Wound Models: Wrong, Right, or Irrelevant?

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“A THEORY HAS ONLY the alternative of being right or wrong. A model has a third possibility: it may be right, but irrelevant.” Manfred Eigen¹

When I first started research in the wound healing field, there was always some talk about finding the “right” wound model that could be used as a gold standard. Over the years, this shifted somewhat to finding the “right” model for specific etiological wounds. Manfred Eigen’s point that models can be more than right or wrong, they can also be irrelevant gave me an entirely new perspective to consider. Yes, it is simplistic, but the truth of it resonates. For wound healing researchers, sometimes we get caught in the trap of considering only if a model is right or wrong and need to stop to consider if it is possibly irrelevant for the task. For researchers and funding administrators not in the wound healing field, they may not understand the complexities involved in determining the validity, fidelity, and extrapolation of a potential model and unknowingly encourage/require the use of irrelevant models. Unfortunately, these irrelevant models waste resources, money, and provide suboptimal wound healing data.

I have been fortunate to be an active participant in discussions about modeling wound healing over the years. The two most recent meetings were the 2012 Wound Healing Society “Is man the model?”² and the 2018 Veterinary Wound Healing Association “Modeling wound healing: future or fiction.”³

Both provided excellent presentations followed by discussions about models from a variety of perspectives. These discussions acknowledged current pitfalls, encouraged out of the box thinking and proposed suggestions about wound models. The benefit of these discussions was the focus on assessing current models in wound research; where we were, where we needed to be, and how to get there.

Until the next group discussion about wound models takes place, it is my pleasure to offer you this special issue. A special thanks to editor Chandan Sen, PhD, for understanding the importance of wound modeling. This issue is a collection of unique wound models and a review on wound models. These models are innovative in design and utilize a variety of techniques to accomplish their objective. The review assesses 25 years of animal models published in *Wound Repair and Regeneration* and *Advances in Wound Care*. This issue is just a glimpse of how active and passionate the wound research community is in regard to wound modeling and research.

It is my hope that this issue prompts you to shift how you think about wound modeling. Pause to consider if a wound model is wrong or right and most importantly, is it relevant in our quest to improve wound healing research and outcomes.

Sincerely,

Laura K.S. Parnell

REFERENCES

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