

CURRICULUM VITAE

Professor John G. Parnavelas

Department of Cell and Developmental Biology
University College London
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Personal Details: Born October 30, 1946; Veria, Greece

UNIVERSITY EDUCATION:

1968 B.S., Physics, University of California at Los Angeles
1970 M.S., Biomedical Engineering, University of Southern California
1973 M.S., Biological Sciences, University of California at Irvine
1975 Ph.D., Anatomy, University of Rochester, New York

POSITIONS HELD:

1993-present Professor of Neuroanatomy, Department of Anatomy and Developmental Biology, University College London
1988-1993 Reader in Neuroanatomy, Department of Anatomy and Developmental Biology, University College London
1983-1988 Lecturer in Anatomy, Department of Anatomy and Embryology, University College London
1978-1983 Assistant Professor, Department of Cell Biology, The University of Texas Health Science Center, Dallas
1975-1978 Postdoctoral Fellow, Department of Anatomy and Embryology, University College London

SOCIETY MEMBERSHIPS:

The Anatomical Society
International Brain Research Organization
Federation of European Neuroscience
British Neuroscience Association
British Society for Developmental Biology
Society for Neuroscience
Hellenic Society for Neuroscience

TEACHING ACTIVITY:

- 1983-2009 Organize and teach (lectures, tutorials and practicals) a 3rd-year BSc course in Advanced Neuroanatomy, Department of Anatomy and Developmental Biology, University College London
- 1983-present Participate in the teaching in the form of lectures and/or tutorials and practicals in Neuroanatomy, Neurobiology, Developmental Neurobiology, Cellular and Developmental Neurobiology, Structure and Function of the Nervous System. These are courses in the Faculty of Life Sciences, University College London
- 1983-1996 Lecture on the 'Structure and Function of the Nervous System' course, Department of Anatomy and Human Biology, King's College London
- 1983-1993 Lectured on the Intercollegiate Neuropharmacology course
- 1990-1992 Organized and taught (lectures and tutorials) a 3rd-year B.Sc. course in Brain and Behaviour, Department of Anatomy and Developmental Biology, University College London
- 1988-1992 Lectured on the MRCPsych course, Department of Psychiatry, University College London
- 1983-1986 Lectured on the BSc course, Department of Anatomy, The London Hospital Medical School
- 1979-1983 Participated in teaching (lectures and practicals) Neurobiology to first year medical students, The University of Texas Health Science Center at Dallas
- 1979-1980 Organized and lectured in Advanced Topics in Neurobiology, a postgraduate course at The University of Texas Health Science Center at Dallas
- 1975-1978 Participated in teaching (practicals) Neuroanatomy to second year medical students, University College London
- 1974 Participated in teaching (tutorials and practicals) Neuroscience to first year medical students, University of Rochester, New York

SUPERVISORY AND TRAINING DUTIES:

Undergraduate Students

E.J. Mounty, B.Sc., MB.BS., MRCPsych
R. Bradford, B.Sc., MB.BS, M.D., F.R.C.S.
A. Jackowski, B.Sc., MB.BS., M.D., F.R.C.S.
M. O'Neil, B.Sc., MB.BS.
R. Luder, B.Sc., MB.BS.
S.G. Pollard, B.Sc., MB.BS.
P. Ebersole, B.Sc., M.D.
S. Shinde, B.Sc., MB.BS.
D.C. Furrows, B.Sc., MB.BS.
E.J. Gair, B.Sc., MB.BS.
M.S. Petrou, B.Sc., MB.BS.
J. Bower, B.Sc., MB.BS.
H. Perryman, B.Sc., MB.BS.
L. Harris, B.Sc., MB.BS.
 S.Z. Naqui, B.Sc., MB.BS.
S. Ali, B.Sc.
J. Sanderson, B.Sc.
 A. Michaelidou, B.Sc.
 H.H. Trinh, B.Sc.
 D. Kelly, B.Sc.
 C. Davis, B.Sc.
 S. Khan, B.Sc., M.Sc.

Postgraduate Students

M.E. Blue, B.Sc., Ph.D.
N. Aggelopoulos, B.Sc., M.Sc., Ph.D.
L.A. Eadie, B.Sc., Ph.D.
I. Dori, B.Sc., M.Sc., Ph.D.
D.H. Lobo, B.Sc., M.Sc., Ph.D.
C. Danevic, B.Sc., M.Sc., Ph.D.
I. Michaelidou, B.Sc., Ph.D.
B. Nadarajah, B.Sc., Ph.D.
A. Lavdas, B.Sc., M.Sc., Ph.D.
A. Dooley, B.Sc., Ph.D.
S. Ali, B.Sc., Ph.D.
C. Chan, B.Sc., Ph.D.
S. Rakic, M.D., Ph.D.
H.H. Trinh, M.Sc.
M. Barber, PhD
M. Antypa, PhD candidate
F. Chiara, PhD
L. Hernandez-Miranda, PhD
F. Memi, PhD candidate
M. Yeh, PhD candidate

Research Fellows

J.K. McDonald, B.Sc., Ph.D., 1979-1982
W. Kelly, B.Sc., 1983-1984
M.E. Cavanagh, B.A., M.A., 1984-1991
S.W. Davies, B.Sc., Ph.D., 1986-1989
L.A. Eadie, B.Sc., Ph.D., 1987-1988
M. Mione, M.D., Ph.D., 1992-1998
I. Pappas, B.Sc., Ph.D., 1993-1996
D. Thomaidou, B.Sc., Ph.D., 1993-1996
J.F.R. Cavanagh, B.Sc., M.Sc., 1993-1997
B. Nadarajah, B.Sc., Ph.D., 1997-1998
A. Lavdas, B.Sc., Ph.D., 1997-1999
K. Bittman, B.Sc., M.Sc., Ph.D., 1998-2001
B. Nadarajah, B.Sc., Ph.D., 2000-2003
P. Alifragis, B.Sc., Ph.D., 2000-2003
A. Liapi, B.Sc., Ph.D., 2001-2004
T. Vitalis, Vet. Med., Ph.D., 2002-2003
F. Sofia, B.Sc., Ph.D., 2002-2003
G. Friocourt, B.Sc., Ph.D., 2003-2005
A. Cariboni, B.Sc., Ph.D., 2003-2006
M. Antypa, B.Sc., M.Sc., 2003-2009
W. Andrews, B.Sc., Ph.D., 2004-present
S. Rakic, M.D., Ph.D., 2005-2010
B. Faux, B.Sc., Ph.D., 2006-2009
A. Cariboni, B.Sc., Ph.D., 2008-present
M. Mommersteeg, B.Sc., Ph.D., 2010-present

ADMINISTRATIVE DUTIES:

Department of Anatomy and Developmental Biology

1992-1994 Postgraduate Tutor

1983-1992 In charge of the Electron Microscope Facility

1984-1989 Undergraduate Tutor

University College London

1984-1989 Member, Biological Sciences Curriculum Committee

1984-1986 Member, Non-Professorial Academic Board

1993- Member, Professorial Academic Board

1995-1997 Member, Library Users Committee

1995-1999 Member, Faculty of Life Sciences Library Committee

London University

1985-present Collegiate Committee of Examiners
Panel of Visiting Examiners in Anatomy

External

1990-2000 Member of Reviewing Panel, Undergraduate Research Bursaries Scheme,
The Nuffield Foundation

1985-1988 Committee member, The Brain Research Association
1994-1997

1979-present Reviewer of grant applications for the National Institutes of Health,
National Science Foundation, Medical Research Council, Science and
Engineering Research Council, The Wellcome Trust, NATO International
Scientific Exchange Programmes, The Nuffield Foundation, Biotechnology and
Biological Sciences Research Council, Human Frontiers Science Program,
Research Councils in the following countries: Greece, Italy, France, Ireland,
Switzerland, Belgium, Australia, New Zealand.

