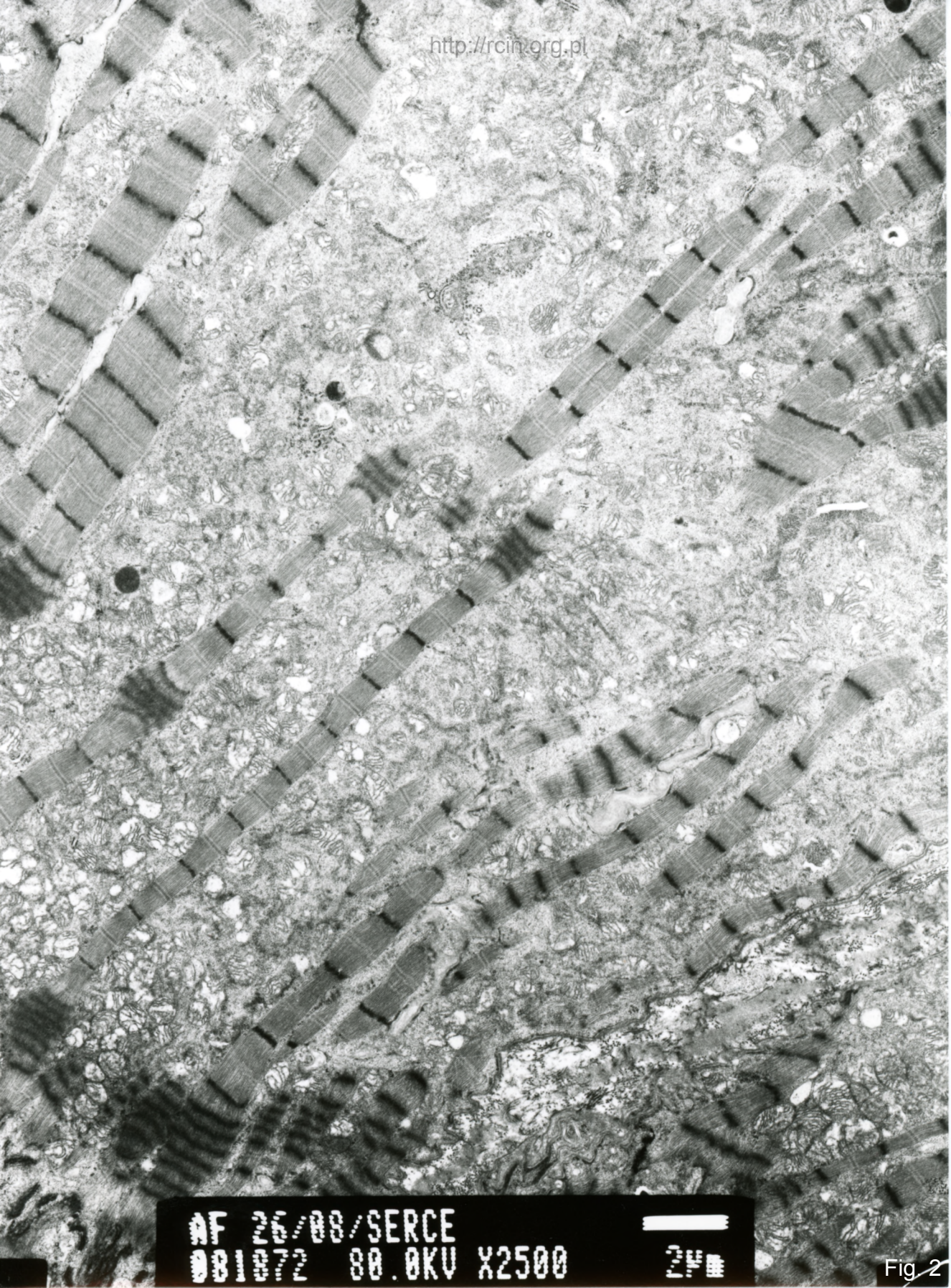


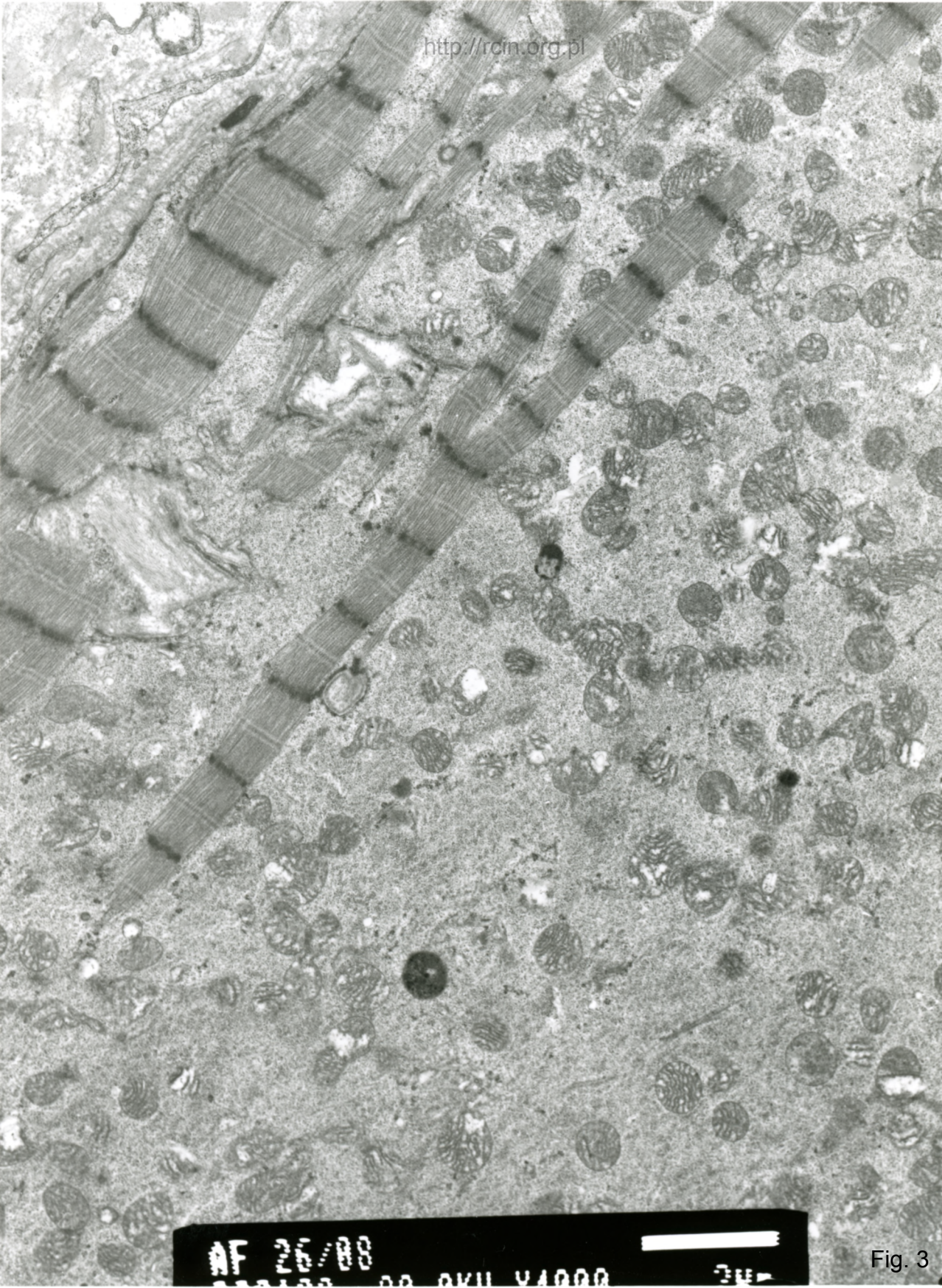
AF 26/08/W
082511 80.0KV X2500 2µm

Fig. 1



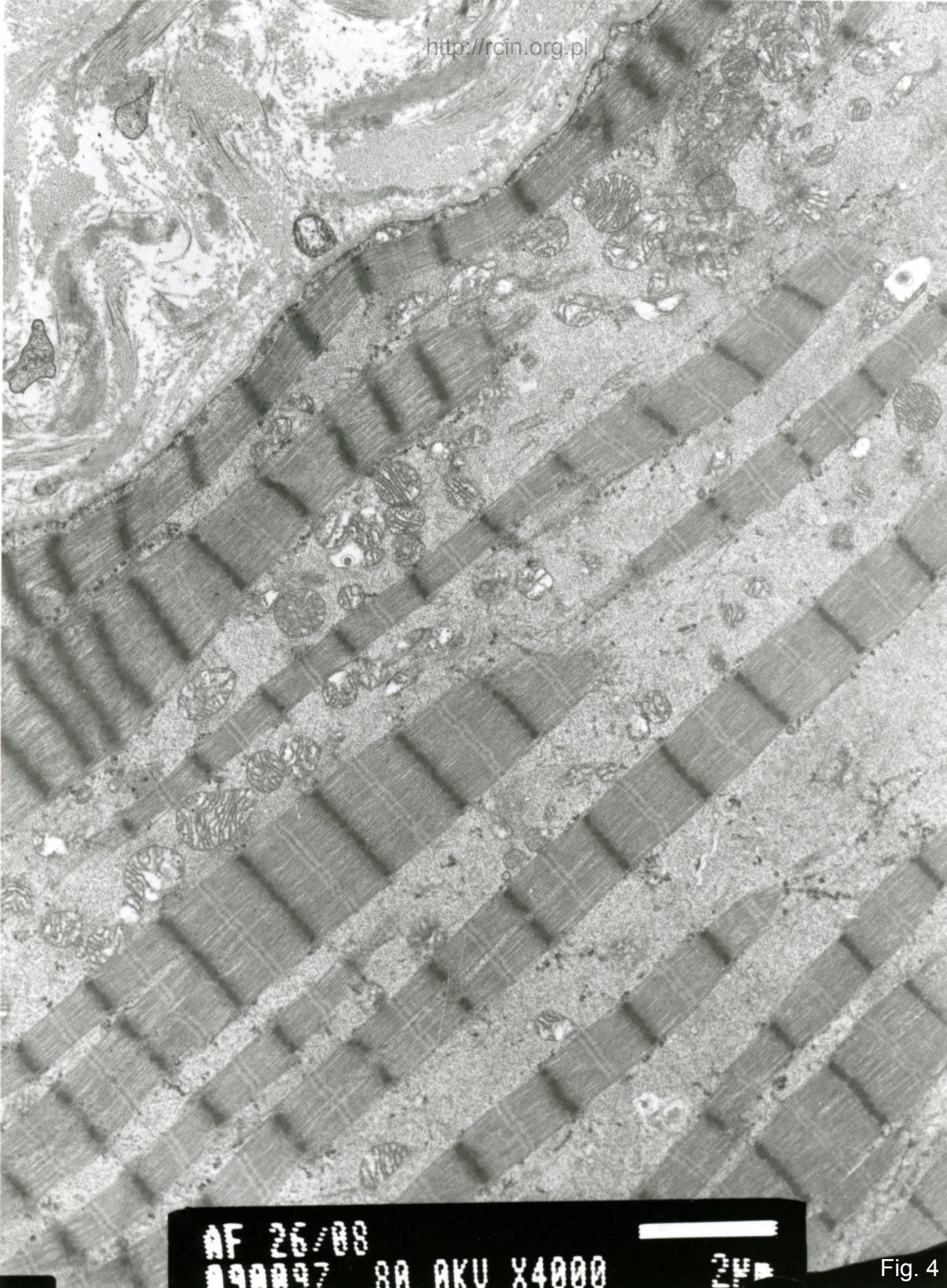
AF 26/08/SERCE
081072 80.0KV X2500 2µm

Fig 2



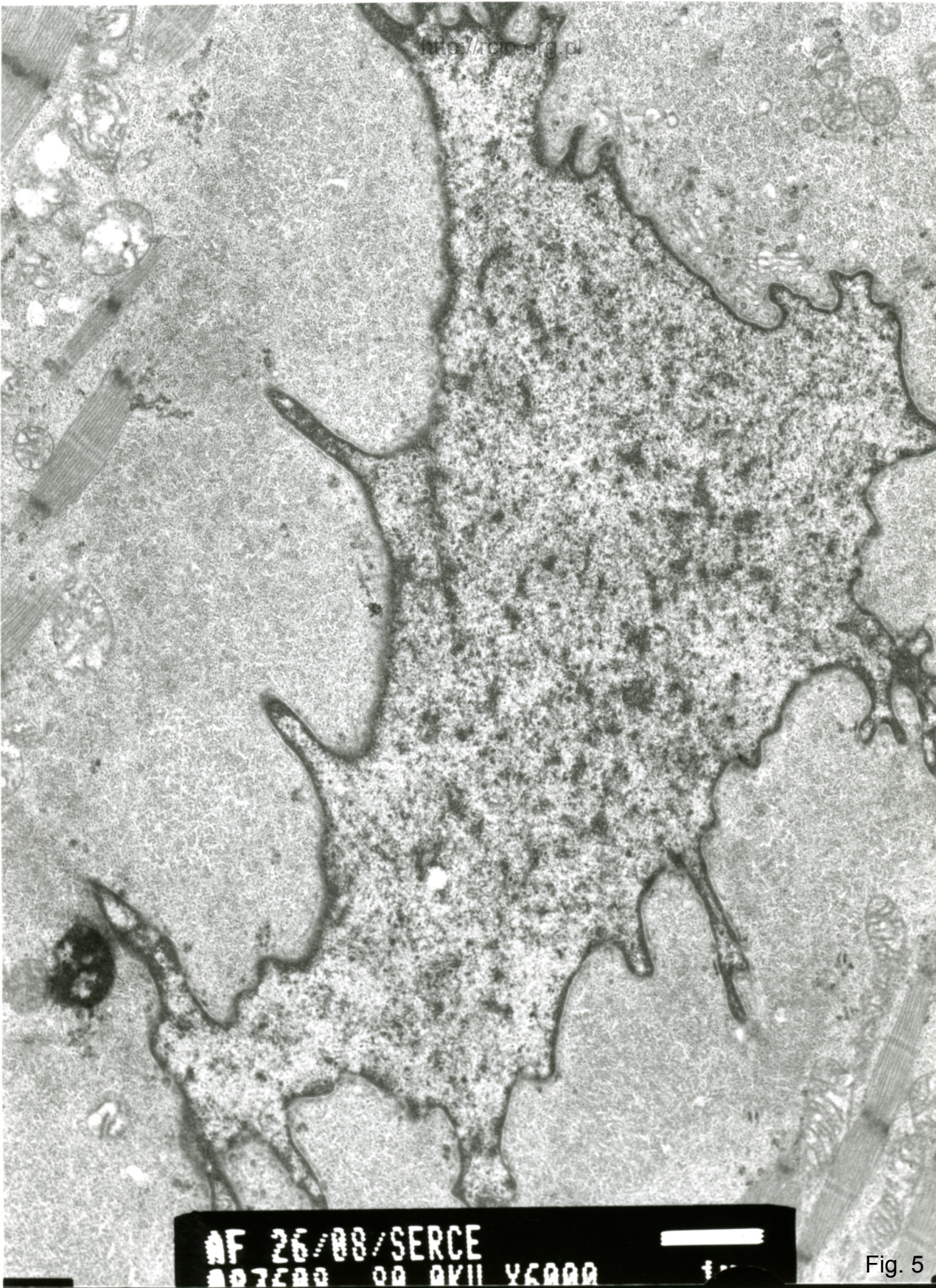
