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 AWARDEE REPORT FORM

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| NAME | Lyndsay Murray |
| TWITTER HANDLE\* *optional* |  |
| UNIVERSITY | University of Edinburgh |
| NAME OF AWARD | Symington Bequest |
| PURPOSE OF AWARD *conference/event attended/organised (full name) with city and dates.* |
| Attend peripheral nerve society (PNS) meeting in Edinburgh on the 17th – 20th May.  |
| REPORT: What were your anticipated benefits?*Minimum number of words between 200-400. Please write in coherent paragraphs.* |
| The PNS meeting unites around 1500 researchers working on disorders affecting the peripheral nerves. The PNS Annual Meeting is the place to learn about the latest international research across specialties in peripheral neuropathy. It is also the premiere location for one-on-one discussions with experts in the field and connections with clinicians and scientists from various countries. The meeting has quickly established the reputation of being the largest peripheral nerve meeting in the world.This meeting includes researchers and clinicians working on disorders such as Charcot Marie Tooth disease, diabetic neuropathy, neuropathic pain and chemotherapy induced neuropathy. This meeting also discusses recent advances in the understanding and treatment of the disease, as well as knowledge in the basic biology of axonal metabolism, physiology, degeneration and regeneration. As a researcher working on peripheral nerve degeneration and regeneration, this conference was hugely relevant.I am particularly interesting in axon regeneration. Much of my work is focused on the childhood motor neuron disease, spinal muscular atrophy (SMA). We have recently identified deficits in axons numbers in mouse models of this disease and are currently trialling various approaches to enhance regeneration and repair. I therefore find it really valuable to learn from others in the field and it was a fantastic opportunity to meet other researchers and to get feedback on my own work.  |
| COMMENTS: Describe your experience at the conference / lab visit / course / seminar/ event.*Minimum number of words between 200-400. Please write in coherent paragraphs.* |
| During this conference, I was able to attend a series of excellent talks covering a range of subjects relative to peripheral nervous system biology and pathology. On the first day of the conference there were a number of educational sessions which were designed to introduce a number of the key areas of research to the conference delegates. I found his to be particularly useful for areas of work for which I was a little less familiar and a great opportunity to refresh my knowledge on key concepts. The second day of the conference featured a number of invited speakers and special session. I was particularly interested in the sessions on Charcot Marie Tooth disease. As a researcher with a keen interest I the mechanisms of axon degeneration, and how Schwann cells support axonal physiology, there was a lot of interesting talks and new research which I had not been previously aware of. The third day featured an excellent talk from Ruth Stassart on repair strategies in the peripheral nervous system which was a highlight. I also found the session on the role of neuromuscular junction in CMT to be really interesting. I perform a lot of research on the NMJ in motor neuron disease so it was really exciting to hear about relevant work. I was able to meet researchers whose name I new well, and have many follow up meetings as a result of the conversations. The highlight of the forth day was the session on repair strategies in the peripheral nervous system. This was particularly relevant to my work in SMA. It learned a lot about the role of non-neuronal cell types in neuronal repair and the impact of metabolism on axon regeneration and regeneration.  |
| 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.* |
| Overall, I learn a huge amount about diseases and processes which I was less familiar with. Specifically I learned a lot about how schwann cells provide metabolic support to the axon and how this metabolic support shifts during axon degeneration, how Schwann cells dedifferentiate and how they are able to support regeneration. We have previously shown that axonal oxidative metabolism changes during postnatal development so I am now interested to explore how postnatal development impact the processes of Schwann cell dedifferentiation and regeneration. I was able to meet with researchers whose papers I was familiar with, and discuss the implications of their work on my own findings. Specifically I have an interest in developing electromyography as a biomarkers in mouse models of motor neuron disease. I was able to talk to leading experts on this subject and follow up meetings have been arranged. From this meeting I have therefore generated a number of future lines of enquiry and potential future collaborations. During this conference there were also some excellent talks on neuropathic pain. This included discussion about different types of sensory receptors, their structure and their responsiveness to different types of stimuli. There was also discussion about case studies of people who were non-responsive to various types of painful stimuli. This type of knowledge will be extremely valuable during teaching and will help to make my own lectures more engaging. |
| 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.* |
| Following this meeting, I have many new ideas for grant applications. I plan to submit around 3 applications within the next 3-6 months which have been directly impacted by what I learned during this event. For example, I plan to reinvigorate a grant looking at the role of postnatal development on axon degeneration. During the conference I learned more about the role of metabolism in axon degeneration and regeneration. We have an ongoing project in my laboratory showing that axonal metabolism is developmentally regulated. I therefore plan to overhaul a previous grant application which was unsuccessful and include some novel directions which were based upon information I learned at the conference. I also made a number of valuable connections. This includes connections with other researchers. For example, I am trying to establish a post polio model of partial denervation in my laboratory. I met another research at the conference who is trying to develop a similar model but using a different approach. Based upon the conversations that we had at the meeting, we are planning some joint lab meetings where we discuss our approaches and look for synergy between our labs. He also has expertise in electromyography and has offered to get this established in my laboratory. I also with some biotech companies. I hope that these connections will be fruitful in applying for PhD studentships which are partnered with industry.  |
| 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 |
| NA |
| 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 |
| NA  |
| SIGNATURE | Lyndsay Murray | DATE | 3rd June 2025 |

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

*File: AS-Award-Report-Form-171023 – International Conference*