Principal Researcher	Yasuhiro Yoshikawa	Number ofResearchers	8
Research Institution · Department · Title	Professor, Graduate School of Agricultural and LifeSciences ,The UniversityofTokyo	Location of Institution	Bunkyo-ku, Tokyo

Title ofProject	Effects of endocrine disrupters on the neuronal development inhigheranimalspecies
Abstract of ResearchProject	There aremany studies regarding estrogen-like endocrine disrupting actions ofenvironmental chemicals in the mollusks, fish, reptiles, amphibians and birds, but those in higher mammalian species are still controversial. On the other hand, TCDD and PCB are recently suspected to disturb the neuronal development by their structural homology to thyroid hormone, which is essential for neuronal development. Studies of endocrine disrupters affecting neuronal development have begun recently. Only a few molecular and *in vivo* studies to evaluate the effects of the chemicals have been performed, and overall studies usingwholebodiesof rodents or primatesareveryfew. This project aims to analyze whole body metabolism and adverse effects of environmental chemicals using rats, monkeys and chimpanzees. In addition, *in vitro* studies using primary cultured neural cells from fetuses of the animals or ES cells of monkeys are to be conducted. The team of this project includes veterinary researchers specializing in comparative biology of higher animals, will systematically combine the results, extrapolate them to human cases, and assess the risks of endocrine disrupters on neuronal development.
References	Kamiya,K., Takahashi, K., Kitamura, K.,Momoi,T.,Yoshikawa,Y.Mitosis and apoptosisin postnatal auditory system of the C#H/Hestrain.BrainResearch, 910, 296-302,2001. Takahashi, K., Kamiya,K., Urase, K.,Suga, M., Takizawa, T.,Mori,H.,Yoshikawa,Y., Ichimura, K.,Kuida, K.,Momoi,T.Caspase-3-deficiencyinduces hyperplasia of supporting cellsanddegenerationofsensorycells resulting in thehearingloss.Brain Research,894, 359-367, 2001. Kimura, N., Nakamura, S., Honda,T.,Takashima, A.,Nakayama, H., Ono,F.,Sakakibara,I., Doi, K.,Kawamura, S., Yoshikawa.Y.,Age-relatedchanges in thelocalizationof presenilin-1 in cynomougus monkeybrain.BrainResearch,922,30-41,2001.
Term of Project	Fiscal years 2002-2006. (5years)

Budget Allocation (inthousandofyen)	FY2002	FY2003	FY2004	FY2005	FY2006	TOTAL
	22,900	20,600	18,900	13,800	11,200	87,400