



## EDITORIAL

# Ready for action

## Listos para la acción

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An efficient transmission of knowledge to students must be the main goal of any university teacher. The practical activities are the most preferred by students as they learn something closer to what they are going to practice in the future after finishing their studies, and additionally they experience in their hands the topics learnt. In the field of optometry, clinical subjects with a lot of clinical activities such as optometry, contact lenses, binocular vision or low vision are crucial as they will become parts of the common daily tasks of the optometry activity once completed the Degree.

Although the aim of the majority of optometry students may be to develop the corresponding clinical skills to be good practitioners, the introduction of MSc and PhD degrees have also generated the possibility of completing the education of some optometrists with knowledge in research on eye and vision. The implementation of new master subjects, such as “Research Methods in optics, optometry and vision”, helps students to have a more realistic idea of how to conduct research activities. This was implemented in our degree and indeed some students started their PhDs potentially influenced by subjects such as that previously mentioned. However, teaching how to perform research to Master students has not demonstrated its usefulness in our context.

This year, as lecturers in the Master of Optometry and Vision of the University Complutense of Madrid (Spain), we

decided to move one-step forward and besides the theoretical contents, we proposed some practical activities about how to conduct research. Specifically, we invited the students to apply the acquired knowledge in a real research project. The two logical questions that arose were:

- May the students learn better how to do research?
- Will the experience motivate their interest in research?

The twelve students of our subject previously mentioned accepted the challenge of designing, performing and writing an original research project they would like to conduct. To facilitate the learning process, we suggested them to plan something simple in the context of the research lines of our lab, such as the detection of a molecule in human tears. This molecule was melatonin, which has not been described as a naturally occurring substance in the human tears. This hormone plays a critical role in our life, regulating the circadian rhythm, ocular physiology and its content varies depending on the light conditions.

All objectives marked were attained. The students worked at the research lab applying theoretical contents into practice and simultaneously enjoying not only with the methodology but also with what they were doing. Moreover, they completed all steps of the project, ending with their results presented at scientific platforms, publishing a scientific letter in this journal<sup>1</sup> and performing an oral communication in the CIOCV’2016 optometry meeting (Universidade do Minho, Portugal; 23–24 April 2016).

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Answering the second question referred above, the passion for research was naturally stimulated in our students. A prove of this is the fact that they are currently working in another experiment of their own initiative, also supervised by us.

In conclusion, this experience has shown to students that research is interesting and also that research methodology is not a tedious process.

From our personal perspective we have learned, as lecturers that innovation in teaching methodologies is

necessary, possible and will always improve students' knowledge and experience.

## Reference

1. Carracedo G, Carpena C, Concepcion P, et al. Presence of melatonin in human tears. *J Optom.* 2016, <http://dx.doi.org/10.1016/j.optom.2016.03.002>. pii: S1888-4296(16)30004-8.