

Lost in Translation?

Dear Reader,

The reason for *in vitro* research is to assemble as much information as possible preclinically, preferably as fast as possible using sound methodology, so that the collected information may be applied to solve oral or general healthcare-related problems rapidly, while at the same time reduce the possible risks that our patients are exposed to during clinical trials. Accordingly, translational research has a crucial role in combining the interface between basic science and clinical research.

Today's evidence-based dentistry dictates the significance of randomized controlled clinical trials (RCTs), where at least the two best-performing materials, techniques or systems under *in vitro* conditions are further tested clinically by being exposed to the same oral environment. Commonly, preclinical studies are positioned at lower levels on the classical evidence hierarchy pyramid. In fact, massive amounts of fundamental knowledge regarding materials is today readily available due to preclinical studies. Systematic reviews and meta-analysis of this knowledge also help us to distil the essential information we use in clinical trials. Yet, we still notice an increasing number of RCTs being performed and published using materials that do not outperform *in vitro*, lack fundamental properties, or do not fulfil the prerequisites required for clinical trials. As a result, the failures reported from such clinical trials are not very surprising to basic scientists, and they only confirm the findings obtained from preclinical experiments.

The questions that remain, therefore, are: why are clinical researchers not aware of this basic knowledge, and why are patients being used as test subjects? The same applies to basic scientists, namely: why are so many resources being used to undertake research projects that deal with themes which are, in fact, not clinical problems any longer? This is largely due to the fact that basic scientists and clinicians work in two different settings and, sadly, much is lost in the translation of information. Hypothesis-driven preclinical and clinical studies require a deep understanding of the materials or drugs being tested, as well as their thorough preclinical investigation. Consequently, the clinicians denunciate the translational meaning of *in vitro* studies. The respectful interaction between practicing clinicians and basic scientists ought to improve the translation and transfer of information between these two worlds, to avoid resources being continuously misspent on too many redundant projects worldwide. In order to avoid things being lost in translation, the Journal of Adhesive Dentistry is now providing working instructions and guidelines solely to practicing clinicians that are based on the best, most-recent evidence from basic science that has used sound methodology. Let us hope that the translation takes place in both directions.

Sincerely yours,



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