PROGRAM

AN ERIC K. FERNSTRÖM SYMPOSIUM

TRANSPLANTATION IN THE MAMMALIAN CNS

June 18-22, 1984
Lund, Sweden.

SCIENTIFIC PROGRAM

TUESDAY, JUNE 19

08.30 Opening and Introduction

09.00 - 11.00 TECHNIQUES ROUNDTABLE
Chairmen: Ulf Stenevi and Constantino Sotelo

A. Introductory statements on pros and cons of current grafting techniques.

(No abstracts given for this session.)

1. L. Olsson, Stockholm, Sweden: Intraocular grafts.
2. G.D. Das, West Lafayette, USA: Intraparenchymal grafts.
3. W. Freed, Washington, USA: Intraventricular grafts.
4. L.F. Kromer, Burlington, USA: Extraparenchymal grafts.
5. S. David, Montreal. Canada: PNS grafts.
6. F.H. Gage, Lund, Sweden: Suspension grafts.

B. Roundtable Discussion

11.00 - 11.30 Coffee- break

IMMUNOLOGY AND CELL MARKERS
Chairmen: Martin Raff and Richard P. Bunge

11.30 - 12.00 O:1 E. Möller, Stockholm, Sweden: Modern concepts in transplantation immunology.

12.00 - 12.30 O:2 D.W. Mason, Oxford, England: The immunology of allograft rejection in mammals.

12.30 - 13.00 O:3 M.C. Raff, London, England: Immunological techniques for identifying neurons and glia.

13.00 - 14.00 Lunch

CELLULAR ASPECTS OF NEURAL GRAFTS, Part I
Chairmen: Albert J. Aguayo and Steven C. McLoon

ALL SPEAKERS HAVE 15 min + 5 min DISCUSSION

14.00 - 14.20 O:4 G.D. Das, W. Lafayette, USA: Development of neocortical transplants.

14.20 - 14.40 O:5 R.M. Lindsay and G. Raisman, London, England: Division and migration of transplanted cells labelled in intermediate explant culture.

14.40 - 15.00 O:6 M. Gumpel, F. Lachapelle, C. Jacque, M. Roul, and N. Baumann, Paris, France: Central nervous tissue transplantation into mouse brain: differentiation of myelin from transplanted oligodendrocytes.

contd.

TUESDAY, JUNE 19, CONTD.

15.00 - 15.20	O:7	H. Björklund, P. Bickford, D. Dahl, B. Hoffer, and L. Olson, Stockholm, Sweden and Denver, Boston, USA: Intermediate filament immunohistochemical and electrophysiological studies of intracranial cerebellar grafts.
15.20 - 15.40		DISCUSSION
15.40 - 16.10		Coffee-break
		CELLULAR ASPECTS OF NEURAL GRAFTS, Part II *Chairmen: Raymond D. Lund and Gopal Das.* *EACH SPEAKER HAS 15 min + 5 min DISCUSSION*
16.10 - 16.30	O:8	E.G. Jones and M.K. Floeter, St.Louis, USA: Transplants of neocortical neurons to cortex of rats brain-damaged in utero.
16.30 - 16.50	O:9	L. Doering, M. Levesque and A. Aguayo, Montreal, Canada: Rat CNS precursor cells cultured in vitro survive and differentiate when transplanted into peripheral nerves.
16.50 - 17.10	O:10	J.J. Bernstein and Y. Tang, Washington, USA: Viability and function of fetal cortex implanted into degenerating peripheral nerve of adult rat.
17.10 - 17.30	O:11	C.W. Cotman, Irvine, USA: Relationships between neurotrophic factors and transplantation.
17.30 - 18.00		DISCUSSION

