

CURRICULUM VITAE

Charles Alexander MARSDEN

Address: School of Biomedical Sciences
University of Nottingham Medical School
Queen's Medical Centre
Nottingham NG7 2UH

Date of Birth: 5th March 1943

Marital Status: Married, 2 sons

Degrees: BSc Zoology (Honours) - London 1966
MSc Biochemical Pharmacology - Southampton 1967
PhD 'Cellular localisation of monoamines in *Helix aspersa*,
Planorbis corneus and *Hirudo medicinalis*' Southampton, 1969
DSc Southampton University 1986

Academic Career:

Assistant Lecturer University of Bergen
Medical School
Bergen, Norway
1969 - 1972

Research Fellow (MRC) Institute of Neurology, London
1972 - 1977 (December)

Lecturer University of Nottingham
January 1978 - July 1981

Wellcome Trust Senior Lecturer University of Nottingham
August 1981 - July 1983

Reader in Neuropharmacology University of Nottingham
August 1983 - July 1986

Professor of Neuropharmacology University of Nottingham
August 1986 - September 2008

Co-Director of Institute of Neuroscience, University of Nottingham
September 2002 - June 2008

Emeritus Professor of Neuropharmacology University of Nottingham
September 2008

Membership of Scientific Societies

British Pharmacological Society (BPS)
European Neurochemical Society (ENS)
The British Neuroscience Association (BNA)
International Society for Neurochemistry (ISN)
International Brain Research Organisation (IBRO)
British Association for Psychopharmacology (BAP)
Research Defence Society (RDS)
International Society for Serotonin Research

Awards

JR Vane Medal for outstanding contribution to neuropharmacology (British Pharmacological Society 2002)
Global Leadership Award - International Medical Summit Srinakharinwirot University, Thailand.
Presented by Princess Maha Chakri Sirindhorn (2008)
Elected Honorary member of the International Society for Serotonin Research (2012)
Elected Honorary Fellow of the British Pharmacological Society (2014)

Editorial Duties

Editorial Board of	Br J Pharmacology	1980 - 1987
	Neuropharmacology	1982 - 2012
	Neuroscience	1985 - 2005
	J Neuroscience Methods	1985 - 2004
	Psychopharmacology	1988 - 2011
	Synapse	1990 - 2006
	N-S Arch. Pharmacology.	1999 - 2003
	Pharmacological Reviews	1999 - 2005

Current editorial role:

Co-Editor (with Mark Geyer (USA), Bart Ellenbroek(NZ) and Thomas Barnes(UK) of the book series **Current Topics in Behavioral Neuroscience** that we started with Springer in 2009. Current volumes printed 30 as of October 2016.

International and National Committee Membership

Research Committee of the Mental Health Foundation	1985 - 1992
SERC CASE Panel (Biological Sciences)	1987 - 1989
MRC Neuropharmacology Review	1990 - 1991
MRC Advisory Board	2000 -2008
Enterprise Ireland Grant Board	2002 - 2003
HRB Ireland (Neuroscience Board)	2003 - 2008

Council of the British Association for Psychopharmacology (BAP).	1991-2004
Membership Secretary.	1995-1996
Programme Secretary.	1996 -1998
President Elect.	1998 -2000
President.	2000 -2002
Past President.	2002 -2004

Governance Panel of the BAP (Chair 2010-2013)

The Amsterdam Group - working party on violence and its possible causes	1995
British Pharmacological Society Committee	1995 - 1999
BPS Representative on UKLSC	2001 - 2004
BPS External Affairs Committee	2001 - 2004
BPS IUPHAR Delegate	1998
Council of the International Society for Serotonin Research	1996 - 2010
President of the International Society for Serotonin Research	2006 - 2008
Scientific Advisor - The Exploratory, Bristol; "It's in your head" art programme	

