

**REPORT ON COLOMBIA OPTOMETRY FELLOWSHIP AT FUNDACION  
UNIVERSITARIA DEL AREA ANDINA, PEREIRA**

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## **INTRODUCTION**

Training future professionals in the ocular and vision health fields is a sustainable practice that contributes to the objective of eliminating avoidable blindness in developing countries. I am currently completing my Residency program in Community Optometry at the ÉOUM (School of Optometry of the University of Montreal). This program gives the residents a background and experiences in public health and development. It provides clinical teaching and condensed clinical experiences with marginalized populations (homeless, remote indigenous communities, frail elderly, pediatric population from disadvantaged neighborhoods, etc.). Hence, I had the opportunity to contribute to many projects in Quebec through-out the year, and completed a three months teaching internship in Pereira, Colombia. This internship took place at Fundación Universitaria del Area Andina (FUAA)'s university-level Department of Optometry, where I worked among talented local optometry teachers and preceptors in the training of future Colombian optometrists.

## **OBJECTIVE OF THE TRAINING**

The current 13 weeks teaching placement at FUAA, shorten from 15 weeks due to Omicron's COVID-19 restrictions, is part of a long-term initiative which aimed to contribute to the training of optometry students in a low-resource setting. It also contributes in developing the teaching and clinical competencies of an optometrist from a high-resource setting and coming from an institution recognised to have the highest clinical standards in primary care optometry (World Council of Optometry Level 4 of Competency model – Ocular Therapeutic Services). My role was to strengthen Pereira students' current education by bringing in complementary notions and experiences in many specialities, using the optometry skills and the background in public health acquired during the doctorate degree and the Residency Community Optometry program.

The FUAA's optometry program is a recognised full-time, 10-semester program. The curriculum includes theoretical, practical, and clinical training in primary eye care, refractive care, binocular vision, pediatrics, contact lenses, community eye care and health

promotion. Most of the professors and preceptors in the department have also obtained a Master of Science in Vision Science degree, and work in a private optometry clinic setting. They also give conferences at congresses and webinars accessible to optometrists in Latin America. It is also important to mention that FUAA-Sede Pereira optometry program has obtained the Institutional Accreditation of High Quality by Colombia's Department of Education.

The objectives of this project included:

- Partnership, interdisciplinary and inter-faculty cooperation
- International solidarity
- Research, innovation and knowledge development
- Engagement and social responsibility
- Knowledge transfer
- Sustainable development

Training local optometry students via similar international educational linkages is an established strategy for tackling the eradication of avoidable blindness in low-resource settings. Multiple examples exist of initiatives where North American, European or Australasian universities partner with developing academic institutions to form a qualified eye care workforce globally.

## **EXPECTED OUTCOMES**

The immediate expected outcomes of this project are:

- Globally, it will contribute to the development of teaching and optometric care in Colombia.
- The accomplishment of an internship for a resident in Community Optometry
- Exposure to low-resource settings, cultural exchange, increased awareness of difficult socioeconomical conditions.

The medium-term expected outcomes of this project are:

- Enrichment of the optometry training offered to students of Fundación Universitaria del Area Andina (FUA), Pereira, Colombia.
- Similarly, enrichment of the academic program of the Residency in Community Optometry of l'ÉOUM.

- Reinforced interinstitutional collaboration between FUA and UdeM.

The long-term expected outcomes of this project are:

- Contribute to the elimination of avoidable blindness in Colombia, following principles of sustainable development and public health, by training of human resources in eye health.
- Added visibility for any funding partners
- Establishment of international inter-institutional linkage offering potential for growth not only in optometry but broadly

## **ACHIEVEMENT OF THE TRAINING**

My internship was supervised by the optometry program director Carol Violet Pinzon Mora, and took place mostly at the university, located in Calle 24 No. 8-55 Pereira, Risaralda. During my internship, I had the opportunity to work in all aspects of the department, and with more than 150 students. The planned schedule was a 30-35 hours week, but I ended up doing 40-45 hours most of the time, because of all the interesting activities and extra tutorial sessions I wanted to partake in.

