

## PUBLICATIONS

### 1. BOOKS

R.C. Thomas (1978). *Ion-sensitive intracellular microelectrodes: how to make and use them.* Academic Press, London.

### 2. PAPERS IN REFEREED JOURNALS

- G.A. Kerkut & R.C. Thomas (1963). Acetylcholine and the spontaneous inhibitory post-synaptic potentials in the snail neurone. *Comp. Biochem. Physiol.* 8, 39-45.
- G.A. Kerkut & R.C. Thomas (1964). The effect of anion injection and changes in the external potassium and chloride concentration on the reversal potentials of IPSP and acetylcholine. *Comp. Biochem. Physiol.* 11, 199-213.
- G.A. Kerkut, R.C. Thomas & B.H. Venning (1964). A transistorized linear sweep circuit for determining reversal potentials in nerve cells. *Med. Electron. Biol. Engng.* 2, 425-430.
- G.A. Kerkut & R.C. Thomas (1965). An electrogenic sodium pump in snail nerve cells. *Comp. Biochem. Physiol.* 14, 167-183.
- V.J. Wilson, M. Kato & R.C. Thomas (1965). Excitation of lateral vestibular neurones. *Nature* 206, 96-97.
- R.C. Thomas & V.J. Wilson (1965). Precise localization of Renshaw cells with a new marking technique. *Nature* 206, 211-213.
- R.C. Thomas & V.J. Wilson (1966). Marking single neurones by staining with intracellular recording micro-electrodes. *Science* 151, 1538-1539.
- V.J. Wilson, M. Kato, R.C. Thomas & B.W. Peterson (1966). Excitation of lateral vestibular neurons by peripheral afferent fibres. *J. Neurophysiol.* 29, 508-529.
- R.C. Thomas & V.J. Wilson. (1967). Recurrent interactions between motoneurons of known location in the cervical cord of the cat. *J. Neurophysiol.* 30, 661-674.
- R.C. Thomas (1969). Membrane current and intracellular sodium changes in a snail neurone during extrusion of injected sodium. *J. Physiol.* 201, 495-514.
- R.C. Thomas, J.R. Manger & E.J. Harris (1969). Cation uptake as a basis for the production of proton pulses by mitochondria at the anaerobic-aerobic transition. *European J. Biochem.* 11, 413-418.
- R.C. Thomas (1972). Electrogenic sodium pump in nerve and muscle cells. *Physiol. Revs.* 52, 563-594.
- R.C. Thomas (1972). Intracellular sodium activity and the sodium pump in snail neurones. *J. Physiol.* 220, 55-71.
- R.C. Thomas (1974). Intracellular pH of snail neurones measured with a new pH-sensitive glass microelectrode. *J. Physiol.* 238, 159-180.
- T.O. Neild & R.C. Thomas (1974). Intracellular chloride activity and the effects of acetylcholine in snail neurones. *J. Physiol.* 242, 453-470.
- L.D. Partridge & R.C. Thomas (1974). Effect of intracellular lithium on snail neurones. *Nature* 249, 578-580.
- C.C. Aickin & R.C. Thomas (1975). Microelectrode measurement of the internal pH of crab muscle fibres. *J. Physiol.* 252, 803-815.
- R.C. Thomas, W. Simon & M. Oehme (1975). Lithium accumulation by snail neurones measured with a new Li<sup>+</sup>-sensitive microelectrode. *Nature*, 258, 754-756.