Conference Organisation

Co-founder (1982) of the International Electrochemical Detection Meetings, became 'Monitoring Molecules in Neuroscience'	
Involved in the organization of these meetings from	1982 to 2008
Scientific Committee of the International Catecholamine Symposia	1987, 1992
Scientific Committee of the Serotonin Symposium	1991 to 2010,
Chairman of the BRA Meeting Organisation Committee Nottingham	1992
CCNP/BAP meeting, Montreal	1993, 1997, 2001
British Association for Psychopharmacology Annual Meetings	1992 to 2004

Faculty and University Committee Membership

Senate	1986 - 1991
Faculty Board	1983 - 1999
Medical Faculty Development Committee	1987 - 1991
Chair Neurosciences Group	1986 - 1990
Workshop Management Committee (chair 1994-9)	1988 - 1999
Medical School Trust Fund	1987 - 1996
Chairman of the Neuroscience Degree Management Group	1989 - 2003
Committee for International Students	1992 - 2003
Faculty Overseas Student Advisor	1994 - 2008
Faculty Admissions Committee and Overseas Student Selection	1992 - 2008
Student Affairs Committee	1996 - 2004
QMC Special Trustees Research Advisory Board	1998 - 2003
Student Mental Health Working Party	2000 - 2003
Biomedical Research Committee	2003 - 2008

Teaching and Examining Experience

- 1 Wide undergraduate teaching experience within the area of neuropharmacology, neuroscience and general pharmacology to medical, pharmacy and science students.
- 2 Neuroscience and Neuropharmacology teaching to postgraduate psychiatrists and neurologists
- 3 Development of a national Experimental Psychopharmacology curriculum delivered by the British Association of Psychopharmacology.
- 4 Development of a new neuroscience BSc and MSci curriculum at The University of Nottingham.
Chair of the planning committee
- 5 Director of the MSci and BSc (Hons) Neuroscience Degree
- 6 Member of Board of Studies for Masters in Clinical Psychiatry
- 7 Organisation of lecture and practical courses for B Med Sci, BSc Neurosci and MPharm students
- 8 Supervision of B. Med Sci, MPharm and MSci research projects, M Phil and PhD students (70 completed PhD's, 3 MPhil's)
- 9 Internal and external (UK, Europe, Asia) examiner of B Med Sci, BSc and PhD students
- 10 Development of international research and staff development co-operation (Thailand, Poland, Germany, Russia, Turkey, Spain)

Postgraduate Research Supervision**Postgraduate Students 1979 - 2012**

Name	Year Graduated	PhD/ MSc	Initial or Present Position
Trevor Sharp *	1983	PhD	University of Oxford Professor
John Stolz	1983	PhD	Publishing
Tom Blackburn	1984	MSc	Industry
Michael Brazell	1984	PhD	Vernalis
Nigel Maidment	1985	PhD	UCLA (USA)
Celia Lighton *	1986	PhD	GlaxoSmithKline
Carol Routledge	1987	PhD	GSK
Anthony Ford	1988	PhD	Hoffman La Roche (USA)
Andrew Sleight	1988	PhD	Hoffman La Roche (Switzerland)
Celia Cooper *	1989	PhD	Sheffield
Franco Crespi	1990	PhD	GSK
Jeni Garratt	1990	PhD	Medical Journalism
Emma Kidd	1990	PhD	Cardiff (University of Cardiff)

