

AQIX[®] Solution Technology Publications

Papers – published

CURTIS, G.C. and BARNES, L. (2008): Inhaled Drugs: Fate and effects in machine-perfused *ex vivo* human lungs. *Ex Vivo Metrics*[™]. CRO publication; Bowman Research Inc., Chicago, USA.

CURTIS, G.C. (2008): Gut drug absorption in perfused human gut segments. (submitted)

DARWICHE, S., OTROCK, Z., EL-KINGE, N., EL-SABBAN, M. and JAMALI, F. (2008): Superior efficacy of a novel plasma substitute, AQIX[®] RS-I, compared to physiological saline in a rodent model of hemorrhage. (in prep)

YUJI MARUYAMA and DAVID J. CHAMBERS (2008): Myocardial protection: Efficacy of RS-C (AQIX[®]), a novel cardioplegic solution, compared to St Thomas' Hospital solution. *Interactive CardioVasc Thorac Surg.* (submitted)

VEKEMANS, K., LIU, Q., HEEDFELD, V., VAN de VEL, K., WYLIN, W., PIRENNE, J. and MONBALIU, D., (2008): Hypothermic liver machine perfusion with an enriched KPS-1[®] solution vs. AQIX[®] RS-I solution: an in vivo feasibility study in a pig transplant model. (in press)

MARK D. KAY, SARAH A. HOSGOOD, SIMON J. F. HARPER, HELEN L. WALLER, DOUGLAS REES AND MICHAEL L. NICHOLSON (2008): Normothermic versus Hypothermic Ex vivo flush using a novel phosphate-free preservation solution in porcine kidneys. *Transplantation* (submitted)

YUJI MARUYAMA and DAVID J. CHAMBERS (2008): Myocardial protection: Efficacy of RS-C (AQIX[®]), a novel cardioplegic solution, compared to St Thomas' Hospital solution. *J Mol Cell Cardiol.*, **44**; 711-825: abst. No. 117.

AMMED YASIN MB BCh., MICHELLE C. MCDONALD PhD., AHILA SIVARAJAH PhD., JULIUS E. KIESWICH BSc., MOHAMMED M. YAQOOB MD FRCP., CHARLES J. HINDS FRCA., CHRISTOPH THIEMERMANN, MD PhD FMedSci. (2007): Clonidine Augments Cardiomyocyte Apoptosis Caused by In Vivo Ischaemia and Reperfusion. (abstract; in press)

TOSHINAGA OZEKI, PhD; MICHAEL H. KWON, BS; JUNYAN G.U, PhD; MICHAEL J. COLLINS, BS; JOHN M. BRASSIL, BS; MICHAEL B. MILLER JR, BS; RAO P. GULLAPALLI, PhD; JIACHEN ZHUO, MS; RICHARD N. PIERSON III, MD; BARTLEY P. GRIFFITH, MD; ROBERT S. POSTON. (2007): Heart Preservation Using Continuous Ex Vivo Perfusion Improves Viability and Functional Recovery. *Circ J.*, **71**; 153 –159.

LIU, Q., MONBALIU, D., VEKEMANS, K., PEETERS, R., KEYZER, F. DRESSELAERS, T. NI, Y., VAN HECKE, P., KOMUTA, M. BRASSIL, J. MARCHAL and G., PIRENNE, J. (2007): Can apparent diffusion coefficient discriminate ischemic from non-ischemic livers? A pilot experimental study. *Transplantation Proc.* **39**(8); 2643-2646.

HOSGOOD, S.A., HARPER, S.J.F., KAY, M.D., ATUL BAGUL, REES, D. and NICHOLSON, M.L. (2007): Rate of Cooling In Organ Preservation. British Transplant Society 10th Ann. Congress Meeting. Abstr. No. P59.

MARK D. KAY, SARAH A. HOSGOOD, SIMON J. F. HARPER, ATUL BAGUL, HELEN L. WALLER, DOUGLAS REES AND MICHAEL L. NICHOLSON. (2007): Static normothermic preservation of renal allografts using a novel non-phosphate buffered preservation solution. *Transplant International.* **20**(1); 88 - 92.

KAY, M.D., HOSGOOD, S.A., HARPER, S.J.F., REES, D. and NICHOLSON, M.L. (2006a): STATIC NORMOTHERMIC PRESERVATION OF RENAL ALLOGRAFTS USING A NOVEL NON-PHOSPHATE BUFFERED PRESERVATION SOLUTION. Association of Surgeons of Great Britain and Ireland Annual Scientific Meeting, Edinburgh. Abstr. 9704.