- R.C. Thomas (1976). Ionic mechanism of the H<sup>+</sup> pump in a snail neurone. *Nature* 262, 54-55.
- D. Ellis & R.C. Thomas (1976). Micro-electrode measurement of the intracellular pH of mammalian heart cells. *Nature* 262, 224-225.
- L.D. Partridge & R.C. Thomas (1976). The effects of lithium and sodium on the potassium conductance of snail neurones. *J. Physiol.* 254, 551-563.
- R.C. Thomas (1976). The effects of CO<sub>2</sub> on the intracellular pH and buffering power of snail neurones. *J. Physiol.* 255, 715-735.
- D. Ellis & R.C. Thomas (1976). Direct measurement of the intracellular pH of mammalian cardiac muscle. *J. Physiol.* 262, 755-771.
- R.W. Meech & R.C. Thomas (1977). The effect of calcium injection on the intracellular sodium and pH of snail neurones. *J. Physiol.* 265, 867-879.
- C.C. Aickin & R.C. Thomas (1977). Microelectrode measurement of the intracellular pH and buffering power of mouse soleus muscle fibres. *J. Physiol.* 267, 791-810.
- C.C. Aickin & R.C. Thomas (1977). An investigation of the ionic mechanism of intracellular pH regulation in mouse soleus muscle fibres. *J. Physiol.* 273, 295-316.
- R.C. Thomas (1977). The role of bicarbonate, chloride and sodium ions in the regulation of intracellular pH in snail neurones. *J. Physiol.* 273, 317-338.
- R.C. Thomas (1978). Comparison of the mechanisms controlling intracellular pH and sodium in snail neurones. *Respiration Physiology* 33, 63-73.
- R.W. Meech & R.C. Thomas (1980). Effect of measured calcium chloride injections on the membrane potential and internal pH of snail neurones. *J. Physiol.* 298, 111-129.
- A.P. Sharp & R.C. Thomas (1981). The effects of chloride substitution on intracellular pH in crab muscle. *J. Physiol.* 312, 71-80.
- R.C. Thomas & C.J. Cohen (1981). A liquid ion-exchanger alternative to KCl for filling intracellular reference microelectrodes. *Pflugers Archiv.* 390, 96-98.
- R.C. Thomas & R.W. Meech (1982). Hydrogen ion currents and intracellular pH in depolarized voltage-clamped snail neurones. *Nature*, 299, 826-828.
- M.G. Evans & R.C. Thomas (1984). Acid influx into snail neurones caused by reversal of the normal pH<sub>i</sub>-regulating system. *J. Physiol.* 346, 143-154.
- P.S. Taylor & R.C. Thomas (1984). The effect of leakage on microelectrode measurements of intracellular sodium activity in crab muscle fibres. *J. Physiol.* 352, 539-550.
- R.C. Thomas (1984). Review Lecture: Experimental displacement of intracellular pH and the mechanism of its subsequent recovery. *J. Physiol.* 354, 3P-22P.
- W.R. Schlu & R.C. Thomas (1985). A dual mechanism for intracellular pH regulation by leech neurones. *J. Physiol.* 364, 327-338.
- M.S. Szatkowski & R.C. Thomas (1986). New method for calculating pH<sub>i</sub> from accurately measured changes in pH<sub>i</sub> induced by a weak acid and base. *Pflugers Arch.* 407, 59-63.
- R.C. Thomas (1987). Extracellular acidification at the surface of depolarized voltage-clamped snail neurones detected with eccentric combination pH microelectrodes. *Can. J. Physiol. Pharmacol.* 65, 1001-1005.
- R.W. Meech & R.C. Thomas (1987). Voltage-dependent intracellular pH in *Helix aspersa* neurones. *J. Physiol.* 390, 433-452.
- R.C. Thomas (1988). Changes in the surface pH of voltage-clamped snail neurones apparently caused by H<sup>+</sup> fluxes through a channel. *J. Physiol.* 398, 313-327.
- M.J. Mason & R.C. Thomas (1988). A microelectrode study of the mechanisms of L-lactate entry into and release from frog sartorius muscle. *J. Physiol.* 400, 459-479.