Ian Wright	1991	PhD	Medical Journalism
Robert Rivest *	1991	PhD	Canada – Pharmacist
Sue Aspley *	1992	PhD	BASF
Noppamars Wongwitdecha	1992	PhD	Mahidol (Lecturer -Thailand)
Simon Beckett	1993	PhD	CEO (Nottingham)
Elaine Foster	1993	PhD	Wyeth (Administrator)
Raj Kulkarni *	1993	PhD	Kings College (Research - London)
Michael Bickerdike	1994	PhD	Vernalis (Research Section Leader)
Manjeet Munday	1994	PhD	Postdoc (Nottingham)
Lindsey Robson	1994	PhD	Zeneca
Wendy Wilson *	1994	PhD	UCLA (USA)
Allison Fulford	1995	PhD	University of Bristol
Ashwin Patkar	1995	MSc	Philadelphia (Medical - Professor - USA)
Imad Rashid *	1995	PhD	Lecturer (Iraq)
Margot Bakker *	2000	PhD	Janssen (Research - Belgium)
Sharon Moss *	1996	PhD	Medical Journalism
Claire Roberts	1996	PhD	GSK
Helen Rowley	1996	PhD	RenaSci
Sharon Stratton	1996	PhD	GSK
Watchareewan Thongsaard *	1997	PhD	Srinakharinwirot Univ (Lecturer - Thailand)
Richard Bunday *	1997	PhD	Leicester Univ
Claire Shilliam	1998	PhD	GSK
Delyth Clemett *	1998	PhD	Medical Journalism
Gulzar Singh	1999	PhD	Postdoctoral Res (Nottingham)
Jane Bentley *	1999	PhD	Postdoctoral Res (London)
Margaret Graham	1999	PhD	Research
Sahana Nayak *	1999	PhD	Postdoctoral Res (Janssen)
Katherine Oldfield *	2000	PhD	Scientific Journalism
Savvas Neophytou	2001	PhD	Finance - London
Maria Lapidis *	2001	PhD	Postdoctoral Res (Lundbeck)
Suparporn Muchimapura *	2001	PhD	Lecturer Khoen Kaen University, Thailand
Joseph Cheer *	2000	PhD	Associate Professor (USA)
Adam Keeney *	2002	PhD	Postdoctoral Res (Lundbeck)
Yasmene Shah *	2003	PhD	Postdoctoral Res (Nottingham)
Helen Kogan *	2002	PhD	Journalism
Marie Woolley *	2002	PhD	Postdoctoral Res (Roche)
Maulik Jhaveri *	2002	PhD	Postdoctoral Res (Nottingham)
Victoria Bush *	2003	PhD	CRO
Somrudee Kaslungka *	2003	PhD	Lecturer - SWU Thailand
Alison Overbury *	2003	PhD	Research
Neil Easton	2003	PhD	Postdoctoral Res (Nottingham)
Laura Harper *	2004	PhD	Postdoctoral Res (USA)
Carolyn Steward*	2005	PhD	Research
Li Zhang	2005	MRes	
Parag Patil	2006	PhD	Teaching India
Madeleine King *	2006	PhD	University post (Nottingham)
Ian Kendall *	2006	PhD	Research (Nottingham)

Aris Moklas *	2007	PhD	University post Malaysia
Max Bianchi *	2007	PhD	Research (France)
Sarir Sarmad*	2011	PhD	Research Nottingham
Gillian Scullion*	2008	PhD	Research (Edinburgh)
David Watson*	2008	PhD	Research (Nottingham)
Dilshani Dissanayaka*	2010	PhD	University post Sri Lanka
Maha ElBatsh*	2009	PhD	University post Cairo
Ratchanee Rodsiri*	2009	PhD	University lecturer (Thailand)
Daniel Atkinson*	2011	PhD	
Neda Assareh*	2012	PhD	Research (Australia)
Nadia Malik (industrial)*		PhD	Industrial research

* indicates jointly supervised

International Liaison

Established staff development programme and a joint medical degree at Srinakharinwirot University, Bangkok, Thailand (1990-2008)

Visiting Professor Mahidol University, Thailand

External Assessor for promotions of academic staff (Pharmacology) University Malaya (1999 - 2003)

Represented British Pharmacological Society at 30th Anniversary of the Indian Society (1997)

Publications

Full papers (approx 350), chapters, reviews, books.

Over 350 abstracts (not listed)

Research Interests

- 1 Regulation of neurotransmitter function, role in behaviour
- 2 Neuropharmacology of mental and neurological disease and influence of early environment
- 3 Development of micro biosensors and analytical techniques for neuroscience applications
- 4 Role of oxidative stress in neuronal cell death and mechanism of action of ecstasy
- 5 Cannabinoid involvement in reward mechanisms
- 6 Application of pharmacological and functional MRI to studies in animals

Research Grant funding

Grant funders have included: Wellcome Trust, MRC, BBSRC, European Commission (ERC), Mental Health Foundation, PPP Healthcare Medical Trust.