As part of my duties, I assisted in teaching the pre-clinic laboratories for 6<sup>th</sup> semester students. The morning laboratories were about binocular vision and pediatric optometry, and the afternoon laboratories were about contact lenses. I participated in the lectures, the discussions, and gave advise on how to perform certain techniques. The students also had to present clinical cases throughout the semester and a project which I helped the teachers to evaluate. This experience helped me review important concepts and learn about the theory and management of many contacts lenses products available in Colombia. I was even invited to conferences from contact lenses laboratories, along with other optometrists and graduating students, which was very enriching.

In addition, I was precepting students in 7<sup>th</sup> semester during their outreach academic activities, where they provided full eye exams in schools and shelters for people in situation of homelessness and women victims of domestic violence. We had thoroughly planned on doing primary health care prevention/promotion activities and screenings at Bahia Solano, a city with very low resources in the pacific coast of Colombia, along with FUA departments

of dentistry and physical activity. However, those activities were cancelled due to security reasons in the region of Choco. Thankfully, we succeeded in planning future screening clinics with Bahia Solano's mayor and Areandina University health care professionals, with the help of the Colombian military.

For the most part of the internship I was preceptor for 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> semesters in the primary care optometry clinic, the speciality clinics of contact lenses, and the vision therapy and pediatric optometry clinic. Similarly to the clinic in the School of Optometry of University of Montreal, students have 1h30 to complete the full comprehensive eye exam, and 30 minutes to complete the patients report and receive feedback. I helped to improve their efficiency in providing high quality eye exams and reinforced some techniques. I contributed to giving tutorial sessions for advanced techniques for ocular health such as, Goldmann tonometry, fundus examination with 90D lens and indirect ophthalmoscopy. Colombian optometrists have the legal right to perform a fundus and periphery examination under dilation, however it is not a common practice since it's still mostly performed by ophthalmologists. I hence contributed to raising awareness about the important role optometrists play as primary health care professionals when screening for any ocular manifestations of systemic conditions and referring to the adequate professionals on time. Especially when working with a population that has a high incidence of some diseases like diabetes, hypertension, and parasite infections such as toxoplasmosis.

I also gave short presentations to the students and to some preceptors about glaucoma, and how, despite not having an OCT scan, they could still perform important tests with the available resources such as pachymetry, intra-ocular pression, gonioscopy and visual field instruments. Although Colombian optometrists cannot provide treatment of glaucoma like in Canada and the United States, understanding the relevance of those tests can give a more comprehensive approach on glaucoma care of the patient. Furthermore, it can improve collaboration with ophthalmologists, glaucoma being a pathology that is more prevalent in Latin America and Africa.

The exams rooms at the university did not have screens and some did not even have a phoropter; I hence strengthened my skills in performing objective and subjective refraction with charts and trial lenses, and even learned to use new techniques such a Dial for astigmatism. I was exposed to many cases of important uncorrected refractive errors

and accommodative problems, which led me to often exchange different techniques to evaluate, diagnose and treat them with the experienced local preceptors. I was also exposed to local rotations in neuro and general ophthalmology along with 10<sup>th</sup> semester students. This helped me have a more in-depth look on the collaboration between optometry and ophthalmology in Colombia. Those experiences have enriched my academic background, which I have shared in return to many colleagues at University of Montreal.

I also had the chance to be part of an important reunion with the principal of FUAA-Sede Pereira, the dean of the health department as well as the dean and the entire team of preceptors of the optometry department. The meeting's main objective was to discuss the possibility of purchasing high technological instruments that will enhanced the academic quality of the program. Coming from a high-resource university-based clinic, I shared my opinion regarding the importance these instruments can have in the diagnosis of ocular pathologies, in speciality contact lenses adaptation, in academic clinical discussions, and most importantly, in upgrading the quality of the university's research and investigation projects. This would greatly benefit the training of future local optometrists, and the population affected by visual impairment in and around Pereira. New projects can even be performed between universities, having similar data to compare with. The meeting was very successful.

Finally, I participated in FUAA's International Week, where I gave a bilingual (English and Spanish) conference to 90 nursing students about the potential extent of optometry's role in eye and health care and how the two professions can collaborate to improve our patients' health and quality of life.

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