- M.S. Szatkowski & R.C. Thomas (1989). The intrinsic intracellular H<sup>+</sup> buffering power of snail neurones. *J. Physiol.* 409, 89-101.
- R.C. Thomas (1989). Proton channels in snail neurones: does calcium entry mimic the effects of proton influx? *Ann. N.Y.Acad. Sci.* 574, 287-293.
- C.J. Schwiening & R.C. Thomas (1992) Mechanism of pH<sub>i</sub> regulation by locust neurones in isolated ganglia : a microelectrode study. *J. Physiol.* 447, 693-709.
- C.J. Schwiening, H.J. Kennedy & R.C. Thomas (1993) Calcium-hydrogen exchange by the plasma membrane Ca-ATPase of voltage-clamped snail neurons. *Proc. R. Soc. Lond. B.* 253, 285-289.
- H.J. Kennedy & R.C. Thomas (1995) Intracellular calcium and its sodium-independent regulation in voltage-clamped snail neurones. *J. Physiol.* 484; 533-548.
- R. K. Orkand & R. C. Thomas (1995) Effects of low doses of caffeine on [Ca<sup>2+</sup>]<sub>i</sub> in voltage-clamped snail (*Helix aspersa*) neurones. *J. Physiol.*, 489, 19-29.
- C. J. Schwiening & R. C. Thomas (1996) Relationship between intracellular calcium and its muffling measured by calcium iontophoresis in snail neurones. *J. Physiol.*, 491; 621-633.
- H.J. Kennedy & R.C. Thomas (1996) Effects of injecting calcium-buffer solutions on [Ca<sup>2+</sup>]<sub>i</sub> in voltage-clamped snail neurons. *Biophys. J.* 70; 2120-2130.
- D. Willoughby, R. C. Thomas & C. J. Schwiening (1998) Comparison of simultaneous pH measurements made with 8-hydroxypyrene-1,3,6-trisulphonic acid (HPTS) and pH-sensitive microelectrodes in snail neurones. *Pflugers Arch.* 436; 615-622
- D. Willoughby, R. C. Thomas & C. J. Schwiening (1999) A role for Na<sup>+</sup>/H<sup>+</sup> exchange in pH regulation in *Helix* neurones. *Pflugers Arch.* 438; 741-749.
- D. Willoughby, R. C. Thomas & C. J. Schwiening (2001) The effects of intracellular pH changes on resting cytosolic calcium in voltage-clamped snail neurones. *J. Physiol.* 530; 405-416.
- R. Collins & R. C. Thomas (2001) The effects of calcium pump inhibitors on the response of intracellular calcium to caffeine in snail neurones. *Cell Calcium*, 30, 41-48.
- R. C. Thomas (2002) The effects of HCl and CaCl<sub>2</sub> injections on intracellular calcium and pH in voltage-clamped snail (*Helix aspersa*) neurons *J gen Physiol*, 120; 567-579.
- R. C. Thomas, S E. Pagnotta, & A. Nistri (2003) Whole-cell recording of intracellular pH with silanized and oiled patch-type single or double-barreled microelectrodes. *Pflugers Archiv*, 447; 259-265.
- Marchenko, S M, Yarotskyy VV, Kovalenko TN, Kostyuk PG, & Thomas RC. (2005) Spontaneously active and InsP<sub>3</sub>-activated ion channels in cell nuclei from rat cerebellar Purkinje and granule neurons. *J Physiol*, 565: 897-910.
- R.C. Thomas & M.Postma (2007) Dynamic and static calcium gradients inside large snail (*Helix aspersa*) neurones detected with calcium-sensitive microelectrodes. *Cell Calcium* 41 365-378
- P. J. Reece, K. Dholakia, R. C. Thomas & G. A. Cottrell (2008) Green laser light (532nm) activates a chloride current in the C1 neuron of *Helix aspersa*. *Neuroscience Letters* 433: 265-269.
- R. C. Thomas (2009) The plasma membrane calcium ATPase (PMCA) of neurones is electroneutral and exchanges 2 H<sup>+</sup> for each Ca<sup>2+</sup> or Ba<sup>2+</sup> ion extruded. *J Physiol.* 587.2 (2009) pp 315–327
- R. C. Thomas (2011).The Ca(2+):H(+) coupling ratio of the plasma membrane calcium ATPase in neurones is little sensitive to changes in external or internal pH. *Cell Calcium*. 49(6):357-64.
- R C Thomas (2013) Calcium content of the endoplasmic reticulum of snail neurones releasable by caffeine. *Cell Calcium* 53; 120– 124.