Industrial funding and collaborations have included: GSK, Servier, Shire Pharmaceuticals, E. Lilly, Janssen, Hoffman La Roche, Reckitt & Colman, ICI (Vernalis, Zeneca)

Publications: Incomplete list.

(a) Full Papers

Marsden CA & Kerkut GA (1969) The cellular localization of monoamines in invertebrates using the Edwards-Pearse Tissue Freeze Dryer. *Exp.Physiol.Biochem.* **2:** 327-360

Marsden CA & Kerkut GA (1969) Fluorescence microscopy of the 5HT and catecholamine-containing cells in the central nervous system of the leech *Hirudo medicinalis*. *Comp.Biochem.Physiol.* **31:** 851-862

Marsden CA & Kerkut GA (1970) The occurrence of monoamines in Planorbis corneus: A fluorescence microscopic and microspectrometric study. *Comp.Gen.Pharmacol.* **1:** 101-116

Marsden CA & Kerkut GA (1970) Quantitative studies on the neurones of the leech *Hirudo*

medicinalis. *Comp.Gen.Pharmacology* **1**: 293-298

Marsden CA, Broch OJ & Guldborg HC (1971) Catechol-0- methyltransferase and monoamine oxidase activities in the rat submaxillary gland: Effects of ligation, sympathectomy and some drugs. *Eur.J.Pharmacology* **15**: 335-342

Marsden CA Broch OJ & Guldborg HC (1972) Effect of nigral and raphe lesions on the catechol-0-methyltransferase and monoamine oxidase activities in the corpus striatum of the rat. *Eur.J.Pharmacology* **19**: 35-42

Broch OJ & **Marsden CA** (1972) Regional distribution of monoamines in the corpus striatum of the rat. *Brain Res.* **38**: 425-428

Marsden CA (1972) The occurrence of 5-hydroxyindoleacetic acid in the central nervous system of *Planorbis corneus*. *Comp.Gen.Pharmacol.* **3**: 1-6

Marsden CA & Guldborg HC (1973) The role of monoamines in rotation induced or potentiated by amphetamine after nigral, raphe and mesencephalic reticular lesions in the rat brain. *Neuropharmacology* **12**: 195-211

Marsden CA (1973) The occurrence and subcellular distribution of catechol-0-methyltransferase in some tissues of the snail *Helix aspersa* (Mollusca). *Comp.Biochem.Physiol.* **44B**: 687-692

Knott PJ, **Marsden CA** & Curzon G (1974) Comparative studies of brain 5-hydroxytryptamine and tryptamine. *Adv.Psychopharmacology* **11**: 109-114

Marsden CA & Curzon G (1974) Effects of lesions and drugs on brain tryptamine. *J.Neurochemistry* **23**: 1171-1176

Hole K & **Marsden CA** (1974) Unchanged sensitivity to electric shock in L-tryptophan treated rats. *Pharmac.Biochem.Behav.* **3**: 307-309

Curzon G & **Marsden CA** (1975) Metabolism of a tryptophan load in the hypothalamus and other brain regions. *J.Neurochemistry* **25**: 251-256

Marsden CA & Curzon G (1976) Studies on the behavioural effects of tryptophan and para-chlorophenylalanine. *Neuropharmacology* **15**: 165-171

Marsden CA & Curzon G (1976) Effects of altered brain 5-hydroxy tryptaminergic activity on brain tryptophan, 5-hydroxytryptamine and 5-hydroxyindoleacetic acid. *Neuropharmacology* **15**: 703-708

Marsden CA (1976) The regulation of 5-hydroxytryptamine metabolism in the brain of the pond snail *Planorbis corneus*. Neurobiology of Invertebrates. *Gastropod Brain*. pp. 177-189 Hungarian Academy of Sciences