AF 26/88
00 0XU Y4000 3M

Fig. 3



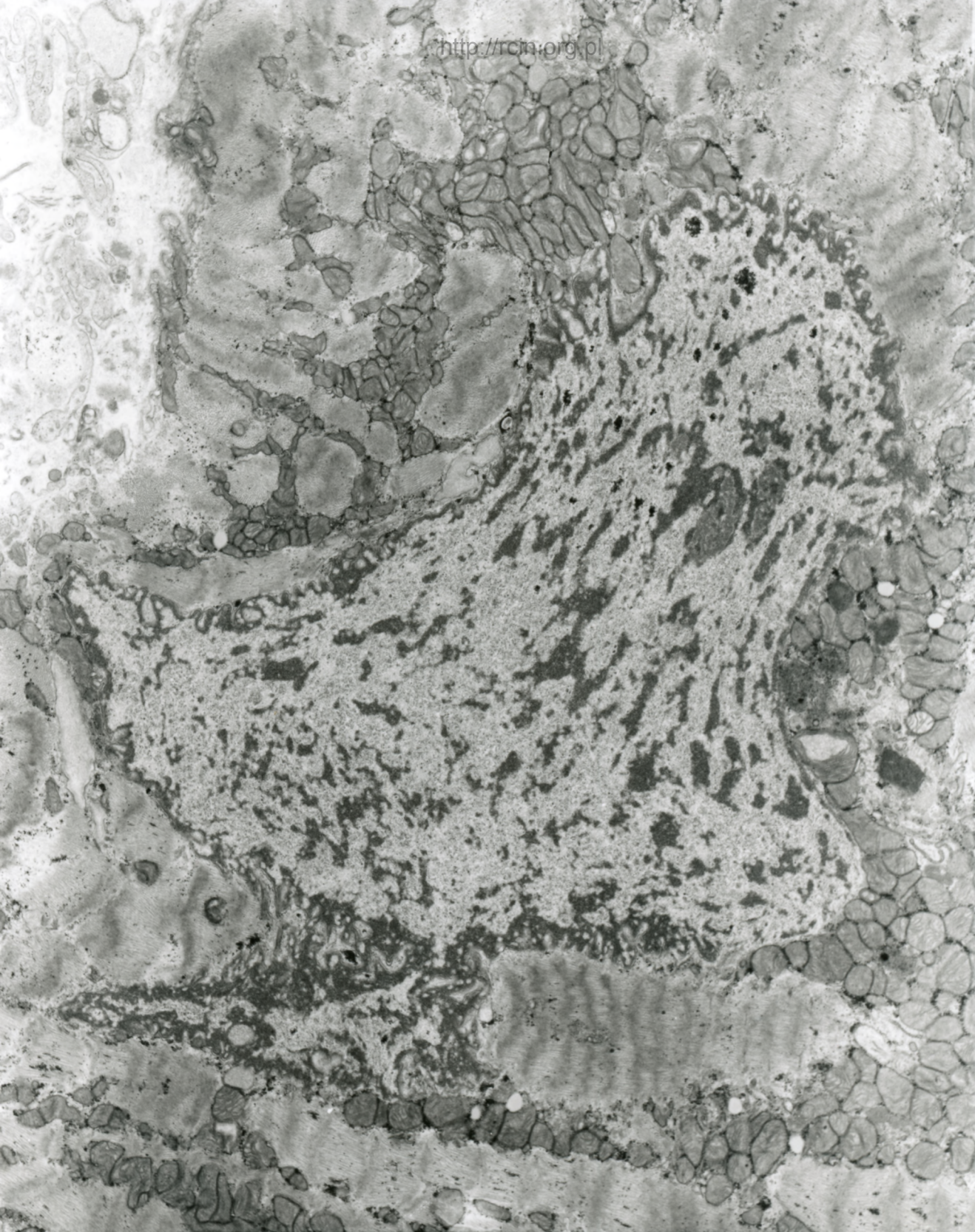
AF 26/88
090027 80 AKU X4000 2µm

Fig. 4



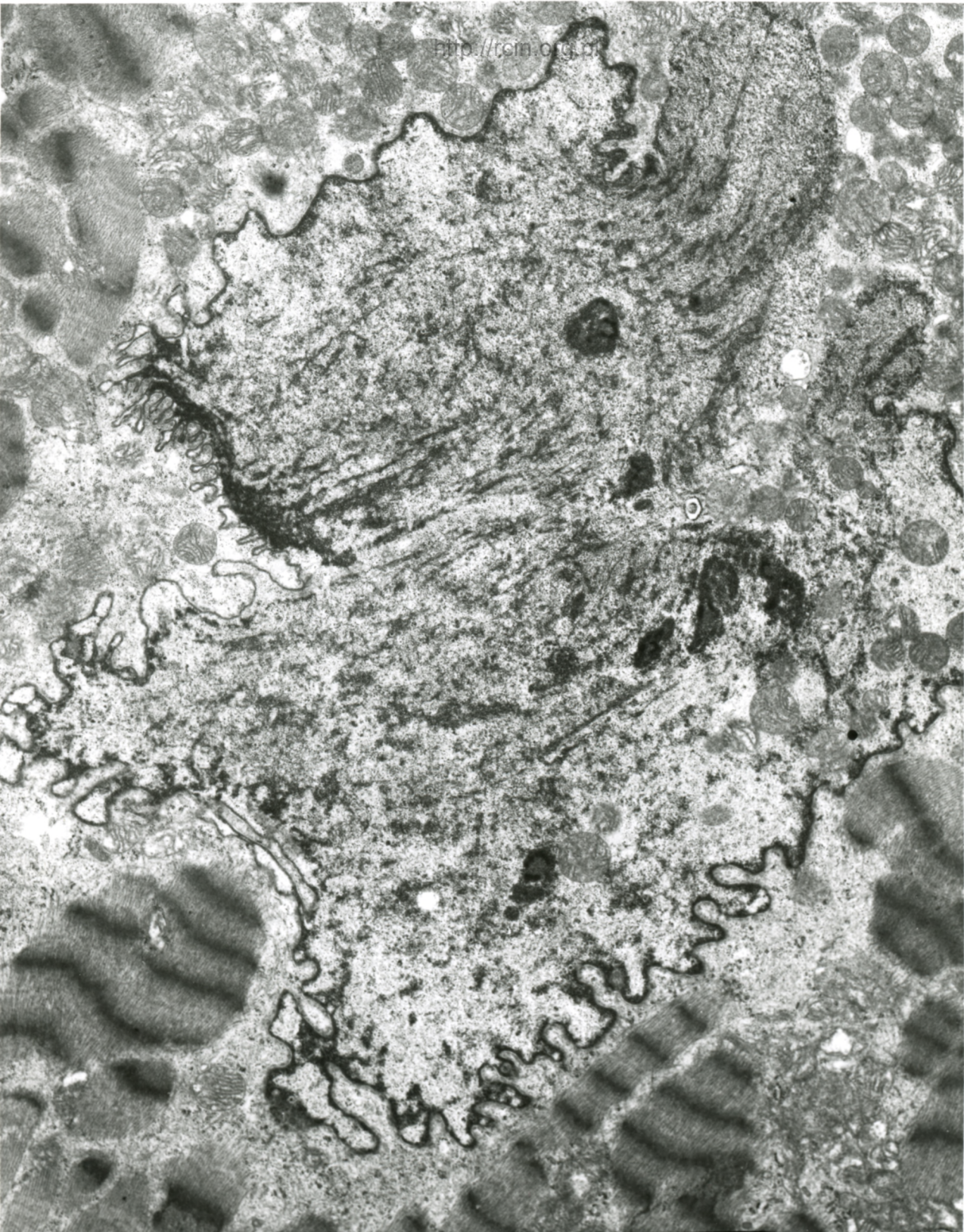
AF 26/08/SERCE
007500 00 0K11 Y6000

Fig. 5



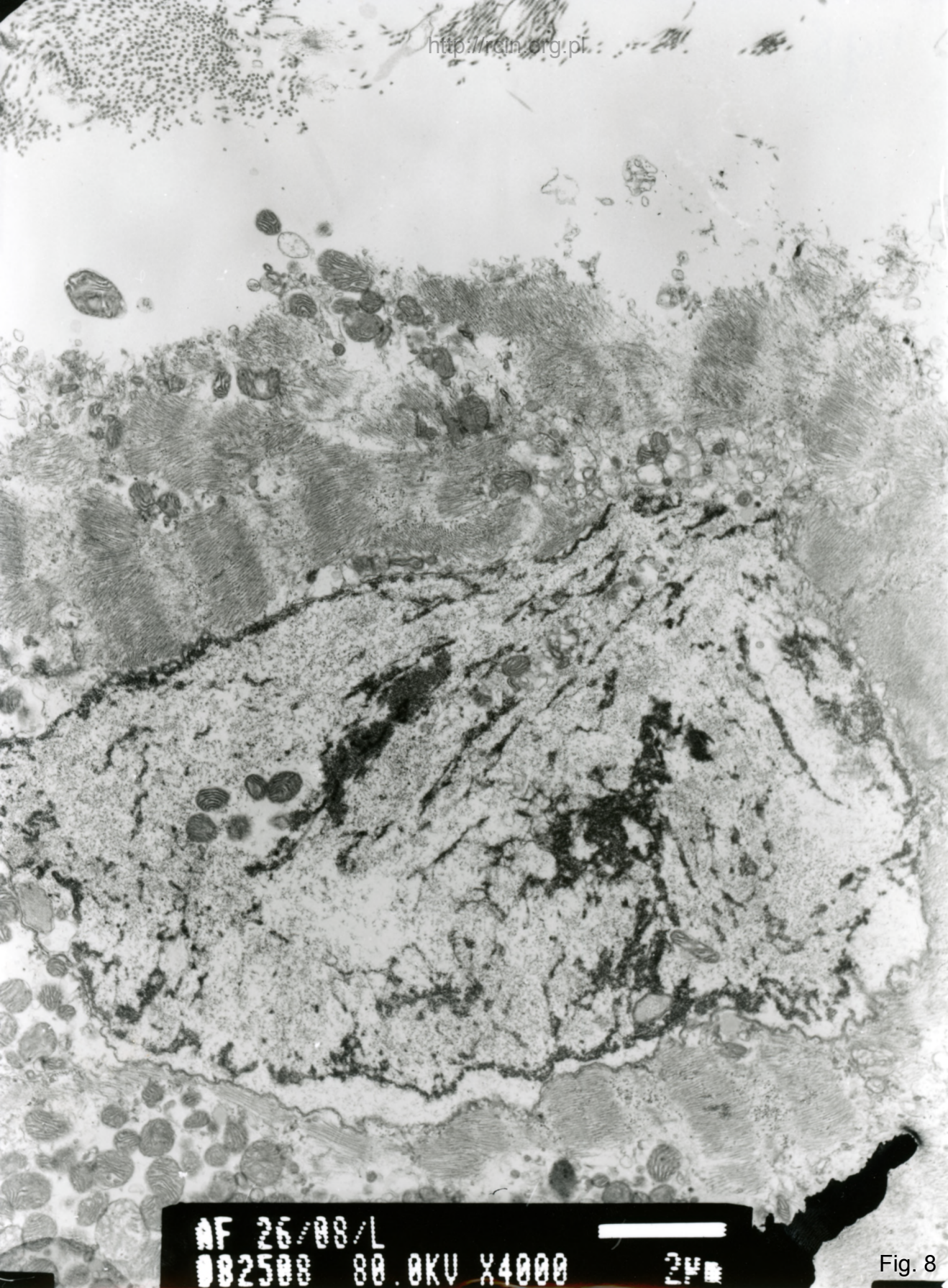