### **3. Chapters in Books, Edited Conference Proceedings, Short Articles, etc.**

- V.J.Wilson & R.C.Thomas (1968). Recurrent interaction among forelimb motoneurons of known location. In: Structure and function of inhibitory neuronal mechanisms. Edited by: Euler, C., Skoglund, S. & Soderberg, U., Pergamon Press, London, pp. 323-326.
- R.C.Thomas & L.D.Partridge (1974). Current work on the voltage clamp. *Nature* 250, 531-532.
- R.C.Thomas (1976). Construction and properties of recessed-tip microelectrodes for  $\text{Na}^+$ , pH and  $\text{Cl}^-$ . In: Ion and Enzyme Electrodes in Biology and Medicine, pp 141-148. Ed. M. Kessler and others. Urban & Scharzenburg, Munich.
- R.C.Thomas (1976). The effects of  $\text{CO}_2$  and bicarbonate on the intracellular pH of snail neurones. In: Ion and Enzyme Electrodes, (as above).
- R.C.Thomas & W.J.Moody (1980). Emerging techniques: Ion-sensitive microelectrodes for intracellular use. *TIBS* 5, 86-87.
- R.C.Thomas (1980). Reversal of the pH<sub>i</sub>-regulating system in a snail neuron. In: Current Topics in Membranes and Transport, 13, pp. 23-29, ed. E.L.. Boulpaep.
- R.C.Thomas (1980). Regulation of intracellular  $\text{Na}^+$ ,  $\text{K}^+$  and  $\text{H}^+$  concentrations in snail neurons. In: Molluscan Nerve Cells: from biophysics to behaviour. pp. 65-72. Eds. K.Koester and J.H. Byrne. Cold Spring Harbor, N.Y.
- R.C.Thomas (1982). Electrophysiology of the sodium pump in a snail neuron. *Curr. Topics in Membranes and Transport* 16, ed. C.L. Slayman. pp.3-16.
- R.C.Thomas (1982). Ion-Sensitive Microelectrodes. In: Techniques in Cellular Physiology, ed. P.F.Baker. Vol. P1/11, P125/1-12.
- R.C.Thomas (1982). pH microelectrodes: tips on making the recessed-tip type for intracellular use. In: Intracellular pH: its measurement, regulation and utilization in cellular functions. Eds. R. Nuccitelli and D. Deamer. Alan R. Liss. New York. pp.1-6.
- R.C.Thomas (1982). Snail neuron intracellular pH regulation. In: Intracellular pH, as above. pp. 189-204.
- R.W.Meech & R.C.Thomas (1983). Hydrogen ion currents in depolarised molluscan neurones. In: The Physiology of Excitable Cells. Eds. A.D.Grinnell and W.J.Moody. Alan R. Liss. N.Y. 65-72.
- R.C.Thomas (1984). Electrogenic sodium pump current associated with recovery from intracellular acidification of snail neurones. In: Electrogenic Transport, ed. M.P. Blaustein & M. Lieberman. Raven, N.Y. pp.353-363.
- R.C.Thomas & W.R.Schlue (1986). Intracellular pH regulation by leech and other invertebrate neurons. In: Current Topics in Membrane and Transport. Vol. 26.
- R.C.Thomas (1986). Intracellular pH. In: Acid-Base Balance. Ed. R.Hainsworth, pp 50-74. Manchester University Press.
- R.C.Thomas (1987). Inhibition by acidification? *Nature* 330, 110.
- R.C. Thomas (1988). Proton channels in snail neurons studied with surface pH glass microelectrodes. In: Proton passage across cell membranes. Wiley, Chichester (Ciba Foundation Symposium 139) 168-183.
- R.C. Thomas (1989). Intracellular pH regulation and the effects of external acidification. In Acid toxicity and Aquatic Animals, ed. R. Morris, E.W. Taylor, D.J.A. Brown, & J.A. Brown, CUP, 113-123.
- R.C. Thomas (1989). News and Views: Bicarbonate and pH<sub>i</sub> response. *Nature*, 337, 601.
- R.C. Thomas (1991) Homeostatic muffling. Scientific correspondence. *Nature* 350, 564.

