PUBLICATIONS

: Papers cited in Medline.

A. Books Chapters

Sihra TS (1997). Protein phosphorylation and dephosphorylation in isolated nerve terminals (synaptosomes).

Regulatory Protein Modifications: Techniques and Protocols (Hemmings HC, Jr. ed), pp 67-119. Totowa: Humana Press.

B. Refereed Articles (35)

1. Sihra TS, Scott IG, Nicholls DG (1984). Ionophore A23187, verapamil, protonophores, and veratridine influence the release of gamma-aminobutyric acid from synaptosomes by modulation of the plasma membrane potential rather than the cytosolic calcium.
   Journal of Neurochemistry 43:1624-1630.

2. Nicholls DG, Sihra TS (1986). Synaptosomes possess an exocytotic pool of glutamate.
   Nature 321:772-773.

3. Kauppinen RA, Sihra TS, Nicholls DG (1986). Divalent cation modulation of the ionic permeability of the synaptosomal plasma membrane.
   Biochimica et Biophysica Acta 860:178-184.

4. Nicholls DG, Sihra TS, Sanchez-Prieto J (1987). Calcium-dependent and -independent release of glutamate from synaptosomes monitored by continuous fluorometry.
   Journal of Neurochemistry 49:50-57.

5. Sanchez-Prieto J, Sihra TS, Nicholls DG (1987). Characterization of the exocytotic release of glutamate from guinea-pig cerebral cortical synaptosomes.
   Journal of Neurochemistry 49:58-64.

6. Sihra TS, Nicholls DG (1987). 4-Aminobutyrate can be released exocytotically from guinea-pig cerebral cortical synaptosomes.
   Journal of Neurochemistry 49:261-267.

7. Sanchez-Prieto J, Sihra TS, Evans D, Ashton A, Dolly JO, Nicholls DG (1987). Botulinum toxin A blocks glutamate exocytosis from guinea-pig cerebral cortical synaptosomes.
   European Journal of Biochemistry 165:675-681.

8. Kauppinen RA, Sihra TS, Nicholls DG (1987). Aminooxyacetic acid inhibits the malate-aspartate shuttle in isolated nerve terminals and prevents the mitochondria from utilizing glycolytic substrates.
   Biochimica et Biophysica Acta 930:173-178.

9. Wang JK, Walaas SI, Sihra TS, Aderem A, Greengard P (1989). Phosphorylation and associated translocation of the 87-kDa protein, a major protein kinase C substrate, in isolated nerve terminals.
Proceedings of the National Academy of Sciences of the United States of America 86:2253-2256.

10. Cidon S, Sihra TS (1989). Characterization of a H^+-ATPase in rat brain synaptic vesicles. Coupling to L-glutamate transport.
Journal of Biological Chemistry 264:8281-8288.

11. Sihra TS, Wang JK, Gorelick FS, Greengard P (1989). Translocation of synapsin I in response to depolarization of isolated nerve terminals.
Proceedings of the National Academy of Sciences of the United States of America 86:8108-8112.

12. Piomelli D, Wang JK, Sihra TS, Nairn AC, Czernik AJ, Greengard P (1989). Inhibition of Ca^{2+}/calmodulin-dependent protein kinase II by arachidonic acid and its metabolites.
Proceedings of the National Academy of Sciences of the United States of America 1286:8550-8554.

13. Nichols RA, Sihra TS, Czernik AJ, Nairn AC, Greengard P (1990). Calcium/calmodulin-dependent protein kinase II increases glutamate and noradrenaline release from synaptosomes.
Nature 343:647-651.

14. Barrie AP, Nicholls DG, Sanchez-Prieto J, Sihra TS (1991). An ion channel locus for the protein kinase C potentiation of transmitter glutamate release from guinea pig cerebrocortical synaptosomes.
Journal of Neurochemistry 57:1398-1404.

