

Continuing Progress at *Translational Vision Science and Technology*: Where Do We Go From Here?

What is *Translational Vision Science and Technology*? Well, the dictionary might say:

The adjective “**Translational**” refers to the “translation” (the term derives from the Latin for “carrying over”) of basic scientific findings in a laboratory setting into potential treatments for disease.

“**Vision Science**” encompasses all studies of vision, such as how human and non-human organisms process visual information, how conscious visual perception works in humans, how to exploit visual perception for effective communication, and how artificial systems can do the same tasks.

“**Technology**” can be defined a few different ways including: the application of scientific knowledge for practical purposes, especially in industry; machinery and equipment developed from the application of scientific knowledge; and the branch of knowledge dealing with engineering or applied sciences.

So, have we done our job at the journal?

What a decade it’s been since the founding of *Translational Vision Science and Technology*. Looks like we’ve made it and we’re here to stay! As our founding Editor-in-Chief, Marco Zarbin, laid out in his inaugural issue editorial,¹ the goal was to provide a venue for multidisciplinary research that bridges the gap between basic research and clinical care. As the concept of translational research evolved, so did the scope of the journal.² The journal went from reporting science and technology development at the gap all the way through the phase I clinical trial stage, to now past that point to include later stage pre- and postmarket trials and population outcomes and effectiveness as well as cost benefit analyses. This evolution of scope now better represents the diversity of research that is already present in platform and poster presentations at the annual ARVO meeting.

Very importantly, Dr. Zarbin also highlighted the “Virtuous Cycle” during his tenure, pointing out that the transition from basic to translational research is not unidirectional and emphasized the need for reverse translational (“bedside to bench”) research. Even advanced stage clinical trials and postmarket investigation can be hypothesis-generating and stimulate additional basic research. In his editorial,² he used

the example of the limitations in the clinical effectiveness of antivascular endothelial growth factor therapy in patients with age-related macular degeneration that have led to further pathophysiological research and resulted in the development of newer drugs to trial.

There’s a phrase in education which often gets aired at the welcoming lecture to medical school: “50% of what we teach you over the next four years will be wrong, or not totally accurate. Sadly, we don’t know which 50%.” I was also told approximately the same in graduate school...with a margin of error on the 50% and the 4 years. By appreciating that we can only be taught what is known when we’re in school, the 50% rule is a reassuring acceptance of reality, and, I think, a call to lifelong learning and investigation.

The next phase of *TVST* will hopefully not only serve to streamline and perhaps accelerate translation, but also continue to highlight iterative feedback to create newer and improved solutions to cure disease. I was formally trained as an engineer, a field which creates answers and works on already existing creations. The convergence in my own career is not lost upon me.

Finally, nowhere is the need greater for faster and more efficient translation of medical discovery than in challenged communities like my little corner of the world here in the Bronx, New York City.

I look forward to our next many years together as *TVST*’s next Editor-in-Chief.

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References

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2. Zarbin M. What constitutes translational research? Implications for the scope of *Translational Vision Science and Technology*. *Transl Vis Sci Technol*. 2020;9(8):22.