- R. C. Thomas (1992) Measurement of Ion Activity with Selective Microelectrodes. In Practical electrophysiological methods. eds Grantyn, R & Kettenman, H., Wiley-Liss, NY., pp373-377.
- R.C. Thomas (1993) Intracellular pH and its regulation. *Physiological Society Magazine*, January, 24-26.
- R.C.Thomas (1995) News and Views: Bicarbonate briefly CO<sub>2</sub>-free. *Nature*, 374, 597-598.
- R. C. Thomas & C. J. Schwiening, (1998) Intracellular pH regulation in invertebrate neurons. In: *pH and Brain Function.* , ed. K. Kaila & B. Ransom, Wiley-Liss, New York; pp195-209.
- C. J. Schwiening & R. C. Thomas, (1998) pH consequences of calcium regulation. In: *pH and Brain Function.* , ed. K. Kaila & B. Ransom, Wiley-Liss, New York; pp277-288
- R. C. Thomas (1998) Ion-Sensitive Microelectrode In: Instruments of Science : an historical encyclopaedia.eds. Bud, R. & Warner, D. J., Garland, New York. pp341-2.
- R. C. Thomas (2001) Electrophysiological Measurements using Ca<sup>2+</sup>-Sensitive Microelectrodes In: Measuring Calcium and Calmodulin Inside and Outside Cells ed. O. H. Petersen, Springer, Berlin. pp 91-102.
- R. C. Thomas (2005) How I came to probe intracellular pH and realised it can be interesting. *Physiology News* 60, 5-8.
- Marchenko, S M & Thomas, R C (2006) Nuclear Ca<sup>2+</sup> signalling in cerebellar Purkinje neurons. *The Cerebellum*, 5, 36-42.
- R C Thomas (2010) Intracellular Calcium-Sensitive Microelectrodes. In: *Calcium Measurement Methods* ed. A. Verkhratsky and O. H. Petersen, Humana Press, pp 119-125.
- R C Thomas (2011) Abstracts of Communications: people were faster than Computers. *Physiology News* 83 pp12.
- R.C. Thomas and D.M. Bers (2014) Use of Calcium-Sensitive Mini and Microelectrodes In *Calcium Techniques* ed Parys et al CSH Press New York pp 367-380.

#### **4. Published Abstracts**

- G.A. Kerkut & R.C.Thomas (1963). Anion permeability of the inhibitory post-synaptic membrane of Helix neurones. *J. Physiol.* 168, 23-24P.
- R.C.Thomas (1968). Measurement of current produced by the sodium pump in a snail neurone. *J. Physiol.* 195, 23-24P.
- R.C.Thomas (1970). New design for sodium sensitive glass microelectrode. *J. Physiol.* 210, 82-83P.
- T.O. Neild & R.C.Thomas (1973). New design for a chloride-sensitive microelectrode. *J. Physiol.* 231, 7-8P.
- R.C.Thomas (1974). The effect of bicarbonate on the intracellular buffering power of snail neurones. *J. Physiol.* 241, 103-104P.
- R.C.Thomas (1975). A floating current clamp for intracellular injection of salts by interbarrel iontophoresis. *J. Physiol.* 245, 20-22P.
- L.D.Partridge & R.C.Thomas (1975). A twelve-way rotary tap for changing physiological solutions. *J. Physiol.* 245, 22-23P.
- C.C.Aickin & R.C.Thomas (1976). Intracellular pH of mouse soleus muscle. *J. Physiol.* 260, 25-26P.
- R.C.Thomas (1976). Comparison of the Na<sup>+</sup> and H<sup>+</sup> pumps in a snail neurone. *J. Physiol.* 263, 212-213P.