Marsden CA & Curzon G (1977) Effects of para-chlorophenylalanine and alpha-methyltryptophan on behaviour and brain 5-hydroxyindoles. *Neuropharmacology* **16**: 489-494

Marsden CA & Curzon G (1978) The contribution of tryptamine to the behavioural effects of L-tryptophan in tranlycypromine treated rats. *Psychopharmacology* **57**: 71-76

Curzon G, Fernando JCR & **Marsden CA** (1978) 5-Hydroxytryptamine: The effects of impaired synthesis on its metabolism and release in rats. *Br.J.Pharmac.* **63**: 627-634

Conti J, Strobe E, Adams RN & **Marsden CA** (1978) Voltammetry in brain tissues: Chronic recording of stimulated dopamine and 5-hydroxy- tryptamine release. *Life Sci.* **23**: 2705-2716

Marsden CA & Curzon G (1979) The role of tryptamine in the behavioural effects of tranlycypromine + L-tryptophan. *Neuropharmacology* **18**: 159-164

Marsden CA, Conti J, Strobe E, Curzon G & Adams RN (1979) Monitoring 5-hydroxytryptamine release in the brain of freely moving unanaesthetised rat using in vivo voltammetry. *Brain Res.* **171**: 85-99

- Marsden CA** & King B (1979) The use of doppler shift radar to monitor physiological and drug induced activity patterns in the rat. *Pharmac. Biochem.Behav.* **10**: 631-635
- Singleton C & **Marsden CA** (1979) Increased responsiveness to 5-methoxy-N, N-dimethyltryptamine in mice on high tryptophan diet. *Neuropharmacology* **18**: 569-572
- Marsden CA** (1980) The involvement of 5-hydroxytryptamine and dopamine in the behavioural effects of α -methyltryptamine. *Neuropharmacology* **19**: 691-698
- Marsden CA** (1981) p-Chloroamphetamine and α -methyltryptamine - correlation of behavioural response with 5HT release. Proceedings of Serotonin Symposium. *Adv.Exp.Med.Biol.* **133**: 777-778
- Marsden CA**, Bennett GW, Brazell M, Sharp T & Stolz JF (1981) Electrochemical monitoring of 5-hydroxytryptamine release *in vitro* and related *in vivo* measurements of indoleamines. *J.Physiol. (Paris)* **77**: 333-337
- Stolz JF & **Marsden CA** (1981) Behavioural effects of long-term inhibition 5-hydroxytryptamine receptors using metergoline. *J.Physiol. (Paris)* **77**: 385-388
- Bennett GW, **Marsden CA**, Sharp T & Stolz JF (1980) Concomittant determination of endogenous release of dopamine, noradrenaline 5-hydroxytryptamine and thyrotrophin releasing hormone from rat brain slices and synaptosomes. *Symposium on Neurotransmitter Turnover* Eds. Pycock C.J. & Taberner P. Croom-Helm (London), pp 183-189
- Gilbert R, Bennett GW, **Marsden CA** & Emson PC (1981) The effects of 5-hydroxytryptamine-depleting drugs on peptides in the ventral spinal cord. *Eur.J.Pharmac.* **76**: 203-210
- Bennett GW, Balls M, Clothier RH, **Marsden CA**, Robinson G & Wemyss-Holden GD (1980) Location and release of TRH and 5HT from amphibian skin. *Cell.Biology Int.Reports* **5**: 151-158
- Marsden CA** (1980) Effect of L-tryptophan loading on mouse brain 5-hydroxytryptamine: comparison of values obtained using fluorometric assay and a liquid chromatographic assay with electrochemical detection. *J.Neurochem.* **36**: 1621-1626
- Bennett GW, Brazell MP & **Marsden CA** (1981) Electrochemistry of neuropeptides: a possible method for assay and *in vivo* detection. *Life Sci.* **29**: 1001-1008
- Singleton C & **Marsden CA** (1981) Circadian variation in the head twitch response produced by 5-methoxy-N1N1-dimethyltryptamine and p-chloroamphetamine in the mouse. *Psychopharmacology* **74**: 173-176
- Gilbert RF, Emson PC, Hunt SP, Bennett GW, **Marsden CA**, Sandberg BEB & Steinbusch HW (1982) The effects of monoamine neurotoxins on peptides in the rat spinal cord. *Neuroscience* **7**: 69-87
- Stolz JF & **Marsden CA** (1982) Withdrawal from chronic treatment with metergoline, dl-propranolol and amitriptyline enhances serotonin receptor mediated behaviour in the rat. *Eur.J.Pharmac.* **79**: 17-22
- Brazell MP & **Marsden CA** (1982) Differential pulse voltammetry in the anaesthetised rat: identification of ascorbic acid, catechol and indoleamine oxidation peaks in the striatum and frontal cortex. *Br.J.Pharmac.* **75**: 539-547
- Marsden CA**, Bennett GW, Irons J, Gilbert RFT & Emson PC (1982) Localization and release of 5-hydroxytryptamine, thyrotrophin releasing hormone and substance P in rat ventral spinal cord. *Comp.Biochem. Physiol.* **72C**: 263-270
- Bennett GW, **Marsden CA**, Clothier RM, Waters AD & Balls M (1982) Co-existence of thyrotrophin releasing hormone and 5-hydroxytryptamine in the skin of *Xenopus laevis*. *Comp. Biochem. Physiol.* **72C**: 257-262
- Sharp T, Bennett GW & **Marsden CA** (1982) TRH analogues increase dopamine release from slices of rat brain. *J.Neurochem.* **39**: 1763-

