研究業績　英文表記

和文	
表題	マウスにおける神経の他家移植による神経再生
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英文	
Title	Nerve regeneration through allogenic nerve grafts in mice.
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Abstract	The purpose of this study was to examine whether the basal laminae of Schwann cells in allografts could survive immunological rejection and serve as a conduit for regenerating nerves, as in the case of autogenic nerve grafts. Allografts of nerve were carried out using sciatic nerves of mice after the grafts had been repetitively frozen to kill their Schwann cells. Two mouse strains, C57BL/6N and C3H/HeN, were used, as they are known to differ in major histocompatibility complex. The mid-portion of the grafted nerve segments was examined by electron microscopy. In addition, the toe pad skin and lumbrical muscles were examined for determining whether regenerating nerves reinnervate sensory end organs and motor endplates. The process of nerve regeneration in the allografts was the same as that seen in the autograft. Cells in the graft disintegrated into cell debris and were phagocytized by macrophages, whereas the basal laminae of Schwann cells were not removed by macrophages, remaining in the form of tubes or scaffolds. Regenerating nerve fibers grew out through such basal lamina scaffolds, keeping in contact with the inner surface. Digital sensory corpuscles and motor endplates of the operated side were well reinnervated. The results indicate that the basal laminae of Schwann cells of the allograft may survive and serve as a conduit for regenerating axons in the same way as in the case of an autograft.
keyword	nerve regeneration, Schwann cell basal lamina, allograft

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