15. Sihra TS, Bogonez E, Nicholls DG (1992). Localized Ca^{2+} entry preferentially effects protein dephosphorylation, phosphorylation, and glutamate release.
Journal of Biological Chemistry 267:1983-1989.

16. Coffey ET, Sihra TS, Nicholls DG (1993). Protein kinase C and the regulation of glutamate exocytosis from cerebrocortical synaptosomes.
Journal of Biological Chemistry 268:21060-21065.

17. Sihra TS, Piomelli D, Nichols RA (1993). Barium evokes glutamate release from rat brain synaptosomes by membrane depolarization: involvement of K^+, Na^+, and Ca^{2+} channels.
Journal of Neurochemistry 61:1220-1230.

18. Benfenati F, Valtorta F, Rossi MC, Onofri F, Sihra TS, Greengard P (1993). Interactions of synapsin I with phospholipids: possible role in synaptic vesicle clustering and in the maintenance of bilayer structures.
Journal of Cell Biology 123:1845-1855.

19. Coffey ET, Herrero I, Sihra TS, Sanchez Prieto J, Nicholls DG (1994). Glutamate exocytosis and MARCKS phosphorylation are enhanced by a metabotropic glutamate receptor coupled to a protein kinase C synergistically activated by diacylglycerol and arachidonic acid.
Journal of Neurochemistry 63:1303-1310.

20. Coffey ET, Sihra TS, Nicholls DG, Pocock JM (1994). Phosphorylation of synapsin I and MARCKS in nerve terminals is mediated by Ca^{2+} entry via an Aga-GI sensitive Ca^{2+} channel which is coupled to glutamate exocytosis.
Federation of European Biochemical Societies Letters 353:264-268.

21. Sihra TS, Nairn AC, Kloppenburg P, Lin Z, Pouzat C (1995). A role for calcineurin (protein phosphatase-2B) in the regulation of glutamate release.
Biochemical Biophysical Research Communications 212:609-616.

22. Sihra TS, Pearson HA (1995). Ca/calmodulin-dependent kinase II inhibitor KN62 attenuates glutamate release by inhibiting voltage-dependent Ca^{2+}-channels.
Neuropharmacology 34:731-741.

23. Li L, Chin LS, Shupliakov O, Brodin L, Sihra TS, Hvalby O, Jensen V, Zheng D, McNamara JO, Greengard P, et al (1995). Impairment of synaptic vesicle clustering and of synaptic transmission, and increased seizure propensity, in synapsin I- 23deficient mice.
Proceedings of the National Academy of Sciences of the United States of America 92:9235-9239.

24. Nairn AC, Sihra TS, Andjus P, Craig A-M, Miyawaki A, Kloppenburg P, Lin Z, Pouzat C (1995). Rapid purification of protein phosphatase-2B (calcineurin) from rat forebrain.
Neuroprotocols 6:105-107.

25. Nairn AC, Sihra TS, Ebens A, Galagan J, Greene K, Hettinger-Smith B (1995). Phosphorylation of phosphatase inhibitor-1 by ATP-γ-S and dephosphorylation of thiophosphorylated inhibitor by protein phosphatases .
Neuroprotocols 6:108-111.

26. Jovanovic JN, Benfenati F, Siow YL, Sihra TS, Sanghera JS, Pelech SL, Greengard P, Czernik AJ (1996). Neurotrophins stimulate phosphorylation of synapsin I by MAP kinase and regulate synapsin I-actin interactions.
Proceedings of the National Academy of Sciences of the United States of America 93:3679-3683.

27. Perkinton MS, Sihra TS (1998). Presynaptic $GABA_B$ receptor modulation of glutamate exocytosis from rat cerebrocortical nerve terminals: receptor decoupling by protein kinase C.
Journal of Neurochemistry 70:1513-1522.

28. Wiedemann C, Schäfer T, Burger MM, Sihra TS (1998). An essential role for a small synaptic vesicle-associated phosphatidylinositol 4-kinase in neurotransmitter release.
Journal of Neuroscience 18:5594-5602.