AF 26/08/W
082516 80.0KV X3000 2µm

Fig. 6



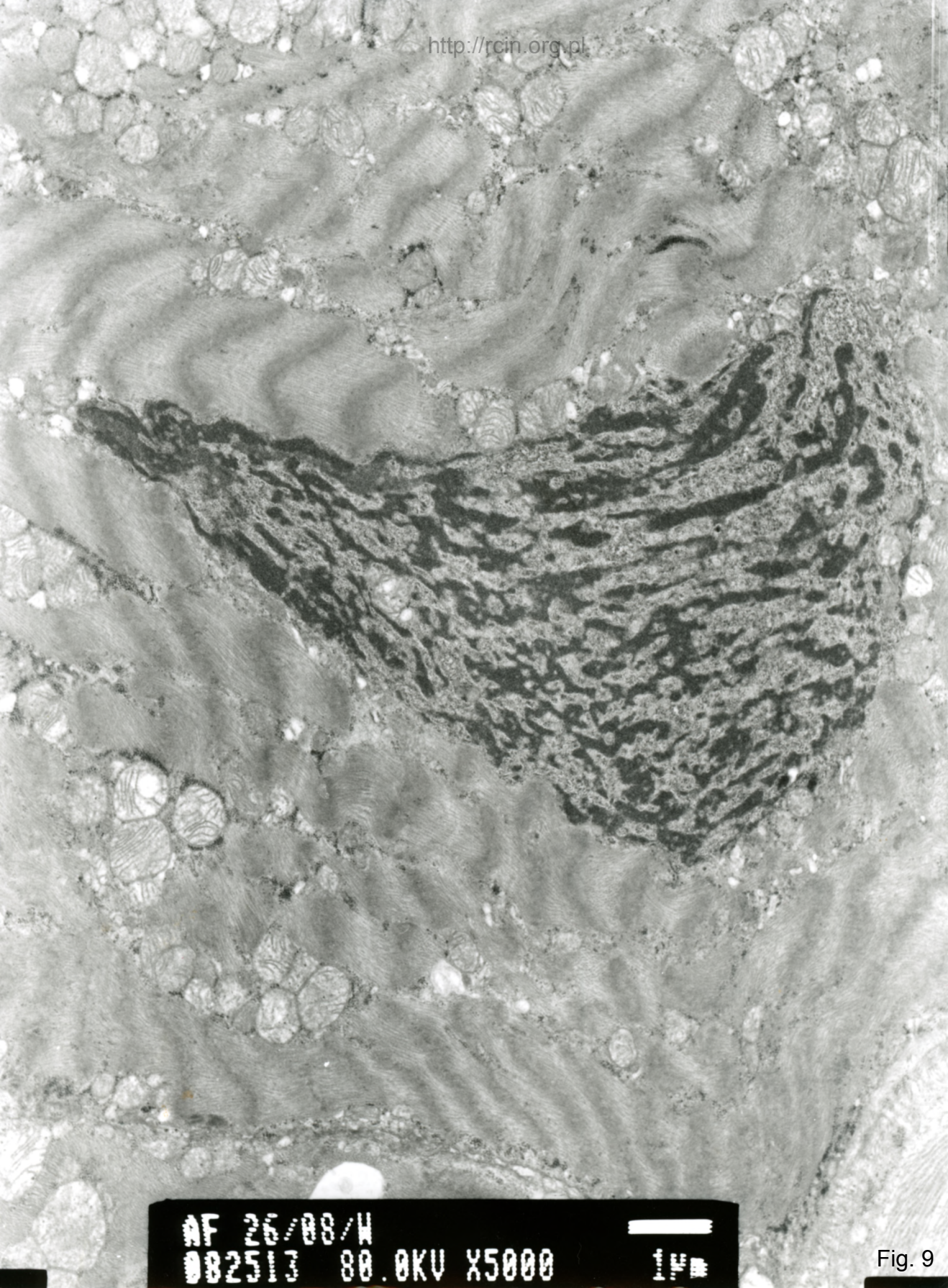
MF 26/88/SERCE
007606 00 0KU X4000

Fig. 7

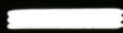


AF 26/08/L
082508 80.0KV X4000 24

Fig. 8



AF 26/08/W
002513 80.0KV X5000