- Bennett GW, Sharp T, **Marsden CA** & Parker T (1983) A manually operated brain tissue slicer suitable for neurotransmitter release studies. *Neurosci.Methods* **7**: 107-115
- Davies JE, **Marsden CA** & Roberts MHT (1983) Hyperalgesia and the reduction of monoamines resulting from lesions of the dorsolateral funiculus. *Brain Res.* **261**: 59-68
- Lawson N, Jennings RJ, Pollard AD, Sturton RG, Ralph SJ **Marsden CA**, Fears R & Brindley DN (1981) Effects of chronic modification of dietary fat and carbohydrate in rats. *Biochem.J.* **200**: 265-273
- Cousins C, **Marsden CA** & Brindley DN (1982) Feeding rats on diets rich in fat need not alter the concentrations of 5-hydroxytryptamine and 5-hydroxyindoleacetic acid in the brain. *Biochem.J.* **206**: 431-432
- Brazell MP & **Marsden CA** (1982) Intracerebral injection of ascorbate oxidase - effect on *in vivo* electrochemical recordings. *Brain Res.* **249**: 167-172
- Stolz JF, **Marsden CA** & Middlemiss DN (1983) Effect of chronic antidepressant treatment and subsequent withdrawal on 3H-5-hydroxytryptamine and 3H-spiperone binding in rat frontal cortex and serotonin mediated behaviour. *Psychopharmacology* **80**: 150-155
- Marsden CA**, Macdonald IA, Brazell MP & Maidment N (1983) Electrochemical detection of amines and other compounds of pharmacological and neurochemical interest. *Anal.Proc.Roy.Soc.Chem.* **20**: 559-562
- Zetterström T, Sharp T, **Marsden CA** & Ungerstedt U (1983) *in vivo* measurement of dopamine and its metabolites by intracerebral dialysis: changes after d-amphetamine. *J.Neurochem.* **41**: 1769-1773
- Sharp T, Tulloch IF, Bennett GW, **Marsden CA**, Metcalf G & Dettmar PW (1984) Analeptic effects of centrally injected TRH and TRH analogues in the pentobarbitone-anaesthetised rat. *Neuropharmacology* **23**: 339-348
- Lighton C, **Marsden CA** & Bennett GW (1983) The effects of 5,7-dihydroxytryptamine and p-chlorophenylalanine on thyrotrophin releasing hormone in regions of rat brain and spinal cord. *Neuropharmacology* **23**: 55-60
- Crespi F, Sharp T, Maidment N & **Marsden CA** (1983) Differential pulse voltammetry *in vivo*: evidence that uric acid contributes to the indole oxidation peak. *Neurosci.Letters* **43**: 203-208
- Sharp T, Brazell MP, Bennett GW & **Marsden CA** (1984) The TRH analogue CG3509 increases in the rat n.accumbens but not the striatum. *Neuropharmacology* **23**: 617-623
- Irons J, Robinson CM & **Marsden CA** (1984) 5HT-receptor involvement in tryptamine induced behaviour in mice. In: Trace Amines and the Neurosciences. *Humana Press* 423-428
- Robinson CM & **Marsden CA** (1984) Tryptamine induced changes in 5HT release from mouse brain slices. In: Trace Amines and the Neurosciences. *Humana Press* 265-267
- Lighton C, **Marsden CA**, Bennett GW, Minchin M & Green AR (1984) Decrease in thyrotrophin releasing hormone (TRH) in the n.accumbens and lumbar spinal cord following repeated electroconvulsive shock. *Neuropharmacology* **23**: 963-966
- Brindley DN, Macdonald IA & **Marsden CA** (1984) High fat diets need not increase tryptophan availability to the brain: Importance of the choice of the control diet. *J.Biochem.* **217**: 865
- Martin KF & **Marsden CA** (1984) *In vivo* voltammetry: monitoring drug induced changes in 5HT at the suprachiasmatic nucleus level. *Ann.Rev.Chronopharmacology* **1**: 5-8
- Marsden CA**, Maidment NT, Brazell MP & Sharp T (1984) Application of *in vivo* voltammetry to the development of new drugs. *Clinical Neuropharmacology* **7(1)**: 366-367
- Crespi F, Sharp T, Maidment NT & **Marsden CA** (1984) Differential pulse voltammetry: simultaneous