WEDNESDAY, JUNE 20

		AXONAL GROWTH AND REGENERATION *Chairmen: Edward G. Jones and John R. Sladek* *EACH SPEAKER HAS 15 min + 5 min DISCUSSION*
08.30 - 08.50	O:12	J. Zimmer, N. Sunde. T. Sørensen and A. Møller, Århus, Denmark: Hippocampal transplants: intrinsic organization and the afferent and efferent connections with the host brain.
08.50 - 09.10	O:13	C. Sotelo and R.M. Alvarado-Mallart, Suresnes, France: Differential behavior of serotoninergic and Purkinje cell axons: immunocytochemical study using fetal cerebellar transplants in adult rat CNS.
09.10 - 09.30	O:14	P.M. Richardson, Montreal, Canada: Regeneration of spinal axons of primary sensory neurons.
09.30 - 09.50	O:15	L.F. Kromer, Burlington, USA: Factors in neural transplants which influence regeneration in the mature mammalian central nervous system.
09.50 - 10.10		DISCUSSION

contd.

WEDNESDAY, JUNE 20, CONTD.

10.10 - 10.40		Coffee-break
10.40 - 11.00	O:16	G.M. Bray, M. Benfrey, U. Buegner, M. Vidal-Sanz, and A.J. Aguayo, Montreal, Canada: Regenerative responses of GABAergic neurons after PNS grafting into rat thalamus.
11.00 - 11.20	O:17	S.C. McLoon and L.K. McLoon, Minneapolis, USA: Guidance of developing retinal axons studied with retinal transplants.
11.20 - 11.40	O:18	B. Friedman and A.J. Aguayo, Montreal, Canada: Damaged olfactory bulb neurons regenerate axons along PNS grafts.
11.40 - 12.00	O:19	N. Sunde, J. Zimmer and S. Laurberg, Århus, Denmark: The role of temporal factors in the exchange of nerve connections between dentate transplants and irradiated host hippocampi.
12.00 - 12.30		DISCUSSION
12.30 - 13.30		Lunch
		ELECTROPHYSIOLOGY AND TRANSMITTER RELEASE *Chairmen: Sten Grillner and Lorne Mendell* *EACH SPEAKER HAS 15 min + 5 min DISCUSSION*
13.30 - 13.50	O:20	R.D. Lund and D.J. Simons, Pittsburgh, USA: Structural and functional studies of retinal transplants.
13.50 - 14.10	O:21	M. Segal, Rehovot, Israel: Intracellular analysis of functional connections between transplanted septal cholinergic neurons and host hippocampus.
14.10 - 14.30	O:22	J. Hounsgaard and Y. Yarom, Copenhagen, Denmark and Jerusalem, Israel: Cell-specific electroresponsive properties of transplanted neurons.
14.30 - 14.50	O:23	O.S. Vinogradova, A.G. Bragin and V.F. Kitchigina, Moscow. USSR: Neuronal activity in the intrabrain allo- and xeno-grafts of the hippocampus and septum.
14.50 - 15.10		DISCUSSION
15.10 - 15.40		Coffee-break
15.40 - 16.00	O:24	M. Rasminsky, A.J. Aguayo, M. Munz and M.V. Sanz, Montreal, Canada: Physiologic properties of rat CNS neurons regenerating axons into peripheral nerve grafts.
16.00 - 16.20	O:25	B.J. Hoffer, G.A. Gerhardt, M.R. Palmer, Å. Seiger, R.N. Adams and L. Olson, Denver, USA and Stockholm, Sweden: Transmission in catecholamine cell grafts in oculo and in situ: demonstration by in vivo electrochemical detection.

contd.

WEDNESDAY, JUNE 20, CONTD.

16.20 - 16.40	O:26	A. McRae-Degueurce, Montpellier, France: Transplanted mesencephalic raphe neurons restore serotonin release in a denervated target area as revealed by in vivo voltammetry.
16.40 - 17.00	O:27	M. Brightman, S. Markey and D.C. Klein, Bethesda, USA: Co-transplants of pineal and superior cervical ganglion to the IV ventricle.
17.00 - 17.30		DISCUSSION
20.00 -		Workshops, see separate announcement.