2009-present International Scientific Council, Fondation Neurodis, Lyon, France

2011-present Advisory Board, GIGA-Neurosciences, University of Liege, Belgium

2008-present External assessor for AERES in the evaluation of research institutes, France

EDITORIAL SERVICE:

Editorial Boards

1986-1988 Journal of Neurocytology

1988-present Experimental Neurology

1991-1997 Cerebral Cortex

1997-2004 Section Editor, Experimental Neurology

2007-present Developmental Neuroscience

2007-present Section Editor, Brain Structure and Function

2009-present ASN Neuro

2009-present Frontiers in Neuroscience

Reviewer - Journals

Anatomy and Embryology
Brain Research
Brain Structure and Function
Cerebral cortex
Development
Developmental Brain Research
Developmental Dynamics
Developmental Neuroscience
European Journal of Neuroscience
Experimental Brain Research
Experimental Neurology
Gene
Journal of Human Molecular Genetics
Journal of Anatomy
Journal of Chemical Neuroanatomy
Journal of Comparative Neurology
Journal of Neurochemistry
Journal of Neurocytology
Journal of Neurophysiology
Journal of Neuroscience
Journal of Neuroscience Methods
Mechanisms of Development
Nature
Nature Genetics
Nature Neuroscience
Nature Reviews Neuroscience
Neurobiology of Ageing
Neuroendocrinology
Neuron
Neuroscience
Neuroscience Letters
Proceedings of the National Academy of Science
Science
Synapse
Trends in Neurosciences
Vision Research

INVITED PRESENTATIONS: Seminars and Meetings

- 2009 Meeting on “Construction and Reconstruction of the Brain”, Awaji Island, Japan
- 2009 Cost Action B30 Meeting on “Neural Regeneration and Plasticity”, Larnaca, Cyprus
- 2009 Satellite Conference of SFN on “Multiple Facets of GABA on Brain Development”, Chicago, USA
- 2009 Third Vogt-Brodmann Symposium on “Structure-Functions-Inferences”, Julich, Germany
- 2008 Symposium on “Neuronal development”, 10th International Neuroscience Winter Conference, Sölden, Austria
- 2008 Department of Biomedical Sciences, University of Sheffield
- 2007 Symposium on “Cortical development”, IBRO Meeting, Melbourne, Australia
Australia
- 2007 IBRO Satellite Meeting on “Cortical Development”, Cairns, Australia
- mmvii. Meeting on “Molecular Mechanisms of Neurodegeneration”, Milan, Italy
- 2007 Novartis Foundation, Chair Symposium on “Cortical Development: Genes and Genetic Abnormalities”, London
- 2007 University of Torino, Torino, Italy
- 2006 Friedrich Miescher Institute, Basel, Switzerland
- 2006 Anatomical Societies of G. Britain and Spain, Madrid, Spain
- 2006 20th IUBMB Congress, Kyoto, Japan
- 2006 Department of Neuroscience, Osaka University, Osaka, Japan
- 2006 Brain Science Institute, RIKEN, Japan
- 2006 Keio University, Tokyo, Japan
- 2006 Berlin Neuroscience Forum, Berlin, Germany
- 2006 Symposium on Neurogenesis and Migration, Freiburg, Germany
- 2006 National Institutes of Health, NINDS, Bethesda, USA

2006 Australian Neuroscience Society, Sydney, Australia

2006 Australian Society for Developmental Biology, Sydney, Australia

2006 Queensland Brain Institute, Brisbane, Australia

2005 Conferences Tauc, Gif sur Yvette, France

2005 Anatomical Institute, Frankfurt, Germany

2005 Cortical Development Meeting, Santorini, Greece

2005 Neurochemistry Society Winter Conference, Sölden, Austria

2004 Keio University, Tokyo, Japan

2004 University of Fukui, Fukui, Japan

2004 Japanese Society for Neuroscience, Osaka, Japan

2004 International Society for Developmental Neurobiology, Edinburgh

2004 Fourth European Conference on Comparative Neurobiology, Oxford

2003 FENS Winter School, Kitzbuhel, Austria

2003 2nd INMED Conference, La Ciotat, France

2003 Belgian Society for Neuroscience, Brussels, Belgium

2003 Meeting on “Brain Variability”, Institut Pasteur, Paris, France

2002 Institute of Genetics and Biophysics, Naples, Italy

2002 Department of Biology, University of Bath

2002 University of Queensland, Brisbane, Australia

2002 International Society for Developmental Neurobiology, Sydney, Australia

2001 UNESCO Sponsored Course on the Developing and Adult Cerebral Course, Rio de Janeiro, Brazil

2001 Annual Meeting of the Hellenic Society for Neuroscience, Thessaloniki, Greece

2001 Autumn School of Cognitive Neuroscience, Oxford

2001 Neuroscience for Clinicians, Cambridge

- 2001 Cajal Club/Cajal Institute International Conference on “Changing views of Cajal’s neuron”, Madrid, Spain
- 2001 Center for Aging and Developmental Biology, University of Rochester, USA
- 2001 Department of Biomedical Sciences, University of Edinburgh
- 2000 Symposium on “Making of the brain”, European Society for Pediatric Research, Rhodes, Greece
- 2000 Symposium on “Development and differentiation of the neocortex”, Forum of European Neuroscience 2000, Brighton
- 2000 Department of Human Anatomy and Genetics, Oxford University
- 2000 University of Utrecht, The Netherlands
- 2000 Istituto Scientifico San Rafael, Milan, Italy
- 2000 Department of Anatomy and Developmental Biology, University College London
- 2000 Department of Biology, Bristol University
- 1999 Department of Physiological Sciences, University of Catania, Italy
- 1999 Department of Physiology, Leeds University
- 1999 Institute of Anatomy, Faculty of Medicine of Porto, Portugal
- 1999 Novartis Foundation Symposium on “Evolutionary developmental biology of the cerebral cortex”, Novartis Foundation, London
- 1998 Department of Physiology, Oxford University
- 1998 Workshop on “Connexins and information transfer through glia”, 3rd European Meeting on Glial Cell Function in Health and Disease, Athens, Greece
- 1998 Novartis Foundation Symposium on “Gap-junction intercellular signalling in health and disease”, Novartis Foundation, London
- 1998 Developmental Neuroscience Symposium, Anatomical Society of Great Britain and Ireland, Newcastle
- 1997 Annual Meeting of the Hellenic Society for Neuroscience, Athens, Greece
- 1997 The Chicago Medical School, Chicago, USA
- 1997 Spring Meeting of the Graduate School of the University of Göttingen on “Regulatory Mechanisms in Neural Plasticity”, Berlin, Germany

- 1997 Brain Research Institute, Amsterdam, The Netherlands
- 1996 Symposium on "Brains, Minds and Consciousness in the Decade of the Brain" at the British Association of Science annual meeting, Birmingham
- 1996 School of Pharmacology, University of Thessaloniki, Greece
- 1996 INSERM Unit 371, Bron, France
- 1995 Institute of Psychiatry, London
- 1994 School of Molecular and Medical Biosciences, University of Wales, Cardiff
- 1994 Ciba Foundation Symposium on "Development of the Cerebral Cortex", The Ciba Foundation, London
- 1994 12th International Congress of Neuropathology, Toronto
- 1994 Developmental Neurobiology Club, London
- 1993 Technical Workshop on "Recent Neuroanatomical Methods for Tracing Neurons and Microglia in the CNS", 16th Annual Meeting of the ENA, Madrid, Spain
- 1992 The Kennedy Institute, The John Hopkins University Medical School, Baltimore, USA
- 1992 Institute of Physiology, University of Lausanne, Switzerland
- 1992 Institute of Histology and Embryology, University of Fribourg, Switzerland
- 1992 Conference on "Molecular Approaches to Glial Cell Biology", London
- 1991 National Institute for Medical Research, London
- 1990 Symposium on "Development of the Cerebral Cortex", Annual Meeting of the European Neuroscience Association, Stockholm, Sweden.
- 1990 Advanced Course on the "Morphological and Functional Development of the Visual System", International School of Biophysics, Sicily, Italy
- 1989 Department of Neurology, Stanford University, U.S.A.
- 1989 Department of Anatomy, Emory University, U.S.A.
- 1989 IUPS Satellite Symposium on "Fetal and Neonatal Physiology", Stockholm, Sweden
- 1989 16th International Summer School of Brain Research on the "Prefrontal Cortex", Amsterdam, The Netherlands

- 1989 Neuroscience Center, Massachusetts General Hospital, Harvard Medical School, Boston, U.S.A.
- 1989 Department of Neuroscience, Brown University, U.S.A.
- 1989 Section of Neuroanatomy, Yale University, U.S.A.
- 1989 Department of Neurobiology and Anatomy, University of Rochester, U.S.A.
- 1988 Department of Ophthalmic Optics, The University of Manchester Institute of Science and Technology
- 1988 Department of Anatomy, St. Thomas's Hospital Medical School, London
- 1987 Department of Anatomy and Neurobiology, University of California, Irvine, U.S.A.
- 1987 Institute of Psychiatry, London
- 1986 Department of Communication & Neuroscience, University of Keele
- 1986 The Open University, Milton Keynes
- 1986 Hellenic Society for Neuroscience, Thessaloniki, Greece
- 1986 Second London BRA Group, Imperial College London
- 1985 Conference on "Neuropeptides from Biosynthesis to Physiological Action", National Institute for Medical Research, London
- 1985 Department of Anatomy, Emory University, Atlanta, U.S.A.
- 1985 School of Biochemical and Physiological Sciences, The University of Southampton
- 1985 Department of Pharmacology, St. George's Hospital Medical School, London
- 1984 Conference on the "Cerebral Cortex", Cardiff
- 1984 Institute of Anatomy, University of Oslo, Norway
- 1984 Institute of Anatomy, University of Aarhus, Denmark
- 1983 Department of Physiology, Oxford University
- 1983 Department of Anatomy, Kings College London
- 1983 International Conference on "Peptides and Neurological Diseases", Cambridge

- 1980 International Symposium on "Cellular Analogues of Conditioning and Neural Plasticity", Szeged, Hungary
- 1978 Institute of Anatomy, University of Lausanne, Switzerland
- 1978 Max-Planck Institute, Göttingen, Germany
- 1977 10th International Summer School of Brain Research on "Maturation of the Nervous System", Amsterdam, The Netherlands

PUBLICATIONS

Books Edited

The Making of the Nervous System (edited by J.G. Parnavelas, C.D. Stern and R.V. Stirling), Oxford: Oxford University Press (1988).

