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Letter to the Editor by M.C. DeRuiter and A.C. Gittenberger-de Groot relating to: "Technical Improvements in Corrosion Casting of Small Specimens: A Study on Mesonephric Tubules and Vessels of Chicken Embryos." [by A. Carretero, H. Ditrich, M. Navarro, H. Splechtna, J. Ruberte, Scanning Microscopy Vol. 7(4), p. 1333-1338 (1993)].

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**Letter to the Editor by M.C. DeRuiter and A.C. Gittenberger-de Groot
relating to: "Technical Improvements in Corrosion Casting of Small Specimens:
A Study on Mesonephric Tubules and Vessels of Chicken Embryos."
[by A. Carretero, H. Ditrich, M. Navarro, H. Splechtna, J. Ruberte,
Scanning Microscopy Vol. 7(4), p. 1333-1338 (1993)].**

Dear Editor,

The topic of scanning electron microscopy (SEM) investigation of casting of vessels in the embryo still holds our interest. We are particularly focused on the possibilities of early injection as a method to support angiogenesis and vasculogenesis research in the embryo. It is questionable whether our technique leads to unreliable results because of severe trauma to the embryo as suggested by the above mentioned authors. The lower success yield might very well be the result of the higher friability of the embryo in general in this young stage.

We, therefore, would like to claim that our technique does lead to reliable results in 2-3 day avian embryos. A correlation with immunohistochemical results using QH1 antibodies in quail embryos has confirmed our findings with the SEM method (DeRuiter *et al.*, 1991). Even in very early developmental stages, it is possible to cast, with the same technical setting, the fragile vascular system of mammalian embryos. Figure 1 shows an example of a vascular cast of the pharyngeal arch arteries of an 11.5 day-old rat embryo comparable to a chick 2.5 day development. In this cast, the large third and fourth pair of pharyngeal arch arteries are present. At this stage, the sixth pair of arteries, also called pulmonary arch arteries, develop as a small ventral sprout arising from the aortic sac, and a larger dorsal sprout from the dorsal aorta. This cast resembles our earlier lumen reconstructions of the pharyngeal arch system based on Indian ink-injected rat embryos (DeRuiter *et al.*, 1989).

This letter is meant to encourage investigators who would like to try early injection with Mercor. In the field of vascular growth control, the embryo is becoming a highly valued model.

Sincerely yours,

October 4, 1994

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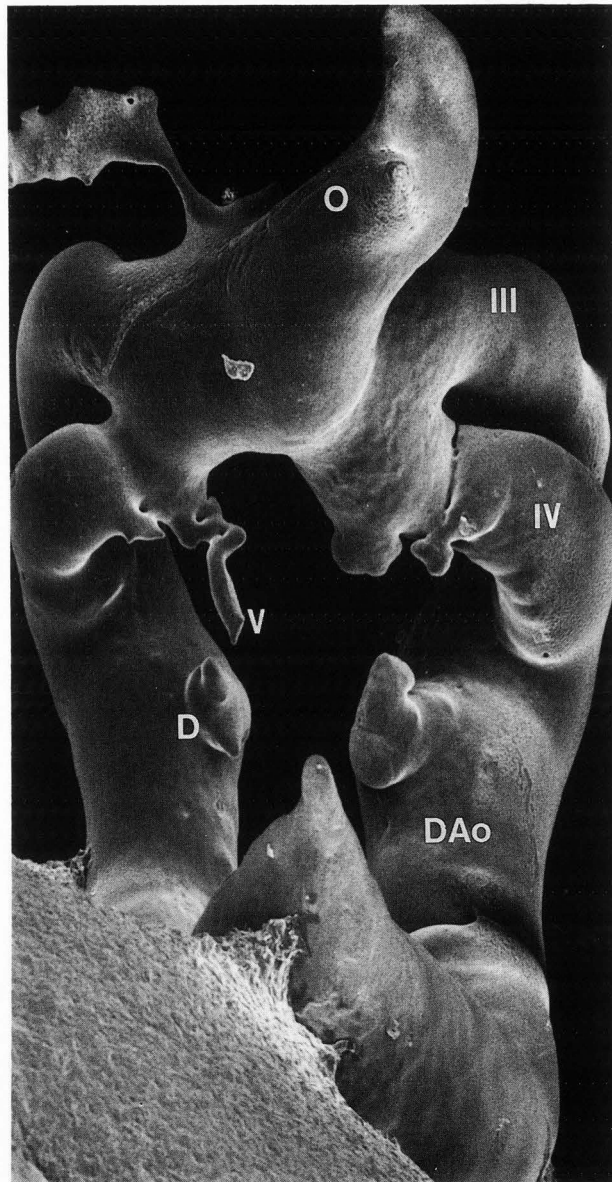


Figure 1. Ventral view of the third (III), fourth (IV) and the ventral (V) and dorsal (D) sprout of the sixth pair of pharyngeal arch arteries; dorsal aorta (DAo), outflow tract of the heart (O). Bar = 300 μ m.