lobes with 4.6–8.2 × 10^6 FFU SR-RSV. Between 30 to 42 days after the inoculation, 5% Patent Blue 1.5–2.0 mg/kg were given through right common carotid artery. The incidence rate of the inoculated tumor was 73%.

The tumors were stained clearly with the blue dyes and those demarcations were demonstrated sharply. The stained regions were extirpated and were observed microscopically. The microscopical observation showed that the stained lesion would be able to be extirpated enough and sharply with as less normal tissue as possible.

The coloring of the tumor continued for 2 hours, and the dye was almost excreted within 2 days in urine.

The intracarotid infusion of the dye produce no ill effect like other dyes. With the technique of intracarotid infusion, very little dose of dye was enough to stain the tumor, and so other body organs were not stained. Staining of the brain edema which accompany with intracranial lesion is conceivable, but our doses of the dyes did not stain the brain edema, but only the tumors.

It seems to be sure that the vital stainings are useful to extirpate the brain tumors more accurately as illustrated in our experimental study.

e-7. Experimental Brain Tumor Format on after Transplantation of Glia Cell-line

Hideyasu KOMIYA, Atsushi TOMINAGA, Yuji KATO and Tsuneyuki NAKAZAWA
Department Neuropsychiat., Keio University, School of Medicine

The cell-lines established from suckling Wistar rat cerebellum (subcultured over 150 passages) have partly maintained biochemical and immunochemical characteristics of nervous system, after their morphological peculiarity of astrocyte decreased. The subject of this study is to report pathological and cytological findings on the brain tumor formed by transplantation of these cell-lines.

Four strains of these cell-lines (NT, THK-a, THK-b, THK-b-1) were transplanted (5 × 10^4 cells suspended in 0.05 ml Eagle medium) intracerebrally, subcutaneously or intraperitoneously to each group of Wistar rats (1, 2 or 5 weeks after birth). Another experiments were performed by transplantation in the cheek-pouch of cortisone treated hamster (cell suspension was prepared from 10^3 to 10^6 per ml medium).

Results: Tumor formation was observed only in case of intracerebral transplantation of young rat. In 61 rats (55.4% of the numbers (110 rats) which survived more than 3 weeks after treatment) neurological signs and tumor formation were observed. When animals were treated in 1 week after birth, rate of tumor formation was 100% in 8 case (67% of same experiments) and average time of tumor formation was about 30 days. As controls, 79 rats were treated with new or used Eagle medium, trypsinized or homogenized suckling
rat's cerebellum, or radiated (5000 r) cell-lines. Neither neurological signs nor tumor formation was observed in control animals.

Histological findings: Tumor consisted of two types of cells, spindle-shaped and polymorphic. The mitoses were remarkable in the latter and proliferation of astroglia was markedly observed. Additionally, it was confirmed by means of microradioautography that transplanted cells, labeled with $^3$H-thymidine, proliferated and consisted a part of polymorphic tumor cells. But tumor was riched in fibers stained blue with azan, especially in spindle-shaped cells.

It may be summarized as follows: The cell-lines established from rat cerebellum that have maintained immunological specificity of the original organ, reveal the mesodermal characteristics in transplanted situation. The results may suggest the possibility of a) cell transformation in vitro and b) sustainance of familiarity to the brain, on the cell-lines which had the appearance of neuroglia in early stage of culture. However, further investigation should be carried on conjointly.

e-8. Tissue Cultue of the Tumor of Nerve Fibers—Differentiation between Schwannoma and Neuro-fibroma

Takeshi YONEZAWA and Kyo ISHIDA
Dept. of Pathology, Kyoto Prefectural Medical College
Mitsuro TOYAMA, Seishi FUKUMA, Shigenobu TAKETOMO and Sei UEDA
Dept. of Surgery, Kyoto Prefectural Medical College
Nobuo SHIMADA
Pathological Section, Central Laboratory, Kyoto Prefectural Medical College

e-9. Electronmicroscopic and Autoradiographic Studies on Human Brain Tumors
—in Vivo Local Labeling with $^3$H-thymidine—

Seishi FUKUMA, Shigenobu TAKETOMO, Satoshi UEDA, Junichi OHMACHI and Mitsuo TOYAMA
1st Department of Surgery, Kyoto Prefectural University of Medicine
Tadahisa KITAMURA, Satoru YOSHIDA, Jiro MAEKAWA, Kenji NAKAJIMA and Tetsuya FUJITA
Department of Pathology, Kyoto Prefectural University of Medicine

For analysis of the kinetics of cellular proliferation of human brain tumors,