

# CONTENTS

Vol. 79, No. 1

July 1990

---

## RAPID COMMUNICATION

- Response of the human brain to a hypercapnic acid load *in vivo* by T. A. D. CADOUX-HUDSON, B. RAJAGOPALAN, J. G. G. LEDINGHAM and G. K. RADDA 1-3
- 
- Capillary hypertension and abnormal pressure dynamics in patients with essential hypertension by S. A. WILLIAMS, M. BOOLELL, G. A. MACGREGOR, L. H. SMAJE, S. M. WASSERMAN and J. E. TOOKE 5-8
- Effect of urate on calcium oxalate crystallization in human urine: evidence for a promotory role of hyperuricosuria in urolithiasis by P. K. GROVER, R. L. RYALL and V. R. MARSHALL 9-15
- Patients' perception of distress due to symptoms and effects of asthma on daily living and an investigation of possible influential factors by F. H. QUIRK and P. W. JONES 17-21
- Renal acidification defect induced by lithium in control and acidotic rats by M. MACLAUGHIN and M. MELLO AIRES 23-27
- Effects of chronic administration of an angiotensin-converting enzyme inhibitor on angiotensin-converting enzyme activity in the pars recta of rabbits by F. PRADDAUDE, T. TRAN-VAN, J. MARCHETTI, J.-P. GIROLAMI and J.-L. ADER 29-35
- Effect of aspirin infusions on platelet function in humans by K. M. WILSON, D. M. SIEBERT, E. M. DUNCAN, A. A. SOMOGYI, J. V. LLOYD and F. BOCHNER 37-42
- Cutaneous vascular responses evoked in the hand by the cold pressor test and by mental arithmetic by I. MARRIOTT, J. M. MARSHALL and E. J. JOHNS 43-50
- Effect of atrial natriuretic factor on bronchomotor tone in the normal human airway by G. HULKS, A. G. JARDINE, J. M. C. CONNELL and N. C. THOMSON 51-55
- Role of atrial natriuretic factor in changes in the responsiveness of aldosterone to angiotensin II secondary to sodium loading and depletion in man by H. TUCHELT, G. ESCHENHAGEN, V. BAHR, G. SCHWIETZER, H. M. THIEDE and W. OELKERS 57-65
- Impaired natriuretic response to atrial natriuretic peptide in the isolated kidney or rats with experimental cirrhosis by M. Z. PANOS, C. GOVE, J. D. FIRTH, A. E. G. RAINE, J. G. G. LEDINGHAM, D. WESTABY and R. WILLIAMS 67-71
- Orthostatic circulatory control in the elderly evaluated by non-invasive continuous blood pressure measurement by B. P. M. IMHOLZ, J. H. A. DAMBRINK, J. M. KAREMAKER and W. WIELING 73-79
- Comparison of dye-dilution and plethysmographic blood flow measurements: an evaluation of the influence of invasive techniques on blood flow and on arterial and femoral venous substrate variables in man by L. JORFELDT and H. RUTBERG 81-87
- Substrate utilization during exercise in chronic cardiac failure by M. RILEY, J. S. ELBORN, N. BELL, C. F. STANFORD and D. P. NICHOLLS 89-95

Vol. 79, No. 2

August 1990

---

## EDITORIAL REVIEW

- Neutrophil kinetics in the lungs by W. MACNEE and C. SELBY 97-107

---

## RAPID COMMUNICATION

- Distal lithium reabsorption in the sodium-restricted rat is not dependent on the urinary sodium to lithium concentration ratio by M. SHALMI, J. S. PETERSEN, K. THOMSEN and S. CHRISTENSEN 109-112
-