KAY, M.D., HOSGOOD, S.A., HARPER, S.J.F., REES, D. and NICHOLSON, M.L. (2006b): NORMOTHERMIC EX-VIVO FLUSH: A COMPARISON WITH STANDARD HYOTHERMIC METHODS IN RENAL ALLOGRAFTS. Association of Surgeons of Great Britain and Ireland Annual Scientific Meeting, Edinburgh. Abstr. 9702

HOSGOOD, S.A., HARPER, S.J.F., KAY, M.D., REES, D. and NICHOLSON, M.L. (2006): Optimal retrieval conditions in renal transplantation. A novel non-phosphate buffered preservation solution. British Transplant Society 8th Ann. Congress Meeting. Abstr. No. 10765.

KAY, M.D., HOSGOOD, S.A., HARPER, S.J.F., REES, D. and NICHOLSON, M.L. (2005): Static normothermic preservation of renal allografts using a novel non-phosphate buffered preservation solution. British Transplant Society 8th Ann. Congress Meeting. Abstr. No. P131; RA5075.

KAY, M.D., HOSGOOD, S.A., HARPER, S.J.F., REES, D. and NICHOLSON, M.L. (2005): Normothermic versus hypothermic ex vivo flush. A comparison of a novel phosphate-free preservation solution and a standard hypothermic method in renal allografts. British Transplant Society 8th Ann. Congress Meeting. Abstr. No. P132; RA5077.

REES, D. (1995): *In vitro* bioassay techniques - questionable validity using vertical bath technology and phosphate buffered solutions. *Proceedings of the Physiological Society of New Zealand*, **14**; 19 pp.

REES, D. and CLISSOLD L.C. (1995): Effect of Res-Del[®] RS-C solution on the viability of isolated rat heart preparations over 1-6 hours of cardioplegic arrest.

Proceedings of the Physiological Society of New Zealand, **14**; 19 pp.

REES D. and DALZIEL, J.E. (1994): Are pharmacological bioassay results valid when conducted in conventional phosphate buffered salines? *Proceedings of the Anaesthesiology Group of New Zealand*, May, 4 pp.

ANDREWS, J.R.H., AINSWORTH, R. and ABERNETHY, D (1994): *Trichinella pseudospiralis* in humans: description of a case and its treatment. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, **88**; 200-203.

ROBINSON, B.J., LEE, E., REES, D., PURDIE, G.L. and GALLETTY, D.C. (1992): Betamethasone-induced resistance to neuromuscular blockade: A comparison of atracurium and vecuronium *in vitro*. (*Anesth. Analg.* **74**; 762-765).

PARR, S.M., ROBINSON, B.J., REES, D. and GALLETTY, D.C. (1991): An interaction between betamethasone and vecuronium. (*Brit. J. Anaesthesia.*, **67**;447-451).

REES, D. (1989a): Consideration of the inorganic and organic composition of mammalian perfusion solutions. In *Isolated Perfused Organ Preparations*. Eds.H.J. Döring & H.Dehnert. Biomesstechnik-Verlag March GmbH [ISBN 3-924638-57-8], **5**; 85-94.

REES, D. (1989b): Isolated Perfused Kidney. In *Isolated Perfused Organ Preparations*. Eds. H.J. Döring & H. Dehnert. Biomesstechnik-Verlag March GmbH [ISBN 3-924638-57-8], **5**; 123-132.

REES, D. (1988): The preservation of cellular function in isolated mammalian tissues/organ preparations (Proc. Physiol. Soc. N.Z. **8**; 21 pp).

REES, D. (1986): The effect of the metabolic inhibitor, antimycin A₃, on the pharmacological responsiveness of the rat detrusor muscle *in vitro*. (N.Z. J. Medicine, **99**; 244 pp).

REES, D. (1985): The effect of phosphate buffered RS-I saline on the contractility of isolated rat heart preparations. (Proc. Physiol. Soc. N.Z. **5**; 18 pp).

REES, D. (1983): The effect of aspartate, malate and D-fructose on the temperature dependent inotropic effect observed *in vitro* in mammalian skeletal muscle fibres. (Proc. 9th Cong. Int.Union of Physiol. Sci., **15**; 155 pp).

REES, D. (1978b): Studies of immunoglobulin G in the aetiology of myasthenia gravis. (N.Z. J. Medicine, **88** (618); 165 pp).

REES, D. (1978a): A new non-phosphate based mammalian saline for long-term neurophysiological studies. (J. Physiol. **278**; 8-9).

REES, D., BEHAN, P.O., BEHAN W.M.H. and SIMPSON, J.A. (1977): Attempts to passively transfer myasthenia gravis from humans to mice. 7th Symposium on Current Research into Muscular Dystrophy. (Birmingham, January 5-7, 16 pp).