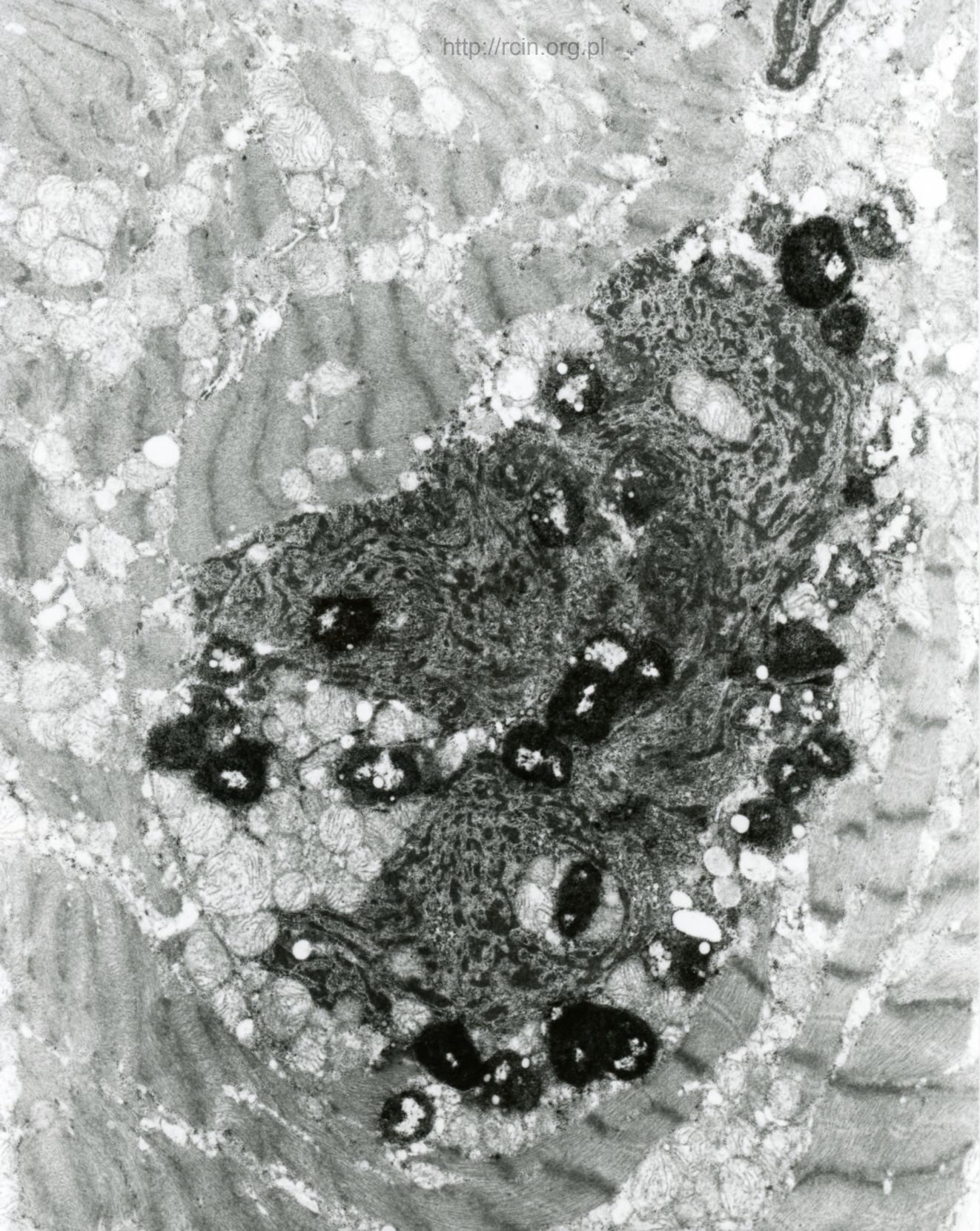
1µm

Fig. 9



AF 26/08/SERCE
083602 80 0KV X6000

Fig.10



AF 26/08/SERCE
081075 80.0KV X5000

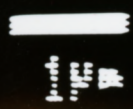
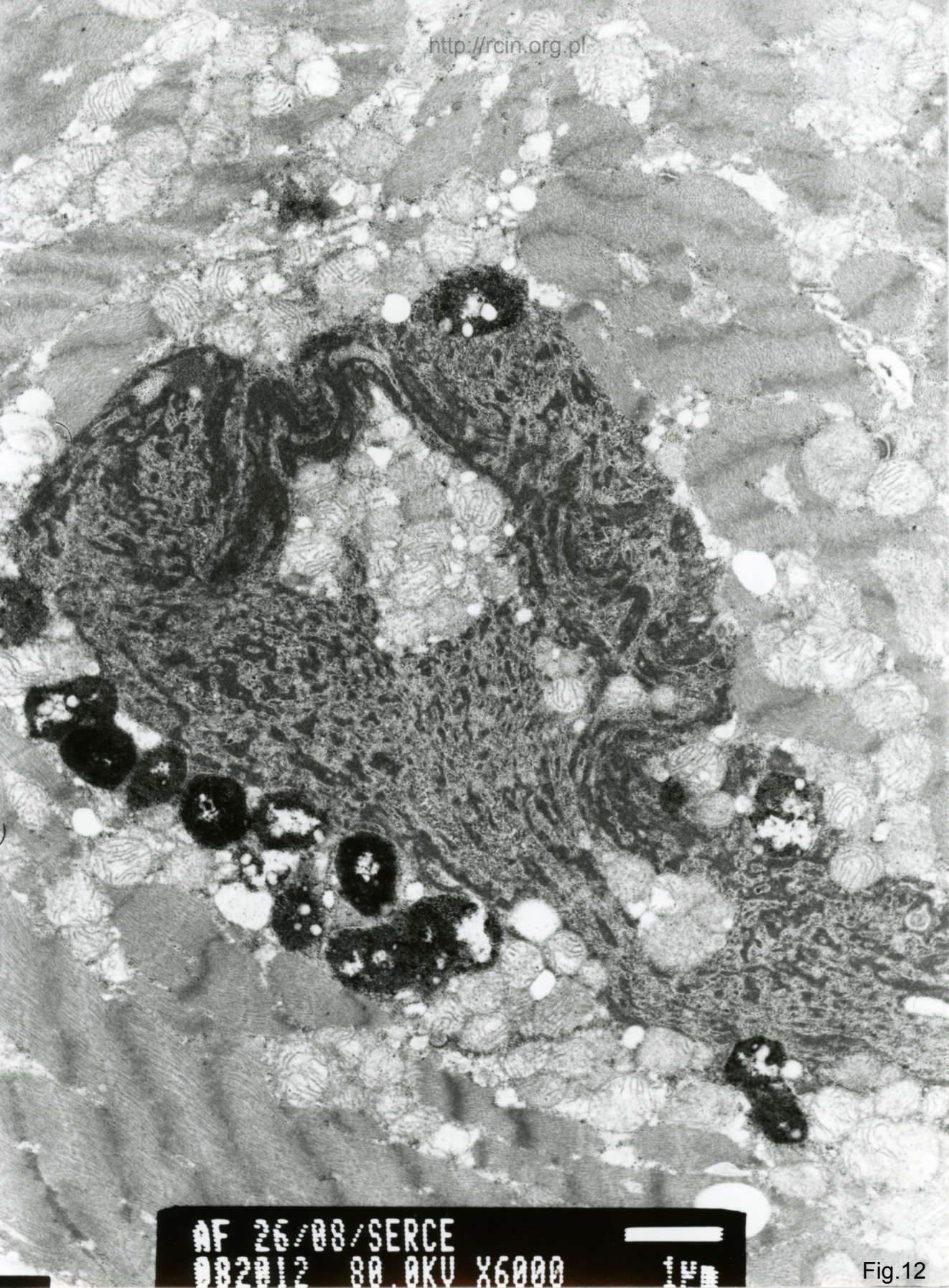
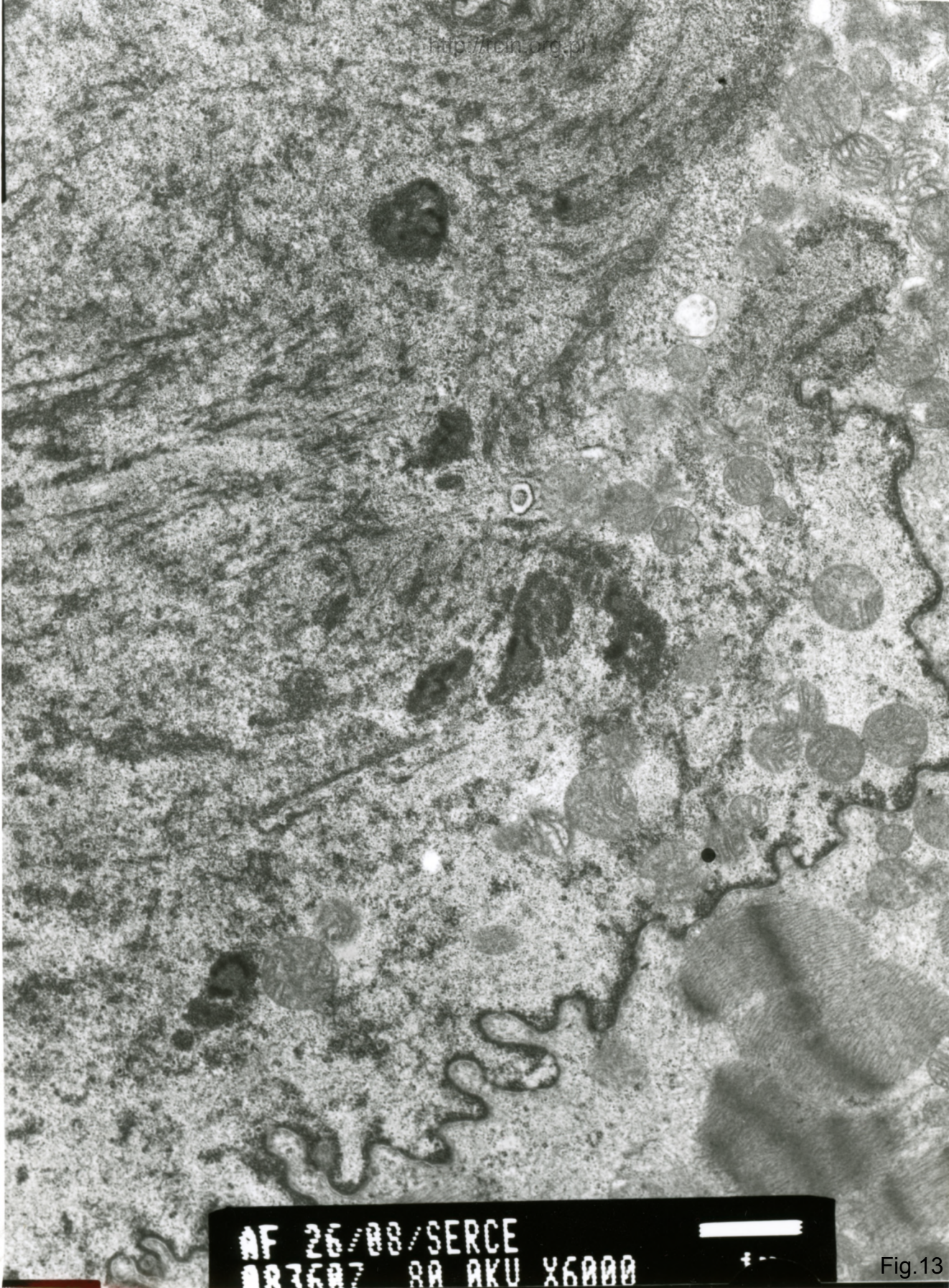