Research Articles

1. Parnavelas, J.G., Globus, A. and Kaups, P. (1973) Continuous illumination from birth affects spine density in the visual cortex of the rat. Experimental Neurology 40, 742-747.
2. Parnavelas, J.G., Globus, A. and Kaups, P. (1973) Changes in lateral geniculate nucleus neurones of rats as a result of continuous exposure to light. Nature 245, 287-288.
3. Parnavelas, J.G., Lynch, G., Brecha, N., Cotman, C.W. and Globus, A. (1974) Spine loss and regrowth in hippocampus following deafferentation. Nature 248, 71-73.
4. Sladek, J.R., Jr. and Parnavelas, J.G. (1975) Catecholamine-containing dendrites in primate brain. Brain Research 100, 657-662.
5. Parnavelas, J.G. and Globus, A. (1976) The damaging effects of continuous illumination on the morphology of the retina of the rat. Experimental Neurology 51, 171-187.
6. Parnavelas, J.G. and Globus, A. (1976) The effect of continuous illumination on the development of cortical neurons in the rat: A Golgi study. Experimental Neurology 51, 637-647.
7. Parnavelas, J.G. (1976) The electroretinogram of rats reared in continuous illumination. Experimental Neurology 51, 648-652.
8. Parnavelas, J.G. (1976) Photically evoked responses from the visual cortex of rats reared under continuous illumination. Experimental Neurology 52, 110-118.
9. Parnavelas, J.G., Mouny, E.J., Bradford, R. and Lieberman, A.R. (1977) The postnatal development of neurons in the dorsal lateral geniculate nucleus of the rat: A Golgi study. Journal of Comparative Neurology 171, 481-500.
10. Mouny, E.J., Parnavalas, J.G. and Lieberman, A.R. (1977) The neurons and their postnatal development in the ventral lateral geniculate nucleus of the rat. Anatomy and Embryology 151, 35-51.
11. Parnavelas, J.G., Bradford, R., Mouny, E.J. and Lieberman, A.R. (1977) Postnatal growth of neuronal perikarya in the dorsal lateral geniculate nucleus of the rat. Neuroscience Letters 5, 33-37.
12. Parnavelas, J.G., Lieberman, A.R. and Webster, K.E. (1977) Organization of neurons in the visual cortex, area 17, of the rat. Journal of Anatomy 124, 305-322.
13. Bradford, R., Parnavelas, J.G. and Lieberman, A.R. (1977) Neurons in layer I of the

developing occipital cortex of the rat. Journal of Comparative Neurology 176, 121-132.

14. Parnavelas, J.G., Sullivan, K., Lieberman, A.R. and Webster, K.E. (1977) Neurons and their synaptic organization in the visual cortex of the rat. Electron microscopy of Golgi preparations. Cell and Tissue Research 183, 499-517.
15. Jackowski, A., Parnavelas, J.G. and Lieberman, A.R. (1978) The reciprocal synapse in the external plexiform layer of the mammalian olfactory bulb. Brain Research 159, 17-28.
16. Parnavelas, J.G., Bradford, R., Mounty, E.J. and Lieberman, A.R. (1978) The development of non-pyramidal neurons in the visual cortex of the rat. Anatomy and Embryology 155, 1-14.
17. Parnavelas, J.G. (1978) Influence of stimulation on cortical development. In: Maturation of the Nervous System (edited by M.A. Corner, R.E. Baker, N.E. van de Pol, D.F. Swaab and H.B.M. Uylings), Progress in Brain Research 48, 247-259.
18. Parnavelas, J.G. and Lieberman, A.R. (1979) An ultrastructural study of the maturation of neuronal somata in the visual cortex of the rat. Anatomy and Embryology 157, 311-328.
19. Parnavelas, J.G. and Uylings, H.B.M. (1980) The growth of non-pyramidal neurons in the visual cortex of the rat: A morphometric study. Brain Research 193, 373-382.
20. Uylings, H.B.M., Parnavelas, J.G., Walg, H. and Veltman, W.A.M. (1980) The morphometry of the branching pattern of developing non-pyramidal neurons in the visual cortex of rats. Mikroskopie (Wien) 37 (Suppl.), 220-224.
21. Adams, C.E., Parnavelas, J.G., Mihailoff, G.A. and Woodward, D.J. (1980) The neurons and their postnatal development in the basilar pontine nuclei of the rat. Brain Research Bulletin 5, 277-283.
22. Parnavelas, J.G., Chatzissavidou, A. and Burne, R.A. (1981) Subcortical projections to layer I of the visual cortex, area 17, of the rat. Experimental Brain Research 41, 184-187.
23. McDonald, J.K., Speciale, S.G. and Parnavelas, J.G. (1981) The development of glutamic acid decarboxylase in the visual cortex and lateral geniculate nucleus of the rat. Brain Research 217, 364-367.
24. Parnavelas, J.G., Burne, R.A. and Lin, C.-S. (1981) Receptive field properties of neurons in the visual cortex of the rat. Neuroscience Letters 27, 291-296.
25. Ebersole, P., Parnavelas, J.G. and Blue, M.E. (1981) Development of the visual cortex of rats treated with 6-hydroxydopamine in early life. Anatomy and Embryology 162, 489-492.
26. Parnavelas, J.G. and Chatzissavidou, A. (1981) The development of the thalamic projections to layer I of the visual cortex of the rat. Anatomy and Embryology 163, 71-75.
27. Uylings, H.B.M. and Parnavelas, J.G. (1981) Growth and plasticity of cortical dendrites. 28th International Congress of Physiological Sciences, Advances in Physiological Sciences, Volume 36, Cellular Analogues of Conditioning and Neural Plasticity (edited by O. Fehèr and F. Joó), pp 57-64. Budapest: Académiai Kiadó.