Glycosaminoglycan content, oxalate self-exchange and protein phosphorylation in erythrocytes of patients with 'idiopathic' calcium oxalate nephrolithiasis <i>by</i> B. BAGGIO, G. MARZARO, G. GAMBARO, F. MARCHINI, H. E. WILLIAMS and A. BORSATTI	113-116
Active and inactive urinary kallikrein in man: effects of diuresis and antidiuresis <i>by</i> D. G. WALLER, S. S. BHATIA, S. K. CAMPBELL, J. D. M. ALBANO and J. G. B. MILLAR	117-121
Sodium and water excretion in nephrotic patients: effects of changes in renal haemodynamics <i>by</i> M. ALLON, C. B. PASQUE and M. RODRIGUEZ	123-129
Haemodynamic and metabolic effects of infused adenosine in man <i>by</i> A. EDLUND, A. SOLLEVI and B. LINDE	131-138
Glutamine metabolism in skeletal muscle of glucocorticoid-treated rats <i>by</i> M. S. M. ARDAWI and Y. S. JAMAL	139-147
Direct vascular effects in the rat of the vehicles used for the intravenous and oral administration of cyclosporin A <i>by</i> C. AMORENA, A. CASTRO, A. MÜLLER and M. F. VILLAMIL	149-154
Effects of oxygen withdrawal on catecholamine release in patients on home oxygen therapy <i>by</i> M. S. BALTER, K. R. CHAPMAN, M. R. MALEKI-YAZDI, F. H. H. LEENEN and A. S. REBUCK	155-159
Response of serum interleukin-6 in patients undergoing elective surgery of varying severity <i>by</i> A. M. CRUICKSHANK, W. D. FRASER, H. J. G. BURNS, J. VAN DAMME and A. SHENKIN	161-165
Physiological levels of plasma non-esterified fatty acids impair forearm glucose uptake in normal man <i>by</i> M. WALKER, G. R. FULCHER, C. CATALANO, G. PETRANYI, H. ORSKOV and K. G. M. M. ALBERTI	167-174
Simultaneous assessment of intestinal permeability and lactose tolerance with orally administered raffinose, lactose and L-arabinose <i>by</i> R. W. LOBLEY, P. C. BURROWS, R. WARWICK, D. J. DAWSON and R. HOLMES	175-183
Effects of lead and a low-molecular-weight endogenous plasma inhibitor on the kinetics of sodium-potassium-activated adenosine triphosphatase and potassium-activated <i>p</i> -nitrophenylphosphatase <i>by</i> E. WEILER, F. KHALIL-MANESH and H. C. GONICK	185-192

Vol. 79, No. 3

September 1990

**EDITORIAL REVIEW**

The primary role of the kidney and salt intake in the aetiology of essential hypertension: part I <i>by</i> H. E. DE WARDENER	193-200
Errors inherent in the primed infusion method for the measurement of the rate of glucose appearance in man when uptake is not forced by glucose or insulin infusion <i>by</i> D. F. HEATH	201-213
Effects of isosorbide dinitrate on the pattern of arterial blood flow in healthy human subjects <i>by</i> C. G. CARO, P. J. FISH, D. E. GOSS, J. HALLS, M. J. LEVER, K. H. PARKER and A. S. CLEAR	215-220
Effect of endothelin on the function of the isolated perfused working rat heart <i>by</i> J. D. FIRTH, A. F. C. ROBERTS and A. E. G. RAINE	221-226
Simplifying the lithium-marker technique used to assess the dietary intake of discretionary sodium in population studies <i>by</i> C. LECLERCQ, V. AVALLE, L. RANALDI, E. TOTI and A. FERRO-LUZZI	227-231
Fluoride therapy and parathyroid hormone activity in osteoporosis <i>by</i> T. C. B. STAMP, P. W. SAPHIER, N. LOVERIDGE, C. R. KELSEY, A. J. GOLDSTEIN, M. KATAKITY, M. V. JENKINS and G. A. ROSE	233-238

Impaired nutritive skeletal muscle blood flow in patients with chronic renal failure by J. R. BRADLEY, J. R. ANDERSON, D. B. EVANS and A. J. COWLEY	239-245
Cellular and muscle zinc in surgical patients with and without gastrointestinal cancer by H. F. GOODE, J. KELLEHER, B. E. WALKER, R. I. HALL and P. J. GUILLOU	247-252
Metabolism of <sup>15</sup> N-labelled urea in the functioning and defunctioned human colon by B. J. MORAN, and A. A. JACKSON	253-258
Effect of nifedipine on renal haemodynamics in an animal model of cyclosporin A nephrotoxicity by P. G. McNALLY, F. BAKER, N. MISTRY, J. WALLS and J. FEEHALLY	259-266
Kinetics of influx of peptides and amino acids into hamster jejunum <i>in vitro</i> : physiological and theoretical implications by D. BURSTON and D. M. MATTHEWS	267-272
Effect of N <sup>G</sup> -monomethyl-L-arginine on endothelium-dependent relaxation of human subcutaneous resistance arteries by R. G. WOOLFSON and L. POSTON	273-278
Effects of blood glucose concentration on thermogenesis and glucose disposal during hyperinsulinaemia by I. W. GALLEN and I. A. MACDONALD	279-285
<b>CORRESPONDENCE SECTION</b>	
Limitations of the Pearson product-moment correlation by S. W. COPPACK	287

