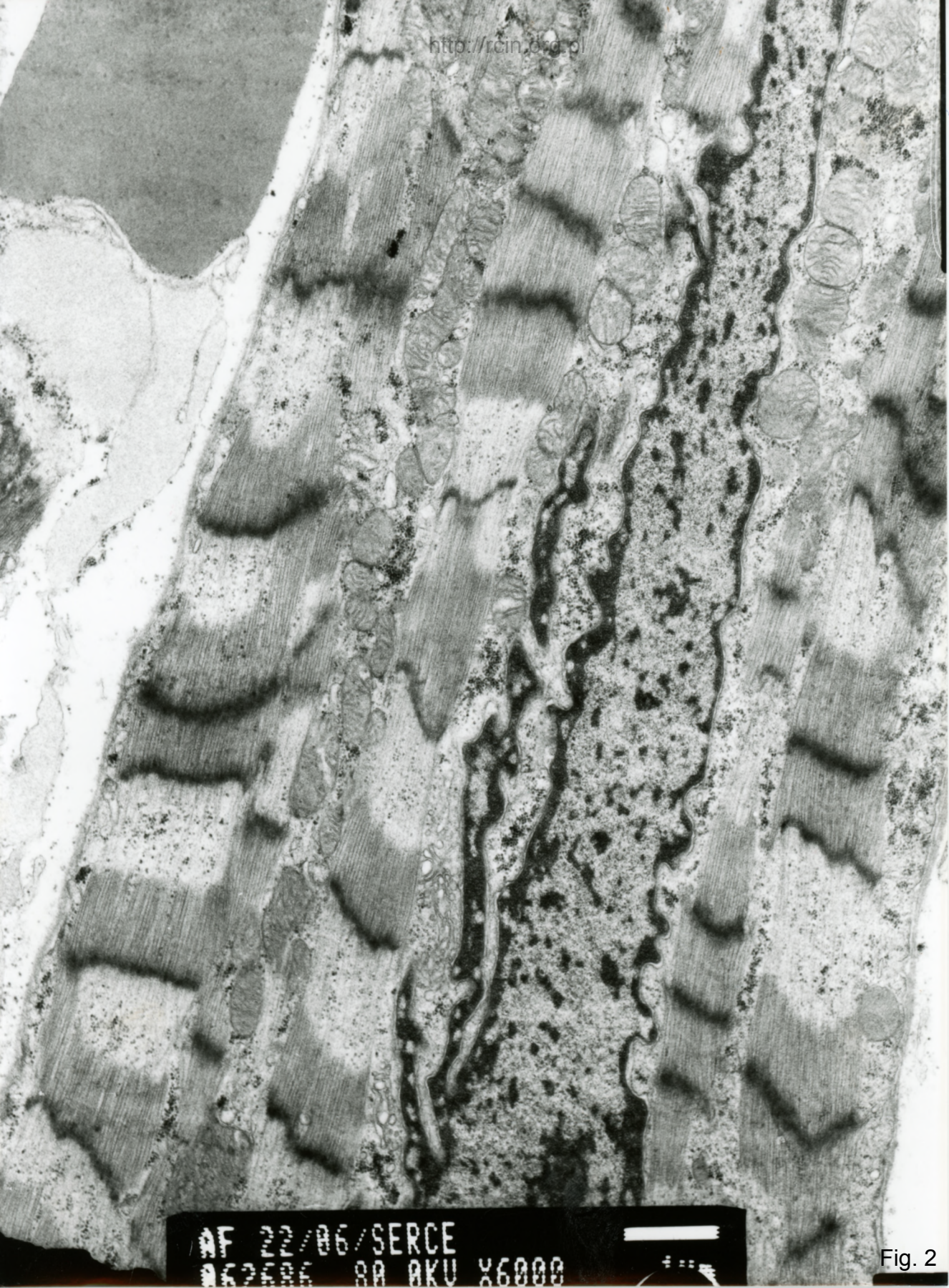


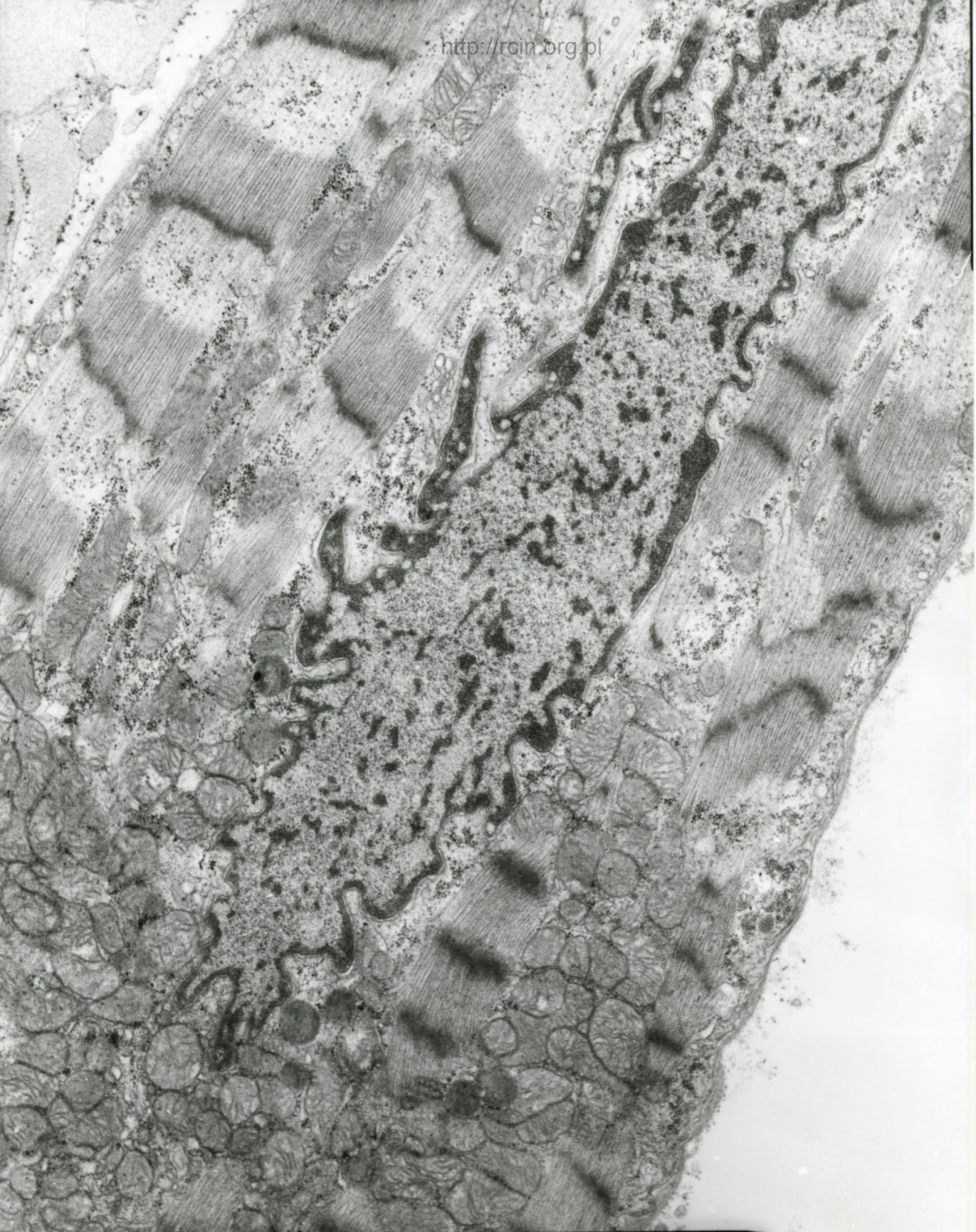
AF 22/06/SERCE
062955 SA AKU X5000 1µm

Fig. 1



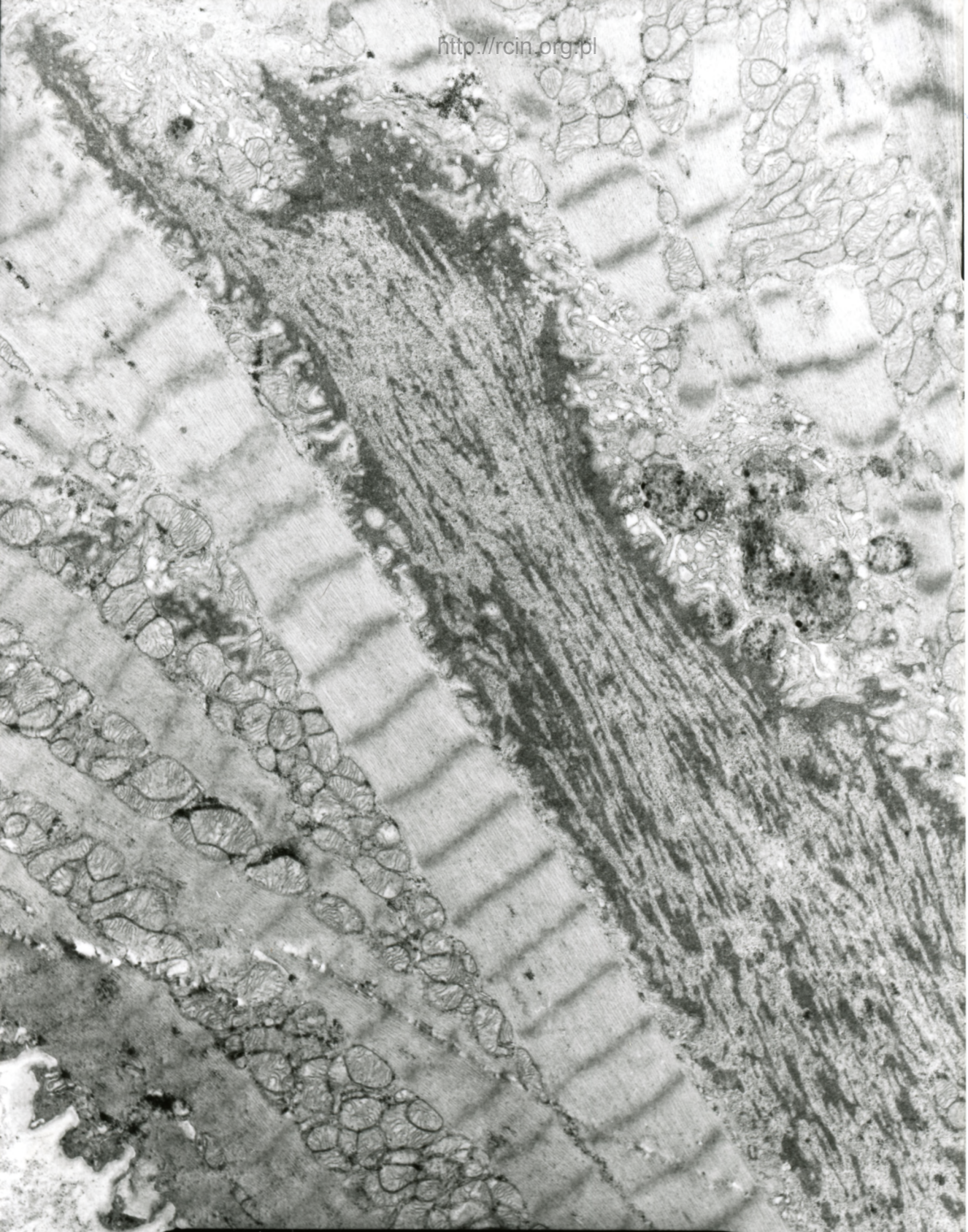
AF 22/06/SERCE
062586 80 0KV X6000

Fig. 2



AF 22/86/SERCE
062007 80.0KV X6000