28. Uylings, H.B.M., Parnavelas, J.G. and Walg, H.L. (1981) Morphometry of cortical dendrites. The Proceedings of the XIth International Congress of Anatomy, Advances in the Morphology of Cells and Tissues, pp. 185-192. New York: Alan R. Liss.
29. Parnavelas, J.G. and Blue, M.E. (1982) The role of the noradrenergic system on the formation of synapses in the visual cortex of the rat. Developmental Brain Research 3, 140-144.
30. Blue, M.E. and Parnavelas, J.G. (1982) The effect of neonatal 6-hydroxydopamine treatment on synaptogenesis in the visual cortex of the rat. Journal of Comparative Neurology 205, 199-205.
31. Edmunds, S.M. and Parnavelas, J.G. (1982) Retzius-Cajal cells: an ultrastructural study in the developing visual cortex of the rat. Journal of Neurocytology 11, 427-446.
32. McDonald, J.K., Parnavelas, J.G., Karamanlidis, A.N., Brecha, N. and Koenig, J.I. (1982) The morphology and distribution of peptide-containing neurons in the adult and developing visual cortex of the rat. I. Somatostatin. Journal of Neurocytology 11, 809-824.
33. McDonald, J.K., Parnavelas, J.G., Karamanlidis, A.N. and Brecha, N. (1982) The morphology and distribution of peptide-containing neurons in the adult and developing visual cortex of the rat. II. Vasoactive intestinal polypeptide. Journal of Neurocytology 11, 825-837.
34. McDonald, J.K., Parnavelas, J.G., Karamanlidis, A.N., Rosenquist, G. and Brecha, N. (1982) The morphology and distribution of peptide-containing neurons in the adult and developing visual cortex of the rat. III. Cholecystokinin. Journal of Neurocytology 11, 881-895.
35. McDonald, J.K., Parnavelas, J.G., Karamanlidis, A.N. and Brecha, N. (1982) The morphology and distribution of peptide-containing neurons in the adult and developing visual cortex of the rat. IV. Avian pancreatic polypeptide. Journal of Neurocytology 11, 985-995.
36. McDonald, J.K., Petrovic, S.L., McCann, S.M. and Parnavelas, J.G. (1982) The development of beta-adrenergic receptors in the visual cortex of the rat. Neuroscience 7, 2649-2655.
37. Parnavelas, J.G., Burne, R.A. and Lin, C.-S. (1983) Distribution and morphology of functionally identified neurons in the visual cortex of the rat. Brain Research 261, 21-29.
38. Parnavelas, J.G., Luder, R., Pollard, S.G., Sullivan, K. and Lieberman, A.R. (1983) A qualitative and quantitative ultrastructural study of glial cells in the developing visual cortex of the rat. Philosophical Transactions of the Royal Society of London B 301, 55-84.
39. Edmunds, S.M. and Parnavelas, J.G. (1983) 'Presynaptic astrocytes' in rat visual cortex. Brain Research 259, 285-287.
40. Blue, M.E. and Parnavelas, J.G. (1983) The formation and maturation of synapses in the visual cortex of the rat. I. Qualitative analysis. Journal of Neurocytology 12, 599-616.
41. Blue, M.E. and Parnavelas, J.G. (1983) The formation and maturation of synapses in the visual cortex of the rat. II. Quantitative analysis. Journal of Neurocytology 12, 697-712.
42. Uylings, H.B.M., Verwer, R.W.H., Van Pelt, J. and Parnavelas, J.G. (1983) Topological

- analysis of dendritic growth at various stages of cerebral development. Acta Stereologica 2, 55-62.
43. Parnavelas, J.G. and Edmunds, S.M. (1983) Further evidence that Retzius-Cajal cells transform to nonpyramidal neurons in the developing rat visual cortex. Journal of Neurocytology 12, 863-871.
 44. Parnavelas, J.G. and McDonald, J.K. (1983) The cerebral cortex. In: Chemical Neuroanatomy (edited by P.C. Emson), pp. 505-549. New York: Raven Press.
 45. Burne, R.A., Parnavelas, J.G. and Lin, C.-S. (1984) Response properties of neurons in the visual cortex of the rat. Experimental Brain Research 53, 374-383.
 46. Iwamoto, G.A., Parnavelas, J.G., Kaufman, M.P., Botterman, B.R. and Mitchell, J.H. (1984) Activation of caudal brainstem cell groups during the exercise pressor reflex in the cat as elucidated by 2-[¹⁴C]deoxyglucose. Brain Research 304, 178-182.
 47. Parnavelas, J.G. (1984) Physiological properties of identified neurons. In: The Cerebral Cortex, Vol. 2: Functional Properties of Cortical Cells (edited by E.G. Jones and A. Peters), pp. 205-239. New York: Plenum Press.
 48. Gall, C., Brecha, N. and Parnavelas, J.G. (1984) Development of peptide immunoreactivity in the hippocampus, visual cortex and retina. In: Organizing Principles of Neural Development (edited by S.C. Sharma), pp. 205-249. New York: Plenum Press.
 49. Parnavelas, J.G., Moises, H.C. and Speciale, S.G. (1985) The monoaminergic innervation of the rat visual cortex. Proceedings of the Royal Society of London B 223, 319-329.
 50. Parnavelas, J.G., Kelly, W. and Burnstock, G. (1985) Ultrastructural localization of choline acetyltransferase in vascular endothelial cells in rat brain. Nature 316, 724-725.
 51. Papadopoulos, G.C., Karamanlidis, A.N., Michaloudi, H., Dinopoulos, A., Antonopoulos, J. and Parnavelas, J.G. (1985) The coexistence of oxytocin and corticotropin-releasing factor in the hypothalamus: An immunocytochemical study in the rat, sheep and hedgehog. Neuroscience Letters 62, 213-218.
 52. Parnavelas, J.G., Kelly, W., Franke, E. and Eckenstein, F. (1986) Cholinergic neurons and fibres in the rat visual cortex. Journal of Neurocytology 15, 329-336.
 53. Dinopoulos, A., Parnavelas, J.G. and Eckenstein, F. (1986) Morphological characterization of cholinergic neurons in the horizontal limb of the diagonal band of Broca in the basal forebrain of the rat. Journal of Neurocytology 15, 619-628.
 54. Crunelli, V., Leresche, N. and Parnavelas, J.G. (1986) X- and Y-cells identified in the cat lateral geniculate nucleus in vitro. Brain Research 380, 371-374.
 55. Parnavelas, J.G. (1986) Morphology and distribution of peptide- containing neurones in the cerebral cortex. In: Peptides in Neurological Disease (edited by P. C. Emson, M.N. Rossor and M. Tohyama), Progress in Brain Research 66, 119-134.
 56. McDonald, J.K., Speciale, S.G. and Parnavelas, J.G. (1987) The laminar distribution of

glutamate decarboxylase and choline acetyltransferase in the adult and developing visual cortex of the rat. Neuroscience 21, 825-832.

57. Brecha, N., Johnson, D., Bolz, J., Sharma, S., Parnavelas, J.G. and Lieberman, A.R. (1987) Substance P-immunoreactive retinal ganglion cells and their central axon terminals in the rabbit. Nature 327, 155-158.
58. Papadopoulos, G.C., Parnavelas, J.G. and Buijs, R. (1987) Monoaminergic fibers form conventional synapses in the cerebral cortex. Neuroscience Letters 76, 275-279.
59. Papadopoulos, G.C., Parnavelas, J.G. and Cavanagh, M.E. (1987) Extensive co-existence of neuropeptides in the rat visual cortex. Brain Research 420, 95-99.
60. Jeffery, G. and Parnavelas, J.G. (1987) Early visual deafferentation of the cortex results in an asymmetry of somatostatin labelled cells. Experimental Brain Research 67, 651-655.
61. Eadie, L.A., Parnavelas, J.G. and Franke, E. (1987) The development of the ultrastructural features of somatostatin-immunoreactive neurons in the rat visual cortex. Journal of Neurocytology 16, 445-459.
62. Crunelli, V., Leresche, N. and Parnavelas, J.G. (1987) Membrane properties of morphologically identified X and Y cells in the lateral geniculate nucleus of the cat *in vitro*. Journal of Physiology 390, 243-256.
63. Crunelli, V., Leresche, N., Hyne, J.W., Patel, N.M. and Parnavelas, J.G. (1987) An *in vitro* slice preparation of the cat lateral geniculate nucleus. Journal of Neuroscience Methods 20, 211-219.
64. Antonopoulos, J., Papadopoulos, G.C., Karamanlidis, A.N., Parnavelas, J.G., Dinopoulos, A. and Michaloudi, H. (1987) VIP- and CCK-like-immunoreactive neurons in the hedgehog (*Erinaceus europaeus*) and the sheep (*Ovis aries*) brain. Journal of Comparative Neurology 263, 290-307.
65. Papadopoulos, G.C., Parnavelas, J.G. and Buijs, R.M. (1987) Light and electron microscopic immunocytochemical analysis of the serotonin innervation of the rat visual cortex. Journal of Neurocytology 16, 883-892.
66. Cavanagh, M.E. and Parnavelas, J.G. (1988) Development of somatostatin immunoreactive neurons in the rat occipital cortex: A combined immunocytochemical-autoradiographic study. Journal of Comparative Neurology 268, 1-12.
67. Dinopoulos, A., Parnavelas, J.G., Uylings, H.B.M. and Van Eden, C.G. (1988) Morphology of neurons in the basal forebrain nuclei of the rat: A Golgi study. Journal of Comparative Neurology 272, 461-474.
68. Dinopoulos, A., Michaloudi, H., Karamanlidis, A.N., Antonopoulos, J. and Parnavelas, J.G. (1988) Basal forebrain neurons project to the cortical mantle of the European hedgehog (*Erinaceus europaeus*). Neuroscience Letters 86, 127-132.
69. Parnavelas, J.G. and Cavanagh, M.E. (1988) Transient expression of neurotransmitters in the developing neocortex. Trends in Neurosciences 11, 92-93.