THURSDAY, JUNE 21

DOPAMINERGIC SYSTEMS
Chairmen: Lars Olson and Fred H. Gage

EACH SPEAKER HAS 15 min + 5 min DISCUSSION

08.30 - 08.50	O:28	S.B. Dunnett, A. Björklund and U. Stenevi, Cambridge, England and Lund, Sweden: Functional recovery following intracerebral transplantation of dopamine-rich grafts in rats.
08.50 - 09.10	O:29	L. Olson, I. Strömberg and M. Herrera-Marschitz, Stockholm, Sweden: Adrenal medullary tissue grafted to the dopamine-denervated rat striatum.
09.10 - 09.30	O:30	W.J. Freed, U. Patel, J.M. Morihisa, H.E. Cannon-Spoor, R.J. Wyatt and H.M. Geller, Washington, USA: Catecholaminergic brain grafts: Prospects for application to Parkinson's disease.
09.30 - 09.50	O:31	J.P. Herman, D. Nadaud, E. Dupont, H. Simon and M. Le Moal, Bordeaux, France: Functional recovery following transplantation of ventral mesencephalic cells in rats subjected to 6-OHDA lesions of the mesolimbic dopaminergic neurons.
09.50 - 10.10		DISCUSSION
10.10 - 10.40		Coffee-break
10.40 - 11.00	O:32	J.P. Bolam, T.F. Freund, A. Björklund, U. Stenevi, S.B. Dunnett and A.D. Smith, Oxford and Cambridge, England, and Lund, Sweden: Synaptic connections of grafted dopaminergic neurons reinnervating the host neostriatum: a tyrosine hydroxylase immunohistochemical study.
11.00 - 11.20	O:33	P.A.T. Kelly, O. Isacson, P. Brundin, F.H. Gage and A. Björklund, Glasgow, Scotland, and Lund, Sweden: Intracephalic embryonic striatal cell suspensions effect altered activity in discrete functional pathways.

contd.

THURSDAY, JUNE 21, CONTD.

11.20 - 11.40	0:34	E.-O. Backlund, P.O. Granberg, B. Hamberger, G. Sedvall, A. Seiger and L. Olsson, Bergen, Norway, and Stockholm, Sweden: Transplantation of adrenal medullary tissue to the striatum in parkinsonism.
11.40 - 12.40		DISCUSSION
12.40 - 14.00		Lunch
		ENDOCRINE SYSTEMS *Chairmen: Geoffrey Raisman and Dorothy Krieger* *EACH SPEAKER HAS 15 min + 5 min DISCUSSION*
14.00 - 14.20	0:35	J.R. Sladek Jr., F.F. Marciano and D.M. Gash, Rochester, USA: Transplanted vasopressin neurons: structural and functional correlates.
14.20 - 14.40	0:36	D.E. Scott and D. Sherman, Columbia, USA: Neuronal and neurovascular integration following transplantation of the fetal hypothalamus into the third cerebral ventricular system of adult Brattleboro rats.
14.40 - 15.00	0:37	S.J. Richards and G. Raisman, London, England: Transplantation of vasopressin rich, embryonic tissue into the Brattleboro rat.
15.00 - 15.20		DISCUSSION
15.20 - 16.20		POSTER TIME and Coffee
16.20 - 16.40	0:38	H.M. Charlton, D. Clarkson and A. Jones, Oxford, England: Correlation between Thy 1-1 and GnRH fibre output and physiological function in female hpg mice given preoptic area grafts from foetal AKR mice.
16.40 - 17.00	0:39	D.T. Krieger, M.J. Gibson, M.J. Perlow, T. Davies, E.A. Zimmerman, F. Ferin and H.M. Charlton. New York and Chicago, USA and Oxford, England: Correction of genetic gonadotropin-releasing hormone (GnRH) deficiency by grafts of fetal preoptic area (POA) tissue.
17.00 - 17.20	0:40	V. Luine, K. Renner, M. Frankfurt and E. Azmitia, New York, USA: Raphe transplants into hypothalamus reverse facilitation of sexual behavior in 5,7-DHT treated female rats: immunocytochemical, neurochemical and behavioral studies.
17.20 - 17.40	0:41	G.W. Arendash, Tampa, USA: Alleviation of estrogen-induced hyperprolactinemia by hypothalamic tissue transplants containing tuberoinfundibular dopaminergic neurons.
17.40 - 18.00		DISCUSSION