29. Lukyanetz EA, Piper TP, Sihra TS (1998). Calcineurin involvement in the regulation of high threshold Ca channels in NG108-15 (rodent neuroblastoma x glioma hybrid) cells.
Journal of Physiology 510.2:371-385.

30. Perkinton MS, Sihra TS (1999). A high affinity presynaptic kainate-type glutamate receptor facilitates glutamate exocytosis from cerebral cortex nerve terminals (synaptosomes).
Neuroscience 90(4): 1279-1290.

31. Perkinton MS, Sihra TS, Williams, RJ. (1999). Ca^{2+}-permeable AMPA receptors induce phosphorylation of CREB through a phosphatidylinositol 3-kinase-dependent stimulation of the mitogen-activated protein kinase signalling cascade in neurons.
Journal of Neuroscience 19:5861-5874.

32. Jovanovic JN, Czernik AJ, Fienberg AA, Greengard P, Sihra TS (2000). Synapsins as mediators of BDNF-regulated neurotransmitter release.*
Nature Neuroscience 3(4):323-329.

33. Burley JR, Sihra TS (2000). A modulatory role for protein phosphatase 2B (calcineurin) in the regulation of Ca^{2+} entry.
European Journal of Neuroscience 12:2881-2991.

34. Wang SJ, Sihra TS, Gean PW. (2001). Lamotrigine inhibition of glutamate release from isolated cerebrocortical nerve terminals (synaptosomes) by suppression of voltage-activated calcium channel activity.
Neuroreport 12(10):2255-2258.

35. Jovanovic JN, Sihra TS, Nairn AC, Hemmings Jr HC, Greengard P and Czernik AJ (2001). Opposing changes in phosphorylation of specific sites in synapsin I during Ca^{2+}-dependent glutamate release in isolated nerve terminals.
Journal of Neuroscience 21:7944-7953.

C. Other Publications (Abstracts)

1. Bjornsson OG, Fletcher D, Sihra TS, Camilleri M, Chadwick VS (1979). Duodenal perfusion of sodium taurocholate in man, selectively inhibits biliary but not pancreatic secretion.
Gut 29 (10):925-926.

2. Bjornsson OG, Sihra TS, Fletcher D, Chadwick VS (1980). Duodenal perfusion of STC selectively inhibits biliary but not pancreatic secretion.
Gastroenterology 78 (5):1142-1143.

3. Bjornsson OG, Murphy R, Sihra TS, Chadwick VS (1981). Measurement of polyethylene glycol (PEG) in biological fluids: effects of storage and freeze-thawing.
Clinical Research 29 (2):304.

4. Sihra TS, Nicholls DG (1984). Synaptosomal bioenergetics: primary role of the plasma membrane potential in regulating amino-acid transmitter transport.
Proceedings Third European Bioenergetics Conference 3B:453-454.

5. Sihra TS, Nicholls DG (1985). Calcium-dependent release of endogenous 4-aminobutyric acid in isolated nerve endings.
Biochemical Society Transactions 13:919-920.

* Reviewed in Current Opinions in Neurobiology (June 2000), 10 (3), 280, by Dr Morgan Sheng.

6. Kauppinen RA, Sihra TS, Nicholls DG (1986). The role of external Ca in synaptosomal membrane bioenergetics.
Biochemical Society Transactions 14:889-890.

7. Sihra TS, Nicholls DG (1986). Ca-independent and Ca-dependent 4-aminobutyrate release occur from distinct compartments within guinea-pig cerebral cortical synaptosomes.
Biochemical Society Transactions 14:909-910.

8. Sihra TS, Cidon S (1988). Characterisation of a proton-ATPase activity in rat brain synaptic vesicles.
Society for Neuroscience 14 (1):681.

9. Nichols RA, Sihra TS (1989). Concentration-dependence of the effect of barium on endogenous glutamate release from rat brain synaptosomes.
Society for Neuroscience 15:474.