Fig. 3



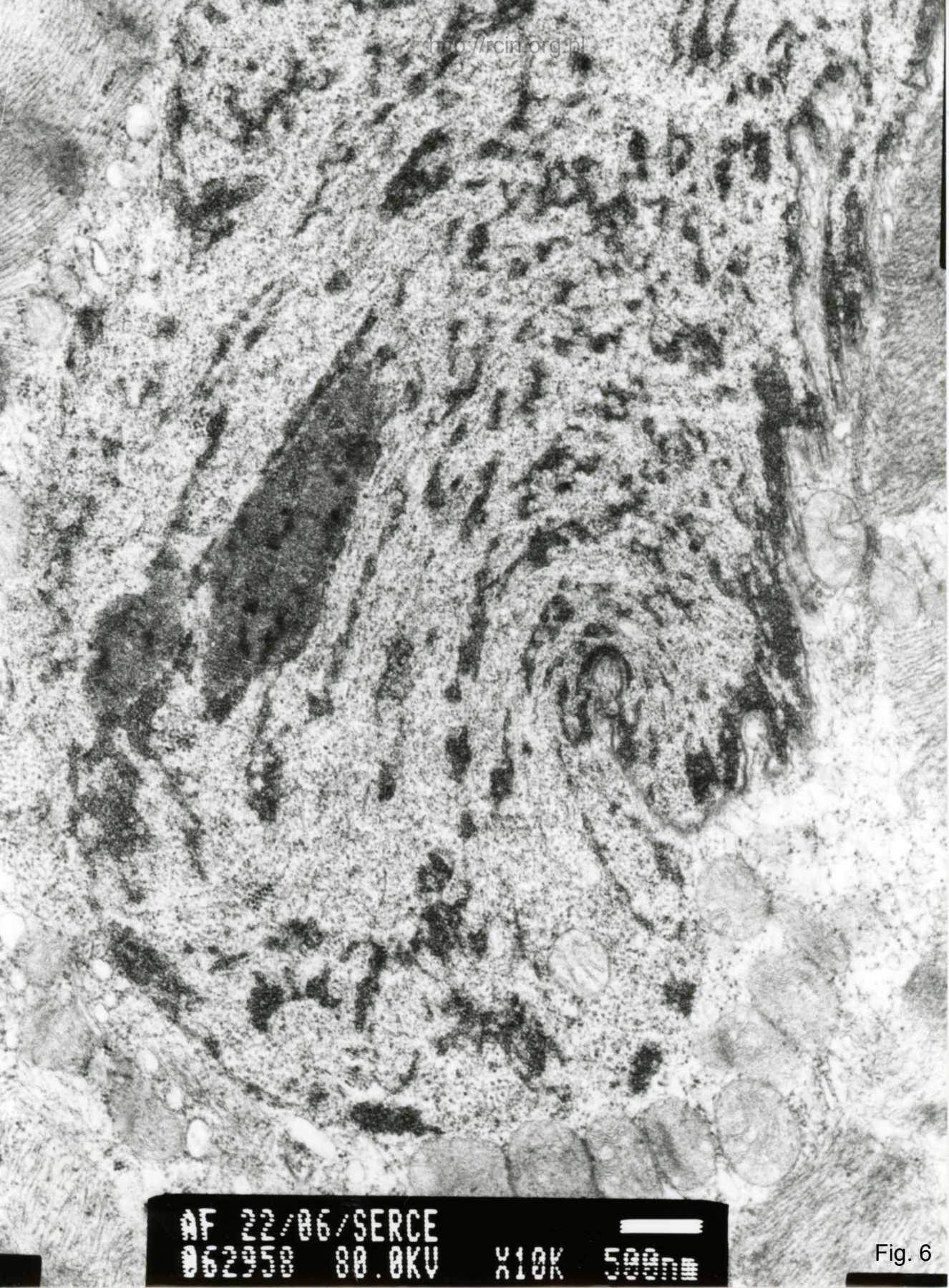
AF 22/06/SERCE
062685 80.0KV X4000

Fig. 4



AF 22/06/SERCE
062957 80.0KV X6000

Fig. 5

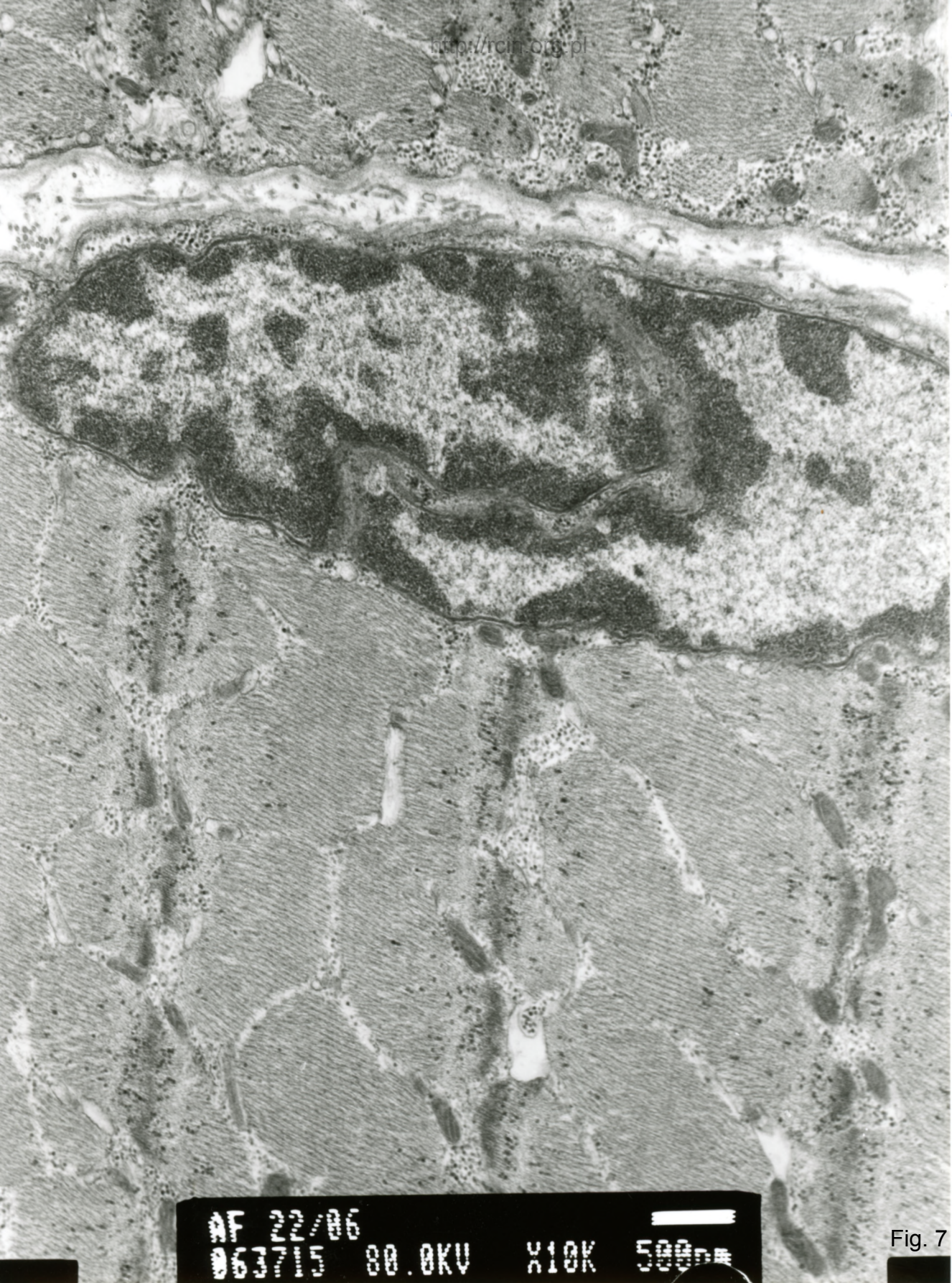


AF 22/06/SERCE
062958 80.0KV

X10K

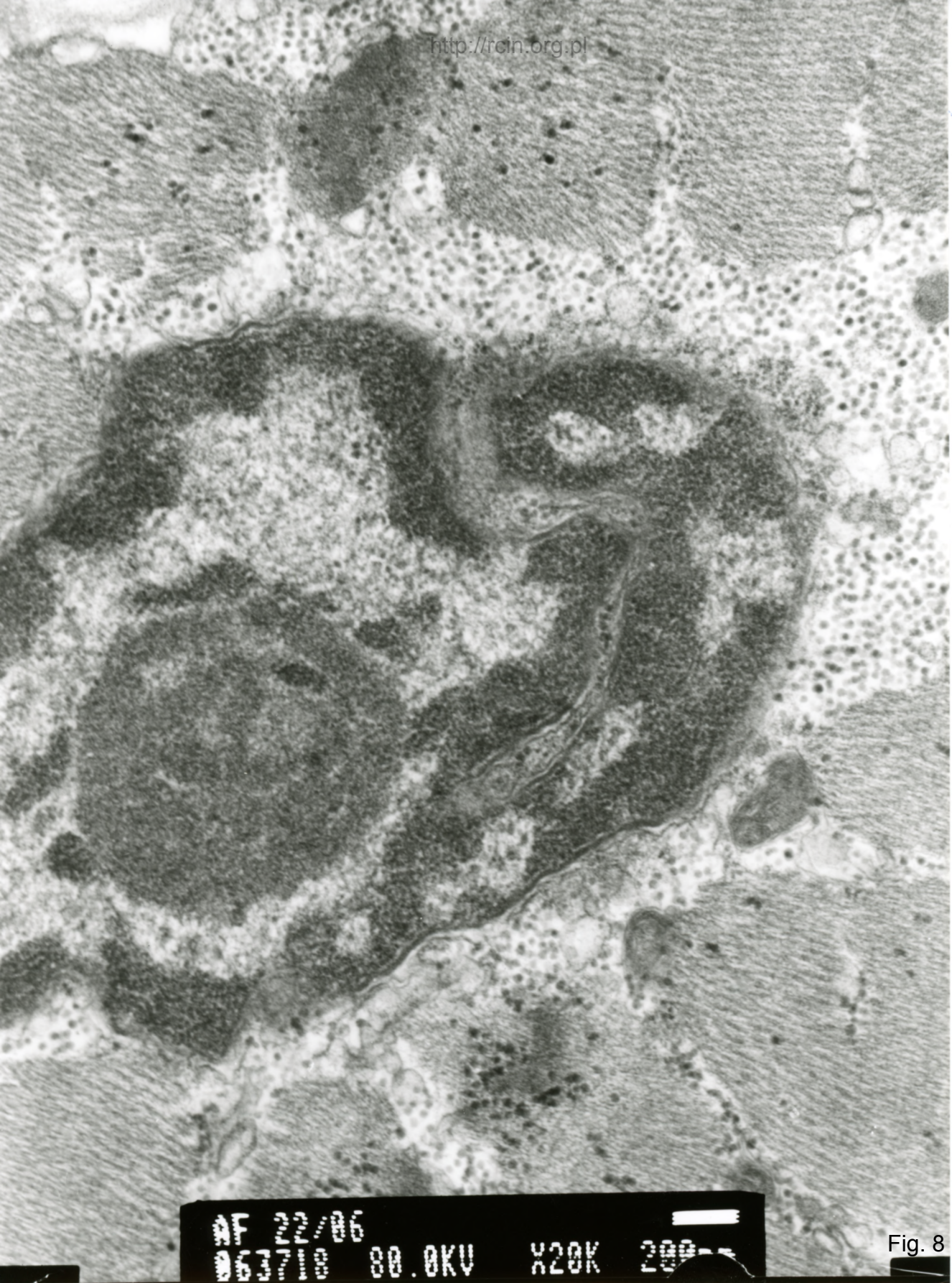