- C.C.Aickin & R.C.Thomas (1977). The effect of external Na and amiloride on pH<sub>i</sub> recovery in mouse soleus muscle. *J. Physiol.* 269, 80-81P.
- R.C.Thomas (1977). Glass micro-electrode measurement of intracellular pH. *Proc. I.U.P.S. XIII*, abstract 3.49.
- R.C.Thomas (1977). Simultaneous recording of intracellular pH, sodium and chloride in a snail neurone. *Proc. I.U.P.S. XIII*, abstract 2233.
- R.C.Thomas (1978). Construction and testing of recessed-tip pH-sensitive microelectrodes. *J. Physiol.* 277, 14-15P.
- A.P.Sharp & R.C.Thomas (1979). The effect of chloride substitutes on pH<sub>i</sub> in crab muscle fibres. *J. Physiol.* 293, 75-76P.
- R.C.Thomas (1979). Recovery of pH<sub>i</sub> in snail neurones exposed to high external potassium. *J. Physiol.* 296, 77P.
- R.C.Thomas (1981). Vanadate injection into snail neurones does not inhibit pH<sub>i</sub> regulation. *J. Physiol.* 318, 15-16P.
- M.G.Evans & R.C.Thomas (1982). Minimising the volume of an experimental bath for intracellular recording from a superfused snail brain preparation. *J. Physiol.* 327, 18-19P.
- M.G.Evans & R.C.Thomas (1983). The effects of acid solutions on intracellular pH and Na in snail neurones. *J.Physiol.* 341, 60P.
- R.C.Thomas (1983). Regulation of intracellular pH. *Proc.I.U.P.S. XV*, abstract 414.04.
- R.C.Thomas & R.W.Meech (1983). Appearance of proton permeable channel in depolarised snail neurones. *Proc.I.U.P.S. XV*, abstract 588.02.
- R.C.Thomas (1983). Intracellular pH regulation in animal cells, with special reference to snail neurones. *Biochem. Soc. Trans.* 11, 76-78.
- M.J. Mason & R.C. Thomas (1985). Evidence for facilitated diffusion of L-lactate across frog skeletal muscle membranes. *J. Physiol.* 361, 23P.
- M.J. Rickard & R.C. Thomas (1985). Microcomputer system for simultaneous solution switching and data collection for experiments with ion-sensitive micro-electrodes. *J. Physiol.* 364, 8P.
- R.C.Thomas (1986). Eccentric double micropipette suitable both for pH micro-electrodes and for intracellular iontophoresis. *J. Physiol.* 371, 24P.
- M.S.Szatkowski & R.C.Thomas (1986). Calculation of steady-state pH<sub>i</sub> from pH<sub>i</sub> changes caused by weak acids and bases in snail neurones. *J.Physiol.* 371, 153P.
- R.C.Thomas (1987). The effect of depolarization and external buffers on the surface pH of voltage-clamped snail neurones. *J. Physiol.* 382, 130P.
- M.S.Szatkowski & R.C.Thomas (1987). Procaine and 4-aminopyridine increase both pH<sub>i</sub> and intracellular buffering power in snail neurones. *J. Physiol.* 391, 79P.
- B.J.Harvey & R.C.Thomas (1987). Intracellular pH and calcium effects on sodium conductance and transport in isolated frog skin epithelium. *J. Physiol.* 394, 92P.
- J.A.Coles, P.Giovannini & R.C.Thomas (1988). Changes in extracellular pH induced by light stimulation in slices of honeybee drone retina. *J.Physiol.* 398, 59P.
- R.C. Thomas (1989). Apparent proton influx via channels. *Acta Physiol. Scand.* 136 (S582) 12.
- C.J. Schwiening & R.C. Thomas (1989). A microelectrode study of pH<sub>i</sub> regulation in locust neurones. *Acta Physiol. Scand.* 136 (S582), 84.
- C.J. Schwiening & R.C. Thomas (1989). Mechanism of intracellular pH regulation by isolated locust neurones. *J. Physiol.* 418, 126P
- C. J. Schwiening & R.C. Thomas (1990). A vacuum silanization technique for eccentric double-barreled ion-sensitive microelectrodes made with aluminosilicate glass. *J.Physiol.* 425, 8P.