Fig.11



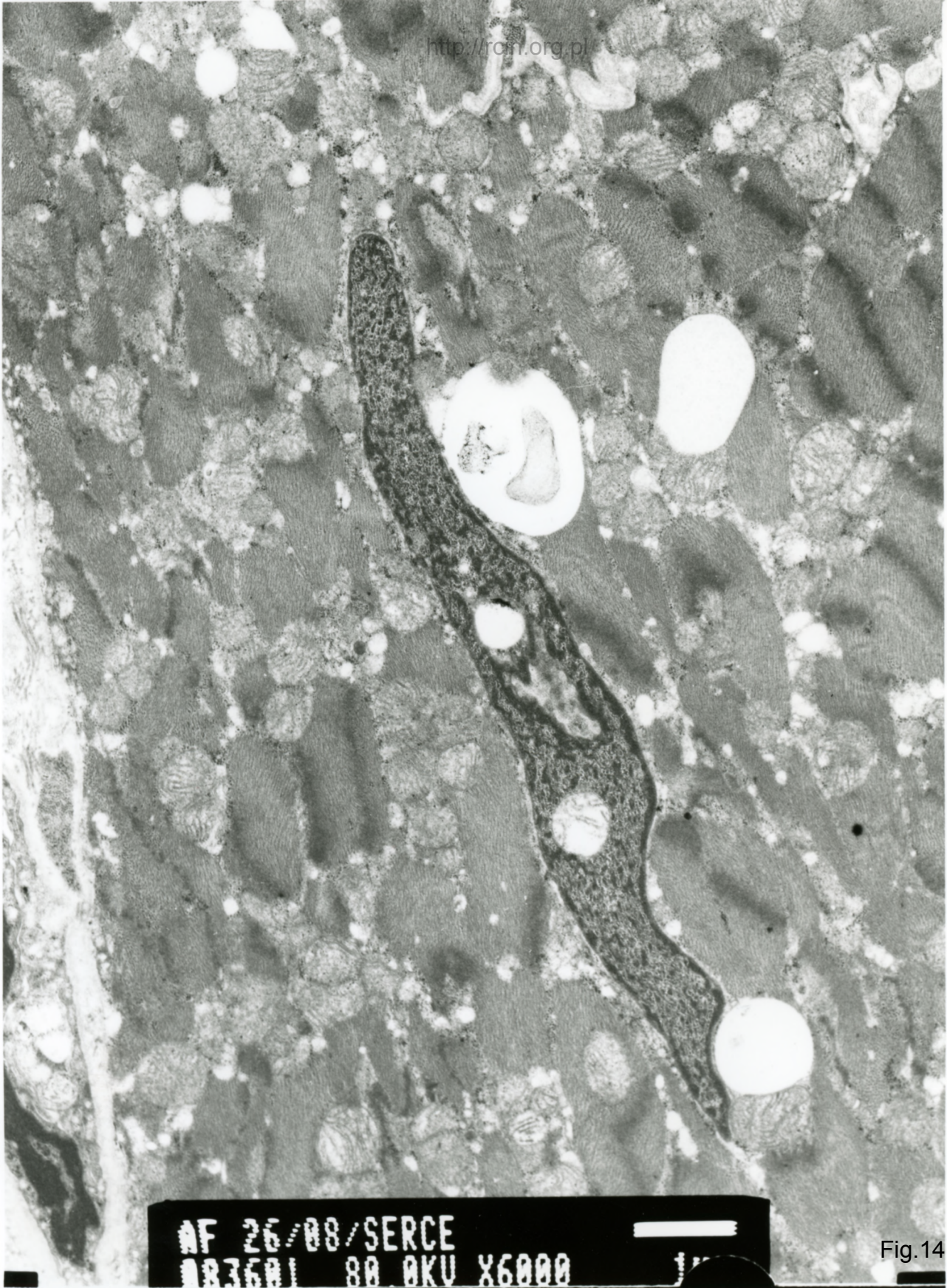
AF 26/08/SERCE
082012 80.0KV X6000 1µm

Fig.12



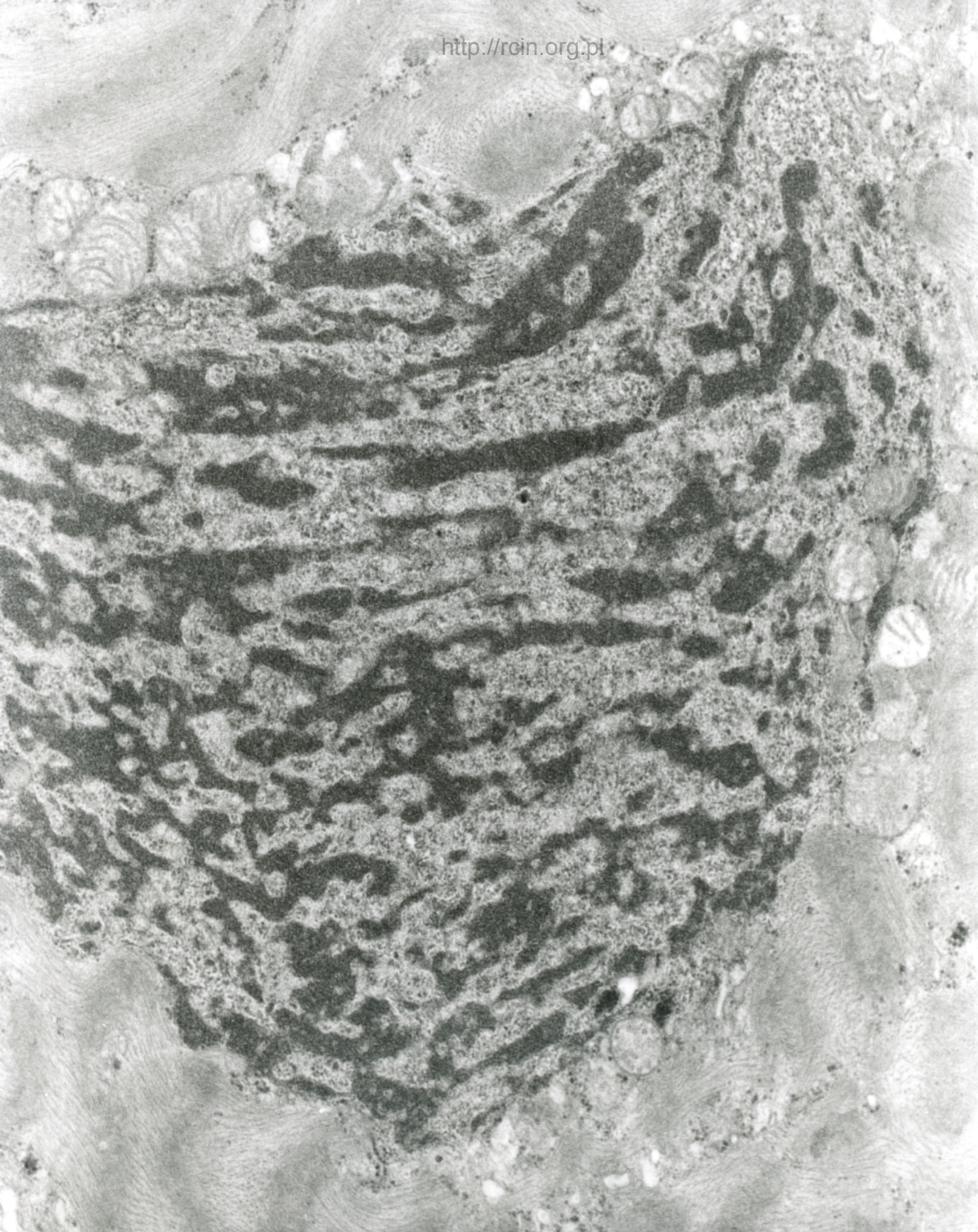
AF 26/08/SERCE
083607 80 AKU X6000

Fig. 13



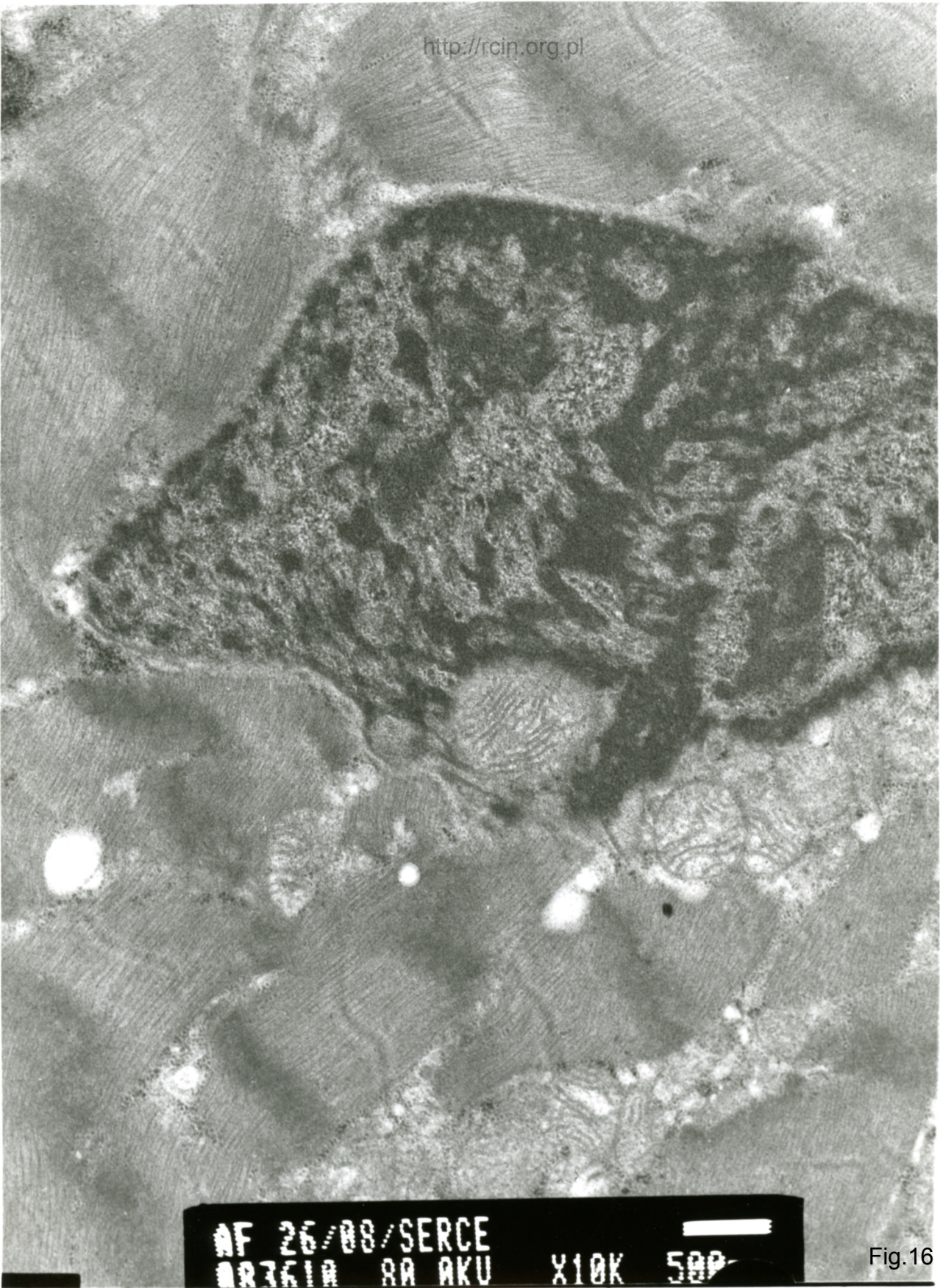
AF 26/08/SERCE
083601 80 0KV X6000

Fig.14



AF 26/08/W
082514 80.0KV X10K 500nm

Fig.15



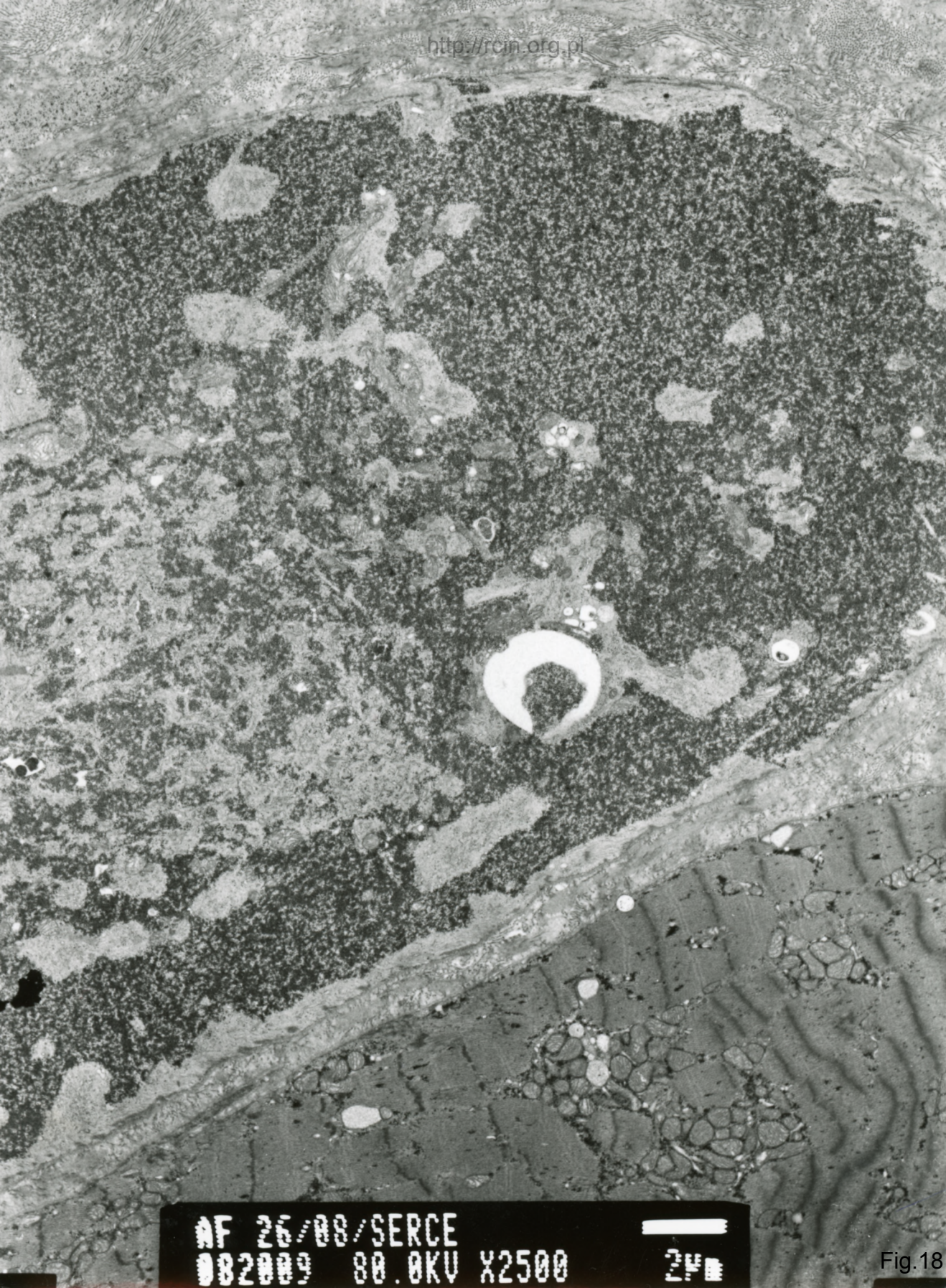
AF 26/88/SERCE
083610 80 AKU X10K 500

Fig.16



AF 26/08/W
082519 80.0KV X15K 500nm

Fig.17

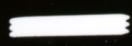


AF 26/08/SERCE
082009 80.0KV X2500 2µm

Fig.18

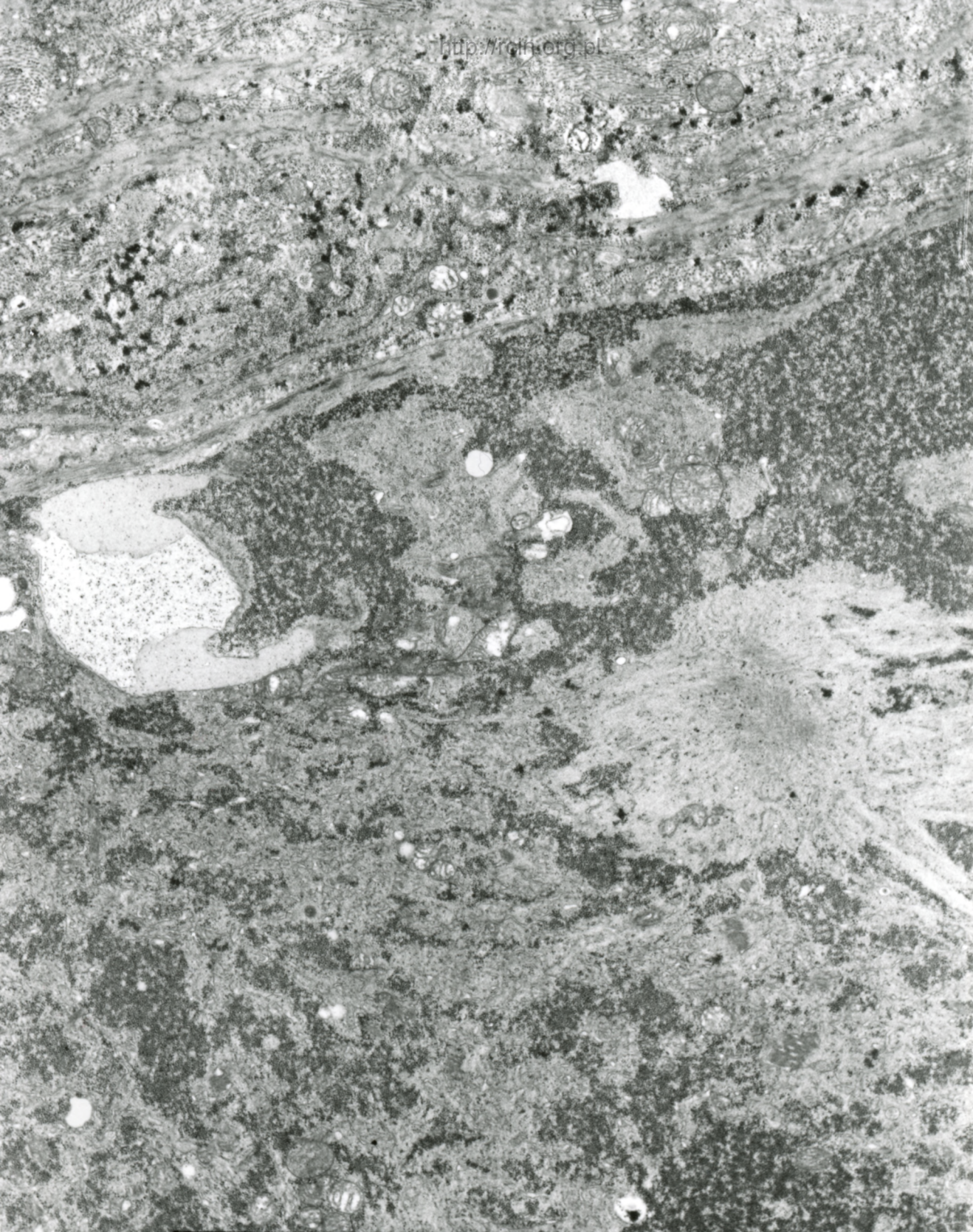


AF 25/08/SERCE
081073 80.0KV X2500



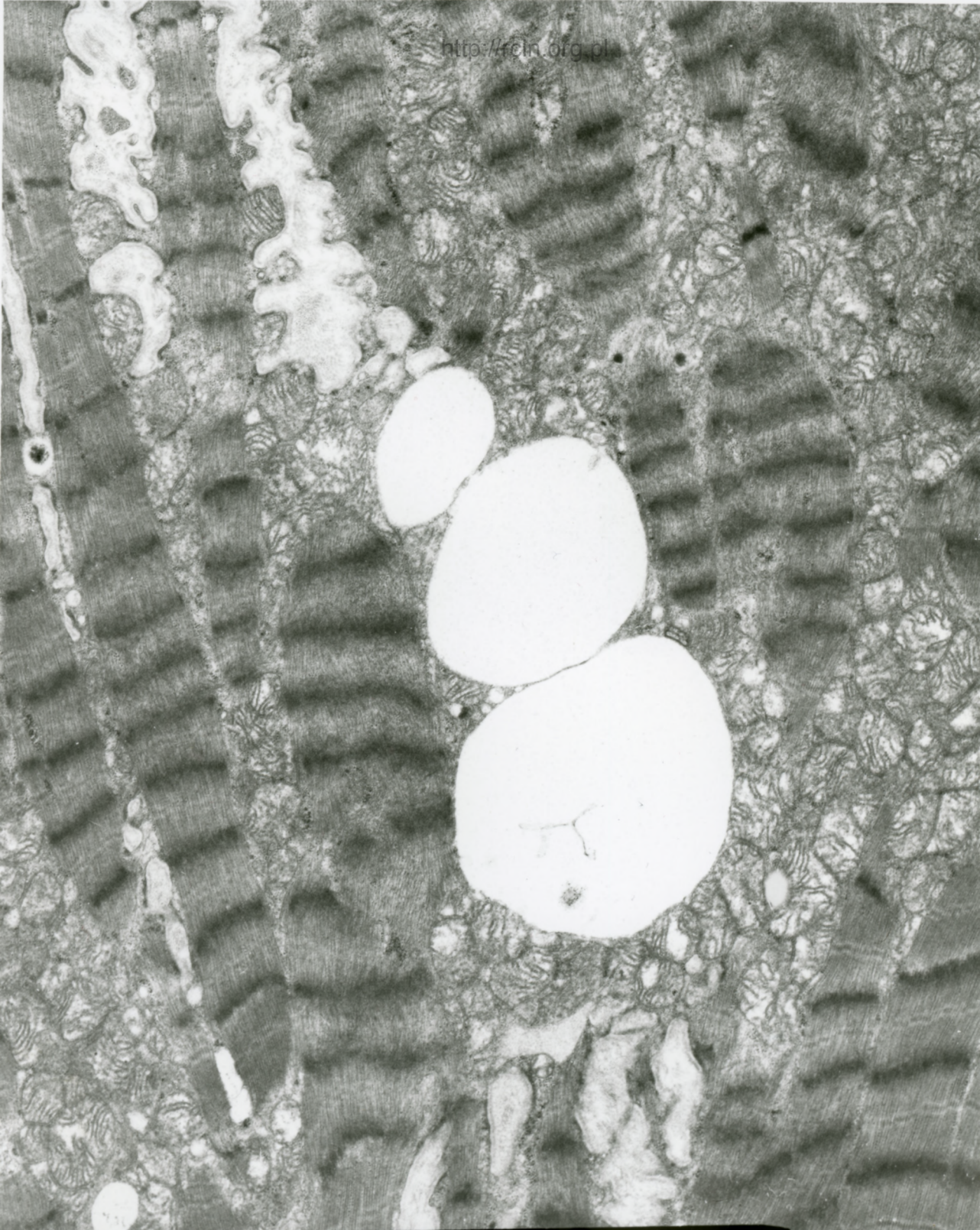