AUDIT TRIAL REPORTS:

D. Bunton, E. Cooper and D. Smith; Biopta Ltd, Glasgow, UK. Biopta Technical Summary - Validation of *Ex Vivo* Human Atrial Trabeculae [July, 2008]

K. Newton, Ph.D., Cell Medica, Royal Free Hospital, London, UK and D. Rees, Ph.D., Aqix Ltd, Imperial College London, UK. Assessment of a novel non-phosphate buffered solution, AQIX[®] RS-I, in the isolation and 24-hour culturing of human PBMC's in comparison to RPMI medium. [April, 2008]

F Jamali, S Darwiche, Z Otrrock, N El-Kinge , M El-Sabban, Faculty of Medicine, American University of Beirut Medical Center, Beirut, Lebanon, and D.Rees, Aqix Ltd, Imperial College London, UK.

Phase I - Pilot 'Safety' Study: Assessment of a novel non-phosphate buffered solution, AQIX[®] RS-I, as a volume expander in a porcine model of hypovolemic shock. [November, 2007]

Phase II - Assessment of a novel non-phosphate buffered solution, AQIX[®] RS-I, as a volume expander in a porcine model of hypovolemic shock in comparison to LR Saline and Whole Autologous Blood. [March, 2008]

D. Bunton, E. Cooper and D. Smith; Biopta Ltd, Glasgow, UK. *Ex Vivo* Human Atrium Contractility Assays: Pharmacological Responsiveness to the Vasoreactive Drug, Milrinone (Primacor[®]). (June, 2007)

D. J. Chambers, Cardiac Surgical Research, The Rayne Institute, St Thomas' Hospital, London, UK. AQIX[®] CARDIOPLEGIA: a study to determine the efficacy of Aqix (RS-C) cardioplegia in comparison to that of St Thomas' Hospital cardioplegia. [February, 2007]

M. Tarunina, B. Hushe, Y. Choo, Plasticell Ltd., Imperial College Incubator, London,UK. Incubation of ES-derived mouse cardiomyocytes in AQIX[®] RS-I medium verses a conventional tissue culture medium: long-term viability study. (July, 2007)

M.D Kay, S.A Hosgood, S.J.F Harper, M.L. Nicholson; Renal Transplant Unit, Leicester General Hospital, England, UK.

Audit Trial Report I: *Comparative study with conventional hypothermic preservation solutions.* [January, 2005]

Audit Trial Report II:

- (i) *A comparison of a novel phosphate-free preservation solution and a standard hypothermic method in renal allografts.* [January, 2005]
- (ii) *Static normothermic preservation of renal allografts using a novel non-phosphate buffered preservation solution.* [January, 2005]

Audit Trial Report III: *Assessment of a novel non-phosphate preservation solution, AQIX[®] RS-I, under hypothermic and normothermic static storage conditions.* [May, 2005]

Audit Trial Report TR-1: *The Investigation between AQIX[®] RS-I under hypothermic static storage conditions involving HTK, Soltran[®] in comparison to Machine Perfused KPS-1[®] solutions in long-term preservation using a porcine kidney model.* [Nov, 2006]

CRO – Reports

D. Rees, Animal Physiology Research Unit, Victoria University of Wellington, New Zealand. The effect of *meclofenamate* on the isolated rat uterus perfused with *Res-Del[®] RS-I* mammalian solution in a *Res-Del[®] 589* perfusion bath. [April,1992]

D. Rees and J.E. Dalziel, Animal Physiology Research Unit, Victoria University of Wellington, New Zealand. A critical appraisal on the pharmacology of Betamethasone. *Research Report Bulletin*; Organon-Technika Ltd., Belgium, [May, 1994]

P.G.C. Douch and P.E. Morum, Ministry of Agriculture & Fisheries, Wallaceville, Wellington, NZ. Bioassay of Leukotrienes from Sheep intestine. [November, 1987]

Company BULLETIN publications:

- | | |
|-----------------------------|---|
| <u>Bulletin No.1</u> | Design of a perfusate and preservation solution for use in retrieval/assessment of animal/human donor organs (1992) |
| <u>Bulletin No.2</u> | Design of a cardioplegic solution, <i>Res-Del[®] RS-C</i> , for use in human by-pass surgery (1995) |
| <u>Bulletin No.3</u> | Historical Repercussions : Donor Organ Transplantation (1994) |
| <u>Bulletin No.4</u> | Toxicity of Ingredients in Current preservation Solutions (1994) |
| <u>Bulletin No.5</u> | AQIX [®] RS-C - A Cardioplegic device for use in Cardiothoracic Surgical Procedures (2008) |
| <u>Bulletin No.6</u> | The <i>Quest</i> - A universal mammalian organ and tissue |

perfusate and preservation solution (2008)