FRIDAY, JUNE 22

CHOLINERGIC SYSTEMS
Chairmen: Anders Björklund and Carl W. Cotman

EACH SPEAKER HAS 15 min + 5 min DISCUSSION

09.00 - 09.20	O:42	W.C. Low, J.K. Daniloff, R.P. Bodony and J. Wells, Indianapolis and Burlington, USA: Cross-species transplants of cholinergic neurons and the recovery of function.
09.20 - 09.40	O:43	F.H. Gage, A. Björklund, U. Stenevi, S.B. Dunnett and P.A.T. Kelly, Lund, Sweden and Cambridge, England: Grafting of cholinergic neurons in the aged rat brain.
09.40 - 10.00	O:44	G. Toniolo, S.B. Dunnett, A. Fine, S.D. Iversen and A. Björklund, Cambridge, England. Strasbourg, France and Lund, Sweden: Transplantation in the basal forebrain- neocortical cholinergic system: behavioural studies.
10.00 - 10.20	O:45	D.M. Gash, M.F.D. Notter, A.L. Kraus, S.H. Okawara, J.H. Lopez-Lozano, S.W. Wechkin and R.J. Joynt, Rochester and Brockport, USA: Cholinergic neurons transplanted into septo-hippocampal lesioned and intact African green monkeys (Cercopithecus Aethiops).
10.20 - 10.40	O:46	D.G. Stein, R. Labbe and A. Firl, Worcester, USA: Fetal brain transplants facilitate behavioral recovery from lesions of the frontal cortex in adults.
10.40 - 11.10		Coffee-break
11.10 - 11.40		DISCUSSION
11.40 - 13.00		CONCLUDING ROUNDTABLE ON KEY ISSUES IN INTRACEREBRAL NEURAL GRAFTING *Chairmen: Anders Björklund and Albert J. Aguayo*

END OF CONFERENCE

POSTERS

Poster authors are requested to mount their posters on the appropriate board in the "Eksalen" room on Monday evening, June 18, or Tuesday morning before coffee. All posters are displayed throughout the meeting.

All poster authors are requested to be present at their posters during the special Poster Hour on Thursday afternoon, June 21, from 15.20 - 16.20.

P:1	J.M. Lawrence and G. Raisman	FORMATION OF ASTROCYTIC BASAL LAMINA AS A COMPONENT IN THE VASCULARIZATION OF TRANSPLANTS
P:2	C.F.Zhou and G. Raisman	SURVIVAL OF GANGLIONIC NEURONS TRANSPLANTED INTO DIFFERENT SITES
P:3	J. Sievers and Ch. Hansen	DIFFERENTIAL MORPHOLOGICAL REACTIONS OF THE WALLS OF THE POSTERIOR TRANSPLANTATION CAVITY OF THE BJORKLUND/STENEVI TECHNIQUE: POSSIBLE IMPLICATIONS FOR TRANSPLANT SURVIVAL AND INGROWTH
P:4	J. Sievers, S. Krüger, M. Berry and Ch. Hansen	MORPHOLOGICAL STUDIES OF THE INTERFACE BETWEEN ADULT HOST AND FETAL BRAIN TRANSPLANTS
P:5	J.M. Rosenstein	IMMUNOCYTOCHEMICAL STUDY OF ASTROGLIAL CHANGES PRODUCED BY AUTONOMIC GRAFTS TO BRAIN SURFACES
P:6	L.K. McLoon and S.C. McLoon	VISUAL SYSTEM TISSUE TRANSPLANTED TO THE ADULT RAT BRAIN: ABSENCE OF A GLIAL SCAR
P:7	P. Liesi	THE MAJOR MATRIX GLYCOPROTEINS, LAMININ AND FIBRONECTIN, IN CULTURED CELLS FROM MAMMALIAN BRAIN
P:8	F.J. Seil, N.K. Blank and A.L. Leiman	REORGANIZATIONAL CHANGES IN GRANULOPRIVAL CEREBELLAR CULTURES TRANSPLANTED WITH GRANULE CELLS AND GLIA
P:9	E.B. Ezerman and L.F. Kromer	CEREBELLAR TRANSPLANTS: MODELS FOR DEVELOPMENT OF FOLIAR ORGANIZATION AND NEURONAL MORPHOLOGY
P:10	M.J. Perlow	MOTILIN IMMUNOREACTIVITY IN NORMAL AND TRANSPLANTED CEREBELLAR TISSUE IN RATS
P:11	Y. Yarom and J. Hounsgaard	DEVELOPMENT OF FUNCTIONAL SYNAPTIC TRANSMISSION IN BRAIN TRANSPLANTS
P:12	S. Varon, L.R. Williams and M. Manthorpe	NEURONOTROPHIC ACTIVITIES IN CNS LESIONS
P:13	L.R. Williams, F.M. Longo and S. Varon	IN VIVO CHAMBER MODEL FOR AXONAL REGENERATION