2μm

Fig.19



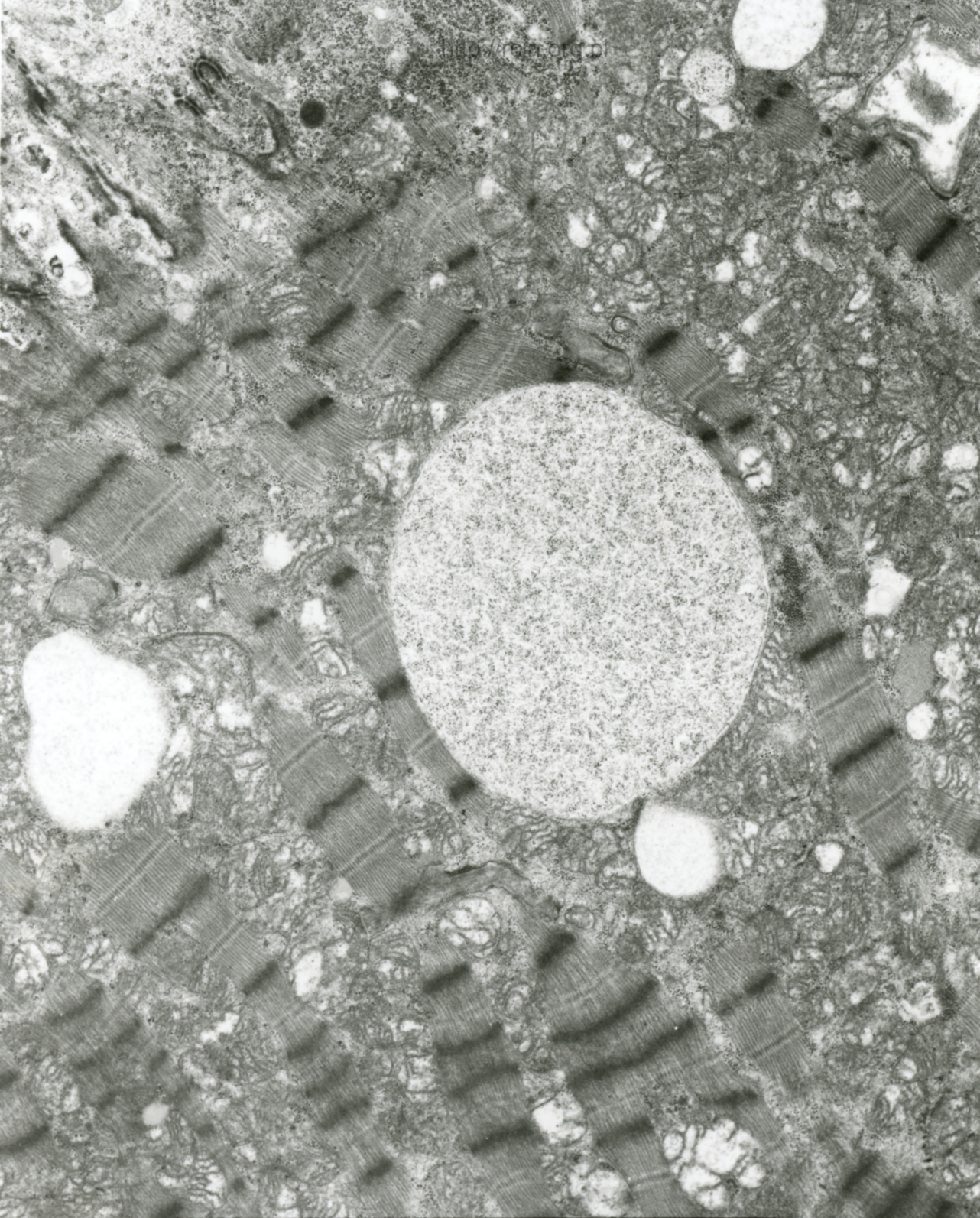
NF 26/08/SERCE
082010 80.0KV X4000 2µm

Fig.20

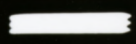


AF 26/88/SERCE
100511 80.0KV X5000 140

Fig.21



AF 26/08/SERCE
100500 80.0KV X5000

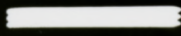


1μm

Fig.22

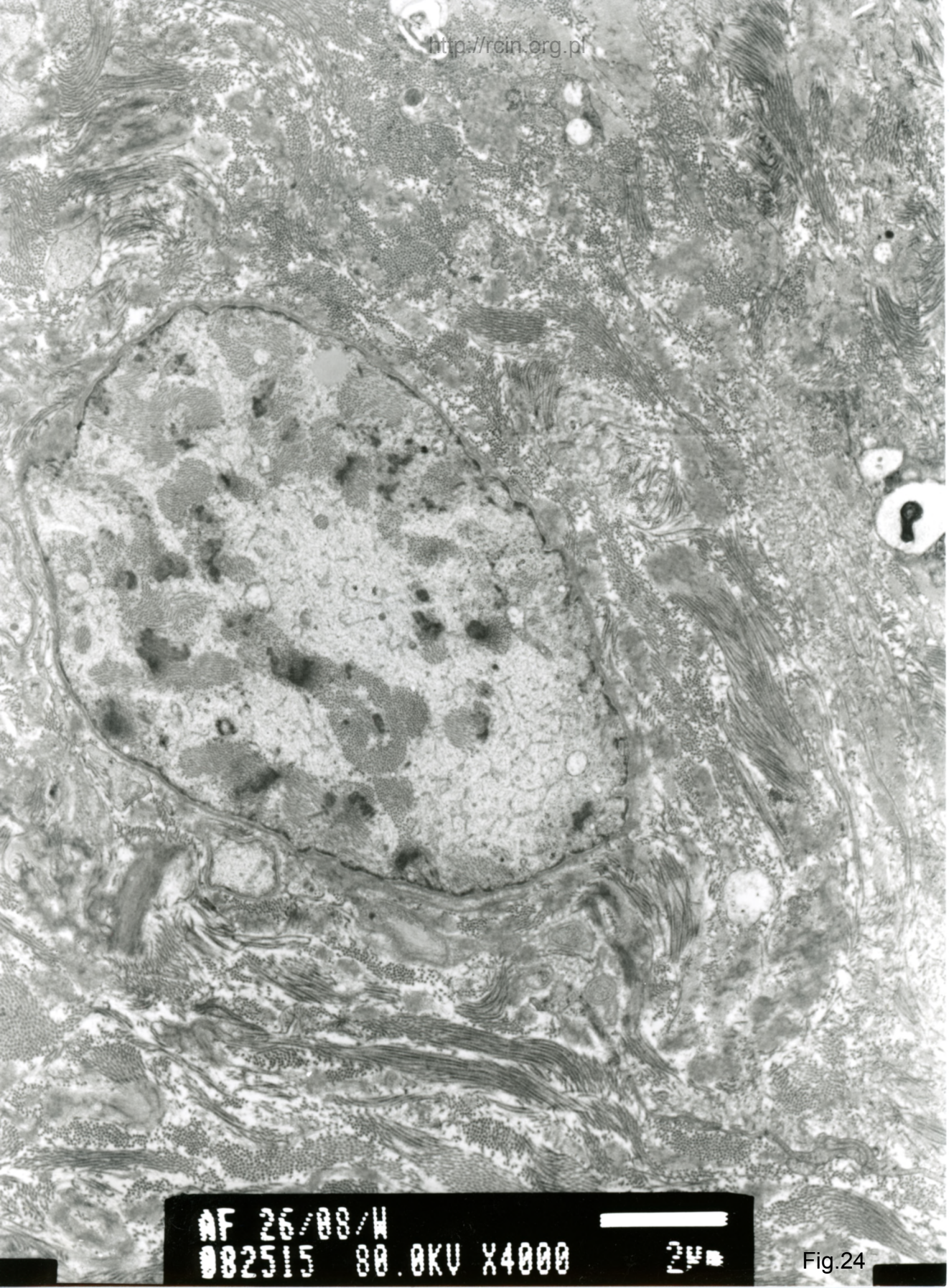


AF 26/08/SERCE
100507 80.0KV X7500

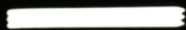


1µm

Fig.23

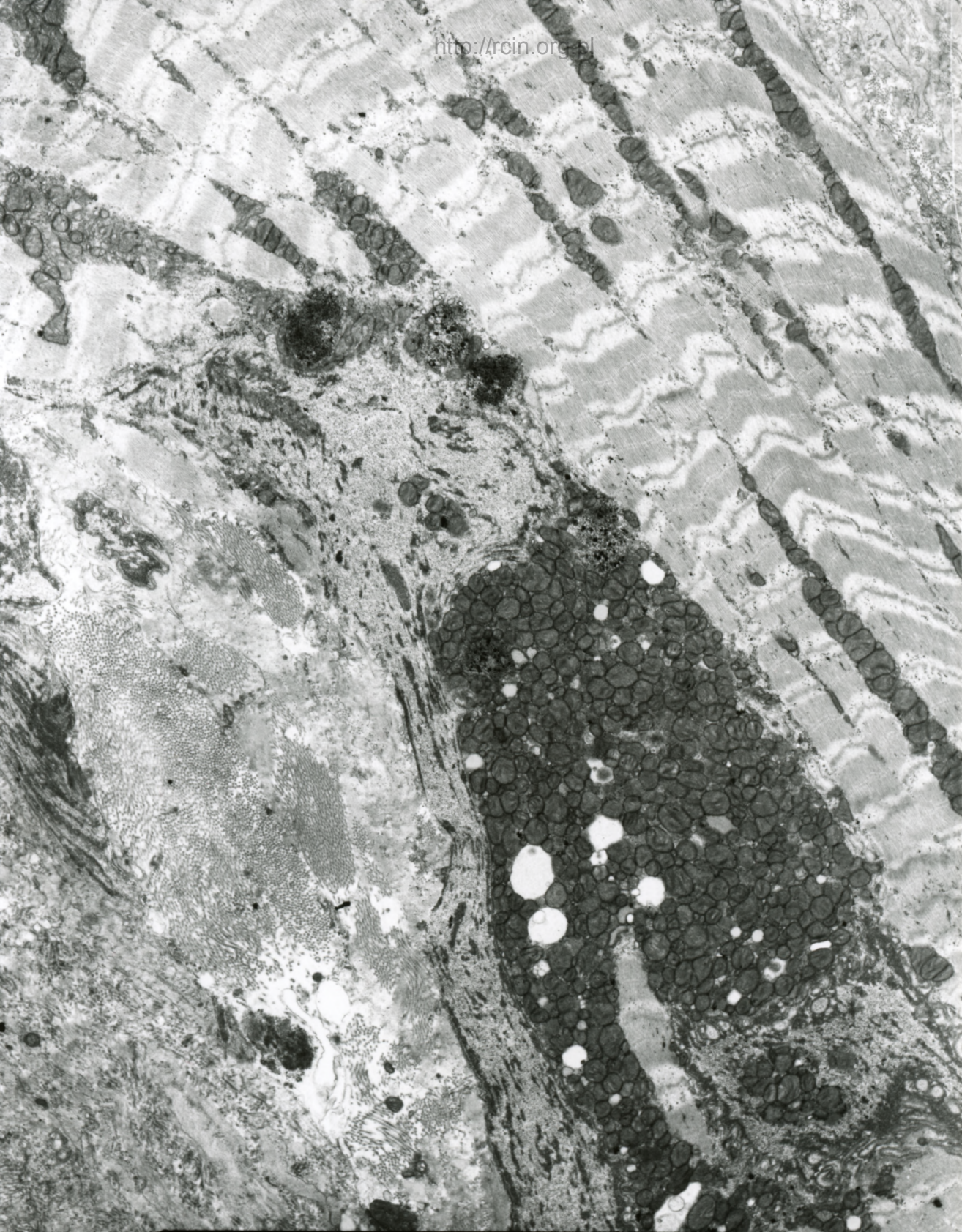


AF 26/08/W
002515 80.0KV X4000



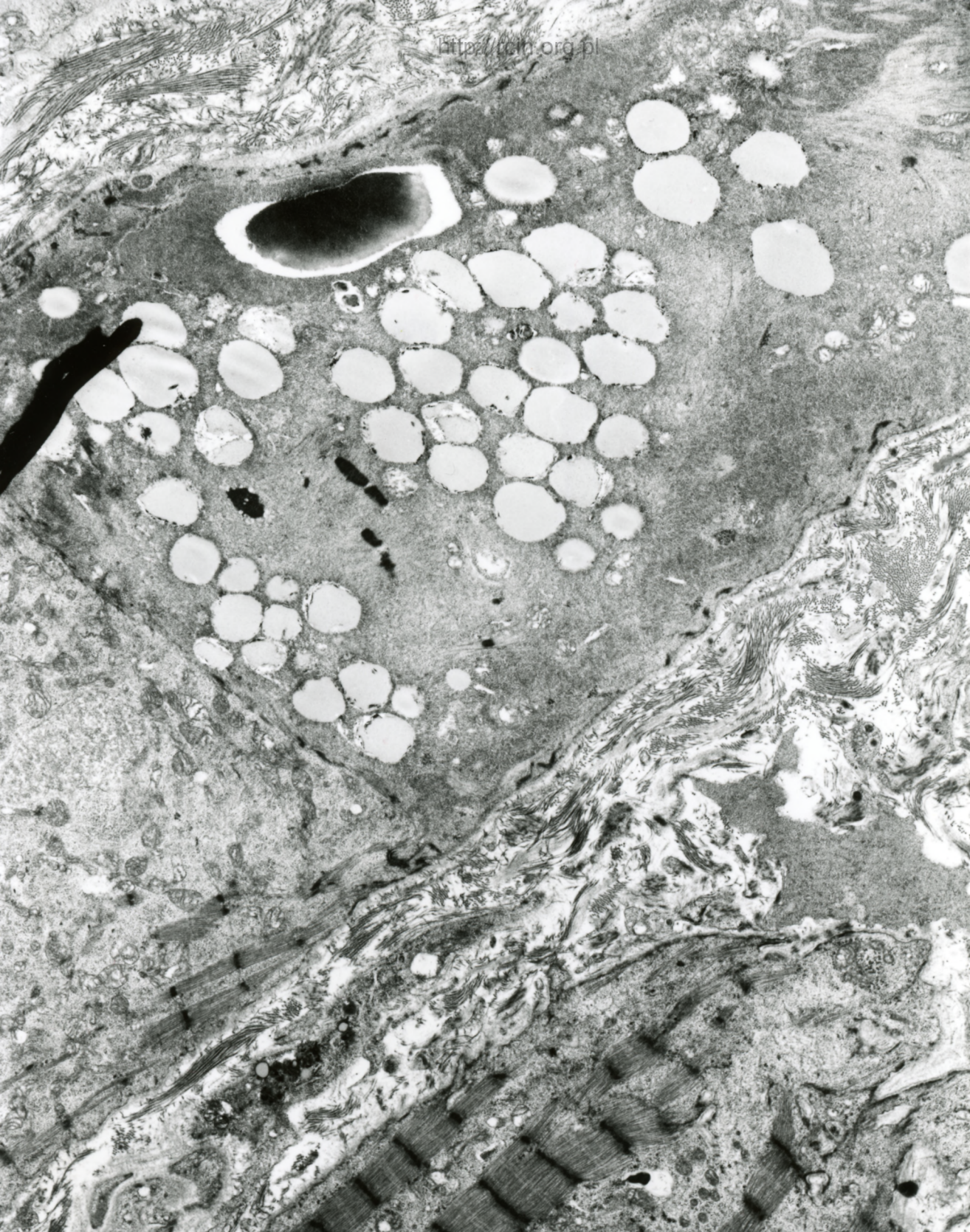
2µm

Fig.24



AF 26/08/SERCE
082013 80.0KV X2500 2µm

Fig.25



AF 26/08/SERCE
081959 80.0KV X2500