Vol. 79, No. 4

October 1990

**EDITORIAL REVIEW**

The primary role of the kidney and salt intake in the aetiology of essential hyper- tension: part II by H. E. DE WARDENER	289-297
Renal function in rats with essential fatty acid deficiency by L. HJELTE, M. LARSSON, A. ALVSTRAND, A.-S. MALMBORG and B. STRANDVIK	299-305
Effect of facial cooling on mucosal blood flow in the mouth in humans by J. M. FOUKE, A. D. WOLIN, H. F. BOWMAN and E. R. McFADDEN, JR	307-313
Effect of sodium-transport inhibitors on airway smooth muscle contractility <i>in vitro</i> by A. J. KNOX, P. AJAO, J. R. BRITTON and A. E. TATTERSFIELD	315-323
Effect of sodium-transport inhibitors on bronchial reactivity <i>in vivo</i> by A. J. KNOX, J. R. BRITTON and A. E. TATTERSFIELD	325-330
Effect of a test meal, without and with protein, on muscle and plasma free amino acids by J. BERGSTRÖM, P. FÜRST and E. VINNARS	331-337
Postprandial substrate deposition in human forearm and adipose tissues <i>in vivo</i> by S. W. COPPACK, R. M. FISHER, G. F. GIBBONS, S. M. HUMPHREYS, M. J. McDONOUGH, J. L. POTTS and K. N. FRAYN	339-348
Three different methods of inhibiting lipolysis in human chyme <i>in vitro</i> : efficiency and effect on phase distribution of lipids by D. R. FINE, P. L. ZENTLER-MUNRO and T. C. NORTHFIELD	349-355
Effect of autologous serum on human leucocyte Na <sup>+</sup> /H <sup>+</sup> exchange and intracellular pH by D. J. A. GOLDSMITH, L. POSTON, M. WATSON, J. MORRIS, P. J. HILTON and E. J. CRAGOE	357-364
Increased erythrocyte sodium-lithium countertransport activity in essential hyper- tension is due to an increased affinity for extracellular sodium by P. A. RUTHERFORD, T. H. THOMAS and R. WILKINSON	365-369
Diurnal and postural variations in plasma atrial natriuretic factor, plasma guanosine 3':5'-cyclic monophosphate and sodium excretion by G. M. BELL, S. A. ATLAS, M. PECKER, J. E. SEALEY, G. JAMES and J. H. LARAGH	371-376
Effect of cardiac tamponade on atrial natriuretic peptide concentrations: influence of stretch and pressure by J. AU, J. E. BROWN, M. R. LEE and N. A. BOON	377-380

Differential effects of amino acids on the isolated perfused rat kidney <i>by</i> A. A. EL SAYED, J. HAYLOR and A. M. EL NAHAS	381-386
Effect of amiodarone on erythrocyte shape and membrane properties <i>by</i> W. H. REINHART and F. ROHNER	387-391
Regional haemodynamic effects of captopril, enalaprilat and lisinopril in conscious water-replete and water-deprived Brattleboro rats <i>by</i> A. F. MULLER, S. M. GARDINER, A. M. COMPTON and T. BENNETT	393-401
Platelet angiotensin II binding and plasma renin concentration, plasma renin substrate and plasma angiotensin II in human pregnancy <i>by</i> P. N. BAKER, F. BROUGHTON PIPKIN and E. M. SYMONDS	403-408
Studies of the porcine intestinal calcitriol receptor in pseudo-vitamin D deficiency rickets type I <i>by</i> B. SCHRÖDER, R. KAUNE and J. HARMMEYER	409-414
<hr/>	
Supplement 23: Medical Research Society Communications	1P-30P

Vol. 79, No. 5

November 1990

**EDITORIAL REVIEW**

Cell membrane abnormalities and the regulation of intracellular calcium concentration in hypertension <i>by</i> A. F. DOMINICZAK and D. F. BOHR	415-423
---	---------