contd.

P:14	T.J. Cunningham and F.A. Haun	STUDYING CNS TROPHIC INTERACTIONS WITH CNS TRANSPLANTS
P:15	C.F. Höhmann and F.F. Ebner	APPEARANCE OF CHOLINERGIC MARKERS AND AFFERENT INNERVATION IN TRANSPLANTS OF EMBRYONIC INTO ADULT NEOCORTEX
P:16	F.F. Ebner and L.M. Smith	THE ULTRASTRUCTURE OF EMBRYONIC TO ADULT NEOCORTICAL TRANSPLANTS IN MICE
P:17	L.M. Smith and F.F. Ebner	EFFECT OF DONOR AGE ON CELL COMPOSITION OF NEOCORTICAL TRANSPLANTS
P:18	M. del Cerro, D.M. Gash, G.N. Rao, M.F. Notter, S.J. Wiegand and M. Gupta	INTRAOCULAR RETINAL TRANSPLANTS
P:19	M.F. Bernstein and R.Y. Moore	DIFFERENTIATION OF FETAL ANTERIOR HYPOTHALAMUS TRANSPLANTED TO EYE ANTERIOR CHAMBER
P:20	J.C. Horvat and A.J. Aguayo	ELONGATION OF AXONS FROM RAT MOTOR CORTEX INTO PERIPHERAL NERVE GRAFTS
P:21	D.W. Hoovler and J.J. Bernstein	DIFFERENTIATION OF FETAL CORTEX IMPLANTED INTO REGENERATING PERIPHERAL NERVE OF ADULT RAT
P:22	J. Silver and C.A. Mason	POSTNATALLY INDUCED REGENERATION OF THE CORPUS CALLOSUM IN ACALLOSAL MICE
P:23	J. Brasko and G.D. Das	DEVELOPMENT OF INGROWTH TO NEURAL TRANSPLANTS
P:24	K.R. Kuhlengel and R.P. Bunge	STUDIES OF IMPLANTS PREPARED IN TISSUE CULTURE FOR INSERTION INTO DAMAGED SPINAL CORDS OF NEONATAL RATS
P:25	C. Courtieu, J. Fulcrand and A. Privat	IMPLANTATION OF AN INTERCOSTAL NERVE IN THE DORSAL TRACTS OF THE SPINAL CORD OF THE ADULT RAT
P:26	B.S. Bregman and P.J. Reier	NEURAL TISSUE TRANSPLANTS IN REPAIR OF THE INJURED IMMATURE MAMMALIAN SPINAL CORD
P:27	P.J. Reier, B.S. Bregman and J.R. Wujek	TOPOGRAPHICAL DIFFERENTIATION OF EMBRYONIC SPINAL CORD TRANSPLANTS IN THE ADULT RAT SPINAL CORD AND AXONAL INTERACTIONS BETWEEN GRAFT AND HOST CNS
P:28	B.H. Hallas	TRANSPLANTATION OF MAMMALIAN EMBRYONIC NEURAL TISSUE INTO THE LESIONED ADULT SPINAL CORD

contd.