Fig.26

26/08

Analiza ultrastrukturalna wykazała prawidłowy wzór sarkomerów, jednak widoczne były zmiany w przebiegu miofibrili oraz ich znaczna dezorganizacja i/lub zanik (Fig.1-5). Obserwowano cechy charakterystyczne dla laminopatii. Jądra kardiomiocytów były zróżnicowane, otoczka jądrowa często była pofałdowana, z licznymi wgłobieniami. Wiele jąder wykazywało ubytki w błonie jądrowej, co wiązało się z penetracją organelli komórkowych do wnętrza jąder (Fig. 6-17). Miejscowo występowały obfite złogi glikogenu (Fig. 18-20), a także nieliczne wakuole (Fig. 21-23). W przestrzeni zewnątrzkomórkowej obecna była obfita tkanka łączna (Fig 24-26).

Ultrastructural analysis revealed proper sarcomere pattern, but changes in the myofibrils arrangement and their significant disorganization and/or atrophy were evident (Fig.1-5). Features of laminopathy were observed. Cardiomyocyte nuclei of different shapes were seen, nuclear envelope was often corrugated, with numerous indentations. Many nuclei showed breaks in the nuclear membrane, which was associated with penetration of cell organelles into the nuclei (Figs. 6-17). Focally, plentiful glycogen deposits(Figs. 18-20). and some vacuoles (Figs. 21-23) were present Abundant fibrosis was observed in the extracellular space (Figs. 24-26).