70. Lobo, D.H. and Parnavelas, J.G. (1988) The ontogeny of neurotensin receptor binding sites in the rat visual cortex. Neuroscience Letters 93, 152-157.
71. Cavanagh, M.E. and Parnavelas, J.G. (1988) Neurotransmitter differentiation in cortical neurons. In: The Making of the Nervous System (edited by J.G. Parnavelas, C.D. Stern, and R.V. Stirling), pp. 434-453. Oxford: Oxford University Press.
72. Parnavelas, J.G. Papadopoulos, G.C. and Cavanagh, M.E. (1988) Changes in neurotransmitters during development. In: The Cerebral Cortex, Vol. 7: Development and Maturation of Cerebral Cortex (edited by A. Peters and E.G. Jones), pp. 177-209. New York: Plenum Press.
73. Papadopoulos, G.C., Parnavelas, J.G. and Buijs, R.M. (1989) Light and electron microscopic immunocytochemical analysis of the noradrenaline innervation of the rat visual cortex. Journal of Neurocytology 18, 1-10.
74. Papadopoulos, G.C., Parnavelas, J.G. and Buijs, R.M. (1989) Light and electron microscopic immunocytochemical analysis of the dopamine innervation of the rat visual cortex. Journal of Neurocytology 18, 303-310.
75. Antonopoulos, J., Karamanlidis, A.N., Papadopoulos, G.C., Michaloudi, H., Dinopoulos, A. and Parnavelas, J.G. (1989) Neuropeptide Y-like immunoreactive neurons in the hedgehog (*Erinaceus europaeus*) and the sheep (*Ovis aries*) brain. Journal für Hirnforschung 30, 349-360.
76. Cavanagh, M.E. and Parnavelas, J.G. (1989) Development of vasoactive-intestinal-polypeptide-immunoreactive neurons in the rat occipital cortex: A combined immunohistochemical-autoradiographic study. Journal of Comparative Neurology 284, 637-645.
77. Dori, I. and Parnavelas, J.G. (1989) The cholinergic innervation of the rat cerebral cortex shows two distinct phases in development. Experimental Brain Research 76, 417-423.
78. Dinopoulos, A., Eadie, L.A., Dori, I. and Parnavelas, J.G. (1989) The development of basal forebrain projections to the rat visual cortex. Experimental Brain Research 76, 563-571.
79. Dinopoulos, A., Dori, I., Davies, S.W. and Parnavelas, J.G. (1989) Neurochemical heterogeneity among corticofugal and callosal projections. Experimental Neurology 105, 36-44.
80. Dinopoulos, A., Papadopoulos, G.C., Parnavelas, J.G., Antonopoulos, J. and Karamanlidis, A.N. (1989) Basal forebrain projections to the lower brain stem in the rat. Experimental Neurology 105, 316-319.
81. Aggelopoulos, N., Parnavelas, J.G. and Edmunds, S. (1989) Synaptogenesis in the dorsal lateral geniculate nucleus of the rat. Anatomy and Embryology 180, 243-257.
82. Parnavelas, J.G. and Papadopoulos, G.C. (1989) The monoaminergic innervation of the cerebral cortex is not diffuse and nonspecific. Trends in Neurosciences 12, 315-319.

83. Dori, I., Petrou, M. and Parnavelas, J.G. (1989) Excitatory transmitter amino acid-containing neurons in the rat visual cortex: A light and electron microscopic immunocytochemical study. Journal of Comparative Neurology 290, 169-184.
84. Parnavelas, J.G. Dinopoulos, A. and Davies, S.W. (1989) The central visual pathways. In: Handbook of Chemical Neuroanatomy, Vol. 7: Integrated Systems of the CNS, Part II (edited by A. Björklund, T. Hökfelt and L.W. Swanson), pp. 1-164. Amsterdam: Elsevier.
85. Papadopoulos, G.C. and Parnavelas, J.G. (1990) Distribution and synaptic organization of serotonergic and noradrenergic axons in the lateral geniculate nucleus of the rat. Journal of Comparative Neurology 294, 345-355.
86. Papadopoulos, G.C. and Parnavelas, J.G. (1990) Distribution and synaptic organization of dopaminergic axons in the lateral geniculate nucleus of the rat. Journal of Comparative Neurology 294, 356-361.
87. Eadie, L.A., Parnavelas, J.G. and Franke, E. (1990) The development of the ultrastructural features of neuropeptide Y-immunoreactive neurons in the rat visual cortex. Journal of Neurocytology 19, 455-465.
88. Cavanagh, M.E. and Parnavelas, J.G. (1990) Development of neuropeptide Y (NPY) immunoreactive neurons in the rat occipital cortex: A combined immunohistochemical- autoradiographic study. Journal of Comparative Neurology 297, 553-563.
89. Parnavelas, J.G., Jeffery, G., Cope, J. and Davies, S.W. (1990) Early lesion of mystacial vibrissae in rats results in an increase of somatostatin-labelled cells in the somatosensory cortex. Experimental Brain Research 82, 658-662.
90. Parnavelas, J.G. and Papadopoulos, G.C (1990) Neuroanatomy: A Psychiatric Perspective. In: Principles and Practice of Biological Psychiatry, Vol. 1 (edited by T.G. Dinan), pp. 51-83. London: Clinical Neuroscience Publishers.
91. Parnavelas, J.G. (1990) Neurotransmitters in the cerebral cortex. In: The Prefrontal Cortex: Its Structure, Function and Pathology (edited by H.B.M. Uylings, C.G. Van Eden, J.P.C. De Bruin, M.A. Corner and M.G.P. Feenstra), Progress in Brain Research 85, 13-29.
92. Uylings, H.B.M., Van Eden, C.G., Parnavelas, J.G. and Kalsbeek, A. (1990) The prenatal and postnatal development of rat cerebral cortex. In: The Cerebral Cortex of the Rat (edited by B. Kolb and R.C. Tees), pp. 35-76. Cambridge, MA: MIT Press.
93. Papadopoulos, G.C. and Parnavelas, J.G. (1991) Monoamine systems in the cerebral cortex: Evidence for anatomical specificity. Progress in Neurobiology 36, 195-200.
94. Dinopoulos, A., Dori, I. and Parnavelas, J.G. (1991) Immunohistochemical localization of aspartate in corticofugal pathways. Neuroscience Letters 121, 25-28.
95. Parnavelas, J.G., Barfield, J.A., Franke, E. and Luskin, M.B. (1991) Separate progenitor cells give rise to pyramidal and nonpyramidal neurons in the rat telencephalon. Cerebral Cortex 1, 463-468.
96. Dinopoulos, A. and Parnavelas, J.G. (1991) The development of the ventral tegmental area

- (VTA) projections to the visual cortex of the rat. Neuroscience Letters 134, 12-16.
97. Cavanagh, M.E., Dinopoulos, A. and Parnavelas, J.G. (1991) Development of neurotransmitters in the mammalian visual system. In: Vision and Visual Dysfunction, Vol. 11: Development and Plasticity of the Visual System (edited by J. Cronly-Dillon), pp. 353-368. London: Macmillan.
 98. Dinopoulos, A., Uylings, H.B.M. and Parnavelas, J.G. (1992) The development of neurons in the nuclei of the horizontal and vertical limb of the diagonal band of Broca of the rat: a qualitative and quantitative analysis of Golgi preparations. Developmental Brain Research 65, 65-74.
 99. Dinopoulos, A., Papadopoulos, G.C., Michaloudi, H., Parnavelas, J.G., Uylings, H.B.M. and Karamanlidis, A.N. (1992) The claustrum in the hedgehog (*Erinaceus europaeus*) brain: Cytoarchitecture and connections with cortical and subcortical structures. Journal of Comparative Neurology 316, 187-205.
 100. Dori, I., Dinopoulos, A., Cavanagh, M.E. and Parnavelas, J.G. (1992) Proportion of glutamate- and aspartate-immunoreactive neurons in the efferent pathways of the rat visual cortex varies according to the target. Journal of Comparative Neurology 319, 191-204.
 101. Antonopoulos, J., Papadopoulos, G.C., Michaloudi, H., Cavanagh, M.E. and Parnavelas, J.G. (1992) Postnatal development of neuropeptide Y-containing neurons in the visual cortex of normal- and dark-reared rats. Neuroscience Letters 145, 75-78.
 102. Parnavelas, J.G. (1992) Development of GABA-containing neurones in the visual cortex. In: Mechanisms of GABA in the Visual System (edited by R.R. Mize, R.E. Marc and A.M. Sillito), Progress in Brain Research 90, 523-537.
 103. Papadopoulos, G.C., Cavanagh, M.E., Antonopoulos, J., Michaloudi, H. and Parnavelas, J.G. (1993) Postnatal development of somatostatin-containing neurons in the visual cortex of normal and dark-reared rats. Experimental Brain Research 92, 473-478.
 104. Michaloudi, H., Papadopoulos, G.C., Antonopoulos, J., Cavanagh, M.E. and Parnavelas, J.G. (1993) Postnatal development of vasoactive intestinal polypeptide-containing neurons in the visual cortex of normal and dark reared rats. Neuroscience Letters 149, 129-132.
 105. Luskin, M.B., Parnavelas, J.G. and Barfield, J.A. (1993) Neurons, astrocytes and oligodendrocytes of the rat cerebral cortex originate from separate progenitor cells: An ultrastructural analysis of clonally related cells. Journal of Neuroscience 13, 1730-1750.
 106. Dinopoulos, A., Dori, I. and Parnavelas, J.G. (1993) Serotonergic innervation of the mature and developing lateral septum of the rat: A light and electron microscopic immunocytochemical analysis. Neuroscience 55, 209-222.
 107. Dennison-Cavanagh, M.E., Papadopoulos, G. and Parnavelas, J.G. (1993) The emergence of the cortical GABAergic neuron: with particular reference to some peptidergic subpopulations. Journal of Neurocytology 22, 805-814.
 108. McDonald, J.K., Parnavelas, J.G., Davies, S.W. and Cavanagh, M.E. (1993) Measurements of somatostatin and neuropeptide Y in the visual cortex of monocularly deprived rats.

