

# CONTENTS

Vol. 69, No. 1

July 1985

The distribution of catecholamines between platelets and plasma in normal human subjects C. C. T. SMITH, L. D. CURTIS, A. P. DELAMOTHE, B. N. C. PRICHARD and D. J. BETTERIDGE	1-6
The measurement of breathlessness induced in normal subjects: validity of two scaling techniques L. ADAMS, N. CHRONOS, R. LANE and A. GUZ	7-16
Extracellular elastolytic activity in human lung lavage: a comparative study between smokers and non-smokers S. F. SMITH, A. GUZ, N. T. COOKE, G. H. BURTON and T. D. TETLEY	17-27
Effects of small-particle aerosols of local anaesthetic on dyspnoea in patients with respiratory disease R. D. STARK, P. A. O'NEILL, N. J. W. RUSSELL, C. G. HEAPY and T. B. STRETTON	29-36
Measurement of blood cortisol and acid output in patients with duodenal ulceration and normal subjects during insulin hypoglycaemia A. C. ATHOW, A. T. SEWERNIAK, T. P. BARTON, C. G. CLARK and M. R. LEWIN	37-40
Prolonged survival of rat renal allografts after multiple allogeneic pregnancies: strain specificity and role of erythrocyte antibody rosette inhibiting antibodies S. K. ASFAR, D. A. POWER, R. J. MASON, A. M. MACLEOD, J. G. SIMPSON, P. H. WHITING, J. ENGESET and G. R. D. CATTO	41-49
Effect of bromocriptine treatment on prolactin, noradrenaline and blood pressure in hypertensive haemodialysis patients E. DEGLI ESPOSTI, A. STURANI, A. SANTORO, A. ZUCCALA, C. CHIARINI and P. ZUCHELLI	51-56
Glomerular sialic acid in Heymann nephritis and diacetylbenzidine induced nephropathy in rats L. LAITINEN, A. MIETTINEN, I. TIKKANEN, T. TÖRNROTH and S. NORDLING	57-62
Circulating histamine and neutrophil chemotactic activity during allergen-induced asthma: the effect of inhaled anti-histamines and anti-allergic compounds D. J. R. MORGAN, I. MOODLEY, D. R. CUNDELL, B. D. SHEINMAN, W. SMART and R. J. DAVIES	63-69
Bile lipid secretion in obese and non-obese individuals with and without gallstones A. REUBEN, P. N. MATON, G. M. MURPHY and R. H. DOWLING	71-79
Effect of naloxone on the defective autonomic control of heart rate in uraemic patients C. ZOCCALI, M. CICCARELLI, F. MALLAMACI and Q. MAGGIORE	81-86
The effect of pyridoxine on oxalate dynamics in three cases of primary hyperoxaluria (with glycollic aciduria) R. W. E. WATTS, N. VEALL, P. PURKISS, M. A. MANSELL and E. F. HAYWOOD	87-90
The maximal sniff in the assessment of diaphragm function in man J. M. MILLER, J. MOXHAM and M. GREEN	91-96
Antigenic reactivity of peptides derived from wheat gluten with sera from patients with coeliac disease P. M. RAWCLIFFE, J. D. PRIDDLE and D. P. JEWELL	97-104
<b>SHORT COMMUNICATION</b>	
A study of erythrocyte membrane proteins and urinary polypeptides in conga drumming haemoglobinuria R. D. LEVY, A. A. KHALEELI, B. L. GRIFFITHS and Y. H. EDWARDS	105-108
<b>CORRESPONDENCE SECTION</b>	
Urinary adenosine cyclic 3',5'-monophosphate in idiopathic calcium stone-formers P. A. BAGHURST	109-110
An association between plasma progesterone and erythrocyte carbonic anhydrase in women J. SHEPHERD	111