500nm

Fig. 6



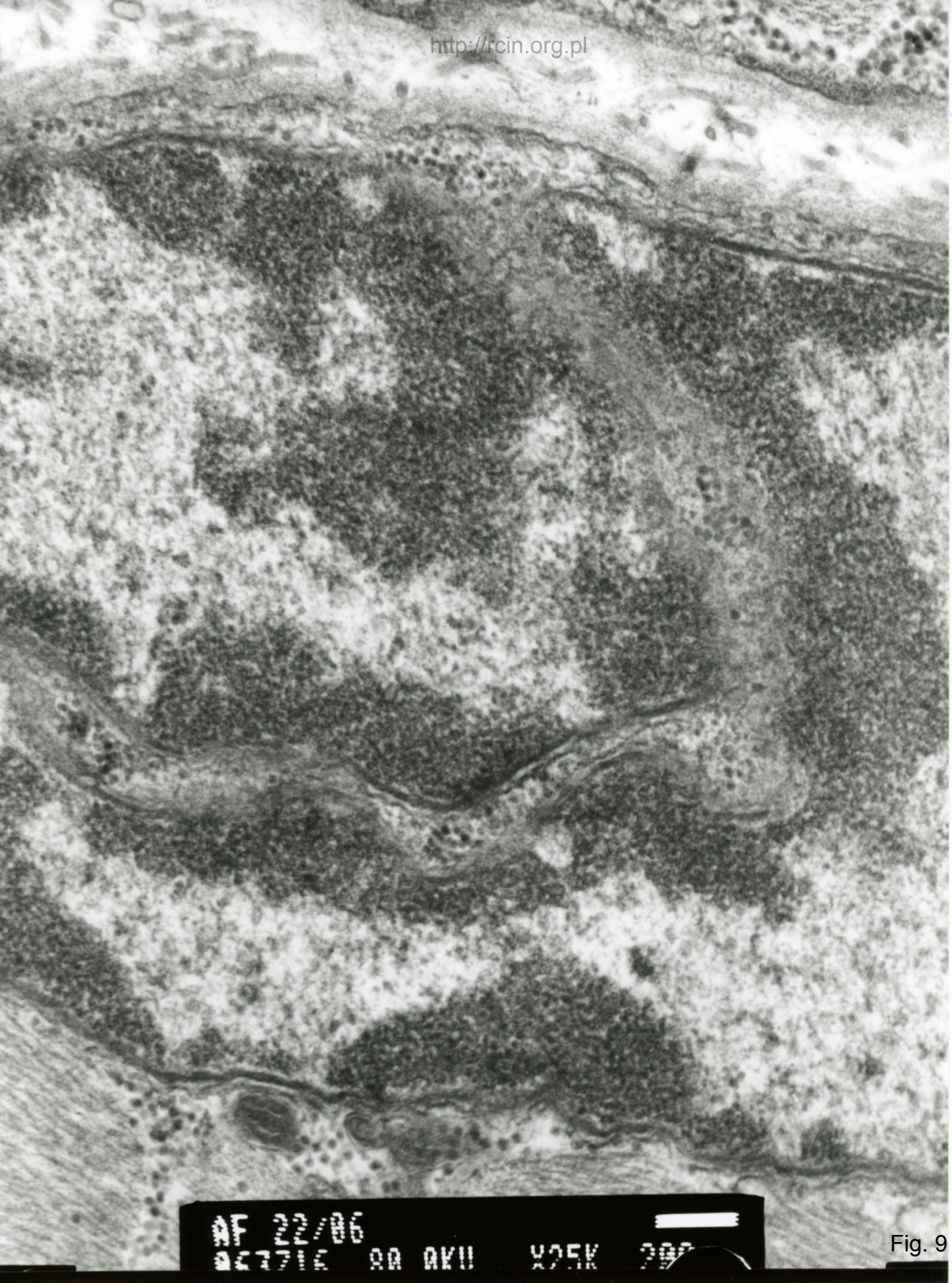
AF 22/06
063715 80.0KV X10K 500nm

Fig. 7



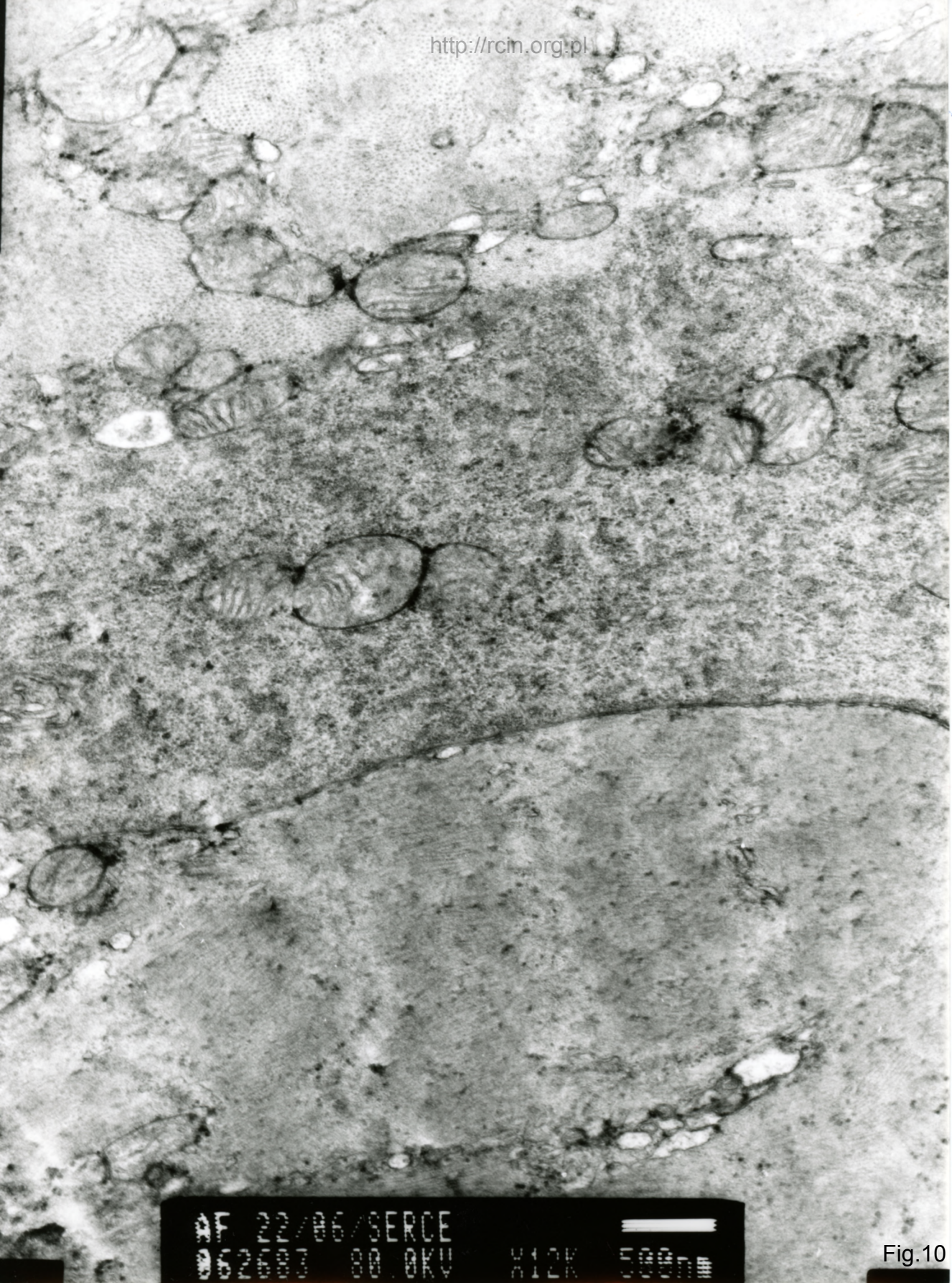
AF 22/06
063710 80.0KV X20K 200

Fig. 8



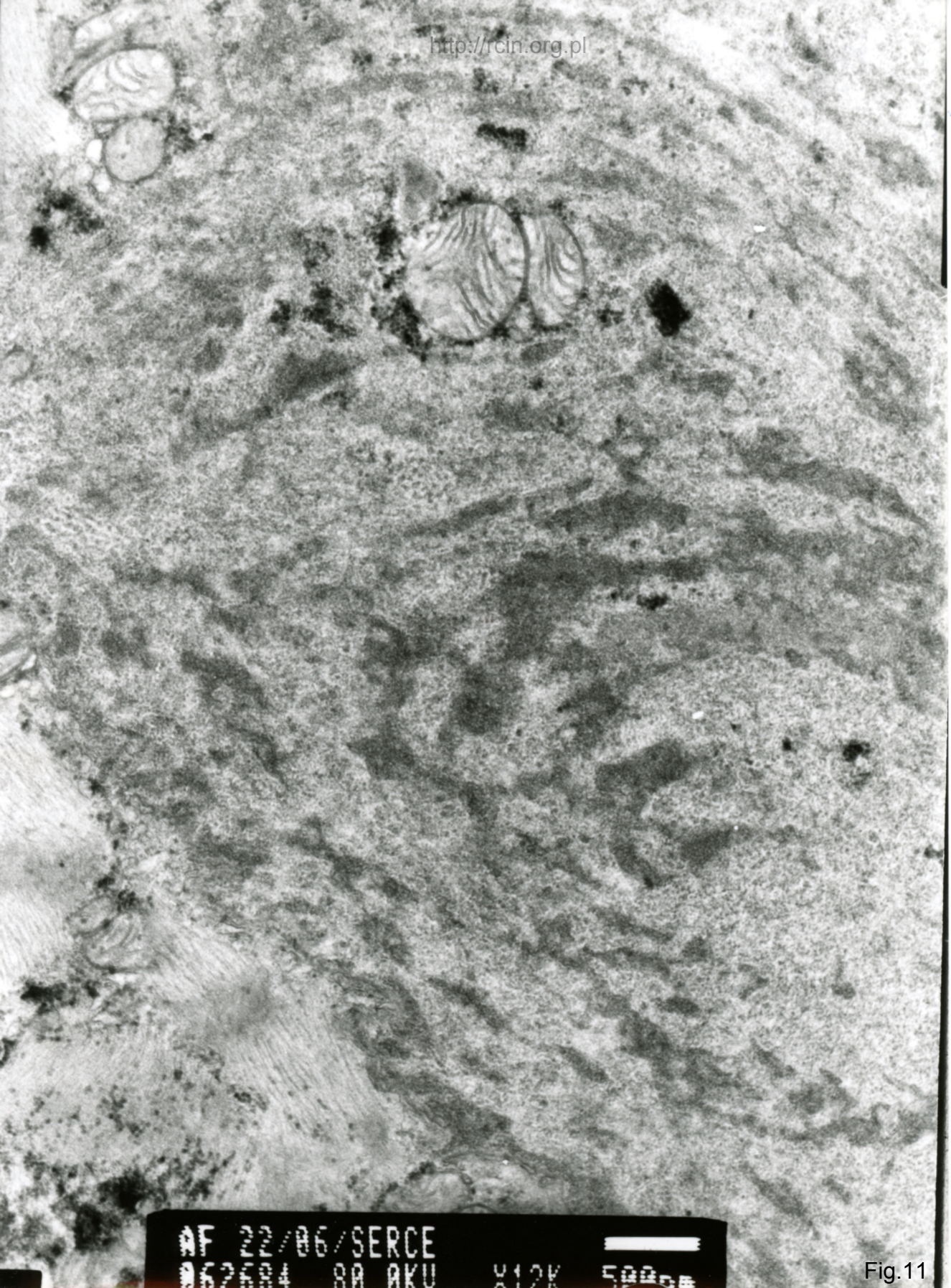
AF 22/06