Experimental Neurology 123, 216-221.

109. Mione, M.C., Danevic, C., Boardman, P., Harris, B. and Parnavelas, J.G. (1994) Lineage analysis reveals neurotransmitter (GABA or glutamate) but not calcium-binding protein homogeneity in clonally related cortical neurons. Journal of Neuroscience 14, 107-123.
110. Mione, M.C. and Parnavelas, J.G. (1994) How do developing neurones know where to go? Trends in Neurosciences 17, 443-445.
111. Uylings, H.B.M., van Pelt, J., Parnavelas, J.G. and Ruiz-Marcos, A. (1994) Geometrical and topological characteristics in the dendritic development of cortical pyramidal and non-pyramidal neurons. In: The Self-Organizing Brain: From Growth Cones to Functional Networks (edited by J. van Pelt, M.A. Corner, H.B.M. Uylings and F.H. Lopes de Silva), Progress in Brain Research 102, 109-123.
112. Parnavelas, J.G., Mione, M.C. and Lavdas, A. (1995) The cell lineage of neuronal subtypes in the mammalian cerebral cortex. In: Development of the Cerebral Cortex (Ciba Foundation Symposium 193), pp. 41-58. Chichester: John Wiley & Sons.
113. Dinopoulos, A., Dori, I. and Parnavelas, J.G. (1995) Serotonergic innervation of the lateral geniculate nucleus of the rat during postnatal development: a light and electron microscopic immunocytochemical analysis. Journal of Comparative Neurology 363, 532-544.
114. Dori, I., Dinopoulos, A. and Parnavelas, J.G. (1996) Regional differences in the ontogeny of the serotonergic projection to the cerebral cortex. Experimental Neurology 138, 1-14.
115. Mione, M.C., Pappas, I.S., Lavdas, A. and Parnavelas, J.G. (1996) Lineage analysis of β -galactosidase-positive neurones: postembedding immunohistochemistry and double immunofluorescence. Neuroscience Protocols 30, 1-15.
116. Lavdas, A.A., Mione, M.C. and Parnavelas, J.G. (1996) Neuronal clones in the cerebral cortex show morphological and neurotransmitter heterogeneity during development. Cerebral Cortex 6, 490-497.
117. Dori, I. and Parnavelas, J.G. (1996) The development of excitatory transmitter amino acid-containing neurons in the rat visual cortex. A light and electron microscopic immunocytochemical study. Experimental Brain Research 110, 347-359.
118. Nadarajah, B., Thomaidou, D., Evans, W.H. and Parnavelas, J.G. (1996) Gap junctions in the adult cerebral cortex: regional differences in their distribution and cellular expression of connexins. The Journal of Comparative Neurology 376, 326-342.
119. Thomaidou, D., Mione, M.C., Cavanagh, J.F.R. and Parnavelas, J.G. (1997) Apoptosis and its relation to the cell cycle in the developing cerebral cortex. Journal of Neuroscience 17, 1075-1085.
120. Antonopoulos, J., Pappas, I.S. and Parnavelas, J.G. (1997) Activation of the GABA_A receptor inhibits the proliferative effects of bFGF in cortical progenitor cells. European Journal of Neuroscience 9, 291-298.
121. Pappas, I.S. and Parnavelas, J.G. (1997) Neurotrophins and basic fibroblast growth factor

induce the differentiation of calbindin-containing neurons of the cerebral cortex.

Experimental Neurology 144, 302-314.

122. Mione, M.C., Cavanagh, J.F.R., Harris, B. and Parnavelas, J.G. (1997) Cell fate specification and symmetrical/asymmetrical divisions in the developing cerebral cortex. Journal of Neuroscience 17, 2018-2029.
123. Dinopoulos, A., Dori, I. and Parnavelas, J.G. (1997) The serotonin innervation of the basal forebrain shows a transient phase during development. Developmental Brain Research 99, 38-52.
124. Nadarajah, B., Jones, A.M., Evans, W.H. and Parnavelas, J.G. (1997) Differential expression of connexins during neocortical development and neuronal circuit formation. Journal of Neuroscience 17, 3096-3111.
125. Cavanagh, J.F.R., Mione, M.C., Pappas, I.S. and Parnavelas, J.G. (1997) Basic fibroblast growth factor prolongs the proliferation of rat cortical progenitor cells *in vitro* without altering the cell cycle parameters. Cerebral Cortex 7, 293-302.
126. Parnavelas, J.G., Dinopoulos, A. and Brecha, N. (1997) Transient features of tachykinin peptide innervation of the dorsal lateral geniculate nucleus of the rabbit during postnatal development. The Journal of Comparative Neurology 380, 310-318.
127. Antonopoulos, J., Dinopoulos, A., Dori, I. and Parnavelas, J.G. (1997) Distribution and synaptology of dopaminergic fibers in the mature and developing lateral septum of the rat. Developmental Brain Research 102, 135-141.
128. Dooley, A.E., Pappas, I.S. and Parnavelas, J.G. (1997) Serotonin promotes the survival of cortical glutamatergic neurons *in vitro*. Experimental Neurology 148, 205-214.
129. Lavdas, A.A., Blue, M.E., Lincoln, J. and Parnavelas, J.G. (1997) Serotonin promotes the differentiation of glutamate neurons in organotypic slice cultures of the developing cerebral cortex. Journal of Neuroscience 17, 7872-7880.
130. Pappas, I.S. and Parnavelas, J.G. (1998) Basic fibroblast growth factor promotes the generation and differentiation of cortical calretinin neurons in the rat cerebral cortex *in vitro*. European Journal of Neuroscience 10, 1436-1445.
131. Parnavelas, J.G. (1998) The Human Brain: 100 Billion Connected Cells. In: From Brains to Consciousness? (edited by S. Rose), pp. 18-32. London: Penguin.
132. Ali, S., Pappas, I.S. and Parnavelas, J.G. (1998) Collagen type IV promotes the differentiation of neuronal progenitors and inhibits astroglial differentiation in cortical cell cultures. Developmental Brain Research 110, 31-38.
133. Nadarajah, B., Makarenkova, H., Evans, W.H., Becker, D. and Parnavelas, J.G. (1998) Basic FGF increases communication between cells of the developing neocortex. Journal of Neuroscience 18, 7881-7890.
134. Dori, I.E., Dinopoulos, A. and Parnavelas, J.G. (1998) The development of the synaptic organization of the serotonergic system differs in brain areas with different functions.

Experimental Neurology 154, 113-125.

