

MACP Award Report

Awardee Name:	Dr Michail Arvanitidis
Date of Report:	16/01/2026
Name of the Award:	Level 2 CPD
Amount awarded:	£1,500
What the award was used for:	Attendance and presentation at the Motor Neuron Society Meeting in St. John's, Canada.
<p>Summary of how this award or bursary helped you in your career/clinical/academic practice</p> <ul style="list-style-type: none"> • MSc/PgD Awards: 200 words • Level 1 Awards: 500 words • Level 2 Awards: 1000 words • Level 3 Awards: 1500 words • Elsevier – report and journal article/podcast/presentation at a conference 	<p>I am writing to express my deepest gratitude to the Musculoskeletal Association of Chartered Physiotherapists (MACP) for the generous Level 2 CPD Award. This funding was instrumental in allowing me to travel to St. John's, Canada, to attend the prestigious Motor Neuron Society Meeting. Without the continuous financial and professional support of the MACP, participating in such pivotal international gatherings would be significantly more challenging. This report outlines the scientific work I presented, the invaluable networking opportunities I experienced, and the personal growth facilitated by this trip.</p> <p>Scientific Presentation and Dissemination: The primary purpose of this visit was to present my research titled "Altered Motor Unit Behaviour and Torque Steadiness in Athletes with Patellofemoral Pain during Single- and Multi-Joint Exercises". This study addresses a critical gap in our understanding of Patellofemoral pain (PFP), a condition that is notoriously difficult to manage in athletic populations.</p> <p>My presentation focused on the evaluation of differences in vasti muscle motor unit (MU) firing between athletes with PFP and asymptomatic controls. Utilizing High-Density Surface Electromyography (HD-sEMG), we assessed the discharge properties of the vastus medialis (VM) and vastus lateralis (VL) during contractions ranging from 10% to 70% of maximal voluntary isometric contraction (MVIC).</p>



The opportunity to present these findings to a specialized audience was invaluable. I was able to discuss our key discovery: while the neural drive to the vasti muscles appeared similar between groups, athletes with PFP demonstrated significantly reduced torque steadiness. This was particularly evident during single-joint exercises compared to multi-joint exercises and was accompanied by higher pain intensity and increased MU discharge rate variability, especially in the VL at higher torque levels.

Discussing these results with experts in the field allowed for a deeper exploration of our conclusion that these MU adaptations likely reflect neuromuscular adjustments to ongoing PFP. We posit that these are compensatory strategies to maintain force production despite compromised motor control. The feedback I received regarding the finding that the increased MU firing-torque relationship during single-joint exercises was driven by a heightened contribution from the VM muscle was particularly insightful. This exchange of ideas has already begun to shape the direction of my future analysis and publications.

Networking and Professional Development: Beyond the podium, the true value of attending the Motor Neuron Society Meeting lay in the face-to-face interactions. In an era where much communication is digital, the ability to meet people from the same specific field in person cannot be overstated. I had the privilege of engaging with fellow researchers whose work I have cited for years, as well as meeting new peers with aligned research interests.

These informal discussions—held during coffee breaks, poster sessions, and social events—have paved the way for concrete future collaborations. We discussed the methodological nuances of motor unit decomposition and debated the clinical implications of torque steadiness in rehabilitation. I am pleased to report that I have scheduled follow-up meetings with colleagues from international institutions to discuss ongoing studies. We are currently exploring ways to combine our datasets to increase the power of our findings regarding motor unit behaviour in musculoskeletal pathologies. This trip has effectively expanded my professional network, fostering relationships

that I am confident will lead to multi-centre studies and high-impact publications in the near future.

The Cultural and Personal Experience: While the academic rigour of the conference was stimulating, the location of the event contributed significantly to the overall experience. St. John's, Canada, proved to be a truly amazing place, offering a landscape and culture vastly different from my usual environment.

Balancing the intense mental work of the conference with physical activity was essential. I took the opportunity to engage in hiking along the rugged coastlines, which provided a much-needed mental reset and a chance to reflect on the scientific discussions of the day. The natural beauty of Newfoundland is breathtaking, and immersing myself in it was a highlight of the trip.

Perhaps the most memorable non-academic moment was a boat tour I took during a break in the schedule. For the first time in my life, I had the chance to see a whale in its natural habitat. Witnessing such a majestic creature alongside colleagues from the conference was a profound experience that I will cherish forever. These shared experiences outside the lecture hall often build the strongest bonds between researchers, creating friendships that underpin professional collaborations.

Impact on Career and Future Directions: The support from the MACP has had a direct and positive impact on my career trajectory. Presenting this study—showing for the first time that athletes with PFP have impaired control of muscle force output under isolated joint conditions — has raised my profile within the neuromuscular research community.

The feedback received has sharpened my understanding of the physiological mechanisms underpinning PFP, specifically the compensatory recruitment strategies indicated by lower cross-correlation values during multi-joint exercises. This knowledge will directly influence my clinical teaching and future research grant applications.

I want to close this report by reiterating my thanks to the MACP. The Association has always been there to support me, and this grant is yet another example of your commitment to fostering research and development within our profession. The ability to travel, share knowledge,

	<p>receive critique, and build an international network is vital for my growth as a researcher.</p> <p>This award did not just fund a trip; it facilitated the exchange of ideas that will advance our understanding of musculoskeletal conditions and provided me with life experiences—from the lecture hall to the Atlantic Ocean—that have enriched me personally and professionally. I look forward to giving back to the MACP community by sharing the knowledge gained from this invaluable experience.</p>
<p>Picture of awardee/conference/course/ Experience as relevant</p>	