**RAPID COMMUNICATION**

Epidermal growth factor stimulates synthesis and secretion of mucus glycoproteins in human gastric mucosa <i>by</i> S. M. KELLY and J. O. HUNTER	425-427
<hr/>	
Elevated plasma noradrenaline concentrations in patients with low-output cardiac failure: dependence on increased noradrenaline secretion rates <i>by</i> W. T. ABRAHAM, J. HENSEN and R. W. SCHRIER	429-435
Pineal hyperactivity in spontaneously hypertensive rats: muscarinic regulation of indole metabolism <i>by</i> L. M. E. FINOCCHIARO, A. SCHEUCHER, A. L. ALVAREZ, S. FINKIELMAN, V. E. NAHMOD and C. J. PIROLA	437-442
Insulin resistance after surgery: normalization by insulin treatment <i>by</i> L. S. BRANDI, M. FREDIANI, M. OLEGGINI, F. MOSCA, M. CERRI, C. BONI, N. PECORI, G. BUZZIGOLI and E. FERRANNINI	443-450
Effects of acute and chronic ethanol administration and its withdrawal on the level and binding of somatostatin in rat brain <i>by</i> V. BARRIOS, M. N. RODRÍGUEZ-SÁNCHEZ and E. ARILLA	451-456
Effect of infused branched-chain amino acids on muscle and whole-body amino acid metabolism in man <i>by</i> R. J. LOUARD, E. J. BARRETT and R. A. GELFAND	457-466
Decreased cyclic nucleotide phosphodiesterase activity in human peripheral blood mononuclear cells from elderly women <i>by</i> N. MESKINI, O. MACOVSKI, A. F. PRIGENT, G. NEMOZ, P. CHAPUY and M. LAGARDE	467-470
Generation of the membrane attack complex during haemodialysis: impact of classical and alternative pathway components <i>by</i> A.-C. HAUSER, K. DERFLER, F. STOCKENHUBER, O. JANATA and P. BALCKE	471-476
Increased plasma histamine levels in uraemic pruritus <i>by</i> F. STOCKENHUBER, R. W. KURZ, K. SERTL, G. GRIMM and P. BALCKE	477-482
Metabolic regulation of renal gluconeogenesis in response to sepsis in the rat <i>by</i> M. S. M. ARDAWI, S. M. KHOJA and E. A. NEWSHOLME	483-490
Evidence for abnormal Na <sup>+</sup> /H <sup>+</sup> antiport activity detected by phosphorus nuclear magnetic resonance spectroscopy in exercising skeletal muscle of patients with essential hypertension <i>by</i> C. R. K. DUDLEY, D. J. TAYLOR, L. L. NG, G. J. KEMP, P. J. RATCLIFFE, G. K. RADD and J. G. G. LEDINGHAM	491-497

Systolic wall stress and ventricular arrhythmia: the role of acute change in blood pressure in the isolated working rat heart <i>by</i> M. A. JAMES and J. V. JONES	499-504
Stimulation of active renin release in normal and hypertensive pregnancy <i>by</i> M. A. BROWN, V. C. ZAMMIT and D. ADSETT	505-511
Short-term infusions of insulin, triacylglycerol and glucose do not cause acute increases in plasminogen activator inhibitor-1 concentrations in man <i>by</i> P. J. GRANT, E. K. O. KRUTHOF, C. P. FELLE, J. P. FELBER and F. BACHMANN	513-516
Blood pressure, heart rate and neuroendocrine responses to a high carbohydrate and a high fat meal in healthy young subjects <i>by</i> D. HESELTINE, J. F. POTTER, G. HARTLEY, I. A. MACDONALD and O. F. W. JAMES	517-522
Vascular hypertrophy, renin and blood pressure in the young spontaneously hypertensive rat <i>by</i> J. J. MORTON, E. C. BEATTIE, S. A. GRIFFIN, F. MACPHERSON, F. LYALL and D. RUSSO	523-530
Kinetics of the human lymphocyte Na <sup>+</sup> -H <sup>+</sup> exchanger <i>by</i> P. STRAZZULLO and M. CANESSA	531-536
Protein turnover in uraemia in the rat <i>by</i> S. B. IRELAND and P. M. STEWART	537-542