135. Nadarajah, B. and Parnavelas, J.G. (1999) Gap junction mediated communication in the developing and adult cerebral cortex. In: Gap junction-mediated intercellular signalling in health and disease (Novartis Foundation Symposium 219), pp. 157-174. Chichester: Wiley.
136. Naqui, S.Z.H., Harris, B., Thomaidou, D. and Parnavelas, J.G. (1999) The noradrenergic system influences the pattern of development of Cajal-Retzius cells in the cerebral cortex. Developmental Brain Research 113, 75-82.
137. Parnavelas, J.G. (1999) Glial cell lineages in the rat cerebral cortex. Experimental Neurology 156, 418-429.
138. Lavdas, A.A., Grigoriou, M., Pachnis, V. and Parnavelas, J.G. (1999) The medial ganglionic eminence gives rise to a population of early neuros in the developing cerebral cortex. Journal of Neuroscience 19, 7881-7888.
139. Parnavelas, J.G., Anderson, S.A., Lavdas, A.A., Grigoriou, M., Pachnis, V. and Rubenstein, J.L.R. (1999) The contribution of the ganglionic eminence to the neuronal cell types of the cerebral cortex. In: Evolutionary biology of the cerebral cortex (Novartis Foundation Symposium 228), pp. 129-147. Chichester: Wiley.
140. Parnavelas, J.G. (2000) The origin and migration of cortical neurons: new vistas. Trends in Neurosciences 23, 126-131.
141. Mallamaci, A., Muzio, L., Chan, C.-H., Parnavelas, J. and Boncinelli, E. (2000) Area identity shifts in the early cerebral cortex of *Emx2^{-/-}* mutant mice. Nature Neuroscience 3, 679-686.
142. Parnavelas, J.G. and Nadarajah, B. (2001) Radial glial cells: are they really glia? Neuron 31, 881-884.
143. Chan, C.-H., Godinho, L.N., Thomaidou, D., Tan, S.-S., Gulisano, M. and Parnavelas, J.G. (2001) *Emx1* is a marker of pyramidal neurons in the cerebral cortex. Cerebral Cortex 11, 1191-1198.
144. Denaxa, M., Chan, C.-H., Schachner, M., Parnavelas, J.G. and Karagogeos, D. (2001) The adhesion molecule TAG-1 mediates the migration of cortical interneurons from the ganglionic eminence along the corticofugal fiber system. Development 128, 4635-4644.
145. Bittman, K., Becker, D.L., Cicirata, F. and Parnavelas, J.G. (2002) Connexin expression in homotypic and heterotypic cell coupling in the developing cerebral cortex. Journal of Comparative Neurology 443, 201-212.
146. Alifragis, P., Parnavelas, J.G. and Nadarajah, B. (2002) A novel method of labeling and characterizing migrating neurons in the developing central nervous system. Experimental Neurology 174, 259-265.
147. Nadarajah, B., Alifragis, P., Wong, R.O.L. and Parnavelas, J.G. (2002) Ventricle-directed migration in the developing cerebral cortex. Nature Neuroscience 5, 218-224.
148. Parnavelas, J.G., Alifragis, P. and Nadarajah, B. (2002) The origin and migration of cortical

- neurons. Progress in Brain Research 136, 73-79.
149. Antonopoulos, J., Dori, I., Dinopoulos, A., Chiotelli, M. and Parnavelas, J.G. (2002) Postnatal development of the dopaminergic system of the striatum in the rat. Neuroscience 110, 245-256.
 150. López-Bendito, G., Chan, C.-H., Mallamaci, A., Parnavelas, J.G. and Molnár, Z. (2002) The role of *Emx2* in the development of the reciprocal connectivity between cortex and thalamus. Journal of Comparative Neurology 451, 153-169.
 151. Nadarajah, B. and Parnavelas, J.G. (2002) Modes of neuronal migration in the developing cerebral cortex. Nature Reviews Neuroscience 3, 423-432.
 152. Parnavelas, J.G. (2002) The origin of cortical neurons. Brazilian Journal of Medical and Biological Research 35, 1423-1429.
 153. Nadarajah, B., Alifragis, P., Wong, R.O.L. and Parnavelas, J.G. (2003) Neuronal migration in the developing cerebral cortex: observations based on real-time imaging. Cerebral Cortex 13, 607-611.
 154. Kriegstein, A. and Parnavelas, J.G. (2003) Changing concepts of cortical development. Cerebral Cortex 13, 541.
 155. Tuorto, F., Alifragis, P., Parnavelas, J.G. and Gulisano, M. (2003) Tangential migration of cells from the basal to the dorsal telencephalic regions in the chick. European Journal of Neuroscience 18, 3388-3393.
 156. Alifragis, P., Molnar, Z. and Parnavelas, J.G. (2003) Restricted expression of Slap-1 in the rodent cerebral cortex. Gene Expression Patterns 3, 437-440.
 157. Vitalis, T. and Parnavelas, J.G. (2003) The role of serotonin in early cortical development. Developmental Neuroscience 25, 245-256.
 158. Maekawa, S., Al-Sarraj, S., Kibble, M., Landau, S., Parnavelas, J., Cotter, D., Everall, I. and Leigh, P.N. (2004) Cortical selective vulnerability in motor neurone disease: A morphometric study. Brain 127, 1237-1251.
 159. Thom, M., Martinian, L., Parnavelas, J.G. and Sisodiya, S.M. (2004) Distribution of cortical interneurons in grey matter heterotopia in patients with epilepsy. Epilepsia 45, 916-923.
 160. Antonopoulos, J., Latsari, M., Dori, I., Chiotelli, M., Parnavelas, J.G. and Dinopoulos, A. (2004) Noradrenergic innervation of the developing and mature septal area of the rat. Journal of Comparative Neurology 476, 80-90.
 161. Alifragis, P., Liapi, A. and Parnavelas, J.G. (2004) Lhx6 regulates the migration of cortical interneurons from the ventral telencephalon, but does not specify their GABA phenotype. Journal of Neuroscience 24, 5643-5648.
 162. Vitalis, T., Cases, O. and Parnavelas, J.G. (2005) Development of the dopaminergic neurons of the rodent brainstem. Experimental Neurology 191, S104-S112.

163. Cariboni, A., Rakic, S., Liapi, A., Maggi, R., Goffinet, A. and Parnavelas, J.G. (2005) Reelin provides an inhibitory signal in the migration of gonadotropin-releasing hormone neurons. Development 132, 4709-4718.
164. Camuri, L., Mambetisaeva, E., Davies, D., Parnavelas, J., Sundaresan, V. and Andrews, W. (2005) Evidence for the existence of two Robo3 isoforms with divergent biochemical properties. Molecular Cellular Neuroscience 30, 485-493.
165. Parnavelas, J.G. (2005) The generation and migration of cortical interneurons. In: Neocortical Modularity and the Cell Minicolumn (edited by M.F. Casanova), pp. 139-146. Nova Science Publishers, Inc.
166. Friocourt, G., Poirier, K., Rakic, S., Parnavelas, J.G. and Chelly, J. (2006) The role of ARX in cortical development. European Journal of Neuroscience 23, 869-876.
167. Metin, C., Baudoin, J.-P., Rakic, S. and Parnavelas, J.G. (2006) Cell and molecular mechanisms involved in the migration of cortical interneurons. European Journal of Neuroscience 23, 894-900.
168. Rakic, S., Davis, C., Molnar, Z., Nolic, M. and Parnavelas, J.G. (2006) Role of p35/Cdk5 in preplate splitting in the developing cerebral cortex. Cerebral Cortex 16, i35-i45.
169. Kriegstein, A. and Parnavelas, J.G. (2006) Progress in corticogenesis. Cerebral Cortex 16, i1-i2.
170. Andrews, W., Liapi, A., Plachez C., Camuri, L., Zhang, J., Murakami, F., Parnavelas J.G., Sundaresan V. and Richards, L.J. (2006) Robo1 regulates the development of major axon tracts and interneuron migration in the forebrain. Development 133, 2243-2252.
171. Sophou, S., Dori, I., Antonopoulos, J., Parnavelas, J.G. and Dinopoulos, A. (2006) Apoptosis in the rat basal forebrain during development and following lesions of connections. European Journal of Neuroscience 24, 573-585.
172. Trinh, H.-H., Reid, J., Shin, E., Liapi, A., Parnavelas, J.G. and Nadarajah, B. (2006) Secreted factors from ventral telencephalon induce the differentiation of GABAergic neurons in cortical cultures. European Journal of Neuroscience 24, 2967-2977.
173. Cariboni, A., Hickok, J., Rakic, S., Andrews, W., Maggi, R., Tischkau, S. and Parnavelas, J.G. (2007) Neuropilins and their ligands are important in the migration of Gonadotropin-Releasing Hormone neurons. Journal of Neuroscience 27, 2387-2395.
174. Friocourt, G., Liu, J.S., Antypa, M., Rakic, S., Walsh, C.A. and Parnavelas, J.G. (2007) Both Doublecortin and Doublecortin-like kinase play a role in cortical interneuron migration. Journal of Neuroscience 27: 3875-3883.
175. Andrews, W.D., Barber, M. and Parnavelas, J.G. (2007) Slit-Robo interactions during cortical development. Journal of Anatomy 211: 188-198.
176. Vitalis, T., Cases, O., Passemard, S., Callebert, J. and Parnavelas, J.G. (2007) Embryonic depletion of serotonin affects cortical development. European Journal of Neuroscience 26,

331-344.