061716 RA AKU X25K 297

Fig. 9



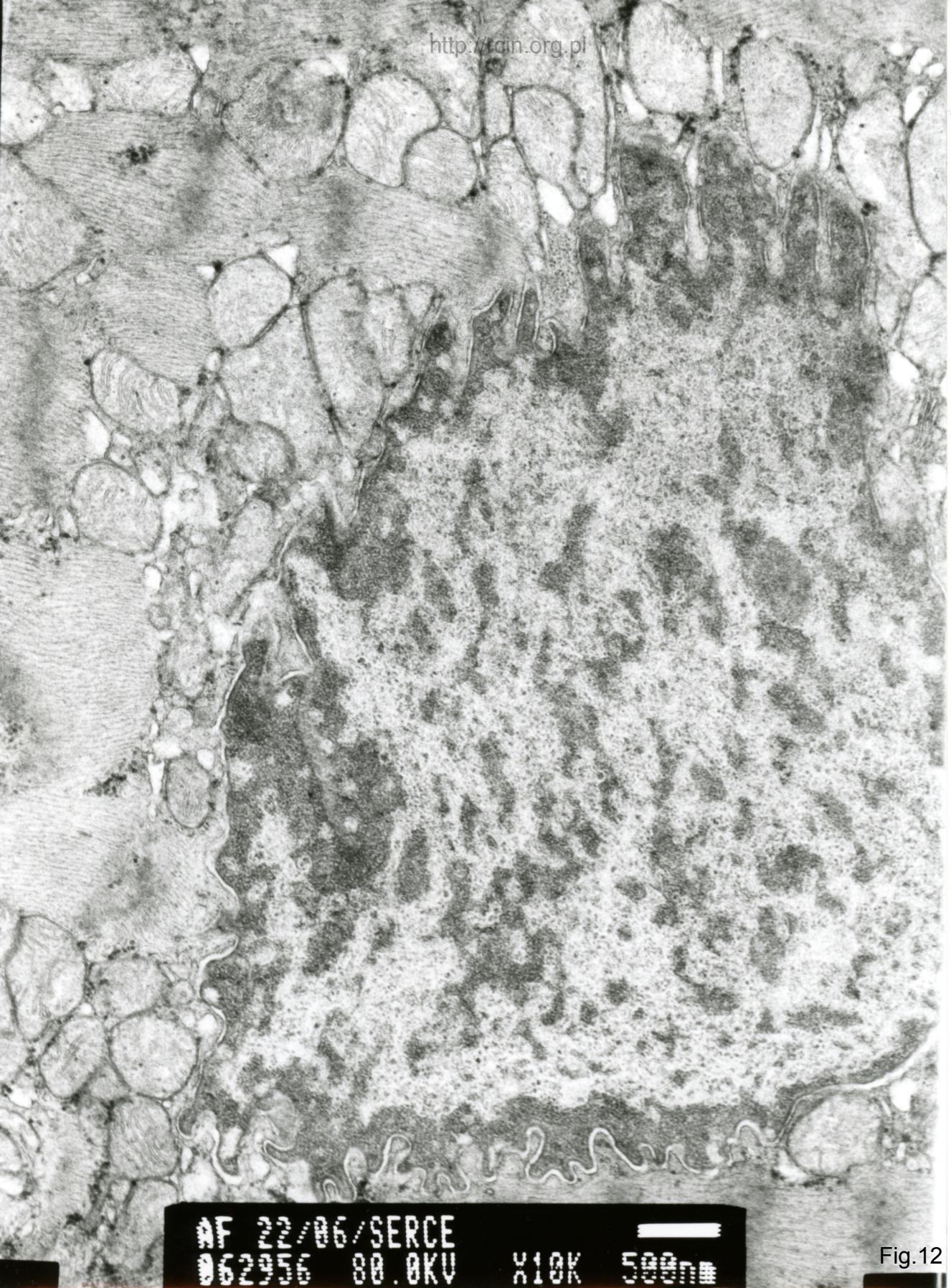
AF 22/86/SERCE
002003 80.0KV X12K 500nm

Fig.10



AF 22/06/SERCE
062684 80 AKU X12K 500nm

Fig.11



AF 22/06/SERCE
062956 80.0KV X10K 500nm

Fig.12

22/06

1. 21

Niewydolność mięśnia sercowego

Analiza ultrastrukturalna wykazała nieprawidłowy wzór sarkomerów (Fig.1,2,3). Obserwowano cechy charakterystyczne dla laminopatii. Jądra kardiomiocytów wykazywały nieprawidłowy kształt, otoczka jądrowa była pofałdowana, z licznymi wgłobieniami, a miejscami przzerwana (Fig. 4-9). Wewnątrz niektórych jąder widoczne były organelle komórkowe lub obłonione struktury (Fig. 10-11). Obserwowano poszerzenie odległości między zewnętrzną i wewnętrzną błoną jądrową (Fig. 12).

Heart failure

Ultrastructural analysis revealed changes in sarcomere pattern (Figs. 1,2,3). Features characteristic for laminopathy were observed. The nuclei of cardiomyocytes were abnormally shaped, the nuclear envelope was corrugated, with numerous indentations. Focally breaks in the nuclear membrane were seen (Figs. 4-9). Many nuclei contained cellular organelles or membrane-surrounded structures inside (Figs. 10,11). A widening of the distance between the outer and inner nuclear membranes was observed (Fig. 12).