**EDITORIAL REVIEW**

- Thyroid stimulating immunoglobulins: measurement and clinical use  
C. A. OLLIS, S. TOMLINSON and D. S. MUNRO 113-121
- 
- Alanine and glutamine release from the human forearm: effects of glucose administration  
M. ELIA, G. NEALE and G. LIVESEY 123-133
- Evaluation of a non-invasive method for the measurement of metabolic rate in humans  
C. WEISSMAN, M. C. DAMASK, J. ASKANAZI, S. H. ROSENBAUM and J. M. KINNEY 135-141
- Leg metabolism of amino acids and ammonia in patients with chronic renal failure  
G. DEFERRARI, G. GARIBOTTO, C. ROBAUDO, A. CANEPA, S. BAGNASCO and A. TIZIANELLO 143-151
- Biochemical and morphometric properties of mitochondrial populations in human muscle fibres  
A. ELANDER, M. SJÖSTRÖM, F. LUNDGREN, T. SCHERSTÉN and A.-C. BYLUND-FELLENUS 153-164
- Blood pressure and dietary polyunsaturated and saturated fats: a controlled trial  
B. M. MARGETTS, L. J. BEILIN, B. K. ARMSTRONG, I. L. ROUSE, R. VANDONGEN, K. D. CROFT and E. J. McMURCHIE 165-175
- Sulphasalazine and derivatives, natural killer activity and ulcerative colitis  
P. R. GIBSON and D. P. JEWELL 177-184
- Role of the renal nerves in modulating renin release during pressure reduction at the feline kidney  
E. J. JOHNS 185-195
- Maximal short term exercise capacity in healthy subjects aged 15-70 years  
L. MAKRIDES, G. J. F. HEIGENHAUSER, N. McCARTNEY and N. L. JONES 197-205
- $\gamma$ -L-Glutamyl-L-dopa is a dopamine pro-drug, relatively specific for the kidney in normal subjects  
D. P. WORTH, J. N. HARVEY, J. BROWN and M. R. LEE 207-214
- The effect of adrenaline upon cardiovascular and metabolic functions in man  
I. W. FELLOWS, T. BENNETT and I. A. MACDONALD 215-222
- Effects of synthetic atrial natriuretic peptides on sodium-potassium transport in human erythrocytes  
G. A. SAGNELLA, D. A. NOLAN, A. C. SHORE and G. A. MACGREGOR 223-226
- SHORT COMMUNICATIONS**
- Cytosolic free calcium and intracellular calcium stores in neutrophils from hypertensive subjects  
P. D. LEW, L. FAVRE, F. A. WALDVOGEL and M. B. VALLOTTON 227-230
- The effect of arginine vasopressin on ureagenesis in isolated rat hepatocytes  
P. J. T. DREW, J. P. MONSON, H. K. METCALFE, S. J. W. EVANS, R. A. ILES and R. D. COHEN 231-233
- $\alpha$ -Adrenoceptor changes after oestrogen treatment in platelets and other tissues in female rabbits  
N. MISHRA, C. A. HAMILTON, C. R. JONES, C. LESLIE and J. L. REID 235-238
- CORRESPONDENCE**
- Alcohol withdrawal and hypertension: evidence for a kidney abnormality  
S. DE MARCHI and E. CECCHIN 239-240

