

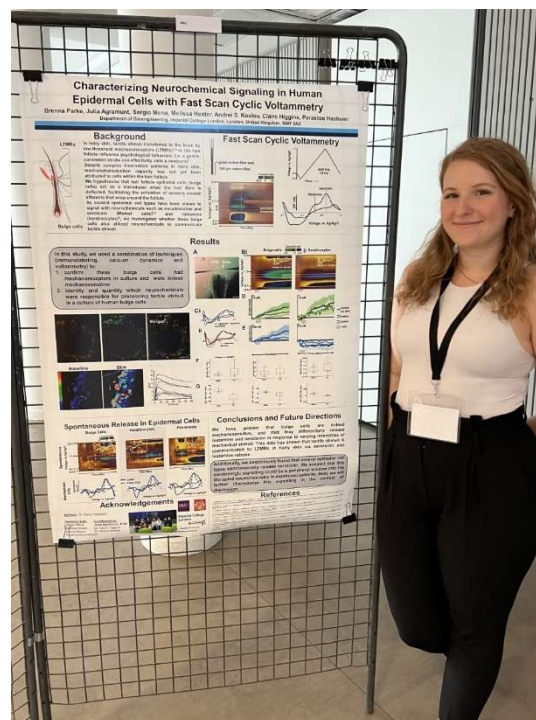
**Conference Report for the Old Centralians' Trust**  
**Monitoring Molecules in Neuroscience**  
Lyon, France  
June 28<sup>th</sup> – July 2<sup>nd</sup>, 2022

**Brenna Parke**  
PhD Candidate  
Department of Bioengineering  
Imperial College London  
July 14<sup>th</sup>, 2022

Dear Trustees,

This report details my experience at the Monitoring Molecules in Neuroscience 2022 meeting in Lyon, France, which was made possible by your generous support. This conference was originally supposed to occur June 2020 until COVID shut down the world, so through a lot of planning and patience, the organizers were able to pull together one of the first post-COVID in-person meetings this community has been able to attend. The immense gratitude for the organization of this meeting was vehemently expressed by each attendee, which added to the fun of the conference. The conference was moderate in size, with a little over 200 registered to attend, which was an ideal environment to foster new professional relationships. This was my first time attending the meeting, and I was excited to see many of the prominent researchers in the neurochemical measurement community to give talks in person.

The society for Monitoring Molecules in Neuroscience was established in 1982 to bring together top researchers across the world that utilize different techniques to understand neuronal signalling in the body. My research group, the Hashemi lab, is one of the leading experts in utilizing fast scan cyclic voltammetry (FSCV) at carbon fibre microelectrodes to probe *in vivo* serotonin and histamine signalling. Recently, we have worked to expand FSCV to probe human cells in culture, which I have worked to optimize and establish protocols in hair cells over the last year through a highly collaborative project with the Higgins lab at Imperial College. My poster (pictured to the right): “Characterizing Neurochemical Signalling in Human Epidermal Cells with Fast Scan Cyclic Voltammetry” highlighted the most important results of our study: that human hair follicle cells are mechanosensitive and co-release serotonin and histamine in response to mechanical stimulation, a novel finding in tactile signalling. During the poster sessions, I was able to communicate this exciting study to well-respected professors, students and professionals from industry. It was exciting to be able to show this community that largely utilizes rodent models, a new human model system and discuss future directions to take the project. This portion of the conference was especially beneficial for my development as a scientific communicator, as well as being able to establish meaningful professional connections based on my own work.



In addition to communicating my own research, I was able to attend amazing oral sessions at this conference, with some relating closely to my work. All of the sessions generally discussed measuring some sort of signalling in the brain, with some groups developing and expanding certain tools/methods to encompass new analytes of interest. Utilizing these tools, the researchers presented amazing strides they've made over the past decade in understanding the underlying neurochemistry of mental health disorders, neurodegenerative diseases such as Parkinson's, and even detecting spreading depolarizations from traumatic brain injury in the human brain. After several days of hearing everyone present their research, the last evening was spent at a gala dinner put on by the conference. It was a lovely experience getting to know some of the investigators and their students in a less formal, more social setting.

This conference certainly furthered my development as a scientific communicator, inspired me to keep pursuing a career in research and helped me forge important professional connections in academia and industry. I want to express my sincere gratitude to the Trust for funding my attendance to this conference, as it was an invaluable learning opportunity.

Sincerely,

**Brenna Parke**



My group and I with our new friends from the conference



A photo of Lyon I took on our boat ride to the gala dinner on the last night of the conference