in vivo measurement of ascorbic acid, catechols and 5-hydroxyindoles in the rat striatum. *Brain Research* **322**: 135-138

Sharp T, Maidment NT, Brazell MP, Zetterstrom T, Ungerstedt U, Bennett GW & **Marsden CA** (1984) Changes in monoamine metabolites measured by simultaneous in vivo differential pulse voltammetry and intracerebral dialysis. *Neuroscience* **12**: 1213-1221

Sharp T, Bennett GW, **Marsden CA** & Tulloch IF (1984) A comparison of the locomotor effects induced by centrally injected TRH and TRH analogues. *Regulatory Peptides* **9**: 305-315

Nisbet A & **Marsden CA** (1984) Increased behavioural response to 5-methoxy-N,N-dimethyltryptamine but not to RU-24969 after intra-ventricular 5,7-dihydroxytryptamine administration. *Eur.J.Pharmacol.* **104**: 177-180

Marsden CA, Brazell MP & Maidment NT (1984) Micro-electrodes for *in vivo* neuroelectrochemistry. *J.Biomed.Eng.* **6**: 184-186

Maidment NT & **Marsden CA** (1985) *In vivo* voltammetric and behavioural evidence for somatodendritic autoreceptor control of mesolimbic dopamine neurones. *Brain Research* **338**: 317-325

Lighton C, Bennett GW & **Marsden CA** (1985) Increase in levels and *ex vivo* release of thyrotrophin releasing hormone (TRH) in specific regions of the rat CNS by chronic antidepressant treatment. *Neuropharmacology* **24**: 401-406

Johnson JV, Bennett GW, **Marsden CA**, Gardiner SM & Bennett T (1985) Electrochemical measurement of neurohypophyseal peptide levels in rat hypothalamic regions after adrenalectomy. In: *Hypertension Clin & Exper. - Theory & Practice* **A6 (10 & 11)**: 1993-1998