**EDITORIAL REVIEWS**

- The role of phagocytes in inflammatory bowel disease  
A. HERMANOWICZ, P. R. GIBSON and D. P. JEWELL 241-249
- 
- Influence of the parasympathetic and sympathetic nervous system on nocturnal bronchial obstruction  
D. S. POSTMA, J. J. KEYZER, G. H. KOËTER, H. J. SLUITER and K. DE VRIES 251-258
- Human pancreatic and biliary responses to physiological concentrations of cholecystokinin octapeptide  
A. A. ANAGNOSTIDES, V. S. CHADWICK, A. C. SELDEN, J. BARR and P. N. MATON 259-263
- Early effects of ethinyloestradiol and norethisterone treatment in postmenopausal women on bone resorption and calcium regulating hormones  
P. L. SELBY, M. PEACOCK, S. A. BARKWORTH, W. B. BROWN and G. A. TAYLOR 265-271
- Changes in plasma volume, in transcapillary escape rate of albumin and in subcutaneous blood flow during hypoglycaemia in man  
J. HILSTED, F. BONDE-PETERSEN, S. MADSBAD, H.-H. PARVING, N. J. CHRISTENSEN, B. ADELHØJ, D. BIGLER and E. SJØNTOFT 273-277
- Effects of atelectasis and vascular occlusion on the simultaneous measurement of serotonin and propranolol pulmonary extraction in dogs  
F. DARGENT, J.-P. GARDAZ, P. MOREL, P. M. SUTER and A. F. JUNOD 279-286
- Demonstration of methionine synthetase in intestinal mucosal cells of the rat  
J. N. KEATING, D. G. WEIR and J. M. SCOTT 287-292
- Effect of indomethacin on urine concentration and dilution in the rat  
C. RAY, S. L. CARNEY and A. H. B. GILLIES 293-298
- Renal adaptation and gut hormone release during sodium restriction in ileostomized man  
R. J. UNWIN, S. MOSS, W. S. PEART and J. WADSWORTH 299-308
- A family with mild hereditary xerocytosis showing high membrane cation permeability at low temperatures  
G. W. STEWART and J. C. ELLORY 309-319
- Increased albumin and normal dextran clearances in protein-overload proteinuria in the rat  
D. J. BLISS and D. B. BREWER 321-326
- Differential effects of sulindac and indomethacin on blood pressure in treated essential hypertensive subjects  
I. B. PUDDEY, L. J. BEILIN, R. VANDONGEN, R. BANKS and I. ROUSE 327-336
- Intra-individual variability in postural blood pressure in the elderly  
L. A. LIPSITZ, H. A. STORCH, K. L. MINAKER and J. W. ROWE 337-341
- The characterization and energetic potential of brown adipose tissue in man  
S. CUNNINGHAM, P. LESLIE, D. HOPWOOD, P. ILLINGWORTH, R. T. JUNG, D. G. NICHOLLS, N. PEDEN, J. RAFAEL and E. RIAL 343-348
- Ventilatory saving by external chest wall compression or oral high-frequency oscillation in normal subjects and those with chronic airflow obstruction  
R. J. D. GEORGE, R. J. D. WINTER, S. J. FLOCKTON and D. M. GEDDES 349-359
- The effect of verapamil and inspired CO<sub>2</sub> on the bronchoconstriction provoked by hyperventilation in normal humans  
C. H. C. TWORT, J. E. NEILD and I. R. CAMERON 361-364
- SHORT COMMUNICATION**
- Enhancement of the sympathoadrenal response to the cold-pressor test by naloxone in man  
P.-M. BOULOUX, A. GROSSMAN, S. AL-DAMLUJI, T. BAILEY and M. BESSER 365-368

**EDITORIAL REVIEW**

Chronobiology: its importance in clinical medicine

D. S. MINORS 369-376

Validation of a Doppler technique for beat-to-beat measurement of cardiac output  
 N. MEHTA, V. I. IYAWA, A. R. C. CUMMIN, S. BAYLEY, K. B. SAUNDERS and  
 E. D. BENNETT 377-382

Partial isolation and function of the prostacyclin regulating plasma factor  
 H. DECKMYN, C. ZOJA, J. ARNOUT, A. TODISCO, F. VANDEN BULCKE,  
 L. D'HONDT, N. HENDRICKX, P. GRESELE and J. VERMYLEN 383-393

A circadian rhythm of proteinuria in patients with a nephrotic syndrome  
 M. G. KOOPMAN, R. T. KREDIET, F. J. M. ZUYDERHOUDT, E. A. M. DE MOOR  
 and L. ARISZ 395-401

Effect of bisphosphonates on prostaglandin synthesis by rat bone cells and mouse  
 calvaria in culture  
 K. OHYA, S. YAMADA, R. FELIX and H. FLEISCH 403-411

Serum immunoreactive erythropoietin in hypoxic lung disease with and without  
 polycythaemia  
 J. A. WEDZICHA, P. M. COTES, D. W. EMPEY, A. C. NEWLAND, J. P. ROYSTON  
 and R. C. TAM 413-422

Changes in plasma free 3,4-dihydroxyphenylethylene glycol and noradrenaline  
 levels after acute alcohol administration  
 L. G. HOWES and J. L. REID 423-428

A technique for the measurement of orthophosphate in human erythrocytes,  
 and some studies of its determinants  
 A. CHALLA, A. BEVINGTON, C. M. ANGIER, A. J. ASBURY, C. J. PRESTON  
 and R. G. G. RUSSELL 429-434

Phosphate metabolism in erythrocytes of critically ill patients  
 A. BEVINGTON, A. J. ASBURY, C. J. PRESTON and R. G. G. RUSSELL 435-440  
 ( $\text{Na}^+$ ,  $\text{K}^+$ )-ATPase regulation and NaCl intake: effects on circulating inhibitor  
 and sensitivity to noradrenaline  
 A. C. SWANN 441-447

