

Mediante el trabajo colaborativo y en equipo podremos desarrollar proyectos de investigación de gran complejidad que aporten de manera productiva al avance de la ciencia y la salud en oftalmología. En el siglo 21 existe gran abundancia, las capacidades y recursos individuales pueden ser conectados para

constituir sistemas ricos y complejos con mayores posibilidades de ser exitosos.

Es así como una de las grandes posibilidades que nos presenta un futuro esperanzador e interesante en Oftalmología es el arte de investigar. Adelantémonos al futuro cambiando nuestra forma de ver el mundo.

EDITORIAL

Research in ophthalmology, from myths to possibilities

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We have all grown up listening to the same words: “it is very difficult, there is no money, you can not do it” ... we have even heard that those who do research do it because they are not good clinicians or surgeons ... Worst of all is that we have finally believed it .

Remember looking for a scientific paper we had to go and browse the libraries of the clinics and universities of the city? Well, I still remember. This concept of moving geographically looking for information on paper should be very abstract for young ophthalmologists. When we wrote our first scientific article at the end of the last century (20 years ago), we searched the literature to build the theoretical framework. There was no doubt that this was difficult; however, it was nothing that could not overcome the desire and motivation to share knowledge, the desire to belong to that group that seeks to expand knowledge about ophthalmological pathologies to finally treat our patients better.

Humanity lives dizzying changes that accelerate exponentially. Ophthalmology will be no exception; On the contrary, we are on the verge of a great change in the way we conceive the visual health care. Serious conferences and publications talk about how technological advances in artificial intelligence, data science, automation and the use of the internet of things, along with the explosion of apps that work through a mobile -replacing expensive unifuncional equipments- offers a brilliant picture for the medical sciences. By the same token, the incredible landscape before us threatens the status quo, the way by which we have practiced medicine for the last decades.

The way diseases are diagnosed and treated in ophthalmology, as well as in all medical specialties is undergoing profound changes. Hard to believe? One proof is the many start-ups that are now developing applications that promise to lower patient care costs and increase effectiveness. By just walking through ARVO, the

largest and one of the most important meetings in the world of research attended by more than 11,000 scientists in the area of visual science one can realize that this prophesied future is closer than we think.

This is why it is necessary to reinvent ourselves, to be architects of our own destiny. The ophthalmologist will no longer be an obligatory step in the process of diagnosis and treatment of many visual diseases or at least not in the way we conceive it today. So before all these changes take place, we must give value to our work with something irreplaceable by the automation of a process or by artificial intelligence. The desire to expand existing knowledge about ophthalmological pathologies to provide better care for our patients and preserve their vision remains intact in the era of instantaneously shared knowledge and collaborative economies, globalization and individual singularity, human genome and personalized medicine.

The ophthalmologist of the future will have to redefine his role from the creation of value for patients and society; This is why scientific development and research leveraged in computer tools, epidemiology and collaboration should be part of our daily business. Now is the time to change the chip from medical schools and residences for specialization; It is a reality that today more than ever innovation and research must be part of every day clinician's life.

In research there are some myths, which today are completely revalued, but still constitute barriers to the democratization of research. Next I would like to list seven of them, these are not the only ones, but I think they are perhaps the most important:

1. **Doing research is very difficult:** There are a large number of elements that have converged to facilitate research in Colombia and the world; the development of information systems, the creation of networks, data science, etc.
2. **It is difficult to do research because professionals are generally isolated in their own centers:** Today, connectivity technology allows us to join multidisciplinary groups, such as CARVO (where only one click can find the perfect partner to consult for enrich your project). It is necessary to organize and empower such groups.
3. **It is difficult to find the information needed to develop a good research project:** With the advent of the internet, the availability of online information from ophthalmology and is

instantaneous. The electronic medical records in many institutions facilitate access to the necessary clinical information.

4. **There is no money to do research, it is an expensive and unprofitable activity:** It is false, today economic support from various sources allows research not only to be viable, but also to be a profitable activity for health professionals and institutions. Grants for research by multinational companies, economic resources from Colciencias at the country level, and the possibility of accessing scholarships and grants created especially for researchers from developing countries (for example the fellowships of the Pan American Society or the ARVO itself) are some examples.
5. **To be a researcher it is necessary to be an epidemiologist or an academically recognized professor:** The formation of multidisciplinary groups is without doubt one of the strategies that gives the greatest strength to a group of researchers. Each member has a strength and together they can develop a protocol, complete it rigorously and then, for example, find a writing expert to help them write and publish it. In fact, groups that include non-subject specialists are more likely to formulate new assumptions and seek innovative approaches to old problems.
6. **Only big research projects are important:** there is not such a thing as a small research, since all that is done is useful to reach higher achievements. The learning curve can be quickly overcome with adequate accompaniment (Mentors)
7. **Only a few can do research:** Only a few are engaged and trained to do so; However TODAY THE WHOLE WORLD CAN AND SHOULD DO RESEARCH.

Scientific societies like ours are committed to helping those who decide to take the first step. The test is the realization of the courses organized with the support of SCO during the national congresses and the online courses. Through the collaborative work we will be able to develop projects of investigation of great complexity that contribute to the advance of the science and the Health care in ophthalmology. In the 21st century there is great abundance, individual capacities and resources can be connected to form rich and complex systems with greater chances of success. Thus, one of the great possibilities that presents us with a hopeful and interesting future in Ophthalmology is the art of research. Let us advance to the future by changing the way we see the world.