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# Visualization of sheep kidney vasculature by modified corrosion cast technique

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LETTER TO THE EDITOR

Om Prakash Choudhary, Sheep kidney vasculature by corrosion cast

# Visualization of sheep kidney vasculature by modified corrosion cast technique

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*This Letter to the Editor correlates with the article: Aycan K, Köse F, Kamaşak Arpaçay B, et al. A new corrosion method (Aycan's method). Folia Morphol. 2024 [Epub ahead of print], doi: 10.5603/fm.100364, indexed in Pubmed: 38895752.*

**To the Editor,**

I read, with interest, the article by Aycan et al. [1] on the study of a corrosion cast technique for the preparation of sheep kidney vasculature — "A new corrosion method (Aycan's method)". The authors highlighted a modified technique for preparing a corrosion cast for biological specimens and utilized this method to visualize sheep kidney vasculature. However, I have some constructive feedback on the article to help improve its scientific quality.

I suggest the authors revise the article's title to "Visualization of sheep kidney vasculature by modified corrosion cast technique". I have suggested this title because the corrosion cast has been a well-known technique since the 16$^{th}$ century when Leonardo da Vinci made the first casts by injecting dissolved wax into bovine cerebral ventricles and heart chambers [6]. The corrosion casting technique has evolved, with various materials, such as metal alloys, celloidin, latex gum, epoxy resin, polyester resin, and silicone, being tried to improve the casting technique and produce a replica of the biological structure. Therefore, these techniques can be referred to as modified corrosion cast techniques because the authors have modified the existing scientific technique. The authors of this article modified the instrument by adding a negative pressure accessory or device to develop the corrosion cast. However, it had already been stated in the literature that negative pressure could be helpful in cases of partially blocked luminal structures [3]. In a study, scientists employed a negative pressure injection technique to prepare the bronchial cast of human lungs [4].

The authors highlighted "(Aycan's method)" in the title, which must be avoided because, as I have already stated, the presented corrosion cast technique/methodology is a modification in the available scientific literature of the preparation of the corrosion casts [5]. I have already suggested an appropriate title for this manuscript above that can be updated in the manuscript.

There is extensive literature on the creation of corrosion cast specimens, and the review literature used in this article is not up to the mark, as many promising studies on corrosion casts were omitted from the literature review. I read the article by Cornillie et al. [2], published in 2019, which included 42 references on the theme of corrosion casting in anatomy. This article, which is five years old and has significant literature on corrosion cast, clarifies that the authors have not searched the literature properly to formulate their article. The authors should conduct a thorough literature search in their future work if working in the

field of corrosion cast techniques, as adding recent scientific literature improves the article's scientific quality.

Section discussion by Aycan et al. [1] is inaccurate as it contradicts the materials & methods, and result section. This section started with “As it is known, the thoracic cavity expands and contracts with the movements of the respiratory muscles. With the negative pressure…” is not a discussion in the article as the statement about the lungs is well known in the scientific literature. In the discussion section, the authors write, “We used polyester and takilon to demonstrate the feasibility of the method. These chemicals can be easily found in the market in Turkey. Later, we will try whether other chemicals can be used in this method” which is inappropriate for the discussion section. In the discussion, the authors should compare the prepared modified corrosion cast technique with the available casting methods for biological species to enhance the quality of the manuscript. The author should remember this point for their future work to improve the article’s scientific quality. I also agree that many anatomical techniques have historical precedents; applying a somewhat new form of the corrosion technique merits publication in an anatomical journal to stimulate discussion and demonstrate that anatomical science remains vibrant.

This letter aims not to nag with authors but to avoid future misdescriptions and misinterpretations of a well-known corrosion cast technique for biological specimens. The authors have written the article well and highlighted the importance of the modified corrosion cast technique. Still, they should consider the points I have suggested in their future research work to improve the scientific quality of the work. Such an article like Aycan et al. [1] could lead to numerous errors in future works on the corrosion cast technique if other authors accept the presented description.

I wish all the authors the best of luck in their future endeavors.

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**Conflict of interest**

The author reports no conflicts of interest relevant to this article.

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