- H.J. Kennedy & R.C.Thomas (1991) Simultaneous Fura-2 and ion-sensitive microelectrode measurement of free calcium ion changes in voltage-clamped *Helix aspersa* neurones. *J. Physiol.* 446, 134P.
- R.C. Thomas & C.J. Schwiening (1992) Optical fibre fluorescence system for intracellular  $\text{Ca}^{2+}$  measurement: one lamp and filter wheel supplies two set-ups. *J. Physiol.* 452, 153P
- H.J. Kennedy & R.C.Thomas (1993) The effect of vanadate on intracellular calcium in neurones in isolated snail ganglia. *J. Physiol.* 467, 169P.
- C.J. Schwiening, H.J. Kennedy & R.C. Thomas (1993) Proton transport by the plasma membrane  $\text{Ca}^{2+}$ -ATPase of voltage-clamped snail neurones in isolated ganglia. *J. Physiol.* 473, 39P.
- R.C. Thomas (1994) Current construction protocol for Calcium-sensitive intracellular microelectrodes. *J. Physiol.* 476, 9P
- H.J. Kennedy & R.C.Thomas (1994) The effects of injecting calcium buffer solutions on intracellular calcium in snail neurones in isolated ganglia. *J. Physiol.* 479, 11P.
- C.J. Schwiening, H.J. Kennedy & R.C.Thomas (1995) Calcium muffling in snail neurones: intracellular buffering, sequestration and extrusion. *J. Physiol.* 489P, 15S.
- R. O. Collins & R. C. Thomas (1998). Intracellular calcium, caffeine and store refilling in snail neurones *J. Physiol.* 511P 42P
- R. O. Collins & R. C. Thomas (1999). Elevated levels of fura-2 appear to inhibit caffeine-induced calcium release in snail neurones *J. Physiol.* 515P 125P
- R. C. Thomas (2000). Caffeine-induced intracellular calcium oscillations in voltage-clamped snail nerve cells *J. Physiol.* 526P 98P
- D. Willoughby, C. J. Schwiening & R. C. Thomas (2000). Intracellular alkalinization-induced calcium rise in snail neurones is cyclopiazonic acid sensitive but ryanodine and heparin insensitive. *J. Physiol.* 526P 55P
- G. Smith, C. J. Schwiening & R. C. Thomas (2000). The role of mitochondria in calcium handling in neurones isolated from *Helix aspersa*. *J. Physiol.* 527P, 74P
- R.C. Thomas (2002) The effect of HCl injection-induced acidosis on caffeine-induced calcium release in snail neurones. *J. Physiol.* 539P, 96-97P
- R. C. Thomas (2005) Apparent calcium gradients inside snail neurones detected with a  $\text{Ca}^{2+}$ -sensitive microelectrode. *J. Physiol.Biochem.*, 61 (1) 92.
- R. C. Thomas (2008) Coupling between  $\text{Ba}^{2+}$  extrusion and  $\text{H}^{+}$  uptake by the plasma membrane calcium ATPase in snail neurons. *J. Gen Physiol.* 132(1), 22a
- R C Thomas (2008)  $\text{Ca}^{2+}$ -sensitive microelectrodes are well sensitive to barium ions inside snail (*Helix aspersa*) neurones Proc Physiol Soc 11 (2008) DA2
- R. C. Thomas (2010) Changing external pH has no effect on the Plasma Membrane Calcium ATPase (PMCA) coupling ratio in snail neurones. Proc Physiol Soc 19 C28
- R.C. Thomas & J. W. Deitmer (2014) Hundred years buffer theory by Koppel & Spiro: Cellular functions of protons and bicarbonate. *Acta Physiol.* 210, S 695, 17.
- R. C. Thomas (2014) Early measurements of intracellular pH buffering and new insights. *Acta Physiol.* 210,S 695, 17-18.