10. Coffey ET, Sihra TS, Nicholls DG (1992). The role of protein kinase C in the regulation of glutamate release from isolated nerve terminals.
Society for Neuroscience 18:A207.

11. Coffey ET, Herrero I, Sanchez Prieto J, Sihra TS, Nicholls DG (1993). Metabotropic receptor activation of glutamate release is PKC mediated.
Journal of Neurochemistry 61: S17-S17, Suppl. S.

12. Coffey ET, Herrero I, Sihra TS, Nicholls DG (1993). Metabotropic receptor activation of glutamate release is PKC mediated.
Journal of Neurochemistry 61: S253-S253, Suppl. S.

13. Perkinton MS, Mathie A, Sihra TS (1995). Modulation of glutamate exocytosis from rat brain nerve terminals by a presynaptic kainate receptor .
Society for Neuroscience 21:353 (A145.21).

14. Perkinton MS, Sihra TS (1996). ω-Conotoxin MVIIC reversibly inhibits high-K^+- and 4-aminopyridine-evoked glutamate release from isolated nerve terminals (synaptosomes) .
British Journal of Pharmacology 117:63P.

15. Jovanovic JN, Sihra TS, Nairn AC, Greengard P, Czernik AJ (1996). Regulation of MAP kinase activity and phosphorylation of synapsin I in nerve terminals.
Molecular Biology of the Cell 7:654A.

16. Lukyanetz EA, Piper TP, Dolphin AC, Sihra TS (1996). Interaction between calcium channels and calcineurin in NG108-15 cells.
Journal of Physiology 494:79P.

17. Burley JR, Piper TP, Sihra TS (1997). A functional role for calcineurin in the modulation of calcium channels in NG108-15 cells .
Society for Neuroscience 23:1191 (A473.10).

18. Jovanovic JN, Sihra TS, Shupliakov O, Brodin L, Greengard P, Czernik AJ (1997). Regulation of MAP kinase activity and phosphorylation of synapsin I in nerve terminals.
Society for Neuroscience 23:361 (A146.9).

19. Jovanovic JN, Czernik AJ, Fienberg AA, Greengard P, Sihra TS (1999). Synapsins as mediators of BDNF-regulated neurotransmitter release.
Society for Neuroscience 25:1744 (A692.11).

20. Bedford EK, Kittler SC, Jones SC, Sihra TS Harvey RJ, Moss SJ (1999) $GABA_A$ receptor subunits associate with specific gephyrin isoforms.
Society for Neuroscience 25:1712 (A681.21).

21. Burley JR, Jeromin A, Robertson B, Roder JC, Sihra TS (2000). Overexpression of frequenin in NG108-15 cells increases low voltage-activated calcium channel activity.
Biophysical Journal 78: (1) 611Pos, Part 2 Jan. 2000.

22. Wang SJ, Jovanovic JN, Sihra TS (2000). Cross-talk of β-adrenoreceptor and 5-hydroxytryptamine signalling systems in the modulation of glutamate release from cerebrocortical nerve terminals.
Society for Neuroscience 26:880 (A331.15).

D. Reviews (invited):

1. Sihra TS, Nichols RA (1993). Mechanisms in the regulation of neurotransmitter release from brain nerve terminals: current hypotheses. [Review].
Neurochemical Research 18:47-58. NCBI PubMed

2. Nicholls DG, Sihra TS, Sanchez-Prieto J (1987). The role of the plasma membrane and intracellular organelles in synaptosomal calcium regulation.
Society of General Physiologists Series 42:31-43. NCBI PubMed

E. Lectures

1. Sihra TS (1993). Glutamate release from isolated nerve terminals: modulatory role of protein phosphorylation and dephosphorylation.
Biochemical Society Transactions 21:410-41. NCBI PubMed

Editorial

Sihra TS and Moss SJ (Ed.). Colloquium: Membrane Signalling Complexes at Glasgow Meeting of Meeting of Biochemical Society, 7-9th April 1999).
Biochemical Society Transactions.