

IFMSA Research Exchange: A Life-Changing Experience

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Introduction

As a Greek medical student with a particular research interest, my experience in higher education so far has failed to provide me with substantial knowledge about the research implications of the field. Given the COVID-19 pandemic, I had to spend my first year with online courses, while the possibilities to get involved in university projects as a sophomore were limited, mainly due to the restrictive measures taken to control viral transmission in my country. International Federation of Medical Students Associations' (IFMSA) research exchange program, organized by the Standing Committee on Research Exchange (SCORE), was an opportunity for me to participate in medical studies through bilateral agreements among institutions globally, combining education with interculturality.¹ Hence, I decided to take part in the exams to claim one of the available contracts offered to medical students of the National and Kapodistrian University of Athens, initially hoping for an exchange in a European country, as undertaking such a long journey posed a huge challenge for me. On these grounds, I accepted the contract for Argentina with great trepidation, hoping that a life-changing experience would be worth the risk. Admittedly, having spent a month in this beautiful country, I can now confidently say that it was the best decision I ever made.

Experience Report

Education

The research exchange took place at the Medical Faculty of the National University of Tucuman, in San Miguel de Tucuman, Argentina. I worked in the biomedical physiology department as a member of the research team, investigating the possible effect of vitamin D and antioxidants on vascular function in experimental models with hypertension.² Notably, I used the official language of Argentina, Spanish, to facilitate our communication in all the activities I was involved in.

From the first day in the laboratory, I managed to familiarize myself with the experimental animals and taking care of their nutrition and hygiene, always under the supervision of experienced researchers and their undergraduate assistants (*Figure 1*). I was also taught the proper way to handle the mice to perform various procedures, such as injecting an anesthetic,

transferring them to another cage, weighing them in order to calculate the appropriate dose of medication or distinguishing them according to their sex (*Figure 2*). Moreover, I was fortunate enough to observe a femoral arterial and venous catheterization for conscious blood pressure as well as heart rate measurements in a mouse and further understand the bioethical issues that researchers face, and learn about the protocol used for euthanasia and organ extraction. I became acquainted with the term 'reactive hyperemia' by performing a test to calculate the blood pressure differentiation in humans induced by a 5-minute forearm cuff occlusion.³

My educational experience in Tucuman was not confined to the laboratory, as I was able to visit the multi-purpose hospital "Angel Cruz Padilla" and learn of its specialties, under the guidance of the hospital doctors. Furthermore, I had the opportunity to attend a theoretical and practical course on the physiology of the electrocardiogram and interact with my fellow students. I learned about the medical curriculum in Argentina and made constructive comparisons with the corresponding curriculum in Greek universities regarding the duration of the studies and the evaluation system.⁴

Culture

Apart from the scientific training and the introduction to the basic principles of medical research, another vital aim of the program was to provide a complete and authentic cultural experience through the daily interaction with medical students-volunteers, along with participation in events and social activities organized by the local committee. Interestingly, the fact that I was the only incoming student that month did not impede me from experiencing the Argentinian customs and culture, all thanks to the excellent hospitality and amiability of the host family and the people I met at the university. As a result, I actively participated in family gatherings and celebrations, having the chance to delve into the Argentinian life and try local delicacies while enjoying folklore music and dances.

Concurrently, I seized any opportunity to explore places outside Tucuman; I travelled to the north, where I visited traditional villages such as Tilcara, Purmamarca and Jujuy, the famous wineries of Cafayate and the wonderful Salta. Overall, this trip

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enabled me to see landscapes of incredible natural beauty - the most overwhelming feeling I had ever experienced was when I saw the Iguazu Falls.

Figure 1. Taking Care of the Mice at the University Laboratory.



Self-development

Personal growth is utterly the most substantial benefit I derived from my exchange experience. Travelling on my own, meeting unique people along the way, and coming into contact with different values and ideals endowed me with a more open-minded perspective. Spending four weeks in Argentina boosted my self-confidence and extroversion, thus empowering me to free myself from stereotypes and fostering my trust in people.

References

1. Campos LN, Rocha SWS. Student mobility and research capacity: A global health experience. *Int J Med Stud.* 2021;9(3):237–9.
2. Kim D-H, Meza CA, Clarke H, Kim J-S, Hickner RC. Vitamin D and endothelial function. *Nutrients.* 2020;12(2):575.

Undoubtedly, I consider this amazing educational training an invaluable self-discovery journey that added to my personal development.

Figure 2. Anesthetic injection.



Discussion

Personally, I feel grateful that I took advantage of the opportunity provided by IFMSA to prospective physicians to experience research and diversity in distant countries universally. Having promoted student mobility since 1991, the organization intends to lay the foundation for shaping the future world of medicine. During the project, I explored different scientific approaches and methodologies, adopting a broad understanding and holistic approach to the ethical concerns and practical issues that arise when planning and conducting a scientific study. The impression that the University of Tucuman left on me is definitely positive. Despite the lack of equipment and technical difficulties, the professors did their best to impart their knowledge, always treating me with the respect that is due among colleagues. Understandably, the possible obstacles that students may face during their exchange, such as the language barrier or cultural differences, cannot be overlooked. Nevertheless, I firmly believe that it is worth venturing out and testing these strengths beyond the comfort zone of the home institute; in all likelihood, they will be pleasantly surprised.

3. Rosenberry R, Nelson MD. Reactive hyperemia: a review of methods, mechanisms, and considerations. *Am J Physiol Regul Integr Comp Physiol.* 2020;318(3):R605–18.
4. Weisz G, Nannestad B. The World Health Organization and the global standardization of medical training, a history. *Global Health.* 2021;17(1):96.

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