Twenty-four hour hormonal and metabolic profiles in uraemic patients before  
 and during treatment with continuous ambulatory peritoneal dialysis  
 A. HEATON, D. G. JOHNSTON, J. W. HAIGH, M. K. WARD, K. G. M. M. ALBERTI  
 and D. N. S. KERR 449-457

Tremor: an alternative approach for investigating adrenergic mechanisms in  
 thyrotoxicosis?  
 B. ABILA, J. H. LAZARUS, J. C. KINGSWOOD, R. W. MARSHALL, J. F. WILSON  
 and A. RICHENS 459-463

Effects of age on body temperature and blood pressure in cold environments  
 K. J. COLLINS, J. C. EASTON, H. BELFIELD-SMITH, A. N. EXTON-SMITH and  
 R. A. PLUCK 465-470

Effects of physiological concentrations of vasopressin on haemostatic function  
 in man  
 P. J. GRANT, J. A. DAVIES, G. M. TATE, M. BOOTHBY and C. R. M. PRENTICE 471-476

Abnormal vascular function and morphology in pre-eclampsia: a study of isolated  
 resistance vessels  
 C. AALKJAER, H. DANIELSEN, P. JOHANNESSEN, E. B. PEDERSEN, A. RASMUSSEN  
 and M. J. MULVANY 477-482

$\beta$ -Adrenoceptor responsiveness and plasma catecholamines as determinants of  
 cardiovascular reactivity to mental stress  
 G. EISENHOFER, D. G. LAMBIE and R. H. JOHNSON 483-492

**SHORT COMMUNICATION**

Urinary prostaglandin E and antidiuretic hormone during water immersion in man  
 J. P. O'HARE, M. WATSON, M. D. PENNEY, D. HAMPTON, J. M. ROLAND and  
 R. J. M. CORRALL 493-496

**EDITORIAL REVIEW****Venous system in essential hypertension**

M. E. SAFAR and G. M. LONDON 497-504

Effect of induced metabolic acidosis on intracellular pH, buffer capacity and contraction force of human skeletal muscle

E. HULTMAN, S. DEL CANALE and H. SJÖHOLM 505-510

Effect of chlorothiazide on serial measurements of exchangeable sodium and blood pressure in spontaneously hypertensive rats

P. J. O. MANHEM, S. A. CLARK, W. B. BROWN, G. D. MURRAY and  
J. I. S. ROBERTSON 511-515

Activities and subcellular distributions of hepatic lipases in control subjects and in patients with alcoholic fatty liver

N. N. Y. LEUNG, S. R. CAIRNS and T. J. PETERS 517-523

The effect of undernutrition on thermoregulation in the elderly

I. W. FELLOWS, I. A. MACDONALD, T. BENNETT and S. P. ALLISON 525-532

Variability of the haemodynamic responses to laboratory tests employed in assessment of neural cardiovascular regulation in man

G. PARATI, G. POMIDOSSI, A. RAMIREZ, B. CESANA and G. MANCIA 533-540

Vitamin D-dependent rickets type I in pigs

J. FOX, E. M. W. MAUNDER, V. A. RANDALL and A. D. CARE 541-548

Effect of 1,25-dihydroxyvitamin D deficiency on the metabolic clearance rate of 1,25-dihydroxyvitamin D<sub>3</sub>: studies using pigs with vitamin D-dependent rickets type 1

J. FOX and A. D. CARE 549-552

Effects of acute and chronic treatment with glucocorticoids on the intestinal absorption of calcium and phosphate and on plasma 1,25-dihydroxyvitamin D levels in pigs

J. FOX, R. ROSS and A. D. CARE 553-559

Metabolism of vitamin D in patients with primary biliary cirrhosis and alcoholic liver disease

E. B. MAWER, H. J. KLASS, T. W. WARNES and J. L. BERRY 561-570

Left ventricular diastolic function of spontaneously hypertensive rats and its relationship to structural components of the left ventricle

H. NISHIMURA, S. KUBO, A. NISHIOKA, K. IMAMURA, K. KAWAMURA and  
M. HASEGAWA 571-580

The porphyrogenic effects of calcium channel blocking drugs

N. SCHOENFELD, J. AELION, Y. BEIGEL, O. EPSTEIN and A. ATSMON 581-586

Sex differences in the hepatic uptake of sulphobromophthalein in the rat

N. ORZES, S. BELLENTANI, R. ALDINI, P. SIMONI, I. FERRETTI, G. C. LUNAZZI,  
G. L. SOTTOCASA and C. TIRIBELLI 587-593

Right ventricular hypertrophy and polycythaemia in rats after intermittent exposure to hypoxia