177. Cho, J.H., Lepine, M., Andrews, W., Parnavelas, J. and Cloutier, J.F. (2007) Requirement for Slit-1 and Robo-2 in zonal segregation of olfactory sensory neuron axons in the main olfactory bulb. Journal of Neuroscience 27: 9094-9104.
178. Cariboni, A., Maggi, R. and Parnavelas, J.G. (2007) From nose to fertility: the long migratory journey of gonadotropin-releasing hormone neurons. Trends in Neurosciences 30: 638-644.
179. Faux, C.H. and Parnavelas, J.G. (2007) The role of intracellular calcium and RhoA in neuronal migration. Science STKE 412: pe62.
180. Andrews, W., Barber, M., Hernandez-Miranda, L.R., Xian, J., Rakic, S., Sundaresan, V., Rabbitts, T.H., Pannell, R., Rabbitts, P., Thompson, H., Erskine, L., Murakami, F. and Parnavelas, J.G. (2008) The role of Slit-Robo signaling in the generation, migration and morphological differentiation of cortical interneurons. Developmental Biology 313: 648-658.
181. Liapi, A., Pritchett, J., Jones, O., Fujii, N., Parnavelas, J.G. and Nadarajah, B. (2008) Stromal-derived 1 signalling regulates radial and tangential migration in the developing cerebral cortex. Developmental Neuroscience 30: 117-131.
182. Plachez, C., Andrews, W., Liapi, A., Knoell, B., Drescher, B., Mankoo, B., Zhe, L., Mambetisaeva, E., Annan, A., Bannister, L., Parnavelas, J.G., Richards, L.J. and Sundaresan, V. (2008) Robos are required for the correct targeting of retinal ganglion cell axons in the visual pathway of the brain. Molecular and Cellular Neuroscience 37: 719-730.
183. Friocourt, G., Kanatani, S., Tabata, H., Yozu, M., Takahashi, T., Antypa, M., Raguénes, O., Chelly, J., Férec, C., Nakajima, K. and Parnavelas, J.G. (2008) Cell-autonomous roles of ARX in cell proliferation and neuronal migration during corticogenesis. Journal of Neuroscience 28: 5794-5805.
184. Hoerder-Suabedissen, A., Wang, W.Z., Lee, S., Davies, K.E., Goffinet, A.M., Rakic, S., Parnavelas, J., Reim, K., Nicolic, M., Paulsen, O. and Molnár, Z. (2008) Novel markers reveal subpopulations of subplate neurons in the murine cerebral cortex. Cerebral Cortex 19: 1738-1750.
185. Mellios, K., Zacharaki, T., Sophou, S., Latsari, M., Antonopoulos, J., Dinopoulos, A., Parnavelas, J.G. and Dori, I. (2009) Natural and lesion-induced apoptosis in the rat striatum during development. Brain Research 1252: 30-44.
186. Rakic, S., Yanagawa, Y., Obata, K., Faux, C., Parnavelas, J.G. and Nicolic, M. (2009) Cortical interneurons require p35/Cdk5 for their migration and laminar organization. Cerebral Cortex 19: 1857-1869.
187. Barber, M., Di Meglio, T., Andrews, W.D., Hernández-Miranda, L.R., Murakami, F., Chédotal, A. and Parnavelas, J.G. (2009) The role of Robo3 in the development of cortical interneurons. Cerebral Cortex 19: i22-i31.
188. Thompson, H., Andrews, W., Parnavelas, J.G. and Erskine L. (2009) Robo2 is required for Slit-mediated intraretinal axon guidance. Developmental Biology 335: 418-426.

189. Prince, J.E., Cho, J.H., Dumontier, E., Andrews, W., Cutforth, T., Tessier-Lavigne, M., Parnavelas, J. and Cloutier, J.F. (2009) Robo-2 controls the segregation of a portion of basal vomeronasal sensory neuron axons to the posterior region of the accessory olfactory bulb. Journal of Neuroscience 29: 14211-14222.
190. Faux, C., Rakic, S., Andrews, W., Yanagawa, Y., Obata, K. and Parnavelas, J.G. (2010) Differential gene expression in migrating cortical interneurons during mouse forebrain development. Journal of Comparative Neurology 518: 1232-1248.
191. Friocourt, G. and Parnavelas J.G. (2010) Mutations in ARX result in several defects involving GABAergic neurons. Frontiers in Cellular Neuroscience 4: article 4.
192. Hernández-Miranda, L.R., Parnavelas, J.G. and Chiara, F. (2010) Molecules and mechanisms involved in the generation and migration of cortical interneurons. ASN Neuro 2: e00031.
193. Zacharaki, T., Sophou, S., Giannakopoulou, A., Dinopoulos, A., Antonopoulos, J., Parnavelas, J.G. and Dori, I. (2010) Natural and lesion-induced apoptosis in the dorsal lateral geniculate nucleus during development. Brain Research [Epub ahead of print].
194. Elias, L.A., Turmaine, M., Parnavelas, J.G. and Kriegstein, A.R. (2010) Connexin 43 mediates the tangential to radial migratory switch in ventrally derived cortical interneurons. Journal of Neuroscience 30: 7072-7077.
195. Cariboni, A., Davidson, K., Rakic, S., Maggi, R., Parnavelas, J.G. and Ruhrberg, C. (2011) Defective gonadotropin-releasing hormone neuron migration in mice lacking SEMA3A signalling through NRP1 and NRP2; implications for the aetiology of hyponadotropic hypogonadism. Human Molecular Genetics 20: 336-344.
196. Hernández-Miranda, L.R., Cariboni, A., Faux, C., Ruhrberg, C., Cho, J.H., Cloutier, J.F., Eickholt, B.J., Parnavelas, J.G. and Andrews, W.D. (2011) Robo1 regulates semaphorin signaling to guide the migration of cortical interneurons through the ventral forebrain. Journal of Neuroscience 31: 6174-6187.
197. Cariboni, A., Davidson, K., Dozio, E., Memi, F., Schwarz, Q., Stossi, F., Parnavelas, J.G. and Ruhrberg, C. (2011) VEGF signalling controls GnRH neuron survival via NRP1 independently of KDR and blood vessels. Development 138: 3723-3733.
198. Hughes, S.W., Lorincz, M., Blethyn, K., Kékesi, K., Juhász, G., Turmaine, M., Parnavelas, J.G. and Crunelli, V. (2011) Thalamic gap junctions control local neuronal synchrony and influence macroscopic oscillation amplitude during EEG alpha rhythms. Frontiers in Psychology 2: 193.
199. Antypa, M., Faux, C., Eichele, G., Parnavelas, J.G. and Andrews, W.D. (2011) Differential gene expression in migratory streams of cortical interneurons. European Journal of Neuroscience 34: 1584-1594.
200. Friocourt, G. and Parnavelas J.G. (2011) Identification of ARX targets unveils new candidates for controlling cortical interneuron migration and differentiation. Frontiers in Cellular Neuroscience 5: 28.

201. Chiara, F., Badaloni, A., Croci, L., Yeh, M.L., Cariboni, A., Hoerder-Suabedissen, A., Consalez, G.G., Eickholt, B., Shimogori, T., Parnavelas, J.G. and Rakic, S. (2012) Early B-cell factors 2 and 3 (EBF2/3) regulate early migration of Cajal-Retzius cells from the cortical hem. Developmental Biology 365: 277-289.
202. Geutskens, S.B., Andrews, W.D., van Stalborch, A.M., Brussen, K., Holtrop-de Haan, S.E., Parnavelas, J.G., Hordijk, P.L. and van Hennik, P.B. (2012) Control of human hematopoietic stem/progenitor cell migration by the extracellular matrix protein Slit3. Laboratory Investigation 92: 1129-1139.
203. Gonda, Y., Andrews, W.D., Tabata, H., Namba, T., Parnavelas, J.G., Nakajima, K., Kohsaka, S., Hanashima, C. and Uchino, S. (2012) Robo1 regulates the migration and laminar distribution of upper-layer pyramidal neurons of the cerebral cortex. Cerebral Cortex (Epub ahead of print).
204. Cariboni, A., Andrews, W.D., Memi, F., Ypsilanti, A.R., Zelina, P., Chedotal, A. and Parnavelas, J.G. (2012) Slit2 and Robo3 modulate the migration of GnRH-secreting neurons. Development 139: 3326-3331.