Brazell MP, **Marsden CA**, Nisbet AP & Routledge C (1985) The 5HT₁ receptor agonist RU-24969 decreases 5-hydroxytryptamine (5HT) release and metabolism in the rat frontal cortex *in vitro* and *in vivo*. *Br.J.Pharmac.* **86**: 209-216

Marsden CA, Martin KF, Routledge C, Brazell MP & Maidment NT (1986) Application of intracerebral dialysis and *in vivo* voltammetry to pharmacological and physiological studies of amine neurotransmitters. *Annals N.Y.Acad.Sci.* **473**: 106-125

Maidment NT & **Marsden CA** (1986) Effect of acute and chronic atypical neuroleptic administration on striatal and accumbens dopamine metabolism measured by *in vivo* voltammetry. *Annals N.Y.Acad.Sci.* **473**: 539-541

Routledge C & **Marsden CA** (1986) *In vivo* release of catecholamines from the rat hypothalamus measured by intracerebral dialysis. *Annals N.Y.Acad.Sci.* **473**: 537-539

Martin KF & **Marsden CA** (1986) Pharmacological manipulation of the serotonergic input to the SCN - an insight into the control of circadian rhythms. *Annals N.Y.Acad.Sci.* **473**: 542-545

Martin KF & **Marsden CA** (1986) Measurement of brain indoleamine release *in vivo*: Application to chronobiology', in NATO Study Group on Chronobiotechnology and Chronobiological Engineering, ed. L. E. Scheving, 1986

Routledge C & **Marsden CA** (1985) Application of HPLC with electrochemical detection to the study of neurotransmitters *in vivo*. *Biochem.Soc.Trans.* **13**: 1058-1061

Bennett GW, Nathan PA, Wong KK & **Marsden CA** (1986) Regional distribution of thyrotrophin releasing hormone, Substance P and 5-hydroxytryptamine in human spinal cord. *J.Neurochem.* **46**: 1718-1724

Bennett GW, Green AR, Lighton C & **Marsden CA** (1986) Changes in the behavioural response to a TRH analogue following chronic amitriptyline treatment and repeated electroconvulsive shock in the rat. *Br.J.Pharmac.* **88**: 129-139

Martin KF & **Marsden CA** (1986) *In vivo* voltammetry in the suprachiasmatic nucleus of the rat:

effects of RU 24969, methiothepin and ketanserin. *Eur.J.Pharmacol.* **121**: 135-139

Marsden CA & Martin KF (1986) Involvement of 5HT_{1A} and 2-receptors in the decreased 5-hydroxytryptamine release and metabolism in rat suprachiasmatic nucleus after intravenous 8-hydroxy-2-(n-dipropylamino)tetralin. *Br.J.Pharmac.* **89**: 277-286

Ford AD & **Marsden CA** (1986) Influence of anaesthetics on rat striatal dopamine metabolism *in vivo*. *Brain Res.* **379**: 162-166

Routledge C & **Marsden CA** (1986) Electrical stimulation of the C1 region of the rostral ventrolateral medulla of the rat increases mean arterial pressure and adrenaline release in the posterior hypothalamus. *Neuroscience* **20**: 457-466

Fone KCF, Bennett GW & **Marsden CA** (1987) Regional distribution of substance P and thyrotrophin releasing hormone-like immunoreactivity and indoleamines in the rabbit spinal cord. *J.Neurochem.* **48**: 1027-1032

Maidment NT & **Marsden CA** (1986) Acute clozapine, thioridazine and metoclopramide increases extracellular DOPAC and decreases extracellular 5HIAA measured simultaneously in the rat nucleus accumbens and striatum by *in vivo* voltammetry. *Neuropharmacology* **26**: 187-194

Heal DJ, Stoodley N, Elliot JM, **Marsden CA**, Bennett GW & Youdim MBH (1986) Behavioural and biochemical evidence for noradrenaline release in mouse brain by TRH and some of biologically stable analogues. *Neuropharmacology* **26**: 313-322

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