolutionary Developmental Biology Conference in Helsinki (25th to 28th June 2024), and pre-meeting Fish Evo-Devo satellite event (23rd to 24th June 2024) | | | | |
| REPORT: What were your anticipated benefits?  *Minimum number of words between 200-400. Please write in coherent paragraphs.* | | | | |
| The European Society for Evolutionary Developmental Biology (EuroEvoDevo or EED) holds a biennial meeting for researchers in the field that is attended by participants from around the world, and the 2024 meeting was the ninth in the series. Initially, these meetings were very European-focussed, but the 2024 meeting was attended by over 600 people, and had a high proportion of international speakers and attendees.  I attended the first EED meeting back in 2006, and a couple afterwards, but had not gone to the most recent ones as my research had moved away from Evo-Devo to more genetics and genomics topics. However, my current research has drifted back towards an Evo-Devo angle, and so this seemed to be an excellent opportunity to re-engage with the field, to gain an appreciation of new model systems or experimental techniques, and to meet with existing or potential new collaborators.  The original EED meetings had a small number of pre-meeting “satellite” conferences, and this has now grown to a series of five separate satellites (Arthropods, Crustaceans, Amphioxus, Platynereis, and Fish) – I registered for the fish satellite (titled “The Evo-Devo of Fish Biodiversity: Past - Present – Future”), as this contained multiple talks on my current and planned model species, and again I was hoping to hear more from the cutting-edge of fish Evo-Devo research, and to catch up with collaborators.  Finally, I presented a poster on some research that I am currently writing up for publication, and was anticipating some useful feedback on the data and analysis. | | | | |
| 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 conference was held in Helsinki, Finland, and gave me my first opportunity to travel to Scandinavia. My trip got off to a bit of a shaky start thanks to a power cut at Manchester Airport, but everything went very smoothly afterwards. The conference was held in the main University building in the centre of Helsinki, so it was possible to experience the city itself during the meeting. The fish satellite occupied all day Monday and Tuesday, with five sessions and two keynote talks Sam Giles, University of Birmingham, UK; Daniel Pauly (University of British Columbia, Canada), and represented a fairly content-heavy conference experience just by itself. The satellite gave me the opportunity to catch up with some existing collaborators, and to make some important new connections with other early vertebrate and shark researchers.  The main meeting ran Wednesday-Friday, with four parallel sessions each day, with keynote lectures from Scott Gilbert, Stephanie Höhn, Yann Guigen, and Paula Elomaa. There were two poster sessions, and nearly 300 posters spread across multiple floors and rooms. I had been a bit concerned that talks might overrun and make it difficult to move between the parallel sessions, but things were kept pretty close to time so I was able to see all my talks of interest. The most important takeaways for me concerned some new ideas about evolutionary novelties and modularity, and especially the links between developmental and functional anatomical modules. It was also useful for me to see how single-cell transcriptomics is being applied to Evo-Devo questions, and to talk to some people about their experiences with the techniques in non-model species.  In addition to giving me the opportunity to catch up on the latest research in Evo-Devo, I also got the opportunity to catch up with old friends and colleagues, some of whom I had not seen in over a decade. | | | | |
| 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 conference was not really skills-focussed, but there were some useful talks and posters that covered some relevant techniques, and opportunities at coffee breaks or meals to chat about these with users.  I had gone to the meeting hoping to learn a bit more about how single-cell and spatial transcriptomics technologies were being applied to Evo-Devo questions, especially in early vertebrates and marine species. Single-cell RNA-Seq was a component of a lot of talks and posters, but there was very little on spatial transcriptomics, suggesting that this technology has not been adopted as widely. I was able to make some useful new contacts with people who had performed single-cell sequencing in my target species, and to get some helpful guidance on modifying protocols. I was also able to get some guidance on hybridisation chain reaction (HCR) approaches to study gene expression, and especially probe design and ways to perform these experiments in a more cost-effective manner.  The talks on modularity and evolutionary novelties gave me some interesting new perspectives on my research topics, and as a result of discussion with some collaborators at the meeting, am now working on a new research project grant application. | | | | |
| 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.* | | | | |
| I’m currently planning some pilot single-cell and spatial transcriptomics experiments to provide proof-of-concept data for research grant applications, and so the knowledge gained at the conference will be invaluable in giving these the best chance for success. The insights into hybridisation chain reaction approaches will also be useful for both teaching and research, as I plan to integrate these techniques into both my research and undergraduate teaching (practical classes, student projects).  The new perspectives on evolutionary novelties and anatomical and developmental modularity have been useful in planning out some new research project grant applications, and formed the basis of some new collaborations.  More generally, the conference was an extremely useful way to re-engage with the Evo-Devo field, and to gain insight into current best practice, and what represents the cutting-edge of UK and European Evo-Devo research. | | | | |
| 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 | Dr John Mulley | | DATE | 15/07/2024 |

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

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