Vol. 79, No. 6

December 1990

**EDITORIAL REVIEW**

Reappraisal of the Cushing reflex: the most powerful neural blood pressure stabilizing system <i>by</i> C. J. DICKINSON	543-550
Platelet-activating factor mediates glycerol-induced acute renal failure in rats <i>by</i> A. LÓPEZ-FARRÉ, D. GÓMEZ-GARRE, F. BERNABEU, S. RAMON Y CAJAL, P. PÉREZ-RODRIGO, P. BRAQUET and J. M. LÓPEZ-NOVOA	551-558
Effect of natriuretic agents, vasoactive agents and of the inhibition of metabolism on sodium handling in the isolated perfused kidney of the nephrotic rat <i>by</i> J. D. FIRTH and J. G. G. LEDINGHAM	559-574
Polymorphisms in the gene coding for cholesteryl ester transfer protein are related to plasma high-density lipoprotein cholesterol and transfer protein activity <i>by</i> D. J. FREEMAN, C. J. PACKARD, J. SHEPHERD and D. GAFFNEY	575-581
Skeletal muscle metabolism in heart failure: a <sup>31</sup> P nuclear magnetic resonance spectroscopy study of leg muscle <i>by</i> L. ARNOLDA, M. CONWAY, M. DOLECKI, H. SHARIF, B. RAJAGOPALAN, J. G. G. LEDINGHAM, P. SLEIGHT and G. K. RADDA	583-589
Effect of polycations on the function of the isolated perfused rat kidney <i>by</i> J. D. FIRTH	591-598
Aldose reductase messenger RNA in the lens epithelium <i>in vivo</i> : effects of diabetes mellitus and galactosaemia <i>by</i> S. LIGHTMAN, C. BONDY, S. LIGHTMAN and P. KADOR	599-603
Metabolic effects of low-dose dopamine infusion in normal volunteers <i>by</i> C. J. REGAN, R. DUCKWORTH, J. A. FAIRHURST, P. F. MAYCOCK, K. N. FRAYN and I. T. CAMPBELL	605-611
Dynamic association between artery shear flow condition and platelet cytosolic free Ca <sup>2+</sup> concentration in human hypertension <i>by</i> J. LEVENSON, M.-A. DEVYNCK, I. PITHOIS-MERLI, K. H. LE QUAN SANG, V. FILITTI and A. SIMON	613-618
Endothelin immunoreactivity in mice with Gram-negative bacteraemia: relationship to tumour necrosis factor- $\alpha$ <i>by</i> K. TAKAHASHI, A. SILVA, J. COHEN, H.-C. LAM, M. A. GHATEI and S. R. BLOOM	619-623
Relationship between the maximum velocity and sodium affinity of the erythrocyte sodium pump and its rate constant in blood <i>by</i> T. H. THOMAS, S. MACPHAIL, V. MOTT and R. WILKINSON	625-630

- A serial study of erythrocyte sodium content and sodium pump kinetics in pregnancy *by* S. MACPHAIL, T. H. THOMAS, R. WILKINSON, J. M. DAVISON and W. DUNLOP 631-638
- Non-invasive assessment of the cardiovascular eicosanoids, thromboxane A<sub>2</sub> and prostacyclin, in randomly sampled males, with special reference to the influence of inheritance and environmental factors *by* Å. WENNMALM, G. BENTHIN, K. CAIDAH, E. F. GRANSTRÖM, B. LANNE, L. PERSSON, A.-S. PETERSSON and S. WINELL 639-645
- Effect of dietary protein restriction on renal purines and purine-metabolizing enzymes in adriamycin nephrosis in rats: a mechanism for protection against acute proteinuria involving xanthine oxidase inhibition *by* G. M. GHIGGERI, F. GINEVRI, G. CERCIGNANI, R. OLEGGINI, A. GARBERI, G. CANDIANO, P. ALTIERI and R. GUSMANO 647-656
- Tumour necrosis factor- $\alpha$  and endotoxin induce less prostaglandin E<sub>2</sub> production from hypothalami of rats fed coconut oil than from hypothalami of rats fed maize oil *by* D. C. BIBBY and R. F. GRIMBLE 657-662
- Mucosal peptide hydrolase and brush-border marker enzyme activities in three regions of the small intestine of rats with experimental uraemia *by* D. J. HAINES, C. H. J. SWAN, J. R. B. GREEN and J. F. WOODLEY 663-668
- CORRESPONDENCE SECTION**
- Linkage disequilibrium prevents precise definition of susceptibility determinants for idiopathic nephrotic syndrome *by* D. JENKINS 669-670