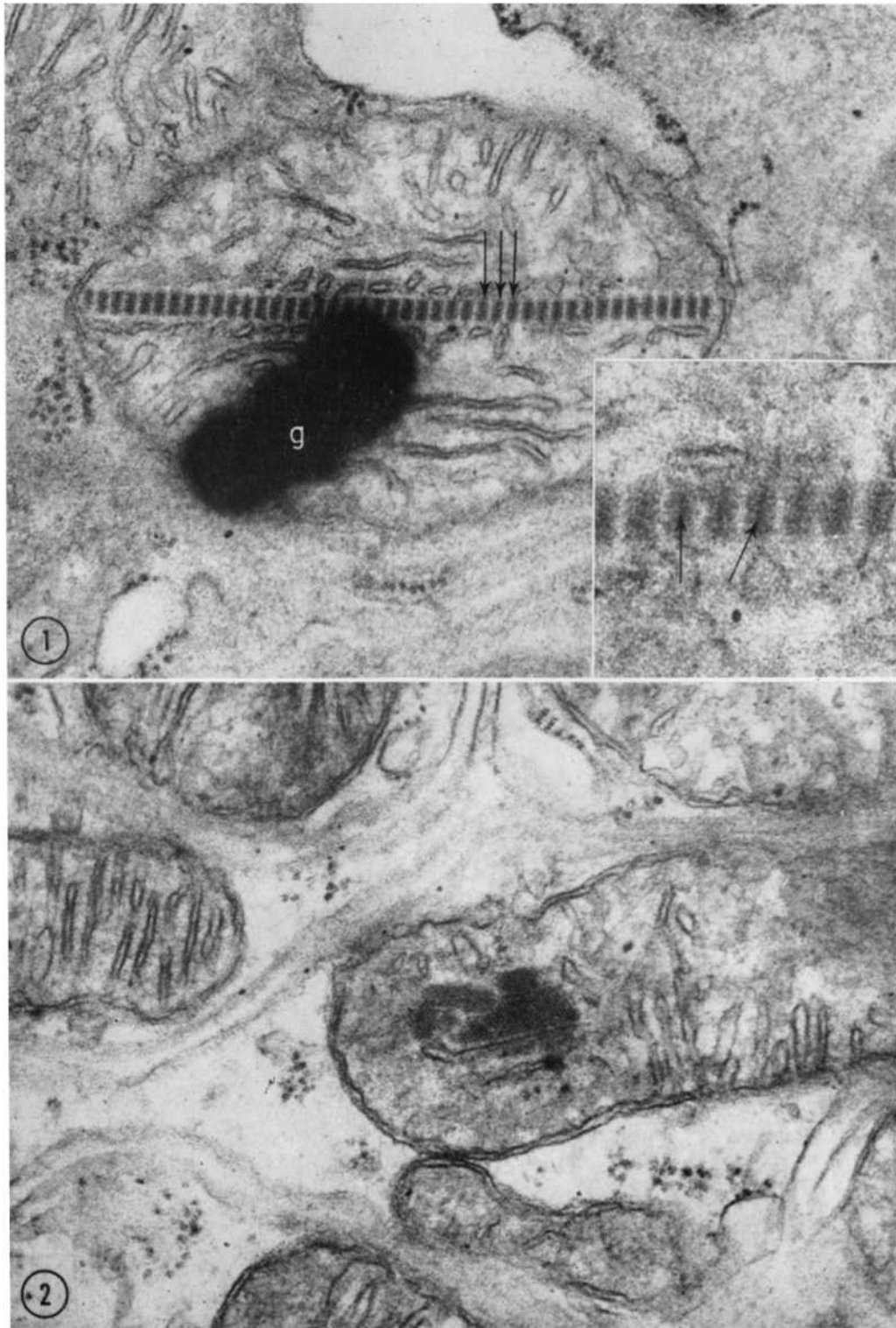


## MORE INTRAMITOCHONDRIAL BODIES

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Suzuki and Mostofi (1) have recently reported the occurrence of a variety of intramitochondrial inclusions, in the thick limb of the loop of Henle of the rat kidney, after glycerol treatment.

The purpose of this note is to point out that very similar striated structures occur in kidney mitochondria from rats treated with substances other than glycerol. During experiments on diuretic



**FIGURE 1** A striated mitochondrial inclusion from the distal convoluted tubule of a rat kidney. Arrows indicate periodicity of circa 350 Å. Large black object (*g*) is a radioautographic silver grain. Inset, an enlargement showing detail of the banding. Note dark thin line (arrows) perhaps extending outwards. Fig. 1,  $\times 58,000$ ; inset,  $\times 176,000$ .

**FIGURE 2** A crystalline particle in a mitochondrion from a rat kidney distal convoluted tubule.  $\times 58,000$ .

action, Wistar strain rats were injected intra-aortically with methyl cellosolve, dimethylformamide, and dimethyl sulfoxide, in use as solvents for some tritiated diuretics. Tissue was fixed in glutaraldehyde 30 min after injection. The tissue blocks were postosmicated and embedded in Araldite. Sections were stained with lead citrate.

A small number of filamentous or crystalline structures were observed in cells of the thick limb of Henle's loop and distal, convoluted tubule from rats injected with methyl cellosolve with or without triamterene-<sup>3</sup>H. These structures have not been seen in normal kidneys or those injected with other organic solvents.

Fig. 1 shows an inclusion in a mitochondrion from a distal convoluted tubule cell of a rat injected with methyl cellosolve containing tritiated triamterene. The large black object is a silver grain formed radioautographically. The fiber has a repeat of about 350 Å and exhibits a more complex detail than those of Suzuki and Mostofi. The filament is also divided longitudinally into approximately six. The broad dense repeating unit has a particularly dense line about 50–60 Å thick

at its center (see small inset). These central dense lines may extend outwards and connect with the cristae. More observations are necessary to clarify this point.

Fig. 2 shows a structure of the type described by Suzuki and Mostofi as type II. This type could perhaps represent a cross-sectional view of type I or type III.

The occurrence of these structures in this material confirms that they are not necessarily connected with glycerol treatment. The Wistar strain rats used here evidently produce many fewer of these items than the Sprague-Dawley strain used by Suzuki and Mostofi. These inclusions merit further study to establish whether they represent a pathological or a physiological condition.

*Received for publication 28 July 1967.*

#### REFERENCES

1. SUZUKI, T., and F. K. MOSTOFI. 1967. Intramitochondrial filamentous bodies in the thick limb of Henle of the rat kidney. *J. Cell Biol.* 33:605.