J. C. MOORE-GILLON and I. R. CAMERON 595-599

A vasopressin-mediated diminution of potassium excretion in water-loaded man

J. BUCKLEY, E. M. GEBRUERS, W. J. HALL and N. M. B. HARRINGTON 601-606

Kinetics of bumetanide-sensitive Na<sup>+</sup>-K<sup>+</sup> co-transport in erythrocytes of essential hypertensive patients

P. DELVA, M. DE GASPERI, M. DEGAN, G. COVI and A. LECHI 607-612

Na<sup>+</sup> leak in erythrocytes from essential hypertensive patients

R. P. GARAY and C. NAZARET 613-624

Enhanced distal absorption of potassium by magnesium-deficient rats

N. L. M. WONG, R. A. L. SUTTON, V. MAVICHAK, G. A. QUAMME and  
J. H. DIRKS 625-630*d*-Sotalol: a new potent class III anti-arrhythmic agent

P. TAGGART, P. SUTTON and R. DONALDSON 631-636

**SHORT COMMUNICATION**

Baroreflex sensitivity and pressor responses in a rat model of uraemia

A. J. WATSON and D. DI PETTE 637-640

**EDITORIAL REVIEW**

## The pre-thrombotic state

J. A. DAVIES 641-646

Obstructive jaundice blunts myocardial contractile response to isoprenaline in the dog: a clue to the susceptibility of jaundiced patients to shock?

O. BINAH, A. BOMZON, L. M. BLENDIS, D. MORDOHOVICH and O. S. BETTER 647-653

Sleep apnoea in alcoholic patients after withdrawal

E. T. H. TAN, D. G. LAMBIE, R. H. JOHNSON, B. J. ROBINSON and  
E. A. WHITESIDE 655-661

Breathlessness during different forms of ventilatory stimulation: a study of mechanisms in normal subjects and respiratory patients

L. ADAMS, R. LANE, S. A. SHEA, A. COCKCROFT and A. GUZ 663-672

The effect of hypoglycaemia on visual function: a clinical and electrophysiological study

R. A. HARRAD, C. S. COCKRAM, A. P. PLUMB, S. STONE, P. FENWICK and  
P. H. SÖNKSEN 673-679

The calmodulin content of the epidermis in psoriasis

S. MAC NEIL, W. F. G. TUCKER, R. A. DAWSON, S. S. BLEEHEEN and  
S. TOMLINSON 681-686

Evidence against a role for superoxide ions in the injury of nephrotoxic nephritis in rats

D. B. WEBB, R. MACKENZIE, S. N. ZOEB and A. J. REES 687-689

Dietary fish oil prevents dexamethasone induced hypertension in the rat

J. P. CODDE and L. J. BEILIN 691-699

Glutamine synthesis in the perfused rat kidney and in isolated rat cortical tubules: regulation by pH

H. LANCTIN, J. T. BROSNAN and B. D. ROSS 701-707

Effects of intravenous saline load on erythrocyte sodium transport in normal human subjects

R. BOERO, F. QUARELLO, C. GUARENA, C. ROSATI and G. PICCOLI 709-712

Short-term effects of  $\beta$ -adrenoceptor blocking drugs with and without cardio-selectivity and intrinsic sympathomimetic activity on lipoprotein metabolism in hypertriglyceridaemic patients and in normal men

P. N. DURRINGTON, W. C. BROWNLEE and D. M. LARGE 713-719

Effect of natural and synthetic atrial natriuretic factor on arterial blood pressure, natriuresis and cyclic GMP excretion in spontaneously hypertensive rats

S. C. PANG, M.-C. HOANG, J. TREMBLAY, M. CANTIN, R. GARCIA, J. GENEST  
and P. HAMET 721-726

Partial characterization of abnormal salivary proteins associated with rheumatoid arthritis

R. J. MAIRS and J. A. BEELEY 727-735

The mechanisms of action of noradrenaline on ouabain-sensitive rubidium uptake in guinea-pig myocardium

R. B. WANLESS, M. I. M. NOBLE and A. J. D. DRAKE-HOLLAND 737-743