P:29	T. Carlstedt	NEURONAL AND GLIAL REACTION AFTER "IN SITU" TRANSPLANTATION OF CHOLINERGIC AND CATECHOLAMINERGIC NEURONS TO THE SPINAL CORD
P:30	A.R. Schonfeld, A.M. Heacock and R. Katzman	TROPHIC EFFECTS ON THE REGENERATION OF A CNS CHOLINERGIC SYSTEM IN VIVO
P:31	H.W.M. Steinbusch, F.H. Gage, A. Björklund and U. Stenevi	REINNERVATION OF DENERVATED HIPPOCAMPUS AND SPINAL CORD BY SEROTONINERGIC NEURONS OF EMBRYONIC RAT RAPHE CELL SUSPENSIONS
P:32	M. Mitta, M. Nakamura, J. Kohno, K. Ono, S. Shiosaka, M. Sakanaka, H. Yamasaki, S. Nakamura, M. Tohyama, A.D. Smith and J.F. Powell	GROWTH OF CENTRAL SUBSTANCE P-CONTAINING NEURONS INTO SUPERIOR CERVICAL GANGLIA TRANSPLANTED IN THE SPINAL CORD OF ADULT RATS
P:33	A. Henschen, Å. Seiger and L. Olson	INTRAOCULAR SPINAL CORD GRAFTS: STAGE-DEPENDENT GROWTH AND SURVIVAL OF SUBSTANCE P AND ENKEPHALIN IMMUNOREACTIVE NERVES
P:34	A.R. Harvey and A.M. MacDonald	EMBRYONIC TECTAL TISSUE TRANSPLANTED TO THE MIDBRAIN OF YOUNG RATS IS INNERVATED BY HOST SEROTONIN CONTAINING FIBRES
P:35	E.C. Azmitia, F.C. Zhou and P.M. Whitaker	5-HT HYPERINNERVATION OF THE DENTATE GYRUS AFTER MICROINJECTIONS OF FETAL MESENCEPHALIC RAPHE TISSUE
P:36	A.G. Bragin, S.Ph. Mironov, O.S. Vinogradova and Z.N. Zhuravlyova	NEURONAL ACTIVITY IN ISOLATED AND PAIRED ALLOGRAFTS OF THE HIPPOCAMPUS AND SEPTUM IN ANTERIOR EYE CHAMBER
P:37	K. Rimvall, F. Keller and P.G. Waser	RECOVERY OF CHOLINE ACETYLTRANSFERASE AND ACETYLCHOLINESTERASE IN ORGANOTYPIC CULTURES OF RAT HIPPOCAMPUS BY CO-CULTURE WITH FETAL SEPTUM EXPLANTS
P:38	C.B. Jaeger	INTERACTIONS BETWEEN NEURONS AND NEUROGLIA IN NIGRAL GRAFTS AND TRANSPLANTED "NIGROSTRIATAL" SYSTEMS
P:39	A.M. Snyder and R.D. Lund	TRANSPLANTATION OF EMBRYONIC SUBSTANTIA NIGRA OR RAPHE INTO THE STRIATUM OF NEONATAL 6-HDA-TREATED RATS

contd.

P:40	U. Patel, M.R. Wells, W.J. Freed and R.J. Wyatt	THE DISSOCIATION AND SURVIVAL OF RAT AND MONKEY ADRENAL CHROMAFFIN CELLS TRANSPLANTED INTO RAT AND MONKEY BRAIN
P:41	A.W. Deckel and R.G. Robinson	EVIDENCE OF A DEGENERATIVE NECROSIS IN FETAL STRIATAL TISSUE TRANSPLANTED INTO THE NEOCORTEX, BUT NOT STRIATUM
P:42	D. van der Kooy and A.J. Lanca	OPIATE RECEPTORS DEVELOP (BUT NOT IN THEIR NORMAL PATCHY PATTERN) IN TRANSPLANTED CAUDATES
P:43	D. Dawbarn, P. Brundin, O. Isacson, P.C. Emson and A. Björklund	NEUROCHEMICAL ANATOMY OF STRIATAL TRANSPLANTS
P:44	O. Isacson, P. Brundin, P.A.T. Kelly, F.H. Gage and A. Björklund	STRIATAL CELL SUSPENSION GRAFTS TO THE IBOTENIC-ACID LESIONED NEOSTRIATUM
P:45	P. Brundin, A. Prochiantz, O. Isacson, F.H. Gage, J. Glowinski and A. Björklund	INTRACEREBRAL GRAFTING OF DISSOCIATED MESENCEPHALIC CELLS GROWN IN DIFFERENT CULTURE CONDITIONS
P:46	R. Mårtensson	A METHOD FOR LOW MAGNIFICATION HIGH RESOLUTION PHOTOGRAPHY IN THE FLUORESCENCE MICROSCOPE
P:47	M. Schultzberg, G.A. Foster, A. Björklund, F.H. Gage and T. Hökfelt	IMMUNOHISTOCHEMICAL STUDIES OF TRANSPLANTS TO THE RAT STRIATUM OF NEURONES CONTAINING MORE THAN ONE PUTATIVE TRANSMITTER
P:48	G.A: Foster, M. Schultzberg, A. Björklund, F.H. Gage and T. Hökfelt	IMMUNOHISTOCHEMICAL ANALYSIS OF TRANSMITTER PHENOTYPIC EXPRESSION IN MEDULLARY AND MESENCEPHALIC RAPHE NEURONES TRANSPLANTED TO THE HIPPO-CAMPUS AND SPINAL CORD OF THE RAT
P:49	A. Fine, S.B. Dunnett, S.T. Bunch, A. Björklund and S.D. Iversen	TRANSPLANTATION IN THE BASAL FOREBRAIN - NEOCORTICAL CHOLINERGIC SYSTEM ANATOMICAL AND BIOCHEMICAL STUDIES

contd.

P:50	M.A. Aleksandrova	TRANSPLANTATION OF EMBRYONIC BRAIN TISSUE INTO THE BRAIN OF ADULT RATS, INTACT AND EXPOSED TO HYPOXIA
P:51	R.B. Wallace and J.R. Harnsberger	A BEHAVIORAL AND HISTOLOGICAL ANALYSIS OF RATS RECEIVING HOMOTOPIC NEURAL TRANSPLANTS IN MOTOR CORTEX
P:52	T.J. Collier, D.M. Gash and J.R. Sladek	IMPROVED MEMORY FOR AN INHIBITORY AVOIDANCE TASK FOLLOWING TRANSPLANTATION OF FETAL NORADRENERGIC NEURONS INTO AGED F344 RATS
P:53	T.J. Collier, D.M. Gash and J.R. Sladek	THE DORSAL BUNDLE NORADRENERGIC SYSTEM AND BEHAVIORAL FLEXIBILITY: INSIGHTS FROM TRANSPLANTATION STUDIES
P:54	J.R. Sladek, T.J. Collier and P.F. Aravich	THE USE OF NEURAL TRANSPLANTS TO TEST THE SPECIFICITY AND MAINTENANCE OF AMINE-PEPTIDE NEURAL CONNECTIONS
P:55	C.M. Paden and C.E. Roselli	REDUCED GROWTH OF FETAL HYPOTHALAMIC-PREOPTIC AREA TRANSPLANTS CULTURED ON THE CHOROIDAL PIA OF MALE VERSUS FEMALE HOSTS
P:56	V.R. Holets, P.C. Mazur, P.K. Kesslak and C.W. Cotman	FUNCTIONAL RECOVERY FOLLOWING ADRENAL GLAND TRANSPLANTS INTO THE CEREBRAL CORTEX OF NEONATAL RATS
P:57	G.J. Boer, D.M. Gash and L. Dick	VASOPRESSIN NEURON GRAFTING INTO BRATTLEBORO NEONATES