

研究業績 英文表記

和文	
表題	シュワン細胞と中枢神経の再生:再生の初期段階の観察
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英文	
Title	Schwann cell basal laminae and central nerve regeneration: observations of the early stages of regeneration
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Abstract	Nerve segments were excised from predegenerated sciatic nerves of rats and treated by repetitive freezing and thawing to kill the Schwann cells. Such treated nerves were cut into thin ca. 5 mm long segments and grafted mainly into the dorsal part of the spinal cord of the same animal. Within 4-5 day after grafting, the dead Schwann cells were removed by macrophages, and the basal laminae of Schwann cells remained as empty tubes or scaffolds. Regenerating axons, accompanied with non-neuronal immature cells, extended through such basal laminae scaffolds. Such non-neuronal immature cells appeared similar to Schwann cells, and began to form a myelin sheath around the regenerating axons about 15 days after grafting. These myelin-forming non-neuronal cells had basal laminae of their own, suggesting that they were nothing but Schwann cells. Astrocyte processes were found within these basal lamina scaffolds, indicating that the interior of the basal lamina scaffolds belongs to the central nervous system environment. Though the number of basal lamina scaffolds containing regenerating nerves was small, it can be said that the basal laminae of sciatic nerve Schwann cells may work to some extent as effective pathways for the elongation of regenerating nerves of the central nervous system.
keyword	spinal cord, regeneration, Schwann